

# **St. Clair 230 kV Transmission Line Class Environmental Assessment**

Final Environmental Study Report

June 18, 2024

**Prepared by:**

Hydro One Networks Inc.

Environmental Services

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## Executive Summary

Hydro One Networks Inc. (Hydro One) has prepared this final Environmental Study Report (ESR) for the proposed construction of a new double-circuit 230 kilovolt (kV) transmission line (the Project) in southwestern Ontario. The Project will be approximately 64 kilometres (km) in length and will connect the Lambton Transformer Station (TS) in the Township of St. Clair to the Chatham Switching Station (SS) in the Municipality of Chatham-Kent. As the preferred route will repurpose approximately 41 km of the existing 115 kV transmission line corridor, the Project will involve dismantling and removal of the existing transmission structures, conductor and associated components and equipment along this stretch of the existing 115 kV transmission line. To facilitate the upgrade of the existing 115 kV transmission line to a 230 kV transmission line, an upgrade of the Wallaceburg TS from 115 kV to 230 kV will also be required. The Project will also involve an expansion of the Lambton TS and Chatham SS to facilitate the connection of the new transmission line. The purpose of the Project is to reliably supply the forecast load growth in the Windsor-Essex region and surrounding Chatham area in the near- to mid-term. This will allow the resources and bulk facilities in this region to operate efficiently for local and system needs and maintain existing interchange capability on the Ontario-Michigan interconnection.

The proposed Project has been subject to the Class Environmental Assessment (Class EA) for Minor Transmission Facilities (Hydro One, January 2022), an approved planning process under the *Environmental Assessment Act (EA Act)* designed for proponents to characterize the existing environment, assess potential environmental effects and mitigation, identify, and evaluate alternatives, conduct consultation, and document study findings. This final ESR has been prepared in accordance with the requirements of the *EA Act* and describes the Class EA process undertaken for the proposed Project.

At the outset of the Class EA, two study areas (Local Study Area/LSA and Project Study Area/PSA) were established to assess potential natural environment, socio-economic environment, technical and cultural constraints and potential effects associated with each of the five route alternatives and their corresponding variations identified (**Figure E-1**). The five route alternatives for the Project include:

### **Route 1 – Parallel the existing 230 kV line**

- This route alternative, shown in red in **Figure E-1**, would parallel the existing 230 kV transmission line between Lambton TS and Chatham SS on the east side;
- This route alternative involves widening the existing 230 kV corridor to the east. Deviations from the existing 230 kV corridor southeast of Lambton TS are proposed to minimize effects to the large woodlots and other natural features in this area; and
- Changes to Wallaceburg TS and the nearby 115 kV transmission line are not anticipated.

### **Route 2 – Upgrade the existing 115 kV line**

- This route alternative, shown in orange in **Figure E-1**, involves the replacement of the existing 115 kV transmission line with a new 230 kV transmission line following the same corridor;
- This replacement would occur for most of the distance of this route alternative from just east of Lambton TS (Kimball Junction) to just north of the Chatham urban centre (Kent Junction);
- This would require the replacement of existing transmission lines and structures and widening of the right-of-way (ROW); and
- This alternative would require Wallaceburg TS to be upgraded from 115 kV to 230 kV.

### **Route 3 – Parallel the existing 230 kV line north of Wallaceburg TS and replace the 115 kV line south of Wallaceburg TS**

- This route alternative, shown in yellow in **Figure E-1**, is a combination of Route 1 and Route 2, whereby the new double-circuit 230 kV transmission line would parallel the existing 230 kV line along the east side of the existing corridor from Lambton TS to Wallaceburg TS;
- This route would replace the existing 115 kV line with a new double-circuit 230 kV line from Wallaceburg TS to just north of Chatham; and
- This alternative would require Wallaceburg TS to be upgraded from 115 kV to 230 kV.

#### **Route 4 – Replace the existing 115 kV line north of Wallaceburg TS and parallel the 230 kV line south of Wallaceburg TS**

- This route alternative, shown in teal in **Figure E-1**, is another combination of Route 1 and Route 2, whereby the existing 115 kV transmission line between Lambton TS and Wallaceburg TS would be replaced with a new double-circuit 230 kV transmission line;
- From Wallaceburg TS to Chatham SS, the route would parallel the existing 230 kV transmission line on the east side of the existing corridor; and
- This alternative would require Wallaceburg TS to be upgraded from 115 kV to 230 kV.

#### **Route 5 – New Greenfield line**

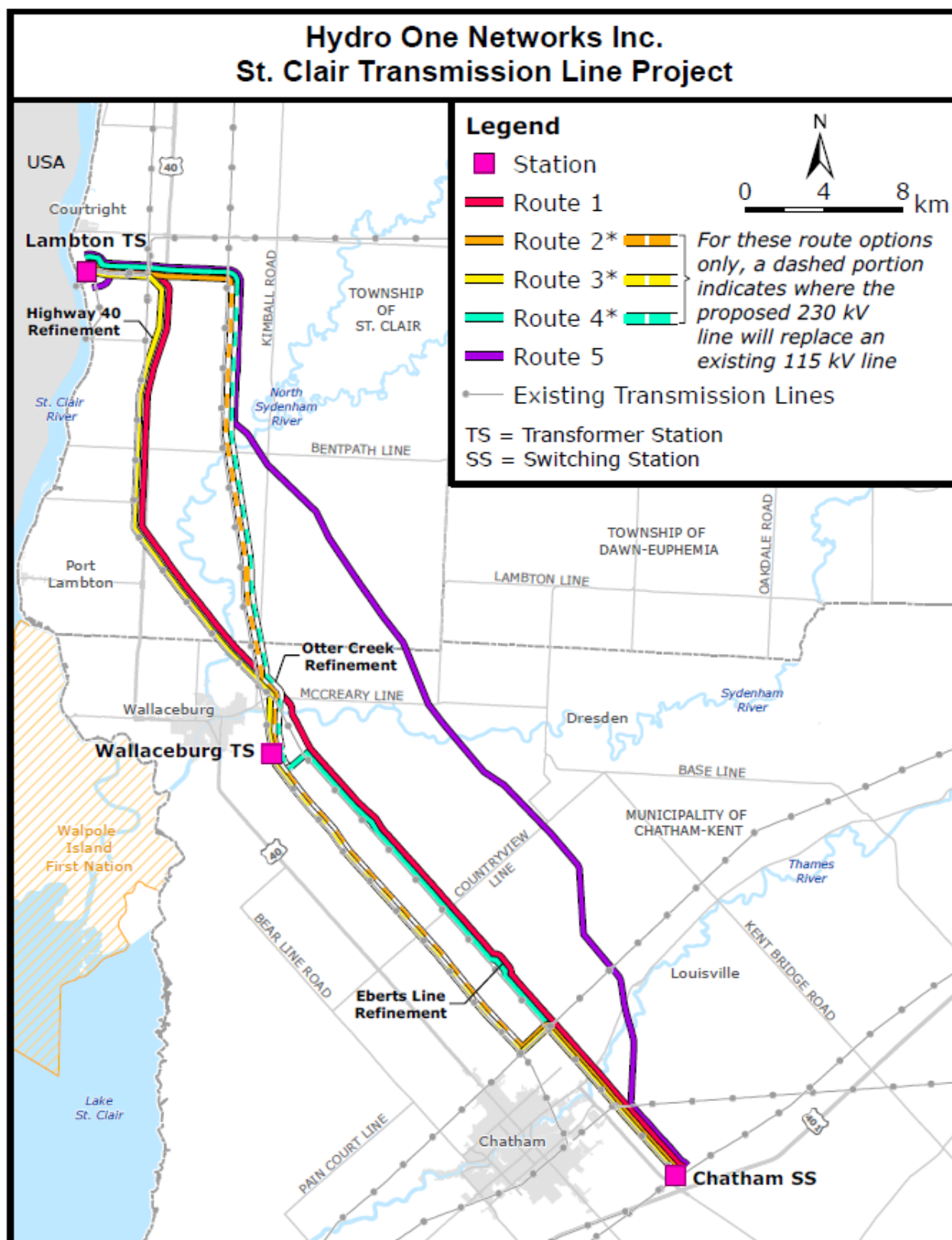
- This route alternative, shown in purple in **Figure E-1**, represents a predominantly new greenfield transmission line corridor between the Lambton TS and Chatham SS, with the exception of short segments near each station where the new transmission line would parallel existing transmission lines; and
- As there are no changes anticipated to the 115 kV line, Wallaceburg TS remains unaffected.

#### **Ancillary Works:**

**Wallaceburg TS:** Routes 2, 3 and 4 would involve the replacement of segments of the existing 115 kV transmission network that currently supplies Wallaceburg TS. These route alternatives would require Wallaceburg TS to be upgraded from a 115 kV TS to a 230 kV TS, which would bring additional reliability and capacity benefits to Wallaceburg and the surrounding area that is currently supplied by this station. Routes 1 and 5 do not involve any replacement of the existing 115 kV transmission system; hence Wallaceburg TS would remain unchanged.

**Lambton TS and Chatham SS:** All route alternatives will require expansion of the station footprint of the Lambton TS and Chatham SS, to connect the new 230 kV transmission line into each station.

Figure E-1: Route Alternatives and Local Study Area



In order to select a preferred route alternative a weighted multi-criteria decision-making approach was undertaken. The criteria were grouped into the following categories:

- Natural Environment;
- Socio-economic Environment;
- Indigenous Culture, Values and Land Use; and
- Technical and Cost.

The first step was the collection of information on existing conditions associated with each criterion using data obtained from literature reviews, reports and technical memos commissioned by Hydro One, online databases, mapping, consultation, and field surveys. Once this information was collected an analysis of each route alternative was undertaken assessing the potential impact of the proposed transmission line. Alternatives were then compared using a multi-criteria decision-making process which accounted for the relative importance (i.e., weights) of the criteria used in the assessment. Evaluation criteria were identified and, relative weightings were assigned, using input obtained through the consultation process for the Project, including the formation of a Technical Advisory Committee (TAC).

Since February 2022, Hydro One has conducted consultation with municipal, provincial, and federal government officials and agencies, Indigenous communities, potentially affected and interested persons, businesses, and interest groups. This involved Project notifications, communications and engagements resulting in issues identification and resolution efforts. The consultation process included the development of a Project website, several rounds of virtual and in-person Community Open Houses (COH), in-person and virtual meetings with Indigenous communities, government officials, potentially affected and interested persons, extensive correspondence with Rights-holders and stakeholders, and dedicated Community Relations and Indigenous Relations representatives. Furthermore, a robust TAC was established early in the Project planning process with members representing multiple Indigenous, government, and interest groups to participate in workshops throughout the Class EA process and help inform the Project team of important Project issues and key decisions.

Overall, route alternative 2 is preferred because it minimizes the overall impact to the natural and socio-economic environments compared to the other route alternatives and minimizes impacts to agricultural lands by utilizing existing transmission corridors for approximately 80% of its total length. From an Indigenous Culture, Values and Land Use perspective, route alternative 2 avoids a separate crossing of the Thames, North Sydenham and Sydenham Rivers, minimizes impacts to native habitats and natural or

naturalized areas, which support hunting and harvesting activities, and provides improved transmission reliability to an Indigenous community supplied from the Wallaceburg TS. From a technical and cost perspective, route alternative 2 is not the most costly to construct overall, though it is more complex and costlier to construct (e.g., line angles, transmission line crossings, upgrades to Wallaceburg TS, etc.) than two other route alternatives. However, route 2 is the most preferred from a real estate perspective as it maximises the ability to utilize existing transmission corridors and results in improvements to the reliability and efficiency of the transmission system supply to the Wallaceburg area through an upgrade to the Wallaceburg TS.

Potential environmental effects resulting from the proposed Project have been identified and avoidance and/or mitigation measures have been proposed accordingly. Based on information collected to date, no significant net adverse environmental effects were identified.

A project level Cumulative Effects Assessment (CEA) was completed for the Project in accordance with the requirements of the Class Environmental Assessment for Minor Transmission Facilities (Hydro One, 2022). The CEA determined there are no areas of environmental concern that will result in a significant cumulative effect. It was determined mitigation measures outlined for the Project provide adequate project specific mitigation that remain effective after considering cumulative effects from the other projects.

Between October 30 to November 6, 2023, the Notice of Completion of the draft ESR was distributed to Indigenous communities consulted, municipal, provincial and federal government officials and agencies, potentially affected and interested persons, and interest groups presented in **Section 3** (see contact list in **Appendix B1**). The Notice was published in the Blenheim News Tribune, Chatham-Kent This Week, Chatham Voice, Ridgetown Independent News, Thamesville Herald, and Wallaceburg Courier between November 8 and November 16, 2023, in addition to being posted on the Project website [www.HydroOne.com/StClair](http://www.HydroOne.com/StClair) (see **Appendix B2** for notification letter and newspaper ad).

Following the release of the Notice of Completion of the draft ESR, Hydro One provided a 30-day comment period, from November 6, 2023, to December 7, 2023, to allow sufficient time to review and comment on the draft ESR. Additionally, in response to requests received from some Indigenous Communities and the Ministry of the Environment, Conservation and Parks (MECP), Hydro One provided extensions to the



draft ESR comment period for these groups. Written comments or questions regarding the draft ESR were submitted to:

Paul Dalmazzi, Senior Environmental Specialist, Hydro One Networks Inc.  
483 Bay Street, North Tower, 14<sup>th</sup> Floor, Toronto, ON, M5G 2P5  
Phone: 1-877-345-6799 (community relations hotline)  
Email: [Community.Relations@HydroOne.com](mailto:Community.Relations@HydroOne.com)

The draft ESR was available electronically on Hydro One's website on the St. Clair Transmission Line (SCTL) Project web page:

<https://www.hydroone.com/abouthydroone/CorporateInformation/majorprojects/saint-clair>. To help aid those without access to a computer, hard copies and limited e-readers were available at the Chatham-Kent Public Library, the Corunna Public Library and the Wallaceburg Municipal Office. Hard copies of the draft ESR were also provided to Indigenous communities upon request. Hydro One sought and received input from two provincial ministries (the Ministry of Natural Resources and Forestry and the Ministry of Citizenship and Multiculturalism) not originally reported in the final ESR submitted in February 2024. This input has been incorporated into this updated final ESR document, as published in May 2024.

Comments received have been responded to and documented in the final ESR as required by the Class EA process. Hydro One has made best efforts to respond and address issues raised by concerned parties during the public comment period. The ESR has been finalized for the proposed Project in accordance with the Class EA and has been filed with the MECP. The Project is considered approved and may proceed as outlined in the ESR.

The *EA Act* has provisions that allow interested parties to request MECP to make an order for a higher level of study (i.e., requiring comprehensive EA approval before being able to proceed), or that conditions be imposed (e.g. require further studies). Such requests may only be made on the grounds that the requested order may prevent, mitigate, or remedy adverse effects on constitutionally protected Aboriginal and treaty rights. This process is referred to as a Section 16 Order request. Such requests were required to be sent in writing or email to the following, while also copying the Hydro One contact information provided above:



Minister of the Environment,  
Conservation and Parks  
777 Bay Street, 5th Floor  
Toronto ON M7A 2J3  
Email: [minister.mecp@ontario.ca](mailto:minister.mecp@ontario.ca)  
Environmental Assessment Branch

Ministry of Environment, Conservation  
and Parks  
135 St. Clair Ave. W, 1st Floor  
Toronto ON, M4V 1P5  
Email: [EABDirector@ontario.ca](mailto:EABDirector@ontario.ca)

No Section 16 Order requests were received by MECP or Hydro One relating to the St. Clair Transmission Line Project, and as such the Project will proceed as outlined in this ESR.

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## List of Acronyms & Abbreviations

AA	Archeological Assessment
AC	Alternating Current
AFN	Aamjiwnaang First Nation
ANSI	Area of Natural and Scientific Interest
AQHI	Air Quality Health Index
BHA	Butternut Health Assessments
CA	Conservation Authority
CAO	Chief Administrative Officer
CCT	CFN Consultation Tool
CDEGS	Current Distribution, Electromagnetic Fields, Grounding and Soil Structure Analysis
CEA	Cumulative Effects Assessment
CFA	Capacity Funding Agreement
CFIA	Canadian Food Inspection Agency
CFN	Caldwell First Nation
CHEC	Cultural Heritage Existing Conditions
CHER	Cultural Heritage Evaluation Reports
CHRS	Canadian Heritage River System
CHVI	Cultural Heritage Value or Interest
CKSPFN	Chippewas of Kettle and Stony Point First Nation
Class EA	Class Environmental Assessment
CLI	Canada Land Inventory
cm	Centimetres
CNR	Canadian National Railway
CO	Carbon monoxide
COH	Community Open House
COTTFN	Chippewas of the Thames First Nation
COVID-19	Coronavirus Disease 2019
CP Rail	Canadian Pacific Railway
CRS	Culture and Rights Study
CSX	CSX Corporation
CWS	Canadian Wildlife Services
CSA	Canadian Standards Association

dBa	Decibels A
DFO	Fisheries and Oceans Canada
Dillon	Dillon Consulting Limited
EA	Environmental Assessment
EA Act	<i>Environmental Assessment Act</i>
EAB	Environmental Assessment Branch
EASR	Environmental Activity and Sector Registry
EBA	Event Based Areas
ECA	Environmental Compliance Approval
ECCC	Environment and Climate Change Canada
ECI	Early Contractor Involvement
eDNA	Environmental Deoxyribonucleic Acid
ELC	Ecological Land Classification
EMF	Electro-magnetic Fields
ENDM	Ministry of Energy, Northern Development and Mines
EPC	Engineering, Procurement and Construction
ESA	<i>Endangered Species Act</i>
ESA	Environmentally Significant Areas
ESC	Erosion Sediment Control
ESR	Environmental Study Report
E.S.T.	Eastern Standard Time
E.T.	Eastern Time
GIS	Global Information System
GPS	Global Positioning System
ha	Hectares
HCCC	Haudenosaunee Confederacy Chiefs Council
HDI	Haudenosaunee Development Institute
HIA	Heritage Impact Assessments
HVA	Highly Vulnerable Aquifer
Hydro One	Hydro One Networks Inc.
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IBA	Important Bird Area
IEEE	Institute of Electrical and Electronics Engineers
IESO	Independent Electricity System Operator
IO	Infrastructure Ontario
IP	Identity Preserved



IPZ	Intake Protection Zone
km	Kilometres
km/hr	Kilometres per hour
kV	Kilovolt
L	Litres
LACP	Land Acquisition Compensation Principles
LIO	Land Information Ontario
LKDSB	Lambton Kent District School Board
LSA	Local Study Area
LTVCA	Lower Thames Valley Conservation Authority
m	Metres
MBCA	<i>Migratory Birds Convention Act</i>
MCDCA	Multi-Criteria Decision Making Analysis
MCM	Ministry of Citizenship and Multiculturalism
MECP	Ministry of the Environment, Conservation and Parks
mG	Milligauss
mm	Millimetres
MIA	Ministry of Indigenous Affairs
MNDMNRF	Ministry of Northern Development, Mines, Natural Resources and Forestry
MNRF	Ministry of Natural Resources and Forestry
MP	Member of Parliament
MPP	Member of Provincial Parliament
MMAH	Ministry of Municipal Affairs and Housing
MOE	Ministry of Energy
MOECC	Ministry of the Environment and Climate Change
MOI	Ministry of Infrastructure
MTCS	Ministry of Tourism, Culture and Sport
MTO	Ministry of Transportation
NHIC	Natural Heritage Information Centre
NHRM	Natural Heritage Reference Manual
NKW	North Kent Wind
NO <sub>2</sub>	Nitrogen dioxide
NPP	Navigation Protection Program
NRCan	Natural Resources Canada
O. Reg.	Ontario Regulation

O <sub>3</sub>	Ozone
°C	Degrees Celsius
OEB	Ontario Energy Board
OFA	Ontario Federation of Agriculture
OGVG	Ontario Greenhouse Vegetable Growers
OMAFRA	Ministry of Agriculture, Food and Rural Affairs
Oneida	Oneida Nation of the Thames
OP	Official Plan
OPG	Ontario Power Generation
OPSD	Ontario Provincial Standard Drawing
OWES	Ontario Wetland Evaluation System
PDWT	Prescribed Drinking Water Threat
PM <sub>2.5</sub>	Particulate Matter
PPS	Provincial Policy Statement
PSA	Project Study Area
PSW	Provincially Significant Wetlands
PTTW	Permit to Take Water
PWQMN	Provincial Water Quality Monitoring Network
rms	Root-mean-square
ROW	Right-of-way
SAC	Spills Action Centre
SAR	Species at Risk
SARA	<i>Species at Risk Act</i>
SARO	Species at Risk Ontario
SCN	Soybean Cyst Nematode
SCC	Species of Conservation Concern
SCGT	Simple Cycle Gas Turbine
SCN	Soybean Cyst Nematode
SCRCA	St. Clair Region Conservation Authority
SCTL	St. Clair Transmission Line
SGRA	Significant Groundwater Recharge Area
Six Nations	Six Nations of the Grand River Elected Council
SO <sub>2</sub>	Sulphur dioxide
SPA	Source Protection Area
SPP	Source Protection Plan
SRank	Subnational Rank

SS	Switching Station
SWH	Significant Wildlife Habitat
SWHTG	Significant Wildlife Habitat Technical Guide
SWP	Source Water Protection
TAC	Technical Advisory Committee
TC	Transport Canada
TEK	Traditional Ecological Knowledge
TFG	Three Fires Group
TMHC	Timmins Martelle Heritage Consultants Inc.
TSR	Thames-Sydenham and Region Source Protection Committee
TS	Transformer Station
V/m	Volts per metre
VC	Valued Components
VIS	Virtual Information Session
WHO	World Health Organization
WIFN	Walpole Island First Nation
WPA	Wellhead Protection Area
WPCP	Water Pollution Control Plant
WSP	WSP Global Inc.

# 1 Introduction

Hydro One Networks Inc. (Hydro One) is committed to energizing life. As southwestern Ontario continues to grow, safe and reliable power is needed to improve reliability for homes and businesses, support the region's local food supply and security, create economic growth, and bring more jobs to the region. To support this increased regional growth, Hydro One is proposing to construct a new double-circuit 230 kilovolt (kV) transmission line between the Lambton Transmission Station (TS), located in St. Clair Township and the Chatham Switching Station (SS), located in the Municipality of Chatham-Kent.

In February 2022, Hydro One commenced a Class Environmental Assessment (Class EA) to construct this new double-circuit 230 kilovolt transmission line. Hydro One is calling this undertaking the St. Clair Transmission Line Project (the Project).

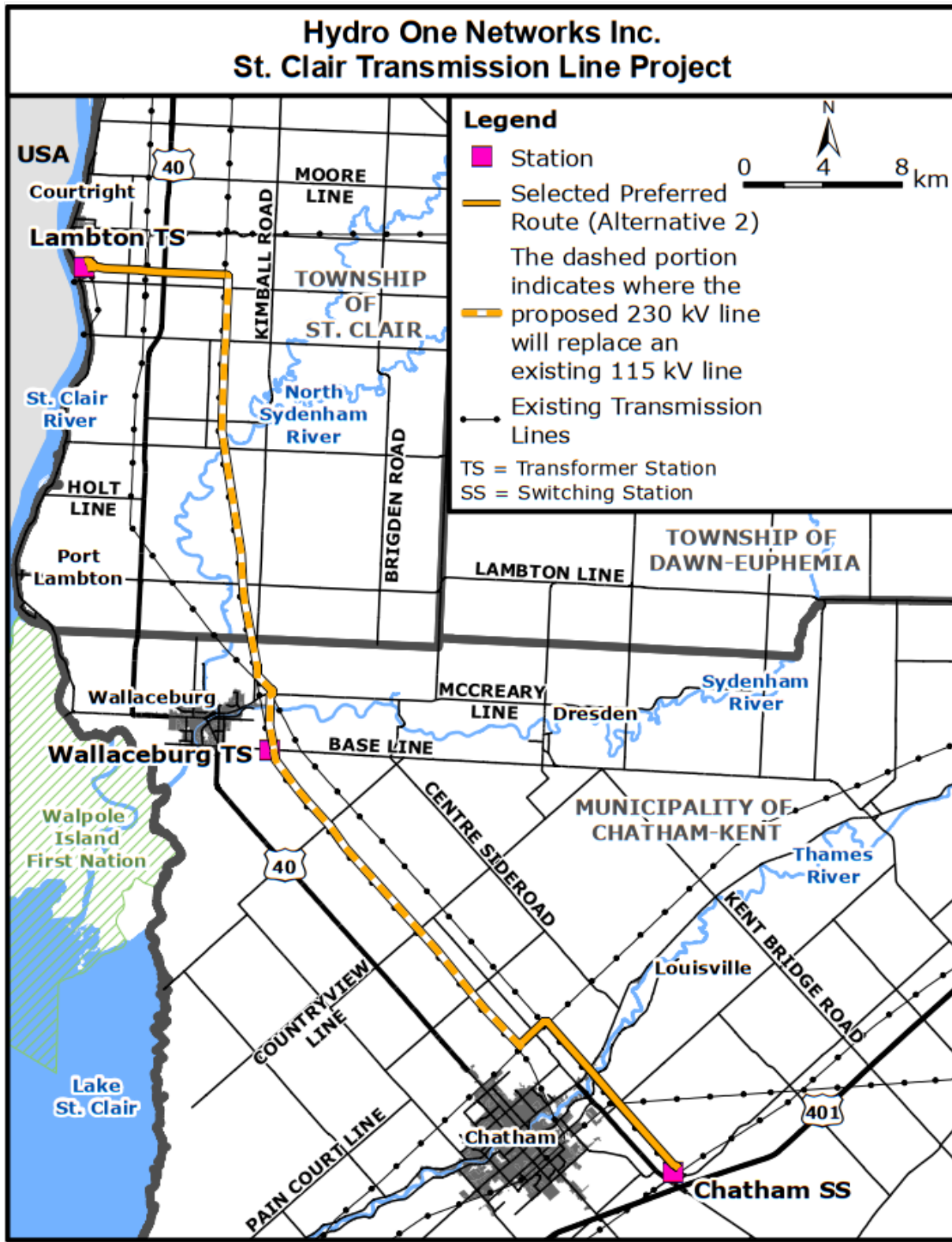
The proposed Project is subject to the Class Environmental Assessment for Minor Transmission Facilities (Hydro One, January 2022), an approved planning process under the *Environmental Assessment Act* (EA Act) designed for proponents to characterize the existing environment, assess potential environmental effects and mitigation, identify, and evaluate alternatives, conduct consultation and document study findings. This final Environmental Study Report (ESR) has been prepared in accordance with the Class EA.

The Project will be approximately 64 kilometres (km) in length and will connect the Lambton TS in the County of Lambton to the Chatham Switching Station (SS) in the Municipality of Chatham-Kent (**Figure 1-1**). As the preferred route alternative will repurpose approximately 41 km of an existing 115 kV transmission line corridor, the Project will involve removal of the existing transmission structures, conductor and associated components and equipment along this stretch of the existing transmission line, as well as approximately 3 additional km of islanded 115 kV transmission line corridor in the Wallaceburg area, from which the preferred route for the new 230 kV transmission line deviates. To facilitate the upgrade of the existing 115 kV transmission line to a 230 kV transmission line, an upgrade of the Wallaceburg TS from 115 kV to 230 kV will also be required. The Project will also involve an expansion of the Lambton TS and Chatham SS to facilitate the connection of the new transmission line.

This final ESR describes the Class EA process that was undertaken for the proposed Project. The final ESR:

- Summarizes existing conditions in the Local Study Area (LSA; 500 m) and Project Study Area (PSA; 120 m);
- Documents the notification to, and consultation undertaken with; Indigenous communities, government agencies, municipal staff and elected officials, interest groups and members of the public about the Project;
- Documents the route identification and evaluation process conducted to select the preferred route;
- Identifies potential environmental effects associated with the Project; and
- Identifies potential avoidance, mitigation, and restoration measures to address these potential environmental effects.

Figure 1-1: Project Location



## **1.1 Need for the Undertaking**

In March 2021, the Independent Electricity System Operator (IESO) – the agency responsible for monitoring electricity demand and forecasting future needs in the province – requested Hydro One to initiate work on development activities, including seeking relevant regulatory approvals and to construct a new double-circuit 230 kV transmission line between the Lambton TS in the County of Lambton to the Chatham SS in the Municipality of Chatham-Kent (**Appendix A**).

The purpose of the new double-circuit 230 kV transmission line is to:

- Ensure sufficient bulk transfer capabilities to supply the forecast load in the Windsor-Essex region and surrounding Chatham area in the near to mid-term; and,
- Improve the deliverability of resources in the Lambton-Sarnia area for intra-zonal and provincial supply.

The required in-service date for the Project is 2028 to address the specified bulk system electricity needs. To meet the energy needs of the region as quickly as possible, Hydro One is seeking opportunities to advance the in-service date.

## **1.2 Description of the Undertaking**

The undertaking will involve the installation of a new double-circuit 230 kV transmission line, including associated infrastructure (e.g., towers, access roads) and station improvements. The undertaking will also involve removal of the existing transmission structures, conductor and components associated with the existing 115 kV transmission line section that will be replaced. The Project will also involve an upgrade of the Wallaceburg TS from 115 kV to 230 kV, a new access road to Lambton TS, as well as expansion of the Lambton TS and Chatham SS to facilitate the connection of the new transmission line. Upon the successful completion of the Class EA process and receipt of subsequent required approvals, construction would begin. Construction is planned to begin in 2027, with potential to begin earlier if possible.

## **1.3 Alternatives to the Undertaking**

The Class EA process requires identification and evaluation of alternatives to the undertaking. “Alternatives to” the undertaking are functionally different approaches to addressing the need for the undertaking.



Alternatives to the undertaking must be reasonable from a technical, economic, and environmental perspective and must fall within the mandate of the proponent. It is understood that companies whose operating licences [i.e., as granted by the Ontario Energy Board (OEB)] are limited to assessment of transmission alternatives cannot, for example, assess generation as an alternative to transmission facilities.

This Project resulted from a recommendation of the IESO, as documented in the report “Need for Bulk System Reinforcements West of London” (September, 23, 2021) and the letter sent to Hydro One by the IESO in March 2021 requesting Hydro One to initiate work on development activities, including seeking relevant regulatory approvals and to construct a new double-circuit 230 kV transmission line between the Lambton TS in the County of Lambton to the Chatham SS in the Municipality of Chatham-Kent.

In such cases, the transmitter will accept the recommendations of an independent agency as a starting point for the Class EA Process and will not revisit alternatives considered and rejected by the planning process (e.g., generation alternatives and other transmission alternatives). The following summarizes the conclusions of the IESO report regarding the alternatives to the undertaking that were considered to address the identified need:

Alternative 1: Do nothing;

Alternative 2: Additional Generation; and

Alternative 3: New Transmission Infrastructure.

### **Alternative 1: Do Nothing**

The “Do Nothing Alternative” is an alternative to the undertaking that must be considered.

Due to the significant increase in the demand forecast for electricity in the Windsor-Essex region and the surrounding area, the Do Nothing Alternative would result in the inability to reliably supply the forecasted load growth. This load growth is anticipated for the Windsor-Essex region and the surrounding area in the near- and mid-term.

Furthermore, the “Do Nothing Alternative” would limit resources and bulk facilities in the region from operating efficiently for local and system needs. Therefore, the “Do Nothing Alternative” is not considered to be a feasible option.

## **Alternative 2: Additional Generation**

The IESO, in their September 23, 2021, report titled "Need for Bulk System Reinforcements West of London" (IESO, 2021), documents the results of a planning study undertaken by the IESO. This study assessed the adequacy of the bulk transmission system in the Windsor-Essex Region and recommended preferred near- and mid-term solutions to address identified needs.

After an assessment by the IESO of the capabilities and cost of potential resources, two resource types - a new natural gas-fired simple cycle gas turbine (SCGT), and an energy storage facility - were identified as the least-cost resource alternatives capable of supplying the magnitude of energy and capacity required. The resource alternatives would be located between the Chatham SS and the Lakeshore TS. Other generation types were also considered (e.g., wind, solar, and renewables, in combination with storage); however, the profile of energy required to meet the regional needs made these options less cost-effective compared to the SCGT and the energy storage facility. In the handoff letter dated March 26, 2021, the IESO stated that their analysis had found that this transmission solution (new double-circuit 230 kV transmission line between Lambton TS and Chatham SS) is the most cost-effective next step to supplying the increasing demand in the region.

## **Alternative 3: Transmission Alternatives**

The IESO report concludes that for the current planning assumptions and the evaluated load growth scenarios, new transmission was found to be the most cost effective and technically feasible option to meet identified system needs in a timely manner. For the needs considered, the transmission option has a net present value approximately \$1.2 billion lower than the least cost resource alternative for the most likely scenario. Based on the results of the two studies, the IESO recommended a new 230 kV double-circuit transmission line from the Lambton TS to the Chatham SS.

## **1.4 Approval Process and Regulatory Requirements**

This section outlines the approval process required under the Class EA process as well as other regulatory requirements.

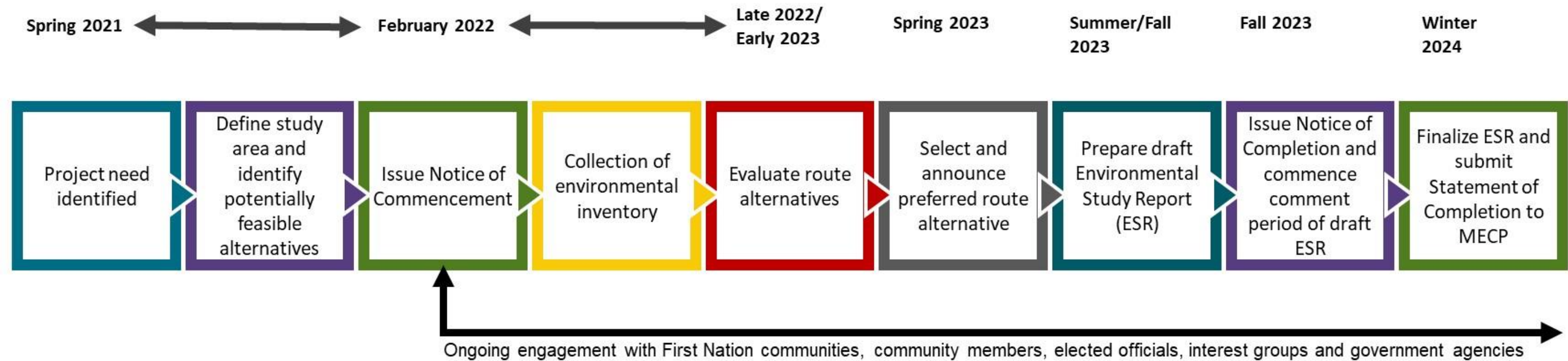
### **1.4.1 Class Environmental Assessment Process**

This final ESR has been prepared in accordance with the Class EA for Minor Transmission Facilities (Hydro One, January 2022) an approved planning process under the *EA Act*. Components of the process include:

- Establish need (**Section 1.1**);
- Identify and evaluate “alternatives to” the undertaking (**Section 1.3**);
- Define study area (**Section 1**);
- Issue initial notification (**Section 3.1**);
- Conduct an environmental inventory (**Section 4**);
- Identify and evaluate route alternatives (**Section 5**);
- Select the preferred route alternative (**Section 5.5**) and prepare the draft ESR;
- Issue Notice of Completion and the draft ESR for public review and comment (**Section 3.13**);
- File the final ESR and Class EA Statement of Completion with the Ministry of the Environment, Conservation and Parks (MECP) and proceed with the undertaking (**Section 3.13**); and,
- Conduct consultation and engagement throughout the process (**Section 3**).

The Class EA process is illustrated in **Figure 1-2**.

Figure 1-2: Class Environmental Assessment Process



The Class EA for Minor Transmission Facilities (Hydro One, January 2022) applies to Category B transmission projects that are not associated with Category B generation projects, as per the Guide to EA Requirements for Electricity Projects associated with Ontario Regulation (O. Reg.) 116 (MECP, 2011).

The criteria that triggered the Class EA for this Project is from Section 1.2 “Class” of Undertakings Subject to this Class EA, which states:

The projects that are subject to this Class EA Document are defined as follows:

- a. The planning, design and construction of minor transmission lines and/or transmission stations (including telecommunication stations), and the subsequent operation, maintenance and retirement of these facilities.

“Minor transmission lines” means all transmission lines that:

- i. Are capable of operating at a nominal voltage of equal to or greater than 115 kilovolts (kV) and less than 345 kV and are greater than 2 kilometres (km) in length; or are capable of operating at a nominal voltage of equal to or greater than 345 kV and are greater than 2 km and less than 75 km in length.
- b. (Note: Transmission lines that are capable of operating at a nominal voltage of equal to or greater than 345 kV and are equal to or greater than 75 km in length are excluded; those projects are subject to an Individual EA). The planning, design and construction required to modify or upgrade a transmission line, and the subsequent operation, maintenance and retirement of the revised line where:
  - i. The work requires replacement of poles or towers and/or changes in the right-of-way (ROW) for existing transmission lines capable of operating at a nominal voltage of equal to or greater than 115 kV and equal to or less than 500 kV.
  - ii. The modified or upgraded existing lines would operate at a nominal voltage of equal to or greater than 115 kV, and equal to or less than 500 kV (nominal voltage).
- c. The planning, design and construction required to modify or expand a transmission station, and the subsequent operation, maintenance and retirement of the modified station where:
  - i. Acquisition of additional property is required; and,
  - ii. The modified stations are capable of operating at a nominal voltage level of equal to or greater than 115 kV and equal to or less than 500 kV

(where a station has more than one voltage level, the highest level is used in defining the station's nominal operating voltage).

Hydro One issued a Notice of Completion of the draft ESR and subsequent comment period to municipal, provincial, and federal government officials and agencies, Indigenous communities consulted, potentially affected and interested persons, and interest groups. The draft ESR was available for public review and comment for a period of 30 calendar days, from November 6, 2023, until December 7, 2023. Additionally, in response to requests received from some Indigenous Communities and the Ministry of the Environment, Conservation and Parks (MECP), Hydro One extended the draft ESR comment period for these groups as requested. Hydro One made its best efforts to respond and address issues raised by concerned parties during the draft ESR comment period. Issues and their respective responses are documented and summarized in the final ESR.

During the comment period, a request may be made to the MECP for an order (Section 16 Order) requiring a higher level of study (i.e., requiring a comprehensive EA approval before being able to proceed) or that conditions be imposed (e.g., require further studies), only on the grounds that the requested order may prevent, mitigate, or remedy adverse impacts on constitutionally protected Aboriginal and treaty rights. The MECP will not consider requests on other grounds. No Section 16 Order requests were received by MECP or Hydro One relating to the Project.

A copy of the final ESR has been placed on the Hydro One Project website, as well as provided to the Environmental Assessment Branch (EAB) and the appropriate Regional EA Coordinator at MECP for filing. The final ESR and the Class EA Statement of Completion have been filed with MECP, and the proposed Project is considered accepted and may proceed as outlined in the final ESR.

#### **1.4.2 Other Permits, Licenses and Approvals**

In addition to meeting *EA Act* requirements, there are several permits, licenses and approvals that may be required under municipal by-laws and provincial and federal legislation and regulations. These are described in **Table 1-1**. In addition to the notifications and engagements described in this final ESR, Hydro One or its contractors will continue to contact the appropriate regulatory agencies to ensure that the proposed Project will meet the regulatory requirements prior to construction. The proposed Project does not trigger a federal EA under the *Impact Assessment Act*, 2019.

As stated in Section 62(1) of the *Planning Act* (R.S.O. 1990, c. P.13), "An undertaking of Hydro One Inc. that has been approved under the *EA Act* is not subject to this Act."

While the proposed Project is not subject to the *Planning Act* after completion of the Class EA, Hydro One will continue to work with the County of Lambton, the Township of St. Clair, and the Municipality of Chatham-Kent during and after the Class EA process and will continue to consult with them regarding design, and the potential effects of the construction on local traffic and nearby communities, as needed.

**Table 1-1: Potentially Required Permits, Licenses and Approvals**

<b>Permit, License, or Approval</b>	<b>Primary Agency</b>	<b>Description</b>
Section 92 Leave to Construct	OEB	Required for the construction of the new transmission line.
Transport Canada Aeronautical Assessment	Transport Canada	Required for the construction of the new transmission structures within 6 km of an aerodrome.
Nav Canada Land Use Assessment	Nav Canada	Required for the construction of the new transmission structures within 6 km of an aerodrome.
Environmental Activity and Sector Registry (EASR)/Permit to Take Water (PTTW)	MECP	May be required for construction dewatering.
Air and Noise EASR	MECP	May be required for noise-emitting equipment as part of the expansion of the Lambton TS or Chatham SS, or the upgrade of the Wallaceburg TS from 115 kV to 230 kV.
Industrial Sewage Works Environmental Compliance Approval (ECA) for station drainage	MECP	May be required for changes to the station drainage system as part of the expansion of the Lambton TS or Chatham SS, or the upgrade of the Wallaceburg TS from 115 kV to 230 kV.



Permit, License, or Approval	Primary Agency	Description
Approvals and/or Permits under the <i>Endangered Species Act, 2007</i>	MECP	May be required for planned works that might affect species at risk and/or their habitat which are protected under the <i>Endangered Species Act, 2007</i> .
Approvals and/or Permits under the Species at Risk Act (SARA), 2022	Environment and Climate Change Canada (ECCC) / Canadian Wildlife Services (CWS)	May be required for planned works that might affect species at risk and/or their habitat which are protected under the <i>Species at Risk Act, 2022</i> .
Archaeological Acceptance Letters	Ministry of Citizenship and Multiculturalism (MCM)	Archaeological assessment is required prior to undertaking new ground disturbance in areas with archeological potential.
Land Use Permit	Ministry of Transportation (MTO)	Required for project assets to be located within MTO Permit Control Areas.
Noise By-law Exemption	Township of St. Clair and Municipality of Chatham-Kent	An exemption may be required if the operation of construction equipment occurs outside of the Noise By-law curfew.
Use, Storage, Transportation of Explosives	Natural Resources Canada (NRCan)	Required for magazines, vehicles used for transportation of explosives, and activities related to storage of explosives in support of splicing.
Road Entrance Permits	Township of St. Clair and Municipality of Chatham-Kent	Required to construct potential new entrances for access to a construction site from existing municipal roads.
Building Permit	Township of St. Clair and Municipality of Chatham-Kent	May be required for additional buildings constructed (e.g., relay buildings) as part of the expansion of the Lambton TS or Chatham SS, or the upgrade of the Wallaceburg TS from 115 kV to 230 kV.
Demolition Permit	Township of St. Clair and Municipality of Chatham-Kent	Required for the demolition and removal of structures.

Permit, License, or Approval	Primary Agency	Description
Section 28 Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Permit	Lower Thames Valley Conservation Authority (LTVCA) and St. Clair Region Conservation Authority (SCRCA)	Required for construction works within LTVCA and SCRCA regulated areas.
<i>Fisheries Act</i> Authorization	Fisheries and Oceans Canada (DFO)	May be required for in-water construction works or works with potential releases that have potential to adversely affect fish or fish habitat.
Crown Land Work Permit	Ministry of Natural Resources and Forestry (MNRF)	May be required if authorization under the <i>Fisheries Act</i> is required.
Notice of Work	Rail Companies	May be required for crossings of federally regulated rail lines.
Clearance Letter	Utility companies	Required to cross utilities (e.g., natural gas or oil pipelines, fibre optics).

In the event that other permits are identified as required, Hydro One and/or the Engineering, Procurement and Construction (EPC) contractor will work with the regulator to ensure compliance.

## 2 Study Area

At the outset of the Class EA, two study areas (Local Study Area/LSA and Project Study Area/PSA) were identified to consider potential natural and socio-economic environmental features and potential effects associated with each of the route alternatives (**Figure 2-1**).

As further described in **Section 5.2** at the beginning of the Class EA process, the Hydro One Project team completed a preliminary assessment to identify the technical and environmental constraints and opportunities for the proposed double-circuit 230 kV transmission line. This included mapping known environmental and technical feature constraints, identifying opportunities to parallel existing linear infrastructure, as well as utilization of existing easements and/or rights-of-way (ROW), where possible.

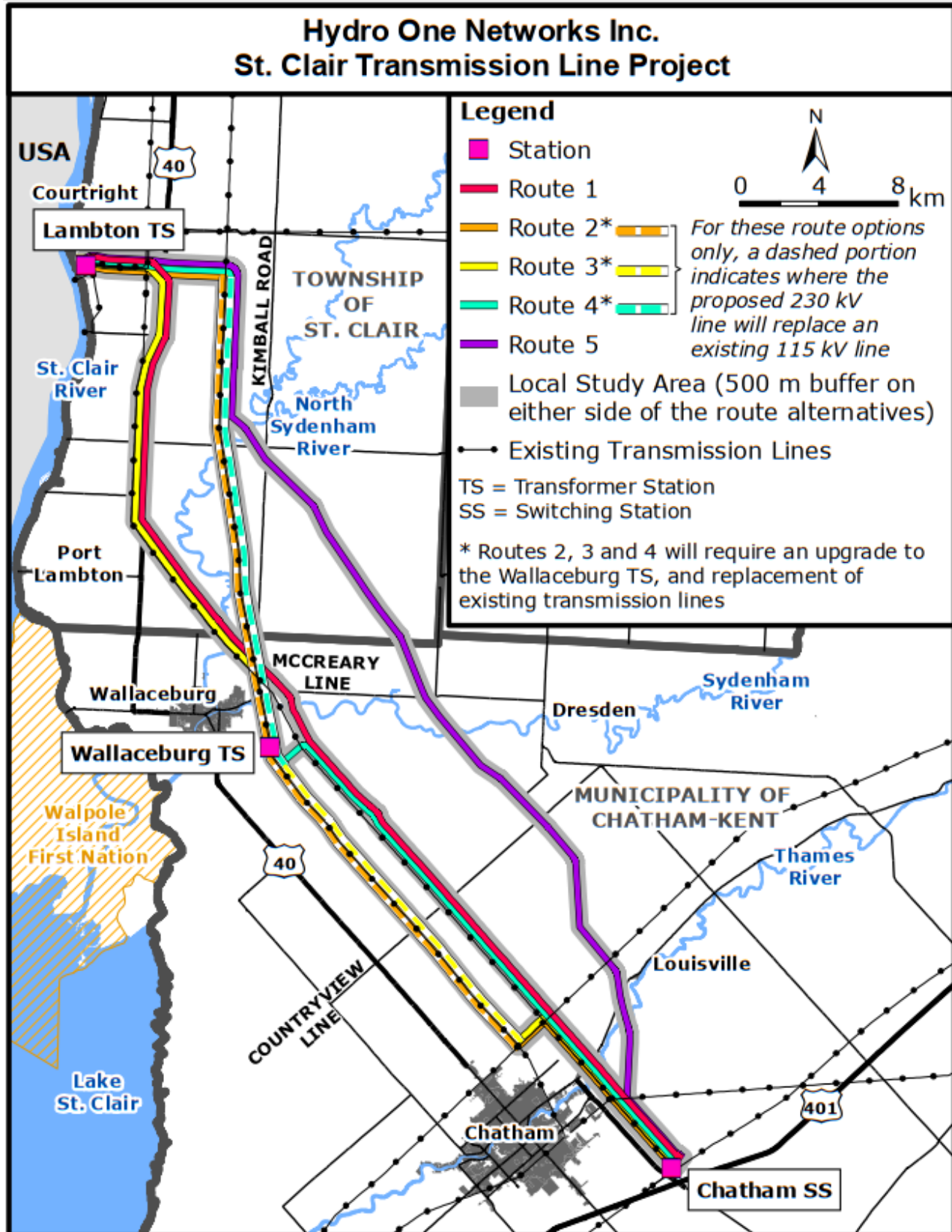
### 2.1 Project Study Area

A Project Study Area (PSA) was delineated to include lands within 120 metre (m) of each of the route alternative centre lines. The PSA encompasses the proposed length of the transmission line from the Lambton TS to the Chatham SS. The purpose of the PSA was to determine an area that would encompass the future asset location, associated ROW and abutting/directly adjacent lands such that technical studies and field investigations, for the purposes of documenting baseline existing conditions, could be appropriately scoped and planned.

### 2.2 Local Study Area

The Local Study Area (LSA) was delineated to include lands within 500 m of each of the route alternative centre lines. The LSA encompasses the proposed length of the transmission line route alternatives from the Lambton TS to the Chatham SS. The purpose of the LSA was to expand upon the PSA to include an area of potential indirect Project effects on the natural and socio-economic environments associated with each of the route alternatives.

Figure 2-1: Study Areas



### 3 Consultation

Consultation and engagement are an important component of the Class EA process by providing opportunities to meaningfully participate and provide input in the planning process. It also allows the proponent to learn about social, cultural, economic, and natural environment feedback and considerations related to the proposed Project. The key principles that have guided Hydro One's approach to consultation and engagement include:

- Ongoing, meaningful, and open engagement with residents and communities affected by or interested in the proposed Project;
- A transparent and flexible engagement process;
- Communicate Project information to support a two-way dialogue with Indigenous communities, local elected officials, federal, provincial, and municipal government agencies, local residents, farmers and property owners, interested persons, businesses, and interest groups;
- Ongoing opportunities for interested parties to learn about and provide meaningful input on the proposed Project; and,
- Full and fair considerations and documentation by the proponent of all input received during the consultation and engagement process and incorporation of such input, where feasible and reasonable, into Project planning.

The Project contact list at the time of this report is provided in **Appendix B-1**.

To facilitate transparent and robust consultation and engagement, a variety of tools were implemented, consisting of:

- Notification letters and postcards to provide updates on the Project. Notices were sent via Canada Post admail to available postal routes and PO boxes intersecting the LSA;
- Letters via registered mail (and in some cases delivered by hand) to potentially and directly affected landowners to provide updates on the Project and encourage any questions and feedback to be discussed with the appropriate Project representative;
- Newspaper, radio, and social media advertisements to provide updates on the Project and reminders of upcoming public engagement events;
- Phone call reminders ahead of upcoming virtual live discussions;
- Establishment of a Technical Advisory Committee, which consisted of various workshops to identify the analysis of the preferred route (**Section 3.11**);

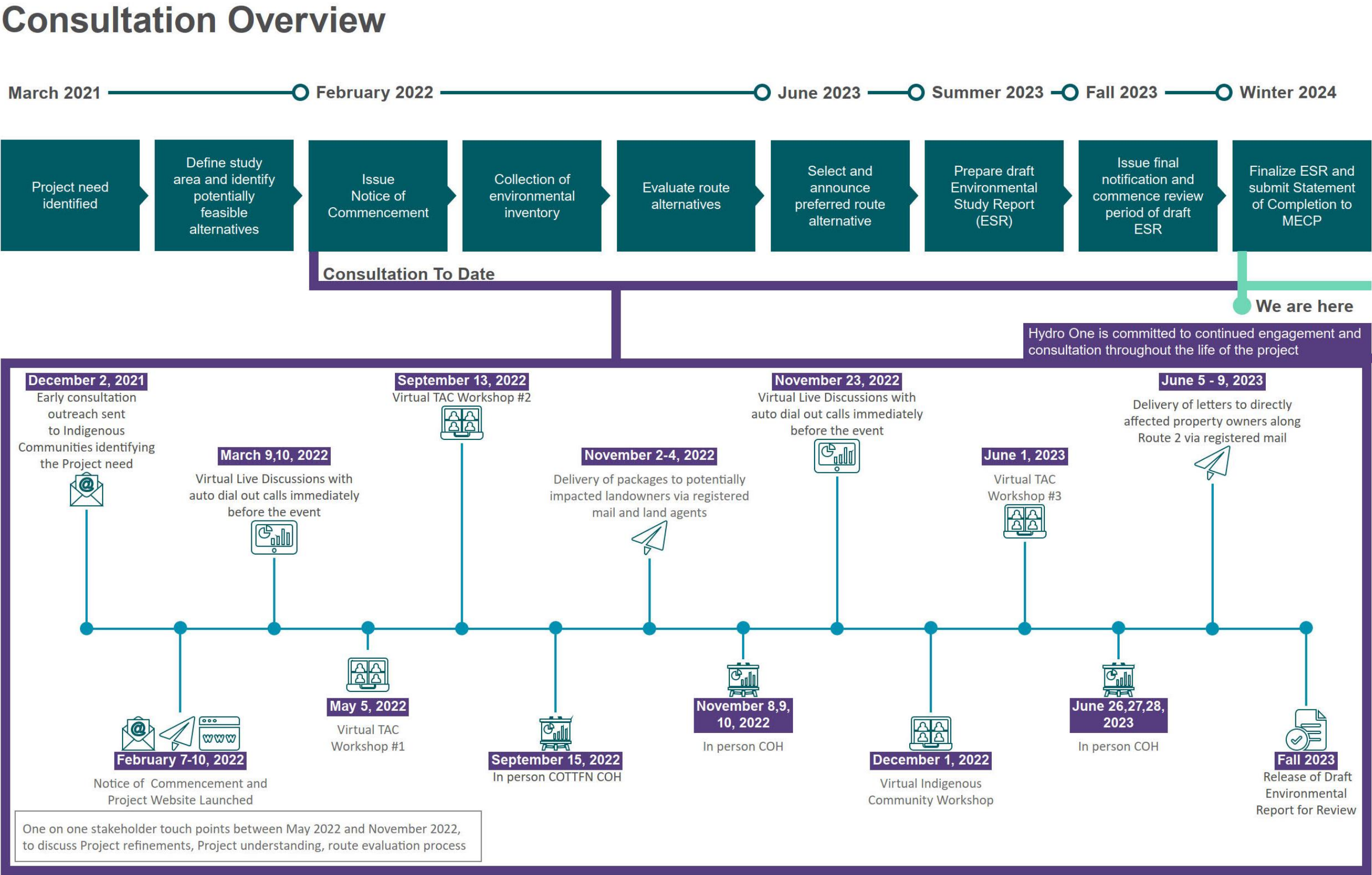
- In-person and virtual community open houses (COH), including virtual live discussions;
- Meetings and discussions with municipal, provincial and federal elected officials, agency and municipal staff, Indigenous communities, and residents;
- Virtual and in-person meetings, and correspondence with Rights-holders and stakeholders who expressed specific interests, concerns and/or feedback;
- Establishment of a Project contact list, through which interested parties received Project updates via email, or via Canada Post mail for those who requested accommodation;
- Dedicated Community Relations email address and phone number for receiving questions and feedback; and,
- A Project website:  
<https://www.hydroone.com/abouthydroone/CorporateInformation/majorprojects/saint-clair> with an interactive online mapping tool to help share Project information and updates.

The results of the consultation and engagement activities are summarized in the sections below. Feedback was considered by the Project team and incorporated where appropriate. Copies of consultation and engagement materials such as notices, COH display panels, presentation slides and correspondence are included in **Appendix B-2**, consultation materials with Indigenous communities are included in **Appendix B-3**, key correspondence with stakeholders is included in **Appendix B-4** and Technical Advisory Committee consultation materials are included in **Appendix B-5**. A copy of the Project Record of Consultation is provided in **Appendix B-6** and a copy of the Draft ESR Comments and responses are provided in **Appendix B-7**.

A high-level overview of the consultation and engagement timeline is outlined in **Figure 3-1** and further explained in the subsequent sections below.



Figure 3-1: Consultation Timeline



### **3.1 Notice of Commencement and Community Open House #1**

The Notice of Commencement, which included an invitation for the virtual COH #1, was published in the Sarnia Observer, Sarnia and Lambton County This Week, Wallaceburg Courier Press, Chatham-Kent This Week, and The Chatham Voice, starting on February 10, 2022. The Notice of Commencement introduced the Project by providing details on the Project need, description, study area, route alternatives and associated regulatory processes. The Notice of Commencement referred to the Project website and solicited questions and comments to be provided to Hydro One Community Relations.

Copies of the Notice of Commencement and Community Open House #1 were distributed as follows:

- The Notice of Commencement was issued to homes and businesses within the LSA by Canada Post admail beginning on February 7, 2022;
- A hand delivery of the Notice of Commencement was completed on February 10, 2022, for properties that were not part of the larger admail campaign due to the configuration of the admail mailing routes;
- On February 10, 2022, Hydro One sent the Notice of Commencement to Chippewas of the Thames First Nation (COTTFN) via the NationsConnect web portal and email. Hydro One also emailed the Notice of Commencement to Caldwell First Nation (CFN), Aamjiwnaang First Nation (AFN), Walpole Island First Nation (WIFN), Oneida Nation of the Thames (Oneida), Chippewas of Kettle and Stony Point First Nation (CKSPFN), Southwind Development Corporation (associated with CKSPFN), and Six Nations of the Grand River (Six Nations);
- On February 10, 2022, the Notice of COH #1 was published in the Sarnia Observer, Sarnia and Lambton County This Week, Wallaceburg Courier Press, Chatham-Kent This Week and The Chatham Voice;
- On February 10 and 11, 2022, Hydro One emailed the Notice of Commencement to federal agencies, provincial ministries and authorities, municipalities, interest groups and businesses;
- On February 17, 2022, Hydro One emailed the Notice of Commencement to the Haudenosaunee Confederacy Chiefs Council (HCCC) and Haudenosaunee Development Institute (HDI);
- On March 2, 2022, Hydro One uploaded the Notice of Commencement to the CFN Consultation Portal;
- Radio ads were played on local radio stations CIJMI-FM (Lambton Shores), CKTI-FM (Lambton Shores), CHKS-FM (Sarnia, Petrolia, Enniskellen, Plympton-



Wyoming, Pt. Edward), CHOK-FM (Sarnia, Petrolia, Enniskellen, Plympton-Wyoming, Pt. Edward), CFGX-FM (Sarnia, Petrolia, Enniskellen, Plympton-Wyoming, Pt. Edward), CKSY-FM (Chatham-Kent), CKUE-FM (Chatham-Kent) from February 10 to 19, 2022;

- Automated calls to community members in Lambton County and the Municipality of Chatham-Kent were made on March 5, 9, and 10, 2022, to encourage participation in COH #1; and,
- Social media advertisements ran on Facebook from February 15 to March 10, 2022, to promote COH #1. Each post was connected to the Project website. On March 9, 2022, and April 21, 2022, Hydro One sent the Project Notice of Commencement to landowners within the ROW of each route alternative to make sure potentially affected landowners were notified. The Notice of Commencement was sent via direct mail.

Refer to **Appendix B2** for a copy of the Notice of Commencement and Community Open House #1.

## **3.2 Community Open House #1 (COH #1)**

### **3.2.1 Overview**

Due to the Coronavirus Disease 2019 (COVID-19) pandemic, virtual engagement opportunities were offered. COH #1 consisted of an interactive virtual room, available on the Project website, and two virtual Live Discussions.

### **3.2.2 Virtual Room #1**

COH #1 included a tour through an interactive virtual room, which was made available starting on February 25, 2023, and can still be accessed today on the Project website.

The virtual interactive room allowed Rights-holders and stakeholders to navigate on the digital platform and view Project information, similar to what they would have seen at an in-person COH, at their own convenience and provide feedback by contacting Hydro One Community Relations. The key Project information shared included:

- The key organizations involved with the Project;
- How the electricity system works;
- An overview of the Independent Electricity System Operator (IESO);
- Why the Project is needed;
- The Class EA process and timeline; and,

- Class EA process highlights (such as, working with landowners, route alternatives evaluation, key milestones for the Project and next steps for stakeholder participation in the Class EA process).

Refer to **Appendix B2** for the virtual COH #1 materials.

### 3.2.3 Virtual Live Discussions

To provide flexibility in schedule, virtual Live Discussions were held over two days (presenting the same content) on March 9, 2022, and March 10, 2022. The two virtual Live Discussions were scheduled to provide participants with an opportunity to learn more about the Project need, the Class EA process, the proposed route alternatives, the route evaluation and selection process, key milestones, and next steps. Both virtual Live Discussions were recorded and remain accessible on the Project website for review. **Table 3-1** presents details of the sessions.

**Table 3-1: March 2022 COH #1 Virtual Live Discussion Participation**

Date and Time	Platform/Venue	Number of Attendees
March 9, 2022 7:00 p.m. to 8:00 p.m. Eastern Time (E.T.)	Live streamed presentation and discussion	3,357
March 10, 2022 7:00 p.m. to 8:00 p.m. E.T.	Live streamed presentation and discussion	1,960

The virtual Live Discussions were presented through a virtual forum and participants could register and call into the event to listen to the presentation and/or view the live stream of materials online. Participants were able to submit their questions in advance or join a queue to ask live questions to Project representatives. The virtual Live Discussions included a panel of Hydro One representatives, a representative from the IESO, and a moderator. During the virtual Live Discussions, Hydro One responded to pre-submitted questions and live questions. Hydro One asked three survey polling questions during each of the virtual Live Discussions and participants were invited to phone in their response. Hydro One uploaded the video presentation, audio recordings from the Question and Answer (Q&A) and Notice materials to the St. Clair Transmission Line Project website:

<https://www.hydroone.com/abouthydroone/CorporateInformation/majorprojects/saint-clair>

Overall, the virtual Live Discussions were well attended, with a combined total of over 5,000 participants signing on over the two days, as shown in **Table 3-1**. A combined total of 24 questions were answered during the sessions and most questions focused on the following themes:

- General Project information;
- Impact to residential/agricultural land;
- Route selection process;
- Property (including property rights and property acquisition);
- Route direction, location and design;
- Existing and new infrastructure; and,
- Local job opportunities.

Pre-submitted and unanswered live questions were responded to by Hydro One Community Relations after the virtual Live Discussions. There was a total of 20 questions addressed during the live session and a remaining 55 questions were responded to by the Hydro One Community Relations team after the sessions. A summary of key questions and responses throughout the Class EA are provided in **Section 3.12**.

### 3.2.3.1 Virtual Live Discussion – March 9, 2022

In total, 3,357 participants joined the March 9, 2022, virtual Live Discussion and the Hydro One panel responded to 12 live questions and one pre-submitted question. The results of the three survey polling questions asked during the event are summarized in **Table 3-2**.

**Table 3-2: March 9, 2022, Virtual Live Discussion Survey Polling Question Summary**

Survey Question	Options	Response Count
<b>Question 1:</b> Why are you joining us this evening?	1) To learn more about the Project	1) 44.1%
	2) Interest to learn more about the route alternatives for the new transmission line	2) 21.4%
	3) To learn how to participate in the Project	3) 8.1%
	4) To ask a question to the Project team	4) 2%
	5) All of the above	5) 24.2%
<b>Question 2:</b> What is your preferred method to receive	1) Direct mail	1) 36.6%
	2) Email	2) 20%
	3) Virtual COH/tele-town halls	3) 16%
	4) In-person meetings [when it is safe to do so]	4) 3.4%

Survey Question	Options	Response Count
Project updates or information?	5) All of the above	5) 24%
<b>Question 3:</b> After this evening's virtual open house, what is your level of support for the Project?	1) Very supportive	1) 11.1%
	2) Supportive	2) 14.6%
	3) Neutral or unsure	3) 56.9
	4) Not very supportive	4) 9%
	5) Not supportive at all	5) 8.3
<b>Question 1</b>	<b>Total Responses</b>	<b>322</b>
<b>Question 2</b>	<b>Total Responses</b>	<b>175</b>
<b>Question 3</b>	<b>Total Responses</b>	<b>144</b>

As shown in **Table 3-2**, most respondents attended the virtual Live Discussion to learn more about the Project and were neutral or unsure of their support for the Project. In addition, most respondents preferred direct mail for Project updates and information. This feedback informed ongoing engagement and evaluation for the Project.

### 3.2.3.2 Virtual Live Discussion – March 10, 2022

In total, 1,960 participants joined the March 10, 2022, virtual Live Discussion and the Hydro One panel responded to 12 live questions. The results of the three survey polling questions asked during the event are summarized in **Table 3-3**.

**Table 3-3: March 10, 2022, Virtual Live Discussion Session Survey Polling Question Summary**

Survey Question	Options	Response Count
<b>Question 1:</b> Why are you joining us this evening?	1) To learn more about the Project	1) 35.1%
	2) Interest to learn more about the route alternatives for the new transmission line	2) 13%
	3) To learn how to participate in the Project	3) 17.5%
	4) To ask a question to the Project team	4) 2.6%
	5) All of the above	5) 31.8
<b>Question 2:</b> What is your preferred method to receive Project updates or information?	1) Direct mail	1) 27.9
	2) Email	2) 11.7%
	3) Virtual COH/tele-town halls	3) 34.2%
	4) In-person meetings [when it is safe to do so]	4) 2.7%
	5) All of the above	5) 23.4%
<b>Question 3:</b> After this evening's virtual open house,	1) Very supportive	1) 11%
	2) Supportive	2) 12.2%
	3) Neutral or unsure	3) 70.7%

Survey Question	Options	Response Count
what is your level of support for the Project?	4) Not very supportive	4) 1.2%
	5) Not supportive at all	5) 4.9%
<b>Question 1</b>	<b>Total Responses</b>	<b>154</b>
<b>Question 2</b>	<b>Total Responses</b>	<b>111</b>
<b>Question 3</b>	<b>Total Responses</b>	<b>82</b>

As shown in **Table 3-3**, most respondents attended the virtual Live Discussion to learn more about the Project and were neutral or unsure of their support for the Project. In addition, most respond preferred virtual COHs/tele-town halls for Project updates and information. This feedback informed ongoing engagement and evaluation for the Project.

### 3.3 Community Open House #2 (COH #2)

#### 3.3.1 Overview

COH #2 consisted of three in-person events, a virtual room, and a virtual Live Discussion.

Prior to COH #2 Hydro One identified refinements to the route alternatives, and station expansions that may be required for the Project. Landowners directly affected by these refinements and station expansions were provided an information package via registered mail. The package sent included a:

- Personalized letter addressed to each landowner noting the specific property identified as affected by the refinement or expansion. The letter included information on the Project's timeline, the reasoning for the refinement or station expansion and how it could potentially affect their property, links to additional information such as an interactive map, and an invitation to COH #2 to be held in November 2023. All letters included contact information for further engagement.
- Map displaying the original route alternative and the refined alternative, along with the reasoning.

Refer to **Appendix B2** for the letter template and the mapping included in the information package.

During this same time Hydro One sent out a package via both registered mail and hand delivery to potentially affected landowners along the five route alternatives. These attempts were to ensure that potentially affected landowners were aware of the Project,

the upcoming COH #2 event and had opportunity to ask questions and provide feedback about the Project. Information packages delivered contained:

- Personalized letter addressed to each landowner noting the specific property identified as potentially affected by the Project. The letter included information on the Project's timeline, links to additional information such as an interactive map, and an invitation to COH #2 to be held in November 2023. All letters included contact information for further engagement.
- Set of tile maps showing the potentially affected property and the route alternatives.

Refer to **Appendix B2** for the letter template included in the information package.

Hydro One issued a Notice for COH #2 in October 2022. Copies of the Notice were distributed as follows:

- The Notice was emailed to the Project contact list on October 26, 2022;
- The Notice of Commencement was issued to homes and businesses within the LSA by Canada Post admail beginning on October 26, 2022;
- A hand delivery of the Notice was completed on November 3, 2022, for properties that were not part of the larger admail campaign due to the configuration of the admail mailing routes;
- The Notice was published in the Sarnia Observer, Sarnia and Lambton County This Week, Wallaceburg Courier Press, Chatham-Kent This Week, The Chatham Voice, Blenheim News Tribune, and Ridgeway Independent News on October 26 and/or 27, 2022;
- Radio ads were played on local radio stations CKTI-FM (Lambton Shores), CFGX-FM (Sarnia, Petrolia, Enniskillen, Plympton-Wyoming, Pt. Edward), and CKSY-FM (Chatham-Kent) between October 27 and November 8, 2022, for the in-person COH, and between November 11 and 22, 2022, for the virtual Live Discussion;
- Automated calls to community members in Lambton County and the Municipality of Chatham-Kent were made on November 21 and 23 2022, to encourage participation in COH #2;
- Social media advertisements ran on Facebook from October 28, 2022 to November 10, 2022, to promote COH #2. Each post was connected to the Project website. Each post was connected to the Project website; and,
- Delivery of an information package was completed for potentially affected landowners. The package included the Notice, a letter indicating the potentially

affected property, and a set of tile maps. These were delivered via registered mail and hand delivery between November 2 and November 5, 2022.

Refer to **Appendix B2** for the notice of COH #2.

### 3.3.2 In-Person Community Open House #2

In-person COH #2 events were held in Mooretown, Wallaceburg, and Chatham on November 8, 9 and 10, 2022, respectively. The in-person COH #2 events provided opportunity for members of the public to review Project information, provide feedback and speak one-on-one with Project team members. The key information shared at these sessions included:

- Project overview and benefits;
- Class EA process;
- Refinements and rationale for these refinements;
- Station expansion and upgrades potentially required for the Project;
- Summary of feedback received from stakeholders to date on the Project;
- Preferred route selection process;
- Process for working with landowners; and,
- Project timeline and next steps.

**Table 3-4** presents details and sign-in sheet attendance for COH #2 in-person events.

**Table 3-4: November 2022 In-person COH #2 Events Participation**

Date and Time	Venue	Number of Signed-in Attendees
November 8, 2022 6:00 p.m. to 8:00 p.m. E.T.	Mooretown Sports Complex, Mooretown	40
November 9, 2022 6:00 p.m. to 8:00 p.m. E.T.	Royal Canadian Legion 52, Wallaceburg	62
November 10, 2022 6:00 p.m. to 8:00 p.m. E.T.	The Active Lifestyle Centre, Chatham	40

Table-sized maps were made available to the members of the public at the venues to view the proposed route alternatives in greater detail. Staff utilized tablets to display interactive mapping, which aided in individual discussions about specific areas or properties. Handouts on various topics were also made available, including topics such as: IESO general information and contact information, electric and magnetic fields, and additional maps. The Project team at the COH #2 events included representatives from



multiple Hydro One Lines of Business, the IESO, as well as consultants supporting the Project. The Project team members listened to feedback from community members and provided details about the Project, the Class EA and preliminary design considerations. Comments and questions were noted and addressed by the Project team.

Overall, in-person COH #2 events were attended by 142 participants and most questions focused on the following themes:

- General Project information;
- Impacts to residential/agricultural land;
- Route selection process;
- Property (including property rights and property acquisition);
- Route direction, location and design;
- Existing and new infrastructure; and,
- Project need.

### **3.3.3 Virtual Room #2**

COH #2 included a tour through an interactive virtual room, which was made available starting on November 8, 2023, and can still be accessed today on the Project website.

The virtual interactive room allowed Rights-holders and stakeholders to navigate on the digital platform and view Project information, similar to what they would have seen at an in-person COH, at their own convenience and provide feedback by contacting Hydro One Community Relations. The key Project information shared includes:

- Project overview and benefits;
- Class EA process;
- Refinements and rationale for these refinements;
- Station expansion and upgrades potentially required for the Project;
- Summary of feedback received from stakeholders to date on the Project;
- Details on each of the specific route alternative refinements;
- Preferred route selection process;
- Process for working with property owners; and,
- Project timeline and next steps.

### **3.3.4 Virtual Live Discussion – November 23, 2022**

A virtual Live Discussion was held on November 23, 2022. The virtual Live Discussion was scheduled to provide stakeholders with an opportunity to learn more about the Project need, the Class EA process, the proposed route alternatives, station expansion



and upgrades potentially required, the route selection process, key milestones, and next steps.

The virtual Live Discussion was presented through a virtual forum and participants could register and call into the event to listen to the presentation and/or view the live stream of materials online. Participants were able to submit their questions in advance or join a queue to ask live questions to Project representatives. The virtual Live Discussion included a panel of Hydro One representatives, a representative from the IESO, and a moderator. During the virtual Live Discussion, Hydro One responded to pre-submitted questions and live questions. The participants were invited to phone in with their questions. Hydro One uploaded the video presentation, audio recordings from the question-and-answer period, and Notice materials to the Project website.

Overall, the virtual Live Discussion was well attended with a total of 3,382 participants signing in. A combined total of 14 questions were answered during the live sessions and most questions focused on the following themes:

- General Project information;
- Impact to residential/agricultural land;
- Property (including property rights and property acquisition);
- Route direction, location, design;
- Local job opportunities; and,
- Project Need.

Unanswered pre-submitted and live questions were responded to by Hydro One Community Relations after the virtual Live Discussion. There were 36 questions in total, 14 were answered live and Hydro One Community Relations followed up on 22 after the Live Discussion. A summary of key questions and responses throughout the Class EA are provided in **Section 3.12**.

**Table 3-5** provides details of the virtual COH #2 on November 23, 2022.

**Table 3-5: November 2022 Virtual COH #2 Participation**

Date and Time	Platform/Venue	Number of Attendees
November 23, 2022 6:00 p.m. to 8:00 p.m. E.T.	Live streamed presentation and discussion	3,382

### 3.4 Community Open House #3 (COH #3)

#### 3.4.1 Overview

COH #3 consisted of three in-person events.

Prior to COH #3, all directly affected landowners with properties on the ROW of the preferred route were sent a package via registered mail and engaged one-on-one by Hydro One's dedicated Real Estate representatives. The package sent included the following:

- Personalized letter addressed to each directly affected landowner. The letter included the notice of preferred route selection and notice of affected property(ies). It discussed Project need, timelines, next steps and contact information for their dedicated Hydro One Real Estate representative and Community Relations for general questions about the Project;
- Map of the preferred route selection;
- Map(s) of the affected property(ies) proposed ROW and other Project information.
- Notice of a preferred route and Invitation to COH #3;
- Route Selection Fact Sheet which included information about the route evaluation and selection process; and,
- Land Acquisition Compensation Principles booklet.

Refer to **Appendix B2** for the letter template, Notice of the Preferred Route and Invitation to COH #3, and Information sheet.

Hydro One issued a Notice of a Preferred Route and Invitation to COH #3 in June 2023. Copies of the Notice were distributed as follows:

- The Notice was emailed to the Project contact list on June 2, 2023;
- The Notice was mailed to homes and businesses within the LSA as admail by Canada Post on June 2, 2023. The Notice was also included in the package sent to all directly affected landowners;
- A hand delivery of the Notice was completed on June 5, 2023, for properties that were not part of the larger admail campaign due to the configuration of the admail mailing routes. The Notice was published in the Wallaceburg Courier Press, Chatham-Kent This Week, The Chatham Voice, Blenheim News Tribune, and Ridgetown Independent News on June 7 and/or 8, 2023. The Notice was published again on June 21 and/or 22, 2023, in Wallaceburg Courier Press,

Chatham-Kent This Week, The Chatham Voice, Blenheim News Tribune, Thamesville Herald and Ridgetown Independent News;

- Radio ads were played on local radio stations CKSYFM (94.3 CKSY) and CFCOFM (Country 929 FM) between June 5 and 25, 2023;
- An information package was delivered via registered mail on June 5, 2023, for directly affected landowners, with properties on the ROW of the preferred route; via registered mail and landowners were engaged one-on-one by Hydro One's dedicated Real Estate representatives;
- Social media advertisements ran on Facebook from June 6 to June 25, 2023, to promote COH #2. Each post was connected to the Project website. Each post was connected to the Project website; and,
- A video presentation describing the route evaluation process and rationale for selection of the preferred route was made available on the Project website on June 5, 2023, and remains accessible today. The video can be accessed through this link: <https://youtu.be/rXPnqqPx6L8>.

Refer to **Appendix B2** for the COH #3 materials.

### **3.4.2 In-Person Community Open House #3**

In-person COH #3 events were held in Brigden, Wallaceburg, and Chatham on June 26, 27, and 28, 2023, respectively. The in-person COH #3 events provided opportunity for members of the public to review Project information, provide feedback and speak one-on-one with Project team members. Key information shared includes:

- Hydro One's role in the electricity system;
- Project overview and benefits;
- Preferred route and benefits;
- Class EA process;
- Route alternatives evaluated;
- Public feedback considered in the evaluation of the route alternatives;
- Evaluation criteria for route alternatives;
- Route alternatives evaluation results;
- Ongoing engagement;
- Mitigation and restoration opportunities;
- Considerations for detailed design of the transmission line;
- Electric and Magnetic Fields (EMF) information; and,
- Project timeline.

**Table 3-6** presents details and sign-in sheet attendance for COH #3 events on June 26, 27, and 28, 2023.

**Table 3-6: June 2023 In-person COH #3 Participation**

Date and Time	Location	Number of Signed-in Attendees
June 26, 2023 2:00 p.m. to 8:00 p.m. E.T.	Brigden Fairgrounds, Brigden	33
June 27, 2023 2:00 p.m. to 8:00 p.m. E.T.	UAW Local 251 Hall, Wallaceburg	29
June 28, 2023 2:00 p.m. to 8:00 p.m. E.T.	Kent Belgian Centre, Chatham	32

Table-sized maps were made available to the members of the public at the venues to view the preferred route in greater detail. Staff utilized tablets to display interactive mapping, which supported individual discussions about specific areas or properties. Handouts on various topics were also made available, including topics such as, IESO general information, and EMF. The Project team at COH #3 events included representatives from multiple Hydro One Lines of Business, the IESO, as well as consultants supporting the Project. The Project team members listened to feedback from community members, provided details about the Project, the Class EA and preliminary design considerations. Comments and questions were noted by the Project team.

Overall, in-person COH #3 events were attended by more than 94 participants and most questions focused on the following themes:

- General Project information;
- Effects to residential/agricultural land;
- Route selection process;
- Property (including property rights and property acquisition);
- Route direction, location, design;
- Existing and new infrastructure;
- Project need; and,
- Construction.

### 3.5 Indigenous Communities

Consultation with Indigenous communities is an important part of the engagement requirements of the Class EA process. The Crown's Duty to Consult requirements per Section 35 of the *Constitution Act* (1982) may be discharged (partially or fully) concurrent with the Class EA process. Hydro One contacted the Ministry of Energy on April 19, 2021, to understand if the Crown's Duty to Consult was triggered by the Project. Hydro One wished to confirm which Indigenous communities were to be consulted and if the Crown would be delegating procedural aspects of the consultation to Hydro One. In the correspondence Hydro One provided a description of the characteristics, general location and scope of the proposed Project.

On July 6, 2022, a letter from the Ministry of Energy provided specific delegation of procedural aspects of the Crown's Duty to Consult to Hydro One, and advised that the following communities were to be included in the consultation and engagement process (see **Appendix B4** for the Hydro One inquiry letter to the Crown and the Crown Duty to Consult delegation letter):

- Aamjiwnaang First Nation;
- Bkejwanong (Walpole Island) First Nation;
- Caldwell First Nation;
- Chippewas of Kettle and Stony Point First Nation;
- Chippewas of the Thames First Nation;
- Oneida Nation of the Thames; and,
- Six Nations of the Grand River First Nation:
  - Six Nations Elected Council
  - Haudenosaunee Confederacy Chiefs Council

The communities listed above were notified of the proposed Project through a pre-Notice of Commencement email sent on December 2, 2021, notifying the communities that the IESO had contacted Hydro One identifying the need to build a 230 kV transmission line from Lambton TS to Chatham SS. A formal Notice of Commencement was sent to all Indigenous communities February 2022, providing notification that Hydro One was initiating a Class EA for the Project. The letters outlined that the procedural aspects of the Duty to Consult had been delegated to Hydro One and provided Crown contacts for questions or comments regarding this delegation.

The Indigenous community consultation and engagement process was implemented to promote a transparent and meaningful approach. The process included:

- Notifications and provision of information to provide updates on the Project throughout the Class EA process;
- Ongoing reminders of upcoming public and Indigenous specific community information events;
- Offers by the Hydro One Project team to meet with the community to present the proposed Project and to address their issues or concerns;
- Frequent meetings, correspondence, and discussions with designated staff/leaders from Indigenous communities;
- Dedicated Indigenous Relations Project representatives;
- The invitation to participate in the Technical Advisory Committee (TAC);
- The invitation to participate in archaeological assessments and Natural Environment field studies. Including the sharing of survey locations to assist in the design of the Natural Environment field program to gather input in advance;
- A series of route evaluation documents were created and shared with the Indigenous communities to assist in gathering input on the route evaluation process;
- The invitation to participate in a virtual Indigenous community workshop to provide input into the Indigenous Culture, Values and Land Use Category to inform the route evaluation;
- Establishment and maintenance of a Project website and interactive Project map (St. Clair Transmission Line Project Webpage), allowing for the sharing of Project information and updates; and,
- Offering capacity funding to support monitoring and Project engagement activities.

Hydro One acknowledges the challenges that Indigenous communities faced in recent years due to COVID-19, and that these challenges impacted communities' ability to address and respond to requests for engagement by proponents such as Hydro One. To address these new challenges early in this Project, Hydro One attempted to facilitate engagement safely, using virtual tools and platforms to a greater extent. Ongoing correspondence and records of engagement activities with Indigenous communities is included in the Record of Consultation (**Appendix B3**).

### **3.5.1 Capacity Funding Agreements**

The Indigenous communities identified by the Crown to be consulted by Hydro One (via delegation) are key contributors to the Project planning. At the outset of the Class EA process, Hydro One offered financial assistance through Capacity Funding Agreements (CFA). The CFAs are meant to address the following aspects with communities:

- Outline an agreed-upon method of consultation and engagement, considering community protocols and practices;
- Outline a jointly agreed-upon work plan and budget for each community to be meaningfully consulted on the Project, including adequate capacity and resourcing to participate;
- Identify a Community Engagement Coordinator or similar position; and,
- Outline a process for the sharing of information regarding the Project and associated studies and regulatory processes.

Hydro One recognizes that each community may wish to amend aspects of the agreement to reflect community consultation protocols that may already be established. Indigenous communities were requested to review the agreements and share revisions with Hydro One.

Funding was also offered to Indigenous communities seeking to undertake or enhance Traditional Ecological Knowledge/Traditional Resource and Land Use studies (collectively referred to as Indigenous Knowledge). Where appropriate, and if provided in advance of the final ESR, the findings from these studies have been incorporated throughout the final ESR.

### **3.5.2 Indigenous Community Participation in Field Surveys**

As part of its initiatives to support and build capacity for the involved Indigenous communities that are participating in the Project, Hydro One offered each community the financial resources necessary to hire a field monitor to participate in the field surveys conducted on behalf of the Project. All communities identified by the Crown were invited to participate in field programs. AFN, CFN, COTTFN, CKSPFN, HDI, and WIFN participated in some of the Archaeological Assessments and/or Natural Environment field surveys conducted during the summer of 2022 and fall 2023.

### **3.5.3 Aamjiwnaang First Nation**

#### **3.5.3.1 Class EA**

In addition to the consultation process outlined above, AFN received an advanced project initiation email on December 2, 2021, requesting a meeting to discuss the Project and the community's preferred approach to consultation and engagement. Subsequently, Hydro One contacted AFN via email on January 26, 2022, requesting a meeting to discuss the Project and an approach to consultation and engagement. Hydro One emailed AFN the Notice of Commencement for the Project on February 10, 2022. Hydro One proposed a regular monthly meeting with AFN to help open lines of communication and to identify and address any concerns quickly and efficiently. Hydro





One extended an invite to virtual COH #1 Live Discussions on March 9 and 10, 2022. Hydro One followed up with AFN via email on March 8, 2022, to provide more information about the virtual COH #1, the TAC, and the upcoming field survey program.

On March 29, 2022, Hydro One emailed AFN information on the upcoming Natural Environment field survey program, including the proposed schedule, mapping and an information sheet on the upcoming Natural Environment surveys planned for that spring and summer. Hydro One noted coordination would be directed through Dillon. AFN thanked Hydro One via email on the same day and stated that they would review and provide Hydro One with a response.

Between the end of March and end of August 2022, Dillon and AFN corresponded several times, via email, relating to field survey participation. A fieldwork agreement was settled on and location and time logistics were communicated by Dillon staff throughout the season.

On April 11, 2022, Hydro One provided information regarding the TAC Workshop #1, and included some materials prior to the workshop. Subsequently, AFN emailed Hydro One, stating their interest in participating in the TAC.

On April 19, 2022, AFN and Dillon met virtually as a follow up to the initial field monitoring program email. Dillon provided additional context and explained the insurance requirements.

On April 25, 2022, Hydro One sent an invitation to the TAC members, including AFN, for the first Socio-economic and Natural Environment workshops on the Project's Class EA, to be held virtually on May 5, 2022. Hydro One also provided the link to a video introduction explaining the weighted Multi-Criteria Decision-Making framework that Hydro One planned to apply during the Class EA to evaluate the route alternatives and select the preferred route.

Hydro One emailed AFN on May 19, 2022, regarding the Project Environmental Deoxyribonucleic Acid (eDNA) Field Survey, the Draft Stage 1 Archaeological Assessment (AA) Report and shapefiles. AFN responded with their interest in the eDNA study and provided details of the representatives attending field work.

Between April and the end of August 2022, Timmins Martelle Heritage Consultants (TMHC) and AFN corresponded several times, via email, relating to field survey participation for the early Stage 1/2 AA near the Thames River.



Hydro One emailed AFN on July 22, 2022, providing three documents. The first was a summary of the Class EA process and the route evaluation process. This document noted the inclusion of a category in the route evaluation process called Indigenous Culture, Values and Land Use and Hydro One requested AFN review the category summary and provide input of any suggested changes from the community. The second document included was a table outlining key Indigenous input opportunities based on the Project timeline. This table was provided by Hydro One as a tool to help ensure the community's input and priorities were received when they could be given the highest consideration in the EA and Project planning process. The final document Hydro One shared was the Cultural Heritage Existing Conditions (CHEC) Report. Hydro One noted they were open to hearing from communities who wish to identify any additional information, such as sites that should be avoided and protected.

Hydro One emailed AFN on August 11, 2022, to provide an update on the status of the Draft Stage 1 AA Report for the Project. Hydro One provided dates for comments or suggested edits to be provided.

On September 1, 2022, Hydro One sent an invitation for TAC Workshop #2 to all TAC members, including AFN, to be held virtually. Hydro One emailed AFN on September 8, 2022, thanking AFN for providing confirmation about the attendance of an AFN representative to TAC Workshop #2, and provided members of the TAC a summary memo from the TAC Workshop #1.

On September 13, 2022, AFN representatives joined the second TAC workshop hosted by Hydro One, virtually. Following the workshop, on September 14, 2022, Hydro One sent an email to TAC members of AFN, including those who could not attend the workshop sessions, providing a link to the follow-up survey on the weighting for both Natural Environment and Socio-economic Environment criteria. Hydro One also reminded recipients that the Project team would be available to discuss the Project at any time upon request.

Hydro One sent an email on October 28, 2022, to AFN to inform them of in-person COH #2 events. Hydro One informed AFN of the plan for a gathering in the region to review the route alternatives to help ensure Indigenous value components were captured and that community members have a chance to provide their input.

On November 4, 2022, Hydro One sent an invitation to a virtual Indigenous Community Workshop to take place on December 1, 2022.

Hydro One met with five Indigenous communities and representatives, including AFN on December 1, 2022. During this workshop Hydro One provided an update on the Project's route evaluation criteria. Hydro One's main goal was to understand how to best incorporate Indigenous interests into the route evaluation. The Indigenous communities asked a variety of questions related to the following topics:

- Restoration of habitat and how this is incorporated in the route evaluation;
- Involvement of Conservation Authorities in restoration programs;
- Important Bird Areas and how these are incorporated in the route evaluation;
- Construction laydown/staging areas, and construction methods, and how these are incorporated in the evaluation method; and,
- Standard mitigation measures.

Hydro One took note of all the input received and provided informative responses to all topics and questions brought up by the Indigenous communities and suggested any other input into the evaluation criteria be provided by the end of 2022 so they could be considered into the final route evaluation. Furthermore, Hydro One provided an update on plans for future Archeological field work. The meeting ended with a brief introduction to the Longwood to Lakeshore Transmission Line Project.

On December 19, 2022, Hydro One provided AFN the summary from the TAC #2 workshop.

Hydro One sent an email on December 21, 2022, to AFN which contained the draft Natural Environment Baseline Conditions Report and the draft summary of the workshop held on December 1, 2022. Hydro One requested that any comments on the report or additional data for the route evaluation be sent to Hydro One by January 31, 2023.

Hydro One sent an email on January 19, 2023, to AFN with the draft Stage 1/2 AA Report for the early archaeological fieldwork near the Thames River. Hydro One provided a brief background on the report, why it was conducted, and explained that the consulting archaeologist, TMHC, had determined no additional investigation was required. The email explained that TMHC planned to submit the report at the end of February 2023 and requested that comments or questions on the report be submitted to TMHC by February 17, 2023.

On January 20, 2023, AFN asked Hydro One if the draft Stage 1/2 AA Report had been shared with other southwestern Ontario Indigenous communities. Hydro One sent an email to AFN to encourage any questions or comments on the Project and provide

confirmation that the Stage 1/2 AA Report had been shared with all the Indigenous communities in the southwest, including AFN. Hydro One noted that comments should be directed to TMHC.

On April 5, 2023, Hydro One had a meeting with AFN to provide updates on the southwest portfolio of projects, an advanced briefing of the route selection, and the draft ESR. AFN's comments and concerns were related to their inability to attend the workshops and the NationsConnect system.

On April 25, 2023, Hydro One sent an invitation for TAC Workshop #3 to all TAC members, including AFN, to be held virtually on June 1, 2023.

On June 1, 2023, AFN joined the third TAC workshop hosted by Hydro One, virtually.

On June 5, 2023, Hydro One notified AFN of the selection of the preferred route and attached notices about the process of selection of the preferred route, a map of the preferred route, COH #3 details, and provided a link to the Project website. Hydro One noted that the Project team could meet with the AFN to discuss the selection of the preferred route or have an open house in the community at their request.

On June 26, 2023, Hydro One thanked invitees for taking part in the TAC and noted that the input received had been invaluable. Attached to the email was a summary from the TAC Workshop #3, and a reminder of the COH #3 events beginning on the same day. Hydro One encouraged invitees to reach out if they had any questions or comments.

On July 21, 2023, Hydro One emailed AFN informing them on the upcoming Natural Environment field survey program, and the upcoming Archeological surveys to be conducted since the preferred route selection. Hydro One noted coordination would be directed through Dillon for the Natural Environment field surveys, and through TMHC for the Archeological surveys. A link to the 2022 baseline environment conditions report was also provided and Hydro One noted that the next major milestone is the release of the draft Environmental Study Report.

During August, September, and throughout the fall of 2023, Dillon and AFN corresponded several times, via email, relating to field survey participation for the late summer and fall sessions planned.

On September 7, 2023, TMHC contacted AFN to invite them to participate on the Stage 2 archaeological assessment fieldwork. Throughout the months of September and October, TMHC and AFN corresponded several times, via email, relating to field survey participation and the applicable agreements to make this possible.

Hydro One emailed AFN on October 27, 2023, to advise that the Draft ESR would be available for public review and comment on November 6, 2023. Hydro One noted that they would provide a link to the report when available and requested comments and feedback by December 7, 2023.

On November 2, 2023, Hydro One emailed AFN to advise that Forbes Bros had been selected to execute their plan to construct the Project.

On November 6, 2023, Hydro One emailed AFN the Notice of Completion for the draft ESR, notifying of the 30-day comment period from November 6 to December 7, 2023.

Hydro One emailed AFN on November 14, 2023, to ask if they would like a printed copy of the draft Environmental Study Report, to assist the Nation's review. On this same day Hydro One confirmed via email that they could fund the review of the draft ESR.

On January 10, 2024, AFN submitted comments on the draft ESR to Hydro One via email. Hydro One responded thanking AFN for their comments. Hydro One provided a formal response to all comments on the draft ESR on January 24, 2024, via email. AFN's comments on the draft ESR and Hydro One's responses are provided in **Section 3.13.1**.

#### **3.5.3.2 Economic Opportunities – Jobs, Training and Procurement**

On July 29, 2022, Hydro One contacted AFN via email to explain the Early Contractor Involvement (ECI) process, introduce both EPC contractors, and offer an introductory meeting.

The Hydro One team is currently engaging with the communities to ensure that the communities have the opportunity to engage in the EPC process and other potential economic benefits.

Hydro One received comments from the AFN regarding the Project, which Hydro One addressed. **Table 3-7** provides a summary of AFN comments and concerns received on the Project and the responses from Hydro One regarding each comment.

Table 3-7: Summary of AFN Comments and Concerns Received on the Project

Theme	Question/Comment	Response
Class EA Process	AFN expressed an interest in participating in the Class EA field programs, including having a field monitor participate in the environmental surveys.	Meaningful engagement and consultation with potentially affected Indigenous communities continues to be a top priority for Hydro One. Hydro One is committed to working closely with Indigenous communities to share information and gather valuable input and local knowledge throughout the lifecycle of the Project.  Hydro One engaged Indigenous communities, including AFN, to invite them to participate in field surveys. As the Project progresses towards the completion of the design process and construction, Hydro One will continue to identify opportunities for participation of Indigenous communities on the Project.
Transmission Line Operations and Maintenance Programs	AFN inquired on the possibility of reducing the vegetation cutting window under existing transmission lines, as the current timeline allows fast growing trees to grow taller than wildflowers.	Hydro One has a program that looks at the existing corridor to identify opportunities to enhance habitat or re-naturalize rights-of-way. Fast growing incompatible trees like birches and poplars pose a risk on the overhead operation and maintenance of the lines. Hydro One would like to see corridors naturalized with native compatible vegetation. A challenge with this is Hydro One only owns small portions of the corridor and therefore doesn't have the ability to naturalize the entire corridor. For this Project, Hydro One will not own the lands under the transmission line, it will still be owned by landowners and Hydro One will likely lease this back for agricultural use. In areas where the new transmission line must go through wooded areas, incompatible vegetation will need to be removed for a general width of 150 feet, or 23 feet on each side of the tower. These are the areas where Hydro One can undertake restoration to compatible vegetation such as meadow and slow-growing shrubs. With respect to the 6 year forestry cutting cycle, the 6 years has been the standard cycle. There has been some interest at looking at shortened cycles, specifically in southwest Ontario, but the Project team doesn't know the full extent as per which this has been developed/adopted.
Effects to Species at Risk (SAR) and Native Plant Species	AFN expressed the desire for the protection of native plants and provided input on forestry practices and effects to native plants and Species at Risk.	Hydro One incorporated feedback into the Class EA where provided, including the route evaluation and selection process and the effects assessment of the preferred route. Representatives of AFN were invited to participate in the field surveys conducted as part of the Natural Environment program. As the Project continues to progress, Hydro One will continue to identify opportunities for participation of Indigenous communities on the Project.

### **3.5.4 Bkejwanong (Walpole Island First Nation)**

#### **3.5.4.1 Class EA**

In addition to the consultation process outlined above, WIFN received an advanced project initiation email on December 2, 2021, requesting a meeting to discuss the Project and the community's preferred approach to consultation and engagement. WIFN responded on December 3, 2021, to Hydro One's letter, stating upcoming dates they were available to meet.

Hydro One emailed WIFN the Notice of Commencement for the Project's Class EA on February 10, 2022. Hydro One proposed a regular monthly meeting with WIFN to help ensure open lines of communication and that concerns are addressed quickly and efficiently. Hydro One extended an invite to the virtual COH #1 Live Discussions on March 9 and 10, 2022. Hydro One indicated they would be reaching out to provide funding options and collaborate on a plan that meets WIFN's needs.

Hydro One followed up with WIFN via email on March 9, 2022, to provide more information about the virtual COH #1, the TAC, and the upcoming field survey program. WIFN responded to Hydro One on March 30, 2022, stating their interest in participating in the field studies.

On March 29, 2022, Hydro One emailed information on the upcoming Natural Environment field survey program, including the proposed schedule, mapping and an information sheet on the upcoming Natural Environment surveys planned for that spring and summer. Hydro One noted coordination would be directed through Dillon. WIFN emailed Dillon on March 30, 2022, indicating their interest in participating in field studies if they have the personnel available.

Between the end of March and end of August 2022, Dillon and WIFN corresponded several times, via email, relating to field survey participation. A fieldwork agreement was settled on and location and time logistics were coordinated by Dillon throughout the season. WIFN field monitors joined some of the Natural Environment surveys throughout the field season.

On April 11, 2022, Hydro One provided information regarding the TAC Workshop #1, and included some materials prior to the workshop.

Hydro One emailed WIFN on April 14, 2022, to provide a five-year Multi Project Engagement Framework Agreement. Hydro One also included a map of the proposed projects and a link to a recent decision by the Minister of Energy.

On April 25, 2022, Hydro One sent an invitation to the TAC members, including WIFN, for the first Socio-economic and Natural Environment workshops on the Project's Class EA, to be held virtually on May 5, 2022. Hydro One also provided the link to a video introduction explaining the weighted Multi-Criteria Decision-Making framework that Hydro One planned to apply during the Class EA to evaluate the route alternatives and select the preferred route.

Between the end of April and end of August 2022, TMHC and WIFN corresponded several times via email, relating to field survey participation for the early Stage 2 AA near the Thames River.

Hydro One emailed WIFN on May 19, 2022, regarding the Project eDNA Field Survey, Draft Stage 1 AA Report, and provided shapefiles.

Hydro One emailed WIFN on July 22, 2022, providing three documents. The first was a summary of the Class EA process and the route evaluation process. This document noted the inclusion of a category in the route evaluation process called Indigenous Culture, Values and Land Use and requested WIFN review the category summary and provide input of any suggested changes from the community. The second document included was a table outlining key Indigenous input opportunities based on the Project's timeline. This table was provided by Hydro One as a tool to help ensure the community's input and priorities were received when they could be given the highest consideration in the EA and project planning process. The final document Hydro One shared was the CHEC Report. Hydro One noted they were open to hearing from communities who wish to identify any additional information, such as sites that should be avoided and protected.

Hydro One emailed WIFN on August 11, 2022, to provide an update on the status of the Draft Stage 1 AA Report for the Project. Hydro One provided dates for comments or suggested edits to be provided.

On September 1, 2022, Hydro One sent an invitation for TAC Workshop #2 to all TAC members, including WIFN, to be held virtually. The goal of TAC #2 was to provide a re-cap of the route evaluation framework, review the results from the survey provided after TAC #1 and to get feedback from attendees and provide a second survey to collect further input on the evaluation criteria. Hydro One provided logistical details regarding the format.

Hydro One emailed WIFN on September 8, 2022, to provide the general map of Hydro One's ongoing and upcoming projects in southwestern Ontario.



On September 13, 2022, WIFN representatives joined the second TAC workshop hosted by Hydro One, virtually. Following the workshop, on September 14, 2022, Hydro One sent an email to TAC members of WIFN, including those who could not attend the workshop sessions, providing a link to the follow-up survey on the weighting for both Natural Environment and Socio-economic Environment criteria. Hydro One also reminded recipients that the Project team would be available to discuss the Project at any time upon request.

Hydro One sent an email to WIFN on October 28, 2022, to inform them of in-person COH #2 events. Hydro One informed WIFN of the plan for a gathering in the region to review the route alternatives to help ensure Indigenous value components are captured and that community members have a chance to provide their input.

On November 4, 2022, Hydro One sent an invitation to a virtual Indigenous Community Workshop to take place on December 1, 2022.

Hydro One met with five Indigenous communities and representatives, including WIFN on December 1, 2022. During this workshop Hydro One provided an update on the Project's route selection criteria. Hydro One's main goal was to understand how to best incorporate Indigenous interests into the route evaluation. The Indigenous communities asked a variety of questions related to the following topics:

- Restoration of habitat and how this is incorporated in the route evaluation;
- Involvement of Conservation Authorities in restoration programs;
- Important Bird Areas and how these are incorporated in the route evaluation;
- Construction laydown/staging areas, and construction methods, and how these are incorporated in the evaluation method; and,
- Standard mitigation measures.

Hydro One took note of all the input received and provided informative responses to all topics and questions brought up by the Indigenous communities and suggested any other input into the evaluation criteria be provided by the end of 2022 so they could be considered into the final route evaluation. Furthermore, Hydro One provided an update on plans for future Archeological field work. The meeting ended with a brief introduction to the Longwood to Lakeshore Transmission Line Project.

On December 19, 2022, Hydro One provided WIFN the summary from the TAC#2 workshop.

Hydro One sent an email on December 21, 2022, to WIFN which contained the draft Natural Environment Baseline Conditions Report and the draft summary of the



workshop held on December 1, 2022. Hydro One requested that any comments on the report or additional data for the route evaluation be sent to Hydro One by January 31, 2023.

Hydro One met virtually with WIFN on January 13, 2022, to provide information about the Project's route evaluation process. WIFN provided historical information about the area. WIFN also identified multiple priorities for the community, including habitat protection, land preservation, and reliability of the supply to electricity to the community.

On January 22, 2023, WIFN provided additional information further to the meeting on January 13, 2023. Hydro One sent an email to WIFN on January 25, 2023, indicating that Hydro One had received the files that WIFN had shared. Hydro One also indicated that they would send the meeting summary to WIFN shortly and provided the Stage 1/2 AA Report and noted that comments on the report should be directed to TMHC.

On February 24, 2023, Hydro One sent a meeting summary to WIFN following the January 13, 2023, discussion, for review and requested WIFN's availability for additional discussion on how the information provided by WIFN was proposed to inform the evaluation. On March 6, 2023, WIFN sent an email to Hydro One requesting a meeting to review the Project maps and Hydro One responded to WIFN confirming a meeting date and requested time availability.

Hydro One sent an email to WIFN on March 8, 2023, to confirm their meeting date and seek approval for Dillon's attendance at the meeting scheduled for March 10, 2023. WIFN responded to Hydro One approving Dillon's attendance at the upcoming meeting if the information shared remained in the group.

Hydro One and WIFN met virtually on March 10, 2023, to review maps provided in January 2023m, as well as to discuss historic uses and knowledge in the proposed corridor and their inclusion in the route evaluation. WIFN agreed with the approach.

On May 23, 2023, Hydro One attended a job fair at WIFN to present Hydro One and Hydro One's projects to linesperson trainees.

On April 25, 2023, Hydro One sent an invitation to WIFN for TAC Workshop #3, to be held virtually on June 1, 2023.

On May 30, 2023, Hydro One emailed WIFN the formal response to the input provided by the community for the Project's route evaluation. In the letter, Hydro One acknowledged the presence of historical areas and features of interest raised by WIFN which are in proximity to the LSA. Hydro One noted that these areas of historical

interest are lands currently used for active agriculture, and that since the features associated with the historical interests raised by WIFN are no longer present on the landscape (and thus would not be affected by the Project) that the information provided would not be an influencing factor in the route evaluation. Rather, the information may be used to further inform the upcoming Stage 2 AA on the preferred route. Hydro One also noted that other comments and input from discussions with WIFN had been incorporated into the route evaluation, such as effects to existing natural features (both terrestrial and aquatic), use of existing transmission corridors, and transmission system impacts and benefits (such as reliability of the high voltage transmission supply to WIFN and the Wallaceburg area, and potential effects to facilities that generate revenue for the community). The email on May 30 also included a reminder of the upcoming TAC Workshop #3.

On June 1, 2023, WIFN joined the third TAC workshop hosted by Hydro One, virtually.

On June 5, 2023, Hydro One notified WIFN of the selection of the preferred route and attached notices about the process of selection of the preferred route, a map of the preferred route, COH #3 details, and provided a link to the Project website. Hydro One noted that the Project team could meet with WIFN to further discuss the selection of the preferred route or have an open house in the community at their request.

On June 26, 2023, Hydro One thanked invitees for taking part in the TAC and noted that the input received had been invaluable. Attached to the email was a summary from the TAC Workshop #3, and a reminder of the COH #3 events beginning on the same day. Hydro One encouraged invitees to reach out if they had any questions or comments.

On July 21, 2023, Hydro One emailed WIFN informing them on the upcoming Natural Environment field survey program, and the upcoming Archeological surveys to be conducted since the preferred route selection. Hydro One noted coordination would be directed through Dillon for the Natural Environment field surveys, and through TMHC for the Archeological surveys. A link to the 2022 baseline environment conditions report was also provided and Hydro One noted that the next major milestone is the release of the draft Environmental Study Report.

During August, September, and throughout the fall of 2023, Dillon and WIFN corresponded several times, via email, relating to field survey participation for the late summer and fall sessions planned.

On September 7, 2023, TMHC contacted WIFN to invite them to participate on the Stage 2 archaeological assessment fieldwork. Throughout the month of September and

October, TMHC and WIFN corresponded several times, via email, relating to field survey participation and the applicable agreements to make this possible.

Hydro One emailed WIFN on October 27, 2023, to advise that the Draft ESR would be available for public review and comment on November 6, 2023. Hydro One noted that they would provide a link to the report when available and requested comments and feedback by December 7, 2023.

On November 2, 2023, Hydro One emailed WIFN to advise that Forbes Bros had been selected to execute their plan to construct the Project.

On November 6, 2023, Hydro One emailed WIFN the Notice of Completion for the draft ESR, notifying of the 30-day comment period from November 6 to December 7, 2023. On November 14, 2023,

On November 13, 2023, Hydro One staff met with the Chief and members of WIFN council where Hydro One provided an update on the major transmission projects in Southwestern Ontario, an update on the consultation and engagement to date and Capacity Funding. Hydro One committed to planning a Community Information Session as soon as possible. Questions about the St. Clair Transmission Line Project were brought up and WIFN requested a hard copy of the draft ESR be provided; Hydro One staff noted that they would ensure a hard copy was sent shortly after the meeting. On November 14, 2023 Dillon mailed WIFN a hard copy of the draft ESR.

Hydro One emailed WIFN on November 21, 2023, to follow up on an action item from their meeting the previous week. Hydro One invited the community to schedule an information session to further discuss the St. Clair Transmission Line Project and requested coordination details for an event.

Hydro One staff met with representatives of Water Wells First (WWF) and a member of Walpole Island First Nation (WIFN) on December 1, 2023.

On January 8, 2024, WIFN submitted comments on the draft ESR. Hydro One responded thanking WIFN for their comments. Hydro One provided a formal response to all comments on the draft ESR on January 24, 2024, via email. WIFN's comments on the draft ESR and Hydro One's corresponding responses are provided in **Section 3.13.1.**

#### **3.5.4.2 Economic Opportunities – Jobs, Training and Procurement**

Hydro One contacted the WIFN via email to explain the ECI process, introduce both EPC contractors, and offer an introductory meeting.

The Hydro One team is currently working to engage with the communities to have a dialogue and to ensure that the communities have the opportunity to engage in the EPC process and other potential economic benefits.

Hydro One received comments from the WIFN regarding the Project, which Hydro One addressed. **Table 3-8** provides a summary of WIFN comments and concerns received on the Project and the responses from Hydro One regarding each comment.

Table 3-8: Summary of WIFN Comments and Concerns Received on the Project

Theme	Question/Comment	Response
Traditional Territory	Hydro One should increase knowledge and appreciation of Indigenous history in southwestern Ontario to consider as part of the Project.	Hydro One acknowledges the history and past uses of the lands on which its projects are constructed, including the St. Clair Transmission Line. Meaningful engagement and consultation with potentially affected Indigenous communities continues to be a top priority for Hydro One. Hydro One is committed to working closely with Indigenous communities to share information and gather valuable input and local knowledge throughout the lifecycle of the Project, including incorporating recognition and description of the history of the Project study area (as informed by Indigenous community input) into the ESR.
Traditional Knowledge and Consideration of Historical Land Uses	How is Hydro One considering confidential Indigenous traditional land use, and sites of cultural importance?	<p>Hydro One acknowledges the presence of mapped historical areas of interest to the Nation which are near the LSA including Footpaths, Sugar Camps, Burial Sites, Buildings, Settlements, Farm and Baldoon Settlement. Hydro One further acknowledges that the mapped historical areas of interest are reflective of written records from settlers (surveyors) and that additional non-mapped historical areas of interest to the Nation are likely present on the landscape based on oral traditions.</p> <p>Based on Hydro One’s review of the mapped historical areas of interest historical Sugar Camps (i.e., Indigenous agriculture and economic activity on the land) intersect with the LSA; current land use is active agriculture. Given that the purpose of the route evaluation is to measure the effect of each of the route alternatives against a set of criteria per category (e.g., Indigenous Culture, Values and Land Use), and in recognition that the Project will not affect the mapped areas of historical interest (i.e., the effect has already previously occurred), the information provided is not an influencing category in the evaluation. The information may be used to inform the upcoming Stage 2 Archaeological Assessment scope on the preferred route. The historical context of these identified areas of interest will be acknowledged and documented in the Environmental Study Report.</p>
Route Selection	The importance of minimizing effects to the natural environment and using existing transmission corridors.	Through the evaluation process, Hydro One selected a route that strikes the best balance between the various criteria of the Natural and Socio-economic Environments, Indigenous Culture, Values and Land Use, and Technical and Cost categories. More than 80% of the distance of the preferred route utilizes existing transmission corridor lands to some extent: over 60% of the preferred route repurposes existing transmission corridor with a need to widen the corridor and acquire new land rights, and nearly 20% of the preferred route utilizes existing corridor lands that are not yet occupied by transmission infrastructure. The preferred route 2 also scored the best (had the least effect) overall in the Natural Environment category and the Indigenous Culture, Values and Land Use category, with several criteria included to directly reflect the input received from WIFN and other Indigenous communities.
System Reliability	The importance of a reliable system to the WIFN community.	With Route 2 being selected as the preferred route, Wallaceburg Transformer Station will be upgraded from 115 kV to 230 kV, which will improve transmission system reliability for the area supplied by the Wallaceburg TS (including Walpole Island First Nation).

### **3.5.5 Caldwell First Nation**

#### **3.5.5.1 Class EA**

In addition to the consultation process outlined above, CFN received an advanced project initiation email on December 2, 2021, requesting a meeting to discuss the Project and the community's preferred approach to consultation and engagement. Subsequently, CFN responded on January 6, 2022, requesting if Hydro One would be able to present to the Chief and Council via virtual meeting. Hydro One confirmed and scheduled a meeting to present to the Chief and Council on January 11, 2022. The meeting provided a presentation recapping the Chatham x Lakeshore project activities and presented other planned projects for southwestern Ontario, including the St. Clair Transmission Line.

Hydro One emailed CFN the Notice of Commencement for the Project on February 10, 2022. Hydro One confirmed CFN's request to have the Notice of Commencement uploaded to the CFN consultation portal and emailed. Hydro One proposed a regular monthly meeting with CFN to help ensure open lines of communication and that concerns are addressed quickly and efficiently. Hydro One extended an invite to the virtual COH #1 Live Discussions on March 9 and 10, 2022. CFN emailed Hydro One information regarding their primary contacts for consultation and their official engagement method, the CFN Consultation Tool (CCT), on February 10, 2022. CFN explained the purpose of the CCT and how Hydro One should use it as the initial method of interface for consultation. CFN also provided their Protocols for Engagement and Consultation with Government and Private Sector document for Hydro One to review.

Hydro One staff uploaded the Notice of Commencement and shapefiles for the Project to the CCT on March 2, 2022, and CFN responded on March 2, 2022, confirming receipt of Hydro One's initial submission but requested additional information. On March 9, 2022, Hydro One emailed CFN to confirm all the requested information had been submitted to the consultation portal. Hydro One also provided an update on upcoming major project activities.

Hydro One emailed CFN on March 29, 2022, with information on the upcoming Natural Environment field survey program, including the proposed schedule, mapping and an information sheet on the upcoming Natural Environment surveys planned for that spring and summer. Hydro One noted coordination would be directed through Dillon. Between end of March and end of August 2022, Dillon and CFN corresponded several times, via email, relating to opportunities for field survey participation.

Through the CCT on April 11, 2022, an initial response from the community indicated CFN's need for capacity funding in order to support further determination of Project effects to species of importance. The response also provided a list of some species of importance. Hydro One emailed CFN on April 14, 2022, regarding capacity funding, and in the email encouraged CFN to identify concerns during the consultation period for this posting. Hydro One also included a map of the proposed projects in the area and a link to a recent decision by the Minister of Energy.

Also, on April 14, 2022, Hydro One emailed CFN mentioning the issues with sending updates using the CCT and inquired if there are any resources or training available to provide direction on uploading updates. Hydro One also provided information on the TAC for the first Socio-economic and Natural Environment workshops on the Project's Class EA, to be held virtually on May 5, 2022. Hydro One also provided the link to a video introduction explaining the weighted Multi-Criteria Decision-Making framework that Hydro One planned to apply during the Class EA to evaluate the route alternatives and select the preferred route.

Between the end of April and end of August 2022, TMHC and CFN corresponded several times, via email, relating to field survey participation for the early Stage 1/2 AA.

Hydro One emailed CFN on May 19, 2022, regarding the Project eDNA Field Survey, Draft Stage 1 AA Report, and Shapefiles. Hydro One noted these documents were provided via email, and the team could not access the CCT.

CFN emailed Hydro One on May 25, 2022, thanking them for the update Project documents, and additionally CFN indicated that they had retained an IT consultant to fix issues on their CCT. In terms of the field work, CFN indicated they were interested in attending all days through a designated Field Liaison Representative which CFN would continue to set up with Dillon. CFN also provided Dillon with the contact information of the new Chief Administrative Officer to be kept informed of engagement with Hydro One going forward.

Hydro One emailed CFN on July 22, 2022, providing three documents. The first was a summary of the Class EA process and the route evaluation process. This document noted the inclusion of a category in the route evaluation process called Indigenous Culture, Values and Land Use and requested CFN review the category summary and provide input of any suggested changes from the community. The second document included was a table outlining key Indigenous input opportunities based on the Project's timeline. This table was provided by Hydro One as a tool to help ensure the community's input and priorities were received when they could be given the highest



consideration in the EA and Project planning process. The final document Hydro One shared was the CHEC Report. Hydro One noted they were open to hearing from communities who wish to identify any additional information, such as sites that should be avoided and protected.

On August 9, 2022, CFN and Hydro One met virtually to discuss the field monitoring agreement.

Hydro One emailed CFN on August 11, 2022, to provide an update on the status of the draft AA Reports for the major projects underway in southwestern Ontario, including the St. Clair Transmission Line Project.

Hydro One emailed CFN on October 21, 2022, a copy of the Draft Stage 1 AA Report to review and stated that notes that were submitted after the deadline would still be considered as part of the engagement on archaeological resources. CFN emailed Hydro One on October 27, 2022, to note their understanding of timeline sensitivity.

Hydro One sent an email to CFN on October 28, 2022, to thank them for the notes on the draft AA Reports and agreements. Hydro One informed CFN of the in-person COH #2 events for the Project taking place on November 8, 9 and 10, 2022, in Mooretown, Wallaceburg and Chatham, respectively, and the COH #2 virtual Live Discussion on November 23, 2022. Hydro One also indicated that the Project team was available to meet with CFN to conduct an open house for CFN members to discuss the Project and other Hydro One projects. Hydro One informed CFN of the plan for a gathering in the region to review the route alternatives to help ensure Indigenous valued components are captured and that community members have a chance to provide their input.

CFN sent an email to Hydro One on November 4, 2022, explaining that they normally attend events meant specifically for the CFN community/staff-specific engagement since their hours are stretched across many tasks. CFN explained that they hope to improve this once a long-term capacity funding agreement with Hydro One is established. CFN expressed interest in a meeting with consultation staff and added CFN's Community Energy contact to the email thread. CFN indicated that they would forward the information to leadership and gauge interest in Hydro One's assistance with community engagement.

On November 4, 2022, Hydro One sent an invitation to a virtual Indigenous Community Workshop to take place on December 1, 2022. Hydro One met with five Indigenous communities and representatives, including CFN on December 1, 2022. During this workshop Hydro One provided an update on the Project's route selection criteria. Hydro



One's main goal was to understand how to best incorporate Indigenous interests into the route evaluation. The Indigenous communities asked a variety of questions related to the following topics:

- Restoration of habitat and how this is incorporated in the route evaluation;
- Involvement of Conservation Authorities in restoration programs;
- Important Bird Areas and how these are incorporated in the route evaluation;
- Construction laydown/staging areas, and construction methods, and how these are incorporated in the evaluation method; and,
- Standard mitigation measures.

Hydro One took note of all the input received and provided informative responses to all topics and questions brought up by the Indigenous communities and suggested any other input into the evaluation criteria be provided by the end of 2022 so they could be considered into the final route evaluation. Furthermore, Hydro One provided an update on plans for future Archeological field work. The meeting ended with a brief introduction to the Longwood to Lakeshore Transmission Line Project.

Hydro One sent an email to CFN on December 21, 2022, to share the draft Natural Environment Baseline Conditions Report and the draft summary of the workshop held on December 1, 2022. Hydro One also requested that any comments on the reports or additional data for the route evaluation be sent to Hydro One by January 31, 2023.

Hydro One sent an email on January 19, 2023, to CFN with the draft Stage 1/2 AA Report for the early archaeological fieldwork near the Thames River. Hydro One provided a brief background on the report, why it was conducted, and explained that the consulting archaeologist, TMHC, had determined no additional investigation was required. The email explained that TMHC planned to submit the report at the end of February 2023 and requested that comments or questions on the report be submitted to TMHC by February 17, 2023.

On February 15, 2023, the Three Fires Group sent an email to Hydro One with comments on the draft Natural Environment Baseline Conditions Report, on behalf of CKSPFN and CFN. On May 30, 2023, Hydro One provided a response table with comments provided by the Three Fires Group on the Draft Natural Environment Existing Conditions Report. Hydro One noted the link to final report would be provided shortly. The following comments and recommendations were addressed in the letter:

- The Nations requested a continuous involvement of the communities in the development and implementation of the project design, including mitigation

measures and future monitoring activities. This would also involve the review of the ESR, the route evaluation process and future involvement of environmental monitors from CFN and CKSPFN during all phases of the Class EA and permitting process. Hydro One acknowledged this request and noted the team was looking forward to continuing to work with the communities, to consider, discuss, and apply, when possible, any Indigenous Knowledge and/or any other input shared by CFN and CKSPFN on the Project.

- The letter noted that species of importance to both Nations include those that are not at-risk yet and possess a culturally significant value that contribute to traditional fishing, hunting, harvesting and gathering.
- The Nations requested that tree habitats be assessed for the potential to provide bat maternity roost habitat along the chosen route prior to construction. In addition to this, it was requested that the proponent should employ mitigation measures such as the retention of such trees. Hydro One confirmed that species at risk habitat and significant wildlife habitat for bats was identified, mapped and considered. It was noted that the detailed assessments would be completed during the detailed design after the preferred route was selected. Hydro One explained that incompatible vegetation would be removed along the preferred route ROW. Proposed mitigation measures will include the removal of incompatible vegetation during appropriate timing windows, or additional mitigation if disruptive work is required within the timing window. In addition, Hydro One will be undertaking a Biodiversity Initiative to offset habitat loss or transition (e.g., from incompatible to compatible vegetation) that cannot otherwise be avoided or mitigated, and that there would be opportunities for indigenous communities to participate in this initiative.
- As part of the letter the Nations brought up species of cultural significance, requested consultation regarding the location of certain species, asked for justification for excluding some species at risk, and suggested some potential nesting areas be included in mapping throughout the PSA. Hydro One acknowledged all the comments and requests and provided a thorough explanation for each specific case brought up by the community. Hydro One referenced the findings from the field work done by Dillon, referred to Recovery Strategies and consultation with the MECP and Conservation Authorities.
- The Nations requested and inquired about wetland communities, marsh communities and requested clarification on the wetland categorization. In regard to the clarification about wetlands, Hydro One explained that in instances where background mapping identified wetlands on lands where landowner access wasn't granted communities were delineated based on aerial photography and

identified as Wetland System. Hydro One confirmed that the construction scope of the Project will include restoration of work areas, including disturbed vegetated areas, with native species compatible with overhead transmission lines. They noted that Indigenous communities will have opportunities to provide input into these restoration plans as they are developed.

- The Nations requested all buildings, bridges and culverts be surveyed to confirm no habitat would be disturbed. Hydro One explained the mitigation measures to avoid destruction of habitat and confirmed additional assessments will be undertaken once the preferred route is selected to support detailed design and mitigation, where necessary.
- The Nations requested a full list of the species for which primer sets were available during baseline eDNA studies, requested that additional efforts be undertaken to characterize seasonal variability in habitats, and requested additional field survey results. Hydro One acknowledged all requests, comments and feedback. All field survey results requested were provided.
- The Nations requested additional information regarding weather conditions, flows, and general conditions during aquatic surveys. In addition, clarification regarding the number of watercourse crossings present, how they were identified, and the type of survey conducted at each crossing was requested. Hydro One provided the requested information.
- The Nations requested that benthic invertebrate surveys be included as part of the baseline surveys and included as part of operational monitoring. Hydro One explained that these surveys were excluded from the field program because the Project will consist primarily of aerial transmission line crossings over watercourses and is not anticipated to have long-term effects on water quality or benthic substrates.

On April 25, 2023, Hydro One sent an invitation for TAC Workshop #3 to all TAC members, including CFN, to be held virtually on June 1, 2023. On June 1, 2023, CFN joined the third TAC workshop hosted by Hydro One, virtually.

On June 5, 2023, Hydro One notified the CFN of the selection of the preferred route and attached notices about the process of selection of the preferred route, a map of the preferred route, COH #3 details, and provided a link to the Project website. Hydro One noted that the Project team could meet with the CFN to discuss the selection of the preferred route or have an open house in the community at their request.

On June 26, 2023, Hydro One thanked invitees for taking part in the TAC and noted that the input received has been invaluable. Attached to the email was a summary from the

TAC Workshop #3, and a reminder of the COH #3 events beginning on the same day. Hydro One encouraged invitees to reach out if they had any questions or comments.

On July 21, 2023, Hydro One emailed CFN informing them on the upcoming Natural Environment field survey program, and the upcoming Archeological surveys to be conducted since the preferred route selection. Hydro One noted coordination would be directed through Dillon for the Natural Environment field surveys, and through TMHC for the Archeological surveys. A link to the 2022 baseline environment conditions report was also provided and Hydro One noted that the next major milestone is the release of the draft Environmental Study Report.

During August, September, and throughout the fall of 2023, Dillon and CFN corresponded several times, via email, relating to field survey participation for the late summer and fall sessions planned. CFN joined Dillon in some of the field survey sessions during fall of 2023.

On September 7, 2023, TMHC contacted CFN to invite them to participate on the Stage 2 archaeological assessment fieldwork. Throughout the months of September and October, TMHC and CFN corresponded several times, via email, relating to field survey participation and the applicable agreements to make this possible. CFN joined Dillon in some of the archeological field surveys in the fall of 2023.

On August 1, 2023, Hydro One called CFN to offer a training session on the invoicing system to support the implementation of the Capacity Funding Agreement.

On August 21, 2023, Hydro One sent an email to CFN to request permission to reference the Traditional Ecological Knowledge Study from the Chatham to Lakeshore Project, for the St. Clair Transmission Line Project Environmental Study Report.

Hydro One emailed CFN on October 27, 2023, to advise that the Draft ESR would be available for public review and comment on November 6, 2023. Hydro One noted that they would provide a link to the report when available and requested comments and feedback by December 7, 2023.

On November 2, 2023, Hydro One emailed CFN to advise that Forbes Bros had been selected to execute their plan to construct the Project.

On November 6, 2023, Hydro One provided the Notice of Completion for the draft ESR, notifying of the 30-day comment period from November 6 to December 7, 2023. On November 7, 2023, CFN replied to Hydro One noting they had forwarded the draft ESR to their team for review.

On November 14, 2023, Hydro One emailed CFN to ask if they would like the Draft Environmental Study Report in hard copy.

On November 21, 2023, CFN requested a comment period extension on the draft ESR until December 15, 2023. Hydro One agreed to the comment period extension.

On December 15, 2023, Caldwell First Nation submitted comments on the draft ESR via email. Hydro One responded thanking CFN for their comments. Hydro One provided a formal response to all comments on the draft ESR on January 24, 2024, via email. CFN's comments on the draft ESR and Hydro One's corresponding responses are provided in **Section 3.13.1**.

#### **3.5.5.2 Economic Opportunities – Jobs, Training and Procurement**

Hydro One contacted the CFN via email to explain the ECI process, introduce both EPC contractors, and offer an introductory meeting.

The Hydro One team is currently working to engage with the communities to have a dialogue and to ensure that the communities have the opportunity to engage in the EPC process and other potential economic benefits.

Hydro One received comments from CFN regarding the Project, which Hydro One addressed. **Table 3-9** provides a summary of CFN comments and concerns received on the Project and the responses from Hydro One regarding each comment.

Table 3-9: Summary of CFN Comments and Concerns Received on the Project

Theme	Question/Comment	Response
Traditional Ecological knowledge and effects to animals and their habitats	<p>CFN expressed the desire to undertake traditional ecological knowledge study work to determine whether the Project's construction and operation would interact with the habitat or travel routes of the following species, which are important to CFN's traditional harvesting: white-tailed deer, muskrat wild turkey, pickerel, perch, frogs , pickerel, turtles, crappie, beavers, blue gill, min, dogfish, smelt, mudpuppies, sweetgrass, rainbow trout, tobacco, ducks, sage, geese, cedar, cotton tail rabbits, black willow, jack rabbits, red willow, and birch.</p> <p>CFN noted that some species which are not at risk are cultural significant and should be protected.</p>	<p>Hydro One has incorporated feedback regarding Indigenous Knowledge into the Class EA including, where provided, the route evaluation and selection process and the effects assessment of the preferred route. The preferred route 2 scored the best (had the least effect) overall in the Natural Environment category and the Indigenous Culture, Values and Land Use category, with several criteria included to directly reflect the input received from CFN and other Indigenous communities.</p> <p>As the Project progresses, Hydro One will continue to identify opportunities for participation of Indigenous communities on the Project. Hydro One will include consideration of habitats that support hunting, harvesting, and trapping activities in their planning of the Project, including the evaluation of route alternatives.</p>
Effects to aquatic habitats and species at risk.	<p>CFN requested a full list of the species for which primer sets were available during baseline eDNA studies and requested that additional efforts be undertaken to characterize seasonal variability in habitats. CFN also requested field survey results.</p> <p>CFN requested additional information regarding weather conditions, flows, and general conditions during aquatic surveys. In addition, clarification regarding the number of watercourse crossings present, how they were identified, and the type of survey conducted at each crossing was requested.</p> <p>CFN requested that benthic invertebrate surveys be included as part of the baseline surveys and included as part of operational monitoring.</p>	<p>Hydro One acknowledged all requests, comments, and feedback. All field survey results requested were provided via the Natural Environment baseline report and a response table was sent with responses to all comments/requests.</p> <p>Hydro One explained that these surveys were excluded from the field program because the Project will consist primarily of aerial transmission line crossings over watercourses and is not anticipated to have long-term effects on water quality or benthic substrates.</p>



Theme	Question/Comment	Response
Species at Risk	<p>CFN requested that tree habitats be assessed for the potential to provide bat maternity roost habitat along the chosen route prior to construction. In addition to this, it was requested that the proponent should employ mitigation measures such as the retention of such trees.</p> <p>CFN suggested all buildings, bridges and culverts be surveyed to confirm no habitats would be disturbed.</p> <p>CFN asked for justification for excluding some species at risk, and suggested some potential nesting areas be included in mapping throughout the PSA.</p>	<p>Hydro One confirmed that species at risk habitat and significant wildlife habitat for bats was identified, mapped and considered and that detailed assessments would be completed during the detailed design after the preferred route was selected. Hydro One explained that incompatible vegetation would be removed along the ROW. Proposed mitigation measures will include the removal of incompatible vegetation during appropriate timing windows, or additional mitigation if disruptive work is required within the timing window. In addition, Hydro One will be undertaking a Biodiversity Initiative to offset habitat loss or transition (e.g., from incompatible to compatible vegetation) that cannot otherwise be avoided or mitigated. Hydro One confirmed that the construction scope of the Project will include restoration of work areas, including disturbed vegetated areas, with native species compatible with overhead transmission lines. They noted that Indigenous communities will have opportunities to provide input into these restoration plans as they are developed.</p> <p>Hydro One explained the mitigation measures to avoid and mitigate destruction of habitat and confirmed additional assessments will be undertaken once the preferred route is selected to support detailed design and mitigation, where necessary.</p> <p>Hydro One acknowledged all the comments and requests and provided a thorough explanation for each specific case brought up by the community. Hydro One referenced the findings from the field work done by Dillon, referred to Recovery Strategies and consultation with the MECP and Conservation Authorities</p>
Class EA process	CFN expressed an interest in participation in the Environmental field surveys, as well as in the review of the ESR, the route evaluation process.	Hydro One and their consultants provided the administrative and scheduling details for Indigenous communities to participate in field surveys. As the Project progresses, Hydro One will continue to identify opportunities for participation of Indigenous communities on the Project. Hydro One confirmed the team was looking forward to continuing to work with the communities, to consider, discuss, and apply, when possible, any Indigenous Knowledge and/or any other input shared by CFN.
Wetland classification Habitat Restoration Seasonal Variability	CFN requested and inquired about wetland communities, marsh communities and requested clarification on the wetland categorization.	Hydro One explained that in instances where background mapping identified wetlands on lands where landowner access wasn't granted, communities were delineated based on aerial photography and identified as Wetland System. Hydro One confirmed that the construction scope of the Project will include restoration of work areas, including disturbed vegetated areas, with native species compatible with overhead transmission lines. They noted that Indigenous communities will have opportunities to provide input into these restoration plans as they are developed.
Field Survey results	CFN requested the results of the field surveys conducted.	All field survey results requested were via the Natural Environment baseline report and a response table was also provided, with responses to all comments/requests from the community.



### **3.5.6 Chippewas of Kettle and Stony Point First Nation**

#### **3.5.6.1 Class EA**

Chippewas of Kettle and Stony Point First Nation leadership has directed Hydro One to engage with various organizations owned or operating on behalf of the Nation. Throughout the Project these organizations have changed names and may be referred to as Southwind Development Corporation, Impact Benefit Agreement Braiding, and/or Three Fires Group in the below summary.

In addition to the consultation process outlined above, the CEO of Southwind Development Corporation (which has since become Three Fires Group [TFG]), the entity to which Hydro One's consultation and engagement activities had previously been directed to by the Nation's leadership, received an advanced Project initiation email on December 2, 2021, requesting a meeting to discuss the Project and the community's preferred approach to consultation and engagement.

Hydro One followed up via email with the CEO of Southwind and included the Notice of Commencement for the Project's Class EA on February 10, 2022. Hydro One proposed a regular monthly meeting with CKSPFN representatives to help enhance communication and to address concerns quickly and efficiently. Hydro One extended an invite to the virtual COH #1 Live Discussions on March 9 and 10, 2022. On February 11, 2022, CKSPFN requested updated contacts from Hydro One for ongoing and future correspondence and engagement.

Hydro One emailed Southwind on March 29, 2022, indicating that a funding arrangement was available for community monitor participation in Archaeology and Natural Environment field surveys. Hydro One indicated that representatives would be reaching out to communities to begin field season planning, and asked if they should provide Southwind's contact information to the representatives. Hydro One indicated they have evolved their approach to providing funding and noted they were open to putting the previously offered interim agreement in place to provide some initial funding to CKSPFN. Hydro One also indicated that recordings of the virtual COH #1 Live Discussions were available on the Project website and that Hydro One was able to provide Project information to the CKSPFN members with guidance from staff and leadership.

On March 29, 2022, Hydro One sent CKSPFN information on the Natural Environment field survey program for the Project and Class EA. Attached to the email was the proposed schedule, mapping, and information sheet on the planned Natural Environment surveys for TFG to review and provide comments that may help shape the

program. Hydro One noted that arrangements were made with Dillon to provide funding for Indigenous community monitoring participation. Hydro One directed TFG to a contact at Dillon to coordinate the funding agreement and logistics for participation if CKSPFN wanted to deploy a monitor to the surveys. CKSPFN emailed Hydro One thanking them for the information and indicated they would determine whether a representative was able to take part in the field survey program. CKSPFN also provided an email address to be copied on future correspondences.

Between the end of March and end of August 2022, Dillon and CKSPFN corresponded several times, via email, relating to field survey participation. A fieldwork agreement was settled on and location and time logistics were coordinated by Dillon throughout the season. CKSPFN field monitors joined some of the Natural Environment surveys throughout the field season.

On April 11, 2022, Hydro One sent information to Southwind, associated with CKSPFN, regarding the TAC. Hydro One explained that the purpose was to obtain valuable input and feedback from TAC members and ultimately select a preferred route for the transmission line. Hydro One provided information regarding the TAC Workshop #1 and included some additional materials prior to the workshop.

On April 25, 2022, Hydro One sent an invitation to the TAC members, including CKSPFN, for the first Socio-economic and Natural Environment workshops on the Project's Class EA, to be held virtually on May 5, 2022. Hydro One provided the workshop agenda, a document further describing the purpose and objectives of the TAC, and the preliminary list of Natural Environment and Socio-economic Environment criteria. Hydro One also provided the link to a video introduction explaining the weighted Multi-Criteria Decision-Making framework that Hydro One planned to apply during the Class EA to evaluate the route alternatives and select the preferred route. CKSPFN joined the first TAC workshop hosted by Hydro One virtually.

On May 10, 2022, Hydro One sent IBA Braiding the Terms of Reference for the Natural Environment field survey as requested on May 5, 2022. Hydro One noted that the Archeological assessments were being conducted by another consultant (TMHC) beginning with Stage 1 AA.

Between the end of April and end of August 2022, TMHC and CKSPFN corresponded several times, via email, relating to field survey participation for the early Stage 1/2 AA.

Hydro One emailed CKSPFN on July 22, 2022, providing three documents. The first was a summary of the Class EA process and the route evaluation process. This

document noted the inclusion of a category in the route evaluation process called Indigenous Culture, Values and Land Use and requested CKSPFN review the category summary and provide input of any suggested changes from the community. The second document included was a table outlining key Indigenous input opportunities based on the Project's timeline. This table was provided by Hydro One as a tool to help ensure the community's input and priorities were received when they could be given the highest consideration in the EA and project planning process. The final document Hydro One shared was the CHEC Report. Hydro One noted they were open to hearing from communities who wish to identify any additional information, such as sites that should be avoided and protected.

On August 11, 2022, Hydro One emailed CKPSFN to provide a reminder to submit any comments on the draft Stage 1 AA reports for the Project. Hydro One provided dates for comments or suggested edits to be provided.

On September 1, 2022, Hydro One sent an invitation for TAC Workshop #2 to all TAC members, including CKPSFN, to be held virtually. On September 8, 2022, Hydro One provided members of the TAC a summary memo from the TAC Workshop #1. On September 13, 2022, CKPSFN representatives joined the second TAC workshop.

Hydro One sent an email on October 28, 2022, to CKSPFN to inform them of the upcoming in-person COH #2 events for the Project. Hydro One informed CKSPFN of the plan for a gathering in the region to review the route alternatives to help ensure Indigenous value components are captured and that community members have a chance to provide their input.

On November 4, 2022, Hydro One sent an invitation to a virtual Indigenous Community Workshop to take place on December 1, 2022.

Hydro One met with five Indigenous communities and representatives, including Three Fires on December 1, 2022. During this workshop Hydro One provided an update on the Project's route selection criteria. Hydro One's main goal was to understand how to best incorporate Indigenous interests into the route evaluation. The Indigenous communities asked a variety of questions related to the following topics:

- Restoration of habitat and how this is incorporated in the route evaluation;
- Involvement of Conservation Authorities in restoration programs;
- Important Bird Areas and how these are incorporated in the route evaluation;
- Construction laydown/staging areas, and construction methods, and how these are incorporated in the evaluation method; and

- Standard mitigation measures.

Hydro One took note of all the input received and provided informative responses to all topics and questions brought up by the Indigenous communities and suggested any other input into the evaluation criteria be provided by the end of 2022 so they could be considered into the final route evaluation. Furthermore, Hydro One provided an update on plans for future Archeological field work. The meeting ended with a brief introduction to the Longwood to Lakeshore Transmission Line Project.

On December 19, 2022, Hydro One provided members of the TAC the summary from the TAC Workshop #2 held on September 13, 2022.

On December 19, 2022, Hydro One sent an email to TFG which contained the draft Natural Environment Baseline Conditions Report and the draft summary of the workshop held on December 1, 2022. Hydro One requested that any comments on the report or additional data for the route selection be sent to Hydro One by January 31, 2023. TFG sent an email to Hydro One to inquire about the budgeting and reimbursement process for contracting a third-party reviewer for the draft Natural Environment Baseline Conditions Report and the draft summary of a workshop that was held on December 1, 2022, for the Project.

On January 19, 2023, Hydro One sent an email to the TFG with the Stage 1/ 2 AA Report. Hydro One provided a brief background on the report, why it was conducted, and explained that the consulting archaeologist TMHC had determined no additional investigation was required. The email explained that TMHC hoped to submit the report at the end of February 2023 and requested that comments or questions on the report be submitted to TMHC by February 17, 2023. On January 25, 2023, Hydro One emailed CKSPFN to provide the Stage 2 AA Report. Hydro One noted that comments should be directed towards TMHC.

On January 27, 2023, TFG sent an email to Hydro One to indicate that they had completed their review on the draft Natural Environment Baseline Conditions Report and were waiting for CFN's review. TFG noted they would provide an update once they met with CKSPFN and CFN on February 7, 2023, to finalize comments. TFG indicated that they would get CKSPFN and CFN's comments to Hydro One by February 8, 2023.

On February 15, 2023, the CKSPFN sent an email to Hydro One with comments on the draft Natural Environment Baseline Conditions Report, on behalf of CKSPFN and CFN. On May 30, 2023, Hydro One provided a response table with comments provided by the Three Fires Group on the Draft Natural Environment Existing Conditions Report. Hydro

One noted the link to final report would be provided shortly. The following comments and recommendations were addressed in the letter:

- The Nations requested a continuous involvement of the communities in the development and implementation of the project design, including mitigation measures and future monitoring activities. This would also involve the review of the ESR, the route evaluation process and future involvement of environmental monitors from CFN and CKSPFN during all phases of the Class EA and permitting process. Hydro One acknowledged this request and noted the team was looking forward to continuing to work with the communities, to consider, discuss, and apply, when possible, any Indigenous Knowledge and/or any other input shared by CFN and CKSPFN on the Project.
- The letter noted that species of importance to both Nations include those that are not at-risk yet and possess a culturally significant value that contribute to traditional fishing, hunting, harvesting, and gathering.
- The Nations requested that tree habitats be assessed for the potential to provide bat maternity roost habitat along the chosen route prior to construction. In addition to this, it was requested that the proponent should employ mitigation measures such as the retention of such trees. Hydro One confirmed that species at risk habitat and significant wildlife habitat for bats was identified, mapped, and considered. It was noted that the detailed assessments would be completed during the detailed design after the preferred route was selected. Hydro One explained that incompatible vegetation would be removed along the preferred route ROW. Proposed mitigation measures will include the removal of incompatible vegetation during appropriate timing windows, or additional mitigation if disruptive work is required within the timing window. In addition, Hydro One will be undertaking a Biodiversity Initiative to offset habitat loss or transition (e.g., from incompatible to compatible vegetation) that cannot otherwise be avoided or mitigated.
- As part of the letter the Nations brought up species of cultural significance, requested consultation regarding the location of certain species, asked for justification for excluding some species at risk, and suggested some potential nesting areas be included in mapping throughout the PSA. Hydro One acknowledged all the comments and requests and provided a thorough explanation for each specific case brought up by the community. Hydro One referenced the findings from the field work done by Dillon, referred to Recovery Strategies and consultation with the MECP and Conservation Authorities.

- The Nations requested and inquired about wetland communities, marsh communities and requested clarification on the wetland categorization. Regarding the clarification about wetlands, Hydro One explained that in instances where background mapping identified wetlands on lands where landowner access wasn't granted communities were delineated based on aerial photography and identified as Wetland System. Hydro One confirmed that the construction scope of the project will include restoration of work areas, including disturbed vegetated areas, with native species compatible with overhead transmission lines. They noted that Indigenous communities will have opportunities to provide input into these restoration plans as they are developed.
- The Nations requested all buildings, bridges and culverts be surveyed to confirm no habitat would be disturbed. Hydro One explained the mitigation measures to avoid destruction of habitat and confirmed additional assessments will be undertaken once the preferred route is selected to support detailed design and mitigation, where necessary.
- The Nations requested a full list of the species for which primer sets were available during baseline eDNA studies, requested that additional efforts be undertaken to characterize seasonal variability in habitats, and requested additional field survey results. Hydro One acknowledged all requests, comments, and feedback. All field survey results requested were provided.
- The Nations requested additional information regarding weather conditions, flows, and general conditions during aquatic surveys. In addition, clarification regarding the number of watercourse crossings present, how they were identified, and the type of survey conducted at each crossing was requested. Hydro One provided the requested information.
- The Nations requested that benthic invertebrate surveys be included as part of the baseline surveys and included as part of operational monitoring. Hydro One explained that these surveys were excluded from the field program because the Project will consist primarily of aerial transmission line crossings over watercourses and is not anticipated to have long-term effects on water quality or benthic substrates.

On April 25, 2023, Hydro One sent an invitation for TAC Workshop #3 to all TAC members, including CKSPFN, to be held virtually on June 1, 2023. The objective of TAC Workshop #3 was to announce the preferred route to the TAC and explain the rationale for its selection, prior to the public announcement of the preferred route.



On May 24, 2023, CKSPFN emailed Hydro One to request a meeting to discuss permits and timelines for several transmission projects in southwestern Ontario. Hydro One provided available dates and times as well as a draft agenda including updates on projects underway in southwestern Ontario. Both parties met on May 31, 2023. In the meeting Hydro One provided updates on the southwestern portfolio of projects and provided an advanced briefing of the preferred route for the Project. Questions and concerns raised by TFG were regarding restoration opportunities, land trusts on the corridor, and full-time monitoring positions. Hydro One provided background on the Biodiversity Initiative. Hydro One also provided an update on the timeline for the SCTL Final ESR.

On June 1, 2023, CKSPFN joined the third TAC workshop hosted by Hydro One, virtually.

On June 5, 2023, Hydro One notified TFG and CKSPFN, of the selection of the preferred route and attached notices about the process of selection of the preferred route, a map of the preferred route, COH #3 event details, and provided a link to the Project website. Hydro One noted that there would be COH #3 events in the region to inform area residents about the next steps, meet the Project team, and provide feedback. Hydro One noted that the Project team could have an open house in the community at CKSPFN's request and suggested regular monthly meetings to provide updates on all Hydro One projects in southwestern Ontario.

On June 20, 2023, Hydro One emailed the CKSPFN to confirm a meeting on July 4, 2023, where Hydro One would provide an update on its projects in southwestern Ontario.

On June 26, 2023, Hydro One thanked invitees for taking part in the TAC and noted that the input received had been invaluable. Attached to the email was a summary from the TAC Workshop #3, and a reminder of the COH #3 events beginning on the same day. Hydro One encouraged invitees to reach out if they had any questions or comments.

On July 21, 2023, Hydro One emailed CKSPFN informing them on the upcoming Natural Environment field survey program, and the upcoming Archeological surveys to be conducted since the preferred route selection. Hydro One noted coordination would be directed through Dillon for the Natural Environment field surveys, and through TMHC for the Archeological surveys. A link to the 2022 baseline environment conditions report was also provided and Hydro One noted that the next major milestone is the release of the draft Environmental Study Report.



On July 26, 2023 Hydro One met with CKSPFN and provided an update on the Southwestern Ontario projects, including the St. Clair Transmission Line Project. CKSPFN noted the community intends to rebuild its Consultation Program internally, rather than continue the current out-sourcing model. After meeting with CKSPFN on another Hydro One project, Hydro One provided website links to all projects including SCTL.

During August, September, and throughout the fall of 2023, Dillon and CKSPFN corresponded several times, via email, relating to field survey participation for the late summer and fall sessions planned. CKSPFN participated in one of the late summer field survey sessions.

On September 7, 2023, TMHC contacted CKSPFN to invite them to participate on the Stage 2 archaeological assessment fieldwork. Throughout the months of September and October, TMHC and CKSPFN corresponded several times, via email, relating to field survey participation and the applicable agreements to make this possible.

On November 2, 2023, Hydro One emailed CKSPFN to advise that Forbes Bros had been selected to execute their plan to construct the Project.

On November 6, 2023, Hydro One provided the Notice of Completion for the draft ESR, notifying of the 30-day comment period from November 6 to December 7, 2023. On November 14, 2023, Hydro One emailed CKSPFN to ask if a hard copy of the draft ESR was needed, to ease the review. CKSPFN accepted the offer of a hard copy of the draft ESR and requested it to be sent to their main office. Hydro One sent a hard copy of draft ESR on November 15, 2023.

#### **3.5.6.2 Economic Opportunities – Jobs, Training and Procurement**

Hydro One contacted the CKSPFN via email to explain the Early Contractor Involvement (ECI) process, introduce both EPC contractors, and offer an introductory meeting.

The Hydro One team is currently working to engage with the communities in order to have a dialogue and to ensure that the communities have the opportunity to engage in the EPC process and other potential economic benefits.

Hydro One received comments from the CKSPFN regarding the Project, which Hydro One addressed. **Table 3-10** provides a summary of the CKSPFN comments received and the responses from Hydro One regarding each comment.

Table 3-10: Summary of CKSPFN Comments and Concerns Received on the Project

Theme	Question/Comment	Response
Natural Environment field program	CKSPFN requested to review the Natural Environment Field Program Terms of Reference	Hydro One provided this to CSKPFN.
Historical Land Use	CKSPFN noted past Indigenous agroforestry within the Bickford Woods area, and the cultural significance of this.	Hydro One acknowledged this information and noted that it would be considered in the planning of the Project, and that any additional information would be helpful in this regard if it could be provided.
Traditional Ecological knowledge and effects to animals and their habitats	<p>CKSPFN expressed the desire to undertake traditional ecological knowledge study work to determine whether the Project construction and operation interact with the habitat or travel routes of the following species, which are important to CKSPFN’s traditional harvesting: white-tailed deer, muskrat wild turkey, pickerel, perch, frogs , pickerel, turtles, crappie, beavers, blue gill, min, dogfish, smelt, mudpuppies, sweetgrass, rainbow trout, tobacco, ducks, sage, geese, cedar, cotton tail rabbits, black willow, jack rabbits, red willow, and birch.</p> <p>CKSPFN noted that some species which are not at risk are cultural significant and should be protected.</p>	<p>Hydro One has incorporated feedback regarding Indigenous Knowledge into the Class EA including, where provided, the route evaluation and selection process and the effects assessment of the preferred route. The preferred route 2 scored the best (had the least effect) overall in the Natural Environment category and the Indigenous Culture, Values and Land Use category, with several criteria included to directly reflect the input received from CFN and other Indigenous communities.</p> <p>As the Project progresses, Hydro One will continue to identify opportunities for participation of Indigenous communities on the Project. Hydro One will include consideration of habitats that support hunting, harvesting, and trapping activities in their planning of the Project, including the evaluation of route alternatives.</p>
Effects to aquatic habitats and species at risk.	<p>CKSPFN requested a full list of the species for which primer sets were available during baseline eDNA studies, requested that additional efforts be undertaken to characterize seasonal variability in habitats, and requested additional field survey results.</p> <p>CKSPFN requested additional information regarding weather conditions, flows, and general conditions during aquatic surveys. In addition, clarification regarding the number of watercourse crossings present, how they were identified, and the type of survey conducted at each crossing was requested.</p> <p>CKSPFN requested that benthic invertebrate surveys be included as part of the baseline surveys and included as part of operational monitoring.</p>	<p>Hydro One acknowledged all requests, comments, and feedback. All field survey results requested were provided.</p> <p>Hydro One explained that these surveys were excluded from the field program because the Project will consist primarily of aerial transmission line crossings over watercourses and is not anticipated to have long-term effects on water quality or benthic substrates.</p>

Theme	Question/Comment	Response
<b>Species at Risk</b>	<p>CKSPFN requested that tree habitats be assessed for the potential to provide bat maternity roost habitat along the chosen route prior to construction. In addition to this, it was requested that the proponent should employ mitigation measures such as the retention of such trees. Hydro One confirmed that species at risk habitat and significant wildlife habitat for bats was identified, mapped, and considered.</p> <p>CKSPFN suggested all buildings, bridges and culverts be surveyed to confirm no habitats would be disturbed.</p> <p>CKSPFN asked for justification for excluding some species at risk, and suggested some potential nesting areas be included in mapping throughout the PSA.</p>	<p>Hydro One confirmed that the detailed assessments would be completed during the detailed design after the preferred route was selected. Hydro One explained that incompatible vegetation would be removed along the preferred route ROW. Proposed mitigation measures will include the removal of incompatible vegetation during appropriate timing windows, or additional mitigation if disruptive work is required within the timing window. In addition, Hydro One will be undertaking a Biodiversity Initiative to offset habitat loss or transition (e.g., from incompatible to compatible vegetation) that cannot otherwise be avoided or mitigated. Hydro One confirmed that the construction scope of the project will include restoration of work areas, including disturbed vegetated areas, with native species compatible with overhead transmission lines. They noted that Indigenous communities will have opportunities to provide input into these restoration plans as they are developed.</p> <p>Hydro One explained the mitigation measures to avoid destruction of habitat and confirmed additional assessments will be undertaken once the preferred route is selected to support detailed design and mitigation, where necessary.</p> <p>Hydro One acknowledged all the comments and requests and provided a thorough explanation for each specific case brought up by the community. Hydro One referenced the findings from the field work done by Dillon, referred to Recovery Strategies and consultation with the MECP and Conservation Authorities.</p>
<b>Class EA process</b>	CKSPFN expressed an interest in participation in the Environmental field surveys, as well as in the review of the ESR, the route evaluation process.	Hydro One provided the administrative and scheduling details for Indigenous communities participating in the field surveys. As the Project progresses, Hydro One will continue to identify opportunities for participation of Indigenous communities on the Project. Hydro One confirmed the team was looking forward to continuing to work with the communities, to consider, discuss, and apply, when possible, any Indigenous Knowledge and/or any other input shared by CFN.
<b>Wetland classification Habitat Restoration Seasonal Variability</b>	CKSPFN requested and inquired about wetland communities, marsh communities and requested clarification on the wetland categorization.	Hydro One explained that in instances where background mapping identified wetlands on lands where landowner access wasn't granted communities were delineated based on aerial photography and identified as Wetland System. Hydro One confirmed that the construction scope of the project will include restoration of work areas, including disturbed vegetated areas, with native species compatible with overhead transmission lines. They noted that Indigenous communities will have opportunities to provide input into these restoration plans as they are developed.
<b>Field Survey results</b>	CKSPFN requested the results of the field surveys conducted.	All field survey results requested were provided.
<b>Construction laydown and staging areas</b>	CKSPFN inquired if specific laydown or staging areas have been identified for each of the route alternatives, and how Hydro One selects these areas.	Hydro One noted that laydown and staging areas are identified after the preferred route is selected. It was noted that laydown and access areas, which are temporary, may be within PSA, and as a result, environmental features within the PSA are considered in the route evaluation. Hydro One also noted that where possible, sensitive features are avoided when selecting the locations for staging and laydown areas.

Theme	Question/Comment	Response
Mitigation measure and Environmental Management Plans	CKSPFN inquired if a list of commitments/mitigation measures was available for review.	<p>Hydro One suggested looking at the Chatham to Lakeshore commitments in the final ESR as that project was in the same vicinity and similar in scope (new double-circuit 230 kV transmission line). It was noted that would provide a good example of the types of effects and commitments that may also be relevant to the St. Clair TL project.</p> <p>As of the release of this Final ESR, Project commitments are summarized in <b>Chapter 7</b> and the included tables.</p>

### **3.5.7 Chippewas of the Thames First Nation**

In addition to the consultation process outlined above, COTTFN received an advanced project initiation email on December 2, 2021, requesting a meeting to discuss the Project and the community's preferred approach to consultation and engagement. Subsequently, COTTFN emailed Hydro One, stating they forwarded the email Hydro One sent to COTTFN's energy sector consultation contact.

On December 25, 2021, Kwusen Research & Media (Kwusen) emailed Hydro One to schedule a NationsConnect training session on behalf of COTTFN. On February 4, 2022, Hydro One staff attended training with COTTFN on the NationsConnect consultation platform used moving forward.

On February 10, 2022, Hydro One formally submitted the Project's Notice of Commencement and Project shapefiles to COTTFN through the NationsConnect web portal. Hydro One proposed a regular monthly meeting with COTTFN to help ensure open lines of communication and that concerns are addressed quickly and efficiently. Hydro One extended an invite to the virtual COH #1 Live Discussions on March 9 and 10, 2022.

On February 23, 2022, a monthly meeting between COTTFN and Hydro One occurred to discuss updates on the Project and engaging with the community.

On March 3, 2022, COTTFN emailed Hydro One indicating that they have made the requested changes to allow Dillon staff direct access to the Project on NationsConnect. Hydro One responded to the COTTFN indicating they would pass along the message to the contact.

On March 9, 2022, COTTFN thanked Hydro One for the Project website URL and expressed interest on planning COTTFN-specific community sessions. COTTFN provided a consultation response letter. The letter indicated the proposed Project is located in the Sombra (#7) and McKee (#2) Treaty areas, and possibly the Longwoods (#25) Treaty area, to which COTTFN is a signatory. COTTFN noted in the letter that the Project is of moderate concern, and the community would continue to engage with Hydro One through their regular meetings. COTTFN asked Hydro One to forward all new information through NationsConnect. COTTFN also indicated they have developed their own consultation protocol document and process.

On March 11, 2022, COTTFN emailed Hydro One confirming their strong preference on posting Project updates on NationsConnect and provided clarification on how to post updates that relate to multiple projects.

On March 25, 2022, Hydro One provided an agenda with a list of discussion items for the meeting with COTTFN. Hydro One provided documents for the upcoming Natural Environment field program and provided the name of Dillon's contact that would coordinating agreements and logistics for field survey participation.

On March 28, 2022, COTTFN emailed Hydro One to thank them for the Natural Environment field program documents and mentioned that they reached out to Dillon to get a monitoring agreement established. COTTFN stated that they wanted to have plant identification as a special session in June.

Between the end of March and end of August 2022, Dillon and COTTFN corresponded several times, via email, relating to field survey participation. A fieldwork agreement was settled on and location and time logistics were coordinated by Dillon throughout the season. COTTFN field monitors joined some of the Natural Environment surveys throughout the field season.

On April 11, 2022, Hydro One sent information through the COTTFN NationsConnect regarding the TAC. Hydro One explained that the purpose was to obtain valuable input and feedback from TAC members and ultimately select a preferred route for the Project. Hydro One provided information regarding the TAC Workshop #1, including some additional materials available prior to the workshop.

On April 14, 2022, COTTFN advised Hydro One that they would like to participate in the TAC and continue to receive updates. Hydro One acknowledged COTTFN's request to participate in the TAC. COTTFN expressed interest to schedule an open house for COTTFN in June 2022. On April 21, 2022, Hydro One proposed an open house for COTTFN in July 2022. Hydro One stated that they would discuss further in their next meeting with COTTFN.

On April 22, 2022, Hydro One provided COTTFN a list of topics for discussion at their next meeting as well as meeting notes from February 2022 and draft meeting notes from March 30, 2022.

On April 25, 2022, Hydro One sent an invitation to the TAC members, including COTTFN, for the first TAC workshop, to be held virtually on May 5, 2022. Hydro One provided the workshop agenda, a document further describing the purpose and objectives of the TAC, and the preliminary list of Natural Environment and Socio-economic Environment criteria. Hydro One also provided the link to a video introduction explaining the weighted Multi-Criteria Decision-Making framework that Hydro One



planned to apply during the Class EA to evaluate the route alternatives and select the preferred route.

On April 27, 2022, COTTFN and Hydro One met to discuss the Project. Topics of discussion included: updates on the field programs (environment and archeology), upcoming TAC workshops, and the upcoming general open house for the Project.

Hydro One hosted the TAC Workshop #1 on May 5, 2022, which representatives from COTTFN attended. For further details on this workshop please refer to **Section 3.11.1**.

Between the end of April and end of August 2022, TMHC and COTTFN corresponded several times, via email, relating to field survey participation for the early Stage 2 AA.

On May 13, 2022, Hydro One emailed COTTFN a response to their questions/concerns relating to the agreement required for participation in the field work programs, and indicated they do not have absolute flexibility on the survey schedule but would accommodate as the protocols allow to provide as many opportunities for COTTFN to participate. On May 17, 2022, COTTFN emailed Hydro One thanking them for their responses and work on resolving some of the issues raised about timing and field work, while indicating that a few points still required further internal discussion. COTTFN reiterated their concern that the agreement was not finalized prior to the field season starting but agreed on the importance of collecting the best data within the available windows of time.

On May 19, 2022, Hydro One emailed COTTFN to provide information regarding the community open house, and eDNA Field Surveys.

On May 25, 2022, Hydro One staff had a virtual meeting with members of COTTFN to discuss the Project. Topics discussed included the field program, and an upcoming in-person community open house being held for the community.

On June 24, 2022, Hydro One had a meeting with COTTFN to discuss the Project. The topics discussed included updates on archaeology and the Natural Environment program, ECI contractor work for the Project, the upcoming in-person community open house, and opportunities for community sponsorship for the community's Powwow. On June 28, 2022, COTTFN emailed Hydro One regarding a work plan they are filling out for the Project. COTTFN inquired to know about when Project timelines would be available, and what would be included in the Environmental study participation and monitoring.



On July 14, 2022, COTTFN emailed Hydro One to provide logistical details for a tour of the community on July 21, 2022, hosted by COTTFN. COTTFN offered to discuss further with a phone call. Hydro One thanked COTTFN for providing the logistical details and stated their availability for a call.

On July 19, 2022, Hydro One emailed COTTFN regarding the funding agreement.

On July 20, 2022, Hydro One emailed COTTFN to provide a memo that summarized the Class EA process and a table that outlines key opportunities for Indigenous communities to provide input. Hydro One also noted that they are open to more input regarding sites not identified in the CHEC Report and invited COTTFN to provide further comment.

Hydro One sent COTTFN, (through NationsConnect) on July 22, 2022, providing three documents. The first was a summary of the Class EA process and the route evaluation process. This document noted the inclusion of a category in the route evaluation process called Indigenous Culture, Values and Land Use and requested COTTFN review the category summary and provide input of any suggested changes from the community. The second document included was a table outlining key Indigenous input opportunities based on the Project's timeline. This table was provided by Hydro One as a tool to help ensure the community's input and priorities were received when they could be given the highest consideration in the EA and project planning process. The final document Hydro One shared was the CHEC Report. Hydro One noted they were open to hearing from communities who wish to identify any additional information, such as sites that should have been avoided and protected.

On August 10, 2022, COTTFN confirmed the re-scheduled date for the in-person community open house hosted by the community which was scheduled for September 15, 2022. COTTFN also provided some materials that were used for the open house, for Hydro One's review.

On August 11, 2022, Hydro One emailed COTTFN through NationsConnect to provide a reminder regarding the review of the Draft Stage 1 Archaeological Assessment Report for the Project. Hydro One stated that TMHC intend to submit to the Ministry by early September. Hydro One also confirmed they had no concerns with the community open house materials COTTFN had provided.

On August 23, 2022, Hydro One emailed COTTFN to provide a draft agenda to discuss multiple major projects and the upcoming community open house. On August 24, 2022, Hydro One provided COTTFN a draft meeting agenda for their meeting on August 25,

2022, and a summary of the previous meeting agenda. COTTFN emailed Hydro One to ask questions about the archaeological assessment and request various shapefiles.

COTTFN sent an email to TMHC indicating that they reviewed the Draft Stage 1 Archaeological Assessment Report for the Project and had no issues with the proposed methodology and recommendations for Stage 2. COTTFN had questions from the report about a potential archaeological site, and a request for shapefiles of archaeology site boundaries.

On August 25, 2022, Hydro One had a meeting with COTTFN and provided updates for the Project's route selection and Cultural Heritage Reports.

On September 1, 2022, Hydro One sent an invitation for TAC Workshop #2 to all TAC members, including COTTFN, to be held virtually. On September 8, 2022, Hydro One provided members of the TAC a summary memo from the TAC Workshop #1 and provided logistical details for TAC Workshop #2.

On September 9, 2022, Hydro One provided COTTFN the shapefiles from the Stage 1 Archaeological Assessment for the Project. Kwusen Support on behalf of NationsConnect sent an email to Hydro One indicating that a new conversation had been started with COTTFN. In the conversation via NationsConnect, Hydro One sent COTTFN the shapefiles from the Stage 1 Archaeological Assessment for the Project. Hydro One noted that site location data came direct from the MTCS and had not been corrected with reference to reports/publications. Hydro One explained that only six of the cemeteries have point locations and there is no precise location information for the others.

On September 13, 2022, COTTFN representatives joined the TAC workshop hosted by Hydro One virtually.

On September 15, 2022, a Community Open House for the Project was held within the COTTFN community. The event was hosted at the Antler River Seniors Complex on the First Nation from 4 pm to 7 pm. Information on the need and scope of the Project, Class EA process, route alternatives and evaluation process, and Project timelines and next steps was shared. Project team members engaged in discussions with community members on several topics including:

- Need for the Project and regional plans to expand the electrical transmission system in southwestern Ontario.

- Route alternatives and aspects to consider in the evaluation and selection of the preferred route.
- Employment and training opportunities.
- Natural Environment and archaeological surveys and procedures.
- Other general questions relating to Hydro One and its existing transmission and distribution facilities.

On October 5, 2022, COTTFN thanked Hydro One for sending the information that was presented at the COTTFN Community Open House.

On October 14, 2022, COTTFN sent an email to Hydro One indicating that they are leading a focus group for COTTFN to provide feedback on the route evaluation for the Project. COTTFN indicated that they would like to provide printed copies of the detailed route alternative maps for reference in the focus group and that the detailed figures from the Hydro One Project website do not include the wetlands or woodlands mapping layer on them. COTTFN requested the wetlands and woodlands layers to be added to the detailed route alternative maps. Hydro One responded to COTTFN thanking them for reaching out and indicated their excitement for the focus group to discuss the Project and route alternatives. On that same day, Hydro One indicated that they will be sending out a draft Natural Environment Baseline Conditions Report which will include PDF maps of the route alternatives in relation to the datasets that COTTFN mentioned, as well as additional results and information from the Natural Environment field surveys that were conducted on the route alternatives earlier in the year. Hydro One explained that the Project website has an interactive mapping tool available which shows the route alternatives and adjustable layers which could be used for the focus group. Hydro One also suggested for COTTFN to provide input into the evaluation framework in the form of specific criteria for each route alternative to better incorporate those aspects of importance as identified by COTTFN.

On October 17, 2022, Hydro One emailed COTTFN to indicate that TMHC was preparing to submit the Draft Stage 1 Archaeological Assessment Report the following week to the MTCS for their review. COTTFN requested Hydro One to provide the updated mapping on or before October 25, 2022.

Between October 19 and 21, 2022, COTTFN and Dillon communicated via email regarding COTTFN's request for detailed mapping.

On October 25, 2022, Hydro One provided the draft agenda for the meeting on October 26, 2022. COTTFN sent an email to Hydro One to note that they had postponed their focus groups on the route alternatives due to a tragic event in the community. COTTFN

explained that they would reschedule for late November 2022. COTTFN indicated that they would be in attendance for the meeting the following morning. Hydro One responded to COTTFN to express condolences to the community. Hydro One emailed COTTFN to provide the meeting agenda for their meeting on October 26, 2022. Hydro One also provided the meeting summary from their meeting in August.

On October 26, 2022, Hydro One had a meeting with COTTFN to discuss the following topics: ongoing projects in the area, an update on the Stage 1 and 2 Archaeological Assessment Report, the COH #2 events from November 8 to 10, 2022, and an update on the Natural Environment Existing Conditions Report. COTTFN asked about a technical workshop for Indigenous communities and noted that they would like to see Hydro One bring together multiple nations in-person to hear their perspectives. Hydro One confirmed that a technical workshop would be held in December 2022 or January 2023 and indicated that they hope to finalize the criteria and weighting by the end of 2022. Hydro One explained that the evaluation of the route alternatives would begin in 2023 and the preferred route would be selected in spring 2023. COTTFN requested Hydro One's assistance in creating a high-level map of southwestern Ontario showing the local nations and major landmarks which will be used in community meetings for members to provide their written/drawn feedback.

On October 28, 2022, Hydro One sent an email to COTTFN to inform them of the in-person COH #2 events. Hydro One also indicated that the Project team was available to meet with COTTFN to conduct a community open house in the community to discuss the Project and other Hydro One projects. Hydro One thanked COTTFN for the input provided to date and informed them of the plan for a gathering in the region to review the route alternatives to help ensure all Indigenous value components are captured and that community members have a chance to provide their input.

On November 1, 2022, COTTFN emailed Hydro One to provide spatial data files and logistical details of the features to be included on the maps. On November 3, 2022, Hydro One responded to COTTFN thanking them for providing spatial data files.

On November 8, 2022, COTTFN thanked Hydro One for indicating the time and date of the survey for the Stage 2 Archaeological Assessment field work at the St. Clair Thames River Crossing. COTTFN also indicated that a staff member would be attending the survey on behalf of COTTFN. Hydro One thanked COTTFN for confirming the attendance of a COTTFN staff member meeting with the TMHC field team at the St. Clair Thames River Crossing for the Stage 2 Archaeological Assessment field work for the following day.

On November 16, 2022, Hydro One sent an email to COTTfN with attached maps that were requested by COTTfN and explained that they had prepared an extra map of the Project study area with a buffer around the route alternatives that could assist as well. On November 18, 2022, COTTfN thanked Hydro One for the maps. Hydro One acknowledged to COTTfN requests for changes on the map, noting they would try to have them back by November 21, 2022. On November 22, 2022, Hydro One sent an email to COTTfN with the requested updated maps.

Hydro One also provided COTTfN with a formal response to questions received at the community open house in September regarding the fate of artifacts collected during the Archaeological surveys, potential repatriation to descendent communities, provincial requirements, as well as the process that TMHC employs. Hydro One sent an email to a resident of COTTfN to follow up regarding their questions at the community open house on September 15, 2022, about the archaeological surveys that proponents undertake when planning projects that require ground disturbance in areas of archaeological potential. Hydro One explained that they worked with their consulting archaeologists, TMHC, to provide a response regarding the provincial requirements and processes as well as the procedures in place at TMHC. A summary of the provincial requirements as well as TMHC procedures were provided.

On November 24, 2022, Hydro One emailed COTTfN to provide the revised funding agreement. Hydro One offered to schedule a meeting if they wanted to discuss further.

On November 29, 2022, Hydro One provided COTTfN a meeting summary from their meeting on October 26, 2022. Hydro One sent an email to COTTfN with the meeting agenda for November 30, 2022.

On November 4, 2022, Hydro One sent an invitation to a virtual Indigenous Community Workshop to take place on December 1, 2022.

Hydro One met with five Indigenous communities and representatives, including COTTfN on December 1, 2022. During this workshop Hydro One provided an update on the Project's route selection criteria. Hydro One's main goal was to understand how to best incorporate Indigenous interests into the route evaluation. The Indigenous communities asked a variety of questions related to the following topics:

- Restoration of habitat and how this is incorporated in the route evaluation;
- Involvement of Conservation Authorities in restoration programs;
- Important Bird Areas and how these are incorporated in the route evaluation;

- Construction laydown/staging areas, and construction methods, and how these are incorporated in the evaluation method; and,
- Standard mitigation measures.

Hydro One took note of all the input received and provided informative responses to all topics and questions brought up by the Indigenous communities and suggested any other input into the evaluation criteria be provided by the end of 2022 so they could be considered into the final route evaluation. Furthermore, Hydro One provided an update on plans for future Archeological field work. The meeting ended with a brief introduction to the Longwood to Lakeshore Transmission Line Project.

On December 19, 2022, Hydro One provided members of the TAC the summary from TAC Workshop #2 held on September 13, 2022.

On December 21, 2022, Hydro One sent an email to COTTFN which contained the draft Natural Environment Baseline Conditions Report and the draft summary of the workshop held on December 1, 2022. Hydro One requested that any comments on the report or additional data for the route selection be sent to Hydro One by January 31, 2023.

On January 16, 2023, COTTFN sent an email to Hydro One with the Community Engagement Session Summary report the community had put together. To provide members of the community an opportunity to provide feedback on the Indigenous Cultures and Values evaluation criteria, COTTFN held two focus group sessions. The report summarized the comments provided during these focus sessions. Hydro One provided a response letter to COTTFN on May 31, 2023. The key themes brought up during these focus groups, and Hydro One's responses, are provided below:

- Human health. COTTFN expressed concern for the lack of data on the effects of existing transmission lines on the health of humans. The need for monitoring and long-term study was noted. Hydro One acknowledged the health concerns COTTFN noted, and state that human health is priority for Hydro One. Hydro One stated their commitment to meet safe EMF exposure levels, and noted EMF levels are taken into consideration during the design of new electrical transmission projects. It was noted that EMF is strongest when close to the source, and as one moves away from the source, the strength of the fields fades rapidly. Hydro One stated that Health Canada's conclusion is that there is no conclusive evidence of adverse effects caused by EMF exposure from power lines.



- Preferred route. The community noted they would prefer if an existing route is utilized in order to reduce impacts. It was noted that a new crossing of the Thames River was undesirable. Hydro One noted they diligently reviewed and evaluated the five viable route alternatives for the new transmission line. Hydro One noted they considered Indigenous values in the route evaluation process and that COTTFN's input on the routes was taken into consideration. The concerns raised in the report were considered in the route evaluation as follows:
  - Co-location and repurposing of existing infrastructure had been included in three of the four evaluation categories (Socio-economic, Technical and Cost, and Indigenous Culture, Values and Land Use). This specifically addressed comments and concerns regarding the preference to utilizing existing corridors, and trying to avoid impacts to undisturbed area.
  - New effects to rivers greater than 1 km in reach was added to the Indigenous Culture, Values and Land Use category through the criterion for fish-bearing waters and areas that support fishing/fish habitat. This addition was made to capture the comment from COTTFN that a new crossing of the Thames River (i.e., not utilizing or abutting an existing transmission line crossing) is undesirable.
- The environment. The community expressed concerns over post-construction restoration of forested ecosystems, as well as migratory patterns of species in the area. Hydro One acknowledged the importance of existing vegetation and wildlife habitat and noted how this was taken into consideration in the route evaluation. It was noted that wooded vegetation, undisturbed native vegetation, species at risk, wildlife habitat, and wetlands are all considered under both the Natural Environment and the Indigenous Culture, Values and Land Use categories, reflecting both their importance as aspects of the natural environment as well as their unique importance to Indigenous communities.
- Water. Concerns about effects on water drainage and groundwater were noted by COTTFN. Hydro One stated that as part of both the Natural Environment and the Indigenous Culture, Values and Land Use criteria, the number of watercourses and the length of watercourse reaches within the right-of-way was considered. Further, specific to the Indigenous Culture, Values and Land Use criterion, new effects to rivers greater than 1 km in reach was included to capture the comment from COTTFN that a new crossing of the Thames River (i.e., not utilizing or abutting an existing transmission line crossing) is undesirable.
- Climate change. The community noted they are concerned about the impacts of clearing the land would have on weather patterns. Hydro One noted that aspects of both climate change mitigation (such as consideration of incompatible



vegetation requiring removal), and adaptation (such as floodplains and natural hazard areas) have been considered in the route evaluation for the Project. With regards to climate change mitigation, additional mitigation measures will also be applied on the Project (e.g., reducing vehicle idling during construction). Hydro One recognized that a changing climate is likely to result in an increase of unusual weather patterns and severe weather events, which could potentially damage or adversely affect infrastructure and other public facilities. It was noted that the infrastructure being planned for this proposed Project will be engineered to adequately withstand the effects of climate change.

- Treaty Rights. The community noted that the industrialization of COTTFN treaty lands is a threat to the potential for lands to be used for traditional and cultural uses. Hydro One noted they continue to engage with Indigenous communities, including COTTFN to seek feedback on the St. Clair Project and how it may affect asserted or established Indigenous rights.
- Cumulative effects on way of life. The community noted the cumulative impact of the increased presence of the industry in the Chatham area and how this has impacted their traditional life, spirit of the land, health, and future of the environment. Hydro One recognized that the legacies of settlement, including agricultural and land conversion and development activities have, and continue, to put pressure on COTTFNs current and future use of lands and resources. Hydro One noted that they would be assessing cumulative effects of the Project but noted that assessing effects such as those beyond the immediate Project area was outside of the Class EA.
- Benefits to the community. The community spoke about the perceived lack of benefits of the Project to the Indigenous nation. Hydro One noted the construction of the proposed new 230 kV transmission line will provide the surrounding area with a more reliable supply of energy as the region experiences growth. This will benefit businesses (including Indigenous-owned businesses) and community members alike. It will allow resources and bulk facilities in the region to operate efficiently for local and systems needs.
- Relationship building. The community expressed their interest in hearing perspectives from other First Nations in the area and in building relationships with non-Indigenous people along the length of the transmission line. Hydro One stated they welcomed input and participation from Indigenous Communities throughout this Project and will continue to meaningfully engage with the communities on this and future projects.

Hydro One sent an email to the COTTFN using NationsConnect to share the Archaeological Assessment Stage 1 and 2 Report for a past field session which took place to support to Project. Hydro One provided a brief background on the report, why it was conducted, and explained that the consulting archaeologist TMHC had determined no additional investigation is required. The email explained that TMHC hoped to submit the report at the end of February 2023 and requested that comments or questions on the report be submitted to TMHC by February 17, 2023.

On January 24, 2023, Hydro One sent an email to COTTFN with the meeting summary from their meeting in November 2022 requesting any edits. A link to EMF information was also provided. Hydro One indicated that they would provide Project updates at their meeting happening the following day and would like to focus on topics identified in the Focus Group Summary provided by COTTFN. Hydro One requested any discussion topics.

On January 31, 2023, COTTFN sent an email to Hydro One with their comments on the Baseline Natural Environment Existing Conditions Report. COTTFN indicated that the Environment team is working to get the preliminary significant species list by the following day. COTTFN also indicated that due to training, they need to move the meeting date for February and will get back to Hydro One with potential meeting dates. On February 2, 2023, COTTFN sent an email to Hydro One with additional comments on the Baseline Conditions Report. COTTFN also indicated that due to training, they need to move the meeting date for February and will get back to Hydro One with potential meeting dates. Hydro One sent an email to COTTFN to thank them for the preliminary species list and indicated that the Project team is compiling the data and will have a touchpoint meeting with COTTFN before the route alternatives are evaluated to help ensure COTTFN's input is included appropriately.

On February 28, 2023, Hydro One emailed COTTFN a draft agenda for the upcoming meeting scheduled for March 1, 2023, in which Hydro One would provide an update on projects in southwestern Ontario. On March 1, 2023, Hydro One had a meeting with COTTFN to discuss Hydro One's projects in the southwest including the Project. Meeting topics included route selection and criteria, Big Bear Creek additions to the reserve, and EMF questions.

On March 1, 2023, Hydro One met with COTTFN and discussed route selection and criteria. Hydro One thanked COTTFN for the comments received on the Natural Environment baseline condition report and noted that the species of interest provided in the comments had been thoroughly reviewed. Hydro One confirmed that the habitat of

these species had been captured in the route evaluation. However, Hydro One also noted that a lot of the species in the lists were generalist species and these were not possible to apply to a more specific assessment or criterion. Hydro One also expanded on bird habitat and migration comments noted by COTTFN and reiterated that the species identified had been captured in the habitat criteria, and special areas such as the heron rookery were being given special attention. Hydro One also requested confirmation that no specific areas had been identified with respect to the Big Bear Creek Additions to Reserve with COTTFN confirming that additional areas have not yet been identified for the additions. Hydro One asked that COTTFN share any updates or information that is available to ensure it is captured in the process, acknowledging that it might be a long while before the process moves forward. In addition to this Hydro One also provided an update on the archeology work for the Project. The meeting adjourned with Hydro One suggesting an in person get together to bring technical staff into the community to share information about the existing line and to address any concerns the community may have.

On April 25, 2023, Hydro One sent an invitation for the TAC Workshop #3 to all TAC members, including COTTFN, to be held virtually on June 1, 2023.

On May 23, 2023, Hydro One emailed COTTFN to explain that Hydro One will use the upcoming meeting to provide updates on three projects in the area. On May 24, 2023, Hydro One had a meeting with COTTFN consultation staff to provide updates on the southwest portfolio of projects, an advanced briefing of the route selection, anticipated Stage 2 Archaeology timelines, and potential additional Natural Environment surveys. COTTFN provided updates on local events and had questions related to technical/financial aspects of implementing the Community Field Work Agreement, which were sent by email to the appropriate contact at Hydro One.

In Hydro One's response to the Focus Group summary (provided on May 31, 2023), Hydro One indicated they had reviewed COTTFN's comments on the Natural Environment Existing Conditions Report and the preliminary list of species of interest. Hydro One noted that information provided by the community was incorporated into the route evaluation where possible. Examples include a review of the preliminary species of interest list to ensure that all appropriate habitats were considered when evaluating the effects of each route to hunting, trapping, or harvesting grounds, and ensuring that wetland communities received additional consideration within the Indigenous Culture, Values and Land Use category.

On June 1, 2023, COTTFN joined the third TAC workshop hosted by Hydro One, virtually.

On June 5, 2023, Hydro One notified COTTFN of the selection of the preferred route and attached notices about the process of selection of the preferred route, a map of the preferred route, COH #3 details, and provided a link to the Project website. Hydro One noted that the Project team could meet with the COTTFN to discuss the selection of the preferred route or have an open house in the community at their request.

On June 26, 2023, Hydro One thanked participants for taking part in the TAC for the Project and noted that the input received had been invaluable. Attached to the email was a summary from the event, and an invitation to the COH #3 events beginning on the same day. Hydro One encouraged participants to reach out if they had any questions or comments.

On July 21 2023, Hydro One emailed COTTFN information on the upcoming Natural Environment field survey program, and the upcoming Archeological surveys. Hydro One noted coordination would be directed through Dillon for the Natural Environment field surveys, and through TMHC for the Archeological surveys.

On July 26, 2023, Hydro One met with COTTFN and provided an update on the Southwestern Ontario projects, including the St. Clair Transmission Line Project. At that time, Hydro One requested permission to make mention of the Culture and Rights Study Deshkan Ziibiing developed for the Chatham x Lakeshore Project, in addition to the Focus Group Report within the ESR. HONI requested to refer to these materials by acknowledging that they were used to develop route selection criteria; COTTFN consented to this use provided no specific sites were mentioned.

During August 2023, September, and throughout the fall of 2023 Dillon and COTTFN corresponded several times, via email, relating to field survey participation. On August 17, 2023, Hydro One, Dillon and COTTFN met to discuss the field survey agreement moving forward. An agreement was put in place. COTTFN participated in one of the fall 2023 field survey sessions.

On September 7, 2023, TMHC contacted COTTFN to invite them to participate on the Stage 2 archaeological assessment fieldwork. Throughout the months of September and October, TMHC and COTTFN corresponded several times, via email, relating to field survey participation and the applicable agreements to make this possible.

Hydro One emailed COTTFN on October 27, 2023, to advise that the Draft ESR would be available for public review and comment on November 6, 2023. Hydro One noted

that they would provide a link to the report when available and requested comments and feedback by December 7, 2023.

On November 2, 2023 Hydro One emailed AFN to advise that Forbes Bros had been selected to execute their plan to construct the project.

On November 6, 2023, Hydro One provided the Notice of Completion for the draft ESR, notifying of the 30-day comment period from November 6 to December 7, 2023.

Hydro One offered COTTFN, via email, a printed version of the draft ESR on November 14, 2023. COTTFN declined the offer of a printed copy of the draft ESR. On November 21, 2023, Hydro One emailed COTTFN the proposed agenda for a meeting between both parties taking place the next day. Hydro One noted important milestones for the St. Clair Transmission Line, Chatham to Lakeshore and Longwood to Lakeshore Project.

On November 22, 2023, COTTFN requested, via email, a comment period extension on the draft ESR until December 21, 2023, and noted a third party would be reviewing the draft ESR. Hydro One agreed to the comment period extension.

On December 21, 2023, COTTFN submitted comments on the draft ESR. Hydro One provided a formal response to all comments on the draft ESR on January 23, 2024, via email, COTTFN's comments on the draft ESR and Hydro One's corresponding responses are provided in **Section 3.13.1**.

Hydro One and COTTFN staff met on January 24, 2024. Hydro One provided an update on the anticipated timing of the final ESR for the SCTL project, upcoming plans for the 2024 field season, and other Hydro One projects in the region.

#### **3.5.7.1 Economic Opportunities – Jobs, Training and Procurement**

Hydro One contacted COTTFN via email to explain the ECI process, introduce both EPC contractors, and offer an introductory meeting.

The Hydro One team is currently working to engage with the communities in order to have a dialogue and to ensure that the communities have the opportunity to engage in the EPC process and other potential economic benefits.

Hydro One received comments from COTTFN regarding the Project, which Hydro One addressed. **Table 3-11** provides a summary of COTTFN comments received and the responses from Hydro One regarding each comment. It should be noted that in consultation with Indigenous communities there may be views and opinions expressed that reflect the perspective of an individual rather than the collective view of the community.



**Table 3-11: Summary of COTTfN Comments and Concerns Received on the Project**

Theme	Question/Comment	Response
<b>Project Need</b>	Why does the IESO want more power in this area?	With electricity demand in the region expected to triple from 2018 to 2026, we need to build a grid that is ready to support the increased demand of communities, industry, and businesses. Once built, this line will add about 400 megawatts of power to the region. This added capacity will support economic growth in the broader Windsor-Essex region, in sectors like agriculture and manufacturing.
<b>Power Use</b>	Who will be using the electricity from the transmission line? Will it be going to farmers in the area?	The electricity from this transmission line will support economic growth in the broader southwest region in sectors like agriculture and manufacturing. With electricity demand expected to triple from 2018 to 2026 in this region, we need to build a grid that is ready to support the increased demand of communities, industry, and businesses.
<b>Power Delivery</b>	Are there other ways to deliver electricity without a transmission line, i.e., by stations?	Both transmission lines and stations are required to transmit electricity, as they serve different functions in the operation of the grid. The purpose of a transformer station is to either transform (increase or decrease) voltage, while switching stations provide switching capability between different transmission lines.
<b>Project Cost</b>	Comment regarding rural delivery charges being expensive and peak rate charges.	The Ontario Energy Board is mandated to protect the interests of consumers as it relates to energy prices, including delivery. Hydro One submits rate applications to the Ontario Energy Board and is also required to submit a Section 92 Leave to Construct approval for the St. Clair Transmission Line Project. In both these instances Hydro One is required to take care to ensure excess money is not spent on the development and construction of these projects and the Ontario Energy Board has final approval.
<b>Energy Generation</b>	Will Hydro One be developing solar energy? Is Hydro One a partner of wind farm companies? Why do wind farms sell their energy to the United States?	Hydro One is responsible for transmitting and distributing across the province and does not generally operate electrical generation facilities. Rather, Hydro One's role is generally to connect 3rd party generators (such as Hydro-electric facilities, wind farms, nuclear generation stations etc.) to the provincial electrical grid. The Independent Electricity System Operator is responsible for conducting long-term analysis of where power is needed, when it is needed. Hydro One works with Independent Electricity System Operator to ensure our interconnection facilities with the USA have the capacity and capability to meet the needs of Ontario's transmission system and its customers.
<b>Construction</b>	Are trucks used to bring towers to the right-of-way?	The specifics of how towers/tower materials will be transported to the Project area will be determined closer to construction. Generally, tower materials (e.g., steel members) are transported to site via flatbed trucks, before being assembled on site and erected with the use of cranes or occasionally helicopters.
<b>Route alternatives</b>	Where will the transmission line pass through the reserve? How will this impact the reserve?	The route alternatives being considered for the St Clair Transmission Line Project are not located on the reserve. However, this Project is located within COTTfN's traditional territory. Hydro One will continue to consult with COTTfN as the Project progresses to identify and mitigate impacts in known areas of importance and value to COTTfN.
<b>Preferred Route</b>	The community noted they would prefer if an existing route is utilized in order to reduce impacts. It was noted that a new crossing of the Thames River was undesirable.	Hydro One noted they considered Indigenous values in the route evaluation process and that COTTfN's input on the routes was taken into consideration. The concerns raised in the report were considered in the route evaluation as follows: <ul style="list-style-type: none"> <li>Co-location and repurposing of existing infrastructure had been included in the Indigenous Culture, Values and Land Use evaluation category to capture this comment from COTTfN as well as similar comments received from other Indigenous communities regarding the preference to utilizing existing corridors, and trying to avoid impacts to undisturbed area.</li> <li>New effects to rivers greater than 1 km in reach was added to the Indigenous Culture, Values and Land Use category through the criterion for fish-bearing waters and areas that support fishing/fish habitat. This addition was made to capture the comment from COTTfN that a new crossing of the Thames River (i.e., not utilizing or abutting an existing transmission line crossing) is undesirable.</li> </ul>
<b>Preferred Route Selection</b>	How is the preferred route selected?	As part of the Class Environmental Assessment process, the Hydro One team will evaluate five route alternatives using several evaluation criteria which will be informed by consultation and engagement, environmental field studies, and technical considerations. Our goal is to select a preferred route that balances the natural environment, Socio-Economic environment, and technical considerations. Input from Indigenous leadership and communities, government agencies, municipalities, interest groups, and the public is crucial in determining the preferred route for the new line.

Theme	Question/Comment	Response
<b>Employment opportunities</b>	Comment regarding employment and training development opportunities for Indigenous youth in southwestern Ontario.	Currently Hydro One is in the planning phase for the Project. More information on this topic will be available at a later time, but Hydro One is committed to supporting the local economy through local employment and procurement.
<b>Climate Change</b>	General concern on the Projects impacts of clearing land feeding into climate change.	Hydro One acknowledged the threats posed by climate change. The team confirmed aspects of both climate change mitigation and adaptation have been considered in the route evaluation for the Project. Hydro One confirmed additional mitigation measures will also be applied, measured such as reducing vehicle idling during construction. The team also noted the infrastructure being planned for the Project will be engineered to adequately withstand the effects of climate change.
<b>Important Bird Area</b>	IBA impacts.	Designated natural areas were considered as part of the evaluation process to select the preferred route. Though the preferred route scored the best overall in the Natural Environment category of the evaluation when compared to the other routes that were considered, a portion of the Project area does fall within the Eastern St. Clair IBA, although the portion of the project within the IBA involves repurposing an existing lower-voltage transmission line corridor.  Further, because of the location of the proposed Project in relation to the IBA, spring and fall migratory bird surveys were undertaken to capture the species and their abundance within the migratory season. Many of the farm fields have tile drains which negates the seasonal sheet flow and standing water that were historically associated with staging and migratory stopover habitat.  Hydro One is committed to working with the appropriate agencies to minimize effects to protected areas and to acquire all necessary permits, approvals, and authorizations. Mitigation measures could include, for example, timing windows and bird diverters. Thedraft Environmental Study Report was available for public review and comment from November 6, 2023 to December 7, 2023.
<b>Species at Risk</b>	What is being done for species at risk and other wildlife, i.e., snakes and turtles?	Species at risk, and other wildlife, will be considered as important criteria in the evaluation of the alternative routes to select a preferred route. As part of the class environmental assessment, we will work with the applicable agencies, stakeholders, and Rights holders to identify opportunities to avoid or mitigate adverse effects of the Project, including species at risk, wildlife, and their habitat.
<b>Effects to vegetation communities and post-construction restoration</b>	The community expressed concerns over post-construction restoration of forested ecosystems, as well as migratory patterns of species in the area.	Hydro One acknowledged the importance of existing vegetation and wildlife habitat and noted how this was taken into consideration in the route evaluation. It was noted that wooded vegetation, undisturbed native vegetation, species at risk, wildlife habitat, and wetlands are all considered under both the Natural Environment and the Indigenous Culture, Values and Land Use categories, reflecting both their importance as aspects of the natural environment as well as their unique importance to Indigenous communities.
<b>Water</b>	Concerns about effects on water drainage and groundwater were noted by COTTFN.	Hydro One stated that as part of both the Natural Environment and the Indigenous Culture, Values and Land Use criteria, the number of watercourses and the length of watercourse reaches within the right-of-way was considered. Further, specific to the Indigenous Culture, Values and Land Use criterion, new effects to rivers greater than 1 km in reach was included to capture the comment from COTTFN that a new crossing of the Thames River (i.e., not utilizing or abutting an existing transmission line crossing) is undesirable.
<b>Climate Change</b>	The community noted they are concerned about the impacts of clearing the land would have on weather patterns.	Hydro One noted that aspects of both climate change mitigation (such as consideration of incompatible vegetation requiring removal), and adaptation (such as floodplains and natural hazard areas) have been considered in the route evaluation for the Project. With regards to climate change mitigation, additional mitigation measures will also be applied on the Project (e.g., reducing vehicle idling during construction). Hydro One recognized that a changing climate is likely to result in an increase of unusual weather patterns and severe weather events, which could potentially damage or adversely affect infrastructure and other public facilities. It was noted that the infrastructure being planned for this proposed Project will be engineered to adequately withstand the effects of climate change.
<b>Species of interest</b>	A preliminary list of species of interest was provided to Hydro One.	Hydro One reviewed the preliminary species of interest list to ensure that all appropriate habitats were considered when evaluating the effects of each route to hunting, trapping, or harvesting grounds through the criterion in the Indigenous Culture, Values and Land use category.



Theme	Question/Comment	Response
<b>Wildlife and habitats</b>	The importance to include sensitive species and habitat in the route evaluation.	Hydro One expanded on bird habitat and migration comments noted by COTTFN and reiterated that the species identified had been captured in the habitat criteria, and special areas such as the heron rookery were being given special attention.
<b>Archaeology</b>	Comment regarding community involvement in Stage 2 and 3 archaeological assessments and COTTFN wanting artefacts returned to them if any are found during field surveys.	<p>Hydro One invites and welcomes participation from Indigenous communities to participate in archaeology programs.</p> <p>Hydro One noted that artefacts encountered during surveys are collected and managed by the consulting archaeologist, and that the archaeologists that Hydro One has engaged for the Chatham x Lakeshore and St. Clair Transmission Line projects (TMHC) have additional protocols in place regarding transfer to a facility in London. Hydro One staff stated that they would follow up to provide a more specific response following the open house, which is provided below:</p> <p>“In Ontario, artifacts collected by a licensed archaeologist are maintained within their care on behalf of the people of Ontario. There are few requirements for the curation and storage of artifacts by a licensed archaeologist, so it is highly variable between individuals and companies. Collections can be transferred to a public holding facility (e.g., a museum or repository) or to a descendent community, but this needs to be approved by the Minister before it can happen and it is up to the receiving group/body to ensure they meet the requirements dictated by the Ministry of Citizenship and Multiculturalism (MCM), which has recently taken over management of the Archaeology Program Unit. If there are multiple Indigenous communities involved in a project, they must all be aligned before a collections transfer can happen. This is highly variable, and Meagan Brooks is the MCM representative who usually manages these discussions and should be contacted to get the specific details of what the MCM would need to see to approve a transfer.</p> <p>TMHC’s corporate policy is to transfer collections to the Sustainable Archaeology Facility in London. It’s a large repository specifically developed to house archaeological collections and they have been developing agreements with the local Indigenous communities about the storage and use of the collections that are in their care. The transfer happens once the project is completed, and all the archaeological reports are reviewed and cleared by the MCM, and we send notifications to the representatives of all of the participating Indigenous communities prior to initiating the transfer. The only time that TMHC doesn’t transfer collections is if a community objects to the transfer to the facility; however, if that happens the collections stay in TMHC’s care until alignment can be obtained between all of the communities.”</p>
<b>Human Health Concerns</b>	COTTFN expressed concern for the lack of data on the effects of existing transmission lines on the health of humans. The need to monitoring and long term study was noted.	Hydro One acknowledged the health concerns COTTFN noted, and state that human health is priority for Hydro One. Hydro One stated their commitment to meet soft EMF exposure levels, and noted EMF levels are taken into consideration during the design of new electrical transmission projects. It was noted that EMF is strongest when close to the source, and as one moves away from the source, the strength of the fields fades rapidly. Hydro One stated that Health Canada’s conclusion is that there is no conclusive evidence of adverse effects caused by EMF exposure from power lines.
<b>Treaty Rights</b>	The community noted that the industrialization of COTTFN treaty lands is a threat to the potential for lands to be used for traditional and cultural uses.	Hydro One noted they continue to engage with Indigenous communities, including COTTFN to seek feedback on the St. Clair Project and how it may affect asserted or established Indigenous rights.
<b>Cumulative effects on way of life</b>	The community noted the cumulative impact of the increase presence of the industry in the Chatham area and how this has impacted their traditional life, spirit of the land, health, and future of the environment.	Hydro One recognized that the legacies of settlement, including agricultural and land conversion and development activities have, and continue, to put pressure on COTTFNs current and future use of lands and resources. Hydro One noted that they would be assessing cumulative effects of the Project but noted that assessing effects such as those beyond the immediate Project area was outside the scope of the Class EA.

Theme	Question/Comment	Response
Benefits to the community.	The community spoke about the perceived lack of benefits of the Project to the Indigenous nation.	Hydro One noted the construction of the proposed new 230 kV transmission line will provide the surrounding area with a more reliable supply of energy as the region experiences growth. This will benefit businesses (including Indigenous-owned businesses) and community members alike. It will allow resources and bulk facilities in the region to operate efficiently for local and systems needs.
Relationship building	The community expressed their interest in hearing perspectives from other First Nations in the area and in building relationships with non-Indigenous people along the length of the transmission line.	Hydro One stated they welcomed input and participation from Indigenous Communities throughout this Project and will continue to meaningfully engage with the communities on this and future projects.

### **3.5.8 Munsee-Delaware Nation**

On January 24, 2023, Hydro One called Munsee-Delaware Nation to share details about major projects in southwestern Ontario. Munsee-Delaware Nation noted they intend to contact the Ministry of Energy to advocate for the First Nation to be included on the consultation list for southwestern Ontario. Munsee-Delaware Nation indicated they are aware of the Equity Partnership model and will be following up with the Hydro One Indigenous Relations team to discuss. Hydro One emailed Munsee-Delaware Nation to provide the Project's project website link.

### **3.5.9 Haudenosaunee Confederacy Chiefs Council, Haudenosaunee Development Institute**

#### **3.5.9.1 Class EA**

In addition to the consultation process outlined above, HCCC and HDI received an advanced Project initiation email on December 2, 2021, requesting a meeting to discuss the Project and the community's preferred approach to consultation and engagement. On February 17, 2022, Hydro One emailed the HCCC and HDI the Notice of Commencement for the Project's Class EA and provided additional details regarding route alternatives, and engagement and consultation. A lawyer representing HDI addressed other HDI contacts on the email, indicating HDI should not respond to the communication, and raised concerns over consent and the Nanfan Treaty. On February 18, 2022, HDI/HCCC emailed Hydro One with concerns regarding their territory and Hydro One's engagement approach. On February 25, 2022, HDI provided a new email address for Hydro One to use when contacting the organization in the future. Hydro One emailed the HDI confirming it received the updated contact information.

On March 29, 2022, Hydro One emailed HDI/HCCC information on the upcoming Natural Environment field survey program, including the proposed schedule, mapping and an information sheet on the upcoming Natural Environment surveys planned for that spring and summer. Hydro One welcomed HDI/HCCC to contact them with questions or comments at any time. Hydro One indicated they have made arrangements with Dillon to provide funding for Indigenous community monitoring participation and if HDI/HCCC would like to deploy a monitor to the surveys, to reach out to Dillon, and provided their contact information.

Between the end of March and end of August 2022, Dillon and HDI corresponded several times, via email, relating to field survey participation. A fieldwork agreement was settled on (directly with Hydro One) and location and time logistics were coordinated by

Dillon throughout the season. HDI field monitors joined some of the Natural Environment surveys throughout the field season.

On April 11, 2022, Hydro One sent information to HDI/HCCC regarding the TAC. Hydro One explained that the purpose was to obtain valuable input and feedback from TAC members and ultimately select a preferred route for the transmission line. Hydro One provided information regarding TAC Workshop #1, including additional materials prior to the workshop.

On May 19, 2022, Hydro One emailed HDI regarding the Project's eDNA Field Survey including the proposed schedule, mapping and an information sheet on the upcoming Natural Environment surveys planned for that spring and summer as well as the Draft Stage 1 Archaeological Assessment, and shapefiles of the proposed routes and resources surrounding the St. Clair Project area.

Between the end of April and end of August 2022, TMHC and HDI corresponded several times, via email, relating to field survey participation for the early Stage 1/2 AA.

Hydro One emailed HDI on July 22, 2022, providing three documents. The first was a summary of the Class EA process and the route evaluation process. This document noted the inclusion of a category in the route evaluation process called Indigenous Culture, Values and Land Use and requested HDI review the category summary and provide input of any suggested changes from the community. The second document included was a table outlining key Indigenous input opportunities based on the Project's timeline. This table was provided by Hydro One as a tool to help ensure the community's input and priorities were received when they could be given the highest consideration in the EA and project planning process. The final document Hydro One shared was the CHEC Report. Hydro One noted they were open to hearing from communities who wish to identify any additional information, such as sites that should have been avoided and protected.

Hydro One emailed HDI on August 11, 2022, to provide an update on the status of the Draft Stage 1 AA Report for the Project. Hydro One provided dates for comments or suggested edits to be provided.

On November 3, 2022, Hydro One sent an email to HDI to inform the community of the in-person COH #2. Attached to the email were the details for the events for distribution to HDI's leadership and community and a link to the Project website for additional reference. Hydro One indicated that they could coordinate a meeting with the Project

team at HDI's request and explained the goal to help ensure that the engaged Indigenous communities provide their input.

On December 21, 2022, Hydro One sent an email to the HDI which contained the draft Natural Environment Baseline Conditions Report. Hydro One requested that any comments on the report or additional data for the route evaluation be sent to Hydro One by January 31, 2023.

On January 19, 2023, Hydro One sent an email to the HDI with the Stage 1/2 Archaeological Assessment Report for a past field session which took place to support to Project. Hydro One provided a brief background on the report, why it was conducted, and explained that the consulting archaeologist, TMHC, had determined no additional investigation is required. The email explained that TMHC hoped to submit the report at the end of February 2023 and requested that comments or questions on the report be submitted to TMHC by February 17, 2023.

On January 25, 2023, Hydro One emailed HDI to provide the early Stage 1/2 Archaeological Assessment Report that took place near the Thames River to support the Project. Hydro One noted that comments should be directed towards TMHC.

On June 5, 2023, Hydro One notified HDI of the selection of the preferred route and attached notices about the process of selection of the preferred route, a map of the preferred route, COH #3 event details, and provided a link to the Project website. Hydro One noted that there would be three COH #3 events in the region to inform area residents about the next steps, meet the Project team, and provide feedback. Hydro One noted that the Project team could meet with the HDI to discuss the route selection at HDI's request.

On July 21 2023, Hydro One emailed HDI information on the upcoming Natural Environment field survey program, and the upcoming Archeological surveys. Hydro One noted coordination would be directed through Dillon for the Natural Environment field surveys, and through TMHC for the Archeological surveys.

During August, September, and throughout the fall of 2023, Dillon and HDI corresponded several times, via email, relating to field survey participation for the late summer and fall sessions planned. HDI participated in all the late summer and fall sessions of 2023.

On September 7, 2023, TMHC contacted HDI to invite them to participate on the Stage 2 archaeological assessment fieldwork. Throughout the months of September and

October, TMHC and HDI corresponded several times, via email, relating to field survey participation and the applicable agreements to make this possible.

Hydro One emailed HDI on October 27, 2023, to advise that the Draft ESR would be available for public review and comment on November 6, 2023. Hydro One noted that they would provide a link to the report when available and requested comments and feedback by December 7, 2023.

On November 2, 2023, Hydro One emailed HDI to advise that Forbes Bros had been selected to execute their plan to construct the Project.

On November 6, 2023, Hydro One provided the Notice of Completion for the draft ESR, notifying of the 30-day comment period from November 6 to December 7, 2023.

### **3.5.9.2 Economic Opportunities – Jobs, Training and Procurement**

Hydro One contacted HDI via email to explain the ECI process, introduce both EPC contractors, and offer an introductory meeting. The Hydro One team is currently working to engage with the communities in order to have a dialogue and to ensure that the communities have the opportunity to engage in the EPC process and other potential economic benefits.

## **3.5.10 Oneida Nation of the Thames**

### **3.5.10.1 Class EA**

In addition to the consultation process outlined above, Oneida received an advanced Project initiation email on December 2, 2021, requesting a meeting to discuss the Project and the community's preferred approach to consultation and engagement.

On February 10, 2022, Hydro One emailed Oneida the Notice of Commencement for the Project's Class EA. Hydro One proposed a regular monthly meeting to help ensure open lines of communication and that concerns are addressed quickly and efficiently. Hydro One extended an invite to the virtual COH #1 Live Discussions on March 9 and 10, 2022.

On March 29, 2022, Hydro One emailed Oneida information on the upcoming Natural Environment field survey program, including the proposed schedule, mapping and an information sheet on the upcoming Natural Environment surveys planned for that spring and summer. Hydro One welcomed Oneida to contact them with questions or comments at any time. Hydro One noted coordination would be directed through Dillon.



On April 11, 2022, Hydro One sent information to Oneida regarding the TAC. Hydro One explained that the purpose was to obtain valuable input and feedback from TAC members and ultimately select a preferred route for the transmission line. Hydro One provided information regarding TAC Workshop #1, including additional materials available prior to the workshop.

Between the end of April and end of August 2022, TMHC and Oneida corresponded several times, via email, relating to field survey participation for the early Stage 1 AA.

On May 19, 2022, Hydro One emailed Oneida regarding the Project's eDNA Field Survey, Draft Stage 1 Archaeological Assessment, and shapefiles.

On June 23, 2022, Oneida emailed Hydro One to request contact information for an Indigenous Liaison since there was a community member with questions about the Project. Hydro One provided the contact information.

Hydro One emailed Oneida on July 22, 2022, providing three documents. The first was a summary of the Class EA process and the route evaluation process. This document noted the inclusion of a category in the route evaluation process called Indigenous Culture, Values and Land Use and requested Oneida review the category summary and provide input of any suggested changes from the community. The second document included was a table outlining key Indigenous input opportunities based on the Project's timeline. This table was provided by Hydro One as a tool to help ensure the community's input and priorities were received when they could be given the highest consideration in the EA and project planning process. The final document Hydro One shared was the CHEC Report. Hydro One noted they were open to hearing from communities who wish to identify any additional information, such as sites that should have been avoided and protected.

On August 8, 2022, Hydro One emailed Oneida to provide an update on the status of the draft early Stage 1/2 Archaeology Reports for the Project.

On November 3, 2022, Hydro One sent an email to Oneida to inform the community of the in-person COH #2 events. Attached to the email were the details for the events for distribution to Oneida leadership and community and a link to the Project website for additional reference. Hydro One indicated that they could coordinate a meeting with the Project team at Oneida's request and explained the goal to help ensure that the engaged Indigenous communities provide their input.

On December 5, 2022, Oneida sent an email to Hydro One to follow up regarding the Project. Oneida expressed interest in having a meeting to discuss the Project in the new



year. Oneida provided an available meeting date and asked Hydro One to confirm if the meeting time worked for them. Hydro One responded to Oneida confirming their availability to meet on the proposed day with an update on the Project and a briefing of other Hydro One projects. Hydro One asked Oneida to send the meeting link once it is set up.

On December 21, 2022, Hydro One sent an email to Oneida which contained the draft Natural Environment Baseline Conditions Report. Hydro One requested that any comments on the report or additional data for the route selection be sent to Hydro One by January 31, 2023.

On January 19, 2023, Hydro One sent an email to the Oneida with the Stage 1/2 Archaeological Assessment Report for a past field session which took place to support the Project. Hydro One provided a brief background on the report, why it was conducted, and explained that the consulting archaeologist, TMHC, had determined no additional investigation is required. The email explained that TMHC hoped to submit the report at the end of February 2023 and requested that comments or questions on the report be submitted to TMHC by February 17, 2023.

On February 8, 2023, Hydro One emailed Oneida to ask whether their Environmental Committee wanted to schedule a meeting for Hydro One to provide an update on major capital projects in southwestern Ontario.

On June 5, 2023, Hydro One notified the Oneida of the selection of the preferred route and attached notices about the process of selection of the preferred route, a map of the preferred route, COH #3 details, and provided a link to the Project website. Hydro One noted that the Project team could meet with the Oneida to discuss the selection of the preferred route or have an open house in the community at their request.

On July 21<sup>st</sup> 2023, Hydro One emailed Oneida information on the upcoming Natural Environment field survey program, and the upcoming Archeological surveys. Hydro One noted coordination would be directed through Dillon for the Natural Environment field surveys, and through TMHC for the Archeological surveys. During August, September, and throughout the fall of 2023, Dillon emailed Oneida with additional information on the Natural Environment field surveys planned for late summer, and fall of 2023.

On September 7, 2023, TMHC contacted Oneida to invite them to participate on the Stage 2 archaeological assessment fieldwork.

Hydro One emailed Oneida on October 27, 2023, to advise that the Draft ESR would be available for public review and comment on November 6, 2023. Hydro One noted that

they would provide a link to the report when available and requested comments and feedback by December 7, 2023.

On November 2, 2023, Hydro One emailed Oneida to advise that Forbes Bros had been selected to execute their plan to construct the Project.

On November 6, 2023, Hydro One provided the Notice of Completion for the draft ESR, notifying of the 30-day comment period from November 6 to December 7, 2023.

### **3.5.10.2 Economic Opportunities – Jobs, Training and Procurement**

Hydro One contacted the Oneida via email to explain the ECI process, introduce both EPC contractors, and offer an introductory meeting.

The Hydro One team is currently working to engage with the communities in order to have a dialogue and to ensure that the communities have the opportunity to engage in the EPC process and other potential economic benefits.

### **3.5.11 Six Nations of the Grand River**

In addition to the consultation process outlined above, Six Nations received an advanced Project initiation email on December 2, 2021, requesting a meeting to discuss the Project and the community's preferred approach to consultation and engagement. Subsequently on January 26, 2022, Hydro One emailed Six Nations to introduce a new team member as Six Nation's primary contact. Hydro One stated they would like to have a meeting with Six Nations to review the projects being planned for the southwestern region of Ontario, and a new regional approach to consultation that Hydro One is pursuing.

On February 11, 2022, Hydro One emailed Six Nations the Notice of Commencement for the Project's Class EA. Hydro One extended an invite to the virtual COH #1 Live Discussions on March 9 and 10, 2022.

On March 10, 2022, Hydro One emailed Six Nations a tentative meeting agenda. On March 14, 2022, Hydro One met with Six Nations in person and provided an update on all the projects Six Nations are engaged with and met with new team members. The updated included information on agreements, and Hydro One's field monitoring program.

Between the end of April and end of August 2022, TMHC and Six Nations corresponded several times, via email, relating to field survey participation for the early Stage 1 AA.

On May 10, 2022, Hydro One emailed Six Nations to thank them for meeting in person the day prior for an event that was not specific to the Project. Hydro One inquired if the signed agreement could be sent back the same day in order to coordinate field monitoring for the Project.

On May 19, 2022, Hydro One emailed Six Nations regarding the Project's eDNA Field Survey, Draft Stage 1 Archaeological Assessment, and shapefiles. On May 20, 2022, Six Nations emailed Hydro One to confirm they had received the documents and files noted above. On June 7, 2022, Hydro One emailed the Six Nations with an attached archaeology agreement to be signed for the Project.

Hydro One emailed Six Nations on July 22, 2022, providing three documents. The first was a summary of the Class EA process and the route evaluation process. This document noted the inclusion of a category in the route evaluation process called Indigenous Culture, Values and Land Use and requested Six Nations review the category summary and provide input of any suggested changes from the community. The second document included was a table outlining key Indigenous input opportunities based on the Project's timeline. This table was provided by Hydro One as a tool to help ensure the community's input and priorities were received when they could be given the highest consideration in the EA and project planning process. The final document Hydro One shared was the CHEC Report. Hydro One noted they were open to hearing from communities who wish to identify any additional information, such as sites that should have been avoided and protected.

On August 8, 2022, Hydro One emailed Six Nations to provide an update on the status of the draft archaeological assessment reports for the major projects underway in southwestern Ontario. On August 17, 2022, Six Nations emailed Hydro One to acknowledge receipt of the email.

On November 3, 2022, Hydro One sent an email to the Six Nations to inform the community of the in-person COH #2. Attached to the email were the details for the events for distribution to Six Nation's leadership and community and a link to the Project website for additional reference. Hydro One indicated that they could coordinate a meeting with the Project team at Six Nation's request and explained the goal to help ensure that the engaged Indigenous communities provide their input.

On December 12, 2022, Hydro One scheduled a reoccurring meeting with a Six Nations representative to provide updates with a list of projects. The representative did not attend and Hydro One sent an email to reschedule.

On December 21, 2022, Hydro One sent an email to Six Nations Elected Council which contained the draft Natural Environment Baseline Conditions Report. Hydro One requested that any comments on the report or additional data for the route selection be sent to Hydro One by January 31, 2023.

On January 19, 2023, Hydro One sent an email to the Six Nations with the Archaeological Assessment Stage 1/2 Report for a past field session which took place to support to Project. Hydro One provided a brief background on the report, why it was conducted, and explained that the consulting archaeologist, TMHC, had determined no additional investigation is required. The email explained that TMHC hoped to submit the report at the end of February 2023 and requested that comments or questions on the report be submitted to TMHC by February 17, 2023.

On June 5, 2023, Hydro One notified the Six Nations of the selection of the preferred route and attached notices about the process of selection of the preferred route, a map of the preferred route, COH #3 details, and provided a link to the Project website. Hydro One noted that the Project team could meet with the Six Nations to discuss the selection of the preferred route or have an open house in the community at their request.

On June 26, 2023, Hydro One thanked invitees for taking part in the TAC and noted that the input received had been invaluable. Attached to the email was a summary from the TAC Workshop #3, and a reminder of the COH #3 events beginning on the same day. Hydro One encouraged invitees to reach out if they had any questions or comments.

On July 21 2023, Hydro One emailed Six Nations information on the upcoming Natural Environment field survey program, and the upcoming Archeological surveys. Hydro One noted coordination would be directed through Dillon for the Natural Environment field surveys, and through TMHC for the Archeological surveys. During August, September, and throughout the fall of 2023, Dillon emailed Six Nations with additional information on the Natural Environment field surveys planned for late summer, and fall of 2023.

On September 7, 2023, TMHC contacted Six Nations to invite them to participate on the Stage 2 archaeological assessment fieldwork. Throughout the months of September and October, TMHC and Six Nations corresponded several times, via email, relating to field survey participation and the applicable agreements to make this possible.

Hydro One emailed Six Nations on October 27, 2023, to advise that the Draft ESR would be available for public review and comment on November 6, 2023. Hydro One

noted that they would provide a link to the report when available and requested comments and feedback by December 7, 2023.

On November 2, 2023, Hydro One emailed Six Nations to advise that Forbes Bros had been selected to execute their plan to construct the Project.

On November 6, 2023, Hydro One provided the Notice of Completion for the draft ESR, notifying of the 30-day comment period from November 6 to December 7, 2023.

#### **3.5.11.1 Economic Opportunities – Jobs, Training and Procurement**

Hydro One contacted Six Nations via email to explain the ECI process, introduce both EPC contractors, and offer an introductory meeting.

The Hydro One team is currently working to engage with the communities in order to have a dialogue and to ensure that the communities have the opportunity to engage in the EPC process and other potential economic benefits.

### **3.6 Federal Government and Agencies**

As part of the consultation and engagement program for the Project, the following federal government representatives and agencies were contacted during the Class EA Process:

- Agriculture and Agri-Food Canada;
- Canadian National Railway (CNR);
- Canadian Pacific Railway (CP Rail);
- Canadian Wildlife Services (CWS);
- Environment and Climate Change Canada (ECCC);
- Fisheries and Oceans Canada (DFO);
- Transport Canada (TC);
- VIA Rail; and,
- Members of Parliament;
  - David Epp, MP for Chatham-Kent-Leamington
  - Marilyn Gladu, MP for Sarnia-Lambton.

Federal agencies provided feedback, but no concerns were raised. Correspondence with federal government and Agencies is included in the Record of Consultation (**Appendix B6**).

### **3.6.1 Agriculture and Agri-Food Canada**

Hydro One emailed the notices for the above-mentioned engagement opportunities to Agriculture and Agri-Food Canada. No comments or concerns were raised by Agriculture and Agri-Food Canada.

### **3.6.2 Birds Canada**

Hydro One emailed the notices for the above-mentioned engagement opportunities to Birds Canada.

On November 6, 2023, Birds Canada emailed Hydro One to request to be removed from the project contact list. Hydro One confirmed that they have been removed from the Project contact list.

### **3.6.3 Canadian National Railway**

Hydro One emailed the notices for the above-mentioned engagement opportunities to CN Rail. No comments or concerns were raised by CN Rail.

### **3.6.4 Canadian Pacific Railway**

Hydro One emailed the notices for the above-mentioned engagement opportunities to CP Rail. No comments or concerns were raised by CP Rail.

### **3.6.5 Canadian Wildlife Services**

Hydro One emailed the notices for the above-mentioned engagement opportunities to CWS. No comments or concerns were raised by CWS.

### **3.6.6 Environment and Climate Change Canada**

Hydro One emailed the notices for the above-mentioned engagement opportunities to ECCC. No comments or concerns were raised by ECCC.

### **3.6.7 Fisheries and Oceans Canada**

Hydro One emailed the notices for the above-mentioned engagement opportunities to DFO. No comments or concerns were raised by DFO.

### **3.6.8 Transport Canada**

Hydro One emailed the notices for the above-mentioned engagement opportunities to TC. On February 14, 2022, the Navigation Protection Program (NPP) of TC explained to Hydro One via email that the NPP is responsible for administering the *Canadian Navigable Waters Act* and for provisions of the *Wrecked Abandoned or Hazardous Vessels Act* and the Private Buoy Regulations under the *Canada Shipping Act, 2001*.

NPP also included the Minor Works Class for aerial cables for Hydro One to review (on February 14, 2022) and stated that the Project can proceed if Hydro One can meet the criteria listed in the Minor Works Class. NPP also provided available options to Hydro One if the Minor Works Class conditions could not be met.

On March 1st, 2022, TC indicated they did not require receipt of all individual or Class EA related notifications and requested Hydro One self-assess if the Project will:

1. Interact with federal property and/or waterways; and
2. Require approval and/or authorization under any Acts administered by TC.

TC explained that the conditions for the Project will be considered under the *Impact Assessment Act* and should the conditions not apply, TC should not be included in any further correspondence regarding the Project's Class EA, and future notifications from Hydro One will not receive a response by TC. For a specific role under the program, TC provided an email for correspondence to be electronically forwarded to which should include a brief description of TC's expected role. TC provided a list of the most common Acts that have been applied to projects in a Class EA context and asked Hydro One to advise if more information was needed. This information was also sent on October 31, 2022.

### **3.6.9 VIA Rail**

Hydro One emailed the notices for the above-mentioned engagement opportunities to VIA Rail. On February 14, 2022, VIA Rail requested, via email, for Hydro One to submit their notice to a direct link and noted that a complete review and agreement would be put in place regarding their railway system. On February 15, 2022, Hydro One responded to VIA Rail and explained that the Project was in the early planning phase and had not yet selected a preferred route but would begin detailed design and engineering once a preferred route was selected. Hydro One asked VIA Rail if it was preferred to submit the request before or after detailed design was drafted; VIA Rail followed up on February 16, 2022, stating that it is preferred to submit the request once a final route has been selected before beginning the agreement process. Hydro One informed VIA Rail on February 16, 2022, that they welcomed any feedback from VIA Rail on the Project. VIA Rail explained to Hydro One that they (VIA Rail) could arrange to have the contracts aligned and help ensure all the requirements are met prior to construction.

VIA Rail replied to the invitation to COH #2 on October 28, 2022, noting the requirements for the submission of engineering drawings to be submitted by Hydro One. The list of requirements related to the following topics:





- Transport Canada;
- Clearance;
- Traffic control near a railway;
- Grade crossings;
- Canadian Standards Association;
- The Federation of Canadian Municipalities;
- The Railway Association of Canada;
- Utilities;
- Waste and wastewater;
- Construction disturbances; and,
- Neighbour relationships.

VIA Rail requested Hydro One's commitment to making all efforts not to interfere with their operations, track infrastructure, or the use of VIA Rail property. VIA Rail also requested that Hydro One commit to comply with and conform to all VIA Rail, Department of Transport and Canadian Transportation Agency rules and regulations, or any other authority having jurisdiction in the vicinity of VIA Rail property or railway ROW. VIA Rail requested assurances from the Municipality of Chatham-Kent and Hydro One that all necessary and possible steps to mitigate or eliminate impacts will be taken. VIA Rail also explained their requirement that the Municipality of Chatham-Kent and Hydro One indemnify VIA Rail against any and all claims, damages, or proceedings (including legal costs and other costs and expenses) that may arise in relation to the non-compliance to any condition contained in their letter. For questions or concerns, VIA Rail provided a contact.

VIA Rail replied to the Notice of Completion of the Draft ESR, via email, on November 6, 2023, noting the requirements for submission of engineering drawings to be submitted by Hydro One. The list of requirements were the same as noted in the email from October 28, 2022.

### **3.6.10 David Epp, Member of Parliament (MP) for Chatham-Kent-Leamington**

Hydro One emailed the notices for the above-mentioned engagement opportunities to MP Epp.

On May 30, 2023, Hydro One notified MP Epp of the upcoming selection of the preferred route (planned for June 5, 2023, for residents) and attached notices. Hydro One also provided details on the messaging sent to property owners and the method of delivery.

On June 12, 2023, Hydro One met with MP Epp to provide a Project update about the preferred route. No concerns were raised.

### **3.6.11 Marilyn Gladu, MP for Sarnia-Lambton**

Hydro One emailed the notices for the above-mentioned engagement opportunities to Gladu. No concerns were raised.

## **3.7 Provincial Government & Agencies**

As part of the consultation and engagement program for the Project, the following provincial government representatives and agencies were contacted during the Class EA Process:

- Members of Provincial Parliament:
  - Monte McNaughton, Member of Provincial Parliament (MPP) for Lambton-Kent-Middlesex;
  - Rick Nicholls (Until June 1, 2022) and Trevor Jones (As of June 2, 2022), MPP for Chatham-Kent-Leamington; and
  - Robert Bailey, MPP for Sarnia-Lambton.
- IESO;
- Infrastructure Ontario (IO);
- Lower Thames Valley Conservation Authority (LTVCA);
- Ministry of Agriculture, Food and Rural Affairs (OMAFRA);
- Ministry of Citizenship and Multiculturalism (MCM)/ Ministry of Tourism, Culture and Sport (MTCS);
- Ministry of Energy (MOE);
- Ministry of Government and Consumer Services;
- Ministry of Infrastructure;
- Ministry of Indigenous Affairs;
- Ministry of Municipal Affairs and Housing (MMAH);
- Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNR)/ Ministry of Natural Resources and Forestry (MNRF);
- Ministry of the Environment, Conservation and Parks (MECP);
- Ministry of the Solicitor General;
- Ministry of Transportation (MTO);
- Ontario Clean Water Agency;
- Ontario Power Generation (OPG); and,
- St. Clair Region Conservation Authority (SCRCA).

Correspondence with provincial government and agencies is included in the Record of Consultation (**Appendix B6**).

### **3.7.1 Monte McNaughton, MPP for Lambton-Kent-Middlesex**

Hydro One shared notices and updates by way of email throughout the Class EA process, and shared notices regarding the above-mentioned engagement opportunities, with MPP McNaughton.

Hydro One met with the office of MPP McNaughton on February 8, 2022, to provide a briefing on southwestern Ontario's regional growth and to provide a Project overview and invitation to COH #1.

On May 30, 2023, Hydro one sent MPP McNaughton an update of the Project and notified his office about the announcement of the preferred route on June 5, 2023. Hydro One offered to provide a briefing.

On June 5, 2023, Hydro One notified MPP McNaughton of the selection of the preferred route. Hydro One noted impacted landowners would be contacted by Hydro One's real estate agents and explained an informative package would be delivered. For more details on the package please refer to **Section 3.4**.

### **3.7.2 Rick Nicholls (until June 1, 2022), and Trevor Jones (as of June 2, 2022), MPP for Chatham-Kent-Leamington**

Hydro One shared notices and updates by way of email throughout the Class EA process, and shared notices regarding the above-mentioned engagement opportunities, with former MPP Nicholls and current MPP Jones.

On May 30, 2023, Hydro one sent MPP Jones an update of the Project and notified him and his office of the announcement of the preferred route on June 5, 2023. Hydro One offered to provide a briefing.

On June 5, 2023, Hydro One notified MPP Jones of the selection of the preferred route. Hydro One noted impacted landowners would be contacted by Hydro One's real estate agents and explained an informative package would be delivered. For more details on the package please refer to **Section 3.4**.

### **3.7.3 Robert Bailey, MPP for Sarnia-Lambton**

Hydro One shared notices and updates by way of email throughout the Class EA process, and also shared notices regarding the above-mentioned engagement opportunities, with MPP Bailey.

Hydro One met with the office of MPP Bailey on February 3, 2022, to provide a briefing on southwestern Ontario's regional growth and to provide a Project overview.

#### **3.7.4 Independent Electricity System Operator**

On March 26, 2021, a representative of the IESO sent a letter to Hydro One on behalf of the Director of Transmission Planning at IESO, for the new 230 kV double-circuit line from Lambton Transmission Station to Chatham Switching Station.

Hydro One emailed notices for the above-mentioned engagement opportunities to the IESO. The IESO attended both COH #1 virtual Live Discussions as a member of the participant panel (along with Hydro One staff) to assist with answering questions from the public. On November 8, 9, and 10, 2022, the IESO attended the in person COH #2 events and presented information about the IESO, the need of the Project, and provided participants additional materials, when requested. The IESO also participated in the COH #2 Virtual Open House on November 23, 2022, by answering questions from the public and providing additional information on the IESO's key services, future energy needs, demand, and supply. On June 26, and 27, 2023, the IESO attended the in person COH #3 events and offered participants information about the IESO, and the need of the Project.

On June 5, 2023, Hydro One notified the IESO, of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process.

Hydro One will continue to provide updates to and work with the IESO as the Project continues to progress.

#### **3.7.5 Infrastructure Ontario**

Hydro One emailed notices for the above-mentioned engagement opportunities to IO. On March 3, 2022, IO indicated their initial scan of information sent identified hydro corridor lands and property owned by the Minister of Government and Consumer Services within and adjacent to the Project's study area. IO stated that the proponents are responsible for verifying this information and explained how to proceed with consultation with IO if government property is required for the Project. Hydro One thanked IO for providing this information and confirmed they would take it into considerations as the Project progressed. No other comments or concerns were raised by IO. Hydro One continued to provide Project notices and opportunities to attend the TAC to IO.

On June 5, 2023, Hydro One notified the IO, of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process. The summary memo for TAC Workshop #3 was provided on June 26, 2023, via email.

### **3.7.6 Lower Thames Valley Conservation Authority**

Hydro One had regular touchpoints with staff from LTVCA by way of email and meetings to share updates on the Class EA process and notices regarding the above-mentioned engagement opportunities.

On April 8, 2022, Hydro One emailed LTVCA and explained the five route alternatives for the Project and the need to expand fence lines at the Lambton TS and Chatham SS to facilitate connection of the new transmission line. Hydro One explained that direct consultation with input from LTVCA was necessary to gather more accurate information on the features in the area because all the route alternatives cross the Thames River and likely near other LTVCA regulated areas. Hydro One also explained the plan to form a TAC for the Class EA for which LTVCA staff would be invited to participate. Hydro One also attached the Natural Environment Field Program Terms of Reference as well as the results of the initial species at risk screening for LTVCA to review.

On April 26, 2022, the LTVCA requested via email, to be kept informed on Project outcomes and review the final route when selected but declined the invitation to sit on the TAC. On May 2, 2022, Hydro One requested shapefiles from the LTVCA and other spatial information relating to LTVCA regulated areas to help inform the evaluation of route alternatives.

On September 13, 2022, LTVCA representatives joined the second TAC workshop hosted by Hydro One, virtually. On this same day, LTVCA requested shapefiles or KML files for the route alternatives from Hydro One and asked Hydro One if a data sharing agreement was required.

On September 22, 2022, Hydro One indicated that they (Hydro One) would like to see if there was interest from LTVCA to meet prior to determining a preferred route for the Project. Hydro One wanted to provide an update on the Project and discuss areas within LTVCA's jurisdiction where restoration works were being planned to inform the route selection process. On this same day Hydro One noted they would be providing the requested shapefiles shortly (provided September 30, 2022).

On October 24, 2022, Hydro One followed up on the shapefiles sent. Hydro One noted a new criterion for the preferred route analysis had been included. This new criterion

would cover any places earmarked for future restoration works. Hydro One inquired about any restorations areas that should be considered within LTVCA's jurisdiction.

On October 30, 2022, the LTVCA provided Hydro One with three restoration projects which intersect the alternative routes and indicated on November 3, 2022, that if there are opportunities to mitigate the construction footprint, they could partner on tall grass/pollinator installations under the corridor.

On January 13, 2023, Hydro One sent an email to the LTVCA to thank them for the restoration projects information LTVCA provided the previous fall. Hydro One explained their understanding that LTVCA is unable to provide regulated area shapefiles and as a result, the Project team proposed to create a shapefile to depict the regulation limit as it is defined under Section 2, Subsection 1, of *Ontario Regulation 152/06*. Hydro One explained that they were open to LTVCA's feedback and welcomed any questions.

On January 20, 2023, the LTVCA explained that they had reviewed the existing mapping where the Project intersects with LTVCA's regulated areas. LTVCA explained that the challenge for the Project area with respect to LTVCA regulated areas was the large floodplain associated with the Thames River and its tributaries and the known errors with the floodplain mapping in the general area. LTVCA explained that they could provide a shapefile showing the floodplain/regulated areas within a 200 to 300 metre buffer around the route alternatives. The LTVCA asked Hydro One to confirm if this would meet the needs of the Project. Hydro One responded on January 23, 2023, noting a concern for timing regarding receiving the spatial information, as the route alternatives evaluation was underway. Hydro One also noted that they would create the shapefile if required and clarified that it would only be for internal use to support the evaluation of the preferred route. On January 24, 2023, the LTVCA provided the requested shapefiles to Hydro One.

LTVCA emailed Hydro One on June 1, 2023, noting that they were interested in restoration works under the transmission line installations for tall grass prairie. Hydro One provided LTVCA information and noted tall grass prairie would be a compatible habitat with the Project.

On June 1, 2023, LTVCA joined the third TAC held virtually.

On June 5, 2023, Hydro One notified the LTVCA, of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process. The summary memo for TAC Workshop #3 was provided on June 26, 2023, via email.

No other comments or concerns were raised by LTVCA.

### **3.7.7 Ministry of Agriculture, Food and Rural Affairs**

Hydro One shared notices via email for the above-mentioned engagement opportunities to OMAFRA.

On May 26, 2022, OMAFRA asked Hydro One if Routes 1 and 5 would be co-located in a road allowance or if it was planned to be permitted through lot creation. Hydro One clarified that transmission lines are typically not co-located on a road allowance; therefore, landowners will have the choice between easement – which does not induce severances/causes new lot creation, or fee simple (lot creation). OMAFRA asked if the Wallaceburg TS is located in a Prime Agricultural Area and if the Wallaceburg TS would require an addition of land to upgrade. Hydro One responded to OMAFRA's questions in an email sent on June 13, 2022, noting they were still looking at alternatives but there may be some additional land required. Hydro One also noted that their main engagement focus at that time was to confirm the evaluation criteria that will be used to determine the preferred route.

On June 1, 2023, representatives from OMAFRA joined the TAC Workshop #3. On that same day OMAFRA requested a copy of the presentation. Hydro One noted they would be providing a summary of the workshop shortly. The summary memo for TAC Workshop #3 was provided on June 26, 2023, via email.

No other comments or concerns were raised by OMAFRA.

### **3.7.8 Ministry of Citizenship and Multiculturalism and Ministry of Tourism, Culture and Sport**

The responsibility for administration of the Ontario *Heritage Act* and matters related to cultural heritage was transferred from the Ministry of Tourism, Culture and Sport (formerly the Ministry of Heritage, Sport, Tourism and Culture Industries) to the Ministry of Citizenship and Multiculturalism (MCM) in the fall of 2022. Before this transfer, any correspondence regarding heritage was with the MTCS and post transfer correspondence was with MCM. As correspondence with both agencies catered around matters revolving aspects of the *Heritage Act*, this subsection includes correspondence with both ministries (MTCS and MCM).

Hydro One shared notices via email for the above-mentioned engagement opportunities to MTCS and MCM. On March 14, 2022, the MTCS provided Hydro One their formal recommendations for the Project. The recommendations included identifying cultural heritage resources, submitting archaeological assessments, identifying baseline cultural





heritage conditions, identifying preliminary potential project-specific impacts, and providing mitigation methods for potential impacts. The MTCS recommended these findings to be included in the ESR and offered their review. Hydro One replied to the MTCS on April 7, 2022, thanking them for the recommendations. Hydro One noted the recommendations were aligned with plans for the Class EA with minor clarifications and the MTCS's opportunity to review the draft Stage 1 Archeological Assessment (AA) and Cultural Heritage Existing Conditions (CHEC) reports and informed them about the ongoing Indigenous community engagement. Hydro One took the opportunity to inform the MTCS about the TAC, and noted more information would be shared shortly.

On May 5, 2022, Representatives from MTCS attended the TAC Workshop #1.

On June 14, 2022, Hydro One met with MTCS to discuss the Project. Hydro One provided an update on the pending Stage 1 AA submission and the CHEC which was being drafted. Hydro One indicated the reports would be circulated to Indigenous communities for review with the question of Indigenous Cultural Heritage Landscapes discussed.

On October 19, 2022, the MCM notified Hydro One that administrative duties of the *Ontario Heritage Act* and related matters had been transferred to the MCM. The MCM requested a copy of the TAC survey as well as confirmation that MTCS staff had completed it. On October 21, 2022, Hydro One confirmed that a comment from MTCS was received at the TAC Workshop. Hydro One explained that MCM can provide input on the evaluation criteria weighting or any feedback on the TAC in the survey responses, as Hydro One was developing a summary to share with the group once available. No concerns were raised by MCM.

On June 5, 2023, Hydro One notified the MCM, of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process.

On September 14, 2023, MCM staff issued a formal response regarding their review of the Stage 1 AA report to Hydro One's consulting archaeologists TMHC. Hydro One and TMHC continued to work with MCM staff to discuss and respond to their comments on the report during the last two weeks of September.

Shortly following the submission of the final ESR Hydro One became aware that the MCM contacts had inadvertently been omitted from distribution of the Notice of Completion and draft ESR review period, due to an error stemming from the recent split and subsequent name change of the former MHSTCI. Hydro One notified both MECP

and MCM staff and committed to provide a 30-day comment period, equivalent to that originally provided for the draft ESR, for MCM staff to review and provide comment on the final ESR, as well as a commitment to incorporate any revisions stemming from MCM's comments into an update to the ESR. Hydro One followed up via email, with the link to the final ESR and a copy of the Notice of Completion, from November 2023 for the MCM's records. Hydro One requested comments to be submitted by March 15, 2024. The MCM confirmed the receipt of the link for the final ESR and noted they would provide comments by March 15, 2024. On March 7, 2024, the MCM reached out to Hydro One, via email, to obtain the Project Information Form (PIF) for the Stage 1 and 2 archeological assessments undertaken by TMHC in 2022. In addition to this, the MCM also inquired about the status of the Preliminary Heritage Impact Assessment (HIA). On March 11, 2024, Hydro One replied to the MCM's email and provided the Preliminary HIA for their reference. Later that same day Hydro One provided the PIF for the Stage 1 and 2 archeological assessment report for the lands around the Thames River crossing.

On March 15, 2024, the MCM emailed Hydro One their comments on the ESR. Hydro One thanked them and confirmed the receipt of the comments. On May 13, 2024, Hydro One emailed the MCM the formal response to their comments on the final ESR, as well as a copy of the Hydro One Cultural Heritage Identification and Evaluation process referenced in the responses.

### **3.7.9 Ministry of Energy**

Hydro One shared notices and updates by way of email throughout the Class EA process, and shared notices regarding the above-mentioned engagement opportunities with the MOE.

On May 11, 2022, the MOE requested Hydro One to clarify and assist in the MOE's review of the assessment for the Project. Hydro One held a virtual meeting with an MOE staff to discuss input provided on the Project. After some back and forth between the MOE and Hydro One on additional information and clarifications on the Project, on July 6, 2022, the MOE sent Hydro One the final Duty to Consult delegation letter.

On September 22, 2022, the MOE and Hydro One met to discuss potential issues and approaches to cumulative effects of the Project and Hydro One's southwest strategic projects portfolio. No other comments or concerns were raised by the MOE.

On June 5, 2023, Hydro One notified the MOE, of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process.

On July 14, 2023, Hydro One thanked everyone who participated at the recent open houses for the Project via email. Hydro One included a link for those who missed the events.

### **3.7.10 Ministry of Infrastructure**

Hydro One emailed notices for the above-mentioned engagement opportunities to the Ministry of Infrastructure (MOI). No comments or concerns were raised by the MOI.

### **3.7.11 Ministry of Indigenous Affairs**

Hydro One emailed notices for the above-mentioned engagement opportunities to the Ministry of Indigenous Affairs (MIA). No comments or concerns were raised by the MIA.

### **3.7.12 Ministry of Municipal Affairs and Housing**

Hydro One emailed notices for the above-mentioned engagement opportunities to the MMAH. The MMAH joined the three TAC workshops hosted by Hydro One, virtually. No comments or concerns were raised by MMAH.

### **3.7.13 Ministry of Natural Resources and Forestry (MNRF), formerly Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNRF)**

Please note that the Ministry of Northern Development, Mines, Natural Resources and Forestry was split up into three ministries following the 2022 Ontario general election. The former MNDMNRF is now the Ministry of Natural Resources and Forestry, the Ministry of Mines and the Ministry of Northern Development. In this section correspondence with MNDMNRF and MNRF will be reflected.

Hydro One shared notices and updates by way of email throughout the Class EA process, and shared notices regarding the above-mentioned engagement opportunities with the MNDMRF and MNRF.

On June 6, 2022, the MNDMNRF expressed their interest in continued involvement of the Class EA and provided contact information of the Regional Planner Land Use Planning and Strategic Issues section for further communications and submissions. MNDMNRF provided Hydro One with information regarding natural heritage, natural resources, and Global Information System (GIS) data layers through the Ministry's Land Information Ontario (LIO) website and recommended Hydro One to make use of the source to review evaluation criteria for the Project. MNDMNRF expressed their interest in the opportunity to review and provide comments on the proposed evaluation criteria and requested Hydro One to provide the shapefiles of the proposed route alternatives. On June 8, 2022, Hydro One requested Dillon to send MNDMNRF a list of survey

questions from the first TAC workshop for them to fill out. Hydro One welcomed MNDMNRF to reach out for further questions and discussion.

On August 2, 2022, Hydro One contacted the MNRF Petroleum Operations Section regarding feedback on the evaluation criteria for the route alternatives for the Project and requested updated maps of petroleum wells and other related infrastructure. Hydro One indicated that they have reached out to Abandoned Wells Ontario but had not yet received a response. The MNRF Petroleum Operations Section confirmed in an email sent to Hydro One on August 15, 2022, that petroleum well data was available for viewing and for downloading at the Ontario Geo Hub website and noted that petroleum data is largely a compilation of historical records with varying levels of accuracy and completeness. For more information about pipelines and historical records related to petroleum wells, information was provided for the Oil, Gas, and Salt Resources Library. MNRF indicated that they do not have approval with respect to applications under the *Planning Act*, however, any decisions by the municipality to proceed with development within proximity to plugged petroleum or salt mining wells, or former operations should consider accessibility to the plugged well in case work on the well is required in the future. A fact sheet was attached to the email to provide additional information. For an assessment on current conditions of the well, MNRF provided Hydro One with contact information of the Ontario Petroleum Institute.

The MNRF informed Hydro One on September 14, 2022, that they reviewed the evaluation criteria for the Project and provided comments for Hydro One's consideration regarding criteria, additional feedback, and the *Public Lands Act*. MNRF provided an email for Hydro One to contact for any questions about the information provided or to apply for permits and/or authorizations. No other comments or concerns were raised by the MNRF.

On June 5, 2023, Hydro One notified the MNRF, of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process.

Shortly following the submission of the final ESR Hydro One became aware that the MNRF contacts had inadvertently been omitted from distribution of the Notice of Completion and draft ESR review period, due to an error stemming from the recent split and subsequent name change of the former MNDMNRF. Hydro One notified both MECP and MNRF staff and committed to provide a 30-day comment period, equivalent to that originally provided for the draft ESR, for MNRF staff to review and provide comment on the final ESR, as well as a commitment to incorporate any revisions

stemming from MNRF's comments into an update to the ESR. Hydro One followed up via email, with the link to the final ESR and a copy of the Notice of Completion, from November 2023 for the MNRF's records. Hydro One requested comments to be submitted by March 15, 2024. The MNRF confirmed the receipt of the link for the final ESR and noted they would forward to the appropriate contact for the Southern Region of Ontario. On March 14, 2024, the MNRF confirmed they were on track to submit comments by the deadline provided.

On March 15, 2024, the MNRF emailed Hydro One their comments on the final ESR. Hydro One thanked them and confirmed the receipt of the comments. On April 22, 2024, Hydro One emailed the MNRF the formal response to their comments on the final ESR. The MNRF's comments on the final ESR and Hydro One's corresponding responses are provided in **Section 3.13.1**.

### **3.7.14 Ministry of the Environment, Conservation and Parks**

Hydro One emailed notices for the above-mentioned engagement opportunities to the MECP.

On March 28, 2022, MECP sent Hydro One a letter of acknowledgement, a preliminary screening guide for species at risk and a document noting areas of interest in response to the Notice of Commencement of the Project. Hydro One confirmed the documents were received and noted that as the Project progressed through the Class EA these supporting materials would be taken into consideration. Hydro One noted that the desktop research for the screening of species at risk had started and the sources provided by MECP would be utilized. As part of this, Hydro One confirmed the 2022 Natural Environment field survey program for properties and natural features of interest would be starting soon. Hydro One sent the MECP the Natural Environment Field Program Terms of Reference which included the plan for the field survey program as well as the results of the initial species at risk screening. Hydro One welcomed the MECP to review the documents.

On April 11, 2022, the MECP Resource Planner and EA Coordinator expressed their interest in participating in TAC meetings. On May 5, 2022, representatives from the MECP joined the TAC workshop, virtually.

TAC Workshop #2 was scheduled for September 13, 2022, and Hydro One asked MECP if there were any other MECP staff who could attend the workshop. On September 2, 2022, MECP indicated that they would not have technical details to contribute and that reviewing a copy of the presentations and minutes from the workshop would suffice. MECP indicated their availability to field general Class EA

questions and noted they would be available to attend meetings related to specific technical program areas.

On September 8, 2022, Hydro One confirmed they would be sending all the materials from the TAC #2 workshop, along with the weighting survey, following the workshop. Hydro One provided the TAC #1 workshop summary report to the MECP and suggested a touchpoint after the second TAC. Hydro One noted they would like to provide an update and have a quick touchpoint as the Project moved forward towards the preferred alternative and discuss and technical updates. On September 10, 2022, MECP provided Hydro One with a contact who would be attending the TAC #2 workshop. MECP noted that the SAR Branch had no additional species at risk to add to the list of species included in the Natural Environment Field Program Terms of Reference, dated April 2022. MECP recommended that Hydro One consult with the SAR Branch directly for species at risk permitting or approvals processes.

On September 13, 2022, MECP representatives joined the second TAC workshop hosted by Hydro One, virtually.

On September 22, 2022, Hydro One virtually met with MECP and other agencies to discuss potential approaches to cumulative effects of the Project and Hydro One's southwest strategic projects portfolio.

On October 5, 2022, Hydro One met virtually with the MECP to provide an update on the Project after the TAC#2 workshop. During the discussion, Hydro One explained their approach to include climate change and atmospheric effects to the suggested criteria based on the MECP response to the TAC #1 workshop survey. Hydro One explained these two topics would be covered under two existing criteria. Climate change mitigation would be included under a technical criterion - length of the line – as this would capture differences in anticipated construction effects such as the amount of fuel vehicles will require during construction. Climate change adaptation would be captured via the Natural Environment criterion – floodplain, regulated areas. Hydro One explained that atmospheric effects would be considered in criteria related to proximity to residences and sensitive receptors. Regarding species at risk, Hydro One noted they would provide a list of species with potential to be present to initiate a discussion with the SAR branch. Hydro One noted that the SAR branch did provide input at the Notice of Commencement stage and may have more input to provide following the conclusion of the field surveys. Hydro One indicated that a report summarizing field surveys would be distributed to the MECP for review.



Hydro One notified the MECP on November 23, 2022, that the OPG Ash Landfill Environmental Compliance Approval (ECA) may be a constraint to the transmission line entry into the Lambton TS. In response, MECP indicated in an email on November 25, 2022, that their staff will direct technical questions to appropriate contacts within the organization and added a direct contact for general questions pertaining to both the OPG Ash Landfill ECA Amendment and the Project.

On November 30, 2022, Hydro One requested general information on OPG's ECA Amendment at the Lambton Generating Station. Hydro One clarified that the Project starts at the Lambton TS and that the Project team was trying to understand how they will need to consider the ECA in their Project design. Hydro One explained that they had a few inquiries before determining if they will need to request an amendment on OPG's ECA and requested a meeting to understand more. Hydro One held a meeting with MECP on December 2, 2022, to discuss the existing Lambton Generating Station Ash Landfill ECA and considerations for the Project. During this meeting the MECP confirmed that lines running across the ash landfill with no infrastructure would not need approval or an amendment, as no impacts to the landfill would be anticipated. However, any changes or additions of structures within the landfill ECA zone would need an amendment. The MECP noted that once Hydro One has more design details, they should contact the Environmental Permissions Branch directly. Hydro One confirmed that even though five route alternatives are being considered, Lambton is the end terminus for all. MECP noted that there is a one year service standard for approving ECAs. They also confirmed that the recent OPG amendments did not affect Hydro One.

Hydro One followed up with the MECP on December 9, 2022, about MECP'S feedback, specifically from the SAR Branch staff, regarding how species at risk and species at risk habitat was proposed to be considered in the route alternatives evaluation.

On December 21, 2022, the MECP provided some comments on species at risk and on the TAC #2 workshop summary memo. In response, on January 13, 2023, Hydro One provided the MECP a brief description of the options considered for how to evaluate the five route alternatives with regards to species at risk and species at risk habitat requesting comments by email or a meeting; MECP explained in a response on January 17, 2023, that they will coordinate with the SAR Branch to review the information and provide any comments.

On February 7, 2023, Hydro One sent an email to MECP to see if the SAR Branch had any comments on what Hydro One proposed regarding the evaluation of species at risk for the Project. The MECP provided the SAR Branch's comments on the criteria for



assessing species at risk and their habitat in relation to the potential route alternatives considered in the Class EA process for the Project on February 13, 2022. Hydro One indicated that they will review the MECP SAR Branch's comments and provide any further questions.

On June 1, 2023, the MECP joined the third TAC workshop hosted by Hydro One, virtually. No other comments or concerns were raised by the MECP.

On June 5, 2023, Hydro One notified the MECP, of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process. On June 26, 2023, Hydro One sent the summary for TAC#3 via email.

On November 23, 2023, Hydro One notified the MECP, to inform Ministry staff of the groundwater and water well concerns that had been raised during consultation on the Project. Throughout the months of November and December 2023, Hydro One and the MECP continued to correspond about the concerns regarding groundwater and water wells in the Project area. This included Hydro One providing their engineering design commitments for the Project, which include:

- Ensuring tower foundations do not directly interact with the Kettle Point Shale contact aquifer and remain between approximately 33 feet to 100 feet (depending on the depth of the overburden) above the top of the contact aquifer layer.
- Not using pile driving to install tower foundations.
- Using screw (helical) piles which are widely used in sensitive environments due to their simpler installation process and minimal noise and vibration levels.

December 5, 2023, the MECP requested a comment period extension on the draft ESR until December 22, 2023, which Hydro One granted in recognition of the additional MECP technical review related to the groundwater and well water concerns that had been raised. In December 2023, MECP requested to have Groundwater Unit staff to attend the helical pile installation for the Chatham to Lakeshore Project to observe this work directly. On December 15, 2023, the MECP staff attended the Chatham to Lakeshore Project installation of helical piles as observers.

On December 22, 2023, the MECP submitted comments on the draft ESR.

Hydro One provided a formal response to all comments on the draft ESR on January 19, 2023, via email. The MECP's comments on the draft ESR and Hydro One's corresponding responses are provided in **Section 3.13.1**. On February 5, 2024, Hydro

One emailed the MECP to provide a copy of the final ESR and copy of Statement of Completion. The next day, MECP confirmed they had successfully downloaded the final ESR and Statement of Completion for the Project.

On February 12, 2024, Hydro One called the MECP to inform them that Hydro One had recently identified that the MCM and MNRF contacts had inadvertently been omitted from distribution of the Notice of Completion and draft ESR review period, due to an error stemming from the recent split and subsequent name change of the former MHSTCI and MNDMNRF, respectively. Hydro One committed to inform the appropriate Ministry staff contacts and provide them the equivalent comment period (30 days), to review the ESR and provide comments to Hydro One. The MECP and Hydro One agreed on this approach and noted that any comments received from these Ministry staff, and subsequent Hydro One responses, would be considered to be formal EA correspondences and would be captured in an update to the ESR. That same day Hydro One emailed the MECP to follow up on the phone call conversation and reiterated the agreed plan to rectify the omission of the MNRF and MCM noted above.

On February 13, 2024, Hydro One emailed the MECP and provided an update on the notification and ESR review by the MNRF and MCM discussed previously.

On April 22, 2023, Hydro One emailed the MECP to confirm they had provided a formal response to the MNRF's comments on the ESR and noted the response to MCM's comments would be sent shortly. Hydro One confirmed both set of comments would be incorporated into the previously agreed upon update to the ESR.

On May 13, 2024, Hydro One emailed the MECP to confirm they had provided a formal response to the MCM's comments on the ESR. Hydro One noted the ESR would be updated to include the comments and responses as previously discussed.

#### **3.7.15 Ministry of the Solicitor General**

Hydro One emailed notices for the above-mentioned engagement opportunities to the Ministry of the Solicitor General. No comments or concerns were raised by Ministry of the Solicitor General.

#### **3.7.16 Ministry of Transportation**

Hydro One emailed notices for the above-mentioned engagement opportunities to the MTO.

On March 21, 2022, MTO provided Hydro One with comments on the Project, route alternatives, permit requirements and applications, and conditions for the proposed

work to avoid potential impacts. MTO noted that Routes 1 and 3 were near Highway 40, and regardless of the route chosen, the Project would cross Highway 40 which is within MTO's ownership. In response, Hydro One held a meeting with MTO staff on April 28, 2022, to discuss potential solutions on MTO's comments for Routes 1 and 3 and their proximity to Highway 40, the goal of which would be to find a balance in conducting a full assessment of the viable options while still respecting technical requirements of the MTO.

On May 5, 2022, the MTO joined the first TAC workshop hosted by Hydro One, virtually.

On May 11, 2022, Hydro One provided MTO with meeting minutes from the discussion held on April 28, 2022. Hydro One reminded MTO that they were waiting on clarification on the setback distance requirements from the MTO for the Highway 40 corridor and that they looked forward to hearing about any further expansions and interchange improvements in this area. Hydro One requested MTO to review the minutes and let them know of any edits by May 25, 2022. On May 25, 2022, MTO notified Hydro One that their design office was completing their assessment of the April 28 meeting minutes and would provide technical comments the following week; Hydro One confirmed in a follow up email on May 26, 2022, that the additional time to review the meeting minutes was acceptable.

On June 3, 2022, MTO provided Hydro One with the summary of requirements for the Project in the vicinity of Highway 40. The requirements included: horizontal clearances (14 m minimum offset), vertical clearances (as defined by Ontario Provincial Standard Drawing (OPSD) 2245.020), and permit requirements. Hydro One explained that they were reviewing the technical information and would provide a response in the near future. Hydro One attached the final minutes for MTO's records.

On September 13, 2022, MTO representatives joined the second TAC workshop hosted by Hydro One virtually.

Hydro One met with MTO on September 21, 2022, to discuss an email from the Ministry and route refinements to the Highway 40 corridor based on the previous conversation with MTO. During the meeting Hydro One provided an overview of the refinement with a sketch and measurements from the ROW. MTO confirmed the sketch and information was sufficient and expressed their support of the presented refinement. The group continued to discuss other roads in the region and the difference between MTO jurisdiction compared to regional roads. It was also discussed that the Project is a 230 kV line, therefore the ground voltage (root-mean-square [rms]) of 132 kV and minimum clearance of 6.4 m was not expected to change. The MTO confirmed that

although they typically require that crossings are perpendicular to the highway, the Ward Line is twinning existing infrastructure and an angled crossing is okay. Hydro One sent the meeting minutes to MTO on November 18, 2022. On December 12, 2022, MTO provided comments on the meeting minutes from September 21, 2022, and Hydro One stated that the design of the route alignment would be confirmed once the preferred route is selected. On January 12, 2023, Hydro One sent an email to MTO with attached finalized minutes from the September 21, 2022, meeting.

On April 24, 2023, Hydro One requested information from MTO regarding MTO's ownership of Pinehurst Line in the Municipality of Chatham-Kent. Hydro One sent a follow up email on May 8, 2023. MTO confirmed with Hydro One on May 8, 2023, that Pinehurst Line in the Municipality of Chatham-Kent is owned by MTO who was responsible for the realignment of the roadway as part of the Highway 401/40 interchange construction.

On June 1, 2023, MTO joined the third TAC workshop hosted by Hydro One, virtually.

On June 5, 2023, Hydro One notified the MTO, of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process. On June 26, 2023 Hydro One sent the summary for TAC#3 via email.

On July 14, 2023 Hydro One thanked everyone who participated at the recent open houses for the Project via email. Hydro One included a link for those who missed the events.

No other comments or concerns were raised by the MTO.

### **3.7.17 Ontario Clean Water Agency**

Hydro One emailed notices for the above-mentioned engagement opportunities to Ontario Clean Water Agency. No comments or concerns were raised by the agency.

### **3.7.18 Ontario Power Generation**

Hydro One emailed notices for the above-mentioned engagement opportunities to OPG.

On October 26, 2022, Hydro One and OPG met to discuss the Lambton TS and GS property including the existing landfill ECA, archeological inquiries and upcoming geotechnical program of the Project. The OPG provided details about the Coal Ash ECA on the Lambton Site. They confirmed boundaries and noted that the entire area should be treated as a landfill. Hydro One provided the proposed geotechnical works for the early design of the Project. The OPG requested an updated borehole map with the



information they had provided. OPG requested a follow up meeting with Hydro One's Real Estate team to coordinate temporary real estate access. During the meeting OPG noted that they had recently completed a Stage 1 AA and committed to sharing it with Hydro One. They also noted that any archaeological assessment would require a break surface permit from onsite staff after the temporary land use agreement is complete. Hydro One and OPG discussed the complications of working in and around the landfill ECA. OPG confirmed that any permissions regarding building within the ECA or any buffer zones would need to be discussed and approved by the MECP. OPG confirmed that they wanted to support the Project. Following the meeting, a Hydro One Real Estate representative sent an email to OPG to schedule a call to discuss the Lambton ECA.

On November 3, 2022, Hydro One sent meeting minutes to OPG, from the meeting on October 26, 2022. No other comments or concerns were raised by OPG. Hydro One continues to work with OPG on Real Estate matters regarding lands in vicinity of the Lambton TS.

On June 5, 2023, Hydro One notified the OPG, of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process.

### **3.7.19 St. Clair Region Conservation Authority**

Hydro One emailed notices for the above-mentioned engagement opportunities to SCRCA.

On March 21, 2022, SCRCA provided Hydro One with a map depicting SCRCA Regulated Areas and owned properties along the proposed route alternatives. SCRCA indicated they would like to discuss the potential route alternatives that cross their properties and how they could assist in the Class EA process. On April 8, 2022, Hydro One requested shapefiles from SCRCA and explained their willingness to sign a data sharing agreement, if necessary. Hydro One welcomed any SCRCA input in the Class EA to help inform the planning of the Project. Hydro One notified SCRCA of the 2022 Natural Environment Field Survey Program to support the Project's Class EA and attached the Natural Environment Field Program Terms of Reference. Hydro One also invited the SCRCA on April 8, 2022, to participate in the TAC for the Project to collect input to help shape the route alternatives evaluation framework.

On May 5, 2022, SCRCA joined the first TAC workshop hosted by Hydro One virtually.

On May 25, 2022, SCRCA provided Hydro One with a data sharing agreement but indicated they could not share the conservation authority property boundaries since dissemination was not included in the licensing agreement for the parcel fabric data. SCRCA indicated that they would send Biological Monitoring Data with generalized buffers added to site locations due to the sensitive nature of the data. On June 7, 2022, Hydro One sent SCRCA the signed data sharing agreement and indicated that they were willing to provide data collected through the planning phase of the Class EA. On June 14, 2022, SCRCA provided Hydro One with GIS data and shapefiles regarding the SCRCA regulation limit, fish and mussel records, and terrestrial species at risk.

During the month of August 2022, SCRCA and Hydro One corresponded multiple times regarding the GIS data and shapefiles that SCRCA had provided, as this information would be utilized in the route evaluation process.

On September 8, 2022, SCRCA provided a shapefile of the Estimated Floodplain Layer in the study area.

On September 13, 2022, SCRCA representatives joined the second TAC workshop hosted by Hydro One, virtually.

On October 3, 2022, Hydro One reached out to SCRCA via email to make sure any outstanding questions or clarifications were addressed. Hydro One noted the addition of an evaluation criterion called Future Ecological Restoration Areas and inquired if there were areas within SCRCA's jurisdiction where ecological restoration was proposed to occur. SCRCA replied via email on October 7, 2022, and noted the restoration work that had already been completed on lands owned/managed by the SCRCA. On February 7, 2023, Hydro One sent an email to SCRCA to inquire about SCRCA's restoration work or plans for future restoration work on specific properties identified by Hydro One. On February 8, 2023, SCRCA clarified the areas on properties SCRCA owned and managed that have been actively restored or managed. In addition to this, SCRCA noted via email that there were some trees planted on the properties that may be disturbed as a result of the Project. They also noted the possible disturbance to crops as there are agricultural sections rented out, depending on the timing of construction and the selected route. Dillon and SCRCA met virtually on February 8, 2023. Based on the discussion it was confirmed that the Conservation Authority (CA) had not been active in planting or managing vegetation in the area previously noted by Hydro One (although other parts of this property were actively planted and managed).

On June 1, 2023, SCRCA joined the third TAC workshop hosted by Hydro One, virtually. On June 5, 2023, Hydro One notified the IESO, of the selection of the preferred

route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process. On June 26, 2023 Hydro One sent the summary for TAC#3 via email.

No other comments or concerns were raised by SCRCA.

### **3.8 Municipal Governments**

As part of the consultation and engagement program for the Project, the following municipal governments were contacted:

- City of Sarnia
- County of Lambton
- Municipality of Brooke-Alvinston
- Municipality of Chatham-Kent
- Municipality of Leamington
- St. Clair Township
- Town of Kingsville
- Town of Petrolia
- Town of Plympton-Wyoming
- Township of Dawn-Euphemia
- Township of Enniskillen
- Township of Warwick
- Village of Oil Springs
- Village of Point Edward.

For each of the aforementioned, the Mayor, Deputy Mayor, Ward Councillors, Chief Administrative Office (CAO), Clerk, and/or key department staff (e.g., Engineering, Public Works, Planning) were contacted, where appropriate. Correspondence with Municipal Governments is included in the Record of Consultation (**Appendix B6**).

#### **3.8.1 City of Sarnia – Municipal Staff**

Hydro One emailed notices for the above-mentioned engagement opportunities to the staff of City of Sarnia. No comments or concerns were raised.

#### **3.8.2 City of Sarnia – Elected Officials**

Hydro One shared notices and updates by way of email throughout the Class EA process, and shared notices regarding the above-mentioned engagement opportunities, with elected officials at the City of Sarnia.



Hydro One met with Mayor Bradley and council members on February 9, 2022, to provide a briefing on southwestern Ontario's regional growth and to provide a Project overview and invitation to COH #1. No comments or concerns were raised.

### **3.8.3 County of Lambton – Municipal Staff**

Hydro One emailed notices for the above-mentioned engagement opportunities to the staff of County of Lambton.

On May 5, 2022, staff from the County of Lambton joined the TAC #1 Workshop hosted by Hydro One virtually.

Hydro One requested to meet with the St. Clair Township and the County of Lambton to provide a Project briefing on September 20, 2022. Hydro One met with the County of Lambton and St. Clair Township staff on October 11, 2022, to discuss the Project, route refinements, and early engineering inquiries prior to the preferred route analysis. The group discussed the municipal planning process in relation to new infrastructure. It was confirmed by the County of Lambton that the Project, as infrastructure, had an exception in the zoning by-laws, however the townships and public work department may have their own requirements. Hydro One noted that while the *Planning Act* also has a broad exemption for electricity transmission infrastructure projects that are subject to the *Environmental Assessment Act*, the Project team was still interested in consulting with municipalities on potential effects to inform the Class EA. Hydro One inquired if there were any future land use plans or studies underway within the vicinity of the Project that are not captured under Official Plan mapping. The County of Lambton confirmed that growth areas are captured in the County's Official Plan. Hydro One requested Official Plan shapefiles to inform the route evaluation process. The group also discussed road clearances and setback requirements that should be considered by Hydro One during the early engineering works prior to selecting a preferred route. It was suggested that Hydro One follow Canadian Standards Association (CSA) standards, and that future discussions could occur once a preferred route was selected. Hydro One requested information on municipal drains in the area so these could be considered in the selection of the preferred route. While St. Clair Township staff noted they have a 15 m setback for buildings from municipal drains, it was agreed that municipal staff and Hydro One could continue to discuss this as the Project progresses. A potential new access road at Lambton TS was also discussed and the St. Clair Township staff provided input on future projects and requirements which should be considered. The meeting ended with a discussion on other projects happening (or planned for) in the area. Hydro One concluded the meeting noting there would be a standing offer to meet

and discuss the Project. The meeting minutes were emailed to participants on December 2, 2022.

On December 14, 2022, Hydro One reached out to the County of Lambton staff to inquire about additional information that would assist with the evaluation of route alternatives for the Project. Hydro One requested that the County of Lambton provide Map 1 of their Official Plan in a shapefile format. Hydro One also stated that they were open to answering any questions or receiving any other helpful information. Following several correspondences in January 2022, the County of Lambton sent Hydro One Official Plan mapping layers on January 25, 2023, to support the route alternatives evaluation.

On June 1, 2023, County of Lambton staff joined the TAC #3 workshop hosted by Hydro One, virtually. On June 5, 2023, Hydro One notified the County of Lambton staff, of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process. On June 26, 2023, Hydro One sent the summary for TAC#3 via email.

No other comments or concerns were raised.

#### **3.8.4 County of Lambton - Elected Officials**

Hydro One shared notices and updates by way of email throughout the Class EA process, and shared notices regarding the above-mentioned engagement opportunities, with elected officials at the County of Lambton.

Hydro One spoke with Warden Marriot on November 30, 2022, to discuss the Project. As Hydro One continues work on the Project and working with landowners, they will continue to engage with Warden Marriot, and respond to items raised. No other comments or concerns were raised.

#### **3.8.5 Municipality of Brooke-Alvinston – Municipal Staff**

Hydro One shared notices, via email, for the above-mentioned engagement opportunities to the Municipality of Brooke-Alvinston. No comments or concerns were raised.

#### **3.8.6 Municipality of Brooke-Alvinston - Elected Officials**

Hydro One shared notices and updates by way of email throughout the Class EA process, and also shared notices regarding the above-mentioned engagement opportunities with Mayor Ferguson. No comments or concerns were raised.

### **3.8.7 Municipality of Chatham-Kent – Municipal Staff**

Hydro One emailed notices for the above-mentioned engagement opportunities to Chatham-Kent staff.

On May 5, 2022, staff from the Municipality of Chatham-Kent joined the first TAC workshop that Hydro One hosted virtually.

WSP Global Inc. (WSP) (on behalf of Hydro One) emailed the Municipality of Chatham-Kent staff on June 13, 2022, to request a copy of the municipalities' designated and listed heritage properties and requested contact details of a representative on these topics. The Municipality of Chatham-Kent responded to WSP's representative on June 13, 2022, providing the general email for planning designated and listed heritage properties in the municipality, along with a link to a record of listed and designated heritage properties in Chatham-Kent. The Municipality of Chatham-Kent staff also included a contact if WSP required more information. On June 14, 2022, WSP emailed the Municipality of Chatham-Kent inquiring if the list of heritage properties they had sent was current and complete, to which the Municipality of Chatham-Kent confirmed the list of heritage properties was up to date with one exception and provided an explanation of that exception.

On September 13, 2022, staff from the Municipality of Chatham-Kent joined the second TAC workshop that Hydro One hosted virtually.

A meeting took place with the Project team and the Municipality of Chatham-Kent staff on October 19, 2022, to discuss the Project including route alternative refinements, and early engineering inquiries prior to the preferred route analysis. For route refinements the Municipality of Chatham – Kent requested to know more about the potential Wallaceburg TS expansion. Hydro One noted that if Routes 2, 3 or 4 were to be selected through the Class EA, an upgrade would be required at Wallaceburg TS to accommodate for the increased capacity of the new line. They noted that this expansion was expected to be within Hydro One owned property, and that the new infrastructure would improve transmission reliability in the area. Chatham-Kent requested to know if Wallaceburg TS fed the Dresden area. Hydro One also provided further clarification on the Otter Creek Crossing refinement. Hydro One noted the refinement was the result of technical constraints in crossing other utilities and the river. They also noted that portions of the 115 kV infrastructure would not be directly repurposed into 230 kV (i.e., as a result of this refinement) would be decommissioned and de-energized but that the structures would not be physically removed. The staff from Chatham – Kent noted there are no new roads or bridge projects planned at the moment but requested engineering

information from Hydro One to take back for future consideration. Chatham – Kent staff also confirmed vertical clearance requirements and provided recommendations. Municipal drains and setback requirements were also discussed.

Further to a clarification email from the Director of Planning Services from the Municipality of Chatham-Kent on October 27, 2022, Hydro One responded on October 28, 2022, to confirm the Otter Creek refinement had been updated on the Project website. Hydro One explained registered mail/letters were sent to landowners affected by the refinements mapping, an explanation of each refinement, and upcoming Community Open Houses. The Director of Community Development for the Municipality of Chatham-Kent thanked Hydro One on October 28, 2022, for sending the details for the public notices that were to be released to community members in the area and explained they are coordinating a submission for consideration in the EA process. On November 18, 2022, Hydro One contacted the Municipality of Chatham-Kent staff to thank them for attending the discussion on October 19, 2022, and provided meeting minutes for Chatham-Kent's staff review and edits.

The Municipality of Chatham-Kent on November 22, 2022, provided Hydro One input regarding the route alternatives being considered. The staff highlighted the three critical factors or criteria that significantly differentiate the five route alternatives which are the tie in to Wallaceburg TS, the physical footprint of the Project, and the impacts to agricultural lands. The staff also included a table to assess the five route alternatives which revealed Route 2 to be the most preferable option, Route 3 and 4 as the second preferred options, Route 1 as the third preferred option, and Route 5 to be the least preferred option. Hydro One responded to the Municipality of Chatham-Kent on November 22, 2022, thanking them for the detailed comments and explained that an effects-based evaluation would be conducted to select the preferred route, and that the Municipality's input was helpful in conducting this evaluation.

On December 14, 2022, Hydro One emailed staff from the Municipality of Chatham-Kent to request shapefiles and any other spatial data for specific zoning and Official Plan mapping to assist the route evaluation.

On January 16, 2023, Hydro One sent an email to the Municipality of Chatham-Kent staff to follow up on the request for Official Plan data with attached shapefiles of the route alternatives. Following resolution on the signing authority for the Data Sharing Agreement, the Municipality of Chatham-Kent shared the Official Plan data with Hydro One to assist in the route alternatives evaluation on January 26, 2023.

On June 1, 2023, the Municipality of Chatham-Kent staff joined the third TAC workshop hosted by Hydro One virtually. On June 5, 2023, Hydro One notified the Municipality of Chatham-Kent staff, of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process. On June 26, 2023 Hydro One sent the summary for TAC#3 via email.

On July 14, 2023 Hydro One thanked everyone who participated at the recent open houses for the Project via email. Hydro One included a link for those who missed the events.

Following the release of the Notice of Completion and commencement of the 30-day draft ESR comment period, staff from the Municipality informed Hydro One of an upcoming agenda item at the November 27, 2023 council meeting, regarding the Project and concerns raised by some residents regarding groundwater resources and water wells. On November 27, Hydro One provided to staff a deputation letter to be shared with council; the letter included the following commitments that Hydro One was making for the Project:

- Ensuring tower foundations do not interact with the aquifer and remain between approximately 33ft to 100ft (depending on the depth of the soil) above the top of the aquifer layer.
- Not using pile driving to install tower foundations.
- Using screw (helical) piles which are widely used in sensitive environments due to their simpler installation process and minimal noise and vibration levels.

Following the November 27 council meeting, Hydro One staff have continued to correspond with staff at the Municipality to arrange for a Hydro One delegation to an upcoming council meeting in early 2024, to provide further information on the SCTL project and other Hydro One projects in the region, as per council's request.

No other comments or concerns were raised.

### **3.8.8 Municipality of Chatham-Kent – Elected Officials**

Hydro One shared notices and updates by way of email throughout the Class EA process, and also shared notices regarding the above-mentioned engagement opportunities with Mayor Canniff, Ward 2, 4 and 5 Councillors, and their staff. No comments or concerns were raised.

On January 17, 2022, Hydro One met with the Mayor of Chatham-Kent and staff members to provide a briefing on southwestern Ontario's regional growth and to provide a Project overview.

On February 18, 2022, Hydro One met with Councillors McGrail and Fass of the Municipality Chatham-Kent to provide a Project briefing, including an update on the Project, the planned EA process and upcoming engagement opportunities.

Hydro One contacted Councillor McGrail, on March 17, 2022, thanking them for passing along a community member's questions and mentioned that Hydro One would contact the individual directly to respond.

Hydro One sent an email to Mayor Canniff on October 27, 2022, to provide a brief update of the Project, including details about upcoming COH #2 events, and route refinements for the Project. Hydro One provided details on their upcoming public engagement and explained that the Municipality's feedback was important and welcomed any questions or concerns.

On May 29, 2022, Hydro met with Mayor Canniff and Councillor McGrail to provide a briefing on the Project's route announcement. Following this, on June 5, 2023, Hydro One sent Mayor Canniff a copy of the presentation delivered the week prior and provided responses to questions raised during the briefing. No other comments or concerns were raised.

Hydro One emailed Mayor Canniff on October 31, 2023, to advise that the Draft ESR would be available for public review and comment on November 6, 2023.

On November 8, 2023, Hydro One emailed the Municipality of Chatham-Kent Mayor to advise that Forbes Bros. has been selected to execute their plan to construct the Project.

The SCTL project was discussed at a Municipality of Chatham-Kent council meeting on November 27, regarding concerns raised by some residents regarding groundwater resources and water wells. Prior to the council meeting, Hydro One provided a deputation letter to be shared with council; the letter included the following commitments that Hydro One was making for the Project:

- Ensuring tower foundations do not interact with the aquifer and remain between approximately 33ft to 100ft (depending on the depth of the soil) above the top of the aquifer layer.
- Not using pile driving to install tower foundations.

- Using screw (helical) piles which are widely used in sensitive environments due to their simpler installation process and minimal noise and vibration levels.

Following the November 27 council meeting, on December 1, 2023 the Municipality of Chatham-Kent informed Hydro One of a motion that had been passed by council, seeking more information on how Hydro One intends to address concerns about the Project related to the integrity of water wells. Hydro One responded the same day via email and offered to provide an update at an upcoming council meeting to address the request from council. As these correspondences occurred during the draft ESR comment period, they have also been summarized and included in **Section 3.13.1** of this ESR. Hydro One staff have continued to correspond with staff at the Municipality to arrange for a Hydro One delegation to an upcoming council meeting in early 2024, to provide further information on the SCTL project and other Hydro One projects in the region, as per council's request. It is currently anticipated a Hydro One delegation will present to council at the council meeting planned for February 5, 2024.

### **3.8.9 Municipality of Leamington- Municipal Staff**

Hydro One emailed notices for the above-mentioned engagement opportunities to Municipality of Leamington staff. No comments or concerns were raised.

### **3.8.10 Municipality of Leamington – Elected Officials**

Hydro One shared notices and updates by way of email throughout the Class EA process, and also shared notices regarding the above-mentioned engagement opportunities with Mayor MacDonald.

Hydro One contacted Mayor MacDonald on March 29, 2021, to inform that the IESO and Hydro One released a joint announcement for the development of a new transmission line in southwestern Ontario and provided additional details about the Project.

Hydro One sent an email to the Mayor and Council of the Municipality of Leamington on October 27, 2022, to provide a Project update, including details about upcoming COH #2 events. No other comments or concerns were raised.

### **3.8.11 St. Clair Township – Municipal Staff**

Hydro One shared notices and updates by way of email throughout the Class EA process, and also shared notices regarding the above-mentioned engagement opportunities with St. Clair Township staff.



St. Clair Township staff emailed Hydro One on February 4, 2022, with an invitation to a virtual St. Clair Township Regular Council meeting via Zoom taking place on February 7, 2022.

Hydro One emailed St. Clair Township staff on May 26, 2022, and briefly reviewed the five route alternatives, shared the interactive mapping tool available on the website, and provided contact information for the Hydro One Project Manager. Hydro One requested St. Clair Township staff to confirm if they had any inquiries for the Project or route selection criteria and stated they would be happy to arrange a meeting to discuss the Project further.

The Cultural Heritage Specialist from WSP emailed St. Clair Township staff on May 30, 2022, requesting a copy of the Town's Heritage Register or list of properties within the municipality that are of heritage concern for comparison with the study area of the Project. The individual also requested contact information from St. Clair Township for any questions regarding heritage inquiries. St. Clair Township staff responded to the WSP representative on May 31, 2022, indicating they do not have a heritage registry in the municipality as well as no properties designated or listed.

The St. Clair Township staff emailed Hydro One on June 1, 2022, to provide Hydro One contact information of the Coordinator of Engineering and Coordinator of Operations who may have comments.

Hydro One met with the County of Lambton and St. Clair Township staff on October 11, 2022, to discuss the Project, route refinements, and early engineering inquiries prior to the preferred route analysis. The group discussed the municipal planning process in relation to new infrastructure. It was confirmed by the County of Lambton that the Project, as infrastructure, had an exception in the zoning by-laws, however the townships and public work department may have their own requirements. Hydro One noted that while the *Planning Act* also has a broad exemption for electricity transmission infrastructure projects that are subject to the *Environmental Assessment Act*, the Project team was still interested in consulting with municipalities on potential effects to inform the Class EA. Hydro One inquired if there were any future land use plans or studies underway within the vicinity of the Project that are not captured under Official Plan mapping. The County of Lambton confirmed that growth areas are captured in the County's Official Plan. Hydro One requested Official Plan shapefiles to inform the route evaluation process. The group also discussed road clearances and setback requirements that should be considered by Hydro One during the early engineering works prior to selecting a preferred route. It was suggested that Hydro One follow CSA

standards, and that future discussions could occur once a preferred route was selected. Hydro One requested information on municipal drains in the area so these could be considered in the selection of the preferred route. While St. Clair Township staff noted they have a 15 m setback for buildings from municipal drains, it was agreed that municipal staff and Hydro One could continue to discuss this as the Project progresses. A potential new access road at Lambton TS was also discussed and the St. Clair Township staff provided input on future projects and requirements which should be considered. The meeting ended with a discussion on other projects happening (or planned for) in the area. Hydro One concluded the meeting noting there would be a standing offer to meet and discuss the Project. The meeting minutes were emailed to participants on December 2, 2022. Hydro One sent an email on December 14, 2022, to St. Clair Township staff and County of Lambton staff to follow up with action items from a meeting that occurred on October 11, 2022, to assist with the evaluation of route alternatives for the Project. Hydro One requested the County of Lambton provide Map 1 and that St. Clair Township provide Schedule A from their respective Official Plans in a shapefile format, as well as information regarding the Oil Springs Line capital project. Hydro One also stated they were open to answering any questions or receiving any other helpful information. On June 5, 2023, Hydro One notified the St. Clair Township staff of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process. On June 26, 2023 Hydro One sent the summary for TAC#3 via email.

On July 14, 2023 Hydro One thanked everyone who participated at the recent open houses for the Project via email. Hydro One included a link for those who missed the events.

No other comments or concerns were raised.

### **3.8.12 St. Clair Township – Elected Officials**

Hydro One shared notices and updates by way of email throughout the Class EA process, and also shared notices regarding the above-mentioned engagement opportunities with Mayor MacDonald.

Hydro One met with Mayor and Council on February 7, 2022, to provide a briefing on southwestern Ontario's regional growth and to provide a Project overview and invitation to COH #1. No comments or concerns were raised.

On August 26, 2022, Hydro One emailed Mayor Arnold an update on the progress of the Project.

Hydro One sent an email to the new mayor of St. Clair Township, Mayor Agar, on October 28, 2022, to provide an update on the Project, including details about upcoming COH #2. Hydro One welcomed the opportunity to provide a briefing at the Mayor's convenience.

Hydro One met with Mayor Agar on February 8, 2023, to provide a Project briefing, including a Project overview, an update on engagement to date, as well as next steps.

On May 26, 2022, Hydro emailed the Mayor and Councillors of St. Clair Township to provide information about the Project's route announcement and offer a briefing.

On August 2, 2023, Hydro One met with St. Clair Township staff to discuss potential community investment opportunities. The Mayor noted he supported the associated announcement activities associated with the investment and suggested a presentation to Council.

Hydro One emailed Mayor Agar on October 31, 2023, to advise that the Draft ESR would be available for public review and comment on November 6, 2023.

On November 8, 2023, Hydro One emailed St. Clair Township Mayor to advise that Forbes Bros. has been selected to execute their plan to construct the Project.

### **3.8.13 Town of Kingsville – Elected Officials**

Hydro One shared notices and updates by way of email throughout the Class EA process, and also shared notices regarding the above-mentioned engagement opportunities with the Deputy Mayor and CAO of the Town of Kingsville.

Hydro One sent an email the Town of Kingsville on October 27, 2022, to inform them of COH #2 events. Hydro One explained that Kingsville's feedback was important and welcomed any questions or concerns.

### **3.8.14 Town of Petrolia – Elected Officials**

Hydro One shared notices and updates by way of email throughout the Class EA process, and shared notices regarding the above-mentioned engagement opportunities with Mayor Loosley and staff.

Hydro One contacted Mayor Loosley on March 29, 2021, to inform that the IESO and Hydro One released a joint announcement for the development of a new transmission line in southwestern Ontario and provided additional details about the Project.

On September 20, 2021, Hydro One met with the Mayor Loosley to provide an overview of southwestern Ontario's regional growth and to provide a Project overview. No other comments or concerns were raised.

On November 7, 2023, the Town of Petrolia confirmed they received the notice for the draft ESR and noted they did not have any comments.

#### **3.8.15 Town of Plympton-Wyoming – Elected Officials**

Hydro One shared notices and updates by way of email throughout the Class EA process, and shared notices regarding the above-mentioned engagement opportunities with the CAO, Clerk and Mayor of the Town of Plympton-Wyoming.

Hydro One sent an email to the Chief Administrative Officer on October 27, 2022 to provide a Project update, including details about upcoming COH #2 events. Hydro One explained that the Town's feedback was important and welcomed any questions or concerns. No comments or concerns were raised.

#### **3.8.16 Township of Dawn-Euphemia – Elected Officials**

Hydro One shared notices and updates by way of email throughout the Class EA process, and shared notices regarding the above-mentioned engagement opportunities with Mayor Broad. No comments or concerns were raised.

#### **3.8.17 Township of Enniskillen – Elected Officials**

Hydro One shared notices and updates by way of email throughout the Class EA process, and shared notices regarding the above-mentioned engagement opportunities with Mayor Marriott.

On January 5, 2022, Hydro One emailed Mayor Marriott to continue engagement on upcoming projects in and nearby the Township of Enniskillen. Hydro One invited Mayor Marriott for a virtual meeting during the week of January 17, 2022, to discuss the Project, and provided a brief update on the Project's need. On January 14, 2022, Hydro One followed up on the previous email/invitation. No comments or concerns were raised.

#### **3.8.18 Township of Warwick – Elected officials**

Hydro One shared notices and updates by way of email throughout the Class EA process, and shared notices regarding the above-mentioned engagement opportunities with the Mayor. No comments or concerns were raised.

### **3.8.19 Village of Oil Springs – Elected Officials**

Hydro One shared notices and updates by way of email throughout the Class EA process, and shared notices regarding the above-mentioned engagement opportunities with Mayor Veen and the Clerk of the Village of Oil Springs. No comments or concerns were raised.

### **3.8.20 Village of Point Edward – Elected Officials**

Hydro One shared notices and updates by way of email throughout the Class EA process, and shared notices regarding the above-mentioned engagement opportunities with Mayor Hand and the Deputy Mayor of the Village of Point Edward. No comments or concerns were raised.

## **3.9 Potentially Affected and Interested Groups, Businesses, School Boards and Utilities**

Consultation and Engagement opportunities were provided to potentially affected and interested groups, businesses, school boards and utilities throughout the Class EA process.

As part of the consultation and engagement program, approximately 40 potentially affected and interested groups, businesses, school boards and utilities were contacted during the Class EA process. A complete list of the interest groups is provided in **Appendix B1**.

Correspondence with potentially affected and interested groups, businesses, school boards and Utilities is included in the Record of Consultation (**Appendix B6**).

### **3.9.1 Boralex (Marsh Line Wind Farm)**

Hydro One shared notices and updates by way of email throughout the Class EA process, and shared notices regarding the above-mentioned engagement opportunities with Boralex.

On June 12, 2023, Boralex emailed Hydro One to note their windfarm connects to Wallaceburg TS via the local network of distribution feeders, and has a radio link to Wallaceburg TS. Boralex expressed feedback about minimizing disruptions relating to the station work. Hydro One emailed Boralex and confirmed their feedback was shared with the Project team. No other comments or concerns were raised.

On June 5, 2023, Hydro One notified the Boralex, of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process.

On June 12, 2023, Boralex contacted Hydro One and expressed concern in regards to possible disruptions to the Wallaceburg TS, as their windfarm is connected to it. Hydro One responded confirming receipt of the feedback and noted the information would be shared with the Project team, as well as the disruption team and that they would be connecting with Boralex shortly on this feedback.

### **3.9.2 Charlotte's Freedom Farm**

Hydro One emailed and mailed notices for the above-mentioned engagement opportunities to Charlotte's Freedom Farm.

On March 8, 2023, Hydro One sent an email to Charlotte's Freedom Farm to check they received Hydro One's past notices regarding the Project and provided an overview of the Project including a link to the Project website. Hydro One provided contact information and indicated there will be a COH in Spring 2023. Charlotte's Freedom Farm responded to Hydro One's email on the same day indicating that they have received the Project notices but have not yet reviewed the information. Charlotte's Freedom Farm also requested information regarding how the Project would affect their property. On March 13, 2023, Hydro One responded to Charlotte's Freedom Farm's email explaining the route alternatives are separate from what already exists on Charlotte's Freedom Farm's property. Hydro One provided an overview of the Class EA, the route selection process and explained Charlotte's Freedom Farm is traversed by Routes 1 and 4. Hydro One indicated they wanted to help ensure Charlotte's Freedom Farm had an opportunity to provide feedback regarding the Project and indicated they can discuss at any time.

In late April 2023, Hydro One heard from over 200 community members, who provided feedback about alternative route 1 and 4 and their potential impact to Charlotte's Freedom Farm. Hydro One responded to each resident to thank them for their feedback, noting it would be considered as part of the Class EA.

### **3.9.3 CSX Corporation (CSX)**

On April 28, 2022, a CSX railroad was identified in the area which had resulted in CSX being added to the Project contact list. Hydro One provided a copy of the Notice of Commencement, summary of the Project and Class EA process requesting that CSX reach out should they have any comments or questions on the Project.

On June 13, 2022, Hydro One reached out to additional contacts at CSX noting a possible refinement to Route 1 being investigated. Hydro One again provided a copy of the Notice of Commencement and explained that they wanted to reach out to advise CSX of the Project and the potential change from the Project website and public mapping.

On October 12, 2022, Hydro One inquired about early technical considerations for the Project that traverse with CSX's infrastructure. Hydro One indicated that the Project Team could discuss the Project and process with CSX and provided a list of initial questions for CSX to respond to over email. Hydro One asked if there was a specific contact at CSX they should reach out to and provided contact information for CSX to contact if they wanted to schedule a call to discuss the Project. On October 13, 2022, an employee of CSX reached out to Hydro One to learn about the Project and confirmed they would send the early design inquiries on to CSX's corporate office. Later that day CSX indicated the answers to Hydro One's questions could be found in the CSX Permitting website. CSX explained when it comes time to permit facilities with the railroad, Hydro One will need to submit a Utility Application through the CSX Property Portal. No other comments or concerns were raised.

On June 5, 2023, Hydro One notified the CSX, of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process.

#### **3.9.4 East Lake St. Clair Wind Farm**

Hydro One emailed notices for the above-mentioned engagement opportunities to the East Lake St. Clair Wind Farm.

No other comments or concerns were raised.

#### **3.9.5 Eastern Power Inc.**

Hydro One emailed notices for the above-mentioned engagement opportunities to Eastern Power Inc.

On May 5, 2022, after COH #1, Hydro One responded to inquiries that were made during the conference call but were not responded to. During COH #1 Eastern Power Inc. inquired about the selection of a preferred route for the Project. Hydro One explained the five route alternatives will be evaluated through the Class EA before a preferred route is selected. Hydro One explained the primary focus was to learn as much as possible about the lands that extend through the various route alternatives. No other comments or concerns were raised.



On June 5, 2023, Hydro One notified the Eastern Power Inc., of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process.

### **3.9.6 Enbridge Gas Inc. (Enbridge)**

Hydro One emailed notices for the above-mentioned engagement opportunities to Enbridge.

On May 4, 2022, Hydro One provided a summary of the five route alternatives and requested the opportunity to discuss Enbridge's existing assets and infrastructure located within the study area to receive clarification about any potential conflicts which may be required for the route alternatives evaluation and selection process. Hydro One explained that as part of the Class EA and evaluation of route alternatives, the potential effects to the Enbridge-owned St. Clair Pool and/or Vector Pipeline need to be taken into consideration since they may be impacted by the eventual construction of one of the five routes. Hydro One requested Enbridge to review the route alternatives, bring forward any questions, and offered to discuss the Project further. On June 27, 2022, Enbridge provided Hydro One a marked-up map reviewing of the Project alternatives and adjacent Enbridge Transmission Gas Lines. Included in this map were locations where Alternating Current (AC) modelling and possible mitigation may be required. Enbridge indicated they were still reviewing possible collocation with lower pressure distribution lines, but there were no immediate concerns, and they would confirm within the next week.

On August 15, 2022, Hydro One informed Enbridge that Hydro One was looking to refine and finalize the criteria to be used for the route evaluation for the Project with the goal of having the preferred route selected in early 2023. Hydro One noted that the locations that may require AC modelling and possible mitigation was incorporated into the route evaluation criteria. Hydro One also wanted to follow up regarding any concern with the lower pressure distribution lines as well as request for shapefiles of where the underground lines are within the area to utilize during the review. As a response, Enbridge indicated in an email sent on August 16, 2022, that there does not appear to be collocation with any of Enbridge's distribution lines and the proposed alternative routes. Enbridge indicated they would confirm if they could provide shapefiles for where their pipelines are located within the study area.

On October 19, 2022, Hydro One met with Enbridge to discuss the Project including schedule, refinements since the Notice of Commencement as well as the following:

- Early engineering and a Hydro One request for GIS data within the area. It was noted the GIS data would be used in the preferred route selection process. Enbridge noted they would confirm if they could provide this data.
- Future Enbridge projects, or considerations for the Project-specific Cumulative Effects Assessment. Enbridge confirmed there were no plans for major infrastructure and committed to investigate further details of projects planned for 2025 and onwards.
- Hydro One requested more information on abandoned petroleum wells in the study area for the Project and any information available to help mitigate construction and maintenance related effects. Enbridge committed to provide any available details about abandoned well in the Projects study area. Hydro One confirmed that both the number of identified petroleum wells and utility crossings in the Projects study area were being taken into consideration for the evaluation of route alternatives.
- AC modelling and interference studies. Corrosion Services noted they would provide information to Hydro One in advance of any AC mitigation. During the call Enbridge confirmed that for tower setbacks they recommend following the standard 30 metres.

On October 20, 2022, following the meeting, the Engineering Manager of Corrosion Services (on behalf of Enbridge) provided Hydro One four worksheets required for the AC study and a stock request for information form which Corrosion Service uses to gather powerline information which is used in developing the Current Distribution, Electromagnetic Fields, Grounding and Soil Structure Analysis (CDEGS) model along with pipeline geometry and soil information. Corrosion Services welcomed any questions and requests to help Hydro One understand Corrosion Services' needs and the repercussions of design choices.

On November 4, 2022, Hydro One provided the meeting minutes from the discussion on October 19, 2022 including action items and the presentation for Enbridge's review. Hydro One confirmed that they received Enbridge's email about AC requirements, to which Hydro One would follow up if there were any questions. Hydro One responded to Enbridge confirming that the primary contact information for Enbridge has been updated.

On January 31, 2023, Hydro One emailed Enbridge inquiring about resources in the Project Study Area and requested a contact for this; Enbridge indicated that they would look into the contact person as requested. On February 2, 2023, Enbridge provided Hydro One with shapefiles of a pipeline in the Project area as well as contact

information for representatives who may assist Hydro One learn more and aid in the Class EA. On February 15, 2023, Hydro One sent an email to Enbridge requesting more clarity on the Enbridge distribution lines' 400 m buffer ROW. On February 28, 2023, Hydro One responded to Enbridge indicating the engineering team was hoping to have a greater understanding of the centreline of Enbridge's infrastructure for protection and corrosion studies. Hydro One indicated the plan was to maintain a tower setback of 30 metres (m) wherever possible and requested confirmation that the distance was acceptable with Enbridge. Enbridge requested clarification from Hydro One on the distance planned for construction from Enbridge's existing infrastructure. Enbridge suggested having a meeting to discuss and provide further clarification at Hydro One's request.

On March 14, 2023, Hydro One sent an email to Enbridge providing examples of distances of the tower footings from the pipeline centreline for Enbridge to provide feedback. Hydro One indicated they can forward questions to the Owners Engineering Team or set up a discussion. On March 17, 2023, Enbridge indicated they would provide feedback in the coming week regarding the early engineering and design inquiries.

On April 21, 2023, Enbridge responded to Hydro One's email regarding early engineering and design inquiries. Enbridge requested an 18-metre setback from the tower footings and provided estimated distances from tower footings to pipeline at Chatham - Lakeshore.

On June 5, 2023, Hydro One notified the Enbridge of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process.

On July 14, 2023, Hydro One thanked everyone who participated at the recent open houses for the Project via email. Hydro One included a link for those who missed the events.

Hydro One and its contractors continue to engage with Enbridge staff on technical discussions. No other comments or concerns were raised.

### **3.9.7 Imperial Oil**

Hydro One emailed and mailed notices for the above-mentioned engagement opportunities to Imperial Oil.

On February 2, 2023, Hydro One sent a follow up email to Imperial Oil to confirm that the Project will not be overlapping with Imperial Oil infrastructure; Imperial Oil confirmed



their infrastructure is not traversed by the Project. No other comments or concerns were raised.

### **3.9.8 Lambton Federation of Agriculture**

On January 28, 2022, Hydro One met with Lambton Federation of Agriculture to provide a briefing on southwestern Ontario's regional growth and to provide a Project overview and invitation to COH #1.

A representative from Lambton Federation of Agriculture joined the first TAC workshop on May 5, 2022.

On May 5, 2022, Hydro One answered a question asked during the virtual open house about telecommunications. Hydro One explained fibre optic telecommunication cables would be installed on the new transmission towers, which can be an enabler for improving broadband capacity in the area by providing the 'backbone' for future broadband infrastructure, which will allow last mile internet service providers to connect. No other comments or concerns were raised.

On June 5, 2023, Hydro One notified the Lambton Federation of Agriculture, of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process.

On July 14, 2023, Hydro One thanked everyone who participated at the recent open houses for the Project via email. Hydro One included a link for those who missed the events.

### **3.9.9 Lambton Kent District School Board (LKDSB)**

Hydro One emailed notices for the above-mentioned engagement opportunities to LKDSB. The LKDSB requested more information from Hydro One on the Project. In response, Hydro One provided the LKDSB with details about the Project, including the purpose of the Class EA and the categories being considered in evaluating routes.

No other comments or concerns were raised.

### **3.9.10 Ontario Federation of Agriculture (OFA)**

Hydro One shared notices and updates by way of email throughout the Class EA process, and shared notices regarding the above-mentioned engagement opportunities with the OFA.

On January 28, 2022, Hydro One met with OFA and discussed the electricity outlook for southwestern Ontario and introduced the Project. Hydro One emphasized their desire to understand the community's needs and to collect early feedback on the Project.

On March 17, 2022, Hydro One and OFA met to discuss early access conversations and difficulties with the virtual map. Hydro One provided an update on early access and provided additional context on the different types of access agreements. Hydro One noted they would make sure the virtual map was accessible and explained some of the features of the map.

On April 7, 2022, OFA requested additional information on the route section between Wallaceburg and Lambton. Hydro One provided clarification on the alternative routes in response.

On April 25, 2022, OFA emailed Hydro One requesting an invitation for the TAC Workshop #1 be sent to the Lambton Federation of Agriculture representative. Hydro One responded to confirm the TAC Workshop #1 invitation was forwarded to the indicated Lambton Federation of Agriculture representative.

On April 28, 2022, Hydro One and the OFA met and Hydro One provided an update on the Project, including a review of the five route alternatives being considered. The OFA joined the first TAC workshop on May 5, 2022.

On May 24, 2022, Hydro One emailed the OFA as a follow up to the TAC Workshop #1 and confirmed the ability to bring in fibre optic capability to the area no matter which route was selected.

The OFA joined the second TAC workshop on September 13, 2022.

On September 15, 2022, the OFA called Hydro One to inquire about a refinement discussed during TAC #2. The OFA wanted more information on the Wind Farm refinement. Hydro One explained the refinement and provided additional information on why the transmission lines could not be buried. Hydro One noted the information presented at TAC #2 was preliminary and as the Project progressed Hydro One would provide more details.

On November 10, 2022, the OFA brought members of the Project team from Hydro One on a bus tour of local farms to provide information on farming practices and the potential effects transmission line projects can have on the farming community. During this event Hydro One was shown examples of typical farming equipment, and the challenges faced by farmers in maneuvering equipment around transmission structures. OFA also

spoke about tile drainage and the importance of it in the farming community, as well as speciality crops. Stops were also made to view and discuss the W. Darcy McKeough spillway, and the location of a bald eagle nest near the PSA that had been raised previously by a local farmer.

On November 17, 2022, Hydro One sent an email to the OFA to thank them for making the time to join all three of the COH #2 events for the Project and for coordinating the educational tour. Hydro One provided a summary of what was heard in the discussions and indicated they look forward to scheduling another meeting soon. Hydro One welcomed any questions.

On January 13, 2023, the OFA emailed Hydro One regarding a potentially affected landowner that reached out to them. On January 16, 2023, Hydro One responded to the OFA to confirm Hydro One would review the property and reach out to the member to discuss their concerns about their property.

On March 24, 2023, Hydro One sent an email to OFA regarding the OFA's concerns and important dates for OFA members in the community. Hydro One indicated that they would review the OFA's feedback with the Project team and would get back to them to discuss plans for the next key engagement milestones.

On May 31, 2023, Hydro One met with the OFA and provided an update on the Project and the selection of the preferred route.

On June 1, 2023, the OFA joined the third TAC Workshop hosted by Hydro One, virtually.

On June 5, 2023, Hydro One notified the OFA, of the selection of the preferred route. Hydro One attached the notice of the route selection and included a link for further details about the route evaluation and selection process. On June 26, 2023 Hydro One sent the summary for TAC#3 via email.

On July 14, 2023, Hydro One thanked everyone who participated at the recent open houses for the Project via email. Hydro One included a link for those who missed the events.

Hydro One continue to work closely with the OFA to discuss the Project and address questions, comments and concerns that may continue to be raised by the OFA and their membership.

### **3.9.11 Ontario Greenhouse Vegetable Growers (OGVG)**

Hydro One emailed notices for the above-mentioned engagement opportunities to the OGVG.

OGVG joined the first COH and inquired about safety measures to protect against severe weather. Hydro One explained that Ontario has a reliable electricity system which can occasionally be subject to Canadian climate and accidents causing power outages. Hydro One provided a link with more information about how they respond to severe weather and invited OGVG to join the contact list to receive project updates and information on future engagement opportunities.

No other comments or concerns were raised.

### **3.9.12 Pattern Energy (North Kent Wind)**

Hydro One emailed notices for the above-mentioned engagement opportunities to Pattern Energy on behalf of their facility, North Kent Wind (NKW).

On May 4, 2022, Hydro One explained via email that some of the route alternatives will involve the upgrading and replacement of some segments of an existing transmission line and provided a link to the Project website with more information on the Project and mapping tool to view the five route alternatives. Hydro One explained that as part of the Class EA and evaluation of route alternatives, the potential effects to NKW will need to be taken into consideration since they may be impacted by the eventual construction of one of the five route alternatives currently being evaluated. Hydro One requested a meeting to seek clarification about which alternatives may impact NKW. Hydro One requested NKW to review the attached maps, bring forward any questions, and explained that a meeting could be arranged with the Project team to discuss the Project further. In a response email sent on May 4, 2022, NKW provided Hydro One with information on the route alternatives and explained that Route 1 and Route 3 would impact their facility. NKW requested clarification on which conductor would be impacted by these routes and explained the least preferred route would be one with any extended outages that might impact generation. NKW suggested using the routes that would deviate from using the L29C transmission line.

On May 13, 2022, Hydro One provided preliminary information to NKW before their upcoming discussion. Hydro One also provided information on which route alternatives would impact NKW, what would be required if those routes were selected, the expected line design and location, and the process of relocating of access road segments. Hydro One provided a picture to show that the clearances to NKW's compound with the



building would be checked to see if any adjustments to the line are required. Hydro One asked NKW to provide information regarding wind farm collector cables.

Hydro One met with NKW on May 16, 2022, to discuss potential impacts and constraints to the NKW as part of the Project, as well as to review the route alternatives for the Project. On May 16, 2022, NKW requested the required collection system drawings for a specific area and indicated their route preference. NKW provided Hydro One with the collector path drawings.

On May 31, 2022, Hydro One provided NKW with the meeting notes from their previous discussion and clarified that they are continuing to consider impacts to the NKW facility and would reach out once they have more information.

On June 21, 2022, Hydro One provided two possible route refinements for the NKW. Hydro One requested NKW to confirm if there were any factors to consider with the refinement for Route 1 compared to Route 2. Finalized minutes from a discussion that took place on May 16, 2022, were also attached to the email. On July 13, 2022, NKW indicated option #1 was their recommendation. NKW also noted the locations of radio frequency antennas and expressed concern about interference that the new transmission line would create and requested transmission line heights, material, and specifications to see if any interference would be created by new installation. NKW also provided an image to the email with the antenna locations. On August 26, 2022, Hydro One provided initial designs for plan views and tower spotting information surrounding the NKW facility and requested any shapefiles regarding underground utilities associated with NKW, specifically source files.

On September 15, 2022, NKW provided Hydro One with shapefiles and requested to keep the files internal and not to distribute to third parties. Hydro One explained in a follow-up email sent on September 16, 2022, that all the external designers and engineers that they would like to share the data with have confidentiality clauses in their contracts. Hydro One explained that they would remind them about the sensitivity of the data before sharing and asked if NKW had any issues with this process. On September 26, 2022, NKW indicated that they had no issues with Hydro One sharing the shapefiles with their engineers and designers outside of the organization, given that they are reminded of the sensitivity of the data.

On June 5, 2023, Hydro One notified the NKW of the selection of the preferred route and attached notices about the process of selection of the preferred route, a map of the preferred route, COH #3 details, and provided a link to the Project website. No other comments or concerns were raised.

### **3.9.13 Sarnia-Lambton Economic Partnership**

Hydro One emailed notices for the above-mentioned engagement opportunities to Sarnia-Lambton Economic Partnership.

On September 6, 2022, an employee of Sarnia-Lambton Economic Partnership sent an email to Hydro One indicating they would like to be added to the Project contact list; Hydro One notified the employee that they have been added to the Project contact list. No other comments or concerns were raised.

### **3.9.14 Water Wells First**

At the Chatham event of COH #3, an attendee identified themselves as a member of Water Wells First, an interest group who aim to raise awareness about and protect against effects to rural water wells. The individual provided Hydro One staff with a history of the group and overview of concerns, noting an interest in the Project and request for Hydro One to undertake a residential water well monitoring program for the Project.

On September 21, 2023, representatives of Hydro One held an in-person follow-up meeting with several members of Water Wells First. Representatives of Water Wells First shared historical concerns related to suggested relationship in reduction of water quality or increase of gas due to installation of driven pile foundations into the shale layer. Key concerns expressed by participants include the potential of vibration during construction or operation, transferring to the aquifer and increasing suspension of solids in the water and/or increasing gas in the aquifer. Hydro One informed the Water Wells First representatives that the Project is still early in the detailed design process and requires further geotechnical investigations to accurately assess the sub surface conditions in order to complete foundation design for the new transmission structures. Hydro One staff noted that as they advance their understanding of the sub surface conditions and foundations are selected, Hydro One will arrange to update Water Wells First as engineering design work on the project advances. Following the meeting on September 21, 2023, Hydro One staff emailed members of Water Wells First on September 27 to provide a brief recap of the meeting including Hydro One's understanding of the group's concerns.

Hydro One staff then met virtually with Water Wells on November 1, 2023, to inform the group of the upcoming release of the draft ESR and associated 30-day comment period, and that the draft ESR would include a review of the information collected and reviewed during the Class EA on groundwater and water well resources in the study area and an assessment of the potential effects to these resources and the mitigation measures that

would be used for the Project. On November 6, 2023, Hydro One emailed Water Wells First a copy of the Notice of Completion of the draft ESR and reiterated that the comment period would run for 30 days, ending on December 7.

During the draft ESR comment period, members of Water Wells First emailed Hydro One to provide comments and questions on the Project; comments received from Water Wells First and Hydro One's responses are provided in **Section 3.13.1** of this ESR.

Hydro One staff met with representatives of Water Wells First and a member of Walpole Island First Nation on December 1, 2023. Hydro One presented an update on the status of foundation design for the new transmission towers, noting that engineering work had continued to progress since the release of the draft ESR and that Hydro One was now able to confirm that screw (helical) pile foundation depths would avoid the Kettle Point Shale contact aquifer by remaining entirely within the clay till overburden, even in the areas where the overburden was known to be thinnest (i.e., near Wallaceburg). The discussion turned to the draft ESR, with WWF expressing that they did not feel that their concerns were adequately summarized in the draft ESR, including the concluding statement that Hydro One did not anticipate any significant adverse effects to groundwater resources. WWF recommended that a baseline groundwater study was needed in order to make such a conclusion and reiterated their previous request for Hydro One to commit to such a study. Hydro One explained that given the commitment to avoid the shale contact aquifer and use of screw pile foundations with minimal associated vibrations, the team did not currently see the possible mechanism for any adverse effect to groundwater resources. Hydro One also sought clarity on the scope of the monitoring program that WWF had previously requested (3 km buffer from the transmission line) and WWF members clarified that this scope would be difficult to implement and suggested that a potential study be focused to within close proximity of the transmission line, and targeted to areas where the shale aquifer was shallowest (< 20 m BGS, generally in the vicinity of Wallaceburg). Hydro One staff reiterated that they did not see the mechanism for the potential adverse effect from the Project, but appreciated the clarity provided by WWF on the request. Other topics discussed at the meeting included implosive conductor splicing, planned lifespan of the new transmission towers, benefits of the Project to the reliability of transmission-voltage electrical supply to the Wallaceburg area, and a potential upcoming community meeting at WIFN. As the meeting occurred during the draft ESR comment period, a summary of the items raised by Water Wells First and responses provided by Hydro One staff is also included in **Section 3.13.1**.

In addition to the meeting held on December 1, 2023, Hydro One provided written responses on February 5, 2024 to the written comments received from Water Wells First during the draft ESR comment period, and reiterated Hydro One's commitment to ongoing dialogue with the group as the Project entered the detailed design phase. These responses are also included in **Section 3.13.1** of this ESR.

### **3.10 Property Owners/Residents/General Members of the Public**

As outlined in **Section 3**, property owners, residents, and general members of the public within the LSA were provided Project notifications by means of email, Canada Post admail, hand delivered notices near Communication Road and Highway 401 (due to the configuration of the admail mailing routes), advertisements in local newspapers, radio, social media, and the Project website. Five admail campaigns with over 7,000 recipients in each campaign were delivered throughout the Class EA process. Hydro One also received feedback and comments by phone and email to their Community Relations team. Before COH #2 Hydro One sent packages to potentially affected landowners along each route alternative noting the specific property affected and specific route alternative(s) traversing the property(ies). The packages included an invitation to the open house, tile maps, links to interactive maps and contact information for any further questions. These were delivered via registered mail campaigns and hand delivery by Hydro One representatives. Further, refinements to some of the alternative routes were done prior to COH #2. The landowners affected by these refinements were sent a second package with a letter and mapping noting the specific change, which were delivered via registered mail.

Throughout the Class EA process, Hydro One had over 8,300 interactions with property owners, residents, and general members of the public via phone, email and virtual/in-person meetings.

During the draft ESR comment The Ross Firm Group (legal representation for a number of directly impacted property owners along the preferred route) submitted a compiled list of comments on the Draft ESR on behalf of the Group's clients. Hydro One responded thanking them for their comments. Hydro One provided a formal response to all comments on the draft ESR on January 26, 2024, via email. Ross Firm Group's comments on the draft ESR and those of other property owners and members of the public, and Hydro One's corresponding responses are provided in **Section 3.13.1**.

**Table 3-16** in **Section 3.12** summarizes the frequent comments received and the responses provided by Hydro One through the Class EA process.

### **3.11 Technical Advisory Committee**

Three TAC workshops were held throughout the Class EA process. The purpose of the TAC was to provide a platform for Hydro One to present information, hold discussions and draw upon the experience and knowledge of representatives from Indigenous communities, government agencies, municipalities, and interest groups. This knowledge-sharing forum helped to inform the planning and Class EA process for the Project. Specifically, Hydro One drew upon the technical knowledge represented by TAC organizations to help inform the comparative evaluation used to select the preferred route for the Project.

To facilitate participation from a wide range of participants, the TAC workshops were held virtually. A summary of each workshop is outlined below.

#### **3.11.1 TAC Workshop #1**

The first TAC Workshop consisted of three components:

1. A video presentation and a handout.
2. Moderated conference call: presentation and discussion.
3. A digital survey to collect feedback on the evaluation criteria.

The intention of the first TAC Workshop was to introduce the Project, provide an update on the status of the Class EA, and begin the conversation to identify the criteria and methods for measuring criteria in support of the route evaluation.

Prior to the workshop, three key materials were shared with the TAC members for their review:

- A TAC Workshop handout indicating the purpose of the TAC, timelines, and a map of the study area;
- An overview video of the Class EA process and the proposed route evaluation approach; and,
- The St. Clair Transmission Line Preliminary Route Evaluation Criteria.

To initiate the TAC, Hydro One invited potential members to participate in the TAC by email beginning the week of April 25, 2022. Email invitations were sent to representatives of organizations that have the technical expertise and local knowledge within the study area, including Indigenous communities, government agencies, municipalities, and industry associations.

The first TAC Workshop was divided into two sessions: a morning session where the focus was on the Natural Environment category and an afternoon session where the focus was on the Socio-economic Environment category. TAC members attending the workshops consisted of representatives from COTTFN, CKSPFN, WIFN, provincial agencies, municipalities, and interest groups. Indigenous community representatives who had previously expressed interest in joining the TAC were also invited to participate in the workshop.

### **Presentation**

Hydro One began the workshop with a presentation on the St. Clair Transmission Line Project. The presentation covered the following:

- Project overview;
- Status of Class EA;
- Route evaluation and evaluation criteria; and,
- Next steps.

The intent of the presentation was to provide an overview of the Project, the processes and objectives of the TAC, and to open the floor for TAC participants to provide input on the evaluation criteria presented.

### **Moderated Conference Call Discussion**

Following the presentation, TAC members were asked to participate in a moderated discussion. The intent of the moderated conference calls was to receive input and feedback on the evaluation criteria from TAC members and to discuss topics with other TAC members and the Hydro One team. A summary of the TAC workshop #1 moderated conference calls is provided in **Table 3-12**.

**Table 3-12: Summary of TAC Workshop #1 Moderated Conference Calls**

<b>Criteria</b>	<b>Date and Time</b>	<b>Virtual Forum</b>	<b>Number of Attendees</b>
<b>Natural Environment Criteria</b>	May 5, 2022, 10:00 a.m. to 11:30 a.m. Eastern Standard Time (E.S.T.)	Online Presentation and Discussion (Cisco Webex Meetings)	24

Criteria	Date and Time	Virtual Forum	Number of Attendees
<b>Socio-Economic Environment Criteria</b>	May 5, 2022, 1:30 p.m. to 3:00 p.m. E.S.T.	Online Presentation and Discussion (Cisco Webex Meetings)	21

A general summary of comments and topics discussed on both calls is outlined below:

### **Natural Environment Moderated Conference Call**

TAC members raised the following comments, questions, and concerns during the discussion:

- Importance of capturing groundwater and surface water resources;
- Rationale for considering the greenfield route alternative;
- The presence of pipelines;
- Importance of species of cultural significance from impacted Indigenous Communities;
- The construction methods to install the transmission line and construction timing need to be considered; and,
- Prioritizing the avoidance of environmentally significant areas.

### **Socio-Economic Environment Moderated Conference Call**

TAC members raised the following comments, questions, and concerns during the discussion:

- Importance of repurposing existing rights-of-way to limit impacts on agriculture;
- Emphasis needed on agricultural lands and operations (underlying clearance, alignment of poles along property lines and drainage impacts, disturbance to machinery, impact to land value);
- Existing and future land uses (agriculture to be considered in future land uses);
- Potential impacts to wildlife;
- Indigenous agroforestry in the Bickford Woods area;
- Timelines for archaeological investigations;
- Cumulative effects of multiple projects in the area;
- How atmospheric effects would be considered in the evaluation; and,
- Climate change resilience.



## Digital Survey

Following completion of the moderated conference calls, Hydro One invited TAC members to complete a digital survey. The survey was available to all TAC participants from May 9, 2022, to May 30, 2022. Hydro One shared the survey past these dates, for one agency that could not attend the workshop. The survey had a total of 21 questions and comprised of three sections:

- Natural Environment Category;
- Socio-Economic Environment Category; and,
- Workshop Feedback.

The intent of the survey was to collect feedback on the workshop and gather input on the preliminary evaluation criteria.

## Summary of Digital Survey Results

In total, seven survey responses were received. TAC members provided input on two criteria for the Natural Environment category and five criteria for the Socio-Economic Environment category. All of the input under the Socio-economic and one recommendation under Natural Environment categories were suggested alterations to the criteria already included in the preliminary list of criteria. A summary of the comments received through the survey are provided in **Table 3-13**.

**Table 3-13: Summary of Comments Received**

Category	Comment Received
Natural Environment	Atmospheric Impacts/Climate Change - dependant on the type of land the different routes are going through
Natural Environment	Species of cultural significance to First Nation transmission line owners
Socio-economic Environment	Existing land use for Indigenous ecological restoration
Socio-economic Environment	Future land use for Indigenous ecological restoration
Socio-economic Environment	Construction Methods - removal of existing infrastructure
Socio-economic Environment	Update Cultural Resources criteria to include a measure for a new Cultural Heritage study
Socio-economic Environment	Indigenous cultural heritage landscapes

Category	Comment Received
<b>Socio-economic Environment</b>	Include Indigenous cultural heritage landscapes and current use of treaty lands under Cultural Heritage Existing conditions
<b>Socio-economic Environment</b>	Update Archaeological Resources criteria to include a measure for “Stage 1 Archaeological Assessment Report and all subsequent stages of archaeological assessment as required by the Ministry of Tourism, Culture and Sport.”
<b>Socio-economic Environment</b>	Include agricultural lands to future land use - take into consideration political events such as the war happening in Ukraine and how this is impacting food sovereignty
<b>Socio-economic Environment</b>	Impact to agricultural operations - working around transmission lines

TAC members were also requested to provide their input on whether any of the categories (Natural Environment, Socio-economic Environment, Technical and Cost, and Indigenous Values and Interests) should be weighted more heavily than other categories. Generally, TAC members did not comment on the weighing of categories in the evaluation.

In addition, TAC members were requested to provide any additional or alternate methods of assessing or scoring any of the initial criteria. The recommended additional or alternate methods of assessing criteria are summarized below in **Table 3-14**.

**Table 3-14: TAC Recommended Additional/Alternative Assessment Methods**

Category	Criteria	Measure	Input from TAC
Natural Environment	Surface Water Resources and Aquatic Habitat	Number of watercourse crossings (count). Number of warm vs. cold (thermal regime) watercourse crossings (count). Drain classes (count). Number of watercourses where SAR are present (count).	No recommendations.
Natural Environment	Vegetation and Vegetation Communities	Route ROW within incompatible vegetation communities (e.g., woodlands, hedgerows) and wetlands (area metric). Route ROW within compatible vegetation communities (e.g., mixed meadow, deciduous thicket) (area metric).	No recommendations.

Category	Criteria	Measure	Input from TAC
Natural Environment	Wildlife and Wildlife Habitat	Route ROW within significant wildlife habitat (area metric).	<p>Add a criterion for species of cultural significance to First Nations. This could be measured by obtaining a list of species from First Nations and noting the presence/absence of species or appropriate habitat within the LSA as well as analysis of species/habitat quality and quantity if either is present within the LSA.</p> <p>It was emphasized that this process must consider that size is not a definitive indicator of the importance of a habitat patch, as small areas can have disproportionate contributions to ecology (e.g., increased biogeochemical cycling or serving as a stepping-stone connector between larger habitat patches).</p>

Category	Criteria	Measure	Input from TAC
Natural Environment	Species at Risk	Route ROW within or in close proximity to SAR occurrences and/or SAR habitat (area metric).	<p>Add a criterion for species of cultural significance to First Nations. This could be measured by obtaining a list of species from First Nations and noting the presence/absence of species or appropriate habitat within the LSA as well as analysis of species/habitat quality and quantity if either is present within the LSA.</p> <p>It was noted some of the criteria listed are very broad and therefore additional qualitative review of some of the measures is necessary once the high-level quantitative review has been done.</p>
Natural Environment	Wetlands, Natural Hazards and Floodplain Areas	Route ROW within regulated areas (area metric).	No recommendations.
Natural Environment	Designated Natural Areas and Identified Habitat Restoration Areas	Route ROW within ANSIs (area metric). Route ROW within Conservation Reserves (area metric). Route ROW within IBAs (area metric). Route ROW within Provincially Significant Wetlands (PSWs) (area metric). Route ROW within Conservation Areas (area metric).	The importance on Indigenous Protected Conserved Areas was emphasized and land being considered for new ecological protection and restoration activities.

Category	Criteria	Measure	Input from TAC
Socio-Economic Environment	Existing Land Use Designation Compatibility	Route ROW within existing compatible land use designations (area metric).	No recommendations.
Socio-Economic Environment	Future Land Use Designation Compatibility	Route ROW within future compatible land use designations (area metric). Route ROW within future incompatible land use designations (area metric).	Future land use for Indigenous ecological restoration should be considered.
Socio-Economic Environment	Agricultural Resources and Operations	Route ROW within agriculturally productive land (e.g., prime agricultural land, specialty crop areas) (area metric), highly improved land (e.g., extensive tile drainage) (area metric). Net difference in Towers on agricultural land (count).	It was noted that farmland is an important criterion to be considered. In order to measure this, it was recommended taking the economic hardship on landowners as the metric. It was suggested that Hydro One interview landowners to understand what they grow and how much of an impact the Project will be on the various agricultural parcels.
Socio-Economic Environment	Petroleum Operations	Route ROW within resource pool areas (area metric) or in close proximity to petroleum operations (e.g., wells, pipelines) (count, buffer needed).	No recommendations.

Category	Criteria	Measure	Input from TAC
Socio-Economic Environment	Residential Properties	Route ROW that overlaps with residential property (count). Route ROW in close proximity to residential properties (e.g., subdivisions, rural homes, barns) (count).	<p>Clear identification of any facilities/structures that may need to be removed to allow the transmission line right-of-way for the various route options.</p> <p>It was suggested a criterion that covers atmospheric impacts to be added. This would include considerations of air quality, dust, noise, etc.</p>
Socio-Economic Environment	Commercial, Industrial, Institutional, Recreational Businesses and Facilities	Route ROW within commercial, industrial, or recreational properties or operations (area metric).	<p>Clear identification of any facilities/structures that may need to be removed to allow the transmission line right-of-way for the various route options.</p> <p>It was suggested a criterion that covers atmospheric impacts to be added. This would include considerations of air quality, dust, noise, etc.</p>
Socio-Economic Environment	Source Water Protection and Groundwater Wells	Route ROW within source water protection areas (area metric). Route ROW within close proximity to private water wells (count).	No recommendations.



Category	Criteria	Measure	Input from TAC
Socio-Economic Environment	Cultural Resources	Cultural Heritage Existing Conditions Report.	Update Cultural Resources criteria to include a measure for a new Cultural Heritage study. It was noted that Indigenous community's species and habitats of interest, Indigenous cultural heritage landscapes, and current use of treaty lands may not be reflected in the Cultural Heritage Existing Conditions Report.
Socio-Economic Environment	Archaeological Resources	Stage 1 Archaeological Assessment Report	Update Archaeological Resources criteria to include a measure for, "Stage 1 Archaeological Assessment Report and all subsequent stages of archaeological assessment as required by the Ministry of Tourism, Culture and Sport."
Socio-Economic Environment	Aggregate Resource Extraction Areas/ Operations (Pits/Quarries)	Route ROW within or in close proximity to active or planned pits/quarries (area metric).	No recommendations.

### 3.11.2 TAC Workshop #2

The purpose of the second TAC Workshop was to gather information on the importance of the criteria used during the evaluation of the alternative routes from TAC members. TAC Workshop #2 also provided an opportunity to update TAC members on the status of the Class EA and summarize how their feedback from TAC Workshop #1 was incorporated into the route evaluation process.

On September 1, 2022, Hydro One sent email invitations to TAC members. TAC members in attendance of the workshop consisted of representatives from AFN, TFG, COTTEN, provincial agencies, municipalities, and interest groups. Indigenous community representatives who had previously expressed interest in joining the TAC were also invited to participate in the workshop.

#### Workshop Sessions

The second TAC Workshop was held on September 13, 2022. To keep conversations focused on key topic areas, the workshop was split into two sessions: one focused on Socio-Economic Environment interests and the other focused on Natural Environment interests (**Figure 3-2**).

The sessions were held virtually using an online presentation and participants could join via video or phone. A summary of the TAC workshop #2 moderated conference calls is provided in **Table 3-15**.

**Table 3-15: Summary of TAC Workshop #2 Moderated Conference Call**

Interest	Date and Time	Virtual Forum	Number of Attendees
Natural Environment Interests	September 13, 2022, 9:00 a.m. to 9:30 a.m. E.S.T.	Microsoft Teams	29
Socio-Economic Environment Interests	September 13, 2022, 1:30 p.m. to 3:00 p.m. E.S.T.	Microsoft Teams	27

Each workshop included an overview presentation (**Appendix B5**) which included the following topics:

- Project Overview;
- Status of the Class EA;
- Re-cap of the Route Evaluation Framework;

- Overview of the Proposed Route Refinements;
- TAC Workshop #1 Results;
- Final Criteria List and Weighting Exercise;
- Discussion; and,
- Next Steps.

A general summary of comments and topics discussed during both sessions is outlined below.

### **Natural Environment Workshop Session**

TAC members raised the following comments, questions or concerns for discussion during the Natural Environment focused session:

- Management of culverts when considering potential watercourse crossings for the route alternatives;
- Inquiries about the existing 115 kV line and a request to review the cost advantage against the impacts to the agriculture community - the agriculture community expressed concern on the potential need to work around a non-functional line in the Otter Creek area;
- Inquiries about the upgrades to Wallaceburg transformer station;
- Support on potentially weighting different species at risk differently to better capture variances in sensitivity;
- Inquiries about habitat impact/habitat replacements;
- Clarification on what sort of input Hydro One is looking for from landowners; and,
- Clarification on timelines to provide restored areas by conservation authorities and whether there is a minimum size.

### **Socio-Economic Environment Workshop Session**

TAC members raised the following comments, questions or concerns for discussion during the Socio-Economic Environment focused session:

- Inquiries regarding petroleum versus agriculture operations and how the different commercial operations outside of agriculture will be weighted.

### **Weighting Exercise**

As part of the presentation, the final criteria list (**Appendix B5**) was presented to TAC members. Input sought in TAC Workshop #2 focused on weighting the relative importance of each criterion through a weighting exercise. Using a live survey tool, participants were asked to weight each of the criterion within the criteria list using the following weighting scale:

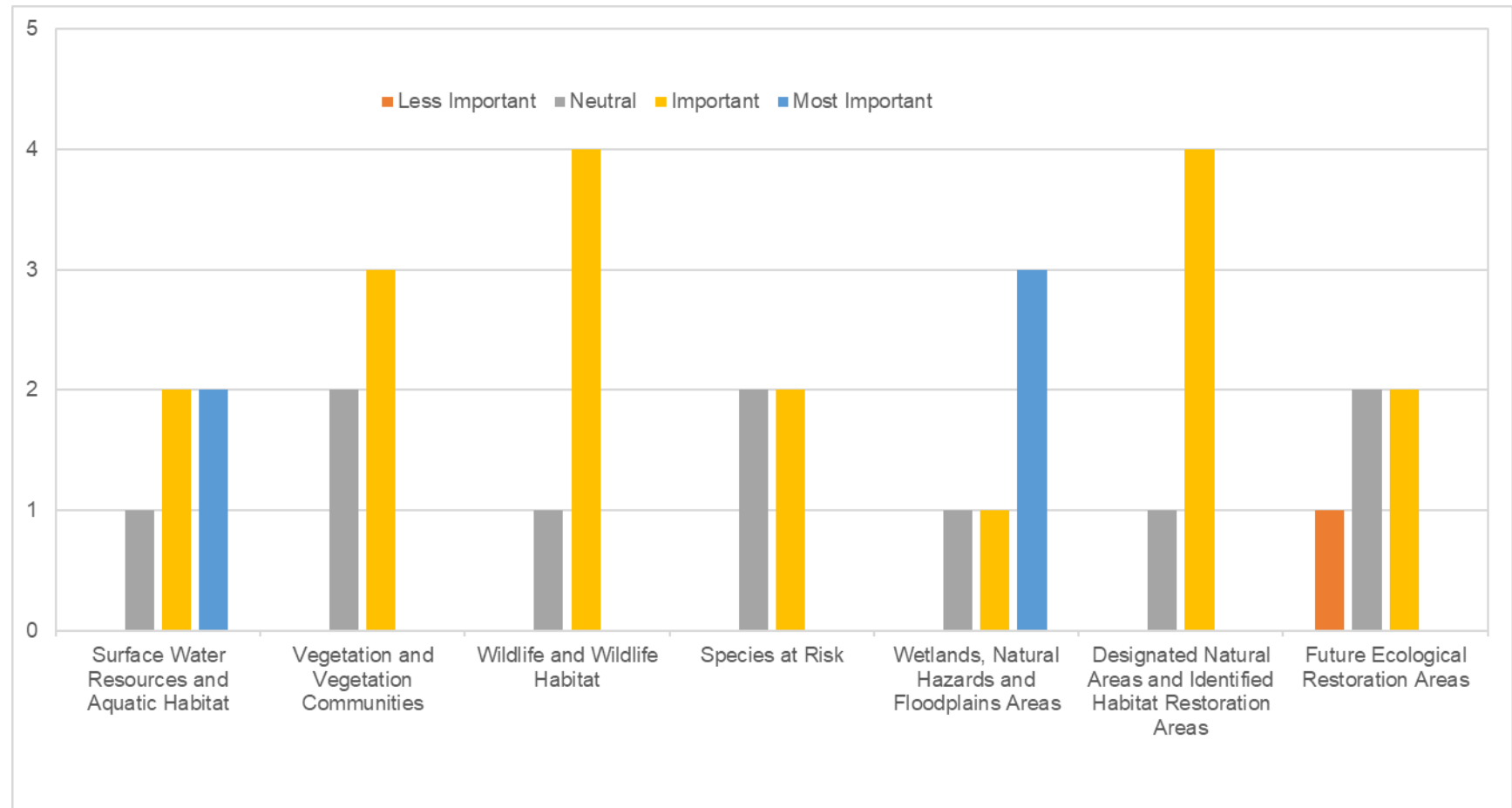
- Most Important;
- Important;
- Neutral;
- Less Important; and,
- Least Important.

TAC members who attended both sessions were asked to complete the live survey only once.

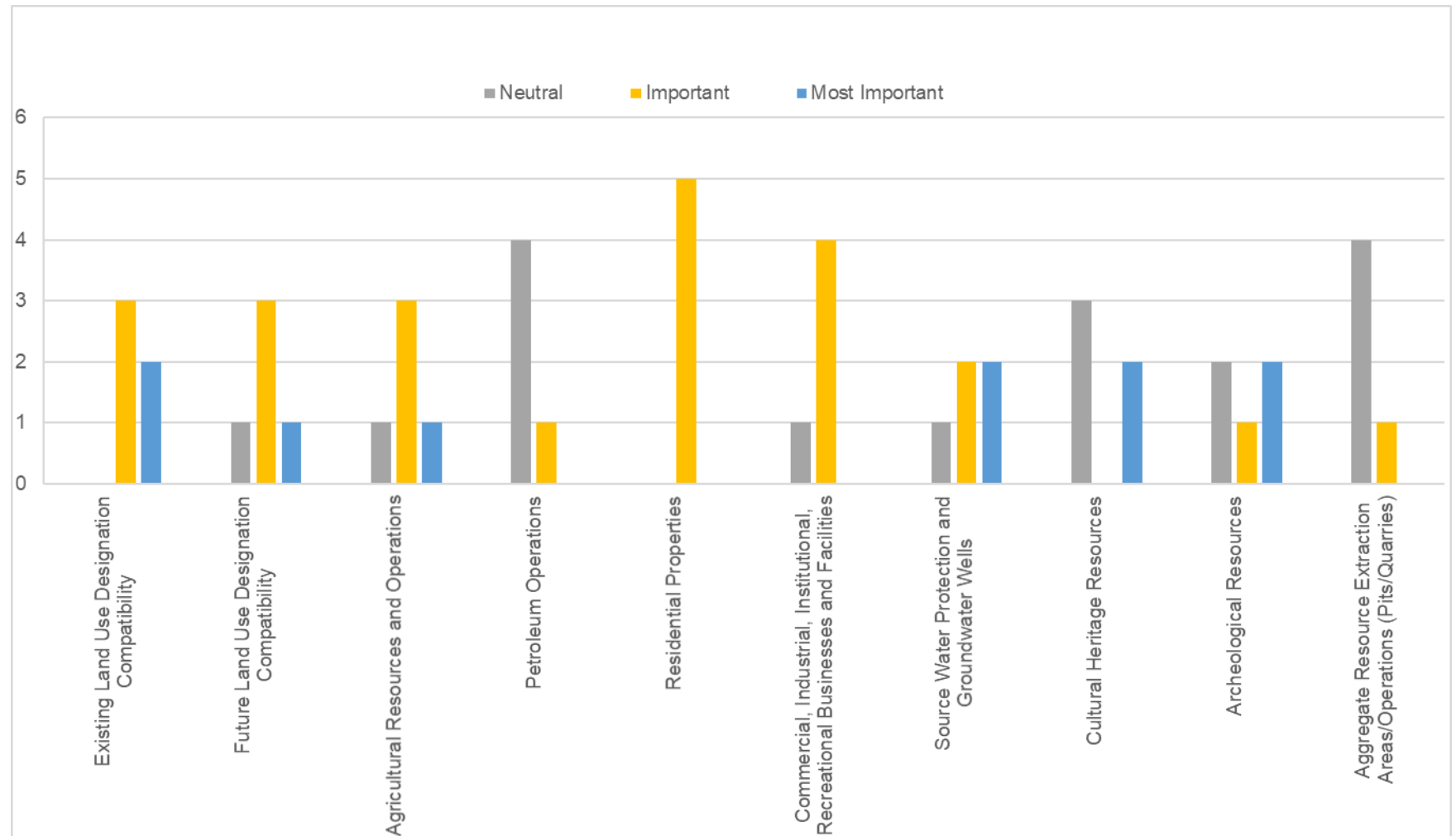
### **Summary of Weighting Exercise**

The results of the weighting exercise are summarized below in **Figure 3-2** and **Figure 3-3**.

**Figure 3-2: Natural Environment Criteria Weighting Survey Results**



**Figure 3-3: Socio-Economic Criteria Environment Criteria Weighting Survey Results**



### 3.11.3 TAC Workshop #3

The purpose of the third TAC workshop was to provide a Project update and announce the selection of the preferred route. TAC workshop #3 also provided an opportunity to update TAC members on the status of the Class EA and summarize how their feedback from TAC Workshop #1 and #2 was incorporated into the evaluation that led to the selection of the preferred route.

On April 25, 2023, Hydro One sent an email invitation for a combined session for both the Socio-economic and Natural Environment categories. TAC members in attendance of the workshop consisted of representatives from AFN, WIFN, TFG, COTTEN, CFN, provincial agencies, municipalities, and interest groups. Indigenous community representatives who had previously expressed interest in joining the TAC were also invited to participate in the workshop.

#### Workshop Session

The third TAC Workshop was held virtually on June 1, 2023, using a virtual platform and participants could join via video or phone. The workshop was held from 9:30 a.m. to 10:35 a.m. ET with 32 individuals in attendance.

The workshop included a presentation (**Appendix B5**) which included the following topics:

- Introduction;
- Project update and status of the Class Environmental Assessment;
- Re-cap of the route evaluation framework;
- Presentation of the preferred route;
- Review of TAC Workshop #2 weighting exercise results;
- Final criteria list and weights; and,
- Next steps.

No questions or concerns were raised by TAC members during the third workshop.

## 3.12 Summary of Stakeholder Comments and Concerns

**Table 3-13** provides a consolidated summary of the comments and concerns raised from the interested parties throughout the Class EA consultation process. Since selection of the preferred route, Hydro One's real estate representatives have continued to work with directly affected landowners on matters specific to their property. Concerns raised during the draft ESR comment period and provided in the form of comments on



the draft ESR, as well as Hydro One's corresponding responses, are presented separately in **Section 3.13**.

Table 3-16: Summary of Stakeholder Comments and Concerns

Theme	Question/Comment	Response
Project Information (General)	How can I learn more about the Project?	Hydro One offered a Project-specific website ( <a href="http://www.hydroone.com/StClair">www.hydroone.com/StClair</a> ) which housed all Project related information from Project need, the EA process, communities engagement opportunities and associated informational material, an interactive map, and how to stay involved. Contact information of the Community Relations team was also shared to speak with a dedicated Project-representative to ask questions and offer feedback. To ensure flexibility attendance was also encouraged at the in-person and virtual community open houses, where Project Team members were available to answer questions and take input. Those interested in learning more about the Project were also added to the Project contact list and regular updates about Project milestones were shared. Communication methods included emailed, community notices, newspapers and radio advertisements and social media advertisements. Community members were also informed about the Public Comment Period on the Draft ESR using the listed communication methods.
Project Information (General)	I cannot locate my property on the map	Hydro One hosted an interactive map on their Project website ( <a href="http://www.hydroone.com/StClair">www.hydroone.com/StClair</a> ) in which people were able to type in their address and look at it in relation to the route alternatives. Tablets with this interactive map were also available during in person community open houses along with large wall map stations. Prior to COH #2 potentially affected property owners received tile maps of all route alternatives via Registered Mail and door knocks, and prior to COH #3 anyone who was impacted by the Project received individual maps which demonstrated the Proposed ROW and property outline hand delivered by Hydro One Real Estate Representatives.
Project Information (General)	Replace the existing transmission line like the flyer indicates	For various technical reasons, an option to use what's already there isn't feasible, e.g. the North American Electric Reliability Corporation standards wouldn't be met. However, some route alternatives provide an opportunity to replace the existing lower voltage 115 kV transmission line with a 230 kV transmission line – although this replacement would still require some expansion of the existing corridor. Other route alternatives run adjacent to the existing 230 kV transmission line in the area.
Project Information (General)	Where can I find the need and associated maps of newly proposed lines?	The maps of newly recommended lines can be found on the IESO website. The maps for the current Project can be found on Hydro One Project website ( <a href="http://www.hydroone.com/StClair">www.hydroone.com/StClair</a> ).

Theme	Question/Comment	Response
Project Information (General)	What is the timeline of the Project?	<p>Hydro One initiated a Notice of Commencement for a Class EA in February 2022. During this period we've sought feedback and completed studies to evaluate five route alternatives to select a preferred route. Input from Indigenous communities and residents, agencies and the public has been crucial, as well as environmental, technical, and other considerations, in determining the preferred route for the new line.</p> <p>With the selection of a preferred route, the next steps included completing an assessment to identify potential effects of the new transmission line and identifying measures to avoid or mitigate adverse effects, identifying real estate requirements and working with directly impacted property owners, and compiled the draft ESR for review and feedback to include in the final ESR in the future. We'll also continue seeking feedback as we work through detailed design with tower placements and construction planning so that the final route is considerate of community interests.</p> <p>Construction will follow once permits and regulatory approvals are obtained. We are looking for opportunities to advance the construction to bring the new line into service earlier than 2028. The construction of the line is expected to start in 2025 or 2026.</p>
Project Information (General)	What is the length of the proposed transmission line?	<p>The length of the St. Clair Transmission Line, between Lambton TS and Chatham SS, is approximately 64 km.</p>
Project Information (General)	What are the next steps now that the preferred route has been selected?	<p>With the selection of a preferred route, the next steps include completing an assessment to identify potential effects of the new transmission line and identifying measures to avoid or mitigate adverse effects, progressing with detailed design with tower placements and construction planning, identifying real estate requirements and working with directly impacted property owners, and compiled the draft ESR for review and incorporating comments received and associated responses into the final ESR. In designing the line, flexibility may be considered on a property-by-property basis to best mitigate effects to properties traversed by the line where practicable and feasible. For example, this could include slight deviations within the ROW, bringing towers closer to the road, and/or considering larger distances between the towers. While we will take feedback for consideration, we remain confident in the evaluation process and the route selected.</p> <p>Construction will follow once permits and regulatory approvals are obtained. We are looking for opportunities to advance the construction to bring the new line into service earlier than 2028. The construction of the line is expected to start in 2025 or 2026.</p>

Theme	Question/Comment	Response
Project Information (General)	Can you explain the Class EA process?	<p>The Class EA process is used to plan transmission infrastructure and sets out requirements and guidelines for notification and consultation activities, evaluation of alternatives, and assessment of environmental effects and prescription of mitigation measures to address those effects.</p> <p>Through the route evaluation process, which is part of the Class EA, Hydro One selected a route that strikes the best balance between the various criteria of the Natural and Socioeconomic Environments, Indigenous Culture, Values and Land Use, and Technical and Cost considerations. More than 80% of the distance of the preferred route utilizes existing transmission corridor lands to some extent. Over 60% of the preferred route repurposes existing transmission corridor with a need to widen the corridor and acquire new land rights. Nearly 20% of the preferred route utilizes existing corridor lands that are not yet occupied by transmission infrastructure.</p> <p>Now that the preferred route has been selected, we are continuing to assess the environmental effects of the Project and identify mitigation measures. The Class EA process, including all of the aforementioned components, will be documented in this final ESR for public review and comment.</p>
Project Information (General)	Which Ministry is in charge of Environmental Assessments?	<p>The Ministry of the Environment, Conservation and Parks oversees the Environmental Assessment process in Ontario. Hydro One also engages widely with other relevant provincial ministries and federal agencies through the Class EA consultation process.</p>
Project Information (General)	Can Hydro One extend the 30-day comment period?	<p>While there may be some situations where a longer comment period for the draft ESR is appropriate, a 30-day comment period is typical for Class EA projects, and we are currently planning for a 30-day comment period for this draft ESR.</p>
Project Need	Why is the transmission line being replaced?	<p>Hydro One is committed to energizing life in southwestern Ontario. As demand for electricity in southwestern Ontario is anticipated to grow significantly over the next several years, Hydro One is undertaking a Class EA to construct a new double-circuit 230 kV transmission line between the Lambton Transformer Station, located in the County of Lambton and the Chatham Switching Station, located in the Municipality of Chatham-Kent.</p> <p>This transmission line is part of a network of electricity infrastructure projects identified in the region by the IESO, the organization responsible for planning for the province's future energy needs. This Project will help meet the rapidly growing electricity demands of the industrial, agricultural, and residential sectors in the region.</p> <p>Portions of the preferred route (but also the previous Routes 3 and 4) will replace an existing 115 kV line, as this was found to strike the best balance of environmental effects and technical/cost factors when compared to other viable route alternatives that were evaluated through the Class EA process.</p>

Theme	Question/Comment	Response
Project Need	What is IESO and what is its role?	<p>The IESO delivers key services across the electricity sector including managing the power system in real-time, planning for the province's future energy needs, enabling conservation and designing a more efficient electricity marketplace to support sector evolution.</p> <p>In 2021, the IESO identified the need for a new double-circuit 230 kV transmission line (the Project) and directed Hydro One to begin work, engagement and activities, including seeking Environmental Assessment and Leave to Construct approvals, to develop and construct the new transmission line.</p>
Project Need	What will the new line do? What are the benefits?	<p>This Project is part of a network of electricity infrastructure projects that will support the regions' economic growth.</p> <p>Southwest Ontario is growing quickly and needs access to more power to support economic growth. With electricity demand expected to triple from 2018 to 2026 in this region, we need to build a grid that is ready to support the increased demand of communities, industry, and businesses. The St. Clair Transmission Line will support local food supply and security, economic development, and job creation. Once built, this line will add about 400 megawatts of power to the region - enough to power a city the size of Waterloo, Ontario.</p>
Project Need	Why do we require this Project and why can't we just replace the existing line?	<p>Southwest Ontario is growing quickly and needs access to more power to support economic growth. With electricity demand expected to triple from 2018 to 2026 in this region, we need to build a grid that is ready to support the increased demand of communities, industry, and businesses. Once built, this line will add about 400 megawatts of power to the region - enough to power a city the size of Waterloo.</p> <p>Hydro One is proposing to construct a new double-circuit 230 kilovolt transmission line. Over 60% of the preferred route repurposes existing transmission corridor but there is a need to widen the corridor and acquire new land rights to accommodate new towers. Moreover, nearly 20% of the preferred route utilizes existing corridor lands that are not yet occupied by transmission infrastructure.</p>
Project Need	Will the new line improve reliability for my community?	<p>The reliability of supply to any community depends on lower voltage distribution facilities as well as high voltage transmission lines. The Project will provide added capacity and reliability with respect to 230 kV transmission lines (not the distribution lines directly) by providing contingencies during an outage which will benefit all existing and future customers in the area.</p>
Project Need	Will this line be fully utilized?	<p>The transmission line is being developed in preparation for the regional electricity demand projected by the IESO.</p>

Theme	Question/Comment	Response
Project Need	Does Ontario sell power to Michigan?	The IESO is the provincial authority responsible for conducting long-term analysis of where power is needed and when it is needed. Hydro One, as a Transmitter and Distributor of electricity, works with the IESO to ensure our interconnection facilities with the United States have the capacity and capability to meet the needs of Ontario's transmission system and its customers.
Project Need	Will this Project increase reliability for Sombra?	The reliability of supply to any community depends on lower voltage distribution facilities as well as high voltage transmission lines. The Project will provide added capacity and reliability with respect to 230 kV transmission lines (not the distribution lines directly) by providing contingencies during an outage which will benefit all existing and future customers in the area.
Project Need	What is the purpose of the line and who made the decision to build it?	<p>In 2021, the IESO identified the need for a new double-circuit 230 kV transmission line (the Project) and directed Hydro One to begin work, engagement and activities, including seeking Environmental Assessment and Leave to Construct approvals, to develop and construct the new transmission line. This Project is part of a network of electricity infrastructure projects that will support the regions' economic growth. Once built, the St. Clair Transmission Line will support local food supply and security, economic development, and job creation.</p> <p>Southwest Ontario is growing quickly and needs access to more power to support economic growth. With electricity demand expected to triple from 2018 to 2026 in this region, we need to build a grid that is ready to support the increased demand of communities, industry, and businesses. Once built, this line will add about 400 megawatts of power to the region - enough to power a city the size of Waterloo, Ontario.</p>
Project Need	Why did you shut down Lambton before you figured out the grid implications?	The IESO is the provincial authority responsible for conducting long-term analysis of where power is needed and when it is needed.
Class Environmental Assessment and Consultation	What was the Project notification process?	<p>Since February 2022, the Project team has been notifying residents and other stakeholders in the Project area with Canada Post admail campaigns, phone calls, local newspaper and radio advertisements, targeted social media advertisements, direct mail and door knocking to property owners where the proposed new line may directly traverse their property.</p> <p>Additional information was provided to the landowners during the COH #3.</p>
Route Evaluation	How is the preferred route determined?	The evaluation of the five viable route options are assessed based on feedback and studies on the following categories of criteria: Natural Environment, Socio-economic Environment, Indigenous Culture, Values and Land Use, and Technical and Cost considerations.



Theme	Question/Comment	Response
<b>Route Evaluation</b>	Expand on route refinement	As a part of the Class EA, five viable route alternatives for the new transmission line were identified based on a preliminary assessment, which considered existing baseline information about the environment, such as waterbodies, dense residential areas, environmentally significant areas, and opportunities to parallel existing linear infrastructure. As Hydro One started learning more about each route through environmental studies and feedback, technical constraints were identified that required us to make the refinements that were presented in Project updates and at the community open house events held in November 2022.
<b>Route direction, location, design (including towers, switching stations, etc.)</b>	Concerned with Route 5	Hydro One provided a brief background on the evaluation of route alternatives, the selection of a preferred route, and the Project-specific land acquisition process. Hydro One stated their appreciation for the feedback and stated that it will be documented and considered as part of the route evaluation process.
<b>Route direction, location, design (including towers, switching stations, etc.)</b>	Recommended use of the existing railway corridor along John Park Line	Hydro One considered and made use of following existing corridors where possible, however the rail corridor along John Park Line would result in a greater number of properties being directly impacted, greater effects to agricultural fields, greater overall line distance and other technical factors that needed to be considered in determining viable route alternatives.
<b>Route direction, location, design (including towers, switching stations, etc.)</b>	Will spacing between the towers be greater than existing 115 kV lines?	The distance between towers would generally range between 300 m and 400 m for a double-circuit 230 kV transmission line. This range could change at certain locations where there are technical and environmental constraints.
<b>Route direction, location, design (including towers, switching stations, etc.)</b>	If the preferred route follows an existing ROW, will there be a wider easement required for the new transmission line?	A typical width of a 230 kV transmission line corridor is between 40 to 45 m. Further, Hydro One generally maintains 33 m in clearances from existing infrastructure. This will be taken into consideration while designing the new transmission line. If Hydro One doesn't possess the land rights and ROW to accommodate new transmission lines, those would have to be acquired and it will be done using the Project and route specific land acquisition compensation principles. For the selected preferred route, the portions of the route that will repurpose an existing lower voltage (115 kV) transmission corridor will require new Real Estate rights for the repurposing and expansion of this corridor to accommodate the new 230 kV double-circuit transmission line.
<b>Route direction, location, design (including towers, switching stations, etc.)</b>	What will be the height of the transmission towers?	Typical tower height can range between 30 m and 60 m, which is influenced by environmental conditions like topography as well as other aspects of the engineering design (e.g., span distances and vertical clearance requirements). Structure designs (including exact heights) will be finalized after the completion of the Class EA as additional studies and detailed engineering design work are completed.
<b>Transmission line design (route, structures, etc)</b>	Could you add more wires on the existing 115 kV transmission towers?	The 115 kV towers do not have the capacity to carry additional lines in order to upgrade the towers to 230 kV. To double the capacity of the line, the towers would have to be wider and taller.



Theme	Question/Comment	Response
Transmission line design (route, structures, etc)	Why was The Otter Creek refinement made?	Route refinements were made due to technical challenges and constraints that were identified through the Class EA process. The knowledge gained from understanding these challenges has helped advance engineering plans to develop solutions to these constraints. As such, the route refinements are a result of understanding and developing solutions to technical challenges.
Transmission line design (route, structures, etc.)	How wide will the ROW be? How wide is the transmission tower base?	A typical width of a 230 kV transmission line corridor is between 130 and 150 feet (40 to 45 m). The typical footprint of a tower ranges from 6 m x 6 m to 14 m x 14 m, depending on the design. The typical height of a tower is influenced by environmental conditions like topography and range between 30 m and 60 m, depending on the design.
Transmission line design (route, structures, etc)	What is the difference between three phase and one phase lines?	Three phase lines are generally associated with higher voltages, and each circuit consists of three conductors.
Transmission line design (route, structures, etc)	What is the distance between two parallel transmission towers?	Route alternatives that paralleled the existing 230 kV transmission corridor would have required the two transmission lines to have been situated approximately 30 to 40 metres apart. The towers would have likely been similar in size and stature to the existing towers. As such, there would not be any changes to the existing transmission line.
Transmission line design (route, structures, etc)	Why was the Lambton facility deconstructed? What will they use the space for? Where does power come to Lambton TS from? Does it travel two ways?	Hydro One is responsible for the electricity distribution and transmission, The IESO is the provincial authority responsible for conducting long-term analysis of where power is needed and when it is needed. Questions about generation requirements should be forwarded to the IESO while questions regarding the Lambton Generating Station site should be forward to OPG for consideration.
Transmission line design (route, structures, etc)	Will 230 kV lines be taller than 115 kV lines?	Yes, 230 kV towers are both taller and wider than the existing 115 kV towers.
Transmission line design (route, structures, etc)	What will be the distance between two towers?	The distance between towers would generally range between 300 m and 400 m for a double-circuit 230 kV transmission line. This range could change at certain locations where there are technical and environmental constraints.
Transmission line design (route, structures, etc.)	Is the line above ground?	Yes. It is planned as an above ground transmission line, with a small portion located underground within the Lambton TS area.
Transmission line design (route, structures, etc.)	How deep underground are the pilings for the towers?	The current plan is to use screw piles as foundation for the towers; however, for some structures due to design requirements concrete caissons may be used. The depth of the foundation depends largely on the type of soil encountered at a specific tower location. Typically, screw piles are between 8 and 15 m deep and concrete caisson are between 15 and 20 m deep. There may be some variation required due to local soil conditions or other factors that may influence design.
Transmission line design (route, structures, etc.)	What is the Geotechnical studies schedule for the Project?	The geotechnical program could start as early as 2023, but the timing depends on access to properties.

Theme	Question/Comment	Response
Transmission line design (route, structures, etc.)	How many feet wide is the ROW and how many feet between each tower?	<p>Hydro One has been powering southwestern Ontario for over 100 years and we know the typical right-of-way required for a 230 kV transmission line is approximately 46 m in width.</p> <p>The typical footprint of a tower ranges from 6 m x 6 m to 14 m x 14 m, depending on the design. The typical height of a tower is influenced by environmental conditions like topography and range between 30 m and 60 m, depending on the design. The general distance between towers could range between 300 m and 400 m. This range could change at certain locations where there are technical and environmental constraints.</p>
Transmission line design (route, structures, etc.)	What is the height of the transmission towers?	<p>The typical height of a tower is influenced by environmental conditions like topography and range between 30 m and 60 m, depending on the design.</p>
Transmission line design (route, structures, etc.)	Do you know the tower locations?	<p>The distance between towers would generally range between 300 m and 400 m for a double-circuit 230 kV transmission line. This range could change at certain locations where there are technical and environmental constraints. The exact tower locations will be determined during the detailed design phase and are not known at this time.</p>
Transmission line design (route, structures, etc.)	Tower height and number of towers needed	<p>Hydro One knows more accurately the size, location and number of towers required, as well as the right-of-way width after a preferred route is identified and Hydro One can complete the engineering design. The typical height of a tower is determined during the detailed design phase, after the route has been selected. Typical tower heights for 230 kV double-circuit structures such as those planned for the St. Clair transmission line range between 30 metres and 60 metres, depending on the design, environmental conditions, and topography. As well, the typical footprint of a tower ranges from 8 metres x 8 metres to 14 metres x 14 metres, depending on the design.</p>
Transmission stations	Is Hydro One expanding the Transformer Station?	<p>Yes, we are expanding the Lambton TS, Chatham SS and Wallaceburg TS as part of this Project.</p>

Theme	Question/Comment	Response
Route Selection and Class EA Process	What is the Environmental Assessment and route evaluation process?	<p>The Class EA is a regulated decision-making tool and a key step for the planning and building of transmission infrastructure in Ontario. In February 2022, we began undertaking an extensive process to study, learn more and collect feedback on five route alternatives identified as viable means of meeting the need at the outset of the Project. Following the selection of the preferred route, our focus is turned to further studying the environmental effects and associated mitigation measures that Hydro One can apply to address these effects, as documented in this Final ESR.</p> <p>Through the route evaluation process, Hydro One selected a route that strikes the best balance between the various criteria of the natural and socioeconomic environments, Indigenous culture, values and land use, and technical and cost considerations. More than 80% of the distance of the preferred route utilizes existing transmission corridor lands to some extent. Over 60% of the preferred route repurposes existing transmission corridor with a need to widen the corridor and acquire new land rights. Nearly 20% of the preferred route utilizes existing corridor lands that are not yet occupied by transmission infrastructure.</p>
Route Selection and Class EA Process	How was Route 2 selected as the preferred route?	<p>Routes were evaluated by applying a number of evaluation criteria compiled into four categories: Natural Environment, Socio-Economic Environment, Indigenous Culture, Values and Land Use, and Technical and Cost. Through the route evaluation process, we have selected a route that strikes the best balance between all of these diverse considerations. More than 80% of the distance of the preferred route utilizes existing transmission corridor lands to some extent. Over 60% of the preferred route repurposes existing transmission corridor with a need to widen the corridor and acquire new land rights. Nearly 20% of the preferred route utilizes existing corridor lands that are not yet occupied by transmission infrastructure.</p>

Theme	Question/Comment	Response
Electricity and Power	What is the electricity source?	Transmission-connected resources within this area are currently a mixture of gas generation in Windsor, a number of wind generators in Windsor-Essex and Chatham-Kent, and a large solar installation in Windsor. These resources represent a combined total of approximately 1,900 megawatt (MW) of installed generation capacity, split relatively evenly between gas facilities and renewable resources, approximately 900 MW and 1,000 MW respectively. In addition, there is also a significant amount of installed gas generation in Lambton-Sarnia, over 2,500 MW, and approximately 440 MW of renewable resources. In combination, these resources represent a total of nearly 5,000 MW of installed generation capacity. However, after more than a decade of strong supply, Ontario is entering a period of emerging electricity system needs, driven by increasing demand, the retirement of the Pickering nuclear plant, the refurbishment of other nuclear generating units, as well as expiring contracts for existing facilities. To address this need, the IESO is competitively securing 3,500 MW of capacity from dispatchable new build resources including new build hybrid electricity generation and storage facilities. For more information visit: <a href="https://www.ieso.ca/en/Sector-Participants/Resource-Acquisition-and-Contracts/Long-Term-RFP-and-Expedited-Process">https://www.ieso.ca/en/Sector-Participants/Resource-Acquisition-and-Contracts/Long-Term-RFP-and-Expedited-Process</a> or email <a href="mailto:community.engagement@ieso.ca">community.engagement@ieso.ca</a> .
Effects to Residential/Agricultural Land	Property impacts and setbacks	Hydro One's typical corridor width for a 230kV transmission line is approximately 43 m and a clearance of 33 m between existing infrastructures, but these dimensions may change depending on the route chosen. The safety regulations in place, such as the Ontario Electrical Safety Code and the Ontario Building Code, will be followed to ensure that all infrastructure is built with appropriate clearances and setbacks. The preferred route for the new transmission line was announced in June 2023, with additional personalized notices and information being sent to directly impacted property owners.
Effects to Residential/Agricultural Land	Land Use within corridor	There are a number of compatible land uses within corridor lands, including agricultural operations, road, vehicle parking, etc. A Real Estate representative will meet with and discuss potential effects and concerns to property with each impacted property once a preferred route is selected.
Effects to Residential/Agricultural Land	Property value	Hydro One will present each directly impacted property owner with a formal offer based upon the information contained in a property specific appraisal report produced by an independent third-party appraiser. The independent third-party appraiser's analysis will take into consideration various attributes of a subject property to determine the market value of the transmission line corridor lands as well as a determination if there is a loss in value to the remainder of the subject property as a result of the proposed transmission line (i.e. injurious affection). Hydro One will compensate for Injurious Affection on directly impacted properties where it's deemed applicable by the independent third-party appraiser.

Theme	Question/Comment	Response
Effects to Residential/Agricultural Land	Effects to cemeteries	Hydro One understands and respects the importance of cemeteries and strives to avoid direct disturbance to cemeteries wherever possible, although transmission lines (both currently existing, and new) may be situated near cemeteries but outside of their boundaries. As per O. Reg 30/11 under the <i>Funeral, Burial and Cremation Services Act</i> , new structures must be located a minimum of 4.57 m (15 feet) from an in-ground grave. There are currently no mandated minimum setbacks from the cemetery boundaries themselves, although Hydro One understands that some smaller and older cemeteries may not have well-defined boundaries and therefore may undertake a more conservative approach where cemetery boundaries are not well-defined.
Effects to Residential/ Agricultural Land	What is stray voltage, and will the Project be a source of it?	Hydro One has been working with the farming community for many years now, to help identify, assess and mitigate stray voltage problems. And in the industry and by our regulator, the Ontario Energy Board, this phenomenon is largely understood to be a concern related to local distribution infrastructure rather than transmission infrastructure, as the problem can extend from the close proximity of a distribution line's neutral conductor to farming equipment. Hydro One has a team that specializes in these requests if property owners or community members have further questions. For more information, please visit <a href="https://www.hydroone.com/request-a-service/stray-voltage">https://www.hydroone.com/request-a-service/stray-voltage</a> .
Effects to Residential/ Agricultural Land	How will Hydro One compensate crop loss before and during construction?	Hydro One will work with directly impacted landowners in an effort to mitigate potential damage to corridor lands before, during and after construction. Where Hydro One cannot avoid damaging crop land, Hydro One will employ a Project-specific crop loss program to compensate landowners who experience crop damage or crop loss from Hydro One's pre-construction, construction as well as post-construction activities. During construction, if a property owner's ability to plant crops is affected, Hydro One will compensate property owners for out of production land. In addition to crop loss, Hydro One's Project-specific crop loss program will make payments to address compaction should this be experienced after Hydro One construction.
Effects to Residential/ Agricultural Land	Who is accountable for the safety of transmission lines and towers?	Hydro One is responsible for building, operating, and maintaining the transmission line. The IESO is responsible for planning the electricity needs of the province and recommending the line based on the electricity needs of a specific region. The Ministry of Energy and Ontario Energy Board have oversight over what gets built. There are over 30,000 km of transmission lines across the province with many in close proximity to homes and businesses.
Effects to Residential/ Agricultural Land	Does Hydro One pay for off corridor access?	The need for potential off-corridor access will be determined by the eventual construction contractor as they begin to plan these and other construction details. Off-corridor access is typically secured and compensated by the construction contractor directly.



Theme	Question/Comment	Response
Effects to Residential/ Agricultural Land	How will Hydro One mitigate the effects of power transmission lines on Global Positioning System's (GPS) installed in tractors and drones?	While this is not an issue that has been commonly encountered on the thousands of kilometres of existing transmission lines through agricultural fields to date, Hydro One recognizes these concerns regarding GPS-guided farm equipment and is committed to looking into issues brought forward and investigating measures to mitigate potential effects, where they exist.
Effects to Residential/ Agricultural Land	What is Bill 58 land and how are landowners being notified?	Bill 58 lands are provincially owned lands under the ministry of Infrastructure Ontario where Hydro One holds statutory easement rights over the lands for electrical transmission and distribution use. Hydro One manages the lands and licenses Bill 58 lands to third-parties for compatible uses (i.e., parking, agricultural uses, etc.). Where these Bill 58 lands are licensed to third-party tenants, those tenants are being notified accordingly.
Effects to Residential/ Agricultural Land	How will drilling as part of the Project affect the wells?	Transmission line structure footings generally do not adversely affect either the quality or quantity of water resources, as effects of construction are often shallow relative to deeper aquifers, temporary in duration, and often less intrusive than other construction methodologies (e.g., excavations for building foundations or driven pile footings). As a part of the Class EA, we will carefully and diligently review source water protection plans and policy areas. Subject to the completion of geotechnical studies and civil engineering designs, the Project team currently anticipates that the majority of the tower footings on the Project will be installed using a helical pile methodology, which is known to have relatively low vibrations and negligible soil displacement when compared to other types of construction methods to install transmission tower footings.
Effects to Residential/ Agricultural Land	What happens to usable timber on the land?	Trees under the transmission line route will be cleared as required to allow for construction work, as well as the eventual safe and reliable operation of the overhead transmission line. Hydro One will work with the landowner to find a solution. Some options include cutting or chipping the wood and the landowner can use it where they need it. Other options include cutting it and leaving it for habitat restoration or removing it from the property.
Effects to Residential/ Agricultural Land	Does the transmission line affect the health and wellbeing of cattle grazing and moving under the line?	Hydro One takes safety seriously and we design and operate our equipment in accordance with all regulatory requirements to account for safety. Scientific research on this topic does not demonstrate that the transmission lines cause or contribute to adverse health effects.
Effects to Residential/ Agricultural Land	Does the transmission line affect the crops? Is it safe to work under the lines?	Hydro One takes responsibility to ensure the community has resources and tools available to understand and feel comfortable about this topic. Hydro One looks to health experts such as World Health Organization and Health Canada who for more than 30 years have concluded that scientific research does not demonstrate that EMFs cause or contribute to adverse health effects. Hydro One designs and operates equipment in accordance with all regulatory requirements to account for safety.

Theme	Question/Comment	Response
Effects to Residential/ Agricultural Land	Field drainage and crop loss	Hydro One will make all possible efforts to mitigate and avoid effects to tile drainage, including the review of tile drain maps in consultation with landowners and in-field assessments to mitigate damages during construction as much as possible. Any damages to tile drains resulting from construction will be repaired to original condition following the completion of construction.
Effects to Residential/ Agricultural Land	Effects to farming operations	Effects to agricultural operations and mitigation measures proposed to address these effects are summarized in <b>Section 7.1</b> of this Final ESR. Hydro One will make all possible efforts to avoid effects to tile drainage, including the review of tile drain maps and consultation with landowners to mitigate damages as much as possible. Where Hydro One cannot avoid damaging crop, they will employ a Project-specific crop loss program to compensate landowners who experience crop damage or loss from the pre-construction, construction, as well as post-construction activities.
Effects to Residential/ Agricultural Land	Will Hydro One compensate for crop loss during early access for geotechnical studies?	Hydro One will work with directly impacted landowners in an effort to mitigate potential damage to corridor lands prior to and during construction. Where Hydro One cannot avoid damaging crop land, Hydro One will employ a Project-specific crop loss program to compensate landowners who experience crop damage or crop loss from Hydro One's pre-construction, construction as well as post-construction activities. In addition to crop loss, Hydro One's Project-specific crop loss program will make payments to address compaction should this be experienced after Hydro One construction.
Effects to Residential/ Agricultural Land	What happens if the impacted landowners don't agree with the selected route?	<p>Hydro One's Real Estate team will work closely with directly impacted owners who have the preferred route on their property. Our goal is to work with all property owners in an effort to obtain voluntary agreements to secure the necessary land rights to construct, operate and maintain the new transmission line. Hydro One will employ Project-specific land acquisition compensation principles that will guide the land acquisitions program. The land acquisition compensation principles will be applied in a fair, open, consistent, and transparent manner for all affected property owners.</p> <p>If Hydro One and directly impacted property owners are not able to come to a voluntary agreement, Hydro One will have to rely on the legislative process to secure the necessary land rights for the Project. However, Hydro One's preferred approach is to work with landowners in an effort to come to an amicable solution and secure the necessary land rights via voluntary agreements.</p>
Effects to Residential/ Agricultural Land	Is there a minimum setback needed for the transmission lines from a house?	A typical width of a 230 kV transmission line corridor is between 40 to 45 m. Houses and other structures are not compatible within the ROW, but no further setbacks are required beyond the ROW limits.



Theme	Question/Comment	Response
<b>Effects to Residential/ Agricultural Land</b>	What kind of compensation package is offered to farmers?	<p>Hydro One will work closely with directly impacted property owners to acquire land rights for transmission right-of-way that crosses their property. Our goal is to secure voluntary property settlements, utilizing Project-specific land acquisition compensation principles (LACP). These principles set out the process between Hydro One and property owners to attain voluntary property settlements, and has been tailored to the project based on local characteristics of the region and the lands impacted by the Project.</p> <p>Each impacted property owner will be presented with a formal offer based upon the information contained in a property specific, independent third party appraisal report. If deemed applicable by the independent third party appraiser, Hydro One's offer will take into consideration Injurious Affection, which is a payment offered when reductions to the market value of the remainder of the property, occur as a result of Hydro One's use and interest in the property. This analysis takes into consideration various attributes – such as the separation distance between the residence and transmission line and/or location of the transmission crossing on the subject property – and whether a loss of value is likely to result from the proposed transmission line. If deemed applicable by the third party appraiser, an injurious affection payment will be made.</p>
<b>Effects to Residential/ Agricultural Land</b>	Can nearby landowners use road allowances?	Road allowances are for the road owners to expand their own infrastructure. However, farming and conducting agricultural business within the transmission line ROW is considered a compatible use within the corridor.
<b>Effects to Residential/ Agricultural Land</b>	Is any injurious effects payment paid in case of non-direct effects?	It is Hydro One's practice and policy, in line with industry standards, to acquire land rights and compensate property owners who have electrical transmission facilities or infrastructure directly on their property. This is in accordance with the Ontario <i>Expropriation Act</i> , which does not require Hydro One to make offers of compensation to property owners' whose lands are not required for the construction and operation of the electrical transmission facilities or infrastructure.
<b>Effects to Residential/ Agricultural Land</b>	In the case of impacted landowners, is the payment only for area where towers are located or is it for the entire easement?	Hydro One's land rights compensation will be based on the market value of the lands required to construct, operate and maintain the transmission line. As such, the compensation is based on the entire easement requirement.
<b>Effects to Residential/ Agricultural Land</b>	How do I deal with trees and weed growth under existing lines?	To keep the power on, our crews are required to ensure a safe distance exists between power lines, trees, and other vegetation along high-voltage transmission corridors. Every corridor is unique, and Hydro One will selectively trim and remove incompatible vegetation that poses a risk to the safe and reliable operation of the electrical system. Community members are encouraged to contact Hydro One with any concerns about corridor maintenance.

Theme	Question/Comment	Response
Property (including property rights and property acquisition)	What are the land compensation principles; how are they covered for damages? If I have a line on my property, what is the process from here?	<p>Hydro One will work closely with directly impacted property owners to acquire land rights for transmission right-of-way that crosses their property. Our goal is to secure voluntary property settlements, utilizing Project-specific land acquisition compensation principles (LACP). These principles set out the process between Hydro One and property owners to attain voluntary property settlements, and has been tailored to the project based on local characteristics of the region and the lands impacted by the Project.</p> <p>Each impacted property owner will be presented with a formal offer based upon the information contained in a property specific, independent third party appraisal report. If deemed applicable by the independent third party appraiser, Hydro One's offer will take into consideration Injurious Affection, which is a payment offered when reductions to the market value of the remainder of the property, occur as a result of Hydro One's use and interest in the property. This analysis takes into consideration various attributes – such as the separation distance between the residence and transmission line and/or location of the transmission crossing on the subject property – and whether a loss of value is likely to result from the proposed transmission line. If deemed applicable by the third party appraiser, an injurious affection payment will be made.</p> <p>With regards to damages, Hydro One will make all possible efforts to mitigate damages where possible. Where damages are not avoidable, Hydro One commits to rectifying damages (including tile damage) where experienced. Hydro One will be employing a crop lands out of production/crop loss program that will outline how Hydro One will compensate for crop lands out of production or crop damages that are experienced during the pre-construction, construction, and post-construction phases of the project.</p> <p>In most cases where there is an existing line on an impacted property, Hydro One will still have to acquire new land rights for the new 230kV transmission line. These land rights will be acquired under Hydro One's Project-specific land acquisition compensation principles. As part of the land acquisition compensation principles, the impacted properties will be viewed as unencumbered (i.e. no existing transmission line infrastructure on the property) by the independent third party appraiser.</p>
Property (including property rights and property acquisition)	If the preferred route follows an existing ROW, will there be a wider easement required for the new transmission line?	Yes. A typical width of a 230 kV transmission line corridor is between 130 and 150 feet (40 to 45 m).

Theme	Question/Comment	Response
Property (including property rights and property acquisition)	How much access is needed during construction?	Pre-construction access to properties could be required for activities such as archeological studies, legal survey, land appraisal and geotechnical investigations. Hydro One will work with directly impacted landowners in an effort to mitigate potential damage to corridor lands prior to and during construction. Where Hydro One cannot avoid damaging crop land, Hydro One will employ a Project-specific crop loss program to compensate landowners who experience crop damage or crop loss from Hydro One's pre-construction, construction as well as post-construction activities. During construction, if a property owner's ability to plant crops is affected, Hydro One will compensate property owners for out of production land. In addition to crop loss, Hydro One's project specific crop loss program will make payments to address compaction should this be experienced after Hydro One construction.
Cost	What is the cost of the Project and how does this affect Increased electricity rates?	Hydro One is continually working to control costs and improve productivity to keep costs as low as possible. The Ontario Energy Board sets and approves rates for all utilities in Ontario, for Hydro One customers these rates are reflected in the delivery line portion of the bill. Hydro One has several programs and tools available to provide our customers with more choice and flexibility to manage their accounts, including setting their own billing date and signing up for high usage alerts. Hydro One encourages any customer who has questions about their bill or account to contact our customer care team at 1-888-664-9376.
Health and Safety	Electromagnetic Fields (EMF), setback distance, and human health	Hydro One has developed a factsheet with more information on EMFs available at COH #3 and also in Appendix D there is also information available on our website at <a href="https://www.hydroone.com/power-outages-and-safety/corporate-health-and-safety/electric-and-magnetic-fields">https://www.hydroone.com/power-outages-and-safety/corporate-health-and-safety/electric-and-magnetic-fields</a> . Hydro One follows all regulatory requirements to design and operate equipment in accordance with safety guidelines. We rely on the guidance of reputable health organizations such as the World Health Organization and Health Canada, who have concluded that scientific research does not demonstrate that EMFs cause or contribute to adverse health effects.

Theme	Question/Comment	Response
Health and Safety	Can you share more independent EMF studies?	<p>Hydro One has a dedicated team that regularly monitors global studies around EMF and ensures that our infrastructure is built and maintained following best practices and industry standards. We look to Health Canada, the World Health Organization, and the International Commission on Non-Ionizing Radiation Protection, for guidance on electrical and magnetic fields. Hydro One has collected some of the information published by these and other health organizations and made these resources accessible at <a href="https://www.hydroone.com/power-outages-and-safety/corporate-health-and-safety/electric-and-magnetic-fields">https://www.hydroone.com/power-outages-and-safety/corporate-health-and-safety/electric-and-magnetic-fields</a>.</p> <p>Based on global studies which have and continue to be regularly monitored, these organizations indicate that members of the public do not need to take precautions to protect from fields produced by extremely low frequencies such as transmission lines. Typically, EMF levels are strongest when you are right beside the source, and then diminish with distance. When you are standing at the edge of the right-of-way, EMF levels have already reduced significantly.</p>
Health and Safety	What are the risks associated with EMFs created by the transmission lines and proximity of lines to homes?	<p>Hydro One has a dedicated team that regularly monitors global studies around EMF and ensures that our infrastructure is built and maintained following best practices and industry standards. We look to Health Canada, the World Health Organization, and the International Commission on Non-Ionizing Radiation Protection, for guidance on electrical and magnetic fields. Based on global studies which have and continue to be regularly monitored, these organizations indicate that members of the public do not need to take precautions to protect from fields produced by extremely low frequencies such as transmission lines. Typically, EMF levels are strongest when you are right beside the source, and then diminish with distance. When you are standing at the edge of the ROW, EMF levels have already reduced significantly.</p>

Theme	Question/Comment	Response
Health and Safety	Safety measures to protect against severe weather	<p>Ontario has a robust and reliable electricity system, but it's occasionally at the mercy of the Canadian climate. In the winter, heavy snow or ice storms can cause power lines to break, while in the summer and fall, winds, rain, and lightning can cause damage that leads to power outages. At other times, and even in sunny weather, traffic collisions or animal contact with electrical equipment can cause outages on our system.</p> <p>As Ontario's largest electricity transmission and distribution service provider, Hydro One takes our responsibility seriously to respond to severe weather incidents safely and timely. To learn more about Hydro One responds to severe weather, please see our website <a href="https://www.hydroone.com/power-outages-and-safety">https://www.hydroone.com/power-outages-and-safety</a>.</p> <p>For the Project, Hydro One's technical experts have confirmed that all of the route alternatives considered would meet the need for the Project and represent acceptable conceptual solutions to provide a safe and reliable supply of electricity. Now that the preferred route has been selected Hydro One has begun the detailed engineering design of the towers, which considers several technical, environmental and safety considerations. Hydro One takes safety very seriously and will design and operate our equipment in accordance with all regulatory requirements to account for safety.</p>
Effects to Business Operations	Identification of an animal sanctuary within the study area	Hydro One thanked the residents for bringing this feature to the Project Team's attention. Upon confirming that this facility would be directly affected by Routes 1 and 4, consideration for this facility was included in the evaluation of the route alternatives. Please refer to <b>Section 5.3.2</b> .
Effects to Recreational Facilities	Identification of a registered model airplane club and associated facilities within the study area	Hydro One thanked the residents for bringing this feature to the Project Team's attention and arranged a site visit to view the facilities and discuss potential effects of the route alternatives. During the site visit it was confirmed that Route 5 would affect the use of these facilities and the route evaluation took this into consideration. For more details on the route evaluation and selection process please refer to <b>Section 5.3.2</b> .
Effects to Recreational Facilities	Identification of airplane hangers and runway within the study area	Hydro One thanked the residents for bringing this private facility to the Project's Team's attention. Discussions between the Project Team and resident determined that runway would be directly affected by Route 5 and the route evaluation has taken this into consideration, please refer to <b>Section 5.3.2</b> .
Effects to Natural Environment	Identification of wildlife/SAR habitat features within or adjacent to the study area (e.g., heron rookery, bald eagle nests, restored wetland providing SAR habitat)	Hydro One thanked the residents and members of the public for bringing these features to the project team's attention, and in some cases arranged site visits and/or virtual meetings to view/discuss and confirm these features. Where appropriate, these features have been considered in the evaluation of the route alternatives. For more details on the route evaluation and selection process please refer to <b>Section 5.3.2</b> . For more details on the assessment of environmental effects and mitigation measure please refer to <b>Section 7.7</b> .



Theme	Question/Comment	Response
Effects to Natural Environment	Effects to birds and animal habitat and migration, including Species at Risk	Hydro One confirmed that in the spring/early summer of 2022, biologists completed breeding bird surveys in the Project area. Species at risk are an important criterion in the evaluation of the alternative routes to select a preferred route and Hydro One appreciates you bringing this to our attention. As part of the Class EA Hydro One has identified opportunities to avoid or mitigate adverse effects of the Project, including species at risk and their habitat. A summary of the environmental effects and proposed mitigation measures, including effects to wildlife and bird species, can be found in <b>Section 7.12</b> .
Effects to Natural Environment	Removal of existing transmission infrastructure	Transmission structures that are removed from corridors are disposed of in an environmentally friendly manner. Hydro One is committed to operating safely in an environmentally and socially responsible manner to help build a brighter future for all.
Effects to Natural Environment	Effects to water	Hydro One and their contractor will make all possible efforts to mitigate and avoid effects to watercourses, aquatic habitats, source water protection areas and other aquatic aspects of the environment. <b>Section 7.7.4 to 7.7.6</b> provides additional information.
Effects to Natural Environment	Will wooded areas be restored post-construction?	<p>Vegetated areas will be restored with compatible vegetation (i.e., species that at maturity will not pose a threat to the operation of overhead transmission lines) following completion of construction. For wooded areas, this may result in a transition of the vegetation community from a woodlot to a shrub thicket or meadow.</p> <p>Additionally, Hydro One will implement a Biodiversity Initiative to offset habitat loss or long-term change that may occur as a result of the Project. More information on the Biodiversity Initiative will be available following the completion of the Class EA.</p>
Effects to Natural Environment	What happens to trees on the land?	Trees under the transmission line route will be cleared during construction to facilitate construction and to ensure the eventual safe and reliable operation of the overhead transmission line. Some options include cutting or chipping the wood and the landowner can use it where they need it. Other options include cutting it and leaving it for habitat restoration or removing it from the property. Where requested, trees or large shrubs removed for construction may be replaced with smaller compatible plant species, which at maturity will not pose a threat to the transmission line.

Theme	Question/Comment	Response
Effects to Natural Environment	There are concerns with water quality and issues like gas locking in wells and geysers. This is an issue for some farmers when shale is disturbed. The shale gets disturbed while drilling (for projects like wind turbines) and this brings up gases and sediments that they're not able to purify. Will the construction of transmission line have any adverse effects in this regard?	Based on reviews of known geological conditions within the study area, there is a layer of competent overburden (generally 14 to 20 m in thickness) above the shale bedrock. While site-specific geotechnical studies (and subsequent final engineering designs for the tower foundations and footings) are still being conducted, currently Hydro One anticipates that the majority (if not all) of the new tower foundations will consist of helical piles anchored within the overburden layer, in which case no adverse effects to water wells would be anticipated due to a lack of direct interaction with the shale bedrock and also the low amount of vibration associated with helical pile installation.
Mitigation	Are there opportunities to partner on restoration and mitigation efforts?	Hydro One is still in the planning phase for the St. Clair Transmission Line but has committed to conducting a Biodiversity Initiative for this Project, through which Hydro One will seek to partner with conservation groups in the area to undertake Projects to create or enhance habitat to offset the net effects of the Project. Hydro One is currently on the planning of the new transmission line itself, it is expected that this initiative would commence closer to construction.
Mitigation	What are the environmental restoration initiatives as part of the Project?	<p>Hydro One is continuing to work closely with government agencies to follow all the applicable legislation, and acquire any permits, approvals, or authorizations prior to beginning any work that would adversely affect natural habitats. Through the Class EA process, avoidance and mitigation measures will be identified to address potential effects to the natural environment, as applicable. Vegetated areas will be restored with compatible vegetation (i.e., species that at maturity will not pose a threat to the operation of overhead transmission lines) following completion of construction. For wooded areas, this may result in a transition of the vegetation community from a woodlot to a shrub thicket or meadow.</p> <p>Additionally, Hydro One will implement a Biodiversity Initiative to offset habitat loss or long-term change that may occur as a result of the Project. More information on the Biodiversity Initiative will be available following the completion of the Class EA.</p>
Construction	Concerned about increased noise during construction and noise of transmission lines	Noise will be a consideration during construction - the level of static noise emitted by transmission lines relates to a number of different factors, such as weather conditions and how heavily loaded the line is. For example, during regular weather, our lines are typically almost silent, but during more severe weather like thunderstorms, the noise levels can be raised. As well, during summertime if air conditioners are running full strength, the lines can emit more noise.



Theme	Question/Comment	Response
Construction	Visual impacts, nuisance noise and dust	Hydro One understands that there may be other, indirect environmental effects that extend beyond the physical footprint of the new transmission line right-of-way itself, such as visual changes or nuisance noise or dust from construction. These effects have been considered through the Class EA in the evaluation of route alternatives and the assessment of environmental effects and mitigation measures. The local study area for this Project in which these effects will be considered is a 500 metres buffer from the proposed route alternatives, as indicated on the map accompanying the Notice of Commencement for the Class EA. This map and an interactive map can be found on the Project website at <a href="http://www.hydroone.com/StClair">www.hydroone.com/StClair</a> , and additional information is available in <b>Section 7.10</b> of this ESR.
Construction	What is the construction timeline?	Construction schedule updates were provided as the Project progressed.  Upon the successful completion of the Class EA process and receipt of subsequent required approvals, construction would begin. Construction is planned to begin in Spring of 2027, or earlier. Project updates will be available on Hydro One's website through the life of the Project.
Construction	How will the construction of the transmission lines proceed?	With the selection of a preferred route, the next steps include completing an assessment to identify potential effects of the new transmission line and identifying measures to avoid or mitigate adverse effects, progressing with detailed design with tower placements and construction planning, identifying real estate requirements and working with directly impacted property owners, and compiling this Final ESR for review and feedback. We'll also continue seeking feedback as we work towards a final route that is considerate of community interests.  Construction will follow once permits and regulatory approvals are obtained. We are looking for opportunities to advance the construction to bring the new line into service earlier than 2028.
Construction	Will there be an extended outage in Wallaceburg during construction?	The existing lines will be used to maintain the system during construction. We do not anticipate any outages to homes during construction of the line.
Construction	How are you going to construct without disrupting power supply? When is construction?	The existing lines will be used to maintain the system during construction. We do not anticipate any outages to homes and businesses during construction of the line.  Construction will follow once permits and regulatory approvals are obtained. We are looking for opportunities to advance the construction to bring the new line into service earlier than 2028. The construction of the line is expected to start in 2025 or 2026.
Construction	How will the construction be staged where existing lines are being replaced?	In parts of the route where existing towers are to be replaced, the towers will be removed before the new ones are installed. The existing lines will be used to maintain the system during construction. We do not anticipate any outages to homes during construction of the line.

Theme	Question/Comment	Response
Construction	Will a new power plant be built in Lambton?	The IESO is the provincial authority responsible for conducting long-term analysis of where power is needed and when it is needed, including generation plants.

### 3.13 Notice of Completion and Draft ESR Comment Period

Hydro One provided a 30-day comment period, from November 6, 2023, to December 7, 2023, to allow sufficient time for review and comment on the draft ESR. In response to requests received from some Indigenous Communities and the MECP, Hydro One provided extensions to the draft ESR comment period for these groups, as requested. Written comments regarding the draft ESR were to be submitted to:

Paul Dalmazzi, Senior Environmental Specialist, Hydro One Networks Inc.  
483 Bay Street, North Tower,  
14<sup>th</sup> Floor, Toronto, ON M5G 2P5  
Phone: 1-877-345-6799 (community relations hotline)  
Email: [Community.Relations@HydroOne.com](mailto:Community.Relations@HydroOne.com)

The draft ESR was available electronically on the Hydro One St. Clair Transmission Line webpage: [www.HydroOne.com/StClair](http://www.HydroOne.com/StClair). Hard copies of the draft ESR as well as electronic copies of the draft ESR on e-readers were also available at the following locations:

Chatham-Kent Public Library	Corunna Library	Wallaceburg Municipal Office
120 Queen Street <b>Chatham, ON</b> N7M 2G6	417 Lyndoch Street <b>Corunna, ON</b> N0N 1G0	786 Dufferin Avenue, <b>Wallaceburg, ON</b> N8A 2V3
519-354-2940	519-862-1132	519- 627-1603

On November 6, 2023, the Notice of Completion of draft ESR was distributed to all interested parties including Indigenous Communities, municipal, provincial and federal government officials and agencies, potentially affected and interested persons, and interest groups presented in **Section 3** (see contact list in **Appendix B1**). The Notice was published in the Blenheim News Tribune, Chatham-Kent This Week, Chatham Voice, Ridgetown Independent News, Thamesville Herald, and Wallaceburg Courier between November 8 and November 16, 2023, in addition to being posted on the Project website [www.HydroOne.com/StClair](http://www.HydroOne.com/StClair) (see **Appendix B2** for notification letter and newspaper ad). The Notice of Completion was also delivered to directly impacted property owners along the route of the Project by their dedicated Hydro One Real Estate representatives.

Comments and concerns received by Hydro One during the draft ESR comment period were recognized, considered, addressed and documented. Additionally, in response to requests received from some Indigenous Communities and the MECP, Hydro One extended the draft ESR comment period as requested. Caldwell First Nation (CFN) requested an extension of eight days, while the MECP and COTTFN requested an extension of 15 days. The ESR has been finalized for the proposed Project in accordance with the Class EA. Hydro One sought and received input from two provincial ministries (the Ministry of Natural Resources and Forestry and the Ministry of Citizenship and Multiculturalism) not originally reported in the final ESR submitted in February 2024. This input has been incorporated into this updated final ESR document, as published in May 2024.

The final ESR has been filed with the MECP, and was made available on the Project webpage <https://www.hydroone.com/abouthydroone/CorporateInformation/majorprojects/saint-clair/>. The Project is considered acceptable to proceed as outlined in the ESR.

The EA Act has provisions that allow interested parties to request MECP order a higher level of study (i.e., requiring comprehensive EA approval before being able to proceed), or that conditions be imposed (e.g. require further studies). Requests may only be made on the grounds that the requested order may prevent, mitigate, or remedy adverse effects on constitutionally protected Aboriginal and treaty rights. This process is referred to as a Section 16 Order request and must be sent in writing or email to:

Minister of the Environment, Conservation  
and Parks  
777 Bay Street, 5th Floor  
Toronto ON M7A 2J3  
Email: [minister.mecp@ontario.ca](mailto:minister.mecp@ontario.ca)

Environmental Assessment Branch  
Ministry of Environment, Conservation  
and Parks  
135 St. Clair Ave. W, 1st Floor  
Toronto ON, M4V 1P5  
Email: [EABDirector@ontario.ca](mailto:EABDirector@ontario.ca)

No Section 16 Order requests were received.

### **3.13.1 Draft ESR Review Period**

Comments received from Indigenous Communities, Stakeholders, Interest Groups and members of the public on the draft ESR, and subsequent responses provided by Hydro One are captured below in **Table 3-17** through to **Table 3-26**.

Table 3-17: Aamjiwnaang First Nation Comments on the SCTL Draft ESR – January 10, 2023

Reference Section	Comments from AFN	Hydro One Response
Not Applicable (N/A)	<div>1. It is not clear whether an archaeological assessment was completed at the preferred route. AFN (via Vertex) recommends a Stage 2 archaeological assessment to be completed for all areas identified with archaeological potential along the preferred route prior to construction work at the site. AFN (via Vertex) also recommends involving Indigenous communities in participating in future archaeological studies.</div>	<div>A Stage 2 Archaeological Assessment (AA), and any future archaeological studies as deemed required, will be completed for the areas of archaeological potential (as identified through the Stage 1 AA) along the preferred route of the St. Clair Transmission Line right-of-way (ROW) by Hydro One and its licensed archaeological consultants. Indigenous communities have been invited to participate in the Stage 2 surveys that began in the 2023 field season and will continue to be offered opportunities to participate as Stage 2 fieldwork continues in 2024.</div> <div>Off Corridor Access will similarly require a Stage 2 AA for areas deemed to have archaeological potential through the Stage 1 AA. These assessments will be conducted by the Engineering, Procurement and Construction (EPC) Contractor for the project, Forbes Bros and their licensed archaeological consultant. Forbes will coordinate the invitation to Indigenous communities for these studies.</div>
N/A	<div>2. AFN (via Vertex) recommends involving Indigenous communities in future cultural heritage evaluation or heritage impact assessment studies to be conducted.</div>	<div>Property-specific built and cultural heritage assessment (Cultural Heritage Evaluation Reports/CHER and Heritage Impact Assessments/HIA) will be conducted on select private properties and potentially even within private residences (for built heritage aspects) along the ROW. In an effort to be as respectful as possible to those who live on these properties Hydro One maintains a limited number of specialists to attend these assessments and does not invite third parties, however we will share results of these studies with Indigenous communities upon request.</div>

Reference Section	Comments from AFN	Hydro One Response
4.4.6.2.2 Noise and Vibration	3. High levels of noise and vibration can affect people by impairing their enjoyment of using the land. However, the project site is considered rural in nature and contains mostly agricultural land and open spaces. The upgrade of Wallaceburg Transformer Station from 115 kV to 230 kV has the potential for greater noise generation; however, according to a noise modelling study conducted, no additional mitigation measures are required for the upgrade. High levels of noise and vibration have the potential to affect wildlife, causing changes in behavior, at least temporarily. However, if recommended mitigation measures are implemented including scheduling construction activities in sequential to reduce the amount of time spent on one location, vibration and noise nuisance could be minimized greatly.	We thank AFN for the comment. With regards to the Wallaceburg TS conversion from 115 kV to 230 kV, while the transformers will increase in voltage, as noted in <b>Section 7.7.3</b> of the draft ESR noise levels are not anticipated to be appreciably increased at nearby sensitive receptors (directly adjacent residences) based on noise modeling done to date. If noise levels from the conversion of the TS are found to be above the appropriate rural noise limits, additional noise mitigation will be employed.
4.6 Environmental Monitoring and Contingency Plans	4. HONI will develop a project-specific Environmental Management Plan containing required legislation, procedures, standards, plans, guidelines and monitoring requirements. HONI also promised to retain an Environmental Specialist on-site to monitor construction activities and to report environmental performance. AFN (via Vertex) recommends involving Indigenous communities in the monitoring of construction activities.	We thank AFN for expressing interest in participating in environmental monitoring during construction of the Project. With regards to environmental monitoring during construction, in the interest of prioritizing the safety of all parties it has not been Hydro One’s historic practice to invite external monitors onto active construction sites. However, in recognition of the interest expressed by AFN in monitoring during construction, Hydro One will work with its construction contractor to identify opportunities to safely involve AFN staff in environmental monitoring during construction.



Reference Section	Comments from AFN	Hydro One Response
5.0 Discussions and Considerations for the Nation	<p>5. There is little discussion of the restoration of lands following construction activities. The Nation should be consulted regarding all restoration plans. This includes land use and the return to equivalent land capability, the use of native vegetation and seed mixes in habitat restoration, and the use of the Nation's greenhouse as a source for vegetation and seed mixes. The Nation should also be informed of construction scheduling, particularly around blasting.</p> <p>AFN (via Vertex) recommends investigating all alternative revegetation strategies for successful revegetation of the site. Seeding alone likely will not create naturally biodiverse ecosystems as seed of most local species is not available. Alternative methods that can be considered include out planting plants from the Nation's Maajiigin Gumig Greenhouse and transplants that could be as or more effective in establishing the desired plant community.</p>	<p>Hydro One and the Engineering, Procurement and Construction (EPC) Contractor for the project, Forbes Bros will share draft plans for post-construction restoration of natural areas for AFN to review, prior to undertaking the work.</p> <p>The vast majority of the preferred route right-of-way (ROW) for the St. Clair Transmission Line project consists of row crops which will remain in the same use following the completion of the project. Although some vegetation will require clearing for construction and maintenance of the new line, we will undertake restoration work following construction. This work will include working with landowners and in consultation with Indigenous communities to plant native compatible native vegetation species. Generally, where incompatible vegetation (trees and large shrubs) requires clearing, restoration will involve the planting of compatible shrub species (stakes/whips or potted stock), with seed mix likely used to establish native plant cover on areas of exposed soils, or where meadow communities are targeted for restoration. We will work with our EPC contractor to prioritize the procurement of locally sourced seed and plant stock and ensure they are aware of the Nation's Maajiigin Gumig Greenhouse as a possible vendor.</p> <p>We will provide advance notification to AFN prior to undertaking implosive conductor splicing, as requested.</p>
5.0 Discussions and Considerations for the Nation	<p>6. Woodlands in the PSA are isolated and could provide important habitat for wildlife and important areas for traditional land use. HONI should take measures to avoid woodlands whenever possible. HONI has committed to undertaking a Biodiversity Initiative to offset any habitat loss or transition (long term change) that may occur as a result of the Project. The Nation should be provided with a copy of the Biodiversity Initiative and given time to comment. While the routes do not intersect the Bickford Oak Woods Conservation Reserve, there is no discussion on its proximity and potential Project-related effects (e.g., wildlife movement). This reserve has been identified as historically important to Indigenous communities.</p>	<p>We understand the history of extensive clearing in southwestern Ontario and the importance of considering any remnant natural habitats in the resulting heavily fragmented natural landscape. For these reasons, existing forests, wetlands and other native vegetation communities were important considerations from the outset of the St. Clair TL Project, and were key factors influencing the development of route alternatives and the selection of the preferred route, which had the least overall effects on incompatible vegetation communities (woodlands and other treed communities).</p> <p>Hydro One is committed to retaining compatible vegetation within the new ROW to the extent practical. We will carefully plan and delineate our construction access and work areas to ensure that effects from construction are minimized. We will complete post-construction restoration activities involving the planting of compatible native shrubs and forbs where we may have had to clear incompatible vegetation from the new Right-of-Way (ROW). While Hydro One understands that this will still result in a long-term transition of these areas from forest communities to shrub thicket/meadow or other low-growing plant communities, this will not result in a total loss of vegetation coverage and habitat</p>

Reference Section	Comments from AFN	Hydro One Response
		<p>in the region but rather a transition from one type of vegetation community to another.</p> <p>Lastly, we have committed to undertaking a Biodiversity Initiative for the SCTL Project, in order to offset the residual net effects to habitats (i.e., those effects that cannot be further avoided or mitigated, such as the long-term transition of forested vegetation communities to shrub thicket or meadow communities). Through the Biodiversity Initiative, Hydro One seeks to fund habitat projects that are planned and will be implemented by other organizations, but require funding to implement. These opportunities are sought via an open call for Letter of Interest (LOI) submissions, which are then evaluated by Hydro One on the basis of the ecological benefits, value-added factors and cost to implement. Selected projects are then implemented by the submitting organization subsequent to entering into a funding agreement with Hydro One. In this way, the ecological benefits from the offset projects can be directly compared to the habitat effects from the project, and rather than utilize a simple area ration, Hydro One has committed that through the Biodiversity Initiative, the St. Clair TL project will not result in a net loss of habitat value in the regional and where possible, will result in a net gain.</p> <p>As Hydro One's focus is first and foremost on the environmental management and planning of projects works (such as route selection, environmental permits and approvals and the development of detailed Environmental Management Plans for construction), habitat offsets such as the Biodiversity Initiative are typically implemented a bit later in the project life cycle, following completion of the Class EA. AFN will be kept informed of any updates and progress on the Biodiversity Initiative for the St. Clair TL project, and will have opportunities to participate via the submission of LOI. We would also note that opportunities for participation extend not only to AFN as the sole submitter of one (or several) LOIs, but also include opportunities for AFN to participate via partnership or joint submission with other organizations. This may also provide additional opportunities to utilize AFN's Maajiigin Gumig Greenhouse and native plant propagation programs, per the comment above.</p>

Reference Section	Comments from AFN	Hydro One Response
5.0 Discussions and Considerations for the Nation	<p>7. Incidental observations and historical records do not provide an adequate identification of SAR and SAR habitat. HONI should conduct species-appropriate SAR surveys along the PR during the appropriate timing windows to further determine the potential for SAR and SAR habitat. This will assist in SAR and SAR habitat avoidance and species-specific mitigation measures, including timing restrictions and setback distances. Wildlife sweeps and non- intrusive bird surveys should be conducted prior to clearing if clearing occurs during sensitive timing windows. Construction personnel are not qualified to appropriately identify SAR and SAR habitat. Qualified wildlife biologists or other qualified personnel should conduct daily and seasonal sweeps for SAR and SAR habitat. If wildlife is identified during construction activities, construction personnel should be required to stop construction activities until qualified personnel, or the regulatory authorities (MECP or DFO) can be consulted. The Nation should receive a copy of the results from all additional wildlife and wildlife habitat surveys.</p>	<p>We thank AFN for this comment and agree with the points raised therein.</p> <p>While historical records and incidental observations are helpful tools to assist in identifying and delineating SAR habitat, these are not the only data points that have been or will be relied upon. As noted throughout Chapter 4 (Environmental Inventory) of the draft ESR, field surveys to characterize habitat (ELC) have been undertaken and compared to provincial guidelines such as SAR habitat regulations and descriptions and Significant Wildlife Habitat (SWH) technical criteria to make conservative predictions on areas that represent potential SAR habitat. For the purposes of the Class EA, potential SAR habitat has been conservatively treated to be assumed as confirmed habitat, unless proven otherwise by results of field surveys. We understand that species-specific investigations are often required during the detailed design phase (post-EA) and some of these species-specific surveys have commenced during the 2023 field season, while others may be forthcoming including those conducted by our EPC contractor (Forbes Bros) to support their construction planning and permitting efforts.</p> <p>As noted in <b>Section 7.7</b> of the draft ESR, In the event vegetation clearing is required during the breeding bird season, nest searches conducted by a qualified biologist will be completed. Construction personnel will be educated on the potential for wildlife to be encountered during construction and the importance of ensuring that wildlife are allowed to safely exit work areas. SAR exclusion fencing may be utilized as required in certain areas.</p> <p>SAR field surveys and identification/delineation of habitat have been and will continue to be conducted by qualified and experienced biologists. Results of SAR and wildlife surveys will be shared with AFN.</p>

Reference Section	Comments from AFN	Hydro One Response
5.0 Discussions and Considerations for the Nation	<p>8. In the agricultural section, damage to agricultural tile drainage and the potential spread of soybean cyst nematode (SCN) onto the agricultural fields was not discussed. To minimize impact on the agricultural resources, HONI should consult with landowners of agricultural field to identify potential tide drainage and implement remedial solution if drainage is found to be present. AFN (via Vertex) recommends retaining an independent tide contractor to develop site specific remediation plan during construction and having landowners inspect and approve repairs once completed but before the area is backfilled.</p> <p>HONI should ask landowners of agricultural fields if they want to test the soil for SCN and, if they agree, soil samples should be taken from the location and tested for SCN. If the test results show positive for SCN present in the field, affected landowners must be consulted and mitigation measures implemented. Recommended mitigation measures include:</p> <ul style="list-style-type: none"><li>• Limiting construction activities to non-agricultural areas where feasible</li><li>• Avoiding cross contamination of invasive species by cleaning equipment and material before they arrive on-site and before they leave the Project site</li><li>• Any imported topsoil must be tested for SCN before using it on the Project</li></ul>	<p>A project-specific Environmental Management Plan (EMP) will be prepared by our EPC Contractor and to outline specific mitigation measures for the project, based on the commitments and general mitigation strategies outlined in the ESR, including measures to avoid the inadvertent spread of invasive species and soil-borne agricultural pests such as nematodes. These mitigation measures will include educating crews on the importance of preventing the spread of invasive species, conducting proper handling, containment and disposal of invasive plant material, where required, and inspecting and cleaning equipment and vehicles as necessary to reduce potential for spreading invasive species. The use of constructed access (gravel roads, matting or a combination thereof) will also serve to minimize direct contact between construction equipment/vehicles and soils, thus reducing the risk of inadvertent transport of soil-borne pests and other invasive species. The EMP and detailed access plans will be distributed to AFN for review prior to construction.</p> <p>AFN's suggestions regarding the identification of fields with SCN are much appreciated and we will review these suggestions with our EPC contractor and Real Estate staff as they develop their detailed construction plans and continue engaging with property owners.</p>

Reference Section	Comments from AFN	Hydro One Response
5.0 Discussions and Considerations for the Nation	9. The Nation should be consulted on timing and completion of a Stage 2 archaeological survey for artifacts. There is concern that anything found of archaeological significance has not been provided to the Nation as it was collected by Six Nations and not provided specifically to the Nation.	<p>As noted above, AFN will be kept apprised of the plans and status of archaeological assessment fieldwork, including opportunities to participate in field surveys and to review draft reports.</p> <p>With regards to artifacts encountered during the Stage 2 AA field surveys, the licensed archaeological consultants currently retained by Hydro One do not provide artifacts directly to Indigenous community monitors attending surveys, but rather catalogue artifacts and transfer collections to third-party facilities specializing in the long-term storage of archaeological resources, such as the Sustainable Archaeology Facility in London. Once an archaeological project is completed and the related reports are reviewed and cleared by the MCM, notifications are sent to the representatives of all of the participating Indigenous communities prior to initiating the transfer and complete the necessary paperwork with MCM who must approve the transfer. If a community expresses objection to the transfer, the artifacts remain in the care of the licensed consulting archaeologist until alignment can be obtained between the interested communities.</p> <p>We are happy to have further discussions with AFN and our licensed consulting archaeologists on the fate of artifacts encountered during AA field surveys on the St. Clair TL project.</p>
5.0 Discussions and Considerations for the Nation	10. The Nation seeks or request opportunities for local businesses and community members to be involved in the Project where practicable. Trainings and workshops should be provided to the Nation so they can qualify for higher paying technical opportunities.	Hydro One is committed to ensuring that the EPC (Forbes Bros.) provides procurement and training/employment opportunities to local Indigenous communities. The EPC is contractually obligated to inform and progress these opportunities with all engaged communities.
5.0 Discussions and Considerations for the Nation	11. Territorial lands have not been as well studied as Reserve lands with respect to Traditional Land Use or Traditional Knowledge. The capacity of the Nation to extend beyond the boundaries of the reserve to assess potential Project impacts to their territorial lands is required.	Hydro One offers capacity funding to all engaged Indigenous communities for them to independently conduct Traditional Land Use and Knowledge studies. AFN has an agreement with Hydro One for this purpose.



Table 3-18: Caldwell First Nation Comments on the SCTL Draft ESR – December 15, 2023

Reference Section	Text Example	Comments from CFN	Hydro One Response
Hydro One Networks Inc. (2023). St. Clair 230 kV Transmission Line Class Environmental Assessment Draft Environmental Study Report. p 1-5	“This Project resulted from a recommendation of the IESO, as documented in the report “Need for Bulk System Reinforcements West of London” (September, 23, 2021) and the letter sent to Hydro One by the IESO in March 2021 requesting Hydro One to initiate work on development activities...”	The scope of this Project is dictated by the previous study completed by the IESO, therefore the alternatives considered are based on that approach. It should be noted that Caldwell First Nation must be consulted on large scale studies completed by the IESO to ensure that leadership and community input is included in broader electricity research and strategies.	We understand that the IESO conducts their own consultation program to support their broader regional planning processes. We will relay this comment from CFN to our colleagues at the IESO.
ibid. p 3-34	“COTTFN, WIFN, HDI, CKSPFN and AFN participated in some of the Archaeological Assessments or Natural Environment field surveys conducted during the summer of 2022 and fall 2023.”	CFN Environment and Consultation Department records show that a Field Liaison Representative was present on this project from December 4 to 8 2023.	This information will be updated in the Final ESR.
ibid. p 4-215	“Overall, the woodland communities identified were often isolated in the landscape and were limited in connectivity to adjacent natural heritage features”	Where possible, habitat replacement and regeneration by Hydro One should improve connectivity as it is a significant challenge in the region.	While post-construction restoration will be limited to those areas disturbed during construction, Hydro One has committed to undertaking a Biodiversity Initiative for the St. Clair Transmission Line (SCTL) project and through this initiative will seek to fund habitat creation and enhancement projects, which may contribute to improving habitat connectivity within the region.

Reference Section	Text Example	Comments from CFN	Hydro One Response
<b>ibid. p 7-273</b>	“Appropriate timing of construction activities, where feasible, to avoid sensitive time periods, such as fishing spawning and egg incubation periods, or migratory bird nesting periods;...”	Climate change is impacting the duration of sensitive timing windows for many species, including fish, birds, and amphibians. Please provide insights into how Hydro One incorporates current scientific knowledge to uphold its track record of environmental compliance and stewardship, ensuring the ongoing protection of species during these critical periods.	Hydro One generally looks to regulatory agencies for guidance relating to the planning of construction activities, including for specific timing windows and any updates or revisions to these guidelines. However, we recognize that ecosystems and their component species are dynamic and continue to adjust to a changing climate and that species do not always adhere to published timing windows. While we strive to ensure that our construction plans consider the most up to date published guidance, we also work with our crews and construction contractors to ensure it is understood that timing windows are guidelines only and that in many cases (e.g., breeding bird season) unseasonable weather may result in species being active at otherwise unexpected times of the year and that provisional plans may be required in such instances.



Reference Section	Text Example	Comments from CFN	Hydro One Response
<b>ibid. p 7-273</b>	“Proactive communication with Indigenous communities, government agencies, stakeholders and interest groups regarding the proposed Project;...”	What is meant by proactive communication? Does Hydro One have established internal protocols for interactions with Indigenous communities? If such protocols exist, please share them with CFN Environment and Consultation Department (ECD).	<p>Hydro One strives to go above and beyond the minimum expectations when it comes to consultation; this often includes proactive collaborative consultation strategies to engage early and often with stakeholders and Rights holders. For capital projects such as the SCTL project, such consultation strategies are tailored to the specific project at hand. Some examples from the SCTL project include:</p> <ul style="list-style-type: none"> <li>• Early notification to Indigenous communities to inform them of the upcoming project (predating the official Notice of Commencement for the Class EA);</li> <li>• Formation of a Technical Advisory Committee (TAC) to provide a forum to discuss and obtain input on the route evaluation process; and</li> <li>• Development of a timeline of key project input opportunities, which was shared with Indigenous communities in July 2022 to facilitate receipt of community input and feedback in time for that input to influence key planning milestones (e.g., selection of the preferred route).</li> </ul> <p>Hydro One acknowledges that consultation does not end at the completion of the EA and looks forward to continuing to discuss any comments, concerns or input provided throughout the lifecycle of the project, and always appreciates any information and knowledge shared by CFN.</p>
<b>ibid. p 7-273</b>	“Development of environmental enhancement or compensation measures to offset the residual net effects of the project where such effects exist.”	Hydro One should strive to counterbalance the residual net effects of a project with environmental benefits that surpass industry standards and legislative requirements, considering the cumulative impacts experienced within the treaty territory.	Hydro One has committed to undertaking a Biodiversity Initiative for this project to offset the net effects to habitats from the Project by funding the creation and enhancement of habitats in the region.
<b>ibid. p 7-276</b>	“Temporary access roads and work pads will be built in agricultural fields using mats, [...] for re-cultivation of the area; and,...”	CFN ECD is glad to learn that Hydro One will be employing mats to address soil compaction.	Thank you for your comment.

Reference Section	Text Example	Comments from CFN	Hydro One Response
<b>ibid. p 7-276</b>	“Mitigation measures to minimize topsoil and subsoil mixing will include: ...”	There should be proposed mitigation measures that prevent the inadvertent transport of soil-borne nematodes.	<p>A project-specific Environmental Management Plan (EMP) will be prepared by our Engineering, Procurement, and Construction (EPC) Contractor and to outline specific mitigation measures for the project, based on the commitments and general mitigation strategies outlined in the ESR, including measures to avoid the inadvertent spread of invasive species and soil-borne agricultural pests such as nematodes. These mitigation measures will include educating crews on the importance of preventing the spread of invasive species, conducting proper handling, containment and disposal of invasive plant material, where required, and inspecting and cleaning equipment and vehicles as necessary to reduce potential for spreading invasive species. The use of constructed access (gravel roads, matting or a combination thereof) will also serve to minimize direct contact between construction equipment/vehicles and soils, thus reducing the risk of inadvertent transport of soil-borne pests and other invasive species.</p> <p>The EMP will be distributed to CFN for review prior to construction.</p>
<b>ibid. p 7-278</b>	“Construction and maintenance activities may require mechanical removal of vegetation (tree felling) and/or application of herbicides to species incompatible with overhead transmission lines.”	The use of herbicides should be considered a last resort (i.e., when noxious weeds and/or incompatible vegetation cannot be removed with mechanical tools).	<p>Hydro One takes an integrated approach to maintaining its corridors including the mechanical removal of vegetation and/or the application of herbicides. Should herbicides be required it is always a selective application with a low volume, direct application of federally and provincially approved herbicides, with appropriate setbacks from waterbodies and other sensitive features.</p> <p>Our Forestry Technicians are required to identify all vegetation that could grow or fall into the power lines or towers. Depending on species type, density of vegetation and corridor characteristics (such as line sag, tower height, elevation etc.), our Forestry Technicians will determine which trees and other vegetation will pose a risk, and the best methods to</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
			<p>address the vegetation. Hydro One's approach aims to find a balance between ensuring that taller-growing and invasive tree species are deterred from re-establishing, and also encouraging the growth of low-growing plant communities to promote biodiversity.</p> <p>The application of herbicides to select vegetation plays a critical role in Hydro One's integrated approach to maintaining vegetation on hydro corridors. Mowing and trimming are important parts of any right of way maintenance program, but mechanical means alone do not provide a long-term sustainable solution for managing vegetation along right of ways. Mechanical control can reduce pollinator habitat, distribute weed seeds and cause some plant species (including some invasive plant species) to re-sprout rapidly resulting in increased density of the stand. Mechanical control also needs to be repeated frequently in order to maintain the right of way. Selective application of herbicides allows desirable species to flourish which increases biodiversity. It is less disruptive to the landscape and controls the entire plant so the intensity of required future maintenance is lower. Integrated vegetation management programs use both mechanical and herbicide control strategies and are proven to be the safest, most cost-effective long-term vegetation management strategy.</p> <p>Typically, vegetation maintenance on transmission lines is completed on a six-year cycle. In instances where herbicides are used to prevent the re-growth of certain fast growing species, the intensity of the required future maintenance is lower, for example, less herbicide required, less cutting, less mowing. In some cases where herbicide is employed, no brush maintenance is required during the next maintenance cycle as low growing vegetation flourishes and impedes the regrowth of trees and brush.</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
			<p>As part of our work planning process, Hydro One staff complete a species at risk assessment for each maintenance project in addition to identification of any Water Source Protected areas or any known archeological areas of concern. They follow product label directions when determining buffers to potable water wells, Municipal well head or water intake, and/or surface water features and wetlands. In most cases Hydro One utilizes more conservative setbacks than what product labels indicate. Additionally, Hydro One staff follow all provincial and federal legislation (including, but not limited to Canada's <i>Migratory Bird Convention Act</i>, Ontario's <i>Endangered Species Act</i>, Ontario's <i>Fish and Wildlife Conservation Act</i>, Ontario's <i>Invasive Species Act</i>), and make all reasonable efforts to comply with the legislation in extreme circumstances if vegetation compromises the integrity of the system.</p> <p>Hydro One does not take the application of herbicides lightly, application is kept to a minimum and spraying is localized to each specific stem and not widespread.</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
<b>ibid. p 7-278</b>	“Where incompatible vegetation must be removed (e.g., hedgerows), there areas will be restored with compatible vegetation (e.g., shrubs) in discussion with landowners.”	<p>Compatible vegetation should consist of native plant species sourced from the local area. Hydro One should consider including, among others, species such as:</p> <ul style="list-style-type: none"><li>• Baakwaanaatig (Staghorn sumac)</li><li>• Miskwaabiimizh (Red osier dogwood, Alternate leaved dogwood)</li><li>• Pawpaw</li><li>• Wadoop (Speckled Alder)</li><li>• Bagaaniminzh (American Hazelnut)</li><li>• Dwarf Hackberry</li><li>• Arrow leaf aster</li><li>• Butterfly Milkweed</li><li>• Canada wild rye</li><li>• Wayaabanaagwak (Lead plant)</li><li>• Native thistle</li><li>• Mashkodewashk (Prairie sage)</li><li>• Mayaawadikwayaapin (Smooth aster)</li></ul> <p>CFN Environment and Consultation Department (ECD) requests that HONI create and share a list of suggested native species with ECD prior to the discussions with landowners.</p>	<p>Thank you for the comment and input provided therein on native plant species of interest to CFN.</p> <p>For overhead transmission lines, compatible species are those that will not reach a height at maturity greater than 3 m, and as such will not pose a risk to the safe and reliable operation of the overhead conductors. We have attached our commonly used list of plant species compatible with overhead transmission lines, noting that this list is not necessarily all-inclusive and there may be opportunities to incorporate other native species that are compatible with overhead transmission lines (i.e. max height of 3 m). We also note that many of the species listed by CFN are indeed compatible with overhead transmission lines and are often planted or seeded on our transmission corridors, such as the shrub dogwoods, asters, butterfly milkweed, Canada wild rye etc.</p> <p>Hydro One and its contractors generally attempt to source local plant material where possible (i.e., dependent on availability) and if CFN is aware of any particular native plant nurseries or seed producers in the region we would be happy to consider those vendors for the SCTL project.</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
<b>ibid. p 7-278</b>	“Additional mitigation measures include:...”	<p>Consider the section detailing the proposed restoration and offset activities, as there is no reference to mitigation measures for the loss of 10.53 hectares of incompatible vegetation within the transmission line ROW.</p> <p>Please provide these mitigation measures to the ECD.</p>	<p>While the total vegetation removal tally is first presented on page 7-278 as referenced in the comment, additional mitigation measures and commitments specific to natural areas and habitats are discussed in greater detail in following sections of the draft ESR (e.g., <b>Section 7.7</b>) and in <b>Table 7-1</b>.</p> <p>In addition to mitigation measures such as retaining compatible vegetation within the new ROW to the extent practical, maintaining overland flow patterns, utilizing constructed access and measures to mitigate the inadvertent spread of invasive species, the post-construction restoration of the ROW requiring vegetation removal will involve the planting of compatible native shrubs and forbs. While Hydro One understands that this will still result in a long-term transition of these areas from forest communities to shrub thicket/meadow or other low-growing plant communities, we plan to offset this net effect through the implementation of a Biodiversity Initiative to create and enhance habitats in the region.</p>
<b>ibid. p 7-282</b>	“A Stage 2 Archaeological Assessment is required for the technically preferred route, for all lands exhibiting archaeological potential that have not been previous assessed.”	CFN Environment and Consultation Department expects opportunities for participation and funding via standard CFN procedures and rates for Stage 2 AA fieldwork, similar to other HONI projects to date.	Hydro One has begun the Stage 2 Archaeological Assessment for the project, and CFN has and will continue to be invited to participate in this program and any subsequent Archaeological Assessment field surveys as required.

Reference Section	Text Example	Comments from CFN	Hydro One Response
<b>ibid. p 7-284</b>	“Where and when future development projects or initiatives are proposed to occur along or within the ROW for the Project, Hydro One will apply its existing processes to review and facilitate these future developments, including compatible uses within the transmission line ROW.”	<p>How can Hydro One adapt its existing processes to include the designation of current or future natural heritage features within the ROW into local Official Plans, especially in the County of Lambton, Township of St. Clair and the Municipality of Chatham-Kent?</p> <p>CFN ECD emphasizes that there is significant potential for preserving and rehabilitating the ROW of transmission line projects, designating these lands as 'natural heritage' to advance land-based conservation objectives. This approach aligns with the goal of ensuring Indigenous peoples' access to land in southwestern Ontario.</p>	<p>New transmission line ROWs are primarily secured through easement agreements with landowners; therefore, while Hydro One registers on title the legal rights to own and operate the transmission corridor and associated assets, the land in question is still private property and Hydro One retains limited control over land use changes (such as naturalization vs continued use as active agricultural lands) beyond what is required to ensure safe and reliable operation of the transmission system. While there may be some isolated exceptions where Hydro One retains greater control over the corridor lands, any changes to current land use must also consider the immediately surrounding landscape and land uses.</p> <p>Similarly, Hydro One does not have any direct influence on Municipal Official Plans or revisions therein, beyond those related directly to our mandate to transmit and distribute electricity. While we may be able to contribute data and information collected (such as natural environment surveys conducted during EA) to the regional knowledge base, and to help inform future Municipal planning processes and decisions, we cannot unilaterally designate natural heritage features or areas beyond those classifications as presented in the ESR and supporting Natural Environment Existing Conditions report.</p> <p>Where opportunities exist to identify lands that are within Hydro One’s control and would be suitable for ecological restoration activities, we are happy to investigate these opportunities and welcome the involvement of CFN in any resulting naturalization projects that may arise.</p>



Reference Section	Text Example	Comments from CFN	Hydro One Response
ibid. p 7-290	“Equipment will be inspected regularly during construction to ensure it is clean and free of leaks; ...”	<p>CFN ECD desires a clearer understanding of the party responsible for conducting inspections during construction and maintenance activities.</p> <p>Additionally, ECD would appreciate information on the reporting process for these inspections and whether we will have access to daily and/or monthly reports.</p> <p>There may be an opportunity to include CFN field staff or the community to build these skills and observe these processes.</p>	<p>Throughout construction, environmental monitoring will be conducted on a regular basis by Environmental staff from both the EPC contractor and Hydro One. Day-to-day Environmental monitoring and equipment inspections will be the responsibility of Forbes staff, as they will maintain control of the work areas (Notice of Project) and will have a constant presence on site. EPC environmental monitoring will be conducted by qualified staff with regular reports and documentation provided to Hydro One for review. Additionally, Hydro One Environmental Services staff will also undertake regular periodic environmental monitoring site visits throughout construction, and will also employ a Site Inspector who will be on site on a day-to-day basis to oversee work activities and progress.</p> <p>We are open to sharing monthly environmental monitoring reports (which in turn will include the associated daily reports for that month) with communities upon request.</p> <p>More information will be shared to CFN in the upcoming Environmental Management Plan which will be prepared by Forbes and shared with the community for review prior to construction.</p> <p>We thank CFN for expressing interest in participating in environmental monitoring during construction of the Project. With regards to environmental monitoring during construction, in the interest of prioritizing the safety of all parties it has not been Hydro One’s historic practice to invite external monitors onto active construction sites. However, in recognition of the interest expressed by CFN in monitoring during construction, Hydro One will work with its construction contractor to identify opportunities to safely involve CFN staff in environmental monitoring during construction, including opportunities for training and skills development as they may arise.</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
<b>ibid. p 7-290</b>	“SCRCA, the LTVCA and/or the Township of St. Clair, County of Lambton and Municipality of Chatham-Kent will be consulted in order to undertake the proper action for managing the potential threats to source water protection areas.”	<p>Please provide actions for managing the potential threats to source water protection areas for CFN ECD’s review and feedback.</p> <p>Caldwell First Nation has never relinquished title or jurisdiction over the waters. Therefore, CFN maintains the right to consultation and consent regarding management actions aimed at safeguarding source water protection areas.</p>	<p>Mitigation measures for work within Source Water Protection areas are described in <b>Section 7.7.5</b> and <b>Table 7-1</b> of the draft ESR.</p> <p>For the Source Water Protection Plans traversed by the SCTL project, there are no policies to which the long-term operation of transmission corridors would contravene. As such, mitigation measures are focused on potential effects during construction and maintenance activities, such as the location of construction refueling areas and spill prevention and response measures.</p> <p>Additional details and site-specific measures will be developed by the EPC contractor (Forbes Bros) as detailed design and construction planning continues. These detailed measures will adhere to the commitments and general measures outlined in the ESR and will be documented in the project specific EMP, which will be shared with Indigenous communities prior to construction.</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
<b>ibid. p 7-291</b>	“With the implementation of the mitigation measures described above, waste generated by the proposed Project is not anticipated to have a long-term net effect.”	<p>Does Hydro One track waste generated by its proposed projects, including waste produced by third-party contractors?</p> <p>Has Hydro One ever contemplated the possibility of waste management carbon offsets for the waste generated by its proposed projects, including waste produced by third-party contractors? If Hydro One tracked waste, which it should be doing on a project basis, including the waste generated by its contractors, it could quantify its carbon emissions by placing project-generated waste into a landfill. Using that quantifiable data, it could fund an offset project (e.g., ecological restoration within the Treaty territory) to compensate for waste impacts.</p>	<p>The management of waste is the responsibility of the EPC Contractor, Forbes Bros for the Project, including recording of all wastes generated, transported and disposed. This will be provided to Hydro One on a monthly basis for review. The exception is the management of hazardous materials, for which Hydro One is more involved directly.</p> <p>Forbes Bros has committed to making all efforts to minimize waste generated from construction operations. Including efforts taken to reuse and/or recycle materials, where feasible. They also plan to implement a recycling program for domestic materials in order to minimize waste throughout the site. The EPC Contractor will be preparing a waste management and disposal plan as part of their Environmental Management Plan which will be available to CFN for review prior to construction.</p> <p>As noted above, we have committed to implementing a Biodiversity Initiative for the SCTL project which will fund habitat creation and enhancement projects within the region, and these projects will also result in carbon sequestration benefits, as noted by CFN.</p>
<b>ibid. p 7-292</b>	“Idling of construction vehicles and equipment will be kept to a minimum and GPS or other navigational tools will be utilized to optimize routing to reduce fossil fuel emissions.”	CFN ECD is pleased to hear that idling will be minimized. What other strategies will Hydro One employ during severe and/or extreme weather events to reduce idling of vehicles and equipment?	Hydro One’s first priority during severe and/or extreme weather events will be on the safety of the crews. Idling and the reduction of fossil fuels will be emphasized at all opportunities in which the crew can safely do so.
<b>ibid. p 7-295</b>	“Replant with compatible vegetation (e.g., shrubs and native seed mix) as required;...”	<p>Hydro One should review its seed sources to ensure that the seeds are being sourced from local populations and not being sourced from abroad.</p> <p>Where possible, Hydro One should use Indigenous owned and operated operations for sourcing vegetation.</p>	Hydro One will work with its construction contractor to prioritize the procurement of locally sourced seed and plant stock. If CFN staff are aware of any local indigenous owned/operated nurseries or seed producers, we are happy to consider them.

Reference Section	Text Example	Comments from CFN	Hydro One Response
<b>ibid. p 7-296</b>	“Existing, natural drainage patterns and flows will be identified and maintained to the extent practical;...”	CFN ECD would like to gain a clearer understanding of the party and/or individual(s) responsible for identifying existing, natural drainage patterns and flows before the installation of access roads.	As part of their preparation and planning for construction activities, the EPC contractor will be further determining site-specific conditions and features in order to inform their construction plans (such as locations of access, equalization culverts etc.). Noting that the landscape traversed by the SCTL project is generally very flat and heavily modified with regards to surface water drainage (e.g., through the installation of agricultural tile drainage, municipal drains and other associated infrastructure), input from property owners and farmers may be an important source of information in this regard. Should surface drainage issues arise from constructed access during construction, these will be noted and corrected (e.g., install additional equalization culverts or similar) on an as-needed basis.
<b>ibid. p 7-297</b>	“Construction water will be discharged in compliance with permits and/or approvals from MECP and the County of Lambton, Township of St. Clair, and Municipality of Chatham-Kent, and required;...”	<p>Why does Hydro One not include approvals and/or consent from First Nations governments?</p> <p>CFN ECD would like to reiterate that Caldwell maintains jurisdiction over its territory, particularly the Project Area, and bears the responsibility for the stewardship of the lands, waters, and all aspects of Creation.</p>	<p>Hydro One acknowledges and respects Caldwell First Nation’s commitment to stewardship of the shared territory on which the transmission line will be constructed. We recognize the obligations industry has in Reconciliation with Indigenous people, and will be guided by the evolving legal obligations, engagement, and consultation. It remains our goal to achieve the agreement and support of the engaged Indigenous communities.</p> <p>To that end, as noted above, Hydro One will commit to sharing the draft EMP with CFN for review prior to construction; the EMP will include the detailed site-specific environmental mitigations and plans for the project, which also form the basis for many permit applications (e.g., Conservation Authority permits for work within CA regulated areas).</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
<b>ibid. p 7-297</b>	<p>“A construction water management plan will be developed prior to construction and implemented appropriately (e.g., passing discharge water through a filter bag or drum before discharge to the environment to capture sediment and slow down the water velocity, etc.), as required;...”</p>	<p>Please provide CFN ECD with the construction water management plan for review and feedback.</p> <p>Additionally, it should be stated as a requirement, not listed as "as required."</p>	<p>As noted above, Hydro One will commit to sharing the draft EMP with CFN for review prior to construction; the EMP will include the detailed site-specific environmental mitigations and plans for the project, including plans regarding handling and discharge of construction waters.</p> <p>It should be noted that Hydro One plans to utilize helical screw pile foundations for the St. Clair TL project; helical screw pile foundations do not require open excavations and as such do not require dewatering during construction, so the need for construction water management is anticipated to be at most very limited and isolated to certain areas, which was why this was stated as ‘as required’ in the draft ESR. However, as the EMP will speak to construction water management regardless, we agree that this phrase can be removed in this section and will make this change in the final ESR.</p>
<b>ibid. p 7-297</b>	<p>“Where practical, discharge of construction waters is to occur at least 30 m away from sensitive receptors (e.g., watercourses, wetlands, etc.). If discharge of construction waters must occur within 30 m of a watercourse or wetland, additional erosion and sediment controls will be utilized.”</p>	<p>If there is a need to discharge construction waters within 30 meters of a watercourse or wetland, Hydro One should obtain CFN's consent and collaborate with CFN ECD to assess additional erosion and sediment control measures before initiating the discharge of construction waters.</p>	<p>As noted above, Hydro One is committed to sharing the draft EMP with CFN for review prior to construction and will respond to and collaborate to address specific concerns; the EMP will include the detailed site-specific environmental mitigations and plans for the project, including plans regarding handling and discharge of construction waters.</p> <p>It should be noted that Hydro One plans to utilize helical screw pile foundations for the SC TL project; helical screw pile foundations do not require open excavations and as such do not require dewatering during construction, so the need for construction water management is anticipated to be very limited.</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
ibid. p 7-298	“To avoid or minimize potential adverse effects of Project infrastructure within SCRCA/LVTCA regulated lands on surface water quantity, the following mitigation measures would be implemented: ...”	As stated previously, the reader should be guided to the section detailing the proposed restoration/offsetting activities, as there is no reference to mitigation measures for impacted SCRCA/LTVCA lands.	While <b>Section 7.7.4</b> of the draft ESR describes some of the mitigation measures that may be applicable to CA regulated areas with regards to surface water, other subsections of <b>Section 7</b> also contain measures that may apply to CA regulated areas, depending on the specific features of the lands in question and adhering to the general mitigation measures and commitments outline din the ESR. Permits will be obtained from the relevant CAs for works within their regulated areas. Restoration measures will be developed closer to implementation of the restoration works, generally with the goal of returning the lands in question to pre-construction conditions. Habitat offsetting will be conducted through the aforementioned Biodiversity Initiative, which (similar to CA permit applications) will be implemented after completion of the EA.
ibid. p 7-300	“An ESC plan will be developed prior to construction and ESC measures will be identified and implemented as required.”	Please provide CFN ECD with the ESC plan for review and feedback.	Erosion and Sediment Control (ESC) plans will be included in the project-specific EMP that will be distributed to CFN prior to construction.



Reference Section	Text Example	Comments from CFN	Hydro One Response
ibid. p 7-300	“Areas with high erosion potential will be identified and avoided, where possible;...”	CFN ECD would like to gain a clearer understanding on the party responsible for identifying areas with high erosion potential to support site preparation and earthwork activities.	<p>The EPC contractor will ultimately be responsible for early identification of existing conditions that require site-specific management, such as areas of erosion concern, as they complete the detailed designs and construction plans such as the EMP. Given the generally flat topography and extensive drainage infrastructure (agricultural tiles and municipal drains), areas of erosion concern are anticipated to be generally limited across the Project area, most likely associated with watercourse or municipal drain banks.</p> <p>To date, no erosion/sloughing or unstable banks have been observed during aquatic habitat field surveys as noted in the Natural Environment existing conditions report (included in Appendix C of the draft ESR), however we understand that such areas may yet be identified through further site investigations and consultation with property owners/local farmers/conservation authorities or municipal staff etc.</p> <p>Both the EPC contractor and Hydro One staff will make note of any areas of developing or previously unnoticed erosion concern as observed during construction monitoring, to adapt construction plans as necessary.</p>



Reference Section	Text Example	Comments from CFN	Hydro One Response
ibid. p 7-300	“ESC measures will be regularly inspected, including after each significant [>10 mm] rainfall event, and repaired where necessary to maintain functionality.”	As previously indicated, CFN ECD requests a clearer understanding on the party responsible for inspecting ESC measures following significant rainfall events.	Throughout construction, environmental monitoring, will be conducted on a regular basis by Environmental staff from both the EPC contractor (Forbes Bros., for the St. Clair TL project) and Hydro One. Day-to-day Environmental monitoring, including inspections of ESC measures following significant rainfall events will be the responsibility of Forbes staff, as they will maintain control of the work areas (Notice of Project) and will have a constant presence on site. EPC environmental monitoring will be conducted by qualified staff with regular reports and documentation provided to Hydro One for review. Additionally, Hydro One Environmental Services staff will also undertake regular periodic environmental monitoring site visits throughout construction, and will also employ a Site Inspector who will be on site on a day-to-day basis to oversee work activities and progress.
ibid. p 7-301	“Remediate spills/leaks as soon as possible upon identification and notify the MECP SAC as required; ...”	CFN ECD expects a notification of any spills/leaks in tandem with the MECP.  In addition, please provide a cleanup plan and seek CFN consultation on it as situations emerge. In some situations, CFN ECD may deploy a Land Guardian to participate in and oversee the cleanup and restoration of an area.	As described in <b>Section 7.7.1.2</b> and <b>Table 7-1</b> of the Draft ESR, a project-specific spill prevention and response plan will be developed and maintained by the EPC contractor (Forbes Bros) and be readily accessible at all times during construction, along with equipment such as spill kits. These plans will form part of the project-specific EMP that Hydro One has committed to sharing with CFN for review prior to construction.  Spills will be addressed and remediated as soon as possible. Clean-up and the disposal of contaminated materials will be managed in accordance with provincial regulations and guidelines. We are open to sharing monthly environmental monitoring reports (which in turn will include the associated spill reporting for that month) with communities upon request.

Reference Section	Text Example	Comments from CFN	Hydro One Response
ibid. p 7-301	“Consult with SCRCA and the LTVCA and/or the County of Lambton, Township of St. and Municipality of Chatham-Kent during detailed design and construction planning on Project-specific mitigation measures.”	Please explain why Hydro One omit consultation with First Nations governments during the detailed design and construction planning regarding project-specific mitigation measures related to construction and maintenance activities that affect designated surface water Intake and Wellhead Protection Areas, as well as Significant Groundwater Recharge Areas.	As noted above, Hydro One is committed to sharing the draft EMP with CFN for review prior to construction; the EMP will include the detailed site-specific environmental mitigations and plans for the project.
ibid. p 7-304	<p>“Where necessary, a hydrogeological assessment will be conducted to inform construction planning, permitting and management.</p> <p>The effects of any dewatering activities during construction are expected to be temporary, and groundwater levels and flows are expected to return to pre-construction conditions following the construction period.”</p>	<p>Prior to commencing construction, it is imperative to conduct a comprehensive hydrogeological assessment to provide essential insights for construction planning, permitting, and management.</p> <p>The Project is situated within the St. Clair Clay Plain, which is a regional aquitard characterized by very low groundwater flow, leading to reduced recharge of deep aquifers. Given this context, Hydro One must acquire a thorough understanding of the geological and hydrogeological characteristics of the area before installing transmission line foundations to ensure that groundwater levels can gradually recover to their pre-dewatering levels.</p> <p>Additionally, ongoing monitoring and adaptive management measures should be put in place to effectively address potential impacts of dewatering on groundwater. In relation to monitoring, CFN ECD seeks clarification on the responsible party for assessing groundwater levels post-installation.</p> <p>CFN may be in a position to deploy a specialist field staff to attend these types of assessments, so this should be a conversation in the New Year.</p>	<p>Hydro One and our contractors are undertaking a geotechnical program to support the civil (foundation) design for the new transmission line towers. Based on the information gathered to date, we are able to commit to utilizing helical screw pile foundations, which do not require open excavation or construction dewatering, and will remain several metres above the Kettle Point Shale contact aquifer, and as such will not affect the recharge of the deeper aquifer.</p> <p>For these reasons, we do not anticipate any significant adverse effects to groundwater quality or quantity as a result of this project, and we do not anticipate the need for a dedicated groundwater monitoring program.</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
ibid. p 7-305	“East Lake St. Clair Important Bird Area”	Please demonstrate how the proposed mitigation measures comply with the <i>Migratory Birds Convention Act</i> and applicable regulations.	<p>The <i>Migratory Birds Convention Act (MBCA)</i> prohibits and regulates activities that would capture, kill, take, injure or harass a migratory bird or their nest or eggs. Compliance with the MBCA is a proponent driven process whereby potential effects of an activity on species protected under the MBCA are assessed. Mitigation measures described in <b>Section 7.7.7</b> and <b>7.7.8</b> of the draft ESR describe the measures that Hydro One and its EPC contractor will take to reduce and/or avoid such outcomes. This is consistent with Environment and Climate Change Canada’s (ECCC) guidelines to avoid harm to migratory birds.</p> <p>Additional project- and site-specific details and plans will be documented in the EMP which as per above, Hydro One has committed to sharing with CFN for review prior to construction.</p>
ibid. p 7-306	“Although vegetation clearing for the new transmission line will not represent a complete removal of vegetation on the new ROW, it will result in changes in vegetation composition within an existing woodland community...”	<p>CFN Environment and Consultation Department requests Hydro One facilitate a walk through the ROW with representatives from interested local First Nation communities prior to vegetation clearing.</p> <p>During which, the representatives from the community may indicate specific individuals that once cut down would still serve a traditional or medicinal use.</p> <p>While leaving cut felled beings provides essential habitat in ecosystems, any large trees or shrubs that have medicinal or traditional uses should be given to communities.</p>	<p>Hydro One would be amenable to arranging pre-construction walkthroughs of areas of interest to Indigenous communities.</p> <p>It must be noted that the majority of the new RoW is anticipated to remain private property (with Hydro One obtaining easement rights for the construction and operation of the transmission line) and as such, felled merchantable timber may also be of interest to the property owner. However, we remain open to conducting these walkthroughs and continuing discussions on any salvageable specimens or materials, subject to any applicable federal or provincial legislation and regulations.</p>
ibid. p 7-307	“Woodlands disturbed during construction will be restored following completion of construction with compatible native species (e.g., native seed mix and shrub stock).”	Again, Hydro One should review its seed sources to ensure that the seeds are being sourced from local populations and not being sourced from abroad.	Hydro One and its contractors generally attempt to source local plant material where possible (i.e., dependent on availability) and if CFN is aware of any particular native plant nurseries or seed producers in the region we would be happy to consider those vendors for the St. Clair project.

Reference Section	Text Example	Comments from CFN	Hydro One Response
ibid. p 7-307	“Hydro One further commits to supporting Indigenous Communities with land use planning initiatives, including traditional plant rehabilitation efforts.”	<p>CFN Environment and Consultation Department requests Hydro One share, with consent of both parties, the success of previous initiatives with other Indigenous communities. Hydro One should continue to engage with CFN with regards to these opportunities.</p> <p>Additionally, CFN ECD requests that all rehabilitation plans for the impacted woodlots be shared.</p>	<p>Hydro One staff are happy to continue this discussion with CFN, and will continue to engage CFN on opportunities within the region. Specific to the St. Clair project, the upcoming Biodiversity Initiative is one such opportunity for CFN participation.</p> <p>Hydro One and the EPC contractor will share draft plans for post-construction restoration of natural areas for CFN review, prior to undertaking the work.</p>
ibid. p 7-308	“One PSW, Bickford Oak Woods Wetland Complex, was observed within the PSA associated with the proposed Project. The wetland units observed during ELC investigations may meet criteria for significance under the Natural Heritage Reference Manual (NHRM; 2010) and OWES (MNRF, 2022) as they have the potential to provide biological, hydrological, and special feature components.”	<p>CFN Environment and Consultation Department underscores that a Provincially Significant Wetland (PSW) like the Bickford Oak Woods (BOW) Wetland Complex encompasses biological, social, hydrological, and special feature components, as evaluated through the Ontario Wetland Evaluation System (OWES). Additionally, data from the Natural Heritage Information Center (NHIC) confirms the PSW status of the BOW Wetland Complex. Therefore, it cannot be assumed that the wetland merely has the "potential to provide biological, hydrological, and special feature components," as indicated in the draft ESR.</p> <p>In light of this information, Hydro One must avoid any impact on the wetland. Furthermore, Hydro One should procure the results of the previously conducted wetland evaluation at the BOW Wetland Complex site to accurately delineate the wetland boundaries before initiating construction of the tower and access roads.</p>	<p><b>Section 7.7.7.6</b> (Provincially Significant Wetlands) confirms that the Bickford Oak Woods Wetland Complex (PSW) is located within the PSA.</p> <p>The following statement “The wetland units observed during ELC investigations may meet criteria for significance... as they have the potential to provide biological, hydrological, and special feature components.” is implying that other wetland units identified during ELC may also meet criteria for significance under OWES given that wetland evaluations were not part of the Class EA. The final ESR will be revised to make this distinction more clearly.</p> <p>In addition to the above, the Bickford Oak Woods Conservation Reserve and associated Clay Creek Woodland ANSI, which represent the largest contiguous patch of the PSW complex, are avoided by the preferred route 2 and this was an important factor in the evaluation of the route alternatives. Similarly, known PSW as informed by NHIC data (including the Bickford Oak Woods complex) were also an important consideration in the evaluation of the route alternatives. However, given that the transmission needs to terminate at the Lambton TS (resulting in convergence of all of the route alternatives and in the vicinity of the Bickford Oak Woods complex), other patches of the complex could not be avoided entirely and were</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
			<p>traversed in some manner by all five of the viable route alternatives identified. Several existing transmission lines also traverse smaller patches of the PSW in this area for the same reason (termination at the Lambton TS). <b>Section 7.7</b> and the subsections within describe a variety of mitigation measures to address aspects of the natural environment, many of which will be applied to the patches of the Bickford Oak Woods PSW and other wetlands traversed by the project.</p> <p>It should be noted that recent changes to OWES, considers closely grouped wetlands (&lt; 30 m apart) but no longer recognizes wetland complexes. Closely grouped wetlands and/or single wetland units that are part of a previously evaluated wetland complex can be re-evaluated. Nonetheless, in the route evaluation and Class EA, we have considered these patches as part of the PSW complex. As noted in the comment, wetland boundaries will be clearly delineated (and documented for construction crews in the EMP) prior to construction.</p>
<b>ibid. p 7-309</b>	<p>“Hydro One will undertake a Biodiversity Initiative to offset habitat loss that cannot otherwise be avoided or mitigated. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes in consultation with SCRCA, LTVCA, Indigenous communities and other interested groups.”</p>	<p>While the Biodiversity Initiative is a step in the right direction for mitigation of habitat loss, the specifics provided by Hydro One are vague.</p> <p>It is understandable that some measurable initiatives aren’t established at this point, but there are certain commitments such as compensation rations that can be made. CFN ECD requests Hydro One shares specific, measurable initiatives that will be taken and what compensation ratio will be implemented. Additionally, there should be monitoring measures for the initiative to determine its effectiveness. If so, CFN ECD requests participation, where possible, in the monitoring and that the results be shared with local First Nation communities.</p>	<p>The Biodiversity Initiative for the St. Clair Transmission Line project will be similar to those that Hydro One has undertaken for past projects, including the Initiative currently underway to support the Chatham to Lakeshore project.</p> <p>Through the Biodiversity Initiative, Hydro One does not identify and conduct offset projects (habitat creation and enhancement works) directly, but rather seeks to fund habitat projects that are planned and will be implemented by other organizations, but require funding to implement. These opportunities are sought via an open call for Letter of Interest (LOI) submissions, which are then evaluated by Hydro One on the basis of the ecological benefits, value-added factors and cost to implement. Selected projects are then implemented by the submitting organization subsequent to entering into a funding agreement with Hydro One. In this way, the ecological benefits from the offset projects can be</p>



Reference Section	Text Example	Comments from CFN	Hydro One Response
			<p>directly compared to the habitat effects from the project, and rather than utilize a simple area ration, Hydro One has committed that through the Biodiversity Initiative, the St. Clair TL project will not result in a net loss of habitat value in the regional and where possible, will result in a net gain.</p> <p>As Hydro One’s focus is first and foremost on the environmental management and planning of projects works (such as route selection, environmental permits and approvals and the development of detailed Environmental Management Plans for construction), habitat offsets such as the Biodiversity Initiative are typically implemented a bit later in the project life cycle, following completion of the Class EA. CFN will be kept informed of any updates and progress on the Biodiversity Initiative for the St. Clair TL project, and will have opportunities to participate via the submission of LOI. We would also note that opportunities for participation extend not only to CFN as the sole submitter of one (or several) LOIs, but also include opportunities for CFN to participate via partnership or joint submission with other organizations.</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
ibid. p 7-311	“For the most part, sensitive resident animals can relocate temporarily to nearby habitats through flight or via existing corridors (e.g., fencerows, watercourse riparian areas, etc.) to seek shelter as a mechanism to avoid noise and disturbance associated with construction activities and return after construction completion.”	It is true that sensitive resident animals can relocate temporarily to nearby habitats to seek shelter during construction activities, though it is essential to acknowledge that in the context of southwestern Ontario, the cumulative impact of various development and construction projects over time (without CFN’s consent) has significantly reduced the availability of viable habitats for these animals. This cumulative impact has led to a situation where suitable habitats have become sparse, making it increasingly challenging for wildlife to find safe refuge during construction and ensuring their long-term survival. Therefore, it is crucial to consider habitat conservation and restoration efforts alongside construction activities to mitigate the adverse effects on local wildlife populations in the region.	The statement in question in the draft ESR was never meant to pre-empt the avoidance, mitigation and restoration measures that Hydro One has committed to for this project. It was meant to provide additional context to the reader as to the mechanisms of interaction between wildlife and temporary disturbance from construction activities. We do acknowledge that the cumulative development in southwestern Ontario has resulted in the outcomes described by CFN, and we will further acknowledge this in the final ESR.
ibid. p 7-312	“In the event in-water works are required to support the construction of potential watercourse crossings, necessary permits and approvals from MECP, Conservation Authorities and DFO would be obtained before the commencement of work.”	Why does Hydro One not seek approvals and/or consent from First Nations governments before commencing work, particularly if it has the potential to impact a constitutionally protected treaty right?	Hydro One acknowledges and respects Caldwell First Nation’s commitment to stewardship of the shared territory on which the transmission line will be constructed. We recognize the obligations industry has in Reconciliation with Indigenous people, and will be guided by the evolving legal obligations, engagement, and consultation. It remains our goal to achieve the agreement and support of the engaged Indigenous communities.  Hydro One intends to continue the consultation work that has been underway prior to and throughout the EA process.



Reference Section	Text Example	Comments from CFN	Hydro One Response
ibid. p 7-315	“Should SAR bat and/or SAR snake habitat be confirmed in association with the proposed Project transmission line ROW, the MECP will be consulted to determine if the aforementioned mitigation measures are sufficient or if permits are required through the ESA.”	Why does Hydro One exclude consultation with First Nations governments when assessing the adequacy of proposed mitigation measures if confirmed SAR bat and/or SAR snake habitats are associated with the proposed Project transmission line right-of-way (ROW)?	Indigenous communities will continue to be consulted on the detailed environmental mitigation plans, including for Species at Risk, as detailed construction mitigation plans are developed. This will be accomplished through the aforementioned opportunities to review the EMP (which will include plans for SAR avoidance and mitigation measures where they are required) prior to construction, as well as offers to hold regular updates and meetings to discuss the progress and plans for the Project.
ibid. p 7-316	“If avoidance of SAR and/or SAR habitat is not possible, MECP, ECCC/CWS and/or DFO will be consulted in advance of construction to discuss detailed mitigation measures and or/assess the need for permitting/approvals under the ESA, SARA or the <i>Fisheries Act</i> .”	<p>CFN ECD is to be consulted in advance of construction to discuss detailed mitigation measures and/or assess the need for permitting/approvals under the ESA, SARA or the <i>Fisheries Act</i>.</p> <p>Separately, CFN requests to be notified of SAR encounters during construction activities via the Environment and Consultation Department (e.g. ECD Manager and Land Guardian).</p>	<p>Indigenous communities will continue to be consulted on the detailed environmental mitigation plans, including for Species at Risk, as detailed construction mitigation plans are developed. This will be accomplished through the aforementioned opportunities to review the EMP (which will include plans for SAR avoidance and mitigation measures where they are required) prior to construction, as well as offers to hold regular updates and meetings to discuss the progress and plans for the Project.</p> <p>Incidental SAR encounters during work (and measures taken to avoid any harm to the specimens) will be documented in monthly reporting and can be shared with CFN upon request.</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
ibid. p 7-316	N/A	<p>Was the Bickford Oak Woods Wetland Complex assessed as potential habitat for SAR species?</p> <p>A review of the Bickford Oak Woods on the Key Biodiversity Areas Canada (KBA Canada) website confirms the presence of the following species:</p> <ul style="list-style-type: none"><li>• Swamp Cottonwood;</li><li>• Black Ash;</li><li>• Butler’s Gartersnake;</li><li>• Cerulean Warbler;</li><li>• Erect Carrion-flower;</li><li>• Shumard Oak;</li><li>• Spoonleaf Moss;</li><li>• Tufted Titmouse;</li><li>• Wood Thrush; and,</li><li>• Striped Whitelip.</li></ul> <p>According to KBA Canada, the site was assessed on 2022-09-21</p>	<p>The Bickford Oak Woods PSW complex was assessed as potential SAR habitat for several SAR species, and was considered as such through the Class EA process. The Bickford Oaks Wood Conservation Reserve, which is also part of the Clay Creek Woodland Area of Natural and Scientific Interest are avoided by route alternative 2.</p> <p>Additional information and mapping can be found in the Natural Environment Existing Conditions report, contained in Appendix C of the draft ESR.</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
ibid. p 7-317	"Utilizing native plant species during construction restoration;..."	<p>While CFN ECD endorses the planting of native species during construction restoration, it's essential to remove and/or treat invasive plant species to enable the establishment of native plant species. Without this intervention, native plant species might struggle to compete with invasives and thrive in the restored area.</p> <p>Additionally, in cases where native plant species are planted during construction restoration, please inform us as to who is responsible for conducting monitoring inspections to assess the successful establishment of these native plants in the restored area.</p>	<p>We appreciate CFN's comment on the importance of managing invasive species. With regards to transmission construction projects, Hydro One's focus is generally foremost on avoiding or mitigating the inadvertent spread of invasive species, as described in the draft ESR. Invasive species removal and control within transmission ROWs are often made difficult by the fact that Hydro One's control is limited to the ROW itself, and as such any populations of invasive species on the same property but beyond the ROW boundaries, or on adjacent properties/nearby roadside ditches, will often serve to reintroduce the species and counteract these (often significant) control and removal efforts. There may be situations where small, isolated or newly establishing populations or stands of invasive species located entirely within the boundaries of the ROW may be practical to control and may be pursued for removal, but this will not be the case in many situations.</p> <p>For post-construction restoration of natural areas, we will seek to establish communities of compatible, native vegetation on the ROW as noted in the ESR. These restoration efforts will be the responsibility of the EPC contractor (Forbes Bros., who may in turn outsource this task and subsequent monitoring to a specialized firm) and these details will be captured in post-construction restoration plans which will be shared with CFN for review prior to implementation.</p>
ibid. p 7-318	"Following completion of the Class EA and OEB Leave-to-Construction processes, Hydro One will engage with interested parties to discuss the implementation of the biodiversity initiative for the Project."	<p>CFN ECD echoes previous questions and concerns in regard to the Biodiversity Initiative and requests that planning and implementation efforts be shared with First Nation communities.</p> <p>CFN ECD is interested in participating in the Biodiversity Initiative, as well as receiving appropriate capacity funding to meaningfully participate.</p>	<p>As noted above, the Biodiversity Initiative for the St. Clair Transmission Line project will be similar to those that Hydro One has undertaken for past projects, including the Initiative currently underway to support the Chatham to Lakeshore project.</p> <p>Through the Biodiversity Initiative, Hydro One does not identify and conduct offset projects (habitat creation and enhancement works) directly, but rather seeks to fund habitat projects that are planned and will be implemented by other organizations, but require</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
			<p>funding to implement. These opportunities are sought via an open call for Letter of Interest (LOI) submissions, which are then evaluated by Hydro One on the basis of the ecological benefits, value-added factors and cost to implement. Selected projects are then implemented by the submitting organization subsequent to entering into a funding agreement with Hydro One. In this way, the ecological benefits from the offset projects can be directly compared to the habitat effects from the project, and rather than utilize a simple area ration, Hydro One has committed that through the Biodiversity Initiative, the St. Clair TL project will not result in a net loss of habitat value in the regional and where possible, will result in a net gain.</p> <p>As Hydro One’s focus is first and foremost on the environmental management and planning of projects works (such as route selection, environmental permits and approvals and the development of detailed Environmental Management Plans for construction), habitat offsets such as the Biodiversity Initiative are typically implemented a bit later in the project life cycle, following completion of the Class EA. CFN will be kept informed of any updates and progress on the Biodiversity Initiative for the St. Clair TL project, and will have opportunities to participate via the submission of LOI. We would also note that opportunities for participation extend not only to CFN as the sole submitter of one (or several) LOIs, but also include opportunities for CFN to participate via partnership or joint submission with other organizations</p> <p>We remain committed to the engagement on this initiative and will be available for any comments, inquiries or concerns when we commence the Biodiversity Initiative for the St. Clair Project, which we tentatively anticipate to occur in Fall 2024.</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
			Hydro One has a signed capacity funding agreement with CFN and is supportive of the use of this funding to participate in the Biodiversity Initiative.
<b>ibid. p 7-318</b>	“Hydro One is committed to continue to engage with the Indigenous communities to provide regular Project updates, and actively identify and avoid geographically defined areas which support current or past traditional use for the harvesting of wildlife or fish, the harvesting of traditional plants, or use as sites of spiritual or cultural significance.”	CFN ECD expects that Hydro One will set a regular and recurring date for Project updates and engagement prior to activities that would impact areas that support current and past traditional use with all First Nation communities in the Project area.	Hydro One will reach out to CFN to coordinate a recurring date for Project updates and looks forward to participating. It is a standing practice to offer a meeting or opportunity to ask questions when Project updates and information is provided to Indigenous communities.
<b>ibid. p 7-363</b>	“In the case of the Project and other Hydro One projects in southwestern Ontario, the need for this new infrastructure has been identified by IESO in their regional planning framework and demand forecasts, with a formal direction provided to Hydro One to undertake planning, and eventually construction and operation of the necessary transmission infrastructure.”	<p>Hydro One neglects to acknowledge the connections between rising energy demand and increased settlement and development. Please explain how Hydro One plans to remedy this issue.</p> <p>While CFN recognizes the need and direction provided by the IESO, it's equally important to acknowledge the future cumulative impacts linked to the escalating energy demand within our traditional territory. This acknowledgment should not be omitted from a Cumulative Effects Assessment and should encourage Hydro One to work with First Nations to safeguard and conserve existing sensitive lands, whether or not they have legislative protection.</p>	<p>Planning for this project is subject to the Class EA for Minor Transmission Facilities (MTF), January 2022 (Class EA for MTF), which is the proponent's legal compliance mechanism under the Environment Assessment Act. Section 6.5 of the Class EA for MTF states: Consideration of Cumulative Effects: All proponents will consider cumulative effects when planning projects. The assessment will include the proposed undertaking and any other proposed undertakings in the immediate project area where documentation is available (e.g., other environmental assessments).</p> <p>Hydro One has assessed the cumulative effects of the project in compliance with this requirement, however; to extend beyond this (such as the surmised area of increased or induced development, or other cumulative effects beyond the immediate project area in order to assess trajectories of change over time), is outside the scope of the Class EA for MTF and Hydro One's mandate, and ability to control. The St. Clair transmission line, as with all regional transmission infrastructure, will provide benefit (by way of increased electrical supply capacity and reliability) to all end-users and consumers of electricity, both current and future. Further, Hydro One's ability to determine what future</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
			<p>developments or potential future increased or induced developments or projects may occur in the region are limited to what the IESO provides in its broader regional planning, which focuses primarily on large-scale regional trends.</p> <p>Hydro One does intend to continue to work with Indigenous communities including CFN to safeguard and conserve existing sensitive lands but can only do so within the realm of our control (such as in the planning of new transmission projects such as the St. Clair project). Future development will be regulated by municipalities and the Province within other applicable planning processes.</p>
ibid. p 7-364	Table 7-3: Projects Included in the Cumulative Effects Assessment	Why was the proposed Hydrogen Ready Power Plant Project excluded from the projects list?	In reviewing the Hydrogen Ready Power Plant project's footprint against the St. Clair Transmission Line project's Local Study Area (LSA) the projects do not overlap.
ibid. p 7-394	"Compared to the larger landscape the anticipated project footprint areas are not expected to result in a significant level of woodland removal."	Kindly refrain from downplaying the impacts on the woodlands within the ROW. When viewed in a holistic manner, these woodlands are home to our non-human relatives who hold spiritual and intrinsic value in both the human and non-human realms. Hydro One should refrain from using such language in future reports.	<p>This comment was not intended to downplay the effects to natural habitats of the project, but rather to provide context to the anticipated net effects after avoidance, mitigation and restoration measures had been undertaken at the project level (and within the area of relevant overlap, in the context of a project-level cumulative effects assessment). Such summary assessments of significance are generally included in environmental assessments and are often expected by regulators reviewing the draft ESR and similar reports.</p> <p>We appreciate the context provided by CFN and will seek opportunities to capture and document this perspective in the ESR.</p>



Reference Section	Text Example	Comments from CFN	Hydro One Response
ibid. p 7-398	“ <b>Not Considered Significant</b> Based on project specific mitigation and project specific net effects coupled with habitat offsetting commitments, cumulative effects are not considered significant within the area of overlap between project study areas used to assess this Project.”	While Hydro One may not consider the determination of significance to Indigenous community-valued components and interests as significant, it is equally important to recognize that such a determination should be made by sovereign First Nations.	We thank CFN for providing this perspective. This conclusion re: lack of significance was intended to mirror the other aspects of the assessment (e.g., other aspects of the natural environment as assessed elsewhere in the chapter), but in recognition of this comment we will simplify our conclusion on this portion of the assessment and remove the statement on lack of significance.
ibid. p 8-402	“An Environmental Specialist will be assigned to the Project for the duration of construction to monitor construction activities and provide guidance on needed field changes.”	Please share the Environmental Specialist’s contact information with CFN via the Environment and Consultation Departments contact list.	<p>Hydro One’s Sr. Environmental Specialist overseeing this project is Paul Dalmazzi, available at <a href="mailto:Paul.Dalmazzi@HydroOne.com">Paul.Dalmazzi@HydroOne.com</a>.</p> <p>Some project-specific roles, particularly those with the EPC contractor (Forbes Bros.), have yet to be filled. Contact information for the EPC’s Environmental Specialist will be available in the Environmental Management Plan. This document will be provided to Indigenous communities for review prior to construction.</p> <p>In the meantime, and prior to the release of this document Hydro One continues to be available for any comments, questions or concerns raised by CFN.</p>



Reference Section	Text Example	Comments from CFN	Hydro One Response
N/A		Overall the ESR includes up-to-date mitigation measures that will be employed to address environmental concerns; however, Hydro One should strive to go beyond industrial and governmental standards, especially given the First Nations' pursuit of equity in this project. The proponent fails to recognize CFN as the original stewards of the land and waters, resulting in identified gaps in the ESR (e.g., no mention of consultation with First Nations to discuss mitigation measures for SAR species (if identified) before construction begins, etc.).	Hydro One continues to utilize best practices for mitigation measures, and agrees on the need to strive for continual improvement. As described in the responses above, we would be happy to discuss mitigation measures with CFN at any point in time and continue to be available. With regards to consultation with Indigenous communities on mitigation measures for SAR and other aspects of the Natural Environment, we have also committed to sharing the project-specific EMP with CFN for review prior to construction. Throughout the project we have offered opportunities for Indigenous community representatives to attend environmental field surveys, and will work with our EPC partner to continue this practice into the detailed design phase and as noted in other response, to investigate opportunities to involve Indigenous community staff in environmental monitoring during construction.
N/A		Additionally, Hydro One does not clearly identify individuals and/or parties responsible for completing on-site inspections and post-monitoring initiative, nor does it indicate plans to involve communities who are interested.	Throughout construction, environmental monitoring, will be conducted on a regular basis by Environmental staff from both the EPC contractor (Forbes Bros., for the St. Clair TL project) and Hydro One. Day-to-day Environmental monitoring, including inspections of ESC measures following significant rainfall events will be the responsibility of Forbes staff, as they will maintain control of the work areas (Notice of Project) and will have a constant presence on site. While some of these specific roles have yet to be filled for the St. Clair project, EPC environmental monitoring will be conducted by qualified staff with regular reports and documentation provided to Hydro One for review, and the selected individuals and their contact information will be included in the project-specific EMP which will be shared with CFN prior to construction.  Additionally, Hydro One Environmental Services staff will also undertake regular periodic environmental monitoring site visits throughout construction, and will also employ a Site Inspector who will be on site on a

Reference Section	Text Example	Comments from CFN	Hydro One Response
			<p>day-to-day basis to oversee work activities and progress. Hydro One environmental planners conducting monitoring on the St. Clair project will report to Paul Dalmazzi, Sr. Environmental Specialist, Hydro One Environmental Services.</p> <p>We thank CFN for expressing interest in participating in environmental monitoring during construction of the Project. With regards to environmental monitoring during construction, in the interest of prioritizing the safety of all parties it has not been Hydro One's historic practice to invite external monitors onto active construction sites. However, in recognition of the interest expressed by CFN in monitoring during construction, Hydro One will work with its construction contractor to identify opportunities to safely involve CFN staff in environmental monitoring during construction, including opportunities for training and skills development as they may arise.</p>

Reference Section	Text Example	Comments from CFN	Hydro One Response
N/A		<p>There is little mention of the cumulative effects associated with the Project on Nindinawaymaaginidook (all our relations) which are necessary to consider in assessing environmental impact. The ESR repetitively uses generic qualifying language related to mitigation, and does not offer firm commitments for employment. This can be perceived as Hydro One not considering these measures with the severity necessary, and this must be amended moving forward.</p>	<p>Hydro One has instructed its EPC contractor (Forbes Bros.) to engage with area Indigenous Communities to ensure all opportunities related to employment and procurement are clearly communicated. This includes a transparent process to access and participate in these opportunities.</p> <p>With regards to the mitigation measures described in the draft ESR, environmental assessments (EA) occur early in the planning phase of a project, and typically outline high-level mitigation measures and commitments which are then used to inform and guide the development of site-specific mitigation plans which are then documented in a project-specific EMP after the EA has been completed. We felt that these qualifiers are prudent at this early stage in planning as not every mitigation measure will be suitable (or the most effective solution) in every specific situation. However, this does not lessen our commitment to undertaking these measures where they are suitable, and in situations there they may not be practical to implement, alternative measures will be utilized.</p> <p>As per the responses above, Hydro One has committed to sharing the EMP for the St. Clair TL project, which will include site-specific details and maps of the construction mitigation plans, with CFN prior to construction.</p>

Table 3-19: Chippewas of the Thames Comments on the SCTL Draft ESR – December 21, 2023

Page Number	Reference	Comments from COTTFN	Draft Response
N/A		<p>1. The proposed St Clair transmission line is in the Traditional and Treaty Territory of Deshkan Ziiibiing, or Chippewas of the Thames First Nation. COTTFN citizens continue to exercise their inherent and constitutionally protected rights in that area. While some of the line is planned within the existing transmission corridor, the construction activities, addition of the new line, and expansion of related infrastructure constitute an impact to those Aboriginal and Treaty rights and a disturbance to the land. The new transmission line would also contribute to the cumulative effects on the Nation’s rights in a landscape that has been significantly altered by settlements, industrial developments, and privatized agricultural land. The past and present effects of colonialism have limited the access of Chippewas of the Thames First Nation to freely practice Anishinaabe lifeways throughout the territory, in violation of the spirit and intent of the Treaties. However, COTTFN maintains jurisdiction and stewardship over the land throughout the Nation’s Traditional and Treaty Territory and will continue to do so.</p>	<p>The issue raised regarding the cumulative effects of development, and of infrastructure projects like the St. Clair TS enabling future growth and development, is a broad issue that is outside the control of Hydro One. Hydro One recognizes and appreciates that the legacies of settlement, including agricultural and land conversion and development activities have, and continue, to put pressure on COTTFNs current and future use of lands and resources. However, Hydro One's role is to provide the necessary electrical infrastructure based on planning conducted by, and direction received from the Independent Electricity System Operator (IESO). The need for this new infrastructure has been identified by the IESO in their regional planning framework and demand forecasts, with a formal direction provided to Hydro One to undertake planning and eventually construction and operation of the transmission assets. Additionally, the Ontario Energy Board (OEB) was issued an Order in Council to amend Hydro One’s transmission license to include the development and construction of the St. Clair TL project. As such, Hydro One is acting on the direction provided by the IESO, as well as direction provided by the Crown via the OEB, to design and build the St. Clair TL Project.</p>
i (Executive Summary)	<p>“As the preferred route will repurpose approximately 41 km of an existing 115 kV transmission line...”</p>	<p>2. The language of “repurpose” seems misleading when the existing 115 kV line will be removed and replaced. It seems more accurate to state that the corridor or ROW will be repurposed.</p> <p>How close would the new 230 kV line be to the existing 115 kV line during construction? On average, how much will be corridor need to be expanded to allow for the new line?</p>	<p>We thank COTTFN for this comment, and indeed it was our intent to frame the “repurpose” in the context of the transmission line <b>corridor</b>, and not the physical transmission line (towers and conductors) itself. In fact, the majority of references throughout the draft ESR do specify that it is the corridor will be repurposed; this seems to have been an omission in this particular section, and will be corrected in the final ESR.</p>

Page Number	Reference	Comments from COTTFN	Draft Response
3-45	“...since the features associated with the historical interests raised by WIFN are no longer present on the landscape (and thus would not be affected by the Project) that the information provided would not be an influencing factor in the route evaluation.”	<p>3. We understand the rationale that traditional land uses that can no longer be practiced in that location would not directly impact the preference of one route over another.</p> <p>However, the significance of that historical land use matters and should be captured in some way.</p>	<p>We thank COTTFN for this comment and perspective. With regards to the specific features of historical use described in this section of the draft ESR, Hydro One felt that as the evaluation of route alternatives is meant to be an effects-based assessment, and that these historical features in question were no longer exist on the landscape, that the project could not affect them and that they should therefore not be an influencing factor in the evaluation, but that these areas and features should be acknowledged in the ESR to provide historical context. We did discuss this with the staff that initially identified these historical features to us, prior to completing the evaluation.</p> <p>However, we understand that assessing and capturing aspects of the environment such as historical land uses and features of interest to Indigenous communities is complex, nuanced and difficult, and also that perspectives can vary between communities and individuals as to the best means to accomplish this. We are striving to continually improve in this regard, and each transmission project represents a learning opportunity for us as to how we can work with communities to identify these areas and features of interest and capture them in a way that is appropriate and respectful, but can still be used to influence evaluations and assessments such as this where they must ultimately be compared to other aspects of the environment. Going forward (and perhaps on future projects), we are happy to revisit this approach in consultation with Indigenous communities.</p>
3-57	“Important Bird Area Braiding”	<p>4. We think that IBA in this case refers to Impact Benefit Agreement.</p>	<p>We thank you for notifying us of this editorial error, we will make the necessary corrections to the final ESR.</p>

Page Number	Reference	Comments from COTTEN	Draft Response
3-70	Typo - "On May 13, 2022, Hydro One emailed COTTEN a response to their questions/concerns relating to the agreement required for participation if the field work programs..."	5. "On May 13, 2022, Hydro One emailed COTTEN a response to their questions/concerns relating to the agreement required for participation in the field work programs..."	We thank you for notifying us of this editorial error, we will make the necessary corrections to the final ESR.
3-78	Typo – "Treaty Rights. The community noted that the industrialization of COTTEN treaty lands is a threat to the potential for lands to be used for traditional ad cultural uses."	6. "Treaty Rights. The community noted that the industrialization of COTTEN treaty lands is a threat to the potential for lands to be used for traditional and cultural uses."	We thank you for notifying us of this editorial error, we will make the necessary corrections to the final ESR.
3-79	Repetition – "COTTEN indicated that the Environment team is working to get the preliminary significant species list by the following day. COTTEN also indicated that due to training, they need to move the meeting date for February and will get back to Hydro One with potential meeting dates."	7. Remove duplicate sentences.	We thank you for notifying us of this editorial error, we will make the necessary corrections to the final ESR.
3-83 to 3-86	Table 3-11	8. We are not requesting a specific change but would like to point out that comments made at an open house or focus group may come from one individual and should not always be reported as the perspective of "the community". There are a wide variety of viewpoints within any community, including a First Nation. That said, we recognize that many of the comments attributed to "the community" in the chart were expressed by multiple individuals.	We thank COTTEN for the comment, and will add the following text to the final ESR to provide additional context to <b>Table 3-11</b> :  "It should be noted that in consultation with Indigenous communities there may views and opinions expressed that reflect the perspective of an individual rather than the collective view of the community."
3-152 to 3-153	Figure 3-2 and Figure 3-3	9. The graphs would be clearer if the vertical axis was included. <b>Figure 3-3</b> is also missing colours in the legend that appear in the graph.	Thank you for the comment and we will make this change in the final ESR
4-198 to 4-200	Table 4-3	10. Please add the total number of water crossings per route at the end of the table.	Thank you for the comment and we will make this change in the final ESR
4-209 to 212	Table 4-5	11. Do you have data on the portion of each route that is covered by each type of ELC community? It would be beneficial to also include those figures in this table.	Thank you for the comment and we will make this change in the final ESR



Page Number	Reference	Comments from COTTEN	Draft Response
4-214 and Appendix C-1	eDNA sampling	<div>12. The eDNA analysis was conducted once over a short time window, but it would be beneficial to extend this analysis to cover different times of the year. This is particularly justified by the potential impact of dewatering activities from the transmission line foundation construction, which may introduce sediment into water bodies, affecting mussel populations, and other aquatic organisms.</div> <div>13. Please provide eDNA analysis documents in the Appendix.</div> <div>14. Can you provide clarification as to why eDNA soil/sediment samples were not considered? This information could be useful to determine if an area within a watercourse is an important breeding area for lamprey/fish.</div>	<p>eDNA analyses were included as an additional aspect of the field program, to help supplement the results of the aquatic habitat assessments. With regards to potential spawning areas and eDNA substrate analyses, the habitat assessments themselves provide a much more accurate indication of potential use through assessment of the physical and biological characteristics of the site in question (substrate, depth, flow, submerged or emergent vegetation, etc).</p> <p>With regards to potential effects from construction dewatering, Hydro One plans to use helical (screw) pile foundations for the St. Clair TL project. These foundation types have a number of environmental benefits, including the lack of open excavations and resulting need to remove, handle and discharge water from construction activities. Similarly, helical pile foundations do not generate excess soils or displace significant volumes of soil, reducing potential sources of sedimentation from excavated or stockpiled soil. We also plan to avoid the need for any-water works on the project to the extent practical (e.g., utilize existing crossings as their location and condition allows, alternate entrance from municipal roads, rather than install new crossings), although if the need for in-water works is identified then additional studies may be conducted to support their planning and permitting, including potential use of additional eDNA analyses if they might provide helpful information beyond what can be obtained through traditional aquatic habitat assessments.</p> <p>A summary of the eDNA results are included in the Natural Environment Existing Conditions Report in Appendix C of the ESR. We have attached the laboratory analyses for your review, as requested.</p>



Page Number	Reference	Comments from COTTN	Draft Response
5-253	Table 5-9: Natural Environment Category Comparative Evaluation Results-Designated Natural Areas and Identified Habitat Restoration Areas	<p>15. Are the estimates for vegetation restoration following the removal of the existing 115kV transmission line factored into the overall area for restoration?</p> <p>Removing old transmission lines, especially when outside the proposed ROW, should be restored to original habitat.</p>	<p>Where the existing 115 kV transmission line is to be removed, it will generally be replaced with the new 230 kV transmission line; where this occurs in natural areas, mitigation measures and post-construction restoration plans will be implemented as outlined in the draft ESR.</p> <p>One exception to the above is an approximately 3 km section of the existing 115 kV line near Wallaceburg form which the preferred route deviates in order to address technical challenges with crossing the existing 230 kV transmission line and the Otter Creek. As this portion of the existing 115 kV line would be “islanded” (i.e., not connecting to a terminal transmission station on either end), we have committed to removing this portion of the 115 kV line in addition to those portions for which the 115 kV corridor will be repurposed for the new 230 kV ROW. However, this portion of the 115 kV line consists primarily of active agricultural fields and residential areas, both are which will remain the predominant land use following removal of the transmission line. For this reason, we do not foresee opportunities to restore or naturalize this section of the 115 kV corridor being removed.</p>
6-267	Expansion of Lambton TS and Chatham SS	<p>16. We request more information on the footprint and scope of these expansions. The ESR suggests that the expansions will go beyond the existing fence lines.</p>	<p>The expansion of Lambton TS will include a new portion of station fence to accommodate the entrances of the double circuit lines entering the station, as well as an additional modular relay building. These expansions are on the existing Ontario Power Generation (OPG) property, and also include a new access road off of Oil Springs Road to facilitate construction traffic and future maintenance of the station.</p> <p>Chatham SS expansion will require an expansion of the fence line on existing Hydro One lands.</p> <p>Hydro One will share details on the station expansions once the designs have been completed.</p>

Page Number	Reference	Comments from COTTEN	Draft Response
7-273, 7-290, etc.	<p>“Avoidance of sensitive areas, where practical”</p> <p>“Work conducted near Provincially/locally designated Vulnerable Areas (namely Wellhead Protection Areas [WPAs]; Intake Protection Zones [IPZs]) will be avoided or limited, where practical” etc.</p>	<p>17. Throughout the document, qualifying language, such as “where practical”, weakens the commitments being made.</p> <p>While it is understandable that Hydro One and the EPC contractor require some flexibility, COTTEN would like to see stronger language and minimum guarantees, especially for sensitive areas and wetlands.</p>	<p>With regards to the mitigation measures described in the draft ESR and the qualifiers used therein, environmental assessments (EA) occur early in the planning phase of a project, and typically outline high-level mitigation measures and commitments which are then used to inform and guide the development of site-specific mitigation plans which are then documented in a project-specific EMP after the EA has been completed. We felt that these qualifiers are prudent at this early stage in planning as not every mitigation measure will be suitable (or the most effective solution) in every specific situation. However, this does not lessen our commitment to undertaking these measures where they are suitable, and in situations there they may not be practical to implement, alternative measures will be utilized.</p> <p>Hydro One has committed to sharing the EMP for the St. Clair TL project, which will include site-specific details and maps of the construction mitigation plans, with COTTEN prior to construction.</p>
7-305	Mitigation measures to reduce bird collision.	<p>18. Please explain how replacing the 115 kV line with a 230 kV line reduces the risk of bird collision.</p>	<p>Birds grow accustomed to features (such as flight obstacles) on the landscape over time; as the existing transmission line has been on the landscape for several decades, replacing the existing line is less of an overall net change to the landscape, and therefore brings less risk of bird collisions in the short term, compared to the construction of a brand new transmission line (e.g., Route 5).</p>

Page Number	Reference	Comments from COTTFN	Draft Response
7-306	Vegetation clearing	19. If vegetation clearing does occur during late fall/winter months, it should be retained to ensure overwintering habitat for important pollinators. They should remain in place until spring to allow them to emerge.	As noted in <b>Section 7.7.8.5</b> of the draft ESR, where vegetation clearing is required, some of the cleared vegetative material may be used to create brush piles along the ROW edges to promote wildlife habitat were deemed appropriate. This may exclude the removal of merchantable timber (leaving the smaller limbs and brush for wildlife habitat), and there may be property-specific considerations in discussion with farmers/landowners, but generally we plan to implement this in natural areas (e.g., woodlots, thicket communities) where vegetation clearing is required.
7-318	Biodiversity Initiative	20. What happens if Hydro One does not receive enough suitable applications to fully offset the habitat loss or transition caused by the Project?	The primary objective of the Biodiversity Initiative for the St. Clair TL Project will be to fund habitat creation or enhancement projects within the tertiary watersheds traversed by the route for the new transmission line. However, if insufficient applications (Letters of Interest; LOIs) are received, we will remain flexible in our implementation of the program. Some examples of measures that we could undertake at this point include: extending the open call for LOIs to encourage additional submissions, expanding the geographic boundaries of the Initiative (e.g., to adjacent tertiary watersheds), or considering other types of proposals which may not involve direct habitat creation but would still contribute to biodiversity in the region (e.g., research initiatives).
7-319	Typo - <b>Table 7-2</b> has been included herein to highlight the VCs form COTTFN to identify mitigation and residual effects from the Project as they relate to each VC.	21. <b>Table 7-2</b> has been included herein to highlight the VCs from COTTFN to identify mitigation and residual effects from the Project as they relate to each VC.	We thank you for notifying us of this editorial error, we will make the necessary corrections to the final ESR.

Page Number	Reference	Comments from COTTFN	Draft Response
7-353	Table 7-2	<p>22. We understood that COTTFN's Culture and Rights Study for another transmission line would be referenced in this ESR and gave Hydro One permission to do so at a high level.</p> <p>However, the Study is referenced more frequently than anticipated. In particular, <b>Table 7-2</b> uses Valued Components from the Culture and Rights Study as a framing device to address mitigation measures for the St Clair transmission line. Those Valued Components were identified in relation to another project and include a topic that did not appear prominently in the Culture and Rights Study (managing invasive species). We request that Hydro One edits <b>Table 7-2</b> to make it not specific to COTTFN.</p>	We thank COTTFN for this clarification, and will make the requested change to the final ESR.
Multiple locations	Native Seed Mix	<p>23. Culturally important plant species to Indigenous Peoples should be included in the native seed mix.</p>	Hydro One will work with its construction contractor to prioritize the procurement of locally sourced native seed and plant stock. Should COTTFN wish to provide us any guidance on important plant species to them we would be happy to consider them. Post-construction restoration plans will be shared with COTTFN prior to implementation.
N/A		<p>24. Ensure that soil piles are not conducive to bank swallow nesting (e.g. no vertical slopes, reduce slopes to 70 degrees or less).</p>	We thank COTTFN for this comment. We will add language to the final ESR committing to managing soil piles in ways that are not conducive to bank swallow nesting (maintain slopes at 70° or less, and/or cover or seed bare soil during breeding season).
		<p>25. <b>Section 1.3</b> of the ESR notes that the scope of this study is limited to the recommendations of the IESO. A previous study by the IESO considered whether the need for additional capacity in the Windsor area could be achieved by new electricity generation, a larger transmission line or by doing nothing. The study recommended new transmission. Thus, the current study only considers transmission as a solution and is limited to a review of transmission line routes. We understand this process. However, the IESO should be made aware that COTTFN should also be consulted on their large-scale studies and plans in order to be able to provide input into broader electricity issues and strategies.</p>	We understand that the IESO conducts their own consultation program to support their broader regional planning processes. We will relay this comment from COTTFN to our colleagues at the IESO.

Page Number	Reference	Comments from COTTFN	Draft Response
		<p>26. Southwestern Ontario, including the territories of the Chippewas of the Thames, have been subject to extensive clearing. Although clearing is restricted to 7.63 ha of treed lands and 2.9 ha of non-treed wetlands, this project is set to take place in areas where forests and wetland systems are already highly fragmented and oftentimes degraded. The net effects of clearing multiple small areas can have a substantial impact on biodiversity and ecological functions at a landscape scale. What specific measures will be undertaken to minimize vegetation removal?</p>	<p>We thank COTTFN for this comment, and we understand the history of extensive clearing in southwestern Ontario and the importance of considering any remnant natural habitats in the resulting heavily fragmented natural landscape. For these reasons, existing forests, wetlands and other native vegetation communities were important considerations from the outset of the St. Clair TL Project, and were key factors influencing the development of route alternatives and the selection of the preferred route, which had the least overall effects on incompatible vegetation communities and wetlands.</p> <p>Hydro One is committed to retaining compatible vegetation within the new ROW to the extent practical. We will carefully plan and delineate our construction access and work areas to ensure that effects from construction are minimized. We will complete post-construction restoration activities involving the planting of compatible native shrubs and forbs where we may have had to clear incompatible vegetation from the new Right-of-Way (ROW). While Hydro One understands that this will still result in a long-term transition of these areas from forest communities to shrub thicket/meadow or other low-growing plant communities, this will not result in a total loss of vegetation coverage and habitat in the region but rather a transition from one type of vegetation community to another. Lastly, we have committed to undertaking a Biodiversity Initiative for the SCTL Project, in order to offset the residual net effects to habitats (i.e., those effects that cannot be further avoided or mitigated, such as the long-term transition of forested vegetation communities to shrub thicket or meadow communities) by funding habitat creation and enhancement projects in the region.</p>
		<p>a) Are the total areas of vegetation removals noted in <b>Section 7.1.5</b> of the ESR final?</p>	<p>These figures represent the most accurate estimate of the amount of vegetation removal as we are able to give</p>

Page Number	Reference	Comments from COTTFN	Draft Response
			<p>at this time, noting that the EA is conducted early in the planning phase of the project and that these figures were calculated based primarily by desktop/GIS assessment (though utilizing information collected from the field survey program). As completion of property-specific surveys, and detailed design are still ongoing, it is possible that final figures vary from this slightly in either direction, though we are not at this point anticipating any significant changes from what is portrayed in the draft ESR. Should a change to the project be identified that results in a significant or notable change in the location or extent of vegetation removal required, we will communicate this to the Indigenous communities and stakeholders (e.g., conservation authorities) to inform them of the change and reason for the change, and to discuss next steps.</p>
		<p>b) Will attempts to minimize clearing by moving features to avoid impacts (e.g. avoiding placing features through the center of vegetation communities) be considered during the detailed design phase of the project?</p>	<p>As noted above, existing forests, wetlands and other native vegetation communities were important considerations from the outset of the St. Clair TL Project, and were key factors influencing the development of route alternatives and the selection of the preferred route, which had the least overall effects on incompatible vegetation communities and wetlands. Through the Class EA and route selection process to date, we have already minimized the effects to vegetation communities and wetlands, relative to the other viable route alternatives identified.</p> <p>There may be some opportunities to further reduce the extent of vegetation removal through detailed design, as per the response to comment 3 a. above. However, and also as noted above, these are more likely to minor incremental adjustments, and we are not planning to investigate larger deviations (e.g., those adding significant new angles or beyond the existing property fabric traversed by the preferred route) at this time.</p>



Page Number	Reference	Comments from COTTFN	Draft Response
		27. The project is currently proposing to clear within a provincially uncommon and rare ecosystem. Specifically, 0.28 ha of Fresh-Moist Black Walnut Lowland Deciduous Forest (FODM7-4) which is ranked S2S3 within Ontario is proposed to be removed. Rare vegetation communities are considered SWH within ecoregion 7E and were not initially identified as SWH within the 2022 Dillon report. Development is not permitted within SWH unless it can be demonstrated that there will be no negative impacts to its ecological function.	We thank COTTFN for this comment and agree on the importance of this vegetation community.
		28. An assessment of impacts to ecological function has not been provided.	<p>The assessment of environmental effects, proposed mitigations and conclusions regarding natural features, including woodlands (<b>Section 7.7.8.3</b>) and wildlife and significant habitat (<b>Section 7.7.8.5</b>) as provided in the draft ESR apply to the FODM7-4 community, as well as the other applicable features and vegetation communities traversed by the Project.</p> <p>Further, specific to the FODM7-4 community, this community is located on the northern bank of the Thames river where the new transmission line will cross (abutting an existing 230 kV transmission line and on existing transmission corridor lands that are now being utilized for the new line) and would have been traversed by four of the five route alternatives, with the only exception being Route 5 (the “greenfield route”) which crosses the Thames river at a different location. While some clearing will be required for the new ROW, there is already an existing transmission line that crosses this community (where management of incompatible vegetation has previously occurred for several decades) and the new ROW will simply be an expansion of this existing effect rather than a brand new effect to this woodlot. We will add the above specification to the relevant sections of the final ESR.</p>



Page Number	Reference	Comments from COTTFN	Draft Response
		29. What specific measure to reduce impacts to this feature will be taken? This is not clear within the ESR.	<p>As noted above, the assessment of environmental effects, proposed mitigations and conclusions regarding natural features, including woodlands (<b>Section 7.7.8.3</b>) and wildlife and significant habitat (<b>Section 7.7.8.5</b>) as provided in the draft ESR apply to the FODM7-4 community, as well as the other applicable features and vegetation communities traversed by the Project.</p> <p>As noted in these and other sections of the ESR, Hydro One is committed to retaining compatible vegetation within the new ROW to the extent practical. We will carefully plan and delineate our construction access and work areas to ensure that effects from construction are minimized. We will complete post-construction restoration activities involving the planting of compatible native shrubs and forbs where we may have had to clear incompatible vegetation from the new Right-of-Way (ROW). While Hydro One understands that this will still result in a long-term transition of these areas from a lowland forest community to a shrub thicket community, however this will not result in a total loss of vegetation coverage and habitat in the region but rather a transition from one type of vegetation community to another.</p>
		30. Will measures to offset the loss of this feature be taken? Additional details regarding compensation and / or restoration should be provided.	<p>Post-construction restoration of this area will consider the existing native species in this area that are compatible with overhead transmission lines, to encourage the re-establishment of these species thus minimizing the overall net change to this community. Detailed restoration plans for this area will be developed closer to their implementation; should COTTFN wish to provide us any guidance on important plant species to them we would be happy to consider them. Post-construction restoration plans will be shared with COTTFN prior to implementation.</p> <p>As noted in the comment, Hydro One understands that even with the implementation of mitigation and restoration measures, there will still be some net effects</p>

Page Number	Reference	Comments from COTTFN	Draft Response
			<p>on natural habitats from the Project and as such, has committed to undertaking a Biodiversity initiative for the St. Clair Project to offset these residual net effects. The Biodiversity Initiative for the St. Clair Transmission Line project is similar to those that Hydro One has undertaken on past projects including the Initiative currently underway to support the Chatham by Lakeshore Project. Hydro One seeks to fund habitat projects that are planned and will be implemented by other organizations, but require funding to implement. These opportunities are sought via an open call for Letter of Interest (LOI) submissions, which are then evaluated on the basis of the ecological benefits, value-added factors and cost to implement. We will keep COTTFN apprised of any updates and progress on the Biodiversity initiative as it draws closer to implementation, and invite</p> <p>Through the Biodiversity Initiative, Hydro One does not identify and conduct offset projects (habitat creation and enhancement works) directly, but rather seeks to fund habitat projects that are planned and will be implemented by other organizations, but require funding to implement. These opportunities are sought via an open call for Letter of Interest (LOI) submissions, which are then evaluated by Hydro One on the basis of the ecological benefits, value-added factors and cost to implement. Selected projects are then implemented by the submitting organization subsequent to entering into a funding agreement with Hydro One. In this way, the ecological benefits from the offset projects can be directly compared to the habitat effects from the project, and rather than utilize a simple area ration, Hydro One has committed that through the Biodiversity Initiative, the St. Clair TL project will not result in a net loss of habitat value in the regional and where possible, will result in a net gain.</p>

Page Number	Reference	Comments from COTTFN	Draft Response
			As Hydro One’s focus is first and foremost on the environmental management and planning of projects works (such as route selection, environmental permits and approvals and the development of detailed Environmental Management Plans for construction), habitat offsets such as the Biodiversity Initiative are typically implemented a bit later in the project life cycle, following completion of the Class EA. COTTFN will be kept informed of any updates and progress on the Biodiversity Initiative for the St. Clair TL project, and will have opportunities to participate via the submission of LOI. We would also note that opportunities for participation extend not only to COTTFN as the sole submitter of one (or several) LOIs, but also include opportunities for COTTFN to participate via partnership or joint submission with other organizations.
		31. Nest searches in high-complexity habitats and extensive areas are not supported by Canadian Wildlife Services (CWS) due to the high potential for nesting activities and high potential that not all nests will be detected. Instances where nest searches are appropriate include low complexity systems such as hedgerows or individual trees. In addition, a window for clearing following nest searches has not been provided, i.e. what is the maximum amount of time which will elapse between the nest searches and the time the trees are removed?	As noted in the draft ESR, our first priority will be to attempt to plan vegetation clearing outside of the breeding season. If nest searches are required, they will be conducted by a qualified individual and will focus not just on visual confirmation of nests but also other indications of nesting activity such as observations of bird behaviour (carrying nest materials etc). Clearing activity will be planned to begin within 48 hours of the nest search being completed, after which time the nest search will be reconducted to support the work.

Page Number	Reference	Comments from COTTFN	Draft Response
		<p>32. It is understood that a complete removal of vegetation in the new ROW will not result in a total loss of vegetation on the landscape and instead will represent a transition to a shrub / meadow dominated community. Will additional shrub plantings or invasive species management activities be taken within the ROW to reduce edge effects, provide wildlife habitat, or enhance biodiversity?</p>	<p>Post-construction restoration of natural areas traversed by the ROW will involve the planting of compatible native shrubs and forbs, and will consider the existing native species in this area that are compatible with overhead transmission lines. Detailed restoration plans for this area will be developed closer to their implementation; should COTTFN wish to provide us any guidance on important plant species to them we would be happy to consider them. Post-construction restoration plans will be shared with COTTFN prior to implementation.</p> <p>With regards to invasive species and transmission construction projects, Hydro One's focus is generally foremost on avoiding or mitigating the inadvertent spread of invasive species, as described in the draft ESR. Invasive species removal and control within transmission ROWs are often made difficult by the fact that Hydro One's control is limited to the ROW itself, and as such any populations of invasive species on the same property but beyond the ROW boundaries, or on adjacent properties/nearby roadside ditches, will often serve to reintroduce the species and counteract these (often significant) control and removal efforts. There may be situations where small, isolated or newly establishing populations or stands of invasive species located entirely within the boundaries of the ROW may be practical to control and may be pursued for removal, but this will not be the case in many situations.</p>

Page Number	Reference	Comments from COTTFN	Draft Response
		33. Impacts on the maintenance activities (i.e., clearing of incompatible vegetation that regenerates over time) of the ROW over the lifetime of St Clair transmission line project have not been sufficiently analyzed and assessed. Clearing will be required in these areas as trees regenerate and have the potential to be disruptive to local wildlife including nesting birds protected under the federal Migratory Birds Convention Act, snakes, fish (if completed near watercourses), and small mammals. What measures will be taken to mitigate impacts associated with maintenance in the ROW and, in particular, near watercourses?	The majority of the mitigation measures described throughout <b>Chapter 7</b> of the draft ESR will be utilized for maintenance and operational work as well as construction of the new transmission line. With regards to vegetation maintenance in natural areas, mitigation measure such as the retention of compatible vegetation/selective removal of incompatible vegetation, consideration of breeding season and timing windows, measures to address the inadvertent spread of invasive species, and adherence to federal and provincial regulations will all apply. will all apply to the operational life of the new transmission line, and this is noted in <b>Chapter 7</b> of the ESR and <b>Table 7-1</b> .
		34. Despite turtle wintering areas being identified within the Natural Environmental Existing Conditions Technical Report, measures to avoid impacts to overwintering turtles have not been provided despite potential for in-water works. In-water works within potential turtle overwintering areas of both SAR and non-SAR species should be avoided when they are in use.	We will commit to avoiding in-water works within turtle wintering areas during the turtle overwintering season. We will specify this in the final ESR.
		35. It is not clear which of the 66 watercourse crossings identified have existing infrastructure (i.e., culverts) that can be utilized during the course of this project. Additional details regarding likely locations of proposed temporary watercourse crossings should be provided once available.	As we continue to engage with property owners and learn more about the specific features along the preferred route, the information we obtain over the coming months (such as the location and condition of existing watercourse crossings that may be utilized for construction) will inform the detailed construction and mitigation plans. These plans will be documented in a project-specific Environmental Management Plan (EMP) which will provide specific instructions to constructions crews (e.g., access plans, watercourse crossing locations, erosion and sediment control plans, etc.). We will commit to sharing the EMP for the St. Clair TL project with COTTFN for review prior to construction.
		36. The specifics of Hydro One's Biodiversity Initiative to offset the loss of significant woodlands and wetlands are vague. It is understood that the specific measure may not be established	The Biodiversity Initiative for the St. Clair Transmission Line project will be similar to those that Hydro One has undertaken for past projects, including the Initiative

Page Number	Reference	Comments from COTTFN	Draft Response
		at this point but certain commitments (i.e. compensation ratios) can be made early on in the process to help ease concerns associated with the impact / removal of natural heritage features from the landscape prior to the completion of the project.	<p>currently underway to support the Chatham to Lakeshore project.</p> <p>Through the Biodiversity Initiative, Hydro One does not identify and conduct offset projects (habitat creation and enhancement works) directly, but rather seeks to fund habitat projects that are planned and will be implemented by other organizations, but require funding to implement. These opportunities are sought via an open call for Letter of Interest (LOI) submissions, which are then evaluated by Hydro One on the basis of the ecological benefits, value-added factors and cost to implement. Selected projects are then implemented by the submitting organization subsequent to entering into a funding agreement with Hydro One. In this way, the ecological benefits from the offset projects can be directly compared to the habitat effects from the project, and rather than utilize a simple area ration, Hydro One has committed that through the Biodiversity Initiative, the St. Clair TL project will not result in a net loss of habitat value in the regional and where possible, will result in a net gain.</p> <p>As Hydro One’s focus is first and foremost on the environmental management and planning of projects works (such as route selection, environmental permits and approvals and the development of detailed Environmental Management Plans for construction), habitat offsets such as the Biodiversity Initiative are typically implemented a bit later in the project life cycle, following completion of the Class EA. COTTFN will be kept informed of any updates and progress on the Biodiversity Initiative for the St. Clair TL project, and will have opportunities to participate via the submission of LOI. We would also note that opportunities for participation extend not only to COTTFN as the sole submitter of one (or several) LOIs, but also include</p>

Page Number	Reference	Comments from COTTFN	Draft Response
			opportunities for COTTFN to participate via partnership or joint submission with other organizations.
		a) What are the compensation ratios for this project?	As per the response above, Hydro One’s approach to Biodiversity Initiatives focuses on offsets (and no net loss) based on ecological valuation, rather than simple area-based ratios. While this is a more complex undertaking than simple area ratios, we feel that this is a more thorough and holistic approach to habitat offsetting, and also aids in the evaluation of LOI submissions (considering ecological value, non-ecological or value-added factors, and cost to implement) to select those submissions that offer the greatest overall value.
		b) Will monitoring data from restoration / conservation activities undertaken as a part of Hydro One’s Biodiversity Initiative be relayed to First Nations Communities?	<p>While monitoring and follow-up tending will be conducted by the organizations submitting LOIs (with costs for the first few years of monitoring built into LOI submissions), Hydro One will obtain periodic updates and can share these with Indigenous communities upon request.</p> <p>It is our hope that Indigenous communities will submit LOIs for consideration and/or partner with other organizations to jointly submit LOIs, such that Indigenous communities can be directly involved in the planning, implementation and follow-up monitoring of habitat creation and enhancement projects funded through the SCTL Biodiversity Initiative.</p>



Page Number	Reference	Comments from COTTEN	Draft Response
		<p>37. Some statements related to mitigation are very generic and do not offer any serious commitment to carrying them out e.g. “Construction of bat nesting boxes in certain areas may be considered to offset the loss of bat roosting habitat, where practical” and “Vegetation removals will be minimized to the extent possible and replanted / seeded with compatible vegetation as required”. The qualifiers “where practical” or “to the extent possible” are attached to many mitigation measures. This gives the perception that these measures will not be seriously considered or implemented when the project is actually constructed.</p>	<p>With regards to the mitigation measures described in the draft ESR and the qualifiers used therein, environmental assessments (EA) occur early in the planning phase of a project, and typically outline high-level mitigation measures and commitments which are then used to inform and guide the development of site-specific mitigation plans which are then documented in a project-specific EMP after the EA has been completed. We felt that these qualifiers are prudent at this early stage in planning as not every mitigation measure will be suitable (or the most effective solution) in every specific situation. However, this does not lessen our commitment to undertaking these measures where they are suitable, and in situations where they may not be practical to implement, alternative measures will be utilized.</p> <p>Hydro One has committed to sharing the EMP for the St. Clair TL project, which will include site-specific details and maps of the construction mitigation plans, with COTTEN prior to construction.</p>
		<p>38. Will the new structures be located within the same footprint as the existing structures? If not, setbacks for new structures (i.e. towers) from wetlands, watercourses, or SAR habitat should be provided.</p>	<p>New transmission structures will not necessarily be located at the exact location of the existing structures, though this may be the case in some situations. We will strive to maintain setbacks of 30 m between watercourses/wetlands and tower locations, and if this is not feasible in a specific situation due to other constraints, then additional mitigation measures will be employed (e.g., additional erosion/sediment controls during construction).</p>
		<p>39. The ESR currently makes references to consultation with Environment and Climate Change Canada and CWS regarding impacts to species at risk and contraventions under SARA. The MECP should be consulted to confirm how impacts to SAR should be addressed during the detailed design phase in order to ensure that firm and appropriate commitments related for SAR can be provided.</p>	<p>MECP SAR Branch will be consulted with regards to SAR mitigations and potential permits during the detailed design phase, as noted in <b>Section 7.7.8.4</b> of the draft ESR.</p>

Page Number	Reference	Comments from COTTN	Draft Response
		40. SAR Reptiles: the proponent has identified that habitats for several SAR reptile species are present, including Eastern Foxsnake (THR), Butler’s Gartnersnake (END), and Blanding’s Turtle (THR).	
		41. Critical habitats of these species such as nesting habitat, overwintering habitat, and thermoregulation areas should be delineated during the detailed design phase. When the proponent states in advance of construction? It gives the impression that consideration for avoiding impacts to key habitats during the detailed design phase is not being provided.	These habitats will continue to be delineated and investigated during the detailed design phase as specific construction plans are developed.
		42. The design of SAR exclusion fencing should include considerations for SAR snakes in addition to turtles. Eastern Foxsnake in particular are adept climbers, the design for SAR turtles will not be appropriate for excluding Foxsnake.	The design of SAR exclusion fencing for Eastern Foxsnake will include measures (e.g., increased height, an outward-facing lip, or similar) to prevent entry into work areas by climbing the fencing.
		a) Equipment left idle should be inspected for SAR snakes.	Vehicles and equipment left idle overnight at work areas will be inspected for SAR snakes prior to use.
		b) Consideration for providing SAR identification training for on-site staff should be provided.	Training on the identification of SAR relevant to the project area, and protocols for incidental observations of SAR, will be provided to construction crews, and materials to assist in field identification will be provided to crews.

Page Number	Reference	Comments from COTTFN	Draft Response
		43. The analysis of net effects for impacts to SAR Reptiles is insufficient.	
		a) Removal of vegetation, including “incompatible vegetation”, particularly in areas where snakes may be overwintering can alter microclimate, rendering them unsuitable. It is understood that hibernacula features are difficult to reliably identify.	No subterranean features with the potential to support hibernacula were observed on the preferred route ROW during field investigations during the Class EA, however if hibernacula are identified during the detailed design phase, or encountered during construction, measures will be taken to avoid disturbing these areas during their sensitive season.
		b) Disturbances and clearing activities despite habitats remaining vegetated with “suitable vegetation” still constitute a disturbance.	We thank COTTFN for this comment and agree that transition from a forested vegetation community to a shrub thicket or meadow community represents a net effect to habitats. For this reason, Hydro One will be implementing a Biodiversity Initiative for the St. Clair TL Project to offset these net effects to habitats, as described in responses above.
		44. An analysis of net effects of impacts to SAR Bats as well as the proposed mitigation measures are insufficient.	
		a) Additional consultation with the MECP should be sought regarding potential impacts to SAR bats during the detailed design phase in advance of clearing activities including any requirements for habitat offsetting.	MECP will be consulted during the detailed design phase to discuss potential effects to SAR including SAR bats, as described in <b>Section 7.7.8.4</b> of the draft ESR.
		b) Consideration for impacts associated with collisions with powerlines has not been provided.	Bats are generally not considered to be at risk of collisions with transmission lines.
		c) The current proposed mitigation measures to conduct exit surveys if clearing during the bat active window is not effective. This would require the proponent to identify potential snag trees in advance of clearing (which is not currently being proposed). If surveys for snag trees are being conducted during the growing season it is likely that snag trees will be missed.	During the field studies conducted to support the Class EA, field staff were instructed to identify snag/cavity trees concurrently during ELC and botanical assessments. Where potential snag/cavity trees were identified, field staff were to record the DBH, tree species, tree height, and approximate location and height of cavities and/or cracks, and collect GPS coordinates. Although no suitable snag/cavity trees were

Page Number	Reference	Comments from COTTEN	Draft Response
		Additional issues may also arise in the event that multiple snag trees are identified within the clearing limits.	identified concurrently with ELC surveys and botanical assessments, we understand that there are ELC communities along the project with potential to support SAR habitat (e.g., WO and FOD communities).  As described in <b>Section 7.7.8.4</b> of the draft ESR, habitat investigations, including for snag/cavity trees, will continue during detailed design. Formal snag/cavity surveys were initiated in winter 2023 along sections of the preferred route where access could be obtained. If identified, snags will be retained to the extent practical (i.e., contingent on not representing a threat to the safety of construction crews or the safe and reliable operation of the transmission line).
		45. Impacts to fish and fish habitat and aquatic SAR should be discussed in greater detail. For example:	
		a) Any in-water works / works within the wetted width should be completed during the appropriate in-water work window. In-water work windows should be determined through consultation with the MECP and DFO.	While our primary objective is to avoid the need for in-water works to the extent practical, if in-water works are required the MECP and DFO will be consulted, and the appropriate timing windows will be applied.
		b) Correspondence with regulatory agencies should be provided.	Correspondence with regulatory agencies to date has been summarized in the draft ESR and appended Record of Consultation. As we enter the detailed design and permitting phase, we are happy to provide updates on our discussions with regulators to Indigenous communities upon request.
		c) The extent of transmission line structures should be specified. We would prefer stronger commitments to locating towers at least 30 m from wetlands and 15 m from watercourses (with additional setbacks where aquatic SAR are present). Generally, for cold-water habitat, a 30 m setback is recommended, and potentially greater setbacks if aquatic SAR are present.	We will strive to maintain setbacks of 30 m between watercourses/wetlands and tower locations, and if this is not feasible in a specific situation due to other constraints, then additional mitigation measures will be employed (e.g., additional erosion/sediment controls during construction).

Page Number	Reference	Comments from COTTEN	Draft Response
		d) The MECP and DFO should be consulted, regardless of whether in-water works are proposed, as impacts related to riparian vegetation removal can reasonably be anticipated.	Both the MECP and DFO have been consulted through the Class EA, and will continue to be consulted during detailed design on items that may relate to or fall under their respective mandates.
		e) In the event that temporary crossing is required, fording should be completed in accordance with the DFO Code Practice: Temporary Fording. If any SAR are present in the watercourse where a temporary crossing is proposed, then the crossing will require DFO approval regardless of if materials will be placed in watercourse or not.	In the event that temporary watercourse crossings are required, the most appropriate crossing type will be selected and its design and installation will follow the appropriate regulatory guidance and permitting. In southwestern Ontario, fording is generally much less likely to be utilized than temporary culverts or clear span bridges, although there may be specific situations in which fording is considered.
		f) Disturbed portions of streambed should be restored to original conditions through substrate salvage and placement.	Our primary objective is to avoid the need for in-channel works and disturbance. If required, temporary watercourse crossing locations will be restored to pre-construction conditions in consultation with the DFO, CAs and Indigenous communities.
		g) Any in-water works are to be completed in the dry in isolation of active flows. Fish relocations as well as mussel relocations per the Protocol for the detection and relocation of freshwater mussel species at risk in Ontario-Great Lakes Area (OGLA) (Mackie et al. 2008). Additional consideration and discussion with the DFO and MECP may be required if proposed works are to take place within aquatic SAR habitat.	While our primary objective is to avoid the need for in-water works to the extent practical, if in-water works are required the MECP and DFO will be consulted to discuss the appropriate mitigation measures required for the location and works in questions, which may include those referenced in the comment.
		h) The location of any necessary temporary crossing structure should avoid spawning habitat of game species and species at risk fish. Mussel beds should be avoided.	As noted in the responses above, our primary objective is to avoid the need for temporary crossings and other in-channel works and disturbance, particularly in the sensitive habitats noted in the comment.

Page Number	Reference	Comments from COTTFN	Draft Response
		<p>46. Measures to prevent the inadvertent transfer of invasive species is critical in helping maintain the existing integrity of natural systems within the territories of the Chippewas of the Thames. The best management practices identified in the <b>Clean Equipment Protocol</b> (Halloran et al. 2013) should be utilized.</p>	<p>Hydro One will continue to identify and flag areas with populations of invasive species for consideration during construction planning. Additionally, as described in <b>Section 7.7.8.6</b> construction staff will be educated on the identification of invasive species and the importance of avoiding their spread to new areas. The <b>Clean Equipment Protocol for Industry</b> will be implemented during construction to guide equipment and vehicle inspection and required cleaning. It should be noted that the use of temporary constructed access will also serve to mitigate the inadvertent transfer of invasive species propagules by limiting the direct contact between construction equipment and bare soil/plant material.</p>
		<p>47. Several statements found in the mitigation section of the report are vague and don't provide strong language to ensure that they will actually be implemented. Examples are as follows:</p> <ul style="list-style-type: none"><li>• "Avoidance of sensitive areas, where practical."</li><li>• "Avoidance of watercourses, where feasible."</li><li>• "Proactive communication" without providing specific details as to when communication will occur and what is meant by proactive.</li></ul> <p>Please provide clearer commitments without the extensive use of qualifiers or limitations.</p>	<p>With regards to the mitigation measures described in the draft ESR and the qualifiers used therein, environmental assessments (EA) occur early in the planning phase of a project, and typically outline high-level mitigation measures and commitments which are then used to inform and guide the development of site-specific mitigation plans which are then documented in a project-specific EMP after the EA has been completed. We felt that these qualifiers are prudent at this early stage in planning as not every mitigation measure will be suitable (or the most effective solution) in every specific situation. However, this does not lessen our commitment to undertaking these measures where they are suitable, and in situations there they may not be practical to implement, alternative measures will be utilized.</p> <p>Hydro One has committed to sharing the EMP for the St. Clair TL project, which will include site-specific details and maps of the construction mitigation plans, with COTTFN prior to construction.</p>



Table 3-20: Walpole Island First Nation Comments on the SCTL Draft ESR – December 1, 2023 and January 8, 2024

Comment	Draft Response
Comments from Individual member of WIFN	
Comment received at an in-person meeting with Water Wells First: A member of Walpole Island FN (WIFN) attending the meeting raised a question on underground fault lines and potential risk from geologic activity/earthquakes; it was noted that these were inactive faults and were of very low risk. The member of WIFN noted issues relating to the reliability of electricity supply to the WIFN community and asked if the SCTL project would affect reliability.	During the meeting on December 1, 2023, Hydro One responded that the reliability of supply to an end user relies upon two different electrical systems (high voltage transmission and lower voltage distribution), and that while the SCTL project would not improve the distribution infrastructure or reliability to Walpole Island, that it would improve the reliability of the transmission supply to the area fed from the Wallaceburg TS (including Walpole Island).
Comments from WIFN	
1. Section 1.3 of the ESR notes that the scope of this study is limited to the recommendations of previous IESO studies, including previous work by the IESO which reviewed whether the need for additional capacity in the Windsor area could be achieved by new electricity generation, a larger transmission line or by doing nothing. The study recommended new transmission. Thus, the current study only considers transmission as a solution and is limited to a review of transmission line routes. We understand this process. However, the EISO should be made aware that WIFN should be consulted on these early studies and network plans in order to be able to provide input into broader electricity issues and strategies.	We understand that the IESO conducts their own consultation program to support their broader regional planning processes. We will relay this comment from WIFN to our colleagues at the IESO.
2. Southwestern Ontario, including the territories of WIFN, have been subject to extensive clearing. Although clearing is restricted to 7.63 ha of treed lands and 2.9 ha of non-treed wetlands, this project is set to take place in areas where forests and wetland systems are already highly fragmented and oftentimes degraded. The net effects of clearing multiple small areas can have a substantial impact on biodiversity and ecological functions at a landscape scale. We understand that compensation will be provided through Hydro One’s Biodiversity Initiative to offset the loss of significant woodlands and wetlands. Details, such as proposed compensation ratio to offset the loss of natural features should be provided at this stage. Please also ensure that WIFN is contacted regarding participation in the initiative.	<p>We thank WIFN for this comment, and we understand the history of extensive clearing in southwestern Ontario and the importance of considering any remnant natural habitats in the resulting heavily fragmented natural landscape. For these reasons, existing forests, wetlands and other native vegetation communities were important considerations from the outset of the St. Clair TL Project, and were key factors influencing the development of route alternatives and the selection of the preferred route, which had the least overall effects on incompatible vegetation communities and wetlands.</p> <p>Hydro One is committed to retaining compatible vegetation within the new ROW to the extent practical. We will carefully plan and delineate our construction access and work areas to ensure that effects from construction are minimized. We will complete post-construction restoration activities involving the planting of compatible native shrubs and forbs where we may have had to clear incompatible vegetation form the new Right-of-Way (ROW). While Hydro One understands that this will still result in a long-term transition of these areas from forest communities to shrub thicket/meadow or other low-growing plant communities, this will not</p>



Comment	Draft Response
	<p>result in a total loss of vegetation coverage and habitat in the region but rather a transition from one type of vegetation community to another.</p> <p>As noted in the comment, Hydro One understands that even with the implementation of mitigation and restoration measures, there will still be some net effects on natural habitats from the Project and as such, has committed to undertaking a Biodiversity initiative for the St. Clair Project to offset these residual net effects. The Biodiversity Initiative for the St. Clair Transmission Line project is similar to those that Hydro One has undertaken on past projects including the Initiative currently underway to support the Chatham by Lakeshore Project. Hydro One seeks to fund habitat projects that are planned and will be implemented by other organizations, but require funding to implement. These opportunities are sought via an open call for Letter of Interest (LOI) submissions, which are then evaluated on the basis of the ecological benefits, value-added factors and cost to implement. We will keep WIFN apprised of any updates and progress on the Biodiversity initiative as it draws closer to implementation, and invite.</p> <p>Through the Biodiversity Initiative, Hydro One does not identify and conduct offset projects (habitat creation and enhancement works) directly, but rather seeks to fund habitat projects that are planned and will be implemented by other organizations, but require funding to implement. These opportunities are sought via an open call for Letter of Interest (LOI) submissions, which are then evaluated by Hydro One on the basis of the ecological benefits, value-added factors and cost to implement. Selected projects are then implemented by the submitting organization subsequent to entering into a funding agreement with Hydro One. In this way, the ecological benefits from the offset projects can be directly compared to the habitat effects from the project, and rather than utilize a simple area ration, Hydro One has committed that through the Biodiversity Initiative, the St. Clair TL project will not result in a net loss of habitat value in the regional and where possible, will result in a net gain.</p> <p>As Hydro One's focus is first and foremost on the environmental management and planning of projects works (such as route selection, environmental permits and approvals and the development of detailed Environmental Management Plans for construction), habitat offsets such as the Biodiversity Initiative are typically implemented a bit later in the project life cycle, following completion of the Class EA. WIFN will be kept informed of any updates and progress on the Biodiversity Initiative for the St. Clair TL project, and will have opportunities to participate via the submission of LOI. We would also note that opportunities for participation extend not only to WIFN as the sole submitter of one (or several) LOIs, but also include opportunities for WIFN to participate via partnership or joint submission with other organizations.</p>

Comment	Draft Response
3. <b>The project is currently proposing to clear 0.28 ha of Fresh-Moist Black Walnut Lowland Deciduous Forest which is a rare forest community in Ontario. Please review whether there are opportunities to avoid impacts to this woodland.</b>	<p>Hydro One agrees on the importance of this vegetation community. This community is located on the northern bank of the Thames river where the new transmission line will cross (abutting an existing 230 kV transmission line and on existing transmission corridor lands that are now being utilized for the new line) and would have been traversed by four of the five route alternatives, with the only exception being Route 5 (the “greenfield route”) which crosses the Thames river at a different location. While this community cannot be avoided entirely, we will work with our EPC contractor to investigate potential means of minimizing our effect to this community through detailed design and construction planning, noting that the dominant aspect of the detailed design for this area will be the Thames river crossing itself and the need to maintain sufficient clearances (both vertical clearances and horizontal setback from the river bank).</p> <p>Post-construction restoration of this area will also consider the existing native species in this area that are compatible with overhead transmission lines, to encourage the re-establishment of these species thus minimizing the overall net change to this community.</p>
4. <b>Collisions with powerlines can be a significant cause of bird mortality. We understand that bird diverters are proposed to improve visibility of the transmission line within the Important Bird Area (IBA). Please provide additional details, including whether any studies are available to demonstrate the success of these measures. If success has been demonstrated, we also recommend that bird diverters be used along the full length of the transmission line and not just within the IBA.</b>	<p>Avian collisions with transmission lines, and the effectiveness of diverters/visual markers has been well studied over the years; results vary depending on the species/habitats in question and specific product (type/colour of diverter) used, but nearly all diverters studied have demonstrated changes in behaviour of studied species and subsequent reductions in collisions, with effectiveness ranging from 36% to 96% reductions, though the majority of studies demonstrated reductions in the range of 50 to 80%.</p> <p>Selection, placement and spacing of bird diverters will form a part of the detailed design of the transmission line and have yet to be determined, but these measures are best applied on a habitat-focused basis; many birds can live in proximity to transmission lines with little risk of collision, with waterfowl and other larger species generally being at higher risk, and areas of highest risk being locations in close proximity to congregation areas or areas where repeated intra-season flights occur (e.g., between key resource areas). As such, our current strategy is to apply diverters on a habitat-focused basis.</p> <p>We are happy to continue this discussion with WIFN staff and will also seek to include our EPC contractor (Forbes Bros.) in these discussions in order to inform their design and construction plans for the use of these tools.</p>
5. <b>We understand that vegetation will be removed outside of the bird breeding and nesting window. If additional vegetation must be removed during the nesting season, nest searches will be undertaken prior to any removals. Please confirm the maximum amount of time which will elapse between the nest searches and the time the trees are removed. This should not be more than one to two days.</b>	<p>Thank you for the comment; we will strive to ensure that any removal of vegetation within breeding season occurs within 48 hours of the nest sweep being conducted, and sooner if practical. Regardless of the outcome of a nest sweep, if an active nest is encountered at any point in construction, any work which could harm the nest or its occupants will cease until the young have fledged or appropriate protective measures (e.g., buffer zone) have been established.</p>

Comment	Draft Response
6. Turtle wintering areas are identified as being present within the project footprint. Some in-water work will be need during construction which could affect wintering turtles. Please avoid in-water work during the turtle wintering season.	We will commit to avoiding in-water works within turtle wintering areas during the turtle wintering season. We will specify this in the final ESR.
7. It is not clear which of the 66 watercourse crossings identified have existing infrastructure (i.e., culverts) that can be utilized during the course of this project. Additional details regarding likely locations of proposed temporary watercourse crossings should be provided, once available.	As we continue to engage with property owners and learn more about the specific features along the preferred route, the information we obtain over the coming months (such as the location and condition of existing watercourse crossings that may be utilized for construction) will inform the detailed construction and mitigation plans. These plans will be documented in a project-specific Environmental Management Plan (EMP) which will provide specific instructions to constructions crews (e.g., access plans, watercourse crossing locations, erosion and sediment control plans, etc.). We will commit to sharing the EMP for the St. Clair TL project with WIFN for review prior to construction.
8. The report indicates that habitats is present for several Endangered and Threatened reptiles, including Eastern Foxsnake, Butler’s Gartnersnake, and Blanding’s Turtle (THR). Critical habitats of these species such as nesting habitat, overwintering habitat, and thermoregulation areas should be delineated during the detailed design phase. The design of SAR exclusion fencing should include considerations for SAR snakes in addition to turtles. Eastern Foxsnake in particular are adept climbers and the design for SAR turtles will not be appropriate for excluding Foxsnake. Equipment left idle should be inspected for SAR snakes. Consideration for providing SAR identification training for on-site staff should be provided.	<p>We thank WIFN for these comments, and make the following commitments:</p> <ul style="list-style-type: none"><li>• As per above, we will commit to avoiding any in-water works in turtle overwintering areas during the overwintering season.</li><li>• No features with the potential to support hibernacula were observed on the Preferred route during field investigations during the Class EA, however if hibernacula are identified during the detailed design phase, or encountered during construction, measures will be taken to avoid disturbing these areas during their sensitive season.</li><li>• The design of SAR exclusion fencing for Eastern Foxsnake will include measures (e.g., increased height, an outward-facing lip, or similar) to prevent entry into work areas by climbing the fencing.</li><li>• Vehicles and equipment left idle overnight at work areas will be inspected for SAR snakes prior to use.</li><li>• Training on the identification of SAR relevant to the project area, and protocols for incidental observations of SAR, will be provided to construction crews, and materials to assist in field identification will be provided to crews.</li></ul> <p>We will ensure the above mitigation commitments are added to the final ESR and further details will be documented in the project-specific EMP.</p>

Comment	Draft Response
9. <b>Measures to prevent the inadvertent transfer of invasive species is critical in helping maintain the existing integrity of natural systems within WIFN’s Traditional Territory. The best management practices identified in the Clean Equipment Protocol (Halloran et al. 2013) should be utilized.</b>	Hydro One will continue to identify and flag areas with populations of invasive species for consideration during construction planning. Additionally, as described in <b>Section 7.7.8.6</b> construction staff will be educated on the identification of invasive species and the importance of avoiding their spread to new areas. The <b>Clean Equipment Protocol for Industry</b> will be implemented during construction to guide equipment and vehicle inspection and required cleaning. It should be noted that the use of temporary constructed access will also serve to mitigate the inadvertent transfer of invasive species propagules by limiting the direct contact between construction equipment and bare soil/plant material.
10. <b>Several statements made in the mitigation section of the report are vague and don’t provide strong language to ensure that they will actually be implemented. Examples are as follows:</b>  a) <b>“Avoidance of sensitive areas, where practical.”</b> b) <b>“Avoidance of watercourses, where feasible.”</b> c) <b>“Proactive communication” without providing specific details as to when communication will occur and what is meant by proactive.</b> d) <b>Please provide clearer commitments without the extensive use of qualifiers or limitations.</b>	<p>With regards to the mitigation measures described in the draft ESR and the qualifiers used therein, environmental assessments (EA) occur early in the planning phase of a project, and typically outline high-level mitigation measures and commitments which are then used to inform and guide the development of site-specific mitigation plans which are then documented in a project-specific EMP after the EA has been completed. We felt that these qualifiers are prudent at this early stage in planning as not every mitigation measure will be suitable (or the most effective solution) in every specific situation. However, this does not lessen our commitment to undertaking these measures where they are suitable, and in situations there they may not be practical to implement, alternative measures will be utilized.</p> <p>As per the responses above, Hydro One has committed to sharing the EMP for the St. Clair TL project, which will include site-specific details and maps of the construction mitigation plans, with WIFN prior to construction.</p> <p>Hydro One has consulted with Indigenous communities to understand their areas of concern with respect to the project and potential impacts to rights. We will continue to provide project updates throughout the life of the project and share relevant information with the communities.</p>
11. <b>Hydro One has committed to work with Indigenous communities to provide training and jobs opportunities to community members. Hydro One should continue to engage with WIFN with regard to these opportunities.</b>	Hydro One is committed to ensuring that the EPC (Forbes Bros.) provides training and employment opportunities to local Indigenous communities. The EPC is contractually obligated to inform and progress these opportunities with all engaged communities.

Comment	Draft Response
12. <b>WIFN community members have raised concerns regarding potential ground water disruption relating to the construction of the hydro towers. WIFN would like a more fulsome response on how Hydro One will address these concerns.</b>	<p>As described in <b>Section 4.6.4</b> of the draft Environmental Study Report, Hydro One has conducted research on the groundwater resources as part of the Class EA for the SCTL Project. Based on this information, as well as information collected from the ongoing geotechnical studies and our current engineering designs we are able to confirm that the new transmission line structure foundations will remain several metres above the Kettle Point Shale contact aquifer. The Kettle Point Shale contact aquifer is the primary source of well water in the area (as confirmed by a review of MECP water well records, which is summarized in <b>Section 4.6.4</b> and <b>Table 4-4</b> of the draft ESR), and that there have been historical concerns regarding adverse effects to well water quality and quantity relating to use of driven pile foundations into this aquifer layer and the underlying Kettle Point Shale bedrock.</p> <p>We have taken the concerns about groundwater impact in the area seriously and reflected the feedback we received on this issue in the design of our tower structures and associated foundations. We have committed to:</p> <ul style="list-style-type: none"><li>• We will not use any driven pile foundations on this project; we will utilize helical pile foundations which is a minimal vibration solution;</li><li>• We will avoid the Kettle Point Shale contact aquifer by designing our tower foundations to be between 6 m to 9 m in depth. This means that even in areas where the overburden is thinnest, our foundations will remain within the protective overburden layer and several metres above the top of the Kettle Point Shale contact aquifer;</li><li>• Using helical screw pile foundations, we will avoid the need for excavation or removal of soils, minimizing overall ground disturbance even within the clay till overburden; and</li><li>• Using helical pile foundations to the depths described, we will avoid the need for construction dewatering (removal and temporary displacement of groundwater).</li></ul> <p>For these reasons, we do not anticipate any significant adverse effects to groundwater quality or quantity as a result of this project</p>
13. <b>With the permanent removal of land available for agricultural production due to Project Infrastructure, it should be noted that the project goes through the land that Bkejwanong has a history of traditional economic use throughout the territory. Thus, it is of great importance that the land will continue to be used by the Walpole Island community for economic and other traditional uses.</b>	<p>The Project infrastructure will be limited to the footprint of the tower structures, so the overall removal of agricultural land will be minimal. Hydro One acknowledges the historical traditional uses of the lands on which the Project will be constructed and the importance to the Bkejwanong community.</p>
14. <b>We have no comments associated with noise, or vibration.</b>	<p>Thank you for the comment.</p>



Table 3-21: MECP Comments on the SCTL Draft ESR – December 22, 2023

Comment Section	Comments from MECP	Hydro One Response
General	1. The decision-making process used to determine the weighting schemes presented in <b>Table 5-5</b> to <b>Table 5-8</b> in the draft ESR could be made more transparent by referencing the explanation presented in the Technical Advisory Committee Workshop #3 Summary Report, included in Appendix B of the draft ESR.	We thank the MECP for this comment, and we will add some additional context to the final ESR based on the explanations provided at the TAC Workshop #3.
Indigenous Consultation	2. Please continue reaching out to communities if there are any substantial changes to the project/process or if the proponent is applying for subsequent permits from the ministry that may be of interest or concern to communities. We recommend that the proponent include the record of consultation with any subsequent applications to the ministry to help in our review of those applications.	We thank the MECP for this comment. Hydro One will continue to consult and engage with Indigenous communities on matters of interest to them, including the development of detailed construction mitigation plans and permits. It should be noted that the majority of specific environmental permits obtained during the detailed design phase will be obtained directly by the Engineering, Procurement and Construction (EPC) contractor (which will be Forbes Bros., for the SCTL Project). Supporting records of consultation with Indigenous communities can be provided to MECP upon request.
Indigenous Consultation	3. <b>Section 3.1</b> of the ESR lists the Indigenous Communities that were emailed the Notice of Completion; however, Appendix B does document distribution of these notices in the record of consultation. Please make sure to document these emails and any follow-up emails with communities in the Record of Consultation and be prepared to provide the record of consultation to the ministry on request.	We thank the MECP for notifying us of this, we will ensure that the Record of Consultation is updated to include the distribution of the Notice of Completion to Indigenous communities.
Species at Risk	4. <b>Section 7.7.8.4</b> of the draft ESR lists the bat active period is listed as April 1 to Sept. 30. Please note, in Southern Ontario, the active season is elongated for Eastern Small-footed Myotis (March 15 <sup>th</sup> to Nov. 30 <sup>th</sup> ).	We thank the MECP for this clarification and will ensure it is captured in the final ESR.
Species at Risk	5. <b>Section 7.7.8.4</b> of the draft ESR states that, “In the event potential SAR bat habitat (including buildings and trees with a 10 cm or greater diameter at breast height) requires removal in support of the proposed Project, bat visual exit and/or acoustic surveys will be completed...”. Please note that visual exit surveys are only appropriate for man-made structures (e.g., houses, barns, bat boxes, etc.) and should not be used in wooded areas. It is recommended that wooded areas utilize acoustic surveys to determine presence/absence of Species at Risk (SAR) bat species.  6. Please note, under the <i>Endangered Species Act</i> (ESA), Wood Thrush and Barn Swallow are listed as Special Concern and no longer receive protections. However, federal <i>Species at Risk Act</i> (SARA) requirements for the species may still be required.	We thank the MECP for these clarifications and will ensure that they are captured in the final ESR.

Comment Section	Comments from MECP	Hydro One Response
Species at Risk	<p>7. Eastern Foxsnake (Carolinian population) and its habitat are protected under the ESA 2007. This species regularly inhabits agricultural lands throughout the area, and so, woodlands, farm hedgerows, old fields, railways, wetlands, and drainage corridors can be important habitats as well as seasonal migration linkages. Specific features such as rotting logs or stumps, piles of organic material (such as compost, sawdust, or woodchips), rock piles, brush piles, and dump sites of old agricultural debris/equipment are likely to provide habitat functions for Eastern Foxsnake in the project area. This species may also utilize old bridges, culverts, and foundations as communal over-wintering sites. If any of the above features are found to occur, they must be protected from all disturbances that would result in damage or destruction of their habitat functions. It is recommended that netting type erosion control measures not be used for projects over drains and rivers. At these locations an alternative product such as Curlex Netfree® blanket or the use of riprap over geotextile fabric should be used for erosion control to prevent entanglement of Eastern Foxsnake.</p>	<p>We thank the MECP for this comment and for the additional clarification on Eastern Foxsnake habitat features, and will incorporate this additional context into the final ESR. We also thank the MECP for the suggestions regarding specific erosion control products which we will take into consideration in tandem with our EPC contractor (Forbes Bros) as detailed construction plans and mitigation measures are developed for the St. Clair Transmission Line project.</p>
Species at Risk	<p>8. Concerning the Northern Bobwhite observation, the ministry SAR Branch was unable to confirm if a permit was issued for the rearing of Bobwhite near the project location. This does not impact Hydro One's proposed activity, however if any information could be provided to MECP Drinking Water and Environmental Compliance Division and SAR Branch about the property in question that may be rearing SAR illegally, it would be greatly appreciated. The ministry would like more information if the individual observation was definitely pen reared or the neighbour was mistaken on the pen reared species and Northern Bobwhite is residing in the natural area.</p>	<p>Additional information on this observation is provided in the Natural Environment Existing Conditions Report developed for the project, which is included in <b>Appendix C</b> of the ESR.</p> <p>We are available to discuss this observation further if the MECP requires, noting that private compliance issues are outside the scope of the St. Clair Transmission Line project.</p>



Comment Section	Comments from MECP	Hydro One Response
Ground Water	<p>9. Helical Piles: Should Hydro One confirm a commitment to utilize only helical corkscrew piles in all its final tower foundation designs and that no helical pile will intersect the regional Contact Aquifer, the ministry will not require any assessment of groundwater resources at this time for the construction of the project.</p>	<p>We thank the MECP for this comment. As informed by the early geotechnical investigations and civil engineering work conducted to date, Hydro One reiterates the following commitments:</p> <ul style="list-style-type: none"><li>• We will not use any driven pile foundations on this project; we will utilize helical (screw) pile foundations which is a minimal vibration solution;</li><li>• We will avoid the Kettle Point Shale contact aquifer by designing our tower foundations to be between 6 m to 9 m in depth. This means that even in areas where the overburden is thinnest, our foundations will remain within the protective overburden layer and several metres above the top of the Kettle Point Shale contact aquifer;</li><li>• Using helical screw pile foundations, we will avoid the need for excavation or removal of soils, minimizing overall ground disturbance even within the clay till overburden; and</li><li>• Using helical pile foundations to the depths described, we will avoid the need for construction dewatering (removal and temporary displacement of groundwater).</li></ul>
Ground Water	<p>10. Steel Piles: Should the geotechnical results dictate that the final tower foundation design at any location along the PSA is to utilize steel piles that will require pile driving through the Contact Aquifer to the underlying bedrock surface, the ministry will require the following:</p> <p>a) Immediate notification to the MECP District and Regional Offices.</p> <p>b) A series of test pile driving programs, pre-tower construction, which should consist of the installation of test piles at several representative locations along the expanse of the PSA where steel piles are proposed. Hydro One should retain a qualified expert (Professional Engineer or Professional Geoscientist) to develop and carry out a monitoring program during the installation of the test piles. This could include the following:</p> <ul style="list-style-type: none"><li>• measuring and monitoring ground-borne vibration generated from the installation of the test piles,</li><li>• measuring and monitoring any changes in groundwater pressures generated from the installation of the test piles, and</li><li>• measuring and monitoring groundwater quality before, during, and after the installation of the test piles.</li></ul>	<p>As noted in the response to comment 9, Hydro One is not planning to utilize any driven pile foundations for the St. Clair Transmission Line project. We also anticipate that the depths of tower foundations will remain several metres above the Kettle Point Shale contact aquifer.</p> <p>If for any reason the need for driven pile foundations to depths that would intersect the Kettle Point Shale contact aquifer are later identified as being needed, Hydro One acknowledges the MECP's requirements as noted in this comment and will inform the MECP at the earliest opportunity to discuss next steps.</p>

Comment Section	Comments from MECP	Hydro One Response
	<p>Following MECP’s review of the results of the Test Piling Program, the ministry may further require the following in preparation of and during tower foundation construction:</p> <ul style="list-style-type: none"> <li>c) A comprehensive groundwater monitoring program before, during and after the pile driving activity involving all private drinking water wells within 1 km of the respective towers along the PSA.</li> <li>d) To address the potential that pile-driving may also cause transient pore pressure waves within the aquifer, and that these waves may also have the potential to temporarily affect water quality in neighboring wells, the groundwater monitoring program should include water level or pore water pressure monitoring at several locations before, during and after nearby pile driving activity.</li> <li>e) A comprehensive vibration monitoring program during the construction phase of the project to assess all ground-borne vibration associated with pile driving and potential blasting activity.</li> <li>f) Detailed requirements to be followed during foundation construction should a water well interference complaint be received by the ministry or the proponent. Generally speaking, if a complaint is received, Hydro One should retain a qualified professional to investigate the claim, collect a representative water sample, and provide an opinion on the cause of the reported issue.</li> </ul> <p>The ministry reserves the right to review and approve all aspects of the groundwater monitoring programs before implementation.</p>	
<b>Noise and Vibration</b>	11. Project Description: the draft ESR includes a description of the project complete with maps and figures. However, the ministry notes that this document does not include a standalone noise and vibration report for this project.	In Hydro One’s experience on past transmission line projects and Class EAs completed, standalone noise and vibration reports have not been required nor has any clear guidance on this been formally published by the MECP.
<b>Noise and Vibration</b>	12. Construction Noise and Vibration: Reference should be made to Ministry Publications NPC-115 “Construction Equipment”, NPC-118 “Motorized Conveyances”, and NPC-119 “Blasting”. Reference should also be made to local municipal noise and vibration by-laws, where applicable.	We thank the MECP for this comment and will add specification to the final ESR as requested.
<b>Noise and Vibration</b>	13. Operation Noise: Publication NPC-360 dated March 31, 2011 is applicable for the transmission lines, while Publication NPC-300 is applicable for the operation of other stationary sources (impulsive and non-impulsive sources]. The noise assessment for the transmission lines should be prepared in accordance with Publication NPC-360, and for the other stationary sources should be in accordance with the procedures detailed in	We thank the MECP for providing these documents, noting that NPC-360 seems to still be marked as “final draft” and does not appear to be published publicly anywhere on the Ministry’s website (in contrast to other established guidance such as NPC-300).

Comment Section	Comments from MECP	Hydro One Response
	Publication NPC-300. Predicted sound levels for transmission lines should be provided at representative worst-case points of reception locations for this project. It is recommended that all efforts should be made at this stage of the project to identify the predictable worst-case impact of the project and if required, investigate noise mitigation measures due to the potential complexities and costs related to post-design or post- construction of the transmission lines and other stationary sources.	We note that the noise assessment (predictive modeling) methodology presented requires an advanced level of detailed design that we have not yet reached for the SCTL project, as our EPC contractor responsible for completing detailed design has only just recently been formally awarded the work. While we will not have the required engineering information required to complete this assessment in time to include in the final ESR, we will commit to continue investigating the application of this protocol as we continue to advance detailed design and engineering work, and will keep the Ministry apprised of our progress and preliminary results.
Noise and Vibration	<p>14. Ministry Documents: attached (Guideline and supporting documentation) are two Ministry guidelines for the assessment of high-voltage transmission lines projects. Please ensure that any noise report and assessment prepared for this project take these two ministry documents into consideration.</p> <p>Attached ministry documents:</p> <p>a) Part C- NPC-360, (Protocol for Predicting Audible Noise from HV Transmission Lines), of the document titled “Protocol for the Measurement and Prediction of Audible Noise from HV Transmission Lines (Final Draft)” - Publication NPC-360 dated March 31, 2011 (Ver. 2); and</p> <p>b) The example acoustic assessment report for high voltage transmission lines titled “Acoustic Assessment Report, ACME Power Generation, Proposed Green Valley High Voltage Transmission Line, Main Road to Secondary Road Anytown, Ontario” dated April 6, 2011.</p>	We thank the Ministry for providing these documents.
Noise and Vibration	15. Points of Reception (POR): list all points of reception on both sides of the proposed transmission lines. It should be noted that an assessment of predicted audible noise (i.e., operational audible noise) is not required for transmission lines of 600 kV or less where a point of reception exceeds 200 metres from the closest edge of the right of way (Part A of Publication NPC-360).	We thank the MECP for this clarification. As we conduct the assessment of predicted audible noise during the detailed design phase (post-EA), we will ensure that it considers and lists the Points of Reception within 200 m of the closest edge of the ROW.
Noise and Vibration	16. Vacant lots: noise sensitive vacant lots and approved (future) developments should be considered in the noise and vibration report.	We will consider noise sensitive vacant lots and approved future developments in the upcoming assessment of predicted audible noise, noting that we are not currently aware of any approved future developments in proximity (i.e., within 200 m) of the proposed St. Clair Transmission Line ROW.

Comment Section	Comments from MECP	Hydro One Response
Noise and Vibration	17. Vibration: identify buildings / receptors that are sensitive to vibration due to construction blasting and piling.	<p>Sensitive receptors will be identified in the project-specific EMP, for consideration when planning work such as implosive splicing locations. We will add this commitment to the final ESR in <b>Section 7.7.3</b> (Potential Environmental Effects and mitigation Measures – Noise and Vibration).</p> <p>It should be noted that while implosive conductor splicing locations have not yet been determined, that implosive splicing locations will maintain safe distance from sensitive receptors such as homes. While implosive splicing is the most reliable and commonly used method to splice sections of transmission-voltage conductor, in situations where splicing must occur in close proximity to sensitive receptors (e.g., at heavy angle locations where there may be adjacent houses), non-implosive methods such as compression sleeves will be used.</p> <p>Helical pile foundations are a low-vibration technique and are not anticipated to have any significant risk to structures outside of the ROW. Helical pile foundations were selected for use in part because of the low level of vibration associated with their installation.</p>
Noise and Vibration	18. Assessment: any noise report and assessment prepared for this project should address all the project components referenced in these noise and vibration review comments #12 to 19. Such a noise assessment should follow the guidance in comment #14 above, and such a vibration assessment should follow the guidelines in Publication NPC-119 for blasting and Publication NPC-207 “Impulse Vibration in Residential Buildings” for piling (impulse vibration).	<p>As noted above, we will prepare a noise assessment once sufficient detailed design work has been completed.</p> <p>Regarding sources of vibration, it should be noted that while implosive conductor splicing locations have not yet been determined, that implosive splicing locations will maintain safe distance from sensitive receptors such as homes. While implosive splicing is the most reliable and commonly used method to splice sections of transmission-voltage conductor, in situations where splicing must occur in close proximity to sensitive receptors (e.g., at heavy angle locations where there may be adjacent houses), non-implosive methods such as compression sleeves will be used.</p> <p>If it becomes apparent that implosive conductor splicing is required in close proximity to sensitive receptors, then we will follow the guidance referenced by the MECP in this comment.</p> <p>Helical pile foundations are a low-vibration technique and are not anticipated to have any significant risk to structures outside of the ROW. Helical pile foundations were selected for use in part because of the low level of vibration associated with their installation.</p>

Comment Section	Comments from MECP	Hydro One Response
Noise and Vibration	19. UTM coordinates of the PORs: considering the extensive length of the transmission lines, which spans approximately 64 km, we request the provision of UTM coordinates for all selected points of reception and vacant lots. To ensure efficient data management, we ask for the coordinates to be provided in an Excel file format.	The upcoming noise assessment will contain an excel spreadsheet listing the Points of Receptors and vacant lots and their UTM with coordinates.

Table 3-22: MCM Comments on the SCTL Draft ESR – March 15, 2024

Reference to Report	Comments from MCM and Rationale	Hydro One Response
Throughout the CHEC Report, Cultural Heritage Preliminary Impact Assessment, and ESR	<p>The term “cultural heritage resources” includes archaeological resources, built heritage resources, and cultural heritage landscapes.</p> <p>For consistency, MCM recommends using the correct terminology when referring to each one, and the term “cultural heritage resources” when referring to all three types.</p> <p>We recommend revising the terminology of the ESR, CHEC Report, and Cultural Heritage Preliminary Impact Assessment.</p>	We thank the MCM for this comment and will revise the terminology accordingly in the ESR and preliminary HIA.
CHEC Report: Executive Summary (p.iii) and ESR: Section 7.4 – Cultural Heritage Resources (p.7-398) and Cultural Heritage Preliminary Impact Assessment: Executive Summary (p.ii)	<p>There seem to be inconsistencies across reports.</p> <p>The CHEC Report states that a total 128 properties with potential CHVI were identified within the study area (for all routes); however, the Cultural Heritage Preliminary Impact Assessment indicates that 129 properties were identified.</p> <p>In addition, the ESR and Cultural Heritage Preliminary Impact Assessment both state that 51 cultural heritage resources and “one crossing of the Thames River” were identified within the Route 2 study area. The CHEC Report, however, only identifies 50 cultural heritage resources (in addition to the crossing of the Thames River).</p> <p>We recommend clarifying.</p>	We thank the MCM for this comment. This discrepancy stems from route refinements that were made during the Class EA, which were not retroactively incorporated into the CHEC which had been completed by that time. We can confirm that the figures in the ESR and the Preliminary HIA are the most current.
CHEC Report: Executive Summary (p.iii); Section 4.1.6 – Results of Analysis and Recommendations (p.38); Section 5 – Summary Statement and Recommendations (p.40) and ESR: Section 4.3.2 – Cultural Heritage (p.4-297) and Cultural Heritage Preliminary Impact Assessment: Executive Summary	<p>The CHEC Report recommends that “a Preliminary Heritage Impact Assessment (HIA)” be conducted to “identify the direct and indirect impacts from the preferred alternative on known and potential [BHRs and CHLs] [...]” (p.iii). In addition, the report completed following the CHEC is titled “Cultural Heritage Preliminary Impact Assessment.”</p> <p>MCM suggests revising the title of the recommended study from “Preliminary HIA” or “Cultural Heritage Preliminary Impact Assessment” to “Cultural Heritage Report: Existing Conditions and Preliminary Impacts (CHR).”</p> <p>Whereas HIAs are site-specific and typically occur at a later stage, CHRs are</p>	The title (and purpose/content) of the Cultural Heritage Preliminary Impact Assessment is taken from the Hydro One Cultural Heritage Identification and Evaluation Process (CH I&E Process; 2019), which was jointly executed by Hydro One and MCM (formerly the Ministry of Heritage, Sport, Tourism and Culture Industries; MHSTCI). In the CH I&E process, the role and purpose of Cultural Heritage Preliminary Impact Assessments are described and are distinct from the more detailed, site-specific Heritage Impact Assessments (HIA).



Reference to Report	Comments from MCM and Rationale	Hydro One Response
(p.ii); Section 1 – introduction (p.1); Section 5 – Summary Statement and Recommendations (p.35)	<p>preliminary in nature and are more appropriate for larger study areas in order to:</p> <ol style="list-style-type: none"> <li>1. Build on the baseline cultural heritage information that was gathered in the Existing Conditions/CHEC Report.</li> <li>2. Identify preliminary potential project-specific impacts on the known and potential BHRs and CHLs that have been identified.</li> <li>3. Recommend measures to avoid or mitigate potential negative impacts to known or potential BHRs and CHLs. The proposed mitigation measures are to inform the next steps of project planning and design.</li> </ol> <p>Note that, to avoid confusion, we have used the term “Cultural Heritage Preliminary Impact Assessment” throughout our cover letter/comments table as this is the existing title of the report completed by WSP.</p>	As the title of the Cultural Heritage Preliminary Impact Assessment stems from the executed CH I&E process, we will retain this report title for the St. Clair project (including references in the ESR), although a discussion on the title of these reports may occur on a more general level between MCM and Hydro One at MCM's request. We have attached the CH I&E process for MCM's reference.
CHEC Report: Section 4.1 – Study Area (p.15)	<p>Section 4.1 indicates the following:</p> <ul style="list-style-type: none"> <li>• “Forty-Nine (50) properties assessed at a preliminary level to have potential [CHVI] for their [BHRs]” and</li> <li>• “Sixty-Nine (70) properties assessed at a preliminary level to have potential [CHVI] for their [BHRs] and as a [CHL].”</li> </ul> <p>There appear to be typographical errors in this section. We recommend revising the text to clarify the number of properties.</p>	We will make this minor revision to the CHEC to clarify and ensure a consistent description of the number of properties.
CHEC Report: Section 4.1 – Study Area, Tables 4.1.1, 4.1.2, 4.1.3, 4.1.4 and 4.1.5 (p.16-37)	<p>For clarity and to support the results presented in Section 4.1, MCM recommends that summary tables 4.1.1 through 4.1.5 be revised to include the following additional elements for each property with known/potential CHVI:</p> <ul style="list-style-type: none"> <li>• Cultural heritage resource reference numbers (as shown in the maps in Figures 4A to 4F).</li> <li>• Heritage recognition (e.g., listed, designated, provincial heritage property, none).</li> <li>• Photographs (as included in Appendix A).</li> </ul>	We will revise the tables to include Cultural heritage reference numbers and heritage recognition. With regards to the photographs, we feel that the appendices are the most appropriate location for photo documentation and as such will not add the photographs to the body text of the report.
Cultural Heritage Preliminary Impact Assessment: Executive Summary (p.ii)	See cover letter. The Cultural Heritage Preliminary Impact Assessment should include clear and specific recommendations about the timing for the CHERs and subsequent HIAs (as required).	Timing of surveys and assessments that require access to the property (and occasionally structures) requires voluntary permission to enter (PTE) from the property owner; this is highly variable among property owners with some granting PTE early on and others not granting PTE until later in planning stages. As such, determining the specific timing of surveys such as CHERs and HIAs is often difficult early in the planning process (i.e., during or immediately following the Environmental Assessment phase). In particular, such studies are often not able to be



Reference to Report	Comments from MCM and Rationale	Hydro One Response
		<p>completed during the Class EA, as the announcement of the preferred route occurs in the latter stages of the Class EA process and outreach to directly affected property owners (including entering into voluntary access agreements for property-specific surveys) is often only commencing or still in early stages at the time of the Notice of Completion of the draft ESR. However, completion of these studies is a commitment made in the ESR for the detailed design stage, subject to the recommendations of the Cultural Heritage Preliminary Impact Assessment and the availability of PTE and progress of detailed design and construction plans.</p> <p>Once voluntary PTE a property is granted, the CHERs (and HIAs, if applicable) will be completed as early as possible during detailed design. This is consistent with the handling of archaeological assessments during Class EA projects, where the desktop study phase (Stage 1 AA) is completed during the EA, and the site-specific field investigations (Stage 2 AA) are captured as commitments in the ESR, but the studies are typically conducted after the EA has been completed.</p> <p>For the St. Clair TL project, we are currently anticipating that CHERs and HIAs will be conducted in calendar 2024; however, we are still awaiting receipt of voluntary PTE from some landowners.</p> <p>We will add the above explanation, and target for completion of CHERs and HIAs in calendar 2024, to the Cultural Heritage Preliminary Impact Assessment.</p>
Cultural Heritage Preliminary Impact Assessment: Executive Summary (p.iii-xiv); Section 4.4 – Results and Recommendations, Table 1 (p.17-34); Section 5 – Summary Statement and Recommendations, Table 2 (p.36-45)	<p>For 17 properties, the Cultural Heritage Preliminary Impact Assessment indicates that “The proposed transmission line RoW is depicted within the property and an access road and hydro towers may be installed in this location. The proposed [transmission line will replace an existing line], running directly parallel and directly adjacent to it on the east side. Accordingly, no direct or indirect impacts are anticipated from the proposed line. A construction access road will be required during the work, and mitigation measures are required.” Post-construction mitigation measures are recommended for these properties.</p> <p>To support and clarify the recommendations of the report, MCM suggests providing additional information (such as additional mapping) to illustrate the location of the construction access road more clearly in relation to potential BHRs and CHLs.</p>	<p>As described in Chapter 7 of the ESR, construction access roads will be temporary in nature and will be removed and restored following completion of construction. As such, there will be no long term change to the landscape from construction access roads or laydown areas.</p> <p>Details of construction planning, including exact entrance, access road and construction laydown areas, are generally not available at the time of the EA and other early planning phase activities but rather are determined and finalized during detailed design. Construction access plans are currently in development for the St. Clair TL project and as such cannot be included in the Cultural Heritage Preliminary Impact Assessment, but in the event that any property-specific HIAs are required for the project these studies will consider construction access plans.</p> <p>We will add some of the above context to the Cultural Heritage Preliminary Impact Assessment report.</p>

Reference to Report	Comments from MCM and Rationale	Hydro One Response
Cultural Heritage Preliminary Impact Assessment: Executive Summary (p.iv); Section 4.4 – Results and Recommendations, Table 1 (p.19); Section 5 – Summary Statement and Recommendations, Table 2 (p.37)	The recommendations for 1069 Bickford Line are not consistent across tables. In the Executive Summary table, recommendations include conducting a property-specific CHER as an alternative option if post-construction restoration is not feasible. In Tables 1 and 2, no further cultural heritage studies are recommended. We recommend clarifying.	We will revise the report to have consistent recommendations across tables.
Cultural Heritage Preliminary Impact Assessment: Executive Summary (p.iii-xiv); Section 4.4 – Results and Recommendations, Table 1 (p.17-34); Section 5 – Summary Statement and Recommendations, Table 2 (p.36-p.45)	See comment #5. We recommend including a cultural heritage resource number to identify each property within the tables (i.e., BHR or CHL 1,2,3, etc.). These numbers should also be included in the report's mapping.	As per the response to comment #5, we will update the tables and mapping to include Cultural heritage reference numbers and heritage recognition.
Cultural Heritage Preliminary Impact Assessment: Executive Summary (p.iii-xiv); Section 4.4 – Results and Recommendations, Table 1 (p.17-34); Section 5 – Summary Statement and Recommendations, Table 2 (p.36-p.45)	Tables 1, 2, and the Executive Summary table each indicate that direct impacts are anticipated to 9190 Eberts Line, more specifically that “three structures that are a part of the potential CHL are within the RoW. Accordingly, the potential heritage resource may be directly and/or indirectly impacted by the proposed work.”  We recommend clarifying, as much as possible, what these impacts may entail (i.e., if demolition or removal may occur).	We will clarify to the extent possible however as the project is still in the detailed design phase, specific impacts to the property cannot be definitively determined at this time pending completion of design and ongoing discussions with the property owner. Should a property-specific HIA be required, we anticipate that greater certainty on the engineering design and construction plans will be available to inform that assessment.
Cultural Heritage Preliminary Impact Assessment: Section 2.0 – Scope and Method (PDF p.21-27)	We recommend that the maps included in this section identify the locations of potential BHRs more clearly within each property (e.g., through the use of points or polygons) to help understand the proximity of the proposed infrastructure to each BHR.	We will update the mapping as requested.
ESR: <b>Section 4.3.1</b> – Archaeology (p.4-296-4-297)	In this section and elsewhere in the ESR, MCM recommends replacing the term “archaeology assessment” with “archaeological assessment” to align with the legislative framework.  MCM also suggests including a reference to the PIF number for each AA listed in <b>Section 4.3.1</b> .  In addition, the ESR indicates that “the results of the Stage 1 [AA] were provided to the MCM and entered into the Ontario Public Register of Archaeological Reports.” MCM’s records indicate that the Stage 1 AA under PIF number P324-0711-2022 is currently under review. We recommend clarifying	We will revise the ESR to replace the term “archaeology assessment” with “archaeological assessment” throughout. We will also add the PIF numbers to references of the AA reports listed in Section 4.3.1. We will also revise Section 4.3.1 of the ESR to clarify that the Stage 1 AA is still pending acceptance from the MCM.  We will make revisions to Section 4.3.1 of the ESR as follows:  “Hydro One commits to completing Stage 2 Archaeological Assessments for these identified areas of archaeological potential along the preferred route as early as possible during detailed design and prior to ground

Reference to Report	Comments from MCM and Rationale	Hydro One Response
	<p>whether there has been another Stage 1 AA (under a different PIF) that has been entered into the Register. Otherwise, Section 4.3.1 of the ESR may need to be revised.</p> <p>Furthermore, see cover letter. MCM recommends that further stages of archaeological assessment (if recommended) be undertaken as early as possible during detail design and prior to any ground disturbing activities. We suggest editing the wording regarding the timeline for future AAs</p>	disturbing activities associated with construction work occurring on these areas or with acceptable avoidance and mitigation measures applied.”
ESR: <b>Section 4.3.2</b> – Cultural Heritage (p.4-297)	<p>See comment #1. The title of this section should be edited from “Cultural Heritage” to “Built Heritage Resources and Cultural Heritage Landscapes.”</p> <p>In addition, this section of the report should clearly state that the Cultural Heritage Preliminary Impact Assessment has been completed and summarize the findings and recommendations of that report (see cover letter).</p>	We will make this revision in the ESR, and incorporate the overall findings of the Cultural Heritage Preliminary Impact Assessment into the ESR.
ESR: <b>Section 5.3.2</b> – Socio-Economic Environment Category (p.5-351 and 5-356)	See cover letter. The Cultural Heritage Preliminary Impact Assessment should be included on the list of studies undertaken.	We will make this addition to the ESR.
ESR: <b>Section 5.4</b> – Step 4: Weighted Criteria, Table 5-5 (p. 5-361); <b>Section 5.5</b> – Step 5: Evaluate and Select, Table 5-9 (p.5-370)	In Table 5-5 and Table 5-9, MCM recommends replacing the phrase “features associated with archaeological potential” to “areas of archaeological potential.”	We will make this revision in the ESR.
ESR: <b>Section 7.12</b> – Summary of Potential Environmental Effects, Mitigation Measures, and Net Effects, Table 7-1 (p.7-447)	<p>See comment #12 and cover letter.</p> <p>We also recommend edits to the “Archaeological Resources” row to align with the current legislative framework.</p>	<p>We will make revisions to Section 7.12 and Table 7-1 of the ESR as follows:</p> <p>“Disturbance to lands with archaeological potential”</p> <p>“Additional archaeological assessments will be completed as early as possible during detailed design and prior ground disturbing activities associated with construction work occurring on these areas or with acceptable avoidance and mitigation measures applied.”</p> <p>“Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the Ontario Heritage Act.</p>

Reference to Report	Comments from MCM and Rationale	Hydro One Response
		<p>The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with Ontario Regulation 30/11 the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where, human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at <a href="mailto:archaeology@ontario.ca">archaeology@ontario.ca</a>) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the Ontario Heritage Act.”</p>
<p>ESR: <b>Section 7.3</b> – Archaeological Resources (p.7-397)</p>	<p>See comment #12, comment #16, and cover letter.</p> <p>We also recommend editing this section to align with the legislative framework.</p>	<p>We will make revisions to Section 7.3 of the ESR as follows:</p> <p>“Hydro One commits to completing Stage 2 Archaeological Assessments for these identified areas of archaeological potential along the preferred route as early as possible during detailed design and prior to ground disturbing activities associated with construction work occurring on these areas, or with acceptable avoidance and mitigation measures applied. Archaeological assessment reports will be submitted to MCM where they will be reviewed to ensure conformance with the requirements of the <i>Ontario Heritage Act</i>.”</p> <p>“Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the Ontario Heritage Act.</p> <p>The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with Ontario Regulation 30/11 the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at</p>



Reference to Report	Comments from MCM and Rationale	Hydro One Response
		archaeology@ontario.ca) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the Ontario Heritage Act.”
ESR: <b>Section 7.4</b> – Cultural Heritage Resources (p.7-398)	See comment #1 and #13. We recommend editing the title of this section from “Cultural Heritage Resources” to “Built Heritage Resources and Cultural Heritage Landscapes.”  In addition, see cover letter (regarding the completion of technical cultural heritage studies).	We will make this revision to the ESR. With regards to the completion of technical cultural heritage studies during the Class EA, please see the response to comment #6 above. While we will append the Cultural Heritage Preliminary Impact Assessment to the ESR and include the overall findings of that report, property-specific CHERs and HIAs are generally not able to be conducted during the Class EA but are completed in the detailed design phase, following completion of the EA.
ESR: <b>Section 7.12</b> – Summary of Potential Environmental Effects, Mitigation Measures, and Net Effects, Table 7-1 (p.7-448)	See comment #13. Also, see cover letter regarding the completion of technical cultural heritage studies. The findings and recommendations of the Cultural Heritage Preliminary Impact Assessment should be incorporated into the ESR.	With regards to the completion of technical cultural heritage studies during the Class EA, please see the response to comment #6 above. While we will append the Cultural Heritage Preliminary Impact Assessment to the ESR and include the overall findings of that report, property-specific CHERs and HIAs are generally not able to be conducted during the Class EA but are completed in the detailed design phase, following completion of the EA.
ESR: <b>Section 7.13.3</b> – Analysis of Cumulative Effects, Table 7-4 (p.7-498)	The information presented in the “Cultural Heritage Resources” row, under the “St. Clair Transmission Line” column does not seem to align with the findings of the Cultural Heritage Preliminary Impact Assessment. The ESR states that “no cultural heritage landscapes were identified in the study area associated with the preferred route for the new transmission line.” This should be reviewed, as the Cultural Heritage Preliminary Impact Assessment identified both potential BHRs and CHLs in the study area for Route 2.  As mentioned in the cover letter, the ESR should incorporate the findings and recommendations of all technical cultural heritage studies undertaken to date.	With regards to the completion of technical cultural heritage studies during the Class EA, please see the response to comment #6 above. While we will append the Cultural Heritage Preliminary Impact Assessment to the ESR and include the overall findings of that report, including in the Analysis of Cumulative Effects presented in Section 7.13.3, property-specific CHERs and HIAs are generally not able to be conducted during the Class EA but are completed in the detailed design phase, following completion of the EA.

Table 3-23: MNRF Comments on the SCTL Draft ESR – March 15, 2024

Comments from MNRF	Hydro One Response
1. Bird species, including Bald Eagle and Osprey, are protected under the Fish and Wildlife Conservation Act (FWCA). Should removal of stick nests be deemed necessary during the detailed design and/or construction phases as indicated in the ESR, a permit under the FWCA may be required. Please contact the Aylmer Work Centre at MNRF.ayl@ontario.ca, for permit requirements prior to the destruction, taking or possession of any nests or eggs of species not protected by the Migratory Birds Convention Act (MBCA) or excluded under section 7(2) of the FWCA.	In the event that removal of stick nests is deemed to be required during detailed design or construction, Hydro One or its engineering, procurement and construction (EPC) contractor (Forbes Bros.) will notify the Aylmer Work Centre to discuss permitting requirements and next steps.

Comments from MNRF	Hydro One Response
2. Should the collection, salvage or relocation of fish or wildlife be required as a part of construction, dewatering or in-water works, please contact the Aylmer Work Centre at MNRF.ayl@ontario.ca for permitting requirements under the FWCA.	Currently, preliminary construction plans seek to avoid any in-water works by using existing watercourse crossings, or where new crossings are required, to utilize temporary clear-span bridges which will not require any works within watercourse channels. However, if changes to these plans are later necessitated, or any other need to potentially salvage or relocate fish or wildlife during construction is identified, Hydro One or its EPC contractor will notify the Aylmer Work Centre to discuss permitting requirements and next steps.
3. Per previous MNRF comment, should in-water works be identified during detailed design, appropriate in water works timing window should be applied. Further in-water work timing restrictions may be required by DFO and/or Conservation Authority permits. Ensure the timing of in-water works are determined based on input and approval requirements (where applicable) of all relevant agencies.	Currently, preliminary construction plans seek to avoid any in-water works by using existing watercourse crossings, or where new crossings are required, to utilize temporary clear-span bridges which will not require any works within watercourse channels. However, if changes to these plans are later necessitated, Hydro One or its EPC contractor will engage the relevant agencies to discuss the application of timing restrictions to in-water works.
4. MNRF recommends referencing the Significant Wildlife Habitat Mitigation Support Tool (SWH MiST) for further mitigation approaches when working in or around SWH.	Hydro One thanks the MNRF for this recommendation. Hydro one and its EPC contractor will review the SWH MiST as detailed environmental mitigation plans are developed for construction of the Project.

Table 3-24: Municipality Comments on SCTL Draft ESR

Date of Comment	Comments from Municipality	Response
December 1, 2023	<p>We are writing to inform you that Chatham-Kent Council passed the following motion regarding the proposed Hydro One St. Clair Transmission Line at its regularly scheduled meeting held on November 27, 2023:</p> <p>“That Chatham-Kent Council send a letter to Hydro One, asking them for more information on how they intend to address the potential impact on the integrity of the water wells from the projects.”</p> <p>Therefore, please accept this letter on behalf of the Municipality of Chatham-Kent and we look forward to Hydro One sharing more information with Members of Council regarding this specific issue and on the progress of the five priority transmission projects in the area.</p>	<p>We are happy to attend and provide an update to the council on the projects as requested.</p>



Table 3-25: Interest Group Comments on SCTL Draft ESR

Comment Number	Date of Comment	Comments from Interest Group	Response
Comments from WWF			
1	11/7/2023	How can a document be created that would address Hydro One's compensation plan to any well owner who should suffer water well interference or loss of property value as a result from the St. Clair transmission line?	<p>Hydro One will continue to work closely with directly impacted property owners to acquire the necessary land rights for the project and gather information on the directly impacted properties, including water well information. The compensation associated with Hydro One's land rights acquisition and, if applicable, the loss in property value, is guided by the Project-specific Land Acquisition Compensation Principles which sets out the process between Hydro One and property owners to attain voluntary property settlements and has been tailored to the project based on local characteristics of the region and the lands impacted by the Project. The Land Acquisition Compensation Principles outlines how compensation is determined, including the consideration of Injurious Affection, which is a payment offered when reductions to the market value of the remainder of the property, occur as a result of Hydro One's use and interest in the property.</p> <p>In addition to directly property owners, we will continue to engage with the local conservation authorities, Indigenous communities, municipalities and the community and work together to address concerns, and find solutions throughout the planning, design, and construction of this project.</p>
2	11/7/2023	What department inside Hydro One has the authority to create such a document? Would not a compensation plan be considered part of the mitigation and risk identification efforts?	Hydro One Real Estate representatives will work directly with impacted property owners.

Comment Number	Date of Comment	Comments from Interest Group	Response
3	11/08/2023	Could Hydro One provide a statement why our recommendations to conduct a groundwater baseline study was rejected from the ESG report?	<p>Throughout our engagement, we've heard valuable feedback from the local community. We have and continue to conduct site visits, environmental surveys, archaeological surveys, research on the groundwater resources in the area as well as geotechnical studies, construction plans and other post-environmental assessment permits and approvals which will continue to help shape the project plan.</p> <p>Hydro One is committed to:</p> <ol style="list-style-type: none"><li>1. Ensuring tower foundations remain between approximately 30 ft (10 m) to 100 ft (30 m) (depending on the depth of the overburden) above the top of the contact aquifer layer.</li><li>2. Not using pile driving to install tower foundations.</li><li>3. Using Screw (Helical) piles, which are widely used in sensitive environments due to their simpler installation process that minimizes ground disturbances (even within the clay till overburden) and avoid the need for excavation or removal of soils and minimizes ground disturbances with negligible noise and vibration levels.</li><li>4. Using helical pile foundations will avoid the need for construction dewatering (removal and temporary displacement of groundwater).</li></ol> <p>Based on these commitments we can confirm that the new transmission line structure foundations will remain significantly above the Kettle Point Shale contact aquifer and construction of the St. Clair Transmission Line Project will not include pile-driving, therefore leaving the Kettle Point black shale contact aquifer undisturbed.</p>

Comment Number	Date of Comment	Comments from Interest Group	Response
3	12/01/2023	Question received at an in-person meeting relating to the planned lifespan of the transmission line and towers.	During the meeting on December 1, 2023, Hydro One replied that towers are designed for a lifespan of several decades, but that this is very conservative and with routine maintenance this timeline is often exceeded.
4	12/01/2023	Comment received at an in-person meeting relating to implosive conductor splicing and the noise generated.	During the meeting on December 1, 2023, Hydro One explained that implosive conductor splicing is standard to industry and the most reliable and commonly used method to splice together sections of transmission conductor, and that this technique can be utilized on ground surface or aerially after conductor sections had been strung onto the new transmission towers. Hydro One pointed out that over 1 million implosive splices have been used worldwide since the 1980s and has a low failure rate.
5	12/01/2023	Comment received at an in-person meeting related to the blasting management plan (to support implosive splicing) that was mentioned in the draft ESR and request that this document should be included in the ESR.	During the meeting on December 1, 2023, Hydro One replied that the blasting management plan is a detailed document that is typically produced by the construction contractor after completion of the Environmental Assessment and closer to construction as a substantial amount of detailed design and planning work (including identification of splicing locations, specific products to be used, etc.) is required to inform that document. Hydro One also noted that planning of implosive splicing would take into account proximity to sensitive receptors such as residences (and associated water infrastructure) to the extent practical, and that if conductor splicing was required in these areas that alternative methods such as compression splicing could be utilized.

Comment Number	Date of Comment	Comments from Interest Group	Response
6	12/06/2023	<p>I just wanted to share this attached map of water well density that [REDACTED] sent to me this morning.</p> <p>This map will give you an idea of the water well density in the area that exists in Ward 4 along the St Clair transmission line route.</p> <p>You can see, there's a preponderance of water wells in this area because there simply isn't a network of water lines serving the properties in Ward 4.</p> <p>Please consider very carefully. It would be a good decision for Hydro One to implement the recommendation we've made for a groundwater baseline study.</p>	<p>We appreciate your support and engagement with the Class Environmental Assessment for this project, including sending Hydro One the image of the Ministry of Environment, Conservations and Parks water well records online mapping tool. Hydro One has diligently reviewed the ministry's water well records for the area. The review of these well records indicates that well log records are consistent amongst the water wells: groundwater is typically found approximately between 15 m and 50 m (49.21 ft and 164 ft) below ground surface, below a thick layer of clay soil which varies in thickness from approximately 45 m (147 ft) near the Lambton TS (northern portion of the transmission line route), to approximately 15 m (49.21 ft) at its thinnest section near Wallaceburg (approximate midpoint of the route) before thickening again to approximately 20 m (65.61 ft) near the Chatham SS (southern portion of the route).</p> <p>Local community input is critical to ensure the planning and development of this project meets the needs of the community and Hydro One has taken the feedback it received and incorporated it into the project.</p>

Table 3-26: Public Comments on SCTL Draft ESR

Comment Number	Date of Comment	Comments from Public	Response
1	11/6/2023	One question I have is if the old towers and lines will be dismantled once the new line is live?	<p>Thank you for your email regarding the St. Clair Transmission Line project and the potential removal of existing infrastructure.</p> <p>This proposed new transmission line is about 60 kilometers, and the preferred route will repurpose about 41 kilometers of an existing transmission corridor. These towers will need to be removed and replaced with larger towers to accommodate the increased amount of power that will flow through the line. Near Otter Creek in Wallaceburg, there will become about 3 kilometers of existing towers and infrastructure that will be decommissioned and removed as it will no longer connect to any other electrical facilities. You may be interested to review additional details, available in <b>Section 1</b> of the ESR.</p> <p>Thank you again for reaching out, we hope this information is helpful.</p>
2	11/7/2023	Please do not disturb the farm sanctuary. Please do not use harmful methods of research into how this project affects animals including fish. Please do not harm beavers or other animals.	<p>Thank you for emailing us regarding the St. Clair Transmission Line project and Charlotte's Freedom Farm.</p> <p>Through our route evaluation process, we heard from many community members about the five route alternatives being evaluated, from which two would traverse through Charlotte's Freedom Farm. We are pleased to let you know the selected route will not traverse Charlotte's Freedom Farm.</p> <p><b>Section 7.1.7</b> of the draft ESR describes the measures that Hydro One is committing to on the St. Clair TL project to avoid or mitigate stress, injury or loss of livestock during construction and operation of the Project. Similarly, <b>Section 7.7.8</b> of the document describes the measures that Hydro One will be undertaking to avoid or mitigate adverse effects to wildlife and their habitats, including fish and aquatic habitats.</p> <p>Thank you again for reaching out, we hope this information is helpful.</p>

Comment Number	Date of Comment	Comments from Public	Response
3	11/8/2023	<p>As a property owner near your number 2 option or preference. What study have you done on impact on ground water contamination from vibration.</p> <p>We have learnt the hard way what wind turbines have done to a lot of water wells in area. Will hydro towers add more vibration to an already bad situation and add to the stirring up of the Kettle Creek black shale which contain cancer causing materials.</p>	<p>Throughout our engagement, we've heard valuable feedback from the local community. We have and continue to conduct site visits, environmental surveys, archaeological surveys, research on the groundwater resources in the area as well as geotechnical studies, construction plans and other post-environmental assessment permits and approvals which will continue to help shape the project plan.</p> <p>Hydro One is committed to:</p> <ol style="list-style-type: none"><li>1. Ensuring tower foundations remain between approximately 30 ft (10 m) to 100 ft (30 m) (depending on the depth of the overburden) above the top of the contact aquifer layer.</li><li>2. Not using pile driving to install tower foundations.</li><li>3. Using Screw (Helical) piles, which are widely used in sensitive environments due to their simpler installation process that minimizes ground disturbances (even within the clay till overburden) and avoid the need for excavation or removal of soils and minimizes ground disturbances with negligible noise and vibration levels.</li><li>4. Using helical pile foundations will avoid the need for construction dewatering (removal and temporary displacement of groundwater).</li></ol> <p>Based on these commitments we can confirm that the new transmission line structure foundations will remain significantly above the Kettle Point Shale contact aquifer and construction of the St. Clair Transmission Line Project will not include pile-driving, therefore leaving the Kettle Point black shale contact aquifer undisturbed.</p>
4	12/7/2023	<p><b>Bald Eagle</b></p> <p>A Bald Eagle nest is located on one of our family's properties and is in close proximity to the existing transmission corridor. The nest is home to a mating pair of Bald Eagles that are often seen flying along the creek or perched in trees on our farm. The image below shows the location of the Bald Eagle nest and the distance to the existing transmission corridor. The shortest distance, on our property, is approximately 370 meters, with the proposed additional corridor being located even closer.</p> <p>In the Environmental Study Report a buffer of 400 m buffer radius was given, making reference to the Significant Wildlife Habitat Mitigation Support Tool (MNRF, 2014).</p> <p>"In accordance with the criteria schedule, SWH for an active Bald Eagle nest includes a 400 m to 800 m radius around the nest. In accordance with the Significant Wildlife Habitat Mitigation Support Tool (MNRF,</p>	<p>Thank you for your comment and for the information provided. We can confirm that the location of the referenced Bald Eagle's nest was identified and included as part of the Class EA for the Project and will be considered as more detailed environmental and construction plans for the Project continue to be developed.</p>



Comment Number	Date of Comment	Comments from Public	Response
		2014), for the purposes of this report, a 400 m buffer radius was applied to both Bald Eagle nests given the species current tolerance to existing transmission lines/towers. Both Bald Eagle nests, including their 400 m buffer radiuses, are considered Confirmed SWH for Bald Eagle Nesting, Foraging and Perching Habitat”. – ES Report	
5	12/7/2023	The report states that the Bald Eagles are tolerant to the existing transmission line/towers, however that does not justify building a transmission corridor closer to the nest. The proposed route would be closer than 400 m to the nest location and would likely require the removal of vegetation within this buffer.	<p>The existing 230 kV transmission line is located within 400 m of the referenced Bald Eagle’s nest, suggesting that there is an existing level of tolerance (i.e. the nesting pair are habituated) to the existing 230 kV transmission line. While the new 230 kV transmission line will parallel the existing 230 kV transmission line along the nest side, it will not result in a significant negative impact (i.e. no loss of forest cover within Bald Eagle SWH) on Bald Eagle nesting, foraging and perching habitat or its ecological function (OMNRF 2014). In addition, the SWHMST states that smaller buffers than those outlined may be appropriate depending on the bird’s tolerance for disturbance. Given the nesting pair’s existing tolerance to the transmission line as well as regular disturbances during the agricultural season, this reduced buffer was considered acceptable. Additionally, restoration of removed incompatible vegetation with compatible species (e.g., native shrubs and forbs) will mitigate the overall change in habitat to these areas where incompatible vegetation is removed.</p> <p>To address this comment, the above information will be added to <b>Section 7.7.8.5</b> of the ESR.</p>
6	12/7/2023	The above quote is the only reference I could find to the Significant Wildlife Habitat Mitigation Support Tool (Version 2014). The SWHMST also states that “Clearing and infrastructure development that results in a loss of forest cover in Bald Eagle nesting SWH will damage or destroy the ecological function of the habitat if mature trees are removed. The best mitigation is to avoid developing in the habitat” (pg. 279). This was not referenced in the report, instead the ES Report states that “to the extent practical, clearing of vegetation will be avoided within a 400 m radius of documented Bald Eagle nests within the species nest-building and breeding season”.	<p>A small number of isolated incompatible trees within 400 m of the nest will require removal in support of the Project. Direct effects (e.g., incompatible vegetation removal) on forest communities within 800 m of the Bald Eagle nest are not anticipated; therefore, the ecological function of the species habitat will be retained. Additionally, restoration of removed incompatible vegetation with compatible species (e.g., native shrubs and forbs) will mitigate the overall change in habitat to these areas where incompatible vegetation is removed.</p> <p>As an additional level of mitigation, Hydro One will update the mitigation in the ESR to incorporate bird diverters and/or similar measures within 400 m of the Bald Eagle nest during detailed design as a mechanism to improve bird visibility of the transmission line. This, and the information supplied in the response above, will be added to <b>Section 7.7.8.5</b> of the ESR.</p>

Comment Number	Date of Comment	Comments from Public	Response
7	12/7/2023	<p>The SWHMST clearly states to avoid development within the habitat, but Hydro One’s mitigation plan is to avoid clearing vegetation, but only during certain times of the year. The ES Report then goes on to say that “Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible”. Where is this vegetation going to be relocated to? The vegetation that is “incompatible” with Hydro One’s transmission corridor, is likely an important part of the Bald Eagles’ habitat. As stated in the SWHMST, “Bald Eagles also require snags, or a number of tall dead, partially dead or living trees for perching, usually within 400 m of a nest tree (James 1984a; Caton et al. 1992)”.</p>	<p>As previously indicated, only a small number of isolated incompatible trees within 400 m of the nest will require removal. Direct effects to forest communities within 800 m of the Bald Eagle nest are not anticipated; therefore, the ecological function of the habitat will be retained. In addition, the SWHMST also details that in the event Bald Eagles have become habituated to infrastructure (and further gives the example of a transmission corridor) that site-specific guidelines for setbacks may be developed based on occurrence of existing nests to disturbance. Given that the setback from the nest to the new 230 kV transmission line will be greater than 330 m, coupled with the species tolerance to existing active agricultural disturbances, the project was assessed as unlikely to displace the Bald Eagles from their current nest.</p> <p>As noted above, post-construction restoration of removed incompatible vegetation with compatible species (e.g., native shrubs and forbs) will mitigate the overall change in habitat to these areas where incompatible vegetation is removed. This is what is referenced by the transition from an incompatible vegetation community (e.g., plant species which at mature height would interfere with the operation of overhead transmission lines) to a compatible vegetation community. Snags (standing dead trees) will be retained to the extent practical in order to preserve the habitat value that these features provide.</p>
8	12/7/2023	<p>The SWHMST also outlines buffers that are supposed to be used to mitigate impacts from development. “The tertiary buffer extends 400 m from the nest but may extend 800 m from the nest if there is a direct line of sight from the nest to the activity. Anthony and Issacs (1989) recommended that human activities be restricted within 800 m of an active eagle nest”. (pg. 260). I would definitely argue that there is direct line of sight from the nest to the activity; however, Hydro One argues that a 400 m buffer radius was applied to both Bald Eagle nests given the species current tolerance to existing transmission lines/tower. It seems like there is an assumption being made that the Bald Eagles have “adapted” to living around hydro lines/towers. Or you could say they have just been fortunate that they have not yet flown into a power line.</p> <p>Our family has found geese, a snowy owl and swans that have unfortunately flown into the existing corridor. Are these species less tolerant to Hydro Transmission Lines/Towers or is there evidence that Bald Eagles are more tolerant?</p>	<p>The SWHMST states that smaller buffers than those outlined may be appropriate depending on the bird’s tolerance for disturbance. Given that the Bald Eagles have become habituated to the existing transmission line, coupled with their tolerance to existing active agricultural disturbances, the project was assessed as unlikely to displace the Bald Eagles from their current nest.</p> <p>Currently, human activity (active agriculture) within 800 m of the Bald Eagle nest occurs multiple times annually during the critical breeding period. The continued presence of the nesting pair suggests that they are tolerant to disturbances which do not negatively impact the ecological function of their habitat.</p> <p>As an additional level of mitigation, Hydro One will update the mitigation in the ESR to incorporate bird diverters and/or similar measures within 400 m of the Bald Eagle nest during detailed design as a mechanism to improve bird visibility of the transmission line. Bird diverters will also be utilized as a measure to mitigate avian collisions in other areas, as noted in <b>Sections 7.7.7</b> and <b>7.7.8</b> of the draft ESR.</p>

Comment Number	Date of Comment	Comments from Public	Response
9	12/7/2023	<p>The mitigation plan for the Natural Environment Resources-Natural Heritage Features: Bald Eagle does not appear to be consistent with the guidelines and tools that are in place to protect significant wildlife. Instead the proposed mitigation plan favours the development of the transmission project, with promises to “transition to vegetation that is compatible” through the “Biodiversity Initiative”. An example given in <b>Section 7.7.8.7</b> (Biodiversity Initiative), is the “long-term transition of incompatible vegetation such as forest communities to compatible vegetation communities such as meadows or shrub thickets”. As previously stated, the “incompatible” vegetation for the development of the transmission project, is what is “compatible” with this species. It is likely that is why they nested there in the first place. As referenced in the SWHMST, the removal of mature trees for perching should be avoided. Meadows or shrub thickets are not a suitable substitution for Bald Eagle habitat. The Biodiversity section of the report then goes on to say “because these net effects cannot be further avoided or mitigated, they are typically compensated for by undertaking positive environmental activities (e.g., the creation of new naturalized habitats or enhancement of existing ones at other locations)”.</p>	<p>A small number of isolated incompatible trees within 400 m of the nest will require removal in support of the Project. Direct effects (e.g., incompatible vegetation removal) on forest communities within 800 m of the Bald Eagle nest are not anticipated; therefore, the ecological function of the species habitat will be retained.</p> <p>As noted in the comment, Hydro One will be undertaking a Biodiversity Initiative for the SCTL Project, which will aim to create or enhance habitats in the region. Depending on the proposals received, this may include the creation or enhancement of forest communities as well as other habitat types. The Biodiversity Initiative will be undertaken following completion of the Class EA, closer to the start of construction activities.</p>
10	12/7/2023	<p>I do not understand how any of the proposed mitigation measures are acceptable. How is removing a species’ habitat, to replace it with something that is not “compatible” with the species or creating or enhancing habitat at another location mitigation? I would argue that these proposed measures are not mitigating the impacts to the Bald Eagles, but instead they are just general statements that Hydro One uses in every Environmental Study Report when addressing the impacts to significant wildlife in the project area.</p>	<p>A small number of isolated incompatible trees within 400 m of the nest will require removal in support of the Project. Direct effects (e.g., incompatible vegetation removal) on forest communities within 800 m of the Bald Eagle nest are not anticipated; therefore, the ecological function of the species habitat will be retained.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is compatible with transmission line corridors, to vegetation that is compatible with overhead transmission lines, in turn mitigating the overall chance to vegetative cover within the project area.</p>

Comment Number	Date of Comment	Comments from Public	Response
11	12/7/2023	<p><b>Cultural Heritage Resources</b></p> <p>Two properties that are owned by our family were identified in the Cultural Heritage Report: one is a “property of potential CHVI” and the other is a “property/CHL of potential CHVI”. This section of the report reads as though you were required to identify all properties of potential cultural heritage value or interest, but you have not given any indication on how you will mitigate adverse effects to these properties. Instead the report just simply says “work will be planned in a manner that avoids adverse effects to the identified potential built heritage resources and cultural heritage landscapes to the extent practical (Page 7 to 283). How will this be done?</p> <p>Then the report states that “Where an identified built heritage resource cannot be feasibly avoided and will be directly impacted through destruction, alteration, or disruption, Hydro One will undertake property specific Cultural Heritage Evaluation Reports (CHERs) and/or Heritage Impact Assessments (HIAs). The additional studies will confirm the CHVI and heritage attributes of the built heritage resource and identify all adverse effects”.</p> <p>This reads as though Hydro One is only concerned about the impact during the construction phase of the project. What about the proximity of the transmission corridor to a property of potential CHVI? The proposed route is located within 80 m (likely closer) to a house that was constructed in the 1890’s. Our family has taken time and spent money to restore the original features of the home, such as the decorative barageboard that was identified in the report. The location of the transmission line adjacent to the home IS an adverse effect.</p>	<p>Similar to many other aspects of the environment, built and cultural heritage resources and values are assessed in a sequential manner, concurrent with the advancement of project designs and plans as noted in <b>Section 7.4</b> of the Draft ESR. As the Class EA represents an early phase of the overall Project planning process, commitments are often made to conduct additional studies and investigations post-EA, as detailed design continues to progress. A similar example of this is archaeological assessments (where Stage 1 archaeological assessments are often conducted during the Class EA but subsequent stage assessments conducted post-EA as informed by the Stage 1 report).</p> <p>For built heritage resources, early investigation during the Class EA is conducted through a Cultural Heritage Existing Conditions (CHEC) Report, as noted in the comment, which identifies both known and potential built and cultural heritage resources; for the latter, additional investigations may be required to confirm the presence or absence of Cultural Heritage Value or Interest (CHVI) and, if confirmed, better understand the specific heritage attributes of the property and the detailed interactions with the project (as informed by advancement of detailed design and construction planning conducted post-EA). Only during project detailed design and construction planning can more accurate heritage impact assessment (HIA) measurements be undertaken.</p> <p>Generally, the highest risk for direct effects to built heritage resources is associated with the construction phase of the project, particularly for structures associated with CHVI that need to be removed or relocated for construction of the new transmission line (i.e., are located directly within the ROW). In such cases, mitigation measures may involve attempts to salvage certain materials or features and attributes associated with the CHVI of the property.</p> <p>For structures with confirmed CHVI that are not within the ROW, these more specific built heritage studies may still inform additional mitigation measures such as the need to restore constructed access roads to pre-existing conditions, conduct vibration monitoring during construction for any buildings within very close proximity to work areas, or (to the extent practical as informed by detailed engineering design) the siting and design of transmission towers along the ROW to mitigate and adverse visual impacts.</p> <p>We look forward to working with landowners to conduct these property-specific built and cultural heritage assessments in the new year, as we continue to design and plan the Project.</p>



Comment Number	Date of Comment	Comments from Public	Response
12	12/7/2023	<p><b>“Clean” Energy</b></p> <p>“The St Clair Transmission Line will facilitate economic growth in the region and provide enough clean energy to power a city the Size of Waterloo” – Sydenham Current.</p> <p>These media releases regarding the project providing the region with “clean” energy are extremely misleading. I’m not understanding how this project is going to provide clean energy when according to the Ontario System Wide Electricity Supply Mix 2022 Data (from the Hydro One website), 10.2% of electricity in Ontario is powered by fossil fuel sources. I would have to assume that constructing new transmission corridors would only increase energy inputs. The IESO recently announced its plan to expand the natural gas-fired electricity generation plant in St Clair Township and in Windsor to meet the growing demand of energy in Ontario. Advertising this project as “clean” seems deceiving to the public. Perhaps I missed it, but I do not see any evidence in this report supporting this claim. In fact, on page 187 of the report, it states that: “Transmission-connected resources within this area are currently a mixture of gas generation in Windsor, a number of wind generators in Windsor-Essex and Chatham-Kent, and a large solar installation in Windsor. These resources represent a combined total of approximately 1,900 megawatt (MW) of installed generation capacity, split relatively evenly between gas facilities and renewable resources, approximately 900 MW and 1,000 MW respectively. In addition, there is also a significant amount of installed gas generation in LambtonSarnia, over 2,500 MW, and approximately 440 MW of renewable resources. In combination, these resources represent a total of nearly 5,000 MW of installed generation capacity”.</p> <p>I would also like to know how these projects are going to “mitigate climate change”. Is there research or a report that supports this claim? Or is this claim being made on assumptions?</p> <p>“The St Clair Transmission Line is part of a network of infrastructure projects that will unlock the electrification potential of Ontario’s economy to mitigate climate change and help address this forecasted demand”. – Hydro One Media Room-Preferred Route selection.</p>	<p>Thank you for your insights and comments, we appreciate your participation in the St. Clair draft Environmental Study Report. Based on your comments, we see two themes that you are looking for Hydro One to address:</p> <ol style="list-style-type: none"><li>1. The use of the words “clean energy” in the news release, and</li><li>2. The reference to the network of infrastructure projects currently in development in the southwest and their ability to unlock the electrification potential of Ontario’s economy to mitigate climate change.</li></ol> <p><b>Clean Energy</b></p> <p>Ontario was the first jurisdiction in North America to completely phase-out coal-fired electricity generation. The term “clean energy” is widely used across Ontario and North America in reference to the energy mix that powers Ontario’s electricity grid which is approximately 92% greenhouse gas (GHG) emissions free. The Independent Electricity System Operator (IESO), the province’s grid operator who directed this project states the following, “Ontario has a clean electricity grid with a range of diverse resources, including hydro, nuclear, natural gas and renewables. Because no single resource can always meet all of the system’s needs, requires maintaining a diverse mix in an effective way to ensure the ongoing reliability of the province’s energy needs.” The St. Clair transmission line will allow more electricity to flow into the region to meet the growing mid-term energy needs of the southwest.</p> <p><b>Climate Change</b></p> <p>As one of the province’s electricity transmitters, Hydro One plays a pivotal role in enabling Ontario’s transition to a net-zero electricity grid and the decarbonization of transportation, industry and manufacturing through electrification. We work to build, operate and maintain a grid that is resilient and can reliably serve the needs of Ontarians today and for generations to come. This grid must be one that is environmentally sustainable and can mitigate future, worsening climate change impacts.</p> <p>We are acting now to adapt to the changing climate, with the goal of being the partner of choice in expanding Ontario’s electricity infrastructure as we move along the pathway to decarbonization.</p> <p>In partnering with the IESO, the Government of Ontario, the agricultural and automotive sectors, the new network of transmission lines being built in the southwest will enable industrial, commercial and residential customers who are looking to lower their carbon footprint, reduce their costs and adopt innovative technologies. We expect to see a significant increase in grid connections and electricity demand due to large-scale</p>

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			investments to support climate change mitigation efforts including in EV supply chain, growing decarbonization efforts and customer investments in battery storage, EV charging and new and evolving technologies. Hydro One is investing in expansion and optimization of the grid in the southwest as our first step in enabling the energy transition. Our investments are intended to unlock decarbonization and economic growth and ensure that intergenerational benefits will flow to all Ontarians.
13	12/7/2023	<p><b>Water Wells</b></p> <p>Two properties owned by our family have water wells located near the selected route. Reading this section of the report has left me nervous and unsure about the future of our drinking water. In the ES Report, Hydro One states that “Transmission line structure footings generally do not adversely affect either the quality or quantity of water resources, as effects of construction are often shallow relative to deeper aquifers, temporary in duration, and often less intrusive than other construction methodologies (e.g., excavations for building foundations or driven pile footings). As a part of the Class EA, we will carefully and diligently review source water protection plans and policy areas. Subject to the completion of geotechnical studies and civil engineering designs, the Project team currently anticipates that the majority of the tower footings on the Project will be installed using a helical pile methodology, which is known to have relatively low vibrations and negligible soil displacement when compared to other types of construction methods to install transmission tower footings”.</p> <p>Is there a study or report that can be referenced that indicates that using the helical pile methodology does not impact water wells? Or is this just assumed because this method has “relatively low vibrations and negligible soil displacement when compared to other types of construction methods”?</p> <p>The statement “Transmission line structure footings generally do not adversely affect either the quality or quantity of water resources” does not leave us with much confidence. The report then goes on to say, “no adverse effects are anticipated for changes in groundwater quality due to the construction of the proposed Project”. I do not believe they expected impacts on water wells when they completed the North Kent Wind Project, however residents were left with contaminants in their drinking</p>	<p>Throughout our engagement, we’ve heard valuable feedback from the local community. We have and continue to conduct site visits, environmental surveys, archaeological surveys, research on the groundwater resources in the area as well as geotechnical studies, construction plans and other post-environmental assessment permits and approvals which will continue to help shape the project plan.</p> <p>Hydro One is committed to:</p> <ol style="list-style-type: none"> <li>1. Ensuring tower foundations remain between approximately 30 ft (10 m) to 100 ft (30 m) (depending on the depth of the overburden) above the top of the contact aquifer layer.</li> <li>2. Not using pile driving to install tower foundations.</li> <li>3. Using Screw (Helical) piles, which are widely used in sensitive environments due to their simpler installation process that minimizes ground disturbances (even within the clay till overburden) and avoid the need for excavation or removal of soils and minimizes ground disturbances with negligible noise and vibration levels.</li> <li>4. Using helical pile foundations will avoid the need for construction dewatering (removal and temporary displacement of groundwater).</li> </ol> <p>Based on these commitments we can confirm that the new transmission line structure foundations will remain significantly above the Kettle Point Shale contact aquifer and construction of the St. Clair Transmission Line Project will not include pile-driving, therefore leaving the Kettle Point black shale contact aquifer undisturbed.</p> <p>We will continue working with landowners on the transmission line route to discuss the specific features of their properties, including locations, depths and construction of water wells, to help further inform our detailed designs and construction plans for the project.</p>



Comment Number	Date of Comment	Comments from Public	Response
		<p>water. The report then goes on to say “If changes in groundwater quality were to occur, it is anticipated that groundwater quality would return to baseline conditions following the implementation of mitigation measures previously outlined above, such as containment and removal of contaminated soils”. How are baseline conditions going to be documented? Is Hydro One going to contract a professional to take water samples before the work commences? Hydro One anticipates that the quality of groundwater would return to baseline conditions. What if it doesn’t? Is Hydro One going to pay for municipal water to be run to our residence? This is our drinking water; we have two small children and I think it is absolutely absurd that Hydro One’s plan is to assume that our drinking water will not be impacted. Then if it is, they then assume that our groundwater would return to baseline conditions when they have no baseline sample to go by. There are a lot of assumptions being made on something as important as drinking water.</p>	
14	12/7/2023	<p><b>Farmland</b></p> <p>One statement that has been made to our family at multiple meetings by Hydro One officials and is also in the ES Report is “Agriculture is a compatible use within overhead transmission line ROWs”. This is a blanket statement that, in my opinion, is very vague and not accurate. Are transmission structures compatible with greenhouse operations? I do not believe we are permitted to build a greenhouse within the corridor? Or what about Livestock operations? Or the use of aerial pesticide application? I would argue that the transmission structures limit the future agricultural uses and opportunities for a property. Technology and machinery in the agricultural industry are constantly changing, with machinery growing in size and even becoming autonomous to increase efficiency. The towers are permanent structures that will limit our family’s ability to evolve with the agricultural industry in the future. Our farms will forever be limited by the transmission corridors and the compensation for this is offered once.</p> <p>In <b>Section 7.1</b> of the report, potential effects from the project on agricultural resources are outlined. The first point is “Permanent loss of agricultural land for production of crops within the new towers’ physical footprint”. What about the land around the towers that has become too difficult to work? Why is the towers’ footprint considered the only</p>	<p>Across the province, Hydro One owns and operates hundreds of kilometers of transmission line corridors across actively farmed agricultural lands; the vast majority of agricultural uses, including cash crop agriculture and livestock pasture, are compatible uses with overhead transmission lines in that these uses can generally continue within the ROW. The existing transmission lines within the study area for the SCTL project are just some examples of this in southwestern Ontario. While certain uses are restricted, such as those requiring building improvements within the ROW, the vast majority of the preferred route for the SCTL Project consists of row crop fields which will remain in the same use following completion of construction of the new transmission line.</p> <p>Throughout the Class EA for the Project, we have heard from individual farmers as well as agricultural associations. Although a continuation of the current agricultural activities are compatible within the ROW, there are concerns relating to the maneuvering of increasingly large farm equipment around transmission towers. While selecting a preferred route that maximizes our ability to utilize existing transmission corridors, thus minimizing these net effects to agricultural fields in the region overall, we understand that there will still be changes to individual properties, particularly those that are not along existing transmission corridor lands being utilized. We will continue to work directly with individual property owners to discuss the specific characteristics of their property and attempt to find solutions to concerns regarding aspects such as tower placement, construction access, etc.</p> <p>For the majority of the transmission line route, tower footings represent the only long-term loss of agricultural lands as the majority of the ROW can still be utilized for crops or</p>

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		permanent loss of agricultural land? For example, at the crossing of McCreary Line, the new transmission line will have to cross the existing transmission line, creating an area that will be difficult and dangerous to operate machinery around. Has this been taken into account when considering the area of land that is lost?	pasture. However, we do recognize that individual circumstances, such as some transmission line crossing locations, may become more encumbered due to the need to maintain appropriate electrical clearances from both the ground surface and existing conductors, leading to additional crossing structures and lower vertical clearances, potentially rendering a slightly larger area (beyond just the individual structure footings) as lands out of production. We will continue to work directly with individual property owners where these circumstances are present in an effort to minimize the lands out of production while maintaining the electrical clearance requirements. We accept this comment and will make reference to this in <b>Section 7.1.1</b> of the final ESR.
15	12/7/2023	<p><b>Impacts to sense of place and human health</b></p> <p>This section of the report only gave mitigation measures for the property owners' who currently have a transmission line on their property, which will be replaced by a new transmission line.</p> <p>What about the property owners' who are getting a second transmission line? Or the property owners' who currently do not have a transmission corridor through their property? I would think the impact on these property owners would be the greatest, but I see no mention on how Hydro One plans to mitigate the impacts on their "sense of place" or human health. Route 2 will be located in close proximity to our residence. As previously stated, we have two young children who play outside in the yard. What if farm machinery were to hit one of the towers? This has happened twice in the last year, once in Chatham-Kent and the other in the Lambton County. It is extremely worrisome for our family with the proposed route being located so close.</p>	<p>When planning a linear infrastructure project such as a transmission line, we must consider the entirety of the route; in this regard, the preferred route 2 represents the least overall net change on the landscape as a whole when compared to existing conditions, by maximizing the extent to which existing transmission corridors can be utilized and therefore minimizing the overall net change to land use and overall visual change to the surrounding landscape. Nevertheless, we understand that there are properties along this project that will have new infrastructure on them, as it is generally not possible to build a new ~60 km transmission line without having some level of change on the landscape and to individual properties along the route.</p> <p>Now that the preferred route has been selected, our focus turns to working directly with individual landowners on the route to obtain feedback to help inform the ongoing development of detailed design and construction planning, which primarily occur after the completion of the Class EA. While technical requirements and constraints (many of which exist to ensure the safe and reliable operation of overhead transmission lines) may restrict the ability to accommodate all property owner requests, we will work to understand the concerns and desires of individual directly impacted property owners and strive to address these as best we can through the flexibility that is available in design and construction of the new transmission line.</p>
16	12/7/2023	<p><b>General Errors</b></p> <p>It appears that the report was recycled from the previous project (Chatham to Lakeshore 230 kV Transmission Line) Example: the header on many pages (such as pg. 7 to 273) is "Chatham to Lakeshore 230 kV Transmission Line Class Environmental Assessment Draft Environmental Study Report". Was the time not taken to review the report before releasing it to the public?</p>	We thank you for notifying us of this editorial error, we will make the necessary corrections to the final ESR.

Comment Number	Date of Comment	Comments from Public	Response
17	12/7/2023	<p><b>Overall Comments</b></p> <p>It appears this is a recycled report that is re-used by Hydro One from project to project. The mitigation measures suggested are vague, generally not site specific, and in most cases, do not address all of those who are impacted. Many claims are made in the report, as highlighted above, which are not supported or Hydro One defers providing evidence to future studies. From what I have had the opportunity to read, I do not understand how this is an acceptable report that justifies the selection of Route 2 or how Hydro One will mitigate the impacts. Using statements such as “Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible” multiple times in this report and other past reports indicates that Hydro One puts little thought or effort into how they will mitigate the impacts. Their top priority appears to be what is compatible with the transmission corridor. For example, removing trees and replacing them with meadows or shrub thickets, benefits Hydro One, but does not mitigate the impacts to the Bald Eagles on our property. Removing a mature hedgerows and replacing it with meadows or shrub thickets, also benefits Hydro One, but does not provide an acceptable replacement to an existing windbreak.</p> <p>We have many concerns with the selected Hydro One transmission corridor. My husband and I attended a consultation meeting and were told that the Project Engineers would meet with us onsite to further discuss our concerns. After setting up a time to meet with our family and other neighbours, we were met only by the real estate team who were there to relay our comments to the engineering team. This left us feeling deceived and embarrassed that we had informed our neighbours that they would have the opportunity to meet with the project engineers. Our family has attended multiple meetings, asking the same questions and voicing the same concerns. None of these concerns have ever been addressed and they are still not addressed in the Environmental Study Report. We have not experienced the “Ongoing, meaningful, and open engagement with residents and communities affected by or interested in the proposed Project” that Hydro One is claiming in this report.</p>	<p>See above for responses relating to bald eagle habitat, effects to incompatible vegetation communities, and editorial corrections. Chapter 5 of the draft ESR further describes the evaluation of the route alternatives and selection of Route 2 as the preferred route.</p> <p>Class Environmental Assessments such as the one conducted for the SCTL Project are undertaken very early in the overall planning process for a project, and project commitments made at this stage are intended to be generally high-level guiding principles that will then be applied to the development of more detailed (site-specific) construction plans and the more detailed permits and approvals that will be required after completion of the Class EA.</p> <p>Hydro One looks forward to continuing to engage and work with directly impacted property owners to understand the specific features and characteristics of their properties, to help inform the detailed design and site-specific construction plans that will be developed after the completion of the Class EA and prior to construction.</p>

Comment Number	Date of Comment	Comments from Public	Response
Natural Environment			
18	12/10/2023	1a.) How were the specific measures for assessing the impact on the natural environment, such as effects of water resources, vegetation and wildlife, determined and quantified?	<p>The Class Environmental Assessment for Minor Transmission Facilities (January 2022) provides basic guidance as to the criteria and measures that are used to evaluate and selection the alternative methods (in this case, route alternatives) of carrying out the undertaking. This includes high-level guidance as to the natural, socio-economic and technical factors and resources that are to be assessed and considered during the Class Environmental Assessment (EA).</p> <p>Throughout the Class EA process, Hydro One has strived to ensure that input and feedback received through the consultation process was utilized to inform the criteria and associated measures and weightings that were used for the route evaluation specific to the St. Clair Transmission Line (TL) project. To support this process, Hydro One formed a Technical Advisory Committee (TAC) early in the Class EA and held workshops to draw from the collective expertise of this diverse group of professionals including staff from government agencies, municipalities, Indigenous communities and industry associations. The first TAC workshop, held in two sessions on May 5, 2022, focused primarily on the identification and confirmation of evaluation criteria and measures used to apply those criteria; a second workshop, held in two sessions on September 13, 2022, presented the results of the first workshop and focused primarily on assigning weightings to evaluation criteria. The TAC and associated workshops are described in further detail in <b>Section 3.11</b> of the draft ESR. In addition to input received from the TAC, input received from stakeholders (including property owners and members of the public) and Rights holders throughout the Class EA process was also used to further refine evaluation criteria, measures and weightings.</p> <p>The criteria measures for the Natural Environment category are detailed in <b>Table 5-5</b> of the draft Environmental Study Report (ESR), while the results per criteria/measure are detailed in <b>Table 5-9</b> of the draft ESR.</p> <p>Specific to the effects to water resources, the measure included the number of watercourse crossings and the length of watercourse within the right-of-way (ROW). The measure for the effects on vegetation and vegetation communities included the area of incompatible vegetation removal within the ROW, while the measure for the effects on wildlife and wildlife habitat included footprint effects on significant wildlife habitat from the ROW, and potential disturbance and indirect effects to wildlife movement/habitat fragmentation within the ROW and Project Study Area (PSA). The higher the count, length and/or area of effect, the greater the effect was considered.</p>

Comment Number	Date of Comment	Comments from Public	Response
			<p>With respect to how the effects were determined and quantified, in accordance with <b>Section 5.5</b> (Step 5: Evaluate and Select) of the draft ESR:</p> <p>“Following identification and weighting of the evaluation criteria, the Project team completed a GIS analysis of the measures identified for each applicable criterion for each route alternative based on available data sources. This provided quantitative information such as area metrics, length of line and numerical counts. The information was then fed into a comparative evaluation matrix where numerical weighted scores were provided per criterion and totaled for each evaluation category. The analysis for each criterion was rationalized with a reasoned argument statement that identified the measured differences and similarities between the route alternatives. Following completion of the comparative evaluation matrix, a summary was provided for each factor area and a reasoned argument was prepared for the overall technically preferred alternative route.</p> <p>The evaluation method used to assess trade-offs between route alternatives so that a preferred route could be identified is called Simple Additive Weighting. This method involves putting quantitative data of different ranges into a standard scale. Once in a standard scale, the criteria weights were applied to reflect their importance within a category, and then a weighted sum was calculated per route alternative.</p> <p>This methodology enabled the Project team to focus on the differences between route alternatives that are determinative versus those with very little differences between them.</p>
19	12/10/2023	1b.) What specific scientific methodologies and environmental planning standards were used to assess these impacts?	<p>The Project followed the streamlined Class Environmental Assessment (Class EA) for Minor Transmission Facilities (Hydro One, January 2022), an approved planning process under the <i>Environmental Assessment Act</i> (EA Act) designed for proponents to characterize the existing environment, assess potential environmental effects and mitigation, identify, and evaluate alternatives, conduct consultation and document study findings. The Class EA was developed for projects that occur frequently, are small in scale, and have predictable range of environmental effects.</p> <p>The Project team employed conventional scientific methods and standards based on their respective professional practice areas. The specific methods used by each of the Project team disciplines to gather information and assess impacts are described in the draft ESR. <b>Section 4</b> (Environmental Inventory) summarizes the environmental inventory for:</p> <ul style="list-style-type: none"><li>• Forestry resources;</li><li>• Cultural heritage resources (i.e., built heritage landscapes, cultural heritage landscapes and archaeological resources);</li><li>• Land use and communities;</li></ul>



Comment Number	Date of Comment	Comments from Public	Response
			<ul style="list-style-type: none"><li>• Mineral resources;</li><li>• Natural environment resources (e.g., air, land, water, wildlife, etc.);</li><li>• Recreational resources; and</li><li>• Visual and aesthetic resources.</li></ul> <p>Specific methodologies used to collect project-specific data and information (e.g., field survey protocols) are further specified in <b>Appendix C</b> of the draft ESR and include provincially published methodologies such as the Ecological Land Classification for Southern Ontario, the Significant Wildlife Habitat Technical Guide, Ontario Breeding Bird Atlas Instructions for General Atlassing, Marsh Monitoring Program Participant’s Handbook for Surveying Amphibians, and the Standards and Guidelines for Consultant Archaeologists, among others.</p> <p><b>Section 5.3</b> (Step 3: Define Criteria) of the draft ESR articulates the criteria and their associates measures used to assess effects on environmental components, while <b>Section 7</b> (Potential Environmental Effects and Mitigation Measures) summarizes the potential effects resulting from construction and operation/maintenance of the Project. In order to minimize Project effects, the following seven guiding principles were adhered to:</p> <ol style="list-style-type: none"><li>1. Avoidance of sensitive areas, where practical;</li><li>2. Avoidance of watercourse crossings, where feasible, by use of an existing nearby crossing, access to structures from either side of the watercourse, or use of off-corridor access;</li><li>3. Appropriate timing of construction activities, where feasible, to avoid sensitive time periods, such as fish spawning and egg incubation periods, or migratory bird nesting periods;</li><li>4. Proactive communication with landowners, businesses and interested community members on the proposed Project timelines and construction areas;</li><li>5. Proactive communication with Indigenous communities, government agencies, stakeholders and interest groups regarding the proposed Project;</li><li>6. Implementation of conventional, proven mitigation measures during construction consistent with the criteria set out in Appendix E of the Class EA for Minor Transmission Facilities (Hydro One, 2022), and in accordance with applicable legislative requirements; and,</li><li>7. Development of environmental enhancement or compensation measures to offset the residual net effects of the Project where such effects exist.</li></ol>



Comment Number	Date of Comment	Comments from Public	Response
20		1c.) How was the weighting of 16-10% for each criterion within the Natural Environment category justified?	<p>The weightings of evaluation criteria within the Natural Environment and Socio-Economic Environment categories were determined primarily through the Technical Advisory Committee (TAC) as detailed in <b>Section 5.4</b> (Step 4: Weight Criteria) of the draft ESR:</p> <p>“Following identification of the evaluation criteria and their measures, the Project Team, using input provided by the TAC, including Indigenous communities, and members of the public, assigned weights for the criteria within each evaluation category. The higher the weighting, the more important the factor or criteria was considered in the outcome of the evaluation. For the environmental categories, criteria weights generally reflected the importance as communicated through the consultation process (e.g., TAC surveys, input received at community open houses, etc.), while for the Technical and Cost category, weights were allocated by the Hydro One project team based on the anticipated overall cost impact of each criterion (e.g., criteria with greater potential cost impacts received a higher weighting).”</p> <p>Specific to the Natural Environment category, the weighting exercise from the second TAC workshop held in September 2022 resulted in generally similar responses regarding which criteria within the category were considered Important or Most Important by TAC members. Following the TAC criteria weighting exercise, the Species at Risk criterion was adjusted upwards in weight to 20% of the category to reflect additional input on the importance of this criterion as received from Indigenous communities and members of the public; many of the latter had raised the importance of SAR habitat at Community Open Houses and other project correspondence.</p> <p>Additional information on the criteria weightings and the results of the TAC workshops and weighting exercises can be found in <b>Appendix B</b> of the draft ESR. Some additional explanation will be added to the above-mentioned <b>Section 5.4</b> of the ESR to further explain the criteria weightings.</p>

Comment Number	Date of Comment	Comments from Public	Response
Socio-Economic Environment			
21	12/10/2023	2a.) Can you elaborate on the criteria used to evaluate socio-economic impacts, particularly regarding co-location and repurposing of existing infrastructure, and how they align with the provincial policies?	<p>As detailed in <b>Section 5.3</b> (Step 3: Define Criteria) of the draft ESR:</p> <p>“The development of the evaluation criteria was based on input and comments provided by Indigenous communities, the public, members of the TAC and Project team members (see <b>Section 3</b>).”</p> <p>Specific to how the co-location and repurposing of existing infrastructure criteria aligns with provincial policies, the criteria measure (as outlined in <b>Table 5-2</b> of the draft ESR) is:</p> <p>“Alignment with Transportation and Infrastructure Corridors policies as defined by the Provincial Policy Statement (PPS), largely reflected as the ability to parallel or utilize existing transmission corridors.”</p> <p>Section 1.6.8 (Transportation and Infrastructure Corridors) of the PSS is summarized as follows:</p> <ul style="list-style-type: none"><li>• Planning and protecting corridors and ROWs for infrastructure to meet current and projected needs.</li><li>• Preserving and reusing abandoned corridors for purposes that maintain the corridor’s integrity and continuous linear characteristics wherever feasible.</li><li>• Co-locating linear infrastructure is promoted where appropriate.</li></ul>

Comment Number	Date of Comment	Comments from Public	Response
22	12/10/2023	2b.) What was the rationale behind the assigned weightings in this category, especially for criteria like agricultural resources and residential properties?	<p>The weightings of evaluation criteria within the Natural Environment and Socio-Economic Environment categories were determined primarily through the Technical Advisory Committee (TAC) as detailed in <b>Section 5.4</b> (Step 4: Weight Criteria) of the draft ESR:</p> <p>“Following identification of the evaluation criteria and their measures, the Project Team, using input provided by the TAC, including Indigenous communities, and members of the public, assigned weights for the criteria within each evaluation category. The higher the weighting, the more important the factor or criteria was considered in the outcome of the evaluation. For the environmental categories, criteria weights generally reflected the importance as communicated through the consultation process (e.g., TAC surveys, input received at community open houses, etc.), while for the Technical and Cost category, weights were allocated by the Hydro One project team based on the anticipated overall cost impact of each criterion (e.g., criteria with greater potential cost impacts received a higher weighting).”</p> <p>Subsequent to the criteria weighting exercise conducted through the TAC, the criteria weightings for Agricultural resources and Residential properties were both adjusted upwards to account for additional input received on the importance of these criteria from property owners, farmers and members of the public through consultation (community open houses and other direct correspondence).</p>
23	12/10/2023	2c.) How was the weighting in this category justified?	<p>Refer to the response above.</p> <p>Subsequent to the criteria weighting exercise conducted through the TAC, the criteria weightings for Agricultural resources and Residential properties were both adjusted upwards to account for additional input received on the importance of these criteria from property owners, farmers and members of the public through consultation (community open houses and other direct correspondence).</p>

Comment Number	Date of Comment	Comments from Public	Response
Indigenous Culture, Values, and Land Use			
24	12/10/2023	3a.) How were Indigenous communities involved in the development of criteria for this category?	<p>As detailed in <b>Section 5.3</b>, “The development of the evaluation criteria was based on input and comments provided by Indigenous communities, the public, members of the TAC and Project team members (see <b>Section 3</b>).</p> <p><b>Section 5.3.3</b> of the draft ESR summarizes how Indigenous communities were involved in the development of the criteria under the Indigenous Culture, Values, and Land Use category.</p> <p>In addition to participation in the Technical Advisory Committee, Indigenous communities representatives attended a separate virtual workshop to specifically discuss the route evaluation framework and incorporation of input into the Indigenous Culture, Values and Land Use category. Additionally, several communities engaged with the Hydro One project team directly in meetings and other correspondence to provide feedback into the development of this category of evaluation criteria and its application to the St. Clair TL project. Further information on the discussions with Indigenous communities regarding the development of route evaluation criteria can be found in <b>Section 3.5</b> of the draft ESR.</p>
25	12/10/2023	3b.) What specific aspects of Indigenous culture, values, and land use were considered, and how were they quantified for evaluation?	<p><b>Table 5-7</b> of the draft ESR includes both the criteria (aspects considered) and their associated measures. Further information on the discussions with Indigenous communities regarding the development of route evaluation criteria can be found in <b>Section 3.5</b> of the draft ESR.</p> <p>The data used to inform the evaluation included information provided by Indigenous communities and Hydro One, including system benefits and reliability for Indigenous communities, and natural environment information collected from a review of existing data sources as well as data collected through targeted field surveys.</p>
26	12/10/2023	3c.) Please explain the basis for the weightings assigned for each criterion in this category?	<p>With exception to the effects to features of historical significance criteria, all criteria within the Indigenous Culture, Values, and Land Use category were weighted equally to reflect feedback from Indigenous communities.</p> <p>The weighting for the effects to features of historical significance was derived from the features no longer being present on the landscape. Although Hydro One recognizes that the study area includes areas of historical agricultural, economic and cultural activity, the weighting was removed and re-assigned to other criteria as the Project will not affect these identified historical features.</p>

Comment Number	Date of Comment	Comments from Public	Response
<b>Technical and Cost</b>			
27	12/10/2023	4a.) What technical factors were considered most critical in the route selection, and how were they evaluated?	<p><b>Table 5-8</b> in the draft ESR lists the Technical and Cost evaluation criteria and their corresponding weightings. As seen in <b>Table 5-8</b>, the highest weighted criterion in the Technical and Cost category was Real Estate considerations, capturing land acquisition considerations and associated project costs. This criterion assessed the total number of impacted properties, built improvements impacted by the ROW and built improvements in close proximity to the ROW, as well as existing encumbrances on the properties from transmission infrastructure.</p> <p>The next highest weighted criteria within the Technical and Cost category were Light and Heavy Angle Structures (evaluated as a simple count of each) and System Benefits and Impacts (evaluated through the lens of additional upfront costs, future cost savings and system reliability and efficiency benefits resulting from the conversion of the Wallaceburg TS supply from single-circuit 115 kV to double-circuit 230 kV). Noting that the latter was not included in <b>Table 5-8</b> in the draft ESR, we will correct this omission in the final ESR.</p>
28	12/10/2023	4b.) How was the cost factor integrated into the route selection process, and what were the key cost considerations?	<p>Cost was incorporated into the Technical and Cost category evaluation inherently through the selection and weighting of individual criteria within the category. Many of the criteria in this category, such as total line length, number of angle structures, number of crossings etc. are directly relevant to the total cost of the project. For example, routes that have a greater overall length, or a greater number of angle structures (turns), are more costly to construct.</p> <p>Additionally, cost was incorporated into the evaluation through the use of criteria weightings within the Technical and Cost category, such that criteria with a relatively greater impact to overall project cost (e.g., Real Estate considerations and number of angle structures) were weighted more heavily than other criteria which were less impactful to project costs (e.g., non-Tx crossings and proximity to wind turbines).</p>
29	12/10/2023	4c.) On what grounds were the weightings for technical and cost criteria established?	<p>As per the response above, the criteria weightings within the Technical and Cost category were assigned by the Hydro One project team such that criteria with a relatively greater impact to overall project cost (e.g., Real Estate considerations and number of angle structures) were weighted more heavily than other criteria which were less impactful to project costs (e.g., non-Tx crossings and proximity to wind turbines).</p>

Comment Number	Date of Comment	Comments from Public	Response
<b>Overall Methodology</b>			
30	12/10/2023	5a.) How was the overall methodology for weighting and evaluating the different categories developed?	As detailed in <b>Section 5.4</b> (Step 4: Weight Criteria):  “At the outset of the step, the Project team determined that the importance of each of the four evaluation categories (Natural Environment, Socio-Economic, Indigenous Culture, Values, and Land Use and Technical and Cost) was equal.”
31	12/10/2023	5b.) Can you provide detailed insights into the decision-making process that led to the final route selection?	Chapter 5 (Identification and Evaluation of Alternative Routes) provides a detailed description of the decision-making process and rationale that was used to identify the route alternatives, and the evaluate those alternatives against each other in order to select the preferred route.  The results of the evaluation are summarized in <b>Section 5.6.3</b> (Technically Preferred Route Alternative):  “Overall, route alternative 2 ( <b>Figure 5-3</b> ) is preferred because it minimizes the overall impact to the Natural and Socio-Economic Environments compared to the other route alternatives and minimizes impacts to agricultural lands by utilizing existing transmission corridors for approximately 80% of its total length. From an Indigenous Culture, Values, and Land Use perspective, route alternative 2 avoids a separate crossing of the Thames, North Sydenham and Sydenham Rivers, minimizes impacts to native habitats and natural or naturalized areas which support hunting and harvesting activities, and provides improved transmission reliability to an Indigenous community supplied from the Wallaceburg TS. From a technical perspective, route alternative 2 is more complex and costlier to construct (line angles, transmission line crossings, upgrades to Wallaceburg TS, etc.), but is most preferred from a real estate perspective, maximizes the ability to utilize existing transmission corridors and results in improvements to the reliability and efficiency of the transmission system supply to the Wallaceburg area through an upgrade to the Wallaceburg TS.”
32	12/10/2023	5c.) Were there any external audits or reviews of the methodology to ensure its objectivity and comprehensiveness?	A Technical Advisory Committee (TAC) was established to help inform the comparative evaluation process used to select the preferred route. The purpose of the TAC was to provide a platform for Hydro One to present information, hold discussions and draw upon the experience and knowledge of individuals and organizations. The TAC consisted of representatives from Indigenous communities, government agencies, municipalities, and interest groups, and three rounds of virtual TAC workshops were held during the route evaluation methodology process to develop a route evaluation and selection framework that drew upon the collective expertise and input from the TAC. The first TAC workshop, held on May 5, 2022, focused primarily on the identification of evaluation criteria and



Comment Number	Date of Comment	Comments from Public	Response
			<p>associated measures. The second TAC workshop, held on September 13, 2022, focused on the weighting of evaluation criteria within their categories. The third and final TAC workshop, held on June 1, 2023, presented the preferred route and results of the route evaluation, including how input from the TAC and other stakeholders and Rights holders had helped to shape the evaluation framework. More information on the TAC is provided in <b>Section 3.11</b> of the draft ESR.</p> <p>Additionally, Hydro One’s environmental consultant team had an internal senior environmental assessment specialist with 39 year’s experience whose sole role was to review the methodology and results of the comparative evaluation. This arm’s length review provided an objective analysis of the assessment’s logic, traceability, and rigor.</p>

Comment Number	Date of Comment	Comments from Public	Response
Legislation and Policy Compliance			
33	12/10/2023	6a.) What specific legislation, environmental planning policies, and scientific principles were adhered to during the route selection process?	<p>The Project followed the streamlined Class Environmental Assessment (Class EA) for Minor Transmission Facilities (Hydro One, January 2022), an approved planning process under the Environmental Assessment Act (EA Act) designed for proponents to characterize the existing environment, assess potential environmental effects and mitigation, identify, and evaluate alternatives, conduct consultation and document study findings.</p> <p>In addition to following the approved Class EA process mentioned above, the evaluation of route alternatives and selection of the preferred route was undertaken consistent with the provisions of the Provincial Policy Statement (PPS). The consistency of the proposed Project (defined as “infrastructure” in the PPS) with the relevant Infrastructure and Public Service Facilities policies included in Section 1.6.8 of the PPS is summarized as follows:</p> <ul style="list-style-type: none"><li>• Planning and protecting corridors and ROWs for infrastructure to meet current and projected needs.</li><li>• Preserving and reusing abandoned corridors for purposes that maintain the corridor’s integrity and continuous linear characteristics wherever feasible.</li><li>• Co-locating linear infrastructure is promoted where appropriate.</li></ul> <p>The Project team employed conventional scientific methods and standards based on their respective professional practice areas. The specific methods used by each of the Project team disciplines to gather information and assess impacts are described in the draft ESR. <b>Section 4</b> (Environmental Inventory) of the draft ESR summarizes the environmental baseline conditions and associated methodology; <b>Section 5</b> (Identification and Evaluation of Alternative Routes) describes the route alternative evaluation methodology, while <b>Section 7</b> (Potential Environmental Effects and Mitigation Measures) summarizes the potential effects, and associated mitigation measures, resulting from construction and operation/maintenance of the Project in adherence with guiding principles (refer to the response above provided for Comment 1b).</p>

Comment Number	Date of Comment	Comments from Public	Response
34	12/10/2023	6b.) How does the chosen route comply with existing environmental and socio-economic regulations and standards?	<p>In addition to meeting the requirements of the Class EA, there are several permits, licenses and approvals that may be required under municipal by-laws and provincial and federal legislation and regulations. These potentially applicable permits and approvals are described in <b>Table 1-1</b> of the draft ESR and are typically obtained after the completion of the EA process, as EA are generally conducted early in the planning phase prior to detailed design and permitting.</p> <p>Similarly, <b>Section 7</b> (Potential Environmental Effects and Mitigation Measures) and <b>Table 7-1</b> summarizes the potential environmental effects and lists the mitigation measures that will be implemented as a mechanism to minimize effects and facilitate compliance with regulations and standards.</p>

## 4 Environmental Inventory

The following sections summarize the environmental baseline conditions in the study areas. Information presented below acknowledges the Valued Components (VCs) from COTTFFN's Culture and Rights Study (CRS). It is acknowledged that VCs from Indigenous Community relate to several areas of potential impact for the project. Baseline condition information collected was considered for impacts to VCs as identified in **Section 7** below. Information presented below was obtained through published documents, government agency resource databases and mapping tools, municipal websites, government planning and guidance documents, relevant project documents, reports commissioned by Hydro One, primary data collection through targeted field surveys, and input received through consultation with stakeholders and Rights holders.

In accordance with **Section 3.3.4** of the Class EA document (Hydro One, 2022), information for the below factors was collected for the purposes of defining existing conditions:

- Agricultural resources;
- Forestry resources;
- Cultural heritage resources (i.e., built heritage resources, cultural heritage landscapes and archeological resources);
- Land Use and Communities;
- Mineral resources;
- Natural environment resources (e.g., air, land, water, wildlife, etc.);
- Recreational resources; and,
- Visual and aesthetic resources.

Natural and Socio-Economic environment baseline conditions are described in the following sections. Desktop information for the Natural and Socio-Economic Environment was generally collected within the LSA, while Natural Environment field surveys were completed within the PSA (see **Section 1**). Field surveys were undertaken between September of 2021 and August of 2022 to assess baseline environmental conditions and significant natural values to inform the Class EA. Additional information beyond the PSA is provided for some environmental features (such as the Socio-Economic environment and cultural heritage) where additional context is appropriate.

Natural heritage field surveys were conducted in accordance with the Natural Environment Field Program Terms of Reference (Dillon, 2022) which was submitted to

the MECP and SCRCA on February 10, 2022, and to the LTVCA on March 24, 2022, for review and comment in advance of the 2022 field program. No comments were received on the Natural Environment Field Program Terms of Reference.

Environmental field survey staff were regularly accompanied during the aquatic and terrestrial surveys by Indigenous Environmental Monitors from HDI, COTTFN, CKSPFN, and WIFN. Where private property access was granted in advance of the field programs, field studies occurred within or directly adjacent to natural heritage features. Where private property access was not granted and the property was associated with a natural feature(s), field data was collected from the public road allowance, Hydro One's existing transmission ROW and/or from property limits where access was granted. Field data collected from adjacent lands was supplemented with information collected through aerial imagery interpretation and secondary data sources. Results of the natural heritage field surveys are summarized in the Natural Environment Existing Conditions Technical Report for the Project (**Appendix C1**). A summary of the 2021 to 2022 field survey program results is summarized in **Section 4.6.7**, below.

## 4.1 Agricultural Resources

The Canada Land Inventory (CLI) classification system rates agricultural land capability. According to CLI data (1998), all agricultural land crossed by the five route alternatives are classified as Class 1 to Class 3 soil capability; with Class 2 soils being the most predominant. Class 1 to Class 3 land capability descriptions for agriculture are as follows (Government of Canada, 2013):

- Class 1: no significant limitations in use for crops;
- Class 2: moderate limitations that restrict the range of crops or require moderate conservation practices; and,
- Class 3: moderate to server limitations that restrict the range of crops or require conservation practices.

The majority of the agricultural land in the LSA is considered prime agricultural lands capable of sustained production of cultivated field crops (Class 1 to Class 3). Excess water (W subclass) was also identified in the LSA which indicates the presence of excess soil moisture due to poor soil drainage.

Deep soils within Class 2 lands are sub-classified as wet. Excess water may be present as a result of flooding, a high-water table, or poor drainage. Wet soils may limit the type of crops planted and restrict the growth of crops (Government of Canada, 2013). It is for this reason that a significant portion of the agricultural lands within the PSA are tile

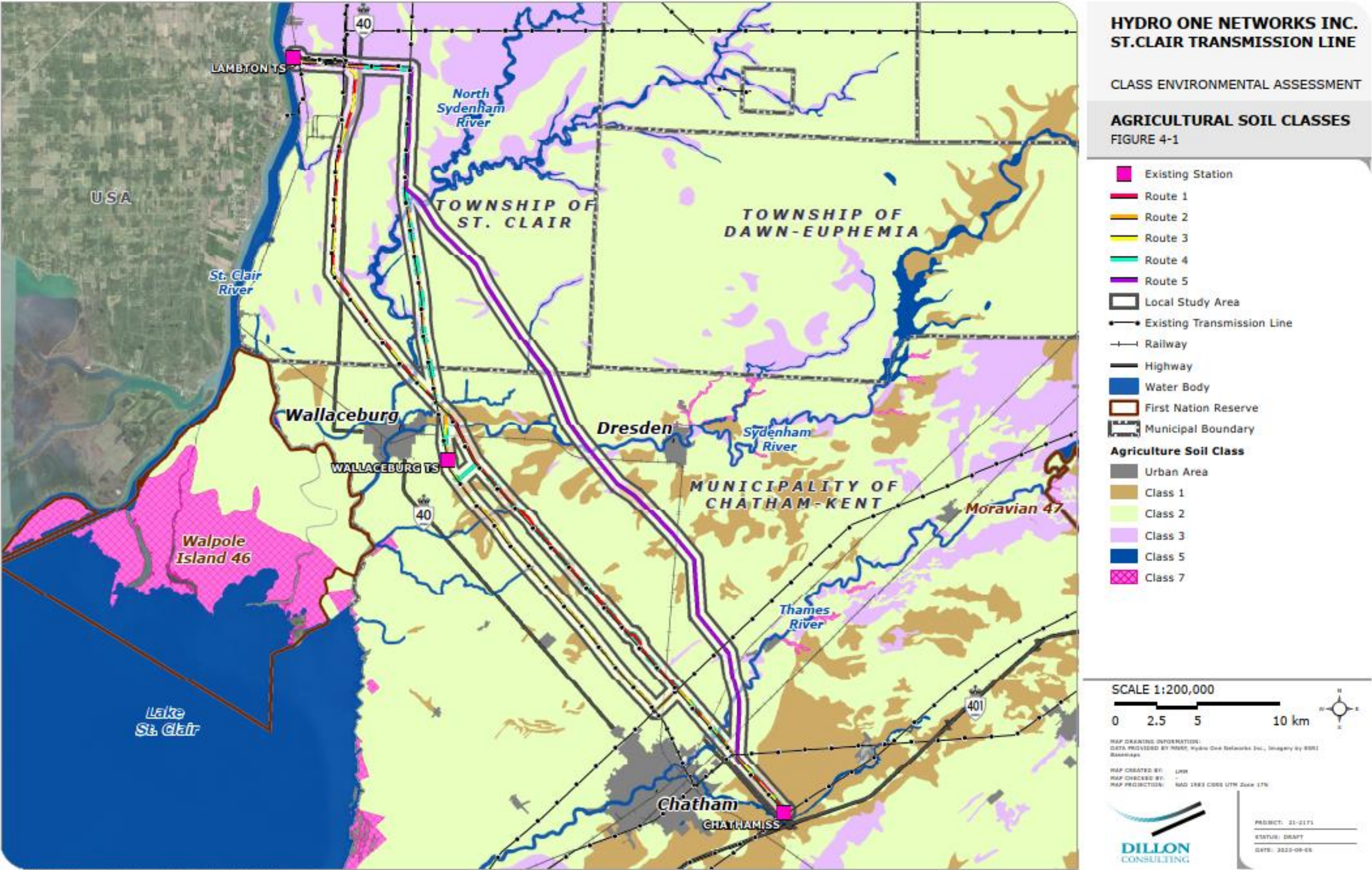
drained (OMAFRA, AgMaps 2022), which has been reiterated by landowners and farmers in the area in conversations held during the Class EA. Similarly, Class 3 soils within the PSA were considered to have low permeability and excessive soil moisture. On the other hand, soils in Class 1 are considered level, deep, well to imperfectly drained and have good nutrient and water holding capacity. If properly managed, soils are considered moderately high to highly productive for common field crops (Government of Canada, 2013).

Agriculture land use comprises the majority of the land base within the LSA along each route alternatives. This includes agricultural fields and specialty crops with the majority used for active crop production. Soybeans, corn, and winter wheat accounts for the majority of the crops (ha) in the LSA for each route alternative (Agriculture Resource Inventory, 2022) which are rotated regularly. Approximately 86%, 90%, 87%, 89% and 89% of the land associated with the ROW required for route alternatives 1 through 5, are under active crop production, respectively.

The LSA is also of interest to Indigenous communities as it contains mapped historical areas of interest which are reflective of written records from settlers. In addition, it's acknowledged that non-mapped historical areas of interest to Indigenous communities are likely present on the landscape based on oral traditions. Mapped historical areas of interest within the LSA include areas of historical agricultural and economic activity on the land. The Project will not affect these mapped historical areas of agricultural and economic activity as the features associated with these historical uses are no longer present within the LSA.



Figure 4-1: Agricultural Soil Classes





## 4.2 Forestry Resources

Timber harvesting in Ontario occurs on both Crown and private land. Forest harvesting on Crown land occurs according to the *Crown Forest Sustainability Act*. Private land harvest occurs at the discretion of landowners or municipalities that have tree removal bylaws.

While there are several woodlands located within the PSA, they fall outside of Forestry Management Units, Agreement Forest Areas, Forest Cover Units, Forest Resource Inventory Areas, or Wood Use Areas Forest Resources as identified through the MNRF Forest Resource Inventory (MNRF, 2022). As such, there is no potential for the proposed Project to affect the productivity or utilization of the land for timber harvesting.

The LSA is also of interest to Indigenous communities as it contains areas of interest relating to historical Agro-Forestry practices as noted by some community elders, particularly in the vicinity of the Bickford Oak Woods Conservation Reserve.

## 4.3 Cultural Heritage Resources

Provincial heritage properties include three types of cultural heritage resources: built heritage resources, cultural heritage landscapes and archaeological sites (MCM, 2010).

### 4.3.1 Archaeology

Timmins Martelle Heritage Consultants Inc. (TMHC) was retained by Hydro One to conduct a Stage 1 Archaeological Assessment for the Project. The need for archaeological assessment work was determined through Hydro One's internal environmental review of the Project lands, as per the Class EA. All archaeological consulting activities were performed in accordance with the Ministry of Citizenship and Multiculturalism (MCM) Standards and Guidelines for Consultant Archaeologists (2011) by a licenced archaeologist. The results of the Stage 1 Archaeological Assessment were provided to the MCM and is currently pending acceptance into the Ontario Public Register of Archaeological Reports. The Stage 1 Archaeological Assessment (TMHC, 2022; PIF # P324-0711-2022) determined that the PSA for all route alternatives contains lands with archaeological potential, as well as previously recorded archaeological finds and sites. It was recommended that a Stage 2 Archaeological Assessment be completed for the technically preferred route alternative, for all lands exhibiting archaeological potential that have not been previously assessed. A combination Stage 1/2 Archaeological Assessment was completed at the corridor lands adjacent to the Thames River crossing by TMHC (2022; PIF # P324-0711-2022) and all locations assessed met provincial standards and no further work was recommended by

the consulting archaeologists. Hydro One commits to completing Stage 2 Archaeological Assessments for these identified areas of archaeological potential along the preferred route as early as possible during detailed design and prior to ground disturbing activities associated with construction work occurring on these areas or with acceptable avoidance and mitigation measures applied. As indicated in **Section 4.1**, although the Project will not affect mapped historical areas of Indigenous agricultural and economic activity given the features are no longer present within the LSA, they will influence Stage 2 Archaeological Assessment efforts within the mapped historical areas.

A copy of the Stage 1 Archaeological Assessment report is provided in **Appendix C2**.

#### **4.3.2 Built Heritage Resources and Cultural Heritage Landscapes**

WSP Global Inc. (WSP) was retained by Hydro One to provide a Cultural Heritage Existing Conditions (CHEC) report for the Project. The CHEC report was completed following guidance provided by MCM. The CHEC report (WSP, 2022) determined that all route alternatives cross properties of known or potential cultural heritage value or interest (CHVI) within the LSA. The Thames River, which must be crossed by all of the route alternatives, is designated as a Canadian Heritage River through the Canadian Heritage Rivers System.

In addition to the CHEC Report, COTTEN identified that the PSA includes cultural heritage landscapes which are important to their cultural continuity and sense of place VCs. While there are currently no published provincial assessment guidelines or criteria specific to Indigenous Cultural Heritage Landscapes, Hydro One acknowledges the importance of cultural continuity and sense of place to Indigenous communities, as well as the historical uses and connection to the lands within the study area, and will continue to engage and work with Indigenous communities to discuss items relating to the cultural heritage and history of Indigenous communities as it relates to the Project.

Following the selection of the preferred route, a Cultural Heritage Preliminary Impact Assessment was conducted by WSP to identify potential direct and indirect impacts from the preferred route on the known and potential built heritage resources identified in the CHEC. The conclusions of the Cultural Heritage Preliminary Impact Assessment have been summarized in **Section 7.4** of the ESR.

A copy of the CHEC and a copy of the Cultural Heritage Preliminary Impact Assessment are provided in **Appendix C2**.

## 4.4 Land Use and Communities

The majority of the PSA is designated as agricultural land as identified in the Municipality of Chatham-Kent (2018), the County of Lambton (2020), and Township of St. Clair (2005) Official Plans (OP). Human settlement areas include those located within the Municipality of Chatham-Kent and the Township of St. Clair.

The Township of St. Clair is comprised of multiple hamlets and urban centres, although none are located within the PSA. In 2021, the Township had a population of 14,659 (Township of St. Clair, 2005; Statistics Canada, 2022).

The Municipality of Chatham-Kent is comprised of several hamlets and urban centres, although none are located within the PSA. In 2021, the Municipality had a population of 103,988 (Municipality of Chatham-Kent, 2018; Statistics Canada, 2022).

The LSA is within two district school board jurisdictions (Lambton Kent and St. Clair Catholic, District School Board); however, there are no schools located within the LSA and/or the PSA.

### 4.4.1 Land Use Planning

Three Official Plans apply to the PSA, including the Municipality of Chatham-Kent, the County of Lambton, and the Township of St. Clair Official Plans. Land use planning and development in the PSA is also guided by the Provincial Policy Statement (PPS).

Schedules from the Official Plans are included in **Appendix C3**.

#### 4.4.1.1 Provincial Policy Statement (2020)

The PPS is issued under Section 3 of the Ontario *Planning Act* and came into effect on May 1, 2020. Section 3 of the *Planning Act* states that decisions affecting planning matters “shall be consistent with” the PPS. The consistency of the proposed Project (defined as “infrastructure” in the PPS) with the relevant Infrastructure and Public Service Facilities policies included in Section 1.6.8 of the PPS is summarized as follows:

- Planning and protecting corridors and ROWs for infrastructure to meet current and projected needs.
- Preserving and reusing abandoned corridors for purposes that maintain the corridor’s integrity and continuous linear characteristics wherever feasible.
- Co-locating linear infrastructure is promoted where appropriate.

Section 1.6.8.6 of the PPS requires that when planning for corridors and ROWs for significant electricity transmission and infrastructure facilities, consider the significant resources protected by Section 2 of the PPS, Wise Use and Management of Resource (e.g., natural heritage, agriculture, water); the Class EA process for the St. Clair transmission line has considered these significant resources as per the guidance in the PPS and as documented in this final ESR. Effects to significant resources, as identified by Section 2 of the PPS, outside of the PSA are not anticipated.

#### **4.4.1.2 Municipality of Chatham-Kent Official Plan (2018)**

The majority of the Municipality of Chatham-Kent's land is designated as Agricultural (Schedule A) and, as identified under Section 3.10 of the OP, over 550,000 acres of land is under cultivation and is considered prime agricultural land (Municipality of Chatham-Kent, 2018). The remaining land in the LSA is designated as Primary Urban Centre and Suburban Residential.

As identified in Schedule A of the OP (**Appendix C3**), the majority of the lands within the PSA are designated as Agricultural. The LSA includes lands designated as residential and suburban residential; however, both the urban centres of Chatham and Wallaceburg are located outside of the LSA and PSA.

The Municipality of Chatham-Kent encourages the development of modern transmission facilities to serve the community. As described under Section 2.4.6 of the OP, utility corridors, communications corridors and transmission facilities are encouraged and are permitted in any land use designation, provided the development satisfies the applicable provincial and/or federal legislation (Municipality of Chatham-Kent, 2018).

#### **4.4.1.3 County of Lambton Official Plan (2020)**

The County of Lambton (County) OP provides the guidance and direction for how land in its local municipalities should be used, as well as the fundamental policy framework for land use planning by local municipalities. The local municipalities, including the Township of St. Clair (lower tier municipality), must implement their own OP and conform to the County's OP. The Municipality of Chatham-Kent neighbours the County and is not subject to the County's OP.

Agricultural lands make up the majority of the landscape within the County. As identified in Map 1 of the OP (**Appendix C3**), with exception to Petrochemical Industrial Lands adjacent to the Lambton TS, nearly the entirety of the lands within the PSA are designated as Agricultural Area. The PSA also includes petroleum and natural heritage resource areas, as well as areas identified for source water protection.

The OP specifies that preferred utility corridors are to be designed in manner that will minimize potentially negative effects where possible. The OP states that utility corridors are important to the County and that it is preferred that the preferred corridor follow existing ROWs, property lines, existing easements and fence lines and if unable to accommodate, to avoid built-up and heavily populated areas. (County of Lambton, 2020). The OP also identifies that minimizing impacts on agricultural land and woodlots is a high priority in rural areas.

#### **4.4.1.4 Township of St. Clair Official Plan (2005)**

The Township of St. Clair Official Plan acknowledges that its OP is essentially the County's OP with additions and deletions to make adjustments for local circumstances.

As identified in Schedule A of the OP (**Appendix C3**), with exception to the Industrial lands identified adjacent to the Lambton TS and Hazard & Environmental Protection Areas, Agricultural Areas make up the majority of the landscape within the Township. All agricultural uses and secondary agricultural uses are identified in Section 1.0 of the OP.

As stated in Section 1.15 of the OP, "where a new utility corridor crosses a farm operation, the owner/operator of the utility will be encouraged to select a route which causes the least disruption to productivity and farm operations, where such routing is practical and environmentally acceptable. One option to be considered is the routing of such facilities along the edge of the farm. Wherever possible, 'easements' should be used to accommodate new utility corridors rather than create separate and distinct lots." Section 1.18 of the Official Plan states that "land severances in the "Agricultural" designation may be permitted to create rights-of-way, to enlarge lots, to consolidate farm holdings, and to allow minor lot line adjustments" (Township of St Clair, 2005).

As stated in Section 2.1 of the OP, transmission corridors are permitted in all land use designations, so long as the infrastructure is designed and constructed to be compatible with the surrounding residential areas, the need for its location within Class 1 to Class 3 soils is documented, and they are located outside of significant natural areas unless they are authorized under an EA process, or subject to the Drainage Act (Townships of St Clair, 2005).

#### **4.4.2 Transportation**

The PSA comprises multiple road networks in the County of Lambton, the Township of St. Clair, and Municipality of Chatham-Kent. Road classifications within the PSA are summarized in **Table 4-1**.



**Table 4-1: Road Classifications within PSA**

Municipality	Road Classification
County of Lambton	Provincial Highway (Hwy 40) Collector Roads Arterial Roads Municipal Roads (Local Roads)
Township of St. Clair	Provincial Highway (Hwy 40) County Roads
Municipality of Chatham-Kent	Provincial Highway (Hwy 40) Urban Arterial Roads Rural Arterial Roads Urban Collector Roads Rural Collector Roads Municipal Roads (Local Roads)

Source(s): County of Lambton OP: Map 1 (2020); Township of St Clair OP: Schedule A (2005); Municipality of Chatham-Kent OP: Schedule B1 (2018).

There is one airport located within the general vicinity of the Project. The Chatham-Kent Municipal Airport is located approximately 8.6 km south of all route alternatives. In addition, a recreational model plane club and associated runways are located on private lands south of Wilkesport, while a private personal air hanger is located east of the hamlet of Eberts, both of which are within the LSA.

Railway lines for Canadian National Railway (CNR), Canadian Pacific Railway (CP Rail), CSX Transportation, Via Rail, as well as a rail line privately held by a numbered corporation (former Wallaceburg-Dresden-Chatham Rail) intersect the LSA. The CNR includes both a north-south run in the northern portion of the LSA, as well as an east-west run in the southern portion of the LSA, while CP Rail and Via Rail includes an east-west run which bisects the LSA through Chatham. The CSX line includes a north-south run from Sarnia to Chatham, of which a portion is captured within both the northern and central portion of the LSA. The privately held line runs from Wallaceburg east to Dresden then south to Chatham, of which a portion is captured within both the southern and central portion of the LSA.

#### **4.4.3 First Nations Lands and Interests**

As outlined in **Section 3.5** several Indigenous Communities were consulted as part of the Class EA process. There are no First Nation reserve lands situated within the PSA or LSA. Of the Indigenous Communities identified by the Crown, the closest community to the PSA is Bkejwanong (WIFN) (No. 06192) (Government of Canada, 2020), located approximately 5 km west of the LSA.

As identified in the Ministry of Energy's (MOE; formerly Ministry of Energy, Northern Development and Mines [ENDM]) letter confirming Indigenous communities to be consulted on the Project, Indigenous communities were consulted on the basis that they have or may have constitutionally protected Aboriginal and/or treaty rights that may be adversely affected by the Project.

**Section 3.5** provides additional information regarding consultation with Indigenous communities including details on COTTFN's completion of the CRS, for another transmission line project in the region. VCs described by COTTFN included in these reports include:

1. Harvesting and Traditional Land Use;
2. Governance and Stewardship; and,
3. Cultural Continuity and Sense of Place.

Each VC category represents an interest or right of First Nations and contributes to forming a large portion of the basis for First Nation wellness. First Nation wellness is described as physical, spiritual, and mental well-being. It is acknowledged that each VC identified above is interconnected to all of the other VCs identified. For example, Harvesting and Traditional Use Rights involve the type of activities that contribute to Cultural Continuity Rights. The VCs from Indigenous Community have been identified throughout this report to highlight areas of First Nations Rights and interests and to acknowledge their importance and demonstrate their consideration through the Class EA process.

In addition to the above, other First Nations communities in the area have provided similar comments and input relating to historical and cultural connections to lands and some extant features in the region, including lands within the LSA and PSA. Some of these historical uses are mentioned above in **Sections 4.1, 4.2 and 4.3.1**.

Although there are no First Nation reserve lands located within the PSA, **Section 7.8** and **Table 7-2** summarize the potential environmental effects and subsequent mitigation and/or avoidance measures in association with Indigenous Lands and Territory, as well as the VCs as shared by an Indigenous community.

## **4.5 Mineral Resources**

Based on a review of the MNRF Land Information Ontario (LIO) database, satellite imagery interpretation and observations made during field investigations, there are no active aggregate pits and quarries located within the PSA (**Appendix C4**).

No active or abandoned mines were identified within the PSA or on adjacent lands (ENDM, 2017).

Lambton County possesses a large share of the province's underground storage capacity for natural gas and other hydrocarbons (Map C; County of Lambton 2020). As such, several mapped active and abandoned petroleum pools and wells were identified in the PSA, as well as major gas pipelines which connect areas throughout the PSA (**Appendix C5**).

## **4.6 Natural Environment Resources**

Natural environment features including air, land, water, wildlife and wildlife habitat resources and features were factors considered within the PSA.

This section addresses physical and biological features in the PSA including baseline information for the following:

- Physical environment;
- Atmospheric environment;
- Surface and groundwater resources;
- Designated or special natural areas; and,
- Natural heritage features.

### **4.6.1 Physical Environment**

Bedrock Geology of the PSA is illustrated on **Figure 4-2** (ENDM, 2010). Bedrock deposits within the majority of the PSA are characterized as shale (ENDM, 1991) of the Kettle Point Formation of the Upper Devonian period (ENDM, 1991). The bedrock geology for the remainder of the PSA in the northwest, consist of shale associated with the Port Lambton Group of the Mississippian to Devonian period (ENDM, 2010).

Quaternary geology of the PSA is depicted on **Figure 4-3** (ENDM, 2010). The PSA consists mainly of till, fine-textured glaciolacustrine deposits, and coarse-textured glaciolacustrine deposits (ENDM, 2012). The overburden thickness varies and is generally thicker in the northern portion of the PSA (~50 m) and becomes thinner near Wallaceburg (~15 m) and is approximately 25 m thick closer to Chatham. The till in this area is described as clay to silt-textured till derived from the glaciolacustrine deposits or shale. The fine-textured glaciolacustrine deposits within this section of the PSA consist of silt-clay layers with minor gravel and sand that are described as massive to well-laminated; the coarse-textured glaciolacustrine deposits that occurs over a relatively smaller area, consist of sand and gravel, with minor clay and silt. Quaternary geology

within the remaining PSA consists of a combination of modern and older alluvial deposits, coarse-textured lacustrine deposits, and eolian deposits. Modern and older alluvial deposits consist of silt, gravel, sand, and clay, and may contain organic remains, while eolian deposits consist mainly of fine to very fine silt and sand.

The bedrock and quaternary geology described for the PSA is consistent with the physiographic region described for southwestern Ontario. The PSA extends across the St. Clair Clay Plains and the Bothwell Sand Plains physiographic regions of Ontario as defined by Chapman and Putnam (1984). The St. Clair Clay Plains span across much of the western portion of Municipality of Chatham-Kent and into the southwest of Lambton County, whereas the Bothwell Sand Plains initiate closer to the Municipality of Chatham-Kent and continue northeast. The topography of the PSA and surrounding region in general are considered as mostly flat (MNRF, 2023).



Figure 4-2: Bedrock Geology

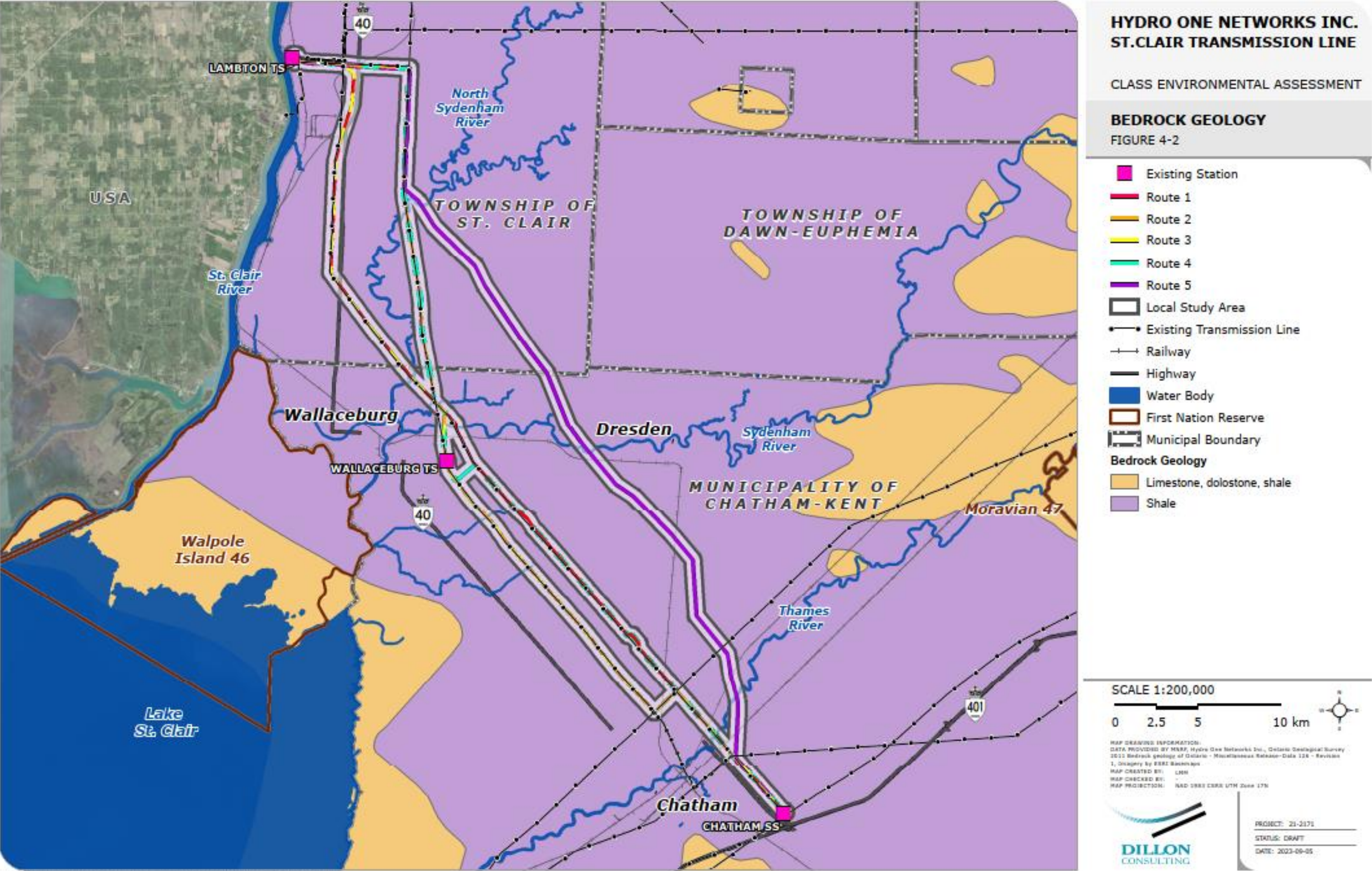
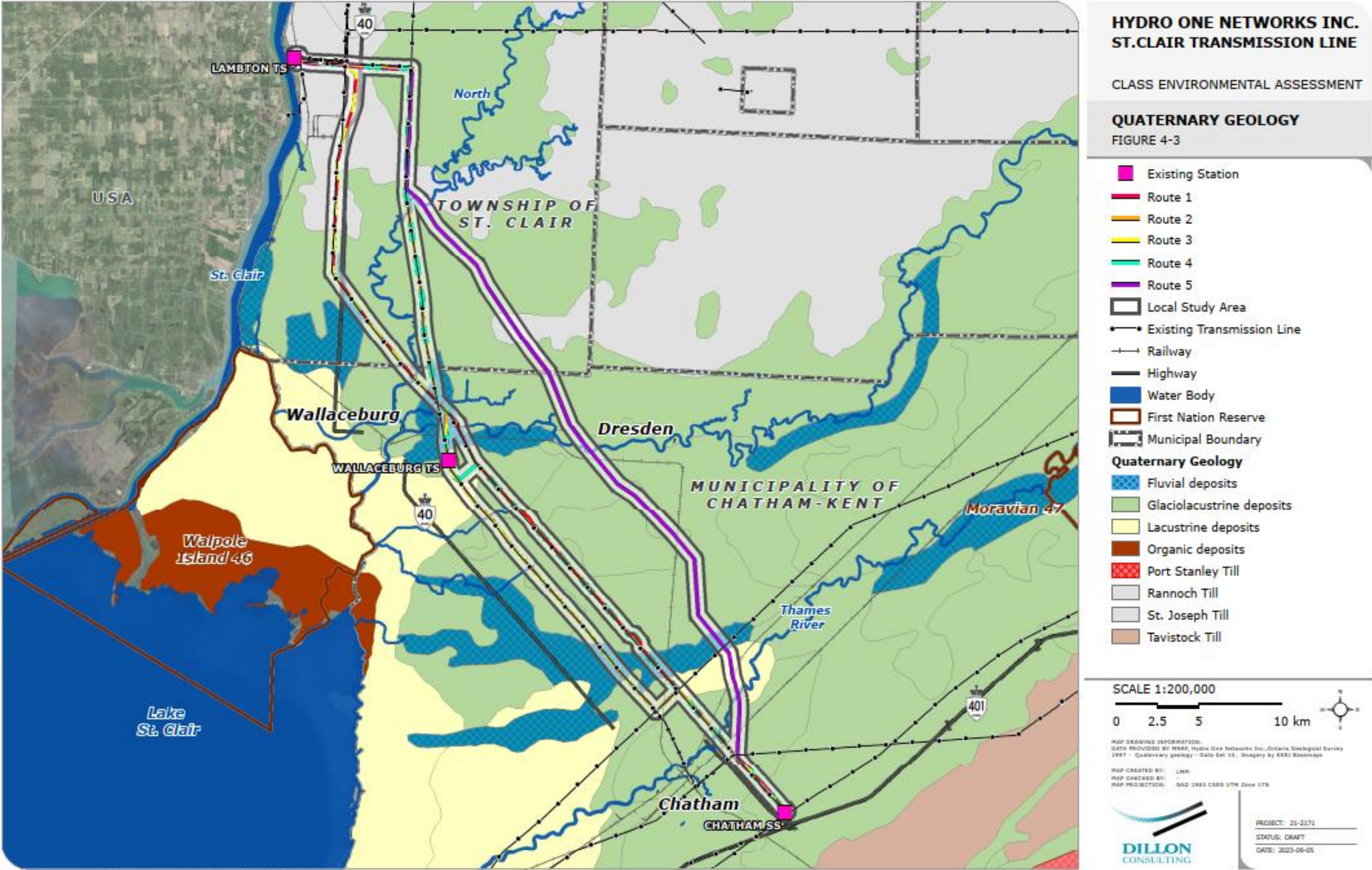




Figure 4-3: Quaternary Geology





## 4.6.2 Atmospheric Environment

### Climate

The Municipality of Chatham-Kent and the Township of St Clair are located within the Humid High Moderate Temperate Eco climate Region of southwestern Ontario. Climate in this region is the mildest identified in Canada, with a growing season of approximately 243 days (Crins et al., 2009). Meteorological stations with sufficient long-term data for the general region of the PSA have been identified in Courtright (Courtright, Climate Identifier [ID] 61219J1) and in Chatham (Chatham Water Pollution Control Plant, [WPCP]; Climate Identifier [ID] 6131415) Ontario (Government of Canada, 2023). The meteorological stations are located approximately 1.8 km west, and 6.1 km southwest of the PSA, respectively. Temperature and precipitation data presented in this section are based on annual Climate Normals data available from 1981 and 2010 (; Government of Canada, 2023).

**Table 4-2: Summary of Published Annual Climate Normals for the 1981 to 2010 Period for the Courtright and Chatham WPCP Stations**

Parameter	Courtright (Station ID: 61219J1): 1.1 km west of Project Study Area	Chatham WPCP (Station ID: 6131415): 6.1 km southwest of Project Study Area
Daily average (degrees Celsius [°C])	9.1	9.8
Daily maximum (°C)	13.7	14.1
Daily minimum (°C)	4.5	5.4
Rainfall (mm)	800.6	803.1
Snowfall (cm)	96.9	79.2
Precipitation (mm)	897.5	882.3
Days with maximum temperature >35°C	0.90	0.55
Days with minimum temperature <-30°C	0.0	0.0
Days with rainfall ≥ 25 mm	5.6	5.6
Days with snowfall ≥ 25 mm	0.12	0.09
Days with precipitation ≥ 25 mm	5.9	5.7

Source: Government of Canada, 2023

## Temperature

The climate normal mean annual temperature recorded at the Courtright and Chatham WPCP meteorological stations are 9.1 and 9.8 degrees Celsius (°C), respectively (Government of Canada, 2023). For these two stations, the climate normal daily average temperature varies between 4.5 to 5.4 °C and 13.7 to 14.1°C. The climate normal frost-free period is from April 22 to October 22 (182 days) and April 24 to October 26 (185 days), respectively (Government of Canada, 2023).

## Precipitation

Precipitation is distributed throughout all four seasons, with snowfall typically limited to between November to April, and rainfall occurring throughout the year. Climate normal days with precipitation (equal to or over 0.2 millimetres [mm]) range between 137.6 and 137.1 days per year for the Courtright and Chatham WPCP meteorological stations, respectively (Government of Canada, 2023). Similarly, climate normal monthly precipitation varies between 56.1 mm (March) and 108.2 mm (September) at Courtright station, and between 54.1 mm (February) and 89.1 mm (September) at Chatham station (Government of Canada, 2023). For the two meteorological stations, the climate normal total annual precipitation is 882.3 mm (Chatham WPCP) and 897.5 mm (Courtright), where 79.2 mm and 96.3 mm are associated with snowfall and 803.1 mm (Chatham WPCP) and 800.6 mm (Courtright) occur as rainfall.

Extreme daily rainfall for the Chatham WPCP meteorological station varies from 32.0 mm (November) to 86.1 mm (July) and are considered climate normal. Extreme snow depths for the Chatham WPCP station range from 0.0 to 26.0 centimetres (cm) (January; Government of Canada, 2023). On the other hand, extreme daily rainfall climate normal data for the Courtright meteorological station varies from 33.6 mm (January) to 90.0 mm (June), while extreme snow depth ranges from 0.0 to 32.0 cm (December; Government of Canada, 2023).

## Wind

At the Chatham WPCP meteorological station, winds are primarily blowing from the southwest with an average maximum hourly speed of 60.5 kilometres per hour (km/hr) (Government of Canada, 2019). Wind data was not provided in the climate normal data set for the Courtright meteorological station.

## Air Quality

In Ontario, air quality is monitored through a network of air quality monitoring stations operated by the MECP and Environment Canada (MECP, 2022; EC 2022); the MECP

monitors air quality throughout the Province as part of the Air Quality Monitoring System (MECP 2022). The nearest stations are located approximately 21.7 km north (Sarnia) and 4.5 km southwest (Chatham) of the PSA. Through hourly monitoring, an Air Quality Health Index (AQHI) reading summarizes background air quality levels for ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), sulphur dioxide (SO<sub>2</sub>) and particulate matter (PM<sub>2.5</sub>). Ozone, nitrogen dioxide, particulate matter, and sulphur dioxide are measured at the Sarnia station, and ozone, nitrogen dioxide and particulate matter are measured at the Chatham station.

The AQHI creates a score (i.e., 1 to 10+) totalling the overall risk associated with levels recorded for the parameters measured. A score of 1 to 3 indicates a low risk, a score of 4 to 6 indicates a moderate risk, while a score of 7+ indicates a high risk to ambient air quality. Air monitoring data summarized to provide AQHI scores from the Sarnia station represents the combined effect of emissions from nearby sources, as well as the effect of emissions transported into the region. AQHI readings are recorded hourly. Based on averaged daily AQHI readings recorded over the 2019, 2020 and 2021 monitoring years, a low score (1 to 3) and, therefore a low risk to air quality, are indicated for the Sarnia area (MECP, 2022). Similarly, annual average AQHI readings recorded for the parameters measured at the Chatham station indicated an overall low score (1 to 3) during 2019, 2020 and 2021, respectively (MECP, 2022).

## Noise

In accordance with the MECP (formerly Ministry of the Environment and Climate Change [MOECC]) publication NPC-300 “Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning” noise-sensitive receptors, or points of reception, are defined as sensitive land uses, which include dwellings; institutional use (educational, nursery, hospital, health care facility, community centre, place of worship or detention centre); and commercial use (hotel or motel) (MOECC, 2016). Based on a desktop review, points of reception were identified within the LSA to represent the noise-sensitive receptors in the vicinity, all being rural residential dwellings, commercial operations, places of worship and/or cemeteries adjacent to active agricultural lands.

Ambient noise conditions within the LSA were established through a review of publicly available information and the professional perspective of Hydro One based on experience on existing transmission line and station projects. Ambient noise conditions within the LSA are generally expected to be dominated by anthropogenic activities. These activities include, but are not limited to, transportation (roads), agricultural activities, and residential activities. The actual ambient noise levels at a given point of

reception depend on a number of factors, including type of noise source, distance to the noise source, and influences from intervening areas (e.g., structures, vegetation, as applicable) that could provide shielding between the noise source and point of reception. Ambient noise levels are expected to vary throughout the various periods of the day (i.e., Daytime [07:00 to 19:00], Evening [19:00 to 23:00], and Night-time [23:00 to 07:00]), days of the week, and seasons of the year. Ambient noise levels are expected to be at their highest during the agricultural planting and harvest seasons.

Ambient noise levels in the LSA are likely influenced by the following noise emissions:

- Local and distant road traffic;
- Railway activities; and,
- Agricultural (seasonal) and residential activities.

#### **4.6.3 Surface Water Resources**

For the purposes of field studies conducted in 2022 in support of the Class EA, surface aquatic features were defined using two categories: 1. watercourses and 2. waterbodies. Watercourses were considered rivers, streams/creeks and constructed drains, whereas waterbodies were considered natural or man-made ponds or pools that are land-locked within the landscape. As summarized in the Natural Environment Existing Conditions Technical Report (**Appendix C1**), a total of 64 watercourse survey locations were proposed in support of the 2022 field program. Of the 64 identified watercourse survey locations, 60 were assessed as part of the 2022 field program. Four watercourses could not be assessed at the location of the crossing or by roadside access. No waterbodies were identified within the PSA.

Physical conditions of watercourses assessed in 2022 were summarized in Section 3.1 of the Natural Environment Existing Conditions Technical Report (**Appendix C1**). Most of the watercourse features within the PSA flow into three Tertiary Watersheds: the Black River – St. Clair River, Sydenham River – St. Clair River and the Lower Thames River. Three rivers intersect all route alternatives: Sydenham River, North Sydenham River, and the Thames River, each of which flow into Lake St. Clair.

A list of watercourses surveyed in association with each route alternative are provided in **Table 4-3** below.

**Table 4-3: Watercourses Surveyed**

<b>Watercourse/Drain Name</b>	<b>Route Alternative 1</b>	<b>Route Alternative 2</b>	<b>Route Alternative 3</b>	<b>Route Alternative 4</b>	<b>Route Alternative 5</b>
Government Drain #10 (Clay Creek)	Yes	Yes	Yes	Yes	Yes
Government Drain #10 (Clay Creek)	Yes	No	Yes	No	No
Clay Creek	Yes	No	Yes	No	No
McKeough Diversion Channel	Yes	No	Yes	No	No
Whitebread Drain East	Yes	No	Yes	No	No
North Sydenham River	Yes	No	Yes	No	No
North Sydenham River	No	Yes	No	Yes	No
Otter Creek	Yes	Yes	Yes	Yes	No
Sydenham River	No	Yes	No	Yes	No
Sydenham River	Yes	No	No	No	No
Sydenham River	No	No	No	No	Yes
Prince Albert Drain	Yes	No	No	No	No
Wade Drain	No	Yes	Yes	Yes	No
Maxwell Creek	No	Yes	No	No	No
Maxwell Creek	Yes	No	No	Yes	No
13th Concession Drain West	No	Yes	Yes	No	No
Little Bear Creek	No	Yes	Yes	No	No
Little Bear Creek	Yes	No	No	Yes	No
Little Bear Creek	No	No	No	No	Yes
Big Creek	No	Yes	Yes	No	No
Big Creek	No	Yes	Yes	No	Yes
Big Creek	Yes	No	No	Yes	No

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<b>Watercourse/Drain Name</b>	<b>Route Alternative 1</b>	<b>Route Alternative 2</b>	<b>Route Alternative 3</b>	<b>Route Alternative 4</b>	<b>Route Alternative 5</b>
Arnold Creek	No	Yes	Yes	No	No
4th Concession Drain	Yes	Yes	Yes	Yes	No
Wheeler Drain	No	Yes	No	Yes	Yes
Coyle Drain	No	Yes	No	Yes	Yes
O'Connor Drain	No	Yes	No	Yes	Yes
Walton Drain	No	Yes	No	Yes	Yes
Moffat Drain East	No	Yes	No	Yes	Yes
Burr Drain	No	Yes	No	Yes	No
Burr Drain	No	No	No	No	Yes
Heyland Drain (Ryans Creek)	No	Yes	No	Yes	No
Heyland Drain (Ryans Creek)	No	No	No	No	Yes
Grant Drain	No	Yes	No	Yes	No
Reid Drain	No	Yes	No	Yes	No
15 <sup>th</sup> Concession Road Drain	Yes	No	No	Yes	No
13th Concession Drain West	Yes	No	No	Yes	No
Gray Drain	Yes	No	No	Yes	No
Lafferty Drain	Yes	No	No	Yes	No
Paincourt Creek Drain	Yes	No	No	Yes	No
Unnamed Watercourse near Brown Drain	Yes	Yes	Yes	Yes	No
Thames River	Yes	Yes	Yes	Yes	Yes
Wolfe Creek	Yes	Yes	Yes	Yes	Yes
Downie Drain	Yes	Yes	Yes	Yes	Yes



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<b>Watercourse/Drain Name</b>	<b>Route Alternative 1</b>	<b>Route Alternative 2</b>	<b>Route Alternative 3</b>	<b>Route Alternative 4</b>	<b>Route Alternative 5</b>
Maynard Line (Field Watercourse)	Yes	Yes	Yes	Yes	Yes
West Otter Creek	No	No	No	No	Yes
Howe Drain West	No	No	No	No	Yes
East Otter Creek Drain	No	No	No	No	Yes
East Chapple Drain	No	No	No	No	Yes
Eaves Drain	No	No	No	No	Yes
Browning Drain	No	No	No	No	Yes
Drummond Creek	No	No	No	No	Yes
Robinson-Pike Creek Drain	No	No	No	No	Yes
Runciman Drain	No	No	No	No	Yes
Watson Baseline Drain	No	No	No	No	Yes
Phair Drain	No	No	No	No	Yes
Purdie Creek Drain	No	No	No	No	Yes
Headley Drain	No	No	No	No	Yes
Arnold Creek	No	No	No	No	Yes
Ferguson Drain	No	No	No	No	Yes
Total number of watercourse crossings	66	66	67	71	57

The topography across the PSA is relatively flat, with general sloping observed towards watercourse systems and surface drainage features. In general, surface flow from constructed drains and watercourses flow south, north and northwest within the three tertiary watersheds (i.e., the Black River – St. Clair River, Sydenham River – St. Clair River and the Lower Thames River.; MNRF Ontario Flow Assessment Tool, 2022). Surface flow within the PSA is generally directed towards the major watercourses and watercourse systems. Within the northern sections of the PSA, surface flows are directed towards Clay Creek, the North Sydenham River, Otter Creek, and the East Sydenham River, and eventually outlet to the Chenail Ecarté and Lake St. Clair (MECP, 2023). Surface flows in the southern portions of the PSA are collected by a number of watercourses including the Maxwell Creek, Little Bear Creek, Rankin Creek, Big Creek, and Thames River systems and travel north-northwest to outlet to the Lower Thames River (MECP, 2023). MNRF secondary watershed mapping for the PSA is provided in **Appendix C6**.

A total of three active Provincial Water Quality Monitoring Network (PWQMN) stations have been identified within the vicinity of the PSA. PWQMN stations for Bear Creek (No. 04002700802), Sydenham River (No. 04002700183), and McGregor Creek (No. 04001308102) are located approximately 3.1 km east, 2.9 km west, and 0.5 km south, respectively, from the PSA. The three PWQMN stations were mapped in MECP available background source protection data (**Appendix C7**). The Bear Creek and McGregor Creek stations were last surveyed in 2019 for Phosphorus, Nitrates, Suspended Solids and Chloride, while the Sydenham River station was last surveyed in 2002 for the same parameters. These parameters were measured in order to document the health of subwatersheds within the regulated areas of SCRCA and LTVCA. As identified in the St. Clair Region Conservation Authority 2018 Watershed Assessment Report, and in the 2018 Lower Thames Valley Watershed Report Card, surface water quality for the subwatersheds identified within, and in the general vicinity of the PSA were considered fair to poor. According to the SCRCA/LTVCA watershed reports, conditions of the subwatersheds are likely attributed to past and ongoing agricultural and residential land uses.

#### **4.6.4 Groundwater Resources**

Groundwater resources were evaluated within the PSA to effectively capture potential effects on groundwater resources from the proposed Project. Well records mapped for the province of Ontario were reviewed to determine groundwater quality (MECP, 2021). Background review determined that many water wells are located within the extent of the PSA; mapping identifying the extent of well records for the PSA and general vicinity

are illustrated in **Appendix C8**. As such, select well records were chosen within the PSA in order to identify the approximate ground water and overburden depths for areas associated with the route alternatives. The majority of the well records within the PSA were recorded prior to the last 40 years. The summary of the water wells chosen for review are listed in **Table 4-4**.

**Table 4-4: Water Well Records Selected for Review within the PSA**

Well ID	Date Complete	UTM Coordinates (Zone 17 T) Eastings	UTM Coordinates (Zone 17 T) Northings	Depth to Water (m)	Overburden
3401488	06/06/1946	383432	4735928	43.5	Clay
3402763	04/15/1963	389138	4728584	34.1	Clay, sand, gravel
3407005	09/01/1981	384381	4723492	37.5	Clay, sand, gravel
3404007	10/19/1971	387713	4723351	33.8	Clay, hardpan
3402664	10/05/1951	393521	4723014	24.4	Clay, hardpan
3308163	11/02/1987	387021	4720295	18.6	Clay, sand
3301644	07/17/1964	389172	4717685	20.4	Clay
3308236	05/26/1987	389613	4717503	22.6	Clay, sand, gravel
3301405	07/07/1962	391681	4714407	21.6	Sand, clay, hardpan
3301329	03/31/1956	399415	4713767	20.7	Sand, clay, gravel, shale
3305426	05/10/1971	392176	4710972	20.7	Clay, loose shale and gravel
3301221	06/27/1947	394977	4707819	15.8	Sand, clay, hardpan
3301133	09/12/1966	398112	4706962	13.7	Clay, and gravel
7361370	06/01/2020	403785	4700634	14.9	Clay, gravel
3300881	04/23/1964	404534	4699567	16.5	Clay, sand
3308433	04/27/1989	405723	4698282	17.4	Clay, sand
3304649	11/23/1968	409577	4693760	18.3	Sand, clay

Source: MECP, 2021

Well log records are consistent amongst the water wells: groundwater is typically found approximately between 15 m and 50 m below ground surface, below a thick layer of clay soil (located approximately between 0 and 30 m below ground surface). The majority of wells observed within and adjacent to the PSA were all used for local water supply (agricultural/livestock and domestic residential). Groundwater observed within boreholes of several of the water wells were described as clear. Excerpted summary water well records listed in are presented in **Appendix C8**.

No municipal drinking water supplies were identified within the PSA or within the general vicinity. The aquifers in the PSA and vicinity have been mapped by the MECP as having a high vulnerability index (Vulnerability Score: 6; MECP, 2019). The extent of the surficial geography feature was used to connect smaller areas of highly vulnerable aquifers, where sand and gravel information matched the water well records (Thames-Sydenham and Region Source Protection Committee [TSR] 2023). Highly vulnerable aquifers within the PSA are included in **Appendix C7**.

### **Groundwater Hydrogeology**

Groundwater hydrogeology was assessed in the Essex Region/Chatham-Kent Region Groundwater Study Volume 1: Geologic/Hydrogeologic Evaluation conducted by Dillon Consulting Limited (Dillon) and WSP (Dillon and WSP, 2004; **Appendix C9**) and the Lambton County Groundwater Study (Dillon, 2005; **Appendix C9**). The results of these regional studies were incorporated into subsequent source water protection assessments and finally incorporated into the provincial web-based Source Protection Information Atlas. The route alternatives are located in the Lower Thames Source Protection Area (SPA) and in the St. Clair Region SPA.

The route alternatives are east of Wallaceburg's surface water source Intake Protection Zone 1 and Zone 2 (higher risk zones) but do cross Intake Protection Zone 3 (lowest risk zone) between Wallaceburg and Tupperville. There are no Wellhead Protection Areas (WPA) along the route alternatives.

The PSA extends across the St. Clair Clay Plains and the Bothwell Sand Plains physiographic regions of Ontario as defined by Chapman and Putnam (1984). The St. Clair Clay Plains span across much of the western portion of Municipality of Chatham-Kent and into the southwest of Lambton County, whereas the Bothwell Sand Plains initiate closer to the Municipality of Chatham-Kent and continue northeast. Although the PSA extends across both the St. Clair Clay Plains and Bothwell Sand Plains, the surficial geology is dominated by the St. Clair Clay Plain which consist of thick (~20 to 30 m) low permeability clay overburden.

Shallow groundwater flow generally follows surface topography towards Lake St. Clair and the Sydenham River and Lower Thames River. Generally, the depth to the water table is shallow, between 2 m and 4 m, and represents water contained within the low-permeability clay till associated with the St. Clair Clay Plain as described above. A deeper contact aquifer overlies a bedrock layer known as the Kettle Point Shale, and consists of basal sands and gravels and the fractured upper portion of the Kettle Point Shale bedrock. The majority of rural water supply wells are deep (~20 m or more) drilled wells that draw from this Kettle Point Shale contact aquifer and are protected by the overlying low permeability clay soils.

#### **4.6.5 Source Water Protection**

The PSA spans the St. Clair Region SPA and Lower Thames Valley SPA (MECP, 2022; **Appendix C7**). Portions of the lands within the two SPAs are categorized as Event-based Areas (EBA). EBAs are considered areas that may pose threats to sources of drinking water (TSR, 2023), and are determined through event-based modelling to identify the potential risk of spills (TSR, 2023). As shown in **Appendix C7**, EBAs are identified in the northern and central portions of the PSA in association with the Wallaceburg Intake Fuel EBAs, for route alternatives 1 and 3. A portion of the EBA to the east of Wallaceburg occurs within the PSA of route alternatives 2 and 4, whereas route alternative 5 does not overlap with the EBAs within the SPAs. Lands within the PSA are delineated as EBAs based on modeled scenarios that show that certain types of fuel spills may reach a surface water intake under certain weather conditions, or as a result of a local threat activity or as a result of a similar prescribed drinking water threat.

Portions of the SCRCA and LTVCA SPAs that overlap the PSA are also designated as category 3 Intake Protection Zones (IPZ-3). Intake Protection Zones are areas of land or water upstream of a municipal intake where run-off from a spill or leak could threaten the water supply (TSR, 2023). Specifically, IPZ-3 indicate areas which, under an extreme event, can contribute contaminants at concentrations that would cause deterioration of the source water for the purpose of human consumption (TSR, 2023).

As a portion of the PSA of route alternatives 1, 2, 3, and 4 contain designated EBAs and IPZ-3; permits related to the handling and storage of fuel are required under the Source Protection Plan for the Thames-Sydenham and Region (TSR, 2023). A review of the Assessment Reports for each of the SPAs indicated that the PSA extends across the following mapped vulnerable areas:

#### **St. Clair Region SPA**

- Event Based Areas (EBA), located in the Wallaceburg area.

- Significant Groundwater Recharge Areas (SGRA), located in the Wallaceburg area.
- High Vulnerability Aquifers (HVA), located in the Wallaceburg Area and to the southeast.

### **Lower Thames Valley SPA**

- Significant Groundwater Recharge Areas (SGRA), located in the Chatham area.
- High Vulnerability Aquifers (HVA), located in the Chatham Area.

EBAs are areas that may contribute runoff to surface water intakes during storm events. SGRAs are locations where groundwater recharge of the source water aquifer is locally significant. HVAs are those aquifers that are susceptible to contamination from land use activities.

The Thames-Sydenham Region Source Protection Plan (SPP) developed for both of the SPAs identify policies that are to be implemented for the protection of source water. In particular, the identified policies focus on specific land use activities that are identified in the *Clean Water Act* as Prescribed Drinking Water Threats (PDWTs) that may pose a low, moderate or significant threat to the source water. Under the *Clean Water Act*, there are 22 PDWTs identified. The PDWTs that were identified for the PSA are related to construction and maintenance activities that are performed within designated vulnerable areas, and include:

- Application of Pesticides (PDWT #10), as part of the anticipated regular maintenance activities along the transmission corridor.
- Storage and Handling of Fuel (PDWT #15), related to refuelling activities for construction equipment.

A review of the Thames-Sydenham Region SPP identified the following policy associated with these PDWTs where the proponent is responsible for action. Policies are only identified for those related to the Storage and Handling of Fuel, as the anticipated Application of Pesticides activity is not identified as posing a significant threat based on the most recent Technical Rules.

### **Policy 1.08 (Ref #2614), Restricted Land Uses for Event-based Modelled Threats.**

As it pertains to the applicable PDWT (handling and storage of fuels), this policy applies where the land has been identified within the Official Plan and/or Zoning By-law as being commercial, agricultural or Industrial, and the activity has been identified as a significant drinking water threat. For handling and storage of fuels, the determination of



the degree of threat is based on the handling and storage quantities involved. Activities deemed to be significant drinking water threats include the handling of fuel in quantities above 250 Litres (L).

#### **4.6.6 Designated or Special Natural Areas**

Designated or special natural areas are identified by federal or provincial agencies and municipalities through legislation, policies, or approved management plans. These areas typically have special or unique values that result in conservation land initiatives. Such areas may have a variety of ecological, recreational, and aesthetic features and functions that are highly valued. Designed or special natural areas within the LSA are outlined below. Significant woodlands and wetlands are discussed below in **Sections 4.6.7.**

#### **Areas of Natural and Scientific Interest**

Areas of Natural and Scientific Interest (ANSI) are contiguous lands and waters officially designated by the province that have geological or ecological features of significant representative provincially, regionally, or locally. These features are important and valued for natural heritage protection, appreciation, scientific study or education. A single ANSI, the Clay Creek Woodland Life Science ANSI, was documented within the PSA in association with route alternatives 1 and 3.

#### **Clay Creek Woodland (ANSI)**

Clay Creek Woodland is designated as a regional Life Science Area of Natural Scientific Interest (ANSI) within the Carolinian life zone that supports a diversity of Carolinian species (MECP, 2022). Measuring at approximately 641 ha, the ANSI provides woodland, swamp, and marsh habitat unique to the Carolinian zone. Clay Creek, a tributary of the Sydenham River, flows southwest through the ANSI and drains into the St. Clair River downstream (MNRF, 2022). A large area of the ANSI is comprised of the Bickford Oak Woods Complex, which is designated as a PSW and a Conservation Reserve. Route alternatives 1 and 3 bisect the Clay Creek Woodland.

#### **Bickford Oak Woods Conservation Reserve**

Located in the County of Lambton, the Bickford Oaks Woods Conservation Reserve is the largest protected Carolinian clay plain forest in Canada. This 314-ha property is predominantly forested with scattered wetland pockets that provide habitat for a diversity of Carolinian species and communities, including the provincially rare pin oak (*Quercus palustris*), Shumard Oak (*Quercus shumardii*), Buttonbush Thicket, Cerulean

warbler (*Setophaga cerulean*), Tufted Titmouse (*Baeolophus bicolor*), and Carolina Wren (*Thryothorus ludovicianus*) (MECP, 2022).

Bickford Oak Woods was designated as a Conservation Reserve, after public consultation, by amending the Chatham District Land Use Guidelines on March 31, 2004. This site is regulated under the *Provincial Parks and Conservation Reserves Act* through amendments to Ontario Regulation 199/08 as a mechanism to protect this important natural heritage and public recreation area (MECP, 2022). Recreational activities and their impacts are monitored, and if they are found to have impacts on natural heritage features, the activity will be limited, and mitigation measures will be enforced. The property will be managed to meet the long-term goal of protecting biodiversity and significant natural heritage values while providing compatible recreational opportunities (MECP, 2022). None of the route alternatives intersect the Bickford Oak Woods Conservation Reserve.

### Important Bird Areas

The PSA overlaps with the Eastern Lake St. Clair Important Bird Area (IBA). Important Bird Areas are considered a relatively new concept in Canada and are not legally protected in their own right. In Canada, IBAs complement (and often overlap partially or entirely with) other national, provincial, and local conservation designations such as National and Provincial Parks, Migratory Bird Sanctuaries, National Wildlife Areas, Crown Reserve lands, and Ecological Reserves.

The IBA noted in the vicinity of the Project was identified to promote conservation and stewardship of migratory stopover and staging habitat for waterfowl along the eastern shoreline of Lake St. Clair. Staging and stopover habitat consists of agricultural fields subject to sheet flooding and standing water during the spring and fall migratory seasons. Historically and to the present day, Lake St. Clair and the general vicinity of the IBA have been used as seasonal recreational hunting grounds. While habitat along the lake shoreline is the primary focus of the IBA, the extent of the IBA continues south-southeast overactive agricultural lands as a buffer to these important shorelines areas. Specifically, within the PSA, the furthest eastern extents of the IBA overlap with portions of route alternatives 2, 3, and 4, respectively (Figure set 2 of **Appendix C1**).

Lake St. Clair is included in two major migration flyways (the Atlantic and Mississippi) and is identified as a critical feeding, resting and staging area for bird species. The identification of the IBA was intended to promote conservation stewardship and to ensure recreational practises and hunting traditions were maintained. While the IBA was

identified as a mid-point between two migration flyways, it is noted that migration routes differ among species.

Recommended mitigation measures and/or best practices to mitigate potential impacts to birds is discussed further in **Section 7.7.7** and **7.7.8**.

#### **4.6.7 Natural Heritage Features**

As defined in the PPS (2020), natural heritage features and areas include “significant wetlands, significant coastal wetlands, fish habitat, significant woodlands, significant habitat of endangered species and threatened species, significant wildlife habitat, and significant areas of natural and scientific interest”, which are important for their environmental and social values as a legacy of the natural landscapes of an area.

The key natural heritage features that are defined in the PPS are considered below. Information on natural heritage features was collected from the following sources:

- Species at Risk Ontario (SARO) (O. Reg. 230/08);
- *Species at Risk Act* (SARA) database;
- Natural Heritage Information Centre (NHIC) database (NHIC, 2022);
- Atlas of Breeding Birds of Ontario (Cadman et al., 2007);
- Atlas of the Mammals of Ontario (Dobbyn, 1994);
- Bat Conservation International range maps (Bat Conservation International, 2023);
- Ontario’s Reptile and Amphibian Atlas (Ontario Nature, 2023);
- Municipality of Chatham-Kent Official Plan (2018);
- County of Lambton Official Plan (2020);
- Township of St. Clair Official Plan (2005);
- St Clair Region Conservation Authority;
- Lower Thames Valley Conservation Authority;
- Aerial imagery; and,
- Ontario Base Map.

In addition to the background information review, Hydro One’s environmental consultant (Dillon) conducted natural heritage field surveys within the PSA. As discussed previously in **Section 4**, surveys were completed within PSA lands where access was granted, and/or from existing ROW and property boundaries. Field surveys were carried out between September of 2021 and August of 2022. A summary of the field survey results is provided below. Refer to Figures set 3 in **Appendix C1** for survey locations.

## Ecological Land Classification & Botanical Assessment

Ecological communities were classified in accordance with Ecological Land Classification (ELC) for southern Ontario, second approximation (Lee et al., 1998; Lee, 2008). Ecological Land Classification communities were mapped based on aerial imagery and subsequently verified in the field. The PSA is dominated by agricultural lands, constructed uses, residential houses, and municipal roads. Natural areas documented within the PSA were identified as isolated features in the landscape.

Vegetation communities identified within the PSA are illustrated in Figure set 5 in **Appendix C1**. The composition of natural vegetation and cultural communities identified within the PSA per route alternative, as well as their areas (ha) within the ROW, are listed below in **Table 4-5**.

**Table 4-5: Vegetation Communities Identified within the PSA**

ELC Community	Route Alternative 1	Route Alternative 2	Route Alternative 3	Route Alternative 4	Route Alternative 5
FOD Deciduous Forest	No	Yes (0.66)	No	Yes (0.67)	Yes (0.60)
FODM2-1 Dry-Fresh Oak - Red Maple Deciduous Forest Type	No	Yes (0.77)	No	Yes (0.77)	Yes (1.65)
FODM2-2 Dry-Fresh Oak – Hickory Deciduous Forest	No	No	No	No	Yes (0.04)
FODM2-4 Dry-Fresh Oak – Hardwood Deciduous Forest	No	No	No	No	Yes (0.07)

<b>ELC Community</b>	<b>Route Alternative 1</b>	<b>Route Alternative 2</b>	<b>Route Alternative 3</b>	<b>Route Alternative 4</b>	<b>Route Alternative 5</b>
FODM5 Dry-Fresh Sugar Maple Deciduous Forest	Yes (0.03)	Yes	Yes (0.03)	Yes (0.03)	Yes (0.03)
FODM6-1 Fresh-Moist Sugar Maple- Lowland Ash Deciduous Forest	Yes (0.80)	No	Yes (0.80)	Yes	No
FODM6-2 Fresh-Moist Sugar Maple-Black Maple Deciduous Forest	Yes (0.42)	No	Yes (0.42)	No	No
FODM6-5 Fresh-Moist Sugar Maple- Hardwood Deciduous Forest	Yes (0.45)	No	No	Yes (0.45)	No
FODM7-4 Fresh-Moist Black Walnut Lowland Deciduous Forest	Yes (0.28)	Yes (0.28)	Yes (0.28)	Yes (0.28)	No

<b>ELC Community</b>	<b>Route Alternative 1</b>	<b>Route Alternative 2</b>	<b>Route Alternative 3</b>	<b>Route Alternative 4</b>	<b>Route Alternative 5</b>
FODM9 Fresh-Moist Oak-Maple- Hickory Deciduous Forest	No	Yes (0.36)	No	Yes (0.36)	Yes (1.40)
FODM9-4 Fresh-Moist Shagbark Hickory Deciduous Forest	Yes (3.48)	Yes (1.07)	Yes (3.48)	Yes (1.07)	Yes (0.18)
MA Marsh	Yes	No	Yes	No	No
ME Meadow	Yes (15.63)	Yes (12.39)	Yes (15.41)	Yes (13.87)	Yes (11.22)
OA Open Aquatic	Yes (0.98)	Yes (0.98)	Yes (1.11)	Yes (0.91)	Yes (0.84)
SW Swamp	Yes (0.32)	Yes (0.12)	Yes (0.32)	Yes (0.13)	Yes (0.13)
SWD Deciduous Swamp	Yes (0.91)	Yes (1.06)	Yes (0.91)	Yes (1.06)	Yes (1.73)
SWT Thicket Swamp	Yes (3.66)	Yes (2.89)	Yes (3.66)	Yes (2.89)	Yes (2.89)
THDM2-11 Dry-Fresh Hawthorn Deciduous Shrub Thicket	Yes (0.46)	No	Yes (0.46)	No	No
WE Wetland System	Yes	Yes (0.01)	Yes	Yes (0.01)	Yes (0.01)
WO Woodland	Yes (2.91)	Yes (2.77)	Yes (2.49)	Yes (3.30)	Yes (3.83)



ELC Community	Route Alternative 1	Route Alternative 2	Route Alternative 3	Route Alternative 4	Route Alternative 5
WODM5-1 Fresh-Moist Poplar Deciduous Woodland	Yes (0.60)	No	Yes (0.60)	No	No
CVC Constructed	Yes (1.41)	Yes (1.37)	Yes (1.41)	Yes (1.31)	Yes (1.31)
CVI_1 Transportation (Highways, roads, railways etc.)	Yes (2.31)	Yes (1.94)	Yes (2.29)	Yes (2.05)	Yes (2.20)
CVR Residential	Yes (2.85)	Yes (1.63)	Yes (2.31)	Yes (3.13)	Yes (1.94)
OAGM1 Annual Row Crop	Yes (238.19)	Yes (252.81)	Yes (250.95)	Yes (259.34)	Yes (251.39)

## Wetlands

Wetland vegetation communities observed within the PSA consisted of deciduous swamp, thicket swamp, marsh, and other wetland systems. In total, five wetland vegetation communities, were identified within the PSA (**Table 4-5**). A total of two Provincially Significant Wetlands (PSW's; Bickford Oak Woods Wetland Complex and Bray's Wetland Complex) and one unevaluated wetland (the Bossu Wetland) were observed within the PSA. Wetlands were associated with all five route alternatives.

The Ontario Wetland Evaluation System (OWES) scores wetlands using a points-based system. As per Section 6.3.1 of the Natural Heritage Reference Manual (NHRM; 2010) and OWES (MNRF, 2022), a PSW is an evaluated wetland that receives either a total of 600 or more points, or 200 or more points in either biological components (i.e., wetland type, biodiversity) and special features components (i.e., rare and significant species, and SWH).

As described in Section 6.3.1 of the NHRM (2010) and in the OWES (MNRF, 2022), the wetland units have the potential to meet criteria for significance as they have the potential to provide biological, hydrological, and special feature components.

## Aquatic and Fish Habitat

The majority of watercourses within the PSA are characterized as a combination of open natural watercourses, roadside and agricultural drains with permanent flow regimes, and provide direct fish habitat. The most common substrate observed in association with surface aquatic features across all five route alternatives consisted of clay and silt; minor detritus, muck, sand, boulder and cobble substrate were also observed. The dominant instream habitat consisted of emergent aquatic vegetation with woody and organic debris.

While many of the drains associated with the PSA were not rated (classification of NR), the majority of those assessed by DFO (Kavanagh and Hoggarth, 2017; MECP, 2019) were reported to have good to fair systematic agricultural tile drainage inputs (classifications of C, E and F). Mapping obtained from the MECP illustrating the drain classifications provided by DFO are included in **Appendix C10**. Drainage classifications provided by DFO were confirmed in the field during aquatic assessments; results of these assessments were summarised in Appendix D of the Natural Environment Existing Conditions Technical Report (**Appendix C1**).

Existing farming practices throughout the PSA have limited the amount of available riparian habitat. In the absence of treed riparian areas, and where watercourses bisect active agricultural lands, riparian areas are limited and generally degraded as agricultural fields were observed to be actively farmed as close to watercourses as possible (i.e., little buffer exists between active farmlands and watercourses). Riparian areas play an important role for fish and wildlife habitat, including species at risk (SAR). In terms of aquatic and fish habitat, riparian areas have the ability to filter and absorb nutrients, sediment and other contaminants from entering the systems; they provide shade and impact water temperatures, as well as provide cover and support the aquatic food cycle. Riparian areas also have the potential to function as wildlife corridors, cover and a source of food for a number of wildlife and SAR (e.g., Eastern Fox snake). It is also acknowledged that riparian areas support a variety of traditional plant species used for harvesting and medicinal purposes while also contributing to cultural continuity of Indigenous communities.

Aquatic features were not observed during field investigations at two watercourse crossings identified during background review (Maynard Line watercourse crossing associated with all five route alternatives; Eaves Drain watercourse crossing associated with route alternative 5). As such, aquatic habitat assessments were not completed for these previously identified watercourse crossings.

All watercourse crossings were confirmed and/or anticipated to provide direct and/or seasonal fish habitat based on field investigations, DFO classification, and/or eDNA (environmental DNA) metabarcoding analysis results. In addition to the aforementioned findings, further detail regarding seasonal fish habitat and species observations per route alternative are provided below:

**Route alternative 1** - Brown Trout (*Salmo trutta*), Creek Chub (*Semotilus atromaculatus*), and Pumpkinseed (*Lepomis gibbosus*) were observed in association with the Big Creek crossing. An observation of a fish carcass as well as historic observations of Northern Pike (*Esox Lucius*) and Carp (*Cyprinus sp.*) by a landowner were noted in association with the McKeough Diversion Channel and Maxwell Creek watercourse crossings, respectively. The Lafferty Drain was assessed as having the potential to provide seasonal fish habitat based on the conditions observed in the field.

**Route alternative 2** - The O'Connor Drain and Burr Drain were assessed as having the potential to provide seasonal fish habitat based on the conditions observed in the field.

**Route alternative 3** - An observation of a fish carcass as well as historic observations of Northern Pike and Carp by a landowner were noted in association with the McKeough Diversion Channel watercourse crossing.

**Route alternative 4** - Brown Trout, Creek Chub, and Pumpkinseed were observed in association with the Big Creek watercourse crossing. Historic observations of Northern Pike and Carp by a landowner were noted in association with the Maxwell Creek watercourse crossing. The O'Connor Drain, Burr Drain, and Lafferty Drain were assessed as having the potential to provide seasonal fish habitat based on the conditions observed in the field.

**Route alternative 5** - Johnny Darter (*Etheostoma nigrum*) was observed in association with the Little Bear Creek watercourse crossing. Burr Drain was assessed as having the potential to provide seasonal fish habitat based on the conditions observed in the field.

### **eDNA Metabarcoding Analysis**

An eDNA aquatic sampling program was completed concurrent with the aquatic and fish habitat assessments to further characterize aquatic species and to augment background fish and mussel data for the surveyed watercourses in the PSA. In parallel with the aquatic habitat assessments, 58 eDNA water samples were collected for eDNA metabarcoding analysis. Watercourses at Stations 54 and 65 were dry and had no observable aquatic feature present at the time of the assessment.

Sample analysis was completed by Nature Metrics through the application of metabarcoding for fishes (12S rRNA marker) and mussels (16S rRNA marker). With respect to fish, 38 unique taxa were identified to species level when aggregately combined across all samples, representing 17 unique families of fishes. Similarly, with respect to mussels, eight unique taxa were identified to species level when aggregately combined across all samples, representing two unique families of mussels. Refer to **Appendix C1** for a breakdown of fish and mussel species identified through eDNA metabarcoding analysis.

Of the 46 total species of fish and mussel, a single SAR (Lilliput [*Toxolasma parvum*]; listed under the *Endangered Species Act* [ESA]) and four SCC (Maple leaf Mussel [Great Lakes – Western St. Lawrence population; *Quadrula quadrula*], Paper Pond shell (*Utterbackia imbecillis*), Wabash Pigtoe [*Fusconaia flava*], and Spotter Sucker [*Minytrema melanops*]) were detected as part of the eDNA metabarcoding analysis.

### Woodlands

Under the PPS, significant woodlands are protected in Ecoregions 7E. Woodlands that intersect the PSA were assessed for significance based on the significant woodlands definitions within the County of Lambton Official Plan (2020), the Township of St. Clair Official Plan (2005), and the Chatham-Kent Official Plan (2018). A total of 78 Significant Woodlands intersect the PSA, of which 26 significant woodlands are associated with each route alternatives 1 and 3; 32 significant woodlands are associated with each of route alternatives 2 and 4; and 40 significant woodlands are associated with route alternative 5.

Significant woodlands within the PSA are mapped within Figure set 6 of the Natural Environment Existing Conditions Technical Report (**Appendix C1**). Overall, the woodland communities identified were often isolated in the landscape and were limited in connectivity to adjacent natural heritage features. Each of the significant woodland communities are considered common or secure in Ontario. Although they are common or secure in Ontario, it is acknowledged that several woodlands in Ontario have been utilized for hunting and trapping, as well as plant and medicinal harvesting by Indigenous communities.

### Valleylands

Under the PPS, significant valleylands are protected in Ecoregions 7E. Three significant valleylands were identified within the PSA based on background review. All three valleylands are associated with the three major river crossings (Sydenham River, North Sydenham River, and Thames River) in association with all five route alternatives. No

additional topographic features or valleylands meeting criteria of Section 8.0 of the NHRM (2010) were observed during field investigations.

### Species at Risk

*The Endangered Species Act*, 2007 (ESA) came into effect in Ontario in June of 2008. The ESA applies to species listed as extirpated, endangered, or threatened under *O. Reg. 230/08* on private and public lands under provincial jurisdiction and provides both species protection (Section 9) and habitat protection (Section 10). Under the ESA, habitat is defined as either General Habitat or Regulated Habitat. General Habitat is defined as the area a species currently depends on, either directly or indirectly, to carry out its life processes. General Habitat does not include areas where a species once lived and/or where it may be re-introduced. General Habitat protection is in place until a regulation is made prescribing an area as Regulated Habitat. Regulated Habitat is the area prescribed for a species in a habitat regulation (under clause 2(1)(a) of the ESA) and may include: specific features/boundaries and areas where the species lives, used to live, or is believed to be capable of living.

Similarly, the *Species at Risk Act* (SARA) was adopted in 2002 by the Government of Canada to protect SAR and their habitat. The SARA applies to species listed under Schedule 1 of the Act on federal lands and/or aquatic species, as well as migratory birds listed under the *Migratory Birds Convention Act*, 1994, as well as Schedule 1 of the Act. Under SARA, species listed on Schedule 1 receive species protection (Section 32) and residence protection (Section 33). Critical Habitat is defined under Section 2 of SARA as “the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species’ critical habitat in the recovery strategy or in an action plan for the species”.

A screening to identify potential SAR and SAR habitat within the LSA was completed in support of the Natural Environment Field Program Terms of Reference (Dillon, 2022). In total, 67 SAR were identified as having the potential to occur within the general vicinity of the LSA based on background review. The list of SAR includes 20 bird, 13 botanical, 12 mollusc, eight reptile, eight fish, five mammal and one insect species. For the full list of SAR with the potential to occur within the general vicinity of the LSA, refer to Table 3 of the Natural Environment Existing Conditions Report (**Appendix C1**).

Results of the screening and field investigations were summarized in the Natural Environment Existing Conditions Technical Report (**Appendix C1**). Throughout the 2021 and 2022 field seasons, six SAR birds (Barn Swallow, Bobolink, Eastern

Meadowlark, Northern Bobwhite, Red-headed Woodpecker, and Wood Thrush) and one SAR plant species (Butternut) were observed within the PSA.

Eight SAR fish and 12 SAR mussels were identified by DFO aquatic SAR mapping (DFO, 2023) as being present within the PSA. In addition to DFO aquatic SAR mapping, eDNA metabarcoding analysis detected the presence of Lilliput.

Although SAR bats and SAR snakes were not observed, natural features within the PSA were assessed as having the potential to support the species habitat based on the 2021 and 2022 field investigation results. In addition, as part of the Class EA consultation process, known occurrences of Spiny Softshell within the PSA in association with the Thames River and Sydenham River, and Blanding's Turtle in association with the Bossu wetland, were identified. Summaries of SAR and descriptions of suitable habitat for each of the aforementioned species are provided in the following subsections.

### **Butternut**

One Butternut was observed within the significant woodland (FODM5) at station 54, associated with all five route alternatives (Figure 5-12, **Appendix C1**). While a formal Butternut Health Assessment (BHA) was not conducted, there is evidence that the Butternut is infected with Butternut Canker disease. As a mechanism to protect the canopy and root zone of 'retainable' Butternut, a 25 m buffer is identified in the Butternut Recovery Strategy (Poisson and Ursic, 2013).

Should Butternut and Butternut habitat have the potential to be impacted as a result of the Project, a formal BHA will be completed to confirm infection with Butternut canker and to assess the tree category. Additional surveys and genetic testing may also be required to determine genetic purity, with hybridized specimens not being subject to protective measures under the ESA. Removal of Butternut may occur under *O. Reg. 830/21*, provided the conditions in the appropriate Regulation are followed.

### **Barn Swallow**

Barn Swallow observations were documented in association with all five route alternatives, as well as during the bird migration surveys (station M2), and incidentally. Although suitable nesting habitat has the potential to occur within the PSA in association with residential homes, agricultural buildings, and culverts, the presence of active Barn Swallow nests was not observed during the 2021 and 2022 field investigations. Although Barn Swallow was delisted under the ESA in January of 2023, it is still listed under Schedule 1 under the SARA. Mitigation for potential impacts to this species as a result of the Project are further discussed in **Section 7.7.8.4**.



### **Bobolink and Eastern Meadowlark**

Bobolink observations were documented in association with route alternatives 1, 4, and 5, as well as during the bird migration surveys (stations M3, M4, M6, and M7), and incidentally. Eastern Meadowlark observations were documented in association with all five route alternatives, as well as incidentally. Large hayfields (5 hectares [ha] or larger) conducive to Bobolink and Eastern Meadowlark nesting were not observed within the PSA during ELC surveys (MNRF, 2019). Annual row crops are not considered suitable breeding habitat for Bobolink and Eastern Meadowlark.

### **Wood Thrush**

Wood Thrush were observed at several stations throughout the PSA during the 2021 and 2022 diurnal breeding bird surveys. This species was heard singing at all five route alternatives at stations 1, 3, 4, 6, 25, 31, and 63. Based on the results of the diurnal breeding bird surveys, the habitats associated with each of the aforementioned survey stations are considered Wood Thrush habitat (Figure set 6 in **Appendix C1**). Mitigation for potential impacts to this species as a result of the Project are further discussed in **Section 7.7.8.4**.

### **Northern Bobwhite**

A single Northern Bobwhite observation was made during the 2022 diurnal breeding bird surveys; however, no suitable breeding habitat was identified. The species was heard singing near a farmhouse at station 12. Through discussion with the landowner, the species is pen-reared and several individuals escaped. As a result, this observation is not considered to be of a species in a natural setting.

### **Red-headed Woodpecker**

Red-headed woodpecker observations were documented during the spring bird migration surveys in association with stations M6 and M7. Red-headed woodpecker prefer open woodlands and other forms of sparsely treed habitats (e.g., parks, golf courses, cemeteries, etc.) with limited canopy cover. Although the species was documented at stations M6 and M7, these stations are located well outside the LSA at greater than 6 km and 13 km, respectively, from the nearest route alternative. Although the PSA has the potential to support Red-headed woodpecker habitat, the species was not documented during the spring breeding bird surveys.

### **Blanding's Turtle**

Blanding's turtle habitat includes wetlands and lakes with shallow waters with an abundance of aquatic plants. Although Blanding's Turtle was not observed during the 2021 and 2022 field program, based on feedback provided during the November 2022 COHs, the Project team was made aware of Blanding's Turtle occurrences in association with routes alternatives 1 and 3 in connection with the Bossu wetland. Based on these occurrences, the Bossu wetland has been carried forward as Blanding's Turtle habitat, while both the Sydenham and North Sydenham River have been carried forward as potential Blanding's turtle habitat given their proximity to the Bossu wetland (Figure set 6 in **Appendix C1**).

### **Spiny Softshell**

Spiny Softshell habitat includes rivers, lakes, and creeks with open sand or gravel for nesting areas, shallow muddy or sandy areas to bury in, areas of deep water for hibernation, and basking areas. Although Spiny Softshell was not observed during the 2021 and 2022 field program, the species is known to occur in the Sydenham, North Sydenham and Thames River. Based on these known occurrences, the aforementioned rivers have been carried forward as potential Spiny Softshell habitat (Figure set 6 in **Appendix C1**). Mitigation for potential impacts to this species as a result of the Project are further discussed in **Section 7.7.8.4**.

### **Potential Habitat for SAR Bats**

As a result of the ELC mapping, the significant woodlands and smaller forest communities within the PSA were assessed as potential SAR bat habitat. Given that habitat is limited across the landscape, and although confirmation of SAR bat habitat is traditionally based on acoustic survey results, the forest communities identified as potential SAR bat habitat is consistent with previous MNRF/MECP guidance. Based on the ELC communities observed, there is potential for the woodland (WO), deciduous forest (FOD), swamp (SW), and wetland (WE) communities to provide SAR bat habitat (Figure set 6 in **Appendix C1**).

Mitigation for potential impacts to SAR bats are provided in **Section 7.7.8.4**. In brief, direct impacts to SAR bats from tree clearing can be avoided if trees representing potential roosts are cleared during the non-active bat season (November to March). Further studies may be required to confirm the presence of SAR bat habitat in support of potential permitting under the ESA.

## SAR Snakes

According to the Recovery Strategy for Eastern Foxsnake – Carolinian and Georgian Bay populations in Ontario (MNR, 2010), Eastern Foxsnake prefer a variety of habitats, with a strong preference for hedgerows, marshes, naturalized pasture, open woodland areas and habitats near water. Similarly, woodlands, farm hedgerows, old fields, railways, wetlands, and drainage corridors can be important habitats as well as seasonal migration linkages. Additionally, features such as rotting logs or stumps, piles of organic material (such as compost, sawdust, or woodchips), rock piles, brush piles, and dump sites of old agricultural debris/equipment have the potential to provide habitat functions for Eastern Foxsnake in the Project area. This species may also utilize old bridges, culverts, and foundations as communal over-wintering sites. Eastern Foxsnake (Carolinian population) habitat is defined under Section 9 of *O. Reg. 832/21*. Critical habitat is defined as nesting and hibernacula. Nest sites include rotting cavities of downed trees, decaying vegetation piles, rodent burrows and hay piles. From late-October until April the species hibernates in burrows, limestone bedrock fissures, canals, and old building foundations.

The Recovery Strategy for Butler's Gartersnake in Ontario (MECP, 2019) states that Butler's Gartersnake prefer a variety of habitats, with a strong preference for open, moist habitats such as grasslands with dense cover, old fields, and small marshes and bodies of water. Critical habitat is classified as locations for live birthing and hibernacula. Sites for live birthing include tallgrass prairie communities, grasslands, cultural meadows, thicket, old fields, or deciduous swamps that contain wet areas. From mid-September until early-April the species hibernates in burrows or dens, log piles, drains, dogwood bushes, or rocky outcrops.

Although specific surveys to identify hibernacula habitat for Eastern Foxsnake and Butler's Gartersnake were not included as part of the 2022 field program, hibernacula habitat has the potential to occur within the PSA. No features with the potential to support hibernacula habitat were incidentally observed within the PSA during field investigations. However, as part of the Class EA consultation process, the Project team was made aware of a man-made hibernacula in association with the Bossu wetland with known occurrences of Eastern Foxsnake use.

Based on the aforementioned habitat descriptions, naturalized riparian corridors, hedgerows, marshes, meadows, thickets, and swamps are identified as potential Butler's Gartersnake habitat within the PSA (Figure set 6 in **Appendix C1**). Similarly, naturalized riparian corridors, hedgerows, marshes, meadows, thickets, woodlands,

forests, and swamps are identified as potential Eastern Foxsnake habitat within the PSA, while the Bossu wetland is identified as Eastern Foxsnake habitat (Figure set 6 in **Appendix C1**).

Mitigation for potential impacts to Eastern Foxsnake and Butler's Gartersnake is provided in **Section 7.7.8.4**. In the event the preferred route has the potential to impact Eastern Foxsnake and/or Butler's Gartersnake habitat, the MECP will be consulted to determine whether a permit under the ESA is required.

### **Aquatic SAR**

Eight SAR fish and 12 SAR mussels classified as either endangered or threatened were identified in the PSA during the background review (refer to Table 3 in **Appendix C1**); all are protected under the ESA. With the exception of Lake Sturgeon and Wavy-rayed Lampmussel, each of the aquatic SAR are protected under the SARA.

All route alternatives contain SAR fish, mussels and Critical Habitat as identified on DFO mapping. In addition, Lilliput was detected in association with route alternatives 1, 2, 3 and 5 at stations 5, 15, 21 and 67 through eDNA analysis (Figure set 6 in **Appendix C1**). Mitigation for potential impacts to aquatic SAR are further discussed in **Section 7.7.8.4**.

### **Wildlife and Significant Habitat**

Species of Conservation Concern (SCC) are defined as:

- Species listed as Special Concern, Threatened, or Endangered under SARA;
- Species that are provincially rare/tracked (i.e., have a Sub-national (provincial) Rank of S1 – Critically Imperiled, S2 – Imperiled, or S3 – Vulnerable); and,
- Species that are designated as Special Concern under the ESA.

Based on desktop background review, 78 SCC were identified as having the potential to occur within the general vicinity of the LSA. The list of SCC includes 34 botanical, 10 fish, nine bird, eight mollusc, six insects, five reptile and one mammal species. For the full list of SCC with the potential to occur within the general vicinity of the LSA, see Table 2 of the Natural Environment Existing Conditions Report (**Appendix C1**).

As the Project is located in Ecoregion 7E (the Carolinian Zone), the presence of significant wildlife habitat (SWH) was assessed according to the Significant Wildlife Habitat Technical Guide (MNRF, 2000) and the Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (MNRF, 2015). Habitat types considered include seasonal concentration areas of animals; rare vegetation communities or specialized habitat for

wildlife; habitat for SCC; and animal movement corridors. Based on the background review results, the following candidate SWH were assessed as having the potential to occur within the PSA:

### **Seasonal Concentration Areas of Animals**

- Waterfowl Stopover and Staging (Terrestrial and Aquatic);
- Reptile Hibernacula;
- Bat Maternity Colonies;
- Turtle Wintering Areas; and,
- Colonially Nesting Bird Breeding Habitat (Tree/Shrub).

### **Specialized Habitat for Wildlife**

- Waterfowl Nesting Area;
- Bald Eagle and Osprey Nesting, Foraging and Perching Habitat;
- Woodland Raptor Nesting Habitat;
- Turtle Nesting Areas;
- Seeps and Springs; and,
- Amphibian Breeding Habitat (Woodland and Wetland).

### **Habitat for Species of Conservation Concern**

- Marsh Bird Breeding Habitat;
- Terrestrial Crayfish; and,
- Special Concern and Rare Wildlife Species.

SWH identified within the PSA was confirmed, identified as candidate, or ruled out using criteria outlined in the Ontario Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (MNRF, 2015), habitat mapping reviewed from aerial imagery, and information collected during the 2021 and 2022 field investigations. Incidental observations of wildlife (including dens, tracks and scats, and other wildlife evidence) were recorded during the 2021 and 2022 field investigations. Observations of SCC made during the 2021 and 2022 field investigations are illustrated in Figure set 5 (**Appendix C1**), while descriptions of candidate and confirmed SWH within the PSA are provided below and illustrated in Figure set 6 (**Appendix C1**).

## **Seasonal Concentrations of Animals**

### **Bat Maternity Colonies**

While surveys for snag and cavity trees were not formally conducted throughout the PSA, forest and swamp communities (i.e., FOD, FODM2, FODM5, FODM6, FODM7, FODM9, SW, and WE) identified within each of the five route alternatives have the potential to provide candidate SWH for Bat Maternity Colonies.

### **Turtle Wintering Areas**

PSWs and open water habitat communities may provide suitable wintering habitat for turtles. As such, the swamp (SWD and SWT), marsh (MA), and open aquatic (OA) communities have been identified as candidate SWH for Turtle Wintering Areas.

### **Colonially – Nesting Bird Breeding Habitat (Tree/Shrub)**

As part of the Class EA consultation process, the Project team was made aware of a Great Blue Heron rookery outside of the PSA, with contiguous habitat within the PSA, in association with route alternative 5. Presence of the rookery was confirmed during a site visit by members of the Project team. In accordance with the criteria schedule, SWH for Colonially – Nesting Bird Breeding Habitat (Trees/Shrubs) includes a minimum of a 300 m buffer radius applied to the edge of the colony or the forest ecosite containing the colony. As a result, confirmed SWH for Colonially – Nesting Bird Breeding Habitat (Trees/Shrubs) was identified in association with route alternative 5.

## **Rare Vegetation Communities**

### **Other Rare Vegetation Communities**

A single vegetation community (FODM7-4, Fresh-Moist Black Walnut Lowland Deciduous Forest), which has an S-Rank of S2S3, was observed at station 51 along the north bank of the Thames River in association with route alternatives 1, 2, 3 and 4; each route parallels an existing 230 kV transmission line within the community. While some clearing will be required for the new ROW, there is already an existing transmission line that crosses this community and the new ROW will be an expansion of this existing corridor rather than a brand new effect to this woodlot.



## **Specialized Habitat for Wildlife**

### **Turtle Nesting Areas**

Two Snapping Turtle were observed during the 2022 aquatic assessment surveys. One was observed near station 15 in association with route alternative 1 and one was observed near station 49 in association with route alternatives 1 and 4. A single Northern Map Turtle was observed near station 34 in association with route alternatives 2 and 4. Based on the incidental observations and the surrounding habitat, the habitat associated with the aforementioned stations are considered candidate SWH for Turtle Nesting Areas.

### **Amphibian Breeding Habitat**

The number of calling amphibians heard during the amphibian breeding surveys met the criteria for SWH at two survey stations. Twenty individuals of two or more of the frog species listed in the Significant Wildlife Habitat Technical Guide Ecoregion 7E Criterion Schedules (MNRF, 2015) were heard at station 4 in association with route alternatives 1 and 3, which met criteria for SWH. Simultaneous calling of an undetermined number of individuals of two of the listed frog species were heard at station 35 in association with route alternatives 2 and 4. Due to the undetermined number of individuals, the habitat at this station was assessed as candidate SWH for breeding amphibians. Based on the results of the amphibian breeding surveys, the aforementioned survey stations are considered confirmed and/or candidate SWH for Amphibian Breeding Habitat.

### **Bald Eagle Nesting, Foraging and Perching Habitat**

As part of the Class EA consultation process, the Project team was made aware of two Bald Eagle nests located outside of the PSA (but within the LSA), which were visually confirmed by members of the Project team. In addition, during the draft ESR comment period, a nearby resident confirmed the location of the Bald Eagle nest identified along Otter Creek and indicated that local residents regularly observe a breeding pair of Bald Eagles in association with the nest. In accordance with the criteria schedule, SWH for an active Bald Eagle nest includes a 400 m to 800 m radius around the nest. In accordance with the Significant Wildlife Habitat Mitigation Support Tool (MNRF, 2014b), a 400 m buffer radius was applied to both Bald Eagle nests given the species current tolerance to existing transmission lines/towers. Both Bald Eagle nests, including their 400 m buffer radiuses, are considered confirmed SWH for Bald Eagle Nesting, Foraging and Perching Habitat.

## **Habitat for Species of Conservation Concern**

### **Special Concern and Rare Wildlife Species**

As previously mentioned, two Snapping Turtle were observed during the 2022 aquatic assessment surveys. One was observed near station 15 in association with route alternative 1 and one was observed near station 49 in association with route alternatives 1 and 4. A single Northern Map Turtle was observed near station 34 in association with route alternatives 2 and 4. Based on the incidental observations, the habitat associated with these stations are considered SWH for Special Concern and Rare Wildlife Species.

Eastern Wood-pewee and Wood Thrush were also observed at several stations throughout the PSA during the 2022 diurnal breeding bird surveys. Eastern Wood-pewee was heard singing at all five route alternatives at survey stations 3, 6, 8, 25, 31, 47, and 58, while Wood Thrush was heard singing at all five route alternatives at stations 1, 3, 4, 6, 25, 31, and 63. Based on the results of the diurnal breeding bird surveys, each of the aforementioned survey stations are considered confirmed SWH for Special Concern and Rare Wildlife Species.

A stand of less than 20 Pawpaw was observed during the 2022 botanical assessment survey. The stand was observed at station 54 in association with all five route alternatives. As such, the habitat associated with the stand of Pawpaw is considered confirmed SWH for Special Concern and Rare Wildlife Species.

Based on the eDNA metabarcoding results, Spotted Sucker, Paper Pond shell, Wabash Pigtoe and Maple leaf Mussel were each detected in association with all five route alternatives with exception to Wabash Pigtoe which was detected in association with route alternative 5 only. Spotted Sucker was detected at stations 14, 15, 18, 20, 34, 45 and 67; Paper Pond shell was detected at stations 12, 14, 15, 20, 21, 34, 45 and 67; Wabash Pigtoe was detected at station 69; while Maple leaf Mussel was detected at stations 12, 13, 14, 15, 20, 34, 51, 67 and 69. Based on the eDNA metabarcoding results, each of the aforementioned survey stations are confirmed SWH for Special Concern and Rare Wildlife Species.

### **Non-Native and Invasive Species**

During ELC and botanical surveys, vegetation communities throughout the PSA exhibited signs of disturbance by past and ongoing land use, and as a result contained non-native species which are not associated with conservation rankings. Of the 133 botanical species observed during the 2022 botanical assessment, 33 were listed as

introduced species and were not considered suitable targets for conservation activities by the province (SRank of SE, SU or SNA), while 14 are considered invasive species in Ontario.

The identified invasive species belong to four of the five categories of control as defined by the Invasive Priority for Control and are listed below.

- Category 1 – widespread invasive species that are top priority for control:
  - Common Buckthorn (*Rhamnus cathartica*); route alternatives 2, 4, and 5);
  - European Common Reed (*Phragmites australis ssp. Australis*); route alternatives 1, 2, 3, 4, and 5);
  - Garlic Mustard (*Alliaria petiolate*); route alternatives 1, 2, 3, 4, and 5);
  - Tartarian Honeysuckle (*Lonicera tatarica*); route alternatives 1, 2, 3, 4, and 5);
  - White Mulberry (*Morus alba*); route alternatives 1, 4, and 5);
- Category 2 – less widespread invasive species that are medium priority:
  - Manitoba Maple (*Acer negundo*); route alternatives 1 and 4);
  - Multiflora Rose (*Rosa multiflora*); route alternatives 1, 2, 3, 4, and 5);
- Category 3 – species that spread locally or persist and reproduce from initial introductions and are therefore of local priority:
  - Black Locust (*Robinia pseudoacacia*); route alternatives 1, 2, 3, and 4);
  - Canada Thistle (*Cirsium arvense*); route alternatives 2, 4, and 5);
  - Fuller's Teasel (*Dipsacus fullonum*); route alternatives 1, 2, 3, 4, and 5);
  - Narrow-leaved Cattail (*Typha angustifolia*); route alternatives 1 and 4);
  - Russian Olive (*Elaeagnus angustifoli*); route alternatives 1, 2, 4, and 5);
- Category 4 – species to watch that spread locally or regionally but have minimal effects on biodiversity:
  - Oxeye Daisy (*Leucanthemum vulgare*); route alternatives 2, 4, and 5); and
  - Wild Carrot (*Daucus carota*); route alternatives 1, 2, and 3).

Category 1 species, including European Common Reed are commonly found throughout the LSA and PSA of all five route alternatives. Physical site disturbance may increase the likelihood that non-native and/or invasive flora species will be introduced to the surrounding botanical communities. Invasive species are able to establish in disturbed sites more efficiently than native flora and can encroach into neighbouring undisturbed areas as well.

Mitigation for potential impacts due to the spread of invasive species are further discussed in **Section 7.7.8.6**.

A complete list of species observed is provided in the Natural Environment Existing Conditions Technical Report in **Appendix C1**.

#### **4.7 Recreational Resources**

There are several outdoor recreation resource areas serving the region; Lake St. Clair, the St. Clair River, the Sydenham River, the North Sydenham River, and the Thames River. Within the LSA there is a single Life Science or Earth Science ANSI (Clay Creek Woodland), one conservation reserve (Bickford Oaks Woods), and two PSW wetland complexes (Bickford Oak Woods Wetland Complex and Peers Wetland).

Bickford Oaks Woods Conservation Reserve/PSW wetland complex is the largest protected Carolinian clay plain forest in Canada and comprises a significant portion of Clay Creek Woodland regional Life Science ANSI. This 314-ha property is predominantly forested with scattered wetland pockets that provide habitat for a diversity of Carolinian species and communities. The property offers trails that traverse through the overlapping conservation reserve, PSW, and ANSI which afford the public year-round enjoyment. Located in the County of Lambton, approximately 26.4 ha of the conservation reserve is within the LSA. Recreational activities and their impacts are monitored, and if found to have impacts on natural heritage features, the activity will be limited, and mitigation measures will be enforced.

Recreational trails also occur within the LSA in association with the Peers wetland PSW, an 11-ha wetland acquired by St. Clair Conservation, located on Kimball Road near Otter Creek. This area also hosts a 1.5 km trail for public enjoyment of the property for activities such as bird watching (St. Clair Conservation, 2022).

The St. Clair River, Sydenham River, North Sydenham River, Thames River and Lake St. Clair are major attractions for water sport enthusiasts (e.g., boating and sailing) and recreational fishing (Canadian Heritage River System [CHRS], 2022) within the LSAs. The Thames River is also a Canadian Heritage River due to its natural and human heritage value (CHRS, 2022).

#### **4.8 Visual and Aesthetic Resources**

This factor considers the change to physical appearances across the landscape and their susceptibility to change as a result of the Project.

The Project is located within predominantly flat agricultural lands, providing open and expansive views. Natural elements include isolated woodlots, tree canopies of rural communities, as well as forest cover and other successional riparian vegetation

adjacent to waterways. Existing vertical elements include traffic and light standards, existing transmission lines and wind turbines. The majority of sensitive receptors are residences with wide views into the horizon. Many of the properties have existing tree lined wind breaks and hedgerows that offer localized privacy from adjacent visual elements.

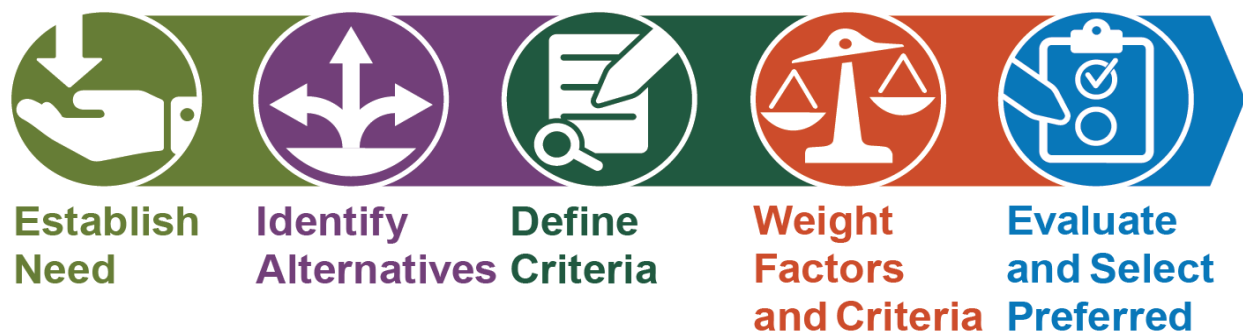
## 5 Identification and Evaluation of Alternative Routes

This section describes the identification and evaluation of the alternative methods for carrying out the proposed Project. “Alternative methods” refer to different means of carrying out the same task to achieve the purpose of the undertaking, which in this case involves the construction of a double-circuit 230 kV transmission line connecting the Lambton TS in the Township of St. Clair to the Chatham SS in the Municipality of Chatham-Kent. Following the identification of the “alternative methods” for the undertaking, evaluation criteria are established, through which, a comparative evaluation results in the selection of the preferred alternative.

Hydro One’s Class EA for Minor Transmission Facilities process (**Section 1.4**) requires the identification of feasible and reasonable route alternatives that can be compared and evaluated on the basis of Natural Environment, Socio-economic Environment, Technical and Cost factors to determine a preferred alternative. Quantitative and qualitative assessment of the potential effects associated with each of the route alternatives identified are considered. For this undertaking, a weighted Multi-Criteria Decision-Making Analysis (MCDA) was used.

A weighted MCDA is a common decision-making approach involving a five-step process outlined below (**Figure 5-1**).

**Figure 5-1: Multi-Criteria Decision-Making Process**







## 5.1 Step 1: Establish Need

As outlined in **Section 1.1**, IESO identified the need for a new double-circuit 230 kV transmission line in southwestern Ontario. Hydro One received direction from the IESO to initiate work on development activities, including seeking relevant approvals to construct the line from the Lambton TS in the Township of St. Clair to the Chatham SS in the Municipality of Chatham-Kent (**Appendix A**).



## 5.2 Step 2: Identify Route Alternatives

The Class EA process requires identification of technically feasible and reasonable alternatives to address the need of the Project.

Following direction from the IESO in March 2021, Hydro One conducted an internal preliminary assessment to identify viable routes (the “route alternatives”) for the new double-circuit 230 kV transmission line. Using readily available secondary source information, the Project team researched and mapped clear Technical, Socio-Economic, and Natural Environment constraints and, where possible, identified potential opportunities to parallel linear infrastructure, such as existing transmission lines and highways, and potential opportunities to repurpose existing transmission corridors.

Technical and environmental constraints were identified from desktop data and orthophotos, and were generally categorized as high, medium or low constraints, and mapped. High constraints included features that would likely preclude technical or economic feasibility, such as large waterbodies, dense residential areas, and close proximity to known wind turbines.

Medium and low constraints included features which may not individually render an alternative not viable; however, they represented an important, early consideration, which would be best to avoid, to the extent practical. Examples of medium and low constraints considered include wetlands, Environmentally Significant Areas (ESAs), Areas of Natural and Scientific Interest (ANSIs), standalone structures/buildings, and woodlands.

Using this constraint mapping, the Hydro One Project team applied technical transmission line engineering principles and best practices to identify viable route alternatives which would meet the need for the Project. Based on the preliminary assessment, five feasible and reasonable route alternatives and associated variations were identified (**Figure 5-2**).

- **Route Alternative 1**, shown in red, parallels the existing 230 kV transmission line between the Lambton TS and the Chatham SS on the east side and involves widening the existing 230 kV corridor to the east. Deviations from the existing 230 kV corridor southeast of the Lambton TS are proposed to minimize effects to the large woodlands and other natural features in this area. Changes to the Wallaceburg TS and the nearby 115 kV transmission line are not anticipated;
- **Route Alternative 2**, shown in orange, involves the replacement of the existing 115 kV transmission line with a new 230 kV transmission line following the same corridor. This replacement would occur for most of the distance of this route alternative from just east of the Lambton TS to just north of the Chatham urban centre and would require the replacement of existing transmission lines and structures and widening of the ROW. This route alternative requires the Wallaceburg TS to be upgraded from 115 kV to 230 kV;
- **Route Alternative 3**, shown in yellow, is a combination of Route 1 and Route 2, whereby the new double-circuit 230 kV transmission line would parallel the existing 230 kV line along the east side of the existing corridor from the Lambton TS to the Wallaceburg TS (northern half of this route). This route alternative replaces the existing 115 kV line with a new double-circuit 230 kV line from the Wallaceburg TS to just north of Chatham (southern half of this route) and requires the Wallaceburg TS to be upgraded from 115 kV to 230 kV;
- **Route Alternative 4**, shown in teal, is another combination of Route 1 and Route 2, whereby the existing 115 kV transmission line between the Lambton TS and the Wallaceburg TS (northern half of this route) is replaced with a new double-circuit 230 kV transmission line. From the Wallaceburg TS to the Chatham SS (southern half of this route), the route parallels the existing 230 kV transmission line on the east side of the existing corridor. This route alternative requires the Wallaceburg TS to be upgraded from 115 kV to 230 kV; and
- **Route Alternative 5**, shown in purple, represents a predominantly new 'greenfield' transmission line corridor between the Lambton TS and the Chatham SS, with the exception of short segments near each station where the new transmission line parallels existing transmission lines. As there are no changes anticipated to the 115 kV line, the Wallaceburg TS remains unaffected.

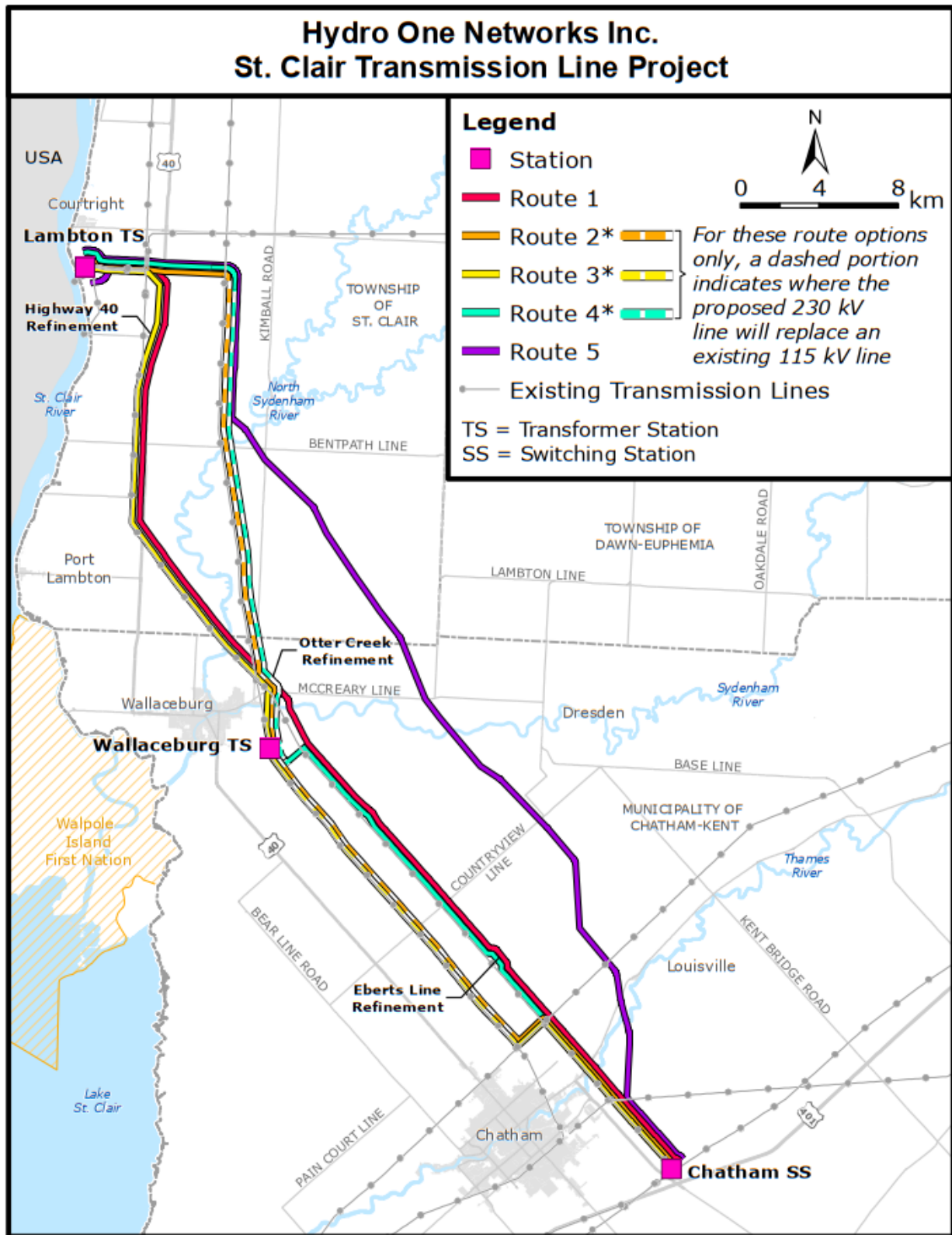
In October 2022, prior to COH #2, Hydro One made three route refinements and noted three transmission stations potentially requiring alteration (e.g., expansion or upgrade) associated with the project:

- **Route Refinement 1 - Otter Creek Crossing:** refinements to route alternatives 2, 3 and 4. The route refinement was required due to technical and construction constraints with other existing transmission lines near Otter Creek. The original route alternatives crossed the existing 230 kV transmission lines above the Otter Creek which posed technical and construction challenges. This refinement was made to spatially separate the transmission line crossing from the Otter creek crossing.
- **Route Refinement 2 – Wind Farm Substation, Eberts line:** refinements to route alternatives 1 and 4. The route refinement was required due to existing underground and overhead infrastructure constraints associated with an adjacent wind farm facility. The original route alternatives followed the existing transmission line which introduced technical and constructability constraints which were discovered during consultation with the wind farm operator, requiring the refinement to minimize conflicts with their existing infrastructure.
- **Route Refinement 3 - Highway 40 between Bickford and Stanley Line:** refinements to route alternatives 1 and 3. Route refinement consisted of moving the transmission line further to the west of Highway 40 to ensure appropriate Ministry of Transportation setback requirements.
- **Wallaceburg TS Upgrade:** Route alternatives 2, 3 and 4 would require an upgrade of the Wallaceburg TS from 115 kV to 230 kV. This work will also require expansion of the station fence line to the east to accommodate the new equipment and transmission line connections, though this expansion is currently anticipated to occur within the existing Hydro One station property.
- **Chatham SS Expansion:** All route alternatives require an expansion of the Chatham SS on the east side to accommodate additional electrical equipment that will connect to the new 230kV transmission lines.
- **Lambton TS Expansion:** All route alternatives require an expansion to the Lambton TS on the north and south sides to accommodate additional electrical equipment that will connect to the new 230kV transmission lines. Immediately east of Lambton TS, the double-circuit lines will deviate into two single circuit lines which will connect to the northern and southern station expansion areas, respectively.

The route alternatives, including the route refinements and station expansions made as shown in **Figure 5-2**, were carried forward for the comparative evaluation.

No other viable alternatives were identified for the expansion of the Lambton TS, the Chatham SS, or the upgrade to the Wallaceburg TS, due to the configuration of equipment within and around the stations.

**Figure 5-2: Route Alternatives, Variations and Refinements**



### 5.3 Step 3: Define Criteria



The next step in the weighted MCDA, following the identification of route alternatives, was the establishment of criteria (with associated quantitative and qualitative metrics) which were then used to assess and compare route alternatives.

The development of the evaluation criteria was based on input and comments provided by Indigenous communities, the public, members of the TAC and Project team members (see **Section 3.0**). Criteria for the Project were grouped into four key Evaluation Categories, as follows:



#### 5.3.1 Natural Environment Category

The Natural Environment category comprises seven criteria, as show in **Table 5-1**. The criteria aim to measure the potential effects of the route alternatives on the Natural Environment features within the study area.

**Table 5-1: Natural Environment Category Criteria**

Criteria	Measure
<b>Surface Water Resources and Aquatic Habitat</b>	Effects to aquatic habitat including total number of watercourse crossings and length of watercourse within the ROW.
<b>Vegetation and Vegetation Communities</b>	Effects to vegetation, particularly removal of incompatible vegetation within the ROW.
<b>Wildlife and Wildlife Habitat</b>	Effects to significant wildlife habitat including footprint effects from the ROW (potential removal, disturbance and/or alteration of habitat), and potential disturbance to wildlife movement/habitat fragmentation within the ROW and PSA, where applicable.



Criteria	Measure
<b>Species at Risk</b>	Effects to Species at Risk and their habitats, including temporary and permanent habitat disturbance and/or alteration within the ROW and PSA, where applicable.
<b>Wetlands, Natural Hazards, and Floodplain Areas</b>	Effects to wetlands and Conservation Authority regulated areas within the ROW.
<b>Designated Natural Areas and Identified Habitat Restoration Areas</b>	Effects to designated natural areas such as ANSIs, Conservation Reserves, Important Bird Areas, Significant Woodlands, Provincially Significant Wetlands, as well as areas that have undergone habitat restoration within the ROW.
<b>Future Ecological Restoration Areas</b>	Effects to areas identified as future ecological restoration areas.

The following data sets were used to evaluate Natural Environment criteria:

Field surveys and GIS analysis and interpretation, including:

- Aquatic habitat assessments;
- eDNA metabarcoding for fish (12S rRNA marker) and mussels (16S rRNA marker);
- Ecological Land Classification;
- Botanical assessment;
- Breeding bird surveys;
- Amphibian breeding surveys;
- Species at Risk habitat assessments;
- Publicly accessible Land Information Ontario (LIO) geographic datasets; and,
- Aerial photography.

### 5.3.2 Socio-Economic Environment Category

The Socio-Economic environment category comprises 10 criteria, as shown in **Table 5-2**. The criteria generally aim to measure the potential effects of the Project on the social and economic features within the study area, which includes portions of the Municipality of Chatham-Kent, County of Lambton and Township of St. Clair.

**Table 5-2: Socio-Economic Environment Category Criteria**

<b>Criteria</b>	<b>Measure</b>
<b>Co-Location and Repurpose of Existing Infrastructure</b>	Alignment with Transportation and Infrastructure Corridors policies as defined by the Provincial Policy Statement (PPS), largely reflected as the ability to parallel or utilize existing transmission corridors.
<b>Future Land Use Designations</b>	Alignment with identified future land use designations including potential future settlement area expansion plans, growth areas and development boundaries, as defined by the Provincial Policy Statement (PPS) and local County/Municipal Official Plans (does not include Designated Natural Areas or Natural Environment designations under the PPS, which are captured in the Natural Environment evaluation category).
<b>Agricultural Resources and Operations</b>	Effects to agricultural resources and operations including temporary construction and future maintenance effects to farmland, movement of farm machinery and agricultural building removal within the ROW.
<b>Petroleum Resources and Operations</b>	Effects to petroleum resources and operations including access to petroleum pools and wells within the ROW.
<b>Residential Properties</b>	Effects to existing residential properties including proximity to existing homes within the ROW and LSA.
<b>Commercial, Industrial, Institutional, Recreational Business and Facilities</b>	Effects to existing commercial, industrial, institutional, and recreational businesses and properties traversed by the ROW.
<b>Source Water Protection and Groundwater Wells</b>	Effects to source water protection policy areas and water wells within the ROW.
<b>Built Heritage Resources and Cultural Heritage</b>	Effects to properties or landscapes with known or potential built heritage resources or cultural heritage landscapes within the ROW and PSA.

Criteria	Measure
<b>Archaeological Resources</b>	Effects to areas of archaeological potential.
<b>Aggregate Resources Extraction Areas/Operations</b>	Effects to aggregate resources and extraction operations including expansion plans and site operations.

To evaluate Socio-Economic Environment criteria a wide range of data was used, including:

- Canadian Land Inventory information;
- Field data collection and GIS analysis and interpretation of Ecological Land Classification;
- Local Official Plans and policies;
- Ontario Provincial Policy Statement (2020);
- Publicly accessible LIO geographic datasets;
- Aerial photography;
- Source Water Protection Mapping and Policy documents;
- Cultural Heritage Existing Conditions Report completed for the Project; and,
- Stage 1 Archaeological Assessment completed for the Project.
- A Cultural Heritage Preliminary Impact Assessment was also undertaken subsequent to the selection of the preferred route, and is summarized in **Section 7.4** of the ESR.

### 5.3.3 Indigenous Culture, Values and Land Use Evaluation Category

The Indigenous Culture, Values and Land Use evaluation category consists of seven criteria, as shown in **Table 5-4**. As described in **Section 3.5** Hydro One provided several opportunities for Indigenous communities to participate in the route evaluation process, including opportunities to participate in the Technical Advisory Committee (TAC), opportunities to hold community-specific route evaluation workshops and discussions, and the provision of project data (such as results of environmental field surveys and Archaeological and Cultural Heritage reports) which could help inform the route evaluation. The sections below summarize the discussions with Indigenous communities revolving around the route evaluation and how the input provided was ultimately reflected in the route evaluation framework.

## **Initial Route Evaluation Communication with Indigenous Communities**

On July 22, 2022, Hydro One emailed each of the participating Indigenous communities a summary of the Class EA process and the route evaluation process. This document noted the inclusion of a category in the route evaluation process called Indigenous Culture, Values and Land Use and Hydro One requested the communities review the category summary and provide input of any suggested changes from the community.

Hydro One met with five Indigenous communities and representatives, including AFN, WIFN, CFN, TFG, and COTTEN on December 1, 2022. During this workshop Hydro One provided an update on the Project's route selection criteria. Hydro One's main goal was to understand how to best incorporate Indigenous interests into the route evaluation. The Indigenous communities asked a variety of questions related to the following topics:

- Restoration of habitat and how this is incorporated in the route evaluation;
- Involvement of Conservation Authorities in restoration programs;
- Important Bird Areas and how these are incorporated in the route evaluation;
- Construction laydown/staging areas, and construction methods, and how these are incorporated in the evaluation method; and,
- Standard mitigation measures.

Hydro One took note of all the input received and provided informative responses to all topics and questions brought up by the Indigenous communities and suggested any other input into the evaluation criteria be provided by the end of 2022 so they could be considered into the final route evaluation. Input on the route evaluation process from each of the Indigenous Communities is outlined below.

### **Aamjiwnaang First Nation (Chippewas of Sarnia)**

In June 2022, through a series of emails, AFN expressed the desire for the protection of native plants and provided Indigenous Knowledge on forestry practices that impact native plants. Hydro One acknowledged that they will incorporate feedback regarding Indigenous Knowledge into the Class EA including where provided, the route and evaluation and selection process and the effects assess of the preferred route alternative.

### **Bkejwanong (Walpole Island First Nation)**

Hydro One met virtually with WIFN on January 13, 2022, to provide information about the Project's route evaluation process. WIFN provided historical information about the

area, requesting this remain confidential for protection of the sites. WIFN also identified multiple priorities for the community, including habitat protection, land preservation, and reliability of the supply to electricity to the community. On January 22, 2023, WIFN provided the relevant maps discussed during their previous meeting. Hydro One and WIFN met virtually on March 10, 2023, to discuss how the information WIFN had provided to Hydro One in January 2023 was proposed to be incorporated into the route evaluation. WIFN agreed with the approach.

On May 30, 2023, Hydro One emailed WIFN the formal response to the input provided by the community for the Project's route evaluation. In the letter, Hydro One acknowledged the presence of mapped historical areas of interest to WIFN which are in proximity to the LSA. Hydro One noted that the mapped areas of historical interest are lands currently used for active agriculture and as a result stated that the information provided is not an influencing factor in the route evaluation. Rather, the information may be used to influence the Stage 2 AA on the preferred route. Hydro One also noted that other comments and input from discussions with WIFN had been incorporated into the route evaluation, such as effects to existing natural features (both terrestrial and aquatic), use of existing transmission corridors, and transmission system impacts and benefits (such as reliability of the high voltage transmission supply to WIFN and the Wallaceburg area).

### **Chippewas of the Thames First Nation**

On September 15, 2022, a Community Open House for the Project was held within the COTTFN community. Information on the need and scope of the Project, Class EA process, route alternatives and evaluation process, and Project timelines and next steps was shared. Project team members engaged in discussions with community members on several topics including the route alternatives and aspects to consider in the evaluation and selection of the preferred route.

On October 14, 2022, COTTFN sent an email to Hydro One indicating that they would be leading a focus group for COTTFN to provide feedback on the route evaluation for the Project. Hydro One collaborated with COTTFN to provide detailed route alternative maps that the focus group could use. Hydro One suggested for COTTFN to provide input into the evaluation framework in the form of specific criteria for each route alternative to better incorporate those aspects of importance as identified by COTTFN.

On January 16, 2023, COTTFN sent an email to Hydro One with the Community Engagement Session Summary report the community had put together. To provide members of the community an opportunity to provide feedback on the Indigenous

Cultures and Values evaluation criteria, COTTFN held two focus group sessions. The report summarized the comments provided during these focus sessions. Hydro One provided a response letter to COTTFN on May 31, 2023. The key themes brought up relating to the route evaluation during these focus groups, and Hydro One's responses, are provided below:

- Preferred route. The community noted they would prefer if an existing route is utilized in order to reduce impacts. It was noted that a new crossing of the Thames River was undesirable. Hydro One noted they diligently reviewed and evaluated the five viable route alternatives for the new transmission line. Hydro One noted they considered Indigenous values in the route evaluation process and that COTTFN's input on the routes was taken into consideration. The concerns raised in the report were considered in the route evaluation as follows:
  - Co-location and repurposing of existing infrastructure had been included in three of the four evaluation categories (Socio-economic, Technical and Cost, and Indigenous Culture, Values and Land Use). This specifically addressed comments and concerns regarding the preference to utilizing existing corridors, and trying to avoid impacts to undisturbed area.
  - New effects to rivers greater than 1 km in reach was added to the Indigenous Culture, Values and Land Use category through the criterion for fish-bearing waters and areas that support fishing/fish habitat. This addition was made to capture the comment from COTTFN that a new crossing of the Thames River (i.e., not utilizing or abutting an existing transmission line crossing) is undesirable.
- The environment. The community expressed concerns over post-construction restoration of forested ecosystems, as well as migratory patterns of species in the area. Hydro One acknowledged the importance of existing vegetation and wildlife habitat and noted how this was taken into consideration in the route evaluation. It was noted that wooded vegetation, undisturbed native vegetation, species at risk, wildlife habitat, and wetlands are all considered under both the Natural Environment and the Indigenous Culture, Values and Land Use categories, reflecting both their importance as aspects of the Natural Environment as well as their unique importance to Indigenous communities.
- Water. Concerns about effects on water drainage and groundwater were noted by COTTFN. Hydro One stated that as part of both the Natural Environment and the Indigenous Culture, Values and Land Use criteria, the number of watercourses and the length of watercourse reaches within the right-of-way was considered. Further, specific to the Indigenous Culture, Values and Land Use criterion, new effects to rivers greater than 1 km in reach was included to capture



the comment from COTTEN that a new crossing of the Thames River (i.e., not utilizing or abutting an existing transmission line crossing) is undesirable.

- Climate change. The community noted they are concerned about the impacts of clearing the land would have on weather patterns. Hydro One noted that aspects of both climate change mitigation (such as consideration of incompatible vegetation requiring removal), and adaptation (such as floodplains and natural hazard areas) have been considered in the route evaluation for the Project.

On March 1, 2022, Hydro One met with COTTEN and discussed route selection and criteria. Specific to the route evaluation, Hydro One noted the following:

- Hydro One thanked COTTEN for the comments received on the Natural Environment baseline condition report and noted that the species of interest provided in the comments had been thoroughly reviewed. Hydro One confirmed that the habitat of these species had been captured in the route evaluation. However, Hydro One also noted that a lot of the species in the lists were generalist species and these were not possible to apply to a more specific assessment or criterion.
- Hydro One expanded on bird habitat and migration comments noted by COTTEN and reiterated that the species identified had been captured in the habitat criteria, and special areas such as the heron rookery were being given special attention.

**Table 5-3: Indigenous Culture, Values and Land Use Category Criteria**

<b>Criteria</b>	<b>Measure</b>
<b>Effects to Features of Historical Significance</b>	Effects to features of historical significance identified by Indigenous communities.
<b>System Benefits and Impacts to Indigenous Communities</b>	Improvements of transmission supply reliability to Indigenous communities, as well as the potential for temporary effects (e.g., transmission circuit outages) to affect identified facilities that generate revenue for Indigenous communities.
<b>Areas that Support Hunting/Trapping/Harvesting Grounds</b>	Effects on lands with habitat or vegetation types that support or have potential to support hunting/trapping/harvesting activities and medicinal plants within the ROW.

Criteria	Measure
<b>Areas that Support Fish Bearing Waters with Identified or Inferred habitat of Game Fish</b>	Effects to aquatic habitat including total number and, length of, watercourse crossings within ROW, as well as new effects to rivers greater than 1 km in reach from existing crossings.
<b>Rare/Undisturbed Native Habitats/Ecosystems</b>	Effects to rare habitats in southwestern Ontario including tall grass prairies, savannah, native woodlands, natural wetlands, etc. within ROW, and measured level of disturbance of native habitat and ecosystems based on calculated average coefficient of conservatism associated with the PSA.
<b>Rare/Sensitive Species Regeneration Potential</b>	Long-term effects to species at risk and their regeneration potential, as well as known Bald Eagle nests and a known heron rookery within the ROW.
<b>Co-Location and Repurpose of Existing Infrastructure</b>	Length of the proposed transmission line that parallels existing infrastructure or repurposes existing transmission line corridors.

Evaluation of criteria in the Indigenous Culture, Values and Land Uses category was based on similar data sources to other criteria but adapted to suit the intent of Indigenous interests as discussed with these communities, where possible. Data included:

Field surveys and GIS analysis and interpretation, including:

- Ecological Land Classification (ELC) focusing on vegetation communities that support hunting/trapping and harvesting;
- Aquatic habitat assessments with a focus on waterbodies that support fisheries;
- Botanical assessment;
- Breeding bird surveys;
- Amphibian breeding surveys; and
- Species at risk habitat assessments;
- Information provided by Indigenous communities;
- Publicly accessible LIO geographic datasets;
- Aerial photography;
- Cultural Heritage Existing Conditions Report completed for the Project;
- Stage 1 Archaeological Assessment completed for the Project; and,

- Preliminary engineering and system planning information on the route alternatives.

### 5.3.4 Technical and Cost Category

The technical and cost category consists of 10 criteria, as shown in **Table 5-4**. The criteria aim to measure the technical and cost considerations of the route alternatives including total transmission line length and angles, land acquisition in support of the ROW, construction complexity and transmission system benefits and impacts.

**Table 5-4: Technical and Cost Category Criteria**

Criteria	Measure
<b>Line Length</b>	Total length of each route alternative.
<b>Light and Heavy Angle Structures</b>	Number of light and heavy angle structures.
<b>Non-Transmission Line Crossings</b>	Total number of crossings of rivers, railways, highways, distribution lines and large watercourses.
<b>Transmission Line Crossings</b>	Total number of crossings of existing 115 kV and 230 kV transmission lines.
<b>Co-Location and Repurpose of Existing Infrastructure</b>	Length of the proposed transmission line that parallels existing infrastructure or repurposes existing transmission line corridors.
<b>Potential Infrastructure Conflicts</b>	Number of pipeline crossings, as well as length of parallel and proximity to pipelines.
<b>Proximity to Existing Wind Turbines</b>	Proximity to existing wind turbines.
<b>Real Estate Considerations</b>	Real Estate and land acquisition considerations and associated project costs.
<b>System Benefits and Impacts</b>	Additional system benefits associated with the upgrade of the Wallaceburg TS to a 230 kV station and avoiding the upcoming need to refurbish the existing 115 kV line.
<b>Overall Constructability</b>	Anticipated transmission circuit outages during construction, which increase complexity of construction planning.

Data used to evaluate criteria in the Technical and Cost category area included:

- Datasets associated with property parcel fabric;
- Publicly accessible LIO geographic datasets;

- Information provided by third parties including mapping data for wind turbine facilities, gas pipeline, utility line information, etc.;
- Engineering standards and best practices; and,
- Preliminary engineering and system planning information on the route alternatives.

## 5.4 Step 4: Weight Criteria



Following identification of the evaluation criteria and their measures, the Project team, using input provided by the TAC during workshop #2, including Indigenous communities, and members of the public, assigned weights for the criteria within each evaluation category. The higher the weighting, the more important the factor or criteria was considered in the outcome of the evaluation. Refer to **Appendix B5** for a summary of the TAC criteria weighting results. For the environmental categories, criteria weights generally reflected the importance as communicated through the consultation process (e.g., TAC surveys, input received at community open houses etc.), while for the Technical and Cost category, weights were allocated by the Hydro One Project team based on the anticipated overall cost impact of each criterion (e.g., criteria with greater potential cost impacts received a higher weighting).

Following the TAC criteria weighting exercise (TAC workshop #2), some criterion weights were adjusted up and/or down as a mechanism to balance additional input on the importance of a criterion based on information received outside of the TAC from Indigenous communities, stakeholders and members of the public throughout the Class EA consultation process. For example, Following the TAC criteria weighting exercise, the Species at Risk criterion was adjusted upwards in weight to 20% of the Natural Environment category to reflect additional input on the importance of this criterion as received from Indigenous communities and members of the public to capture the input received during the Class EA on the importance of SAR and their habitat. Refer to **Appendix B5** for a summary of the TAC criteria weighting results.

At the outset of this step, the Project team determined that the importance of each of the four evaluation categories (Natural Environment, Socio-Economic Environment, Indigenous Culture, Values and Land Use and Technical and Cost and) was equal. This was reflected in each of the four evaluation categories being assigned a weight of 25% of the overall route evaluation and ensured that no one evaluation category had more influence over the results of the evaluation than any others. However, criteria weights within each category were differentiated to reflect their relative importance within a given category.

To complete weighting of the criteria, each category was given an assigned value of 100% to be distributed amongst the criteria within said category. Then, input from the public consultation process was considered together with direct input from TAC members through a weighting workshop and questionnaire (**Section 3.10**) and input from Indigenous communities. **Table 5-5** through **Table 5-8** summarizes the weights applied to each criterion within a factor grouping.

**Table 5-5: Natural Environment Category Criteria Weighting**

<b>Criteria</b>	<b>Measure</b>	<b>Weight</b>
<b>Surface Water Resources and Aquatic Habitat</b>	Effects to aquatic habitat including total number of watercourse crossings and length of watercourse within the ROW.	16
<b>Vegetation and Vegetation Communities</b>	Effects to vegetation, particularly removal of incompatible vegetation within the ROW.	16
<b>Wildlife and Wildlife Habitat</b>	Effects to significant wildlife habitat including footprint effects from the ROW (potential removal, disturbance and/or alteration of habitat), and potential disturbance to wildlife movement/habitat fragmentation within the ROW and PSA, where applicable.	16
<b>Species at Risk</b>	Effects to species at risk and their habitats, including temporary and permanent habitat disturbance and/or alteration within the ROW and PSA, where applicable.	20
<b>Wetlands, Natural Hazards, and Floodplain Areas</b>	Effects to wetlands and Conservation Authority regulated areas within the ROW.	16
<b>Designated Natural Areas and Identified Habitat Restoration Areas</b>	Effects to designated natural areas such as ANSIs, Conservation Reserves, Important Bird Areas, Significant Woodlands, Provincially Significant Wetlands, as well as areas that have undergone habitat restoration within the ROW.	16

Criteria	Measure	Weight
<b>Future Ecological Restoration Areas<sup>1</sup></b>	Effects to areas identified as future ecological restoration areas.	0
<b>Factor Area</b>	<b>Total</b>	<b>100</b>

**Table 5-6: Socio-Economic Environment Category Criteria Weighting**

Criteria	Measure	Weight
<b>Co-Location and Repurpose of Existing Infrastructure</b>	Alignment with Transportation and Infrastructure Corridors policies as defined by the Provincial Policy Statement (PPS), largely reflected as the ability to parallel or utilize existing transmission corridors.	16
<b>Future Land Use Designations<sup>2</sup></b>	Alignment with identified future land use designations including potential future settlement area expansion plans, growth areas and development boundaries, as defined by the Provincial Policy Statement (PPS) and local County/Municipal Official Plans (does not include Designated Natural Areas or Natural Environment designations under the PPS, which are captured in the Natural Environment evaluation category).	0
<b>Agricultural Resources and Operations</b>	Effects to agricultural resources and operations including temporary construction and future maintenance effects to farmland, movement of farm machinery and agricultural building removal within the ROW.	16

<sup>1</sup> Future ecological restoration areas was provided a weight of 0% because there were no future ecological restoration areas identified within the PSA. While it is recognized that this criterion is important based on comments received, the weighting was removed and re-assigned to other criteria based on its inability to impact the Project due to a lack of identified sites within the study area.

<sup>2</sup> Future land use designation was provided a weight of 0% because no lands associated with future land use designations were identified within the PSA. While it is recognized that this criterion is important based on comments received, the weighting was removed and re-assigned to other criteria based on its inability to impact the Project due to a lack of identified sites.



<b>Criteria</b>	<b>Measure</b>	<b>Weight</b>
<b>Petroleum Resources and Operations</b>	Effects to petroleum resources and operations including access to petroleum pools and wells within the ROW.	2.5
<b>Residential Properties</b>	Effects to existing residential properties including proximity to existing homes within the ROW and LSA.	20
<b>Commercial, Industrial, Institutional, Recreational Business and Facilities</b>	Effects to existing commercial, industrial, institutional, and recreational businesses and properties traversed by the ROW.	14
<b>Source Water Protection and Groundwater Wells</b>	Effects to source water protection policy areas and water wells within the ROW.	15
<b>Built Heritage Resources and Cultural Heritage Landscapes</b>	Effects to properties or landscapes with known or potential built heritage resources or cultural heritage landscapes within the ROW and PSA.	5
<b>Archaeological Resources</b>	Effects to areas of archaeological potential.	11.5
<b>Aggregate Resources Extraction Areas/Operations<sup>3</sup></b>	Effects to aggregate resources and extraction operations including expansion plans and site operations.	0
<b>Factor Area</b>	<b>Total</b>	<b>100</b>

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<sup>3</sup> Aggregate resources extraction areas/operations was provided a weighting of 0% because there are no active licensed aggregate extraction areas/operations within the PSA. While it is recognized that this criterion is important based on comments received, the weighting was removed and re-assigned to other criteria based on its inability to impact the Project due to a lack of identified sites.

**Table 5-7: Indigenous Culture, Values and Land Use Category Criteria Weighting**

<b>Criteria</b>	<b>Measure</b>	<b>Weight</b>
<b>Effects to Features of Historical Significance<sup>4</sup></b>	Effects to features of historical significance identified by Indigenous communities.	0
<b>System Benefits and Impacts to Indigenous Communities</b>	Improvements of transmission supply reliability to Indigenous communities, as well as the potential for temporary effects (e.g., transmission circuit outages) to affect identified facilities that generate revenue for Indigenous communities.	16.67
<b>Areas that Support Hunting/Trapping/Harvesting Grounds</b>	Effects on lands with habitat or vegetation types that support or have potential to support hunting/trapping/harvesting activities and medicinal plants within the ROW.	16.67
<b>Areas that Support Fish Bearing Waters with Identified or Inferred habitat of Game Fish</b>	Effects to aquatic habitat including total number and, length of, watercourse crossings within ROW, as well as new effects to rivers greater than 1 km in reach.	16.67
<b>Rare/Undisturbed Native Habitats/Ecosystems</b>	Effects to rare habitats in southwestern Ontario including tall grass prairies, savannah, native woodlands, natural wetlands, etc. within ROW, and measured level of disturbance of native habitat and ecosystems based on calculated average coefficient of conservatism associated with the PSA.	16.67
<b>Rare/Sensitive Species Regeneration Potential</b>	Long-term effects to species at risk and their regeneration potential, as well as known Bald Eagle nests and a known heron rookery within the ROW.	16.67

<sup>4</sup> Effects to features of historical significance was provided a weight of 0% because the specific historical features identified are no longer present on the landscape and therefore cannot be affected by any of the route alternatives. Although Hydro One recognizes that the study area includes areas of historical agricultural, economic and cultural activity on the land, the weighting was removed and re-assigned to other criteria as the Project will not affect these identified features.

Criteria	Measure	Weight
<b>Co-Location and Repurpose of Existing Infrastructure</b>	Length of the proposed transmission line that parallels existing infrastructure or repurposes existing transmission line corridors.	16.67
<b>Factor Area</b>	<b>Total</b>	<b>100</b>

**Table 5-8: Technical and Cost Category Criteria Weighting**

Criteria	Measure	Weight
<b>Line Length</b>	Total length of each route alternative.	5
<b>Light and Heavy Angle Structures</b>	Number of light and heavy angle structures.	15
<b>Non-Transmission Line Crossings</b>	Total number of crossings of: rivers, railways, highways, distribution lines and large watercourses.	5
<b>Transmission Line Crossings</b>	Total number of crossings of existing 115 kV and 230 kV transmission lines.	10
<b>Co-Location and Repurpose of Existing Infrastructure</b>	Length of the proposed transmission line that parallels existing infrastructure, or repurposes existing transmission line corridors.	10
<b>Potential Infrastructure Conflicts</b>	Number of pipeline crossings, as well as length of parallel and proximity to pipelines.	5
<b>Proximity to Existing Wind Turbines</b>	Proximity to existing wind turbines.	5
<b>Real Estate Considerations</b>	Real Estate and land acquisition considerations and associated project costs.	25
<b>System Benefits and Impacts</b>	Additional system benefits associated with the upgrade of the Wallaceburg TS to a 230 kV station, and avoiding the upcoming need to refurbish the existing 115 kV line.	15
<b>Overall Constructability</b>	Anticipated transmission circuit outages during construction, which increase complexity of construction planning.	5
<b>Factor Area</b>	<b>Total</b>	<b>100</b>

## 5.5 Step 5: Evaluate and Select



Following identification and weighting of the evaluation criteria, the Project team completed a GIS analysis of the measures identified for each applicable criterion for each route alternative based on available data sources. This provided quantitative information such as area metrics, length of line and numerical counts. The information was then fed into a comparative evaluation matrix where numerical weighted scores were provided per criterion and totalled for each evaluation category. The analysis for each criterion was rationalized with a reasoned argument statement that identified the measured differences and similarities between the route alternatives. Following completion of the comparative evaluation matrix, a summary was provided for each factor area and a reasoned argument was prepared for the overall technically preferred alternative route. The results of the weighted MCDA are found in **Table 5-9** through **Table 5-12**.

**Table 5-9: Natural Environment Category Comparative Evaluation Results**

Criteria	Measure	Criteria Weight (%)	Route Alternative 1	Route Alternative 2	Route Alternative 3	Route Alternative 4	Route Alternative 5
<b>Surface Water Resources and Aquatic Habitat</b>	Effects to aquatic habitat including total number of watercourse crossings and length of watercourse within the ROW.	16.0	Traverses 4.2 km of watercourse (surface flow), crossing 66 watercourses in total, with potential to affect fish, fish habitat and riparian vegetation. <b>Weighted Score: 13.3</b>	Traverses 3.17 km of watercourse (surface flow), crossing 66 watercourses in total, with potential to affect fish, fish habitat and riparian vegetation. <b>Weighted Score: 14.5</b>	Traverses 3.74 km of watercourse (surface flow), crossing 67 watercourses in total, with potential to affect fish, fish habitat and riparian vegetation. <b>Weighted Score: 13.6</b>	Traverses 4.83 km of watercourse (surface flow), crossing 71 watercourses in total, with potential to affect fish, fish habitat and riparian vegetation. <b>Weighted Score: 12.1</b>	Traverses 3.62 km of watercourse (surface flow), crossing 57 watercourses in total, with potential to affect fish, fish habitat and riparian vegetation. <b>Weighted Score: 15.4</b>
<b>Vegetation and Vegetation Communities</b>	Effects to vegetation, particularly removal of incompatible vegetation within the ROW.	16.0	Traverses 31.28 ha of vegetation communities including hedgerows (e.g. windbreaks). 15.18 ha (49%) are incompatible with transmission lines (long term effects) while 16.10 ha (or 51%) are compatible (short term effects). <b>Weighted Score: 11.1</b>	Traverses 22.91 ha of vegetation communities including hedgerows (e.g. windbreaks). 10.53 ha (46%) are incompatible with transmission lines (long term effects) while 12.39 ha (or 54%) are compatible (short term effects). <b>Weighted Score: 16.0</b>	Traverses 29.67 ha of vegetation communities including hedgerows (e.g. windbreaks). 13.8 ha (46%) are incompatible with transmission lines (long term effects) while 15.88 ha (or 54%) are compatible (short term effects). <b>Weighted Score: 12.2</b>	Traverses 26.29 ha of vegetation communities including hedgerows (e.g. windbreaks). 12.42 ha (47%) are incompatible with transmission lines (long term effects) while 13.87 ha (or 53%) are compatible (short term effects). <b>Weighted Score: 13.6</b>	Traverses 24.69 ha of vegetation communities including hedgerows (e.g. windbreaks). 13.47 ha (55%) are incompatible with transmission lines (long term effects) while 11.22 ha (or 45%) are compatible (short term effects). <b>Weighted Score: 12.5</b>
<b>Wildlife and Wildlife Habitat</b>	Effects to significant wildlife habitat including footprint effects from the ROW (potential removal, disturbance and/or alteration of habitat), and potential disturbance to wildlife movement/habitat fragmentation within the ROW and PSA, where applicable.	16.0	Affects 34.43 ha of wildlife and wildlife habitat within the ROW, including 15.94 ha of SWH for Bald Eagle Nesting, Foraging and Perching, Amphibian Breeding Habitat, and eight special concern species (Eastern Wood-pewee, Mapleleaf Mussel, Northern Map Turtle, Snapping Turtle, Paper Pondshell, Pawpaw, Spotted Sucker and Wood Thrush), as well as 18.49 ha of candidate SWH for Bat Maternity Colonies, Turtle Nesting Areas, Turtle Overwinter Areas, and two special concern species (Northern Map Turtle and Snapping Turtle). Affects and/or potentially affects 188.05 ha of wildlife	Affects 28.28 ha of wildlife and wildlife habitat within the ROW, including 12.03 ha of SWH for Bald Eagle Nesting, Foraging and Perching, and eight special concern species (Eastern Wood-pewee, Mapleleaf Mussel, Northern Map Turtle, Snapping Turtle, Paper Pondshell, Pawpaw, Spotted Sucker and Wood Thrush), as well as 16.25 ha of candidate SWH for Amphibian Breeding Habitat, Bat Maternity Colonies, Turtle Nesting Areas, Turtle Overwinter Areas, and two special concern species (Northern Map Turtle and Snapping Turtle). Affects and/or potentially affects 172.65 ha of wildlife and wildlife habitat within the	Affects 34 ha of wildlife and wildlife habitat within the ROW, including 15.79 ha of SWH for Bald Eagle Nesting, Foraging and Perching, Amphibian Breeding Habitat, and eight special concern species (Eastern Wood-pewee, Mapleleaf Mussel, Northern Map Turtle, Snapping Turtle, Paper Pondshell, Pawpaw, Spotted Sucker and Wood Thrush), as well as 18.21 ha of candidate SWH for Bat Maternity Colonies, Turtle Nesting Areas, Turtle Overwinter Areas, and two special concern species (Northern Map Turtle and Snapping Turtle). Affects and/or potentially affects 186.98 ha of wildlife	Affects 29.18 ha of wildlife and wildlife habitat within the ROW, including 12.37 ha of SWH for Bald Eagle Nesting, Foraging and Perching, and eight special concern species (Eastern Wood-pewee, Mapleleaf Mussel, Northern Map Turtle, Snapping Turtle, Paper Pondshell, Pawpaw, Spotted Sucker and Wood Thrush), as well as 16.82 ha of candidate SWH for Amphibian Breeding Habitat, Bat Maternity Colonies, Turtle Nesting Areas, Turtle Overwinter Areas, and two special concern species (Northern Map Turtle and Snapping Turtle). Affects and/or potentially affects 173.99 ha of wildlife and wildlife habitat within the	Affects 29.58 ha of wildlife and wildlife habitat within the ROW, including 12.81 ha of SWH for Colonially Nesting Bird Breeding Habitat (tree/shrub), and nine special concern species (Eastern Wood-pewee, Mapleleaf Mussel, Northern Map Turtle, Snapping Turtle, Paper Pondshell, Pawpaw, Spotted Sucker, Wabash Pigtoe and Wood Thrush), as well as 16.78 ha of candidate SWH for Bat Maternity Colonies, Turtle Overwinter Areas, and two special concern species (Northern Map Turtle and Snapping Turtle). Affects and/or potentially affects 181.46 ha of wildlife and wildlife habitat within the PSA, including 70.55 ha of



Criteria	Measure	Criteria Weight (%)	Route Alternative 1	Route Alternative 2	Route Alternative 3	Route Alternative 4	Route Alternative 5
			and wildlife habitat within the PSA, including 89.24 ha of SWH for Bald Eagle Nesting, Foraging and Perching, Amphibian Breeding Habitat, and eight special concern species (Eastern Wood-pewee, Mapleleaf Mussel, Northern Map Turtle, Snapping Turtle, Paper Pondshell, Pawpaw, Spotted Sucker and Wood Thrush), as well as 98.81 ha of candidate SWH for Bat Maternity Colonies, Turtle Nesting Areas, Turtle Overwintering Areas and two species concern species (Northern Map Turtle and Snapping Turtle).  <b>Weighted Score: 13.5</b>	PSA, including 71.53 ha of SWH for Bald Eagle Nesting, Foraging and Perching, and eight special concern species (Eastern Wood-pewee, Mapleleaf Mussel, Northern Map Turtle, Snapping Turtle, Paper Pondshell, Pawpaw, Spotted Sucker and Wood Thrush), as well as 101.11 ha of candidate SWH for Amphibian Breeding Habitat, Bat Maternity Colonies, Turtle Nesting Areas, Turtle Overwintering Areas and two species concern species (Northern Map Turtle and Snapping Turtle).  <b>Weighted Score: 16.0</b>	and wildlife habitat within the PSA, including 89.13 ha of SWH for Bald Eagle Nesting, Foraging and Perching, Amphibian Breeding Habitat, and eight special concern species (Eastern Wood-pewee, Mapleleaf Mussel, Northern Map Turtle, Snapping Turtle, Paper Pondshell, Pawpaw, Spotted Sucker and Wood Thrush), as well as 97.85 ha of candidate SWH for Bat Maternity Colonies, Turtle Nesting Areas, Turtle Overwintering Areas and two species concern species (Northern Map Turtle and Snapping Turtle).  <b>Weighted Score: 13.7</b>	PSA, including 71.86 ha of SWH for Bald Eagle Nesting, Foraging and Perching, and eight special concern species (Eastern Wood-pewee, Mapleleaf Mussel, Northern Map Turtle, Snapping Turtle, Paper Pondshell, Pawpaw, Spotted Sucker and Wood Thrush), as well as 102.13 ha of candidate SWH for Amphibian Breeding Habitat, Bat Maternity Colonies, Turtle Nesting Areas, Turtle Overwintering Areas and two species concern species (Northern Map Turtle and Snapping Turtle).  <b>Weighted Score: 15.6</b>	SWH for Colonially Nesting Bird Breeding Habitat (tree/shrub), and nine special concern species (Eastern Wood-pewee, Mapleleaf Mussel, Northern Map Turtle, Snapping Turtle, Paper Pondshell, Pawpaw, Spotted Sucker, Wabash Pigtoe and Wood Thrush), as well as 110.91 ha of candidate SWH for Bat Maternity Colonies, Turtle Overwintering Areas and two species concern species (Northern Map Turtle and Snapping Turtle).  <b>Weighted Score: 15.3</b>
<b>Species at Risk</b>	Effects to Species at Risk and their habitats, including temporary and permanent habitat disturbance and/or alteration within the ROW and PSA, where applicable.	20.0	Affects 73.17 ha of SAR and/or SAR habitat within the ROW, including 12.42 ha associated with Blanding's Turtle, Butler's Gartersnake, Butternut, Eastern Foxsnake, Wood Thrush and 17 aquatic SAR, as well as 60.75 ha associated with potential SAR bats, Butler's Gartersnake, Blanding's Turtle, Eastern Foxsnake and Spiny Softshell habitat.  Of the effects to SAR and/or SAR habitat within the ROW, 51.08 ha are associated with temporary habitat disturbance impacts (e.g. revegetation of incompatible habitat to shrub thicket and/or meadow will still provide Butler's Gartersnake and Eastern Foxsnake habitat), and 16.62	Affects 53.88 ha of SAR and/or SAR habitat within the ROW, including 6.91 ha associated with Wood Thrush and 17 aquatic SAR, as well as 46.98 ha associated with potential SAR bats, Butler's Gartersnake, Blanding's Turtle, Eastern Foxsnake and Spiny Softshell habitat.  Of the effects to SAR and/or SAR habitat within the ROW, 38.89 ha are associated with temporary habitat disturbance impacts (e.g. revegetation of incompatible habitat to shrub thicket and/or meadow will still provide Butler's Gartersnake and Eastern Foxsnake habitat), and 11.80 ha are associated with permanent habitat removal impacts (e.g. woodland	Affects 70.79 ha of SAR and/or SAR habitat within the ROW, including 12.12 ha associated with Blanding's Turtle, Butler's Gartersnake, Butternut, Eastern Foxsnake, Wood Thrush and 17 aquatic SAR, as well as 58.67 ha associated with potential SAR bats, Butler's Gartersnake, Blanding's Turtle, Eastern Foxsnake and Spiny Softshell habitat.  Of the effects to SAR and/or SAR habitat within the ROW, 49.82 ha are associated with temporary habitat disturbance impacts (e.g. revegetation of incompatible habitat to shrub thicket and/or meadow will still provide Butler's Gartersnake and Eastern Foxsnake habitat), and 15.74	Affects 59.85 ha of SAR and/or SAR habitat within the ROW, including 7.49 ha associated with Butternut, Wood Thrush and 17 aquatic SAR, as well as 52.36 ha associated with potential SAR bats, Butler's Gartersnake, Blanding's Turtle, Eastern Foxsnake and Spiny Softshell habitat.  Of the effects to SAR and/or SAR habitat within the ROW, 42.97 ha is associated with temporary habitat disturbance impacts (e.g. revegetation of incompatible habitat to shrub thicket and/or meadow will still provide Butler's Gartersnake and Eastern Foxsnake habitat), and 12.99 ha are associated with permanent habitat removal	Affects 8.87 ha of SAR and/or SAR habitat within the ROW, including 8.25 ha associated with Butternut, Wood Thrush and 17 aquatic SAR, as well as 50.62 ha associated with potential SAR bats, Butler's Gartersnake, Blanding's Turtle, Eastern Foxsnake and Spiny Softshell habitat  Of the effects to SAR and/or SAR habitat within the ROW, 39.75 ha are associated with temporary habitat disturbance impacts (e.g. revegetation of incompatible habitat to shrub thicket and/or meadow will still provide Butler's Gartersnake and Eastern Foxsnake habitat), and 14.83 ha are associated with permanent habitat removal impacts (e.g. woodland



Criteria	Measure	Criteria Weight (%)	Route Alternative 1	Route Alternative 2	Route Alternative 3	Route Alternative 4	Route Alternative 5
			ha are associated with permanent habitat removal impacts (e.g. woodland removal results in permit removal of SAR bat habitat).  Affects and/or potentially affects to 385.25 ha of SAR and/or SAR habitat within the PSA, including 72.27 ha associated with Blading's Turtle, Butler's Gartersnake, Butternut, Eastern Foxsnake, Wood Thrush and 17 aquatic SAR, as well as 312.98 ha associated with potential SAR bats, Butler's Gartersnake, Blanding's Turtle, Eastern Foxsnake and Spiny Softshell.  <b>Weighted Score: 15.1</b>	removal results in permit removal of SAR bat habitat).  Affects and/or potentially affects to 341.36 ha of SAR and/or SAR habitat within the PSA, including 41.34 ha associated with Butternut, Wood Thrush and 17 aquatic SAR, as well as 300.02 ha associated with potential SAR bats, Butler's Gartersnake, Blanding's Turtle, Eastern Foxsnake and Spiny Softshell.  <b>Weighted Score: 20.0</b>	ha are associated with permanent habitat removal impacts (e.g. woodland removal results in permit removal of SAR bat habitat).  Affects and/or potentially affects to 380.02ha of SAR and/or SAR habitat within the PSA, including 67.85 ha associated with Blading's Turtle, Butler's Gartersnake, Butternut, Eastern Foxsnake, Wood Trush and 17 aquatic SAR, as well as 312.17 ha associated with potential SAR bats, Butler's Gartersnake, Blanding's Turtle, Eastern Foxsnake and Spiny Softshell.  <b>Weighted Score: 15.6</b>	impacts (e.g. woodland removal results in permit removal of SAR bat habitat).  Affects and/or potentially affects to 346.58 ha of SAR and/or SAR habitat within the PSA, including 46.09 ha associated with Butternut, Wood Thrush and 17 aquatic SAR, as well as 300.50 ha associated with potential SAR bats, Butler's Gartersnake, Blanding's Turtle, Eastern Foxsnake and Spiny Softshell.  <b>Weighted Score: 18.3</b>	removal results in permit removal of SAR bat habitat).  Affects and/or potentially affects to 354.52 ha of SAR and/or SAR habitat within the PSA, including 49.48 ha associated with Butternut, Wood Thrush and 17 aquatic SAR, as well as 305.05 ha associated with potential SAR bats, Butler's Gartersnake, Blanding's Turtle, Eastern Foxsnake and Spiny Softshell.  <b>Weighted Score: 18.1</b>
<b>Wetlands, Natural Hazards and Floodplain Areas</b>	Effects to wetlands and Conservation Authority regulated areas within the ROW.	16.0	Traverses 51.24 ha of CA regulated areas, including 4.89 ha of wetland.  <b>Weighted Score: 15.6</b>	Traverses 50.50 ha of CA regulated areas, including 4.07 ha of wetland.  <b>Weighted Score: 16.0</b>	Traverses 51.85 ha of CA regulated areas, including 4.89 ha of wetland.  <b>Weighted Score: 15.4</b>	Traverses 52.78 ha of CA regulated areas, including 4.08 ha of wetland.  <b>Weighted Score: 15.4</b>	Traverses 77.24 ha of CA regulated areas, including 4.75 ha of wetland.  <b>Weighted Score: 10.7</b>
<b>Designated Natural Areas and Identified Habitat Restoration Areas</b>	Effects to designated natural areas such as ANSIs, Conservation Reserves, Important Bird Areas, Significant Woodlands, Provincially Significant Wetlands, as well as areas that have undergone habitat restoration within the ROW.	16.0	Traverses 10.16 ha of significant woodlands, 0.95 ha of ANSI, 1.24 ha of PSW and 1.75 ha of habitat restoration areas.  <b>Weighted Score: 9.7</b>	Traverses 7.09 ha of significant woodlands, 49.11 ha of IBA, and 1.13 ha of PSW.  <b>Weighted Score: 12.8</b>	Traverses 9.28 ha of significant woodlands, 0.95 ha of ANSI, 49.18 ha of IBA, and 1.24 ha of PSW and 1.75 ha of habitat restoration areas.  <b>Weighted Score: 6.8</b>	Traverses 8.25 ha of significant woodlands, 8.42 ha of IBA, and 1.13 ha PSW.  <b>Weighted Score: 12.2</b>	Traverses 9.66 ha of significant woodlands, 1.62 ha of PSW, and 2.88 of habitat restoration areas.  <b>Weighted Score: 12.2</b>
<b>Future Ecological Restoration Areas</b>	Effects to areas identified as future ecological restoration areas.	0.0	Does not traverse land identified as future ecological restoration areas.  <b>Weighted Score: 0.0</b>	Does not traverse land identified as future ecological restoration areas.  <b>Weighted Score: 0.0</b>	Does not traverse land identified as future ecological restoration areas.  <b>Weighted Score: 0.0</b>	Does not traverse land identified as future ecological restoration areas.  <b>Weighted Score: 0.0</b>	Does not traverse land identified as future ecological restoration areas.  <b>Weighted Score: 0.0</b>
<b>Final Weighted Score</b>			<b>78.3</b>	<b>95.3</b>	<b>77.3</b>	<b>87.2</b>	<b>84.1</b>

Table 5-10: Socio-Economic Environment Category Comparative Evaluation Results

Criteria	Measure	Criteria Weight (%)	Route Alternative 1	Route Alternative 2	Route Alternative 3	Route Alternative 4	Route Alternative 5
Co-Location and Repurpose of Existing Infrastructure	Alignment with Transportation and Infrastructure Corridors policies as defined by the Provincial Policy Statement (PPS), largely reflected as the ability to parallel or utilize existing transmission corridors.	16.0	Route alternative 1 co-locates with 54.50 km of existing transmission line infrastructure and/or ROWs. <b>Weighted Score: 7.3</b>	Route alternative 2 co-locates with 60.19 km of existing transmission line infrastructure and/or ROWs of which 41.17 km involves repurposing an existing 115 kV transmission line corridor. <b>Weighted Score: 16.0</b>	Route alternative 3 co-locates with 58.68 km of existing transmission line infrastructure and/or ROWs of which 23.83 km involves repurposing an existing 115 kV transmission line corridor. <b>Weighted Score: 12.4</b>	Route alternative 4 co-locates with 56.68 km of existing transmission line infrastructure and/or ROWs of which 29.98 km involves repurposing an existing 115 kV transmission line corridor. <b>Weighted Score: 13.4</b>	Route alternative 5 co-locates with 18.22 km of existing transmission line infrastructure and/or ROWs. <b>Weighted Score: 2.4</b>
Future Land Use Designations	Alignment with identified future land use designations including potential future settlement area expansion plans, growth areas and development boundaries, as defined by the Provincial Policy Statement (PPS) and local County/Municipal Official Plans (does not include Designated Natural Areas or Natural Environment designations under the PPS, which are captured in the Natural Environment evaluation category).	0.0	Does not traverse land identified for future development. <b>Weighted Score: 0.0</b>	Does not traverse land identified for future development. <b>Weighted Score: 0.0</b>	Does not traverse land identified for future development. <b>Weighted Score: 0.0</b>	Does not traverse land identified for future development. <b>Weighted Score: 0.0</b>	Does not traverse land identified for future development. <b>Weighted Score: 0.0</b>
Agricultural Resources and Operations	Effects to agricultural resources and operations including temporary construction and future maintenance effects to farmland, movement of farm machinery and agricultural building removal within the ROW.	16.0	Traverses 238.19 ha of prime agricultural land and requires the removal of 1 agricultural building. <b>Weighted Score: 3.2</b>	Traverses 262.19 ha of prime agricultural land, of which 40.07 km is associated with the existing 115 kV transmission line corridor to be repurposed, which requires less net new transmission towers within agricultural fields. Route alternative 2 requires the removal of 2 agricultural buildings. <b>Weighted Score: 12.5</b>	Traverses 250.95 ha of prime agricultural land, of which 23.83 km is associated with the existing 115 kV transmission line corridor to be repurposed, which requires less net new transmission towers within agricultural fields. Route alternative 3 requires the removal of 1 agricultural building. <b>Weighted Score: 8.8</b>	Traverses 259.34 ha of prime agricultural land, of which 29.98 km is associated with the existing 115 kV transmission line corridor to be repurposed, which requires less net new transmission towers within agricultural fields. Route alternative 4 requires the removal of 2 agricultural buildings. <b>Weighted Score: 10.1</b>	Traverses 251.39 ha of prime agricultural land. Route alternative 5 does not require the removal of any agricultural buildings. <b>Weighted Score: 6.5</b>

Criteria	Measure	Criteria Weight (%)	Route Alternative 1	Route Alternative 2	Route Alternative 3	Route Alternative 4	Route Alternative 5
<b>Petroleum Resources and Operations</b>	Effects to petroleum resources and operations including access to petroleum pools and wells within the ROW.	2.5	Route alternative 1 is associated with 1 active petroleum well and 2 abandoned petroleum wells, and crosses 21.37 ha of petroleum pool resources. <b>Weighted Score: 0.4</b>	Route alternative 2 crosses 6.63 ha of petroleum pool resources, and does not overlap with petroleum wells. <b>Weighted Score: 2.4</b>	Route alternative 3 is associated with 1 active petroleum well and 2 abandoned petroleum wells, and crosses 15.42 ha of petroleum pool resources. <b>Weighted Score: 0.5</b>	Route alternative 4 crosses 12.54 ha of petroleum pool resources, and does not overlap with petroleum wells. <b>Weighted Score: 1.8</b>	Route alternative 5 crosses 11.88 ha of petroleum pool resources, and does not overlap with petroleum wells. <b>Weighted Score: 2.0</b>
<b>Residential Properties</b>	Effects to existing residential properties including proximity to existing homes within the ROW and LSA.	20.0	Two residential homes and 39 residential parcels are located within the ROW, while 226 residential properties are located within the LSA. <b>Weighted Score: 5.9</b>	40 residential parcels are located within the ROW, while 258 residential properties are located within the LSA. No residential buildings are located within the ROW. <b>Weighted Score: 19.5</b>	39 residential parcels are located within the ROW, while 245 residential properties are located within the LSA. No residential buildings are located within the ROW. <b>Weighted Score: 19.7</b>	Two residential homes and 49 residential parcels are located within the ROW, while 267 residential properties are located within the LSA. <b>Weighted Score: 4.8</b>	47 residential parcels are located within the ROW, while 206 residential properties are located within the LSA. No residential buildings are located within the ROW. <b>Weighted Score: 19.2</b>
<b>Commercial, Industrial, Institutional, Recreational Business and Facilities</b>	Effects to existing commercial, industrial, institutional, and recreational businesses and properties traversed by the ROW.	14.0	One commercial building and 30 commercial properties are located within the ROW. <b>Weighted Score: 1.1</b>	One commercial building and 10 commercial properties are located within the ROW. <b>Weighted Score: 2.9</b>	A total of 30 commercial properties are located within the ROW. No commercial buildings are located within the ROW. <b>Weighted Score: 12.1</b>	A total of two commercial buildings and 10 commercial properties are located within the ROW. <b>Weighted Score: 2.9</b>	One commercial building and 12 commercial properties are located within the ROW. <b>Weighted Score: 2.5</b>
<b>Source Water Protection and Groundwater Wells</b>	Effects to source water protection policy areas and water wells within the ROW.	15.0	Crosses 318.90 ha of Source Water Protection designated areas within the ROW, and 21 private water wells within the PSA. <b>Weighted Score: 8.5</b>	Crosses 297.09 ha of Source Water Protection designated areas within the ROW, and 16 private water wells within the PSA. <b>Weighted Score: 10.0</b>	Crosses 375.38 ha of Source Water Protection designated areas within the ROW, and 26 private water wells within the LSA. <b>Weighted Score: 7.1</b>	Crosses 288.60 ha of Source Water Protection designated areas within the ROW, and 14 private water wells within the LSA. <b>Weighted Score: 10.8</b>	Crosses 209.38 ha of Source Water Protection designated areas within the ROW, and 10 private water wells within the LSA. <b>Weighted Score: 15.0</b>
<b>Built Heritage Resources and Cultural Heritage Landscapes</b>	Effects to properties or landscapes with known or potential built heritage resources or cultural heritage landscapes within the ROW and PSA.	5.0	Potential to affects 60 properties with cultural heritage value or interest, including five known or potential resources within the ROW, 9 known or potential resources within close proximity to the ROW and 46 known or potential resources within the LSA. <b>Weighted Score: 3.8</b>	Potential to affect 52 properties with cultural heritage value or interest, including two known or potential resources within the ROW, 9 known or potential resources within close proximity to the ROW and 41 known or potential resources within the LSA. <b>Weighted Score: 5.0</b>	Potential to affect 52 properties with cultural heritage value or interest, including four known or potential resources within the ROW, 6 known or potential resources within close proximity to the ROW and 42 known or potential resources within the LSA. <b>Weighted Score: 4.8</b>	Potential to affect 57 properties with cultural heritage value or interest, including three known or potential resources within the ROW, 10 known or potential resources within close proximity to the ROW and 44 known or potential resources within the LSA. <b>Weighted Score: 4.4</b>	Potential to affect 50 properties with cultural heritage value or interest, including three known or potential resources within the ROW, 8 known or potential resources within close proximity to the ROW and 39 known or potential resources within the LSA. <b>Weighted Score: 4.9</b>

Criteria	Measure	Criteria Weight (%)	Route Alternative 1	Route Alternative 2	Route Alternative 3	Route Alternative 4	Route Alternative 5
Archaeological Resources	Effects to areas of archaeological potential.	11.5	Traverses 85 features associated with archaeological potential. <b>Weighted Score: 8.4</b>	Traverses 68 features associated with archaeological potential. <b>Weighted Score: 10.5</b>	Traverses 84 features associated with archaeological potential. <b>Weighted Score: 8.5</b>	Traverses 69 features associated with archaeological potential. <b>Weighted Score: 10.3</b>	Traverses 62 features associated with archaeological potential. <b>Weighted Score: 11.5</b>
Aggregate Resources Extraction Areas/Operations	Effects to aggregate resources and extraction operations including expansion plans and site operations.	0.0	Does not impact any existing, licensed, aggregate extraction sites. <b>Weighted Score: 0.0</b>	Does not impact any existing, licensed, aggregate extraction sites. <b>Weighted Score: 0.0</b>	Does not impact any existing, licensed, aggregate extraction sites. <b>Weighted Score: 0.0</b>	Does not impact any existing, licensed, aggregate extraction sites. <b>Weighted Score: 0.0</b>	Does not impact any existing, licensed, aggregate extraction sites. <b>Weighted Score: 0.0</b>
Final Weighted Score			38.5	78.8	73.9	58.5	63.8

Table 5-11: Indigenous Culture, Values and Land Use Category Comparative Evaluation Results

Criteria	Measure	Criteria Weight (%)	Route Alternative 1	Route Alternative 2	Route Alternative 3	Route Alternative 4	Route Alternative 5
Effects to Features of Historical Significance	Effects to features of historical significance identified by Indigenous communities.	0.0	<p>The LSA includes mapped historical areas of interest and is acknowledged to include likely non-mapped historical areas of interest based on oral traditions. The specific mapped historical features identified by an Indigenous community are no longer present on the landscape and therefore cannot be affected by any of the route alternatives. Although Hydro One recognizes that the study area includes areas of historical agricultural, economic and cultural activity on the land, the weighting was removed and re-assigned to other criteria as the Project will not affect these identified features.</p> <p><b>Weighted Score: 0.0</b></p>	<p>The LSA includes mapped historical areas of interest and is acknowledged to include likely non-mapped historical areas of interest based on oral traditions. The specific mapped historical features identified by an Indigenous community are no longer present on the landscape and therefore cannot be affected by any of the route alternatives. Although Hydro One recognizes that the study area includes areas of historical agricultural, economic and cultural activity on the land, the weighting was removed and re-assigned to other criteria as the Project will not affect these identified features.</p> <p><b>Weighted Score: 0.0</b></p>	<p>The LSA includes mapped historical areas of interest and is acknowledged to include likely non-mapped historical areas of interest based on oral traditions. The specific mapped historical features identified by an Indigenous community are no longer present on the landscape and therefore cannot be affected by any of the route alternatives. Although Hydro One recognizes that the study area includes areas of historical agricultural, economic and cultural activity on the land, the weighting was removed and re-assigned to other criteria as the Project will not affect these identified features.</p> <p><b>Weighted Score: 0.0</b></p>	<p>The LSA includes mapped historical areas of interest and is acknowledged to include likely non-mapped historical areas of interest based on oral traditions. The specific mapped historical features identified by an Indigenous community are no longer present on the landscape and therefore cannot be affected by any of the route alternatives. Although Hydro One recognizes that the study area includes areas of historical agricultural, economic and cultural activity on the land, the weighting was removed and re-assigned to other criteria as the Project will not affect these identified features.</p> <p><b>Weighted Score: 0.0</b></p>	<p>Although the LSA does not include mapped historical areas of interest, it is acknowledged that it likely includes non-mapped historical areas of interest based on oral traditions. The specific mapped historical features identified by an Indigenous community are no longer present on the landscape and therefore cannot be affected by any of the route alternatives. Although Hydro One recognizes that the study area includes areas of historical agricultural, economic and cultural activity on the land, the weighting was removed and re-assigned to other criteria as the Project will not affect these identified features.</p> <p><b>Weighted Score: 0.0</b></p>



Criteria	Measure	Criteria Weight (%)	Route Alternative 1	Route Alternative 2	Route Alternative 3	Route Alternative 4	Route Alternative 5
<b>System Benefits and Impacts to Indigenous Communities</b>	Improvements of transmission supply reliability to Indigenous communities, as well as the potential for temporary effects (e.g., transmission circuit outages) to affect identified facilities that generate revenue for Indigenous communities.	16.7	Route alternative 1 would not result in temporary transmission circuit outages during construction but will also not involve an upgrade of the Wallaceburg TS and therefore will not have any improvement to the reliability or efficiency of the Transmission supply for an Indigenous community fed directly from Wallaceburg TS. <b>Weighted Score: 10.4</b>	Route alternative 2 would require approximately 4 days of temporary construction outages on transmission circuits, which may affect some revenue-generating facilities that are directly connected to the transmission system but would not affect the local distribution supply to the area. Route 2 would also involve an upgrade of the Wallaceburg TS from 115 kV to 230 kV, which would increase the reliability and efficiency of the transmission supply to the Wallaceburg area including an indigenous community that is supplied from the Wallaceburg TS. <b>Weighted Score: 11.7</b>	Route alternative 3 would require approximately 4 days of temporary construction outages on transmission circuits, which may affect some revenue-generating facilities that are directly connected to the transmission system but would not affect the local distribution supply to the area. Route 3 would also involve an upgrade of the Wallaceburg TS from 115 kV to 230 kV, which would increase the reliability and efficiency of the transmission supply to the Wallaceburg area including an indigenous community that is supplied from the Wallaceburg TS. <b>Weighted Score: 11.7</b>	Route alternative 4 would require approximately 4 days of temporary construction outages on transmission circuits, which may affect some revenue-generating facilities that are directly connected to the transmission system but would not affect the local distribution supply to the area. Route 4 would also involve an upgrade of the Wallaceburg TS from 115 kV to 230 kV, which would increase the reliability and efficiency of the transmission supply to the Wallaceburg area including an indigenous community that is supplied from the Wallaceburg TS. <b>Weighted Score: 11.7</b>	Route alternative 5 would not result in temporary transmission circuit outages during construction but will also not involve an upgrade of the Wallaceburg TS and therefore will not have any improvement to the reliability or efficiency of the transmission supply for an Indigenous community fed directly from Wallaceburg TS. <b>Weighted Score: 10.4</b>
<b>Areas that Support Hunting/Trapping/Harvesting Grounds</b>	Effects on lands with habitat or vegetation types that support or have potential to support hunting/trapping/harvesting activities and medicinal plants within the ROW.	16.7	Affects 30.09 ha of lands identified that have the potential to support hunting, trapping and harvesting activities. <b>Weighted Score: 12.4</b>	Affects 22.37 ha of lands identified that have the potential to support hunting, trapping and harvesting activities. <b>Weighted Score: 16.7</b>	Affects 28.99 ha of lands identified that have the potential to support hunting, trapping and harvesting activities. <b>Weighted Score: 12.9</b>	Affects 25.01 ha of lands identified that have the potential to support hunting, trapping and harvesting activities. <b>Weighted Score: 14.9</b>	Affects 23.77 ha of lands identified have the potential to support hunting, trapping and harvesting activities. <b>Weighted Score: 15.7</b>



Criteria	Measure	Criteria Weight (%)	Route Alternative 1	Route Alternative 2	Route Alternative 3	Route Alternative 4	Route Alternative 5
Areas that Support Fish Bearing Waters with Identified or Inferred habitat of Game Fish	Effects to aquatic habitat including total number and, length of, watercourse crossings within ROW, as well as new effects to rivers greater than 1 km in reach.	16.7	Traverses 4.20 km of watercourse, crossing 66 watercourses in total with potential to affect fish habitat. Does not cross any watercourses with publicly known fish stocking programs and/or result in a new transmission line crossing the Thames, North Sydenham and Sydenham Rivers. <b>Weighted Score: 14.6</b>	Traverses 3.17 km of watercourse, crossing 66 watercourses in total with potential to affect fish habitat. Does not cross any watercourses with publicly known fish stocking programs and/or result in a new transmission line crossing the Thames, North Sydenham and Sydenham Rivers. <b>Weighted Score: 15.9</b>	Traverses 3.74 km of watercourse, crossing 67 watercourses in total with potential to affect fish habitat. Does not cross any watercourses with publicly known fish stocking programs and/or result in a new transmission line crossing the Thames, North Sydenham and Sydenham Rivers. <b>Weighted Score: 15.0</b>	Traverses 4.79 km of watercourse, crossing 70 watercourses in total with potential to affect fish habitat. Does not cross any watercourses with publicly known fish stocking programs and/or result in a new transmission line crossing the Thames, North Sydenham and Sydenham Rivers <b>Weighted Score: 13.8</b>	Traverses 3.62 km of watercourse, crossing 57 watercourses in total with potential to affect fish habitat. Does not cross any watercourses with publicly known fish stocking programs. Route 5 would also involve a new transmission line crossings of the Thames, North Sydenham and Sydenham Rivers, over 1 km from the existing transmission line crossings. <b>Weighted Score: 10.5</b>
Rare/Undisturbed Native Habitats/Ecosystems	Effects to rare habitats in southwestern Ontario including tall grass prairies, savannah, native woodlands, natural wetlands, etc. within ROW, and measured level of disturbance of native habitat and ecosystems based on calculated average coefficient of conservatism associated with the PSA.	16.7	Affects 13.99 ha of undisturbed native habitat, including 4.89 ha of wetland habitat within the ROW. The level of disturbance to native habitats within the PSA is calculated at 4.52 average coefficient of conservatism (highly disturbed). <b>Weighted Score: 13.1</b>	Affects 9.98 ha of undisturbed native habitat, including 4.07 ha wetland habitat within the ROW. The level of disturbance to native habitats within the PSA is calculated at 4.07 average coefficient of conservatism (highly disturbed). <b>Weighted Score: 16.6</b>	Affects 13.11 ha of undisturbed native habitat, including 4.89 ha of wetland habitat within the ROW. The level of disturbance to native habitats within the PSA is calculated at 4.61 average coefficient of conservatism (highly disturbed). <b>Weighted Score: 13.5</b>	Affects 11.14 ha of undisturbed native habitat, including 4.08 ha of wetland habitat within the ROW. The level of disturbance to native habitats within the PSA is calculated at 4.56 average coefficient of conservatism (highly disturbed). <b>Weighted Score: 15.9</b>	Affects 12.55 ha of undisturbed native habitat, including 4.75 ha of wetland habitat within the ROW. The level of disturbance to native habitats with the PSA is calculated at 4.52 average coefficient of conservatism (highly disturbed). <b>Weighted Score: 13.9</b>

Criteria	Measure	Criteria Weight (%)	Route Alternative 1	Route Alternative 2	Route Alternative 3	Route Alternative 4	Route Alternative 5
Rare/Sensitive Species Regeneration Potential	Long-term effects to species at risk and their regeneration potential, as well as known Bald Eagle nests and a known heron rookery within the ROW.	16.7	Affects 26.88 ha of confirmed SAR habitat (Blanding's Turtle, Butler's Garter snake, Butternut, Eastern Fox snake, Wood Thrush and 17 aquatic SAR) as well as 60.75 ha of potential SAR habitat (Eastern Fox snake, Butler's Garter snake, Blanding's Turtle, SAR bats, and Spiny Softshell), and 2.46 ha of Bald Eagle Nesting, Foraging and Perching SWH. <b>Weighted Score: 12.5</b>	Affects 17.70 ha of confirmed SAR habitat (Wood Thrush and 17 aquatic SAR) as well as 46.98 ha of potential SAR habitat (Eastern Fox snake, Butler's Garter snake, Blanding's Turtle, SAR bats, and Spiny Softshell), and 2.84 ha of Bald Eagle Nesting, Foraging and Perching SWH. <b>Weighted Score: 16.7</b>	Affects 22.45 ha of confirmed SAR habitat (Blanding's Turtle, Butlers Garter snake, Butternut, Eastern Fox snake, Wood Thrush and 17 aquatic SAR) as well as 58.67 ha of potential SAR habitat (Eastern Fox snake, Butler's Garter snake, Blanding's Turtle, SAR bats, and Spiny Softshell), and 2.46 ha of Bald Eagle Nesting, Foraging and Perching SWH. <b>Weighted Score: 13.5</b>	Affects 22.60 ha of confirmed SAR habitat (Butternut, Wood Thrush and 17 aquatic SAR) as well as 52.36 ha of potential SAR habitat (Eastern Fox snake, Butler's Garter snake, Blanding's Turtle, SAR bats, and Spiny Softshell), and 2.84 ha of Bald Eagle Nesting, Foraging and Perching SWH. <b>Weighted Score: 14.5</b>	Affects 23.54 ha of confirmed SAR habitat (Butternut, Wood Thrush and 17 aquatic SAR) as well as 50.62 ha of potential SAR habitat (Eastern Fox snake, Butler's Garter snake, Blanding's Turtle, SAR bats, and Spiny Softshell), and 2.84 ha of Colonially Nesting Bird Breeding Habitat (tree/shrub) SWH. <b>Weighted Score: 14.5</b>
			Route alternative 1 co-locates with 54.50 km of existing transmission line infrastructure and/or ROWs. <b>Weighted Score: 7.6</b>	Route alternative 2 co-locates with 60.19 km of existing transmission line infrastructure and/or ROWs of which 41.17 km involves repurposing an existing 115 kV transmission line corridor. <b>Weighted Score: 16.7</b>	Route alternative 3 co-locates with 58.68 km of existing transmission line infrastructure and/or ROWs of which 23.83 km involves repurposing an existing 115 kV transmission line corridor. <b>Weighted Score: 13.0</b>	Route alternative 4 co-locates with 56.68 km of existing transmission line infrastructure and/or ROWs of which 29.98 km involves repurposing an existing 115 kV transmission line corridor. <b>Weighted Score: 13.9</b>	Route alternative 5 co-locates with 18.22 km of existing transmission line infrastructure and/or ROWs. <b>Weighted Score: 2.5</b>
Final Weighted Score			70.5	94.3	79.4	84.6	67.5

**Table 5-12: Technical and Cost Category Comparative Evaluation Results**

Criteria	Measure	Criteria Weight (%)	Route Alternative 1	Route Alternative 2	Route Alternative 3	Route Alternative 4	Route Alternative 5
<b>Line Length</b>	Total length of each route alternative.	5.0	Total line length is 59.96 km. <b>Weighted Score: 5.0</b>	Total line length is 63.64 km. <b>Weighted Score: 4.7</b>	Total line length is 62.38 km. <b>Weighted Score: 4.8</b>	Total line length is 63.40 km. <b>Weighted Score: 4.7</b>	Total line length is 61.20 km. <b>Weighted Score: 4.9</b>
<b>Light and Heavy Angle Structures</b>	Number of light and heavy angle structures.	15.0	Requires 7 light angle structures and 38 heavy angle structures. <b>Weighted Score: 13.9</b>	Requires 11 light angle structures and 56 heavy angle structures. <b>Weighted Score: 9.3</b>	Requires 10 light angle structures and 49 heavy angle structures. <b>Weighted Score: 10.6</b>	Requires 8 light angle structures and 57 heavy angle structures. <b>Weighted Score: 9.8</b>	Requires 5 light angle structures and 42 heavy angle structures. <b>Weighted Score: 13.9</b>
<b>Non Transmission Line Crossings</b>	Total number of crossings of: rivers, railways, highways, distribution lines and large watercourses.	5.0	Crosses 4 major waterbodies, 45 distribution lines, 1 highway, 7 railways and 3 large watercourses. <b>Weighted Score: 4.2</b>	Crosses 4 major waterbodies, 50 distribution lines, 1 highway, 7 railways and 3 large watercourses. <b>Weighted Score: 3.9</b>	Crosses 4 major waterbodies, 45 distribution lines, 1 highway, 7 railways and 3 large watercourses. <b>Weighted Score: 3.9</b>	Crosses 5 major waterbodies, 50 distribution lines, 1 highway, 7 railways and 3 large watercourses. <b>Weighted Score: 3.8</b>	Crosses 3 major waterbodies, 40 distribution lines, 1 highway and 7 railways. <b>Weighted Score: 5.0</b>
<b>Transmission Line Crossings</b>	Total number of crossings of existing 115 kV and 230 kV transmission lines.	10.0	Crosses 3 existing 115 kV transmission lines and 1 existing 230 kV transmission line. <b>Weighted Score: 9.0</b>	Crosses 2 existing 115 kV transmission lines and 3 existing 230 kV transmission line. <b>Weighted Score: 5.3</b>	Crosses 2 existing 115 kV transmission lines and 3 existing 230 kV transmission line. <b>Weighted Score: 5.3</b>	Crosses 2 existing 115 kV transmission lines and 3 existing 230 kV transmission line. <b>Weighted Score: 5.3</b>	Crosses 3 existing 115 kV transmission lines and 1 existing 230 kV transmission line. <b>Weighted Score: 9.0</b>
<b>Co-Location and Repurpose of Existing Infrastructure</b>	Length of the proposed transmission line that parallels existing infrastructure or repurposes existing transmission line corridors.	10.0	Route alternative 1 co-locates with 54.50 km of existing transmission line infrastructure and/or ROWs but does not repurpose existing transmission corridors. <b>Weighted Score: 4.5</b>	Route alternative 2 co-locates with 60.19 km of existing transmission line infrastructure and/or ROWs of which 41.17 km involves repurposing an existing 115 kV transmission line corridor. <b>Weighted Score: 10.0</b>	Route alternative 3 co-locates with 58.68 km of existing transmission line infrastructure and/or ROWs of which 23.83 km involves repurposing an existing 115 kV transmission line corridor. <b>Weighted Score: 7.8</b>	Route alternative 4 co-locates with 56.68 km of existing transmission line infrastructure and/or ROWs of which 29.98 km involves repurposing an existing 115 kV transmission line corridor. <b>Weighted Score: 8.4</b>	Route alternative 5 co-locates with 18.22 km of existing transmission line infrastructure and/or ROWs but does not repurpose existing transmission corridors. <b>Weighted Score: 1.5</b>
<b>Potential Infrastructure Conflicts</b>	Number of pipeline crossings, as well as length of parallel and proximity to pipelines.	5.0	Crosses 5 pipelines, with an aggregate length of parallelism of 2,727.79 m and distance from parallel pipeline of 1,435.13 m. <b>Weighted Score: 5.0</b>	Crosses 5 pipelines, with an aggregate length of parallelism of 2,904.0 m and distance from parallel pipeline of 1,122.41 m. <b>Weighted Score: 4.3</b>	Crosses 5 pipelines, with an aggregate length of parallelism of 2,730.45 m and distance from parallel pipeline of 1,448.82 m. <b>Weighted Score: 5.0</b>	Crosses 5 pipelines, with an aggregate length of parallelism of 2,912.43 m and distance from parallel pipeline of 1,122.18 m. <b>Weighted Score: 4.3</b>	Crosses 5 pipelines, with an aggregate length of parallelism of 2,907.14 m and distance from parallel pipeline of 1,160.24 m. <b>Weighted Score: 4.4</b>

Criteria	Measure	Criteria Weight (%)	Route Alternative 1	Route Alternative 2	Route Alternative 3	Route Alternative 4	Route Alternative 5
Proximity to Existing Wind Turbines	Proximity to existing wind turbines.	5.0	Route alternative 1 is within 250 m of 2 wind turbines. <b>Weighted Score: 0.0</b>	Route alternative 2 is within 250 m of 1 wind turbine. <b>Weighted Score: 0.1</b>	Route alternative 3 is within 250 m of 1 wind turbine. <b>Weighted Score: 0.1</b>	Route alternative 4 is within 250 m of 1 wind turbine. <b>Weighted Score: 0.1</b>	There are no wind turbines within 250 m of route alternative 5. <b>Weighted Score: 5.0</b>
Real Estate Considerations	Real Estate and land acquisition considerations and associated project costs.	25.0	Property rights required on 95 property parcels, with a relatively large area of new transmission line ROW encumbrances. <b>Weighted Score: 18.8</b>	Property rights required on 102 property parcels, with the least overall area of new transmission line ROW encumbrances (utilizes the most lands with existing transmission line ROW encumbrances). <b>Weighted Score: 19.8</b>	Property rights required on 105 property parcels, with a moderate overall area of new transmission line ROW encumbrances. <b>Weighted Score: 18.4</b>	Property rights required on 106 property parcels, with a moderate overall area of new transmission ROW encumbrances. <b>Weighted Score: 18.3</b>	Property rights required on 140 property parcels, with the largest overall area of new transmission line ROW encumbrances. <b>Weighted Score: 17.4</b>
System Benefits and Impacts	Additional system benefits associated with the upgrade of the Wallaceburg TS to a 230 kV station and avoiding the upcoming need to refurbish the existing 115 kV line.	15.0	Route alternative 1 would not require additional costs associated with the upgrade of Wallaceburg TS but would also not avoid upcoming refurbishment costs associated with the existing 115 kV line. The reliability and efficiency of the transmission supply to the Wallaceburg area would not be improved, as Wallaceburg TS would remain in operation at 115 kV. <b>Weighted Score: 5.2</b>	Route alternative 2 requires the salvage of 44.16 km of existing 115 kV transmission line infrastructure, and results in additional cost to upgrade the Wallaceburg TS to 230 kV, but avoids upcoming refurbishments costs associated with the existing 115 kV transmission line. It would result in improvements to the reliability of transmission supply to the Wallaceburg area and would also make the transmission supply more efficient by reducing line losses. <b>Weighted Score: 12.0</b>	Route alternative 3 requires the salvage of 23.83 km of existing 115 kV transmission line infrastructure, and results in additional cost to upgrade the Wallaceburg TS to 230 kV, but avoids upcoming refurbishments costs associated with the existing 115 kV transmission line. It would result in improvements to the reliability of transmission supply to the Wallaceburg area and would also make the transmission supply more efficient by reducing line losses. <b>Weighted Score: 12.0</b>	Route alternative 4 requires the salvage of 29.98 km of existing 115 kV transmission line infrastructure and results in additional cost to upgrade the Wallaceburg TS to 230 kV, but avoids upcoming refurbishments costs associated with the existing 115 kV transmission line. It would result in improvements to the reliability of transmission supply to the Wallaceburg area and would also make the transmission supply more efficient by reducing line losses. <b>Weighted Score: 12.0</b>	Route alternative 5 would not require additional costs associated with the upgrade of Wallaceburg TS, but would also not avoid upcoming refurbishment costs associated with the existing 115 kV line. The reliability and efficiency of the transmission supply to the Wallaceburg area would not be improved, as Wallaceburg TS would remain in operation at 115 kV. <b>Weighted Score: 5.2</b>

Criteria	Measure	Criteria Weight (%)	Route Alternative 1	Route Alternative 2	Route Alternative 3	Route Alternative 4	Route Alternative 5
Overall Constructability	Anticipated transmission circuit outages during construction, which increase complexity of construction planning.	5.0	Route alternative 1 would not require temporary construction outages on transmission circuits. <b>Weighted Score: 5.0</b>	Route alternative 2 would require approximately 4 days of temporary construction outages on transmission circuits. This increases the complexity of construction planning and scheduling and may affect some facilities that are directly connected to the transmission system, but would not affect the local distribution supply to the area. <b>Weighted Score: 0.0</b>	Route alternative 3 would require approximately 4 days of temporary construction outages on transmission circuits. This increases the complexity of construction planning and scheduling and may affect some facilities that are directly connected to the transmission system, but would not affect the local distribution supply to the area. <b>Weighted Score: 0.0</b>	Route alternative 4 would require approximately 4 days of temporary construction outages on transmission circuits. This increases the complexity of construction planning and scheduling and may affect some facilities that are directly connected to the transmission system, but would not affect the local distribution supply to the area. <b>Weighted Score: 0.0</b>	Route alternative 5 would not require temporary construction outages on transmission circuits. <b>Weighted Score: 5.00</b>
			70.7	69.4	67.8	66.8	71.4
Final Weighted Score							



**Table 5-13: Final Overall Weighted Scores**

<b>Criteria</b>	<b>Route Alternative 1</b>	<b>Route Alternative 2</b>	<b>Route Alternative 3</b>	<b>Route Alternative 4</b>	<b>Route Alternative 5</b>
<b>Natural Environment Category Total Weighted Score</b>	78.3 Least Preferred	95.3 Most Preferred	77.3 Least Preferred	87.2 Medium Preference	84.1 Medium Preference
<b>Socio-Economic Category Total Weighted Score</b>	38.5 Least Preferred	78.8 Most Preferred	73.9 Preferred	58.5 Medium Preference	63.8 Medium Preference
<b>Technical and Cost Category Total Weighted score</b>	70.7 Preferred	69.4 Medium Preference	67.8 Least Preferred	66.8 Least Preferred	71.4 Most Preferred
<b>Indigenous Culture, Values and Land Use Category Total Weighted Score</b>	70.5 Least Preferred	94.3 Most Preferred	79.4 Medium Preference	84.6 Preferred	67.5 Least Preferred
<b>Final Overall Weighted Score</b>	258.0 Least Preferred	337.8 Most Preferred	298.4 Medium Preference	297.1 Medium Preference	286.8 Medium Preference



## **5.6 Summary of Comparative Evaluation**

### **5.6.1 Natural Environment Category Summary**

Route alternative 2 is the technically preferred from a Natural Environment perspective. Route alternative 2 scored the highest in all but one of the evaluated criteria. Route alternative 2 has the least potential effect on vegetation, wildlife and wildlife habitat, SAR and SAR habitat, wetlands, natural hazards lands, and designated natural areas and identified habitat restoration areas. In the only Natural Environment criterion in which route alternative 2 did not score the highest (i.e., surface water resources and aquatic habitat), it was evaluated as having the second least potential effects behind route alternative 5.

### **5.6.2 Socio-Economic Environment Category Summary**

Route alternative 2 is the technically preferred in the Socio-Economic Factor overall. Route alternative 2 conforms well to the recommendations of the PPS. More than 80% of the preferred route utilizes existing transmission corridor lands to some extent, which is more than the other route alternatives. Of this, over 60% of the preferred route repurposes an existing transmission corridor with a need to widen the corridor and acquire new land rights and nearly 20% of the preferred route utilizes existing corridor lands that are not yet occupied by transmission infrastructure.

### **5.6.1 Indigenous Culture, Values and Land Use Category Summary**

Route alternative 2 is the technically preferred from the Indigenous Culture, Values and Land Use perspective, and scored the best or tied for the best in each of the evaluated criteria. Overall, route alternative 2 maximizes opportunities to utilize existing transmission line corridors, avoids a separate crossing of the Thames, North Sydenham and Sydenham Rivers, minimizes impacts to native habitats and natural or naturalized areas which support hunting and harvesting activities, and provides improved transmission reliability to an Indigenous community supplied from the Wallaceburg TS.

### **5.6.2 Technical and Cost Category Summary**

Overall, for technical and cost, route alternative 5 is the technically preferred because it has the fewest number of line angles, has the fewest non-transmission crossings, and avoids proximity to wind turbines. From a technical and cost perspective route alternative 2 is more complex and costlier to construct than route alternative 5 due to the number of line angles, overall length, the number of transmission line crossings and the additional cost associated with the Wallaceburg TS upgrade. However, route alternative 2 is the most preferred from a real estate/land rights perspective (number of

impacted properties and repurposing of lands with existing transmission line ROWs), avoids upcoming refurbishment costs associated with the existing 115 kV, and results in improvements to the reliability and efficiency of the transmission system supply to the Wallaceburg area through an upgrade to the Wallaceburg TS.

### **5.6.3 Technically Preferred Route Alternative**

Overall, route alternative 2 (**Figure 5-3**) is preferred because it minimizes the overall impact to the Natural and Socio-Economic Environments compared to the other route alternatives and minimizes impacts to agricultural lands by utilizing existing transmission corridors for approximately 80% of its total length. From an Indigenous Culture, Values and Land Use perspective, route alternative 2 avoids a separate crossing of the Thames, North Sydenham and Sydenham Rivers, minimizes impacts to native habitats and natural or naturalized areas which support hunting and harvesting activities, and provides improved transmission reliability to an Indigenous community supplied from the Wallaceburg TS. From a technical perspective, route alternative 2 is more complex and costlier to construct (line angles, transmission line crossings, upgrades to Wallaceburg TS, etc.), but is the most preferred from a real estate perspective, maximises the ability to utilize existing transmission corridors and results in improvements to the reliability and efficiency of the transmission system supply to the Wallaceburg area through an upgrade to the Wallaceburg TS.



## 6 Project Description

The proposed Project is similar to many other projects completed by Hydro One. Based on the need identified by the IESO on the electrical load forecast for the Windsor-Essex Region and surrounding area, the IESO requested Hydro One to construct a new double-circuit 230 kV transmission line between the Lambton TS in the County of Lambton and the Chatham SS in the Municipality of Chatham-Kent. The purpose of the new double-circuit 230 kV transmission line is to:

- Ensure sufficient bulk transfer capabilities to supply the forecast load in the Windsor-Essex region and surrounding area in the near- to mid-term; and,
- Improve the deliverability of resources in the Lambton-Sarnia area for intra-zonal and provincial supply.

**Figure 6-1** provides an example of the types of transmission structures (i.e., towers) proposed for the Project. The structure shown in the figure is considered a preliminary illustrative example as it is subject to the continuation of engineering and design work.

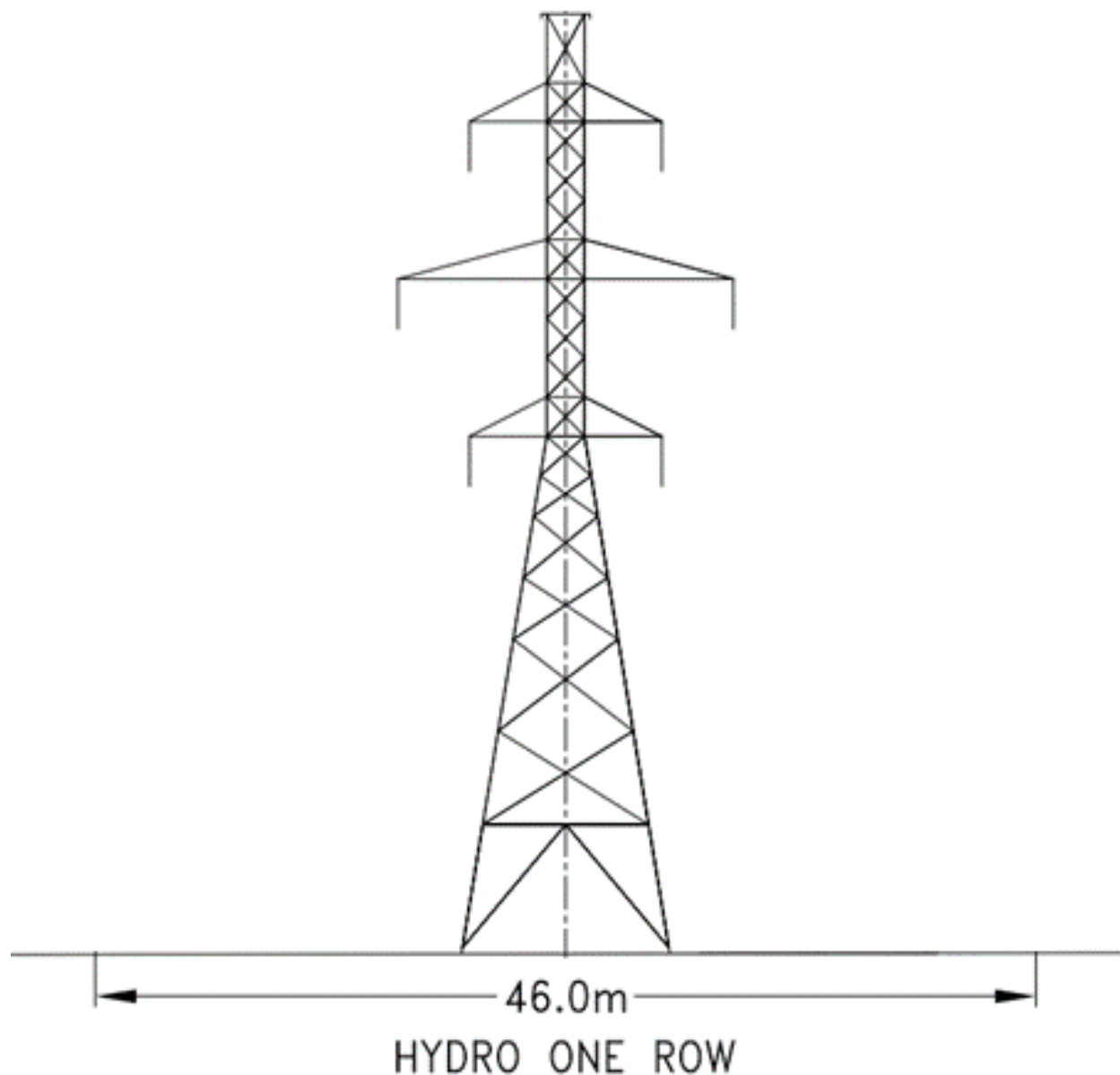
As the preferred route alternative will repurpose approximately 41 km of an existing 115 kV transmission line corridor, the Project will involve dismantling and removal of the existing transmission structures, conductor and associated components and equipment along this stretch of the existing transmission line to be replaced with the new 230 kV double-circuit transmission structures, conductors and associated components.

To facilitate the upgrade of the existing 115 kV transmission line to a 230 kV transmission line, an upgrade of the Wallaceburg TS from 115 kV to 230 kV will also be required. This will involve relocation of the existing distribution station currently situated on the eastern side of the station, expansion of the fence line (currently anticipated to be contained within the station property owned by Hydro One), expansion of the grounding grid and station drainage systems, construction of additional bus work, switchgear and associated equipment, and the construction of new transformer pads and containment pits for two new 230 kV transformers.

The Project will also involve the expansion of the Lambton TS and Chatham SS to facilitate connection of the new transmission circuits into each station. At Lambton TS, the expansions will occur on the north and south ends of the station. At Chatham SS, the expansion will occur at the eastern end. In both cases, works will involve expansion of the fence line, grounding grid and station drainage systems, construction of access roads within the station fence, construction of additional bus work, switchgear and associated equipment, and, at Lambton TS only, the construction of additional modular

relay buildings within the station perimeter and an overhead line to cable junction station outside the station perimeter (to facilitate the transition between overhead line and underground cable for one of the circuits).

**Figure 6-1: Example of Transmission Structure Proposed for the Project**



## 6.1 Design Phase

Following completion of the Class EA process, detailed engineering and design for the proposed Project will be undertaken. The final design plans will be based on necessary surveys, including a geotechnical survey, and consultation with stakeholders. During the design phase, additional studies and surveys (e.g., Stage 2 Archaeological Assessment, geotechnical investigations) will be conducted as required. Concurrent with finalization of the design, required permits, licences and approvals, as listed in **Section 1.4**, will be obtained. Hydro One will also finalize restoration plans in consultation with appropriate stakeholders and the local communities, as necessary.

Hydro One recognizes a changing climate is likely to result in an increase of unusual weather patterns and severe weather events, which could potentially damage or adversely affect infrastructure and other public facilities. Hydro One is confident the facilities being planned for this Project will be engineered to adequately withstand effects of climate change throughout the duration of their planned lifespan.

## 6.2 Construction Phase

Construction activities will be guided by Hydro One standards and guidelines as well as Project-specific documents; these are to be adhered to by all construction personnel including contractors and sub-contractors. In addition, a project-specific Environmental Management Plan will be prepared, outlining specific requirements to be followed for the proposed Project.

Prior to construction, a detailed construction plan will be developed. Construction activities will be restricted to designated work areas and protective barriers, such as fencing, will be erected to protect features from construction related effects.

Throughout the construction period, an Environmental Specialist will be available to address unforeseen environmental effects and mitigation requirements. The Environmental Specialist will monitor activities to ensure conformance with the requirements set out in the Environmental Management Plan.

Should any archaeological finds be uncovered during construction, work in the vicinity will stop immediately pending assessment by the Project archaeologist and further consultation with the MCM – Heritage Program Unit, as well as the appropriate Indigenous communities.

Upon completion of construction, clean up and restoration (e.g., seeding, plantings) of areas disturbed by construction would occur, as required. Documents covering ongoing



commitments, including monitoring and notification requirements will be prepared, and operation and maintenance staff will be briefed, as necessary.

Construction of the new double-circuit 230 kV transmission line will involve the following activities:

- Site preparation including clearing, demolition and removal of existing structures (including dismantling and removal of the existing transmission line structures, conductors and associated equipment) as required, and grading;
- Installation of foundations at the new structure locations;
- Assembly and construction of the transmission structures;
- Stringing new transmission conductors (wires) on the structures and installation of associated equipment;
- Construction of a single-circuit overhead line to cable junction station outside the Lambton TS perimeter;
- Trenching and installation of underground duct bank and cables to enable one of the circuits to enter Lambton TS; and,
- Clean up and site restoration.

Upgrading of the Wallaceburg TS will involve the following activities:

- Relocation of the distribution station;
- Site preparation including clearing and grading;
- Expansion of the station grounding grid;
- Expansion of any sub-grade station drainage systems;
- Installation of a new portion of station fence;
- Installation of foundations at the new structure locations;
- Construction of new bus work and associated equipment;
- Construction of two transformer pads and containment pits;
- Installation of two transformers, associated equipment and switchgear; and,
- Clean up and site restoration.

Expansion of the Chatham SS and the Lambton TS will involve the following activities:

- Site preparation including clearing and grading;
- Expansion of the station grounding grid;
- Expansion of any sub-grade station drainage systems;
- Installation of a new portion of station fence;
- New permanent access road (for Lambton TS only);

- Installation of foundations at the new structure locations;
- Connection of new bus work, switchgear and associated equipment;
- At Lambton TS only, the construction of additional modular relay buildings within the station perimeter and an overhead line to cable junction station outside the station perimeter (to facilitate the transition between overhead line and underground cable to enable entry of one of the circuits); and,
- Clean up and site restoration.

Temporary facilities for the purpose of the proposed Project may include equipment staging areas and temporary stockpile areas, temporary rider poles or similar protective measures required during conductor stringing, and temporary structures near the transmission stations for the staging of outages. Temporary facilities will be required prior to, and during, the construction period. The location of the temporary facilities will be determined by the Project team and their contractor(s) during detailed design/construction planning.

### **6.3 Maintenance, Operation and Retirement Phases**

The proposed Project is planned to be in service by 2028 or earlier. The new double-circuit 230 kV transmission line and the new expanded portions of the Chatham SS and the Lambton TS would undergo regular maintenance in adherence with Hydro One's maintenance standards and regulatory requirements to maintain a safe and reliable electricity transmission system.

When transmission facilities become obsolete or unserviceable and/or deemed to be at end-of-life, the equipment is retired from service. Transmission facilities retired from service are often left in place (idle) for potential future use. The facilities may eventually be removed, and the site made suitable for other purposes. The foundations are typically cut back 1.0 m below ground surface when transmission structures are removed.

If a station site is suspected to be environmentally contaminated, the decommissioning of facilities will follow the guidance provided by O. Reg. 153/04 of the *Environmental Protection Act*.

### **6.4 Project Schedule**

The anticipated schedule for the proposed Project activities is provided below in **Table 6-1**. This schedule shows key steps remaining in the Class EA process and subsequent anticipated timing of the start of construction.

**Table 6-1: Project Schedule**

<b>Activity</b>	<b>Period</b>
Draft ESR 30-day comment period	Nov 6 – Dec 7, 2023
Extension of draft ESR comment period for Indigenous communities	Nov 6 – Dec 22, 2023
Extension of draft ESR comment period for MEPC	Nov 6 – Dec 22, 2023
Comment integration and response	Dec 2023 & Jan 2024
Filing of final ESR and Class EA Statement of Completion with the MECP	Feb 2024
Submission of Section 92 application to the Ontario Energy Board	2024
Ontario Energy Board Section 92 Approval	2025 or earlier
Construction Start	Fall 2026 or earlier
Planned in-service date	2028 or earlier

## 7 Potential Environmental Effects and Mitigation Measures

This section describes the potential environmental effects and mitigation measures associated with both the short-term (construction) and long-term (operation/maintenance) activities of the proposed Project. The assessment of potential environmental effects for the proposed Project considered the baseline information on the environmental features collected for the PSA, as presented in **Section 4**.

The potential environmental effects resulting from the construction and operation/maintenance of the proposed Project are similar to other projects undertaken by Hydro One and are well understood by the Project team. Hydro One has a strong track record of environmental compliance and stewardship and is committed to the completion of comprehensive environmental and social analysis and mitigation of potential effects.

The selection of mitigation measures are based on the following seven guiding principles:

- Avoidance of sensitive areas, where practical;
- Avoidance of watercourse crossings, where feasible, by use of an existing nearby crossing, access to structures from either side of the watercourse, or use of off-corridor access;
- Appropriate timing of construction activities, where feasible, to avoid sensitive time periods, such as fish spawning and egg incubation periods, or migratory bird nesting periods;
- Proactive communication with landowners, businesses and interested community members on the proposed Project timelines and construction areas;
- Proactive communication with Indigenous communities, government agencies, stakeholders and interest groups regarding the proposed Project;
- Implementation of conventional, proven mitigation measures during construction consistent with the criteria set out in Appendix E of the Class EA for Minor Transmission Facilities (Hydro One, 2022), and in accordance with applicable legislative requirements; and,
- Development of environmental enhancement or compensation measures to offset the residual net effects of the project where such effects exist.

Based on the Project design and implementation of the proposed mitigation measures, no “significant” adverse net effects (e.g., effects following the implementation of

mitigation) are anticipated. The following subsections detail the effects assessment and identify avoidance, mitigation and/or compensation commitments required for the proposed project.

## 7.1 Agricultural Resources

Agriculture is a predominant land use within southwestern Ontario and is an important component of the regional economy. The majority of agricultural land use in southwestern Ontario is designated for production of cash crops and agricultural greenhouses (OMAFRA, 2022). The PSA is dominated by prime agricultural soils (Class 1-3). The preferred route will cross several agricultural property parcels and will have temporary and long-term effects on agricultural operations in the area. Potential effects from the Project include:

- Permanent loss of agricultural land for production of crops within the new towers' physical footprint;
- Temporary loss of agricultural land for production of crops associated with construction activities in the ROW;
- Temporary soil compaction from construction vehicles;
- Potential for construction activities to mix soil horizons, lowering the quality of soil or mixing of soil across agricultural properties;
- Potential disturbance to farm operations including planting and harvesting schedules, spraying and tilling activities;
- Removal of sections of agricultural hedgerows;
- Application of herbicides within the ROW with potential to spread into adjacent farm operations;
- Potential damage to field tile drains;
- Potential effects to adjacent livestock including stress, injury or loss from construction activities including use of implosive conductor splicing methods; and,
- Potential for transmission line interference with automated GPS guided farm equipment.

While some of the effects to agricultural operations will be long-term and result in net effects, many are temporary in nature and can be mitigated with diligent construction planning and implementation of mitigation measures during construction. No significant net effects to agricultural resources are anticipated. The following subsections outline the effects assessment for each potential agricultural effect and outline anticipated avoidance, mitigation and/or compensation strategies to be employed by Hydro One.

### 7.1.1 Loss of Agricultural Lands and Crops

The Project will result in temporary removal of planted/established crops and/or lands available for crop production to facilitate construction activities within the transmission line ROW. Also, some agricultural lands will be permanently lost as a result of Project infrastructure (e.g., tower footing locations). For the majority of the transmission line route, tower footings represent the only long-term loss of agricultural lands as the majority of the ROW can still be utilized for crops or pasture. However, Hydro One does recognize that individual circumstances, such as some transmission line crossing locations, may become more encumbered due to the need to maintain appropriate technical clearances from both the ground surface and other conductors, leading to additional crossing structures and lower vertical clearances. In such circumstances, there is potential for a slightly larger area (beyond the individual tower footings) of agricultural lands capable of being rendered out of production.

All lands out of production and crops lost as a result of the Project's construction activities will be compensated in accordance with Hydro One's crop loss/crop lands out of production policies. Additionally, the following mitigation measures are proposed for effects to agricultural lands and crops:

- Contact will be maintained with landowners and stakeholders regarding work schedules and other items of interest (e.g., access roads, minimizing disturbances to existing and planned farm operations, etc.);
- Where practical, some construction and maintenance activities will be scheduled to avoid the growing season or sensitive times of year (e.g., extreme wet periods), although it is recognized that this will not be possible in all circumstances;
- Access roads, staging areas, tower construction and stringing activities will be constructed to a minimum length and width required to accommodate the safe movement of construction equipment;
- Work will be limited to the planned access roads, staging and work areas. If a later expansion to these areas is required, it will be discussed with the landowner in advance;
- Towers will be located along fence/property lines where practical to minimize impeding on agricultural operations;
- Existing farm lanes and other existing access roads will be used whenever practical. In the event farm lanes are absent, access will be focused within the ROW or along field edges, to the extent practical; and,



- Restoration measures, as informed by discussions with landowners (e.g., alleviate soil compaction, remove excess aggregate, etc.) on areas affected by construction, may be undertaken following the completion of construction and removal of temporary construction access, as necessary.

### **7.1.2 Soil Compaction**

Project activities have potential to cause soil compaction through the use of heavy equipment. Compaction of soil may occur during both the construction and operation/maintenance phases of the Project. Soil compaction resulting from these activities is largely unavoidable and is anticipated to be temporary in nature. Measures to mitigate soil compaction include:

- Equipment with low bearing capacity will be used, where practical;
- Access will be located along existing farm lanes or field edges, where practical;
- Access roads, staging areas and tower and stringing activities will be constructed to a minimum length and width required to accommodate the safe movement of construction equipment;
- Work will be limited to the planned access roads, staging and work areas. If a later expansion to these areas is required, it will be discussed with the landowner in advance;
- Temporary access roads and work pads will be built in agricultural fields using mats, or geotextile and crushed rock, or equivalent means, which can be easily removed when construction is complete to allow for re-cultivation of the area; and,
- Restoration measures, as informed by discussions with landowners, to cultivate or otherwise alleviate soil compaction on areas affected by construction, may be undertaken following the completion of construction and removal of temporary construction access, as necessary.

### **7.1.3 Soil Mixing**

Mixing of soil including soil horizons and movement of soil between property parcels is a potential effect of the Project. Excavations may be required for construction activities. Excavation has the potential to result in mixing of soil horizons, reducing the quality of surface topsoil for agricultural purposes. This effect is anticipated to be minimal and limited to areas of deep ground disturbance (e.g., some tower footing locations), but may be permanent. Additionally, movement of construction equipment through the ROW may cause migration of soils from one agricultural field to another. Mitigation measures to minimize topsoil and subsoil mixing will include:

- Where geotechnical conditions and engineering requirements allow, foundation types (such as helical piles) that minimize surface disturbance and do not require soil excavation or soil stripping of the foundation site will be used;
- Stripping or excavation of soils will be minimized to the extent practical;
- Where soil stripping is required, topsoil and subsoils will be removed and stockpiled separately;
- Depths of soil being removed will be carefully monitored and minimized during stripping activities;
- Volume of topsoil and subsoil salvaged for replacement or re-use on site will be maximized, where practical;
- Soils will be stripped under generally dry conditions (not saturated), such that rutting, soil mixing, or other undesired ground disturbance is minimized to the extent practical;
- Vegetation, stone piles, fencing and deleterious materials will be removed prior to stripping;
- For backfilling operations, topsoil and subsoil will be replaced in reverse order of excavation to minimize the potential for additional mixing and maximizing future growing potential;
- Soil cover on exposed areas within agricultural areas will be discussed with the landowner for the most appropriate solution;
- Equipment and vehicle inspections and cleaning will be conducted as required during construction, to minimize the potential for inadvertent transport of trace soils between contaminated and non-contaminated agricultural fields;
- Cleaning will be conducted using a risk-based approach, whereby vehicles and equipment that have come in contact with soils will be inspected and cleaned of dirt/debris/seeds; and,
- Cleaning will occur in a manner that ensures that runoff is contained and waste materials can be collected.
- Any imported topsoil will be tested for soybean cyst nematode (SCN) or otherwise shown to be free of SCN.

#### **7.1.4 Disturbance to Farm Operations**

Project activities will require construction and maintenance of the transmission line ROW. Effects to agricultural operations from construction and maintenance activities may include impediments to farm vehicle maneuverability or disruption to farm operations including planting and harvesting or tilling and spraying. Generally, disruption effects are anticipated to be temporary in nature and can be mitigated by:

- Where practical, the location of towers will be placed to minimize impacts to maneuverability of agricultural equipment (e.g., along lot lines or field boundaries);
- Contact will be maintained with affected landowners regarding work schedules and other items of interest (e.g., access roads, minimizing disturbances to farm operations, etc.);
- Access roads, staging areas, tower construction and stringing activities will be constructed to a minimum length and width required to accommodate the safe movement of construction equipment;
- Work will be limited to the planned access roads, staging and work areas. If a later expansion to these areas is required, it will be discussed with the landowner in advance;
- To the extent practical, some construction and maintenance activities will be scheduled to avoid sensitive times of the year with regards to agricultural operations, although it is recognized that this will not be feasible in all circumstances; and,
- Constructed access roads will be smooth and tapered to allow for vehicular, pedestrian and equipment crossings, where applicable.

#### **7.1.5 Vegetation Removal**

Construction and maintenance of the transmission line ROW will require removal of 10.53 ha of incompatible vegetation including trees typically found in hedgerows or windbreaks. Incompatible vegetation communities associated with the Project include the following:

- Deciduous Forest (FOD) – 0.66 ha;
- Dry-Fresh Oak-Red Maple Deciduous Forest (FODM2-1) – 0.77 ha;
- Fresh-Moist Black Walnut Lowland Deciduous Forest (FODM7-4) – 0.28 ha;
- Fresh-Moist Oak-Maple-Hickory Deciduous Forest (FODM9) – 0.36 ha;
- Fresh-Moist Shagbark Hickory Deciduous Forest (FODM9-4) – 1.07 ha;
- Swamp (SW) – 0.12 ha;
- Deciduous Swamp (SWD) – 1.06 ha;
- Thicket Swamp (SWT) – 2.89 ha;
- Wetland System (WE) – 0.01 ha;
- Woodland (WO) – 2.77 ha; and,
- Isolated Tree Clusters – 0.54 ha.

Construction and maintenance activities may require mechanical removal of vegetation (tree felling) and/or application of herbicides to species incompatible with overhead transmission lines. Effects from vegetation removal include potential for herbicide overspray and/or fragmentation of existing hedgerows and windbreak systems. Where incompatible vegetation must be removed (e.g., hedgerows), these areas will be restored with compatible vegetation (e.g., shrubs) in discussion with landowners.

Additional mitigation measures include:

- Vegetation that will not affect construction or line clearances will be retained, where possible;
- Hedgerows and windbreak areas impacted by construction will be replaced with compatible vegetation post-construction, in consultation with the landowner; and
- Consult with Indigenous communities and private landowners to identify potential opportunities to facilitate pre-construction harvest of plant species of interest to Indigenous communities.

Construction and maintenance activities have potential to utilize herbicides to control noxious weeds and/or incompatible vegetation. There is also potential for inadvertent movement of trace soils between agricultural fields. Chemical control methods have potential to overspray to adjacent crops and movement of soils has potential to transport undesirable soil types and compounds. It is recognized that some agricultural operations in the PSA may be certified organic or produce Identity Preserved (IP) crops. Other agricultural operations may transition to organic/IP crop types. To minimize potential disruption or contamination to organic or IP agricultural operations the following mitigation measures will be implemented:

- Contact will be made with landowners to determine if organic or IP operations are present which may require additional considerations during construction planning;
- Equipment and vehicle inspections and cleaning will be established during construction, to minimize the potential for inadvertent transport of trace soils;
- Cleaning will occur in a manner that ensures that runoff is contained and waste materials can be collected;
- Field crews will be informed if working in organic or IP croplands; and,
- Mitigation strategies will be discussed with landowners prior to construction and field crews will be informed of the required mitigation and monitored to ensure these strategies are properly implemented.

### **7.1.6 Damage to Field Tile Drains**

The use of heavy equipment for construction and maintenance activities has potential to cause damage to agricultural tile drains. If damage to tile drains occurs as a result of construction or maintenance activities, the tile will be repaired by a licensed tile drainage contractor in consultation with the affected landowner. To minimize potential for tile, drain damage, the following mitigation measures will be implemented for the Project:

- Landowners will be consulted to determine existing field tile locations in support of avoidance/protection measures;
- Tile drains will be avoided and/or protected (e.g., tower locations, temporary construction access), to the extent practical;
- Access roads, staging areas, tower construction and stringing activities will be constructed to a minimum length and width required to accommodate the safe movement of construction equipment;
- Work will be limited to the planned access roads, staging and work areas. If a later expansion to these areas is required, it will be discussed with the landowner in advance;
- Where temporary access roads and work pads are built in tiled agricultural areas, mats, or geotextile and crushed rock, or equivalent means, will be utilized to protect tile drains;
- Equipment with low bearing capacity will be used to minimize potential damage to tile drains, where practical; and,
- Where practical, some construction and maintenance activities will be scheduled to avoid sensitive times of the year (e.g., extreme wet periods), although it is recognized that this may not be feasible in all circumstances.

### **7.1.7 Livestock Stress, Loss or Injury**

Construction and maintenance activities are inherently loud and will occur in proximity to livestock managed areas (grazing fields, pastures, etc.) resulting in potential for livestock stress, injury or loss. Some construction activities such as the potential use of implosive conductor splicing may scare or startle agricultural livestock. These effects are anticipated to be temporary in nature and of a relatively short duration. To minimize impacts to livestock the following mitigation measures will be implemented:

- Landowners will be informed in advance of upcoming work activities which may disturb or pose a risk to livestock, and consulted with respect to potential mitigation measures, such as moving or containing livestock, as necessary;

- Vehicle and equipment travel on agricultural lands will follow the ROW, or existing roads, trails and paths to the extent practical;
- Field crews will be informed about livestock in the vicinity of work areas to confirm they are aware of the need to secure gates, are cognizant of noise sensitivity controls, and to ensure clean-up of construction materials and debris at the end of each day to minimize potential livestock ingestion;
- If excavations cannot be closed immediately, exclusion fencing will be erected to protect livestock from entering;
- Vehicles/equipment will be inspected and cleaned as necessary to prevent the potential introduction or spreading of diseases;
- Existing gates and fences will be used as required. All fences and gates will be left in "as-found" condition following construction;
- Livestock access control gates and fencing will be installed during construction at roads and between fenced fields as necessary to prevent escape of livestock or movement of livestock into work areas;
- Equipment and machinery used on site will be maintained in good working condition with functioning mufflers;
- Prior to any use of implosive splicing, a Blasting Communication and Management Plan will be developed outlining proper storage, security, detonation, and notification requirements;
- Notify area residents, municipal authorities, police department, and other crews within 1.6 km about the use of implosive splicing, at least one week prior to the work commencing;
- Signs shall be posted on all roadways leading to a blasting area in accordance with government rules and regulations; and,
- Maintain safe distances of the blasting site from other employees, vehicles, equipment, structures, and fire hazard sources. Perform blasts during pre-determined times.

#### **7.1.8 Potential GPS Signal Interference**

During consultation with local farmers, concerns were raised that the transmission line may potentially interfere with automated or GPS-guided agricultural equipment (e.g., auto-steer). Hydro One acknowledges the concerns raised as well as insistence by some farmers currently working fields below transmission lines, that localized issues have been observed beneath the transmission lines. While we do not anticipate effects to communication systems in farm equipment, Hydro One will work with concerned farmers to collect information on the systems of concern and contact manufacturers of



these systems to gain further insight into potential concerns and possible solutions if applicable. While obstructions such as buildings or trees are known to block reception of GPS signals, published studies assessing these concerns indicate that overhead power line conductors are too thin to cause appreciable screening.

## 7.2 Forestry Resources

As indicated in **Section 4.2**, there is no potential for the proposed Project to affect forestry resources; therefore, no potential effects have been identified for the proposed Project.

## 7.3 Archaeological Resources

As noted in **Section 4.3.1**, a Stage 1 Archaeological Assessment was completed by TMHC (2022; PIF # P324-0711-2022). The Stage 1 Archaeological Assessment determined that the LSA for the preferred route contains lands with potential to support archaeological resources. A Stage 2 Archaeological Assessment is required for the technically preferred route, for all lands exhibiting archaeological potential that have not been previously assessed. Hydro One commits to completing Stage 2 Archaeological Assessments for these identified areas of archaeological potential along the preferred route as early as possible during detailed design and prior to ground disturbing activities associated with construction work occurring on these areas, or with acceptable avoidance and mitigation measures applied. Archaeological assessment reports will be submitted to MCM where they will be reviewed to ensure conformance with the requirements of the *Ontario Heritage Act*. If the Stage 2 Archaeological Assessment identifies the need for further assessment, a Stage 3 Archaeological Assessment will occur as required and as outlined in the “Standards and Guidelines for Consultant Archaeologists” (MCM, 2011). Copies of all Archaeological Assessment reports will be filed for acceptance with MCM prior to construction. A combination Stage 1/2 Archaeological Assessment was completed at the corridor lands adjacent to the Thames River crossing by TMHC (2022; PIF #P324-0740-2022) and all locations assessed met provincial standards and no further work was recommended by the consulting archaeologists.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to

carry out an archaeological assessment, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with Ontario Regulation 30/11 the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at [archaeology@ontario.ca](mailto:archaeology@ontario.ca)) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.

## **7.4 Built Heritage Resources and Cultural Heritage Landscapes**

Based on the findings of the Cultural Heritage Existing Conditions (CHEC) Report, there is the potential for Project-related works to adversely affect 52 known or potential heritage resources along the preferred route alternative, including 51 properties with potential Cultural Heritage Value or Interest (CHVI) and one crossing of the Thames River, Cultural Heritage River. Of the 51 properties of known and/or potential CHVI within the PSA of the preferred route, two are located within the transmission line ROW in association with a Built Heritage Resource and a Cultural Heritage Landscape, respectively.

Following the selection of the preferred route, WSP conducted a Cultural Heritage Preliminary Impact Assessment for the properties with known or potential CHVI along the preferred route. The Preliminary Impact Assessment identified that five resources may be directly impacted by the Project, six resources may be affected by vibration associated with construction work, and 17 resources require post-construction restoration to mitigate potential impacts. The Project will cross the Thames River, a Canadian Heritage River. The proposed crossing of the Thames River occurs adjacent to the site of an existing transmission line crossing, and utilizes unused transmission corridor lands that were previously acquired for a future transmission line. The crossing will consist of overhead transmission lines and will not result in an alteration of the course or flow of the river itself. Accordingly, no direct or indirect impacts are anticipated to the Thames River.

To minimize potential adverse effects to built heritage resources and cultural heritage landscapes, work will be planned in a manner that avoids adverse effects to the

identified potential built heritage resources and cultural heritage landscapes to the extent practical. With regards to vibration from construction, it is anticipated that helical (screw) pile foundations will be utilized for the Project; vibrations associated with the installation of these foundations are negligible. Vibration from general construction activities is discussed further in **Section 7.5.6** of this ESR. Construction access and laydown areas will be temporary and restored to pre-existing conditions following the completion of construction. Where an identified built heritage resource cannot be feasibly avoided and will be directly impacted through destruction, alteration, or disruption, Hydro One will undertake property specific Cultural Heritage Evaluation Reports (CHERs) and/or Heritage Impact Assessments (HIAs). CHERs and HIAs will be conducted as early as possible during the detailed design phase, subject to receiving permission to access the properties for these surveys. The additional studies will confirm the CHVI and heritage attributes of the built heritage resource and identify all adverse effects. All evaluation and assessment will be in compliance with the Hydro One Cultural Heritage Identification and Evaluation Process (2020) and MCM Standards and Guidelines (2011).

## **7.5 Land Use and Communities**

### **7.5.1 Business Operations**

Project activities are required in areas of existing industrial operations such as those located in the western portion of the Township of St. Clair, adjacent to the St. Clair River and Highway 40. There is potential for disruption to the function and to the access of industrial operations during the construction phase of the Project; however, it is expected to be minimal and temporary in nature.

To minimize disruptions and/or impacts, contact will be maintained with commercial property owners with the potential to be impacted during construction. Business access will be maintained at all times during construction, and in instances where access cannot be maintained, arrangements will be made for alternate access prior to construction activities starting and appropriate road signage will be provided. Where seasonal businesses are identified, efforts will be made to avoid disruption during peak/busy seasons, to the extent practical.

Due to the need to maintain a redundant transmission supply to the Wallaceburg TS for the duration of construction (removal of the existing N5K 115 kV transmission line, and conversion of Wallaceburg TS from 115 kV to 230 kV), there is a high probability that some brief planned outages to transmission circuits will be required to facilitate line connections during construction. These outages are anticipated to be needed for

approximately four days total during construction and will only affect facilities that are connected directly to the transmission grid (the distribution supply to homes and businesses in the area will not be affected). Hydro One will work with any affected transmission-connected facilities to provide advance notification and discuss potential means to mitigate the impact of these temporary outages to their operations.

Access to construction areas will be carefully designed to avoid and minimize adverse effects. Advanced notice will be provided to nearby residences, farmers, landowners and commercial operations, the MTO, and emergency response services outlining the location of entry/exit points for the construction site (e.g., at the transmission line and Highway 40), as well as the schedule for construction work or construction related traffic in those areas. Road signage will also be created and installed to reflect this information.

#### **7.5.2 Effects to Existing and Future Land Use Designations and Potential Future Development**

The Project is within the County of Lambton, Township of St. Clair and the Municipality of Chatham-Kent's OP designated areas. The outline of land use policies and OP acceptable uses and how the Project fits into provincial policy and local OPs is outlined in **Section 4.4.1**. Generally, OPs include support towards energy transmission and investment in southwestern Ontario. Specifically, the local OPs allow for the provision of opportunities to develop energy supply including electricity transmission facilities in all land use types. It is recognized that the proposed Project will cross multiple types of current land use designations, including agricultural and commercial, and industrial lands. While there are a number of compatible land uses within the transmission line corridor, the location of a transmission line corridor will introduce certain restrictions to future development potential within the corridor. Throughout the province, development (both residential and commercial/industrial) occurs around and adjacent to existing transmission line corridors and stations. Uses deemed to be compatible with overhead transmission lines are often approved within transmission line ROWs. Hydro One has existing departments and processes to review proposals for developments that are planned adjacent to or within transmission line ROWs and facilitate compatible uses of these corridors. Typically, there are no restrictions placed on development or new construction outside of the transmission line ROW itself.

Where and when future development projects or initiatives are proposed to occur along or within the ROW for the Project, Hydro One will apply its existing processes to review and facilitate these future developments, including potential compatible uses within the transmission line ROW. In addition, Hydro One will work with local municipalities to



consider potential means of accommodating potential future development during design of the transmission line, within the property fabric traversed by the transmission line ROW.

### **7.5.3 Effects to Local Roads and Traffic**

The proposed Project is located within a rural landscape, with a number of provincial highways serving as key access routes through southwestern Ontario. Construction activities have potential to cause disruption to provincial highway traffic and to local traffic on municipal and county roads during construction phases of the proposed Project. Specifically, stringing of conductors across roads and highways and the construction of new access roads, including the new permanent Lambton TS access road (off Oil Springs Line), may require temporary road closures, rolling closures, lane occupancy and/or detours. The presence of heavy equipment may also increase traffic and loads which may result in localized wear and tear on lower order roadways. Effects to road and highway traffic and roadways are expected to be minimal and temporary in nature. Potential disruption to airports/aerodromes and railway lines are not anticipated.

Temporary effects to roads and traffic are largely unavoidable. To mitigate potential impacts from construction activities, Hydro One will:

- Complete a pre- and post-construction road survey to document impacts to local roads caused by heavy equipment and increased construction traffic during construction activities. Survey results will be shared with Municipal staff in advance of construction work commencing, as necessary. Damage caused as a direct result of construction activities associated with the Project will be repaired upon completion of construction activities;
- The Project will adhere to seasonal load restrictions;
- Where required, a Traffic Control Plan will be developed and shared with local municipalities, as necessary;
- Construction haul routes and schedules will be shared with local municipalities in advance of construction, as necessary;
- Construction traffic will access the construction area from the existing road network at specified construction access/egress locations;
- Common parking areas will be established for construction crews;
- To the extent practical, in an effort to avoid road closures and other disruptions during stringing, conductor stringing will utilize rider poles, boom-tipped riders, or other protective measures in an effort to avoid road closures and other disruptions during stringing, to the extent practical;

- If temporary road or highway closures (e.g., rolling closures) are required during stringing or other construction activities, the construction contractor will coordinate closely with the appropriate road authority to ensure that proper notice is provided and that required signage and traffic controls are utilized, and that the duration of any temporary closures will be minimized to the extent practical;
- Where construction work is planned to directly affect local traffic (e.g., temporary road or lane closures), local advertisements (e.g., radio, newspaper, etc.) will be issued and road signage will be erected to provide notification / pre-construction information to area residents on timelines and potential detours, if required; and,
- Traffic control officers or flag persons will be assigned to assist with construction entry/exit, as necessary.

With the implementation of the mitigation measures described above, the proposed Project is not anticipated to have a long-term net effect on local roads and traffic.

#### **7.5.4 Mud and Construction Debris**

Construction activities may result in the accumulation of mud and construction debris on and adjacent to local roads in construction areas. These effects have the potential to migrate to areas outside of the construction zone.

Construction will be completed with general clean site policies enforced requiring pick-up and disposal of refuse and construction waste at an approved waste management facility on a regular basis. Mud related to construction activities will be removed from local roads and access roads as necessary throughout construction. Mud mats will be installed (as needed) as a mechanism to reduce the transport of debris off-site. Vehicles and equipment will be regularly inspected and washed and maintained at work areas as necessary. Formal cleanup and site restoration (e.g., restoration planting and seeding) will further minimize this potential effect as construction progresses and is completed.

With the implementation of the mitigation measures described above, mud and construction debris generated by the proposed Project is not anticipated to have a long-term net effect.

#### **7.5.5 Electric and Magnetic Fields (EMF)**

EMF are invisible fields that surround electrical equipment, such as power cords, wires and everyday household items like microwaves, televisions and vacuums. EMFs are strongest when close to their source. As you move away from the source, the strength of the fields fades rapidly.



Hydro One has a dedicated team that regularly monitors global studies around electric and magnetic fields (EMF) and ensures that our infrastructure is built and maintained following best practices and industry standards. We look to Health Canada, the World Health Organization and the International Commission on Non-Ionizing Radiation Protection (ICNIRP), for guidance on EMF and our approach. Based on global studies which have and continue to be regularly monitored, these organizations indicate members of the public in the vicinity of transmission lines do not need to take precautionary measures to protect from fields produced by electricity at extremely low frequencies because exposures, which includes transmission infrastructure.

Hydro One has developed an Information Sheet that addresses concerns related to EMF is available in **Appendix D**.

EMF values from the proposed Project are expected to remain significantly below the ICNIRP exposure guidelines.

#### **7.5.6 Noise and Vibration**

Construction and maintenance activities have the potential to affect ambient noise and vibration levels while the operation of the transmission line has the potential to affect noise levels during temporary weather events (i.e., foul-weather). These effects, in turn, may create temporary nuisance or disturbance effects for local residents, land users and wildlife.

All work is expected to be completed using common construction methods and in general accordance with the ministry's Publication NPC-115 "Construction Equipment", Publication NPC-118 "Motorized Conveyances" and Publication NPC-119 "Blasting". The noise and vibration associated with construction would most likely be a result of activities, such as general site grading, foundations work, construction traffic and implosive splicing. Each of the aforementioned activities require the use of various pieces of heavy equipment, such as bulldozers, front-end loaders, small trucks, backhoes, bobcats, dump trucks, compactors, concrete trucks and/or cranes. The movement or delivery and worker vehicles would also add to the noise levels during the construction period.

Noise and vibration effects are anticipated to be short-term, temporary and transient during the construction period. Specific to vibration, it is expected to be temporary in nature, occur only during specific activities (e.g., implosive splicing), and limited to the immediate vicinity of the construction work area. Indirect noise disturbance effects on wildlife during construction can include temporary declines in habitat occupancy, as well

as changes to mobility and feeding habitat patterns. Mitigation measures to reduce potential nuisance effects resulting from noise and vibration include:

- Sensitive receptors will be identified in the Project-specific EMP, for consideration when planning work such as implosive splicing locations;
- Where geotechnical conditions and engineering requirements allow, foundation types (such as helical piles) that minimize vibrations during construction will be used;
- Equipment and machinery used on site will be maintained in good working condition;
- Prior to any use of implosive splicing, a Blasting Communication and Management Plan will be developed outlining proper storage, security, detonation, and notification requirements;
- Area residents, municipal authorities, police department, and other crews within 1.6 km will be notified about the use of implosive splicing one week prior to the work commencing;
- Signs shall be posted on all roadways leading to a blasting area in accordance with government rules and regulations; and
- A safe distance of the blasting site will be maintained from other employees, vehicles, equipment, structures, and fire hazard sources. Blasts will be performed during pre-determined times and outside of electrical storms or adverse weather conditions.

Construction activities will also conform to local noise control by-laws (Township of St. Clair Noise By-Law 44 of 2014 and Municipality of Chatham-Kent Noise By-Law 178 2017). Noise By-Law exemptions will be sought if work is required outside of the hours specified in the aforementioned by-laws (e.g., overnight).

Noise sources and vibration levels from maintenance activities and operation after construction would be variable, are expected to be limited to a short duration, and would occur periodically over the life of the proposed Project. With exception of periodic maintenance activities (e.g., inspection from ground-based vehicles and vegetation maintenance, etc.), no additional noise (or vibration) sources are expected during maintenance of the proposed Project. Therefore, no additional mitigation is required during the maintenance and operation of the Project.

Noise emitted by transmission lines during normal operation relates to a number of different factors, such as weather conditions and how heavily loaded the line is. For example, during regular weather, our lines are typically almost silent, but during more

severe weather like thunderstorms, the noise levels can be raised. Regarding the potential to affect noise levels as a result of the operation of the transmission line, Hydro One is committed to investigating the application of the ministry's final draft Publication NPC-360 "Protocol for the Measurement and Prediction of Audible Noise from HV Transmission Lines" during detailed design.

The upgrade of the Wallaceburg TS from 115 kV to 230 kV will require the installation of new 230 kV transformers at the station, which have the potential for greater noise emissions than the existing 115 kV transformers. Initial noise modelling has been conducted for the planned TS upgrade and results indicate that additional noise mitigation measures are not anticipated to be required at this time. The existing Environmental Compliance Approval will be updated to an Environmental Activity Sector Registration (EASR) for noise emissions for the Wallaceburg TS to reflect the station upgrade. Hydro One is further committed to investigating the use of the ministry's Publication NPC-300 "Environmental Noise Guideline – Stationary and Transportation Noise Sources – Approval and Planning" during detailed design.

With the implementation of the mitigation measures described above, noise sources and vibration levels generated by the proposed Project are not anticipated to have a long-term net effect.

#### **7.5.7 Community Benefits Initiative**

While Hydro One always strives to avoid and mitigate potential effects to the Socio-Economic Environment, and restore areas that are affected by the Project, Hydro One acknowledges there may be net effects. Because these net effects cannot be further avoided or mitigated, they are typically compensated for by undertaking positive activities. In an effort to offset net effects, Hydro One is committed to working with municipalities in the area to identify opportunities that could enhance and contribute to the broader landscape, recognizing that community benefits can be varied and diverse in nature.

### **7.6 Mineral and Petroleum Resources**

#### **7.6.1 Aggregate Extraction**

As discussed in **Section 4.5**, there are no areas within the PSA used for the extraction of aggregate; therefore; no potential effects have been identified for the proposed Project.

### **7.6.2 Petroleum Resources**

Although the proposed Project falls within portions of a petroleum pool resource area as well as crosses several petroleum and natural gas pipelines, the proposed Project is not anticipated to have a temporary and/or permanent effect on petroleum pools and operations in proximity to the proposed Project.

## **7.7 Natural Environment Resources**

### **7.7.1 Physical Environment**

#### **7.7.1.1 Physiography and Geology**

The existing physiography, topography and geology is expected to remain as is following the construction of the proposed Project. Therefore, no net effects on the physical environment have been identified for the proposed Project.

#### **7.7.1.2 Spills**

During construction and maintenance activities, there is the possibility of spills from the release of oils and fuels from construction/maintenance vehicles and equipment. There are a number of mitigation measures to reduce the risk of spills and to minimize the effect in the unlikely event that a spill occurs.

An Emergency Response Plan as well as spill cleanup equipment will be maintained and readily accessible at all times during construction and maintenance activities. Refuelling of vehicles and equipment will be completed in designated locations, a minimum of 30 m away from sensitive receptors (e.g., source water protection areas, watercourse, wetlands, etc.) while utilizing emergency spill trays. In the event refuelling is required outside of designated areas, additional containment or other mitigation and spill prevention measures will be utilized. Fuelling operations will require the operator to visually observe the fuelling process at all times.

There are a number of additional mitigation measures to reduce the risk of spills and to minimize the effect in the unlikely event that a spill occurs. These measures include the following:

- Equipment will be inspected regularly during construction to ensure it is clean and free of leaks;
- Areas impacted by a spill will be secured, and unauthorized personnel will be kept out of the affected area until further assessment and/or clean-up is conducted;

- Clean-up and the disposal of contaminated materials will be managed in accordance with provincial regulations and guidelines;
- Fuels, chemicals, lubricants or other deleterious substances will be stored on level ground in properly contained storage areas;
- Only approved aboveground petroleum storage tanks will be used during the construction phase of the Project and will be stored in designated fuelling areas and with additional temporary containment measures;
- Work conducted near Provincially/locally designated Vulnerable Areas (namely Wellhead Protection Areas [WPAs]; Intake Protection Zones [IPZs]) will be avoided or limited, where practical; and,
- SCRCA, the LTVCA and/or the Township of St. Clair, County of Lambton and Municipality of Chatham-Kent will be consulted in order to undertake the proper action for managing the potential threats to source water protection areas.

The new 230 kV transformers to be installed at the Wallaceburg TS will be situated on spill containment pits that are connected to an oil-water separator, to protect against the risk of an inadvertent release of mineral insulating oil from the transformers.

Should a reportable spill occur, the MECP Spills Action Centre (SAC) will be notified of all reportable spills and containment and remediation measures undertaken.

#### **7.7.1.3 Waste Generation**

Construction waste would be generated by the proposed Project and would need to be disposed of at appropriate waste reception or recycling facilities. Waste produced during the construction period may include non-hazardous wastes (packaging, spent lubricating cartridges, coffee cups, etc.) and hazardous wastes (pneumatic oils from hydraulic systems, gasoline and other lubricants/oils).

Hazardous waste (solid and liquid) should be transported by MECP licensed waste haulers to MECP registered disposal sites. Good management practices are recommended to prevent spills and contamination during construction (see above). Any temporary waste on-site should include the use of secured containers in designated sites away from sensitive areas and removed from the site on an ongoing basis. With respect to concrete wash water, all water from concrete chute washing activities will be contained in leak proof containers or in an approved settling pond off site. Waste produced will be minimized, segregated, and recycled where possible, and all testing, handling, storage, transport and disposal of waste will be completed in accordance with all applicable legislation.

With the implementation of the mitigation measures described above, waste generated by the proposed Project is not anticipated to have a long-term net effect.

#### **7.7.1.4 Excess Materials Management**

Project activities have the potential to produce excess materials during construction and maintenance phases. Excess materials can include topsoil and subsoil from excavation or stripping activities. All efforts will be made to reuse soils onsite where practical and feasible; however, excess materials that cannot be managed onsite will be handled in accordance with O. Reg. 406/19. In the event soils are stockpiled, they will be managed in ways that are not conducive to bank swallow nesting (e.g., slopes maintained at 70° or less, and/or covered or bare soils seeded during the breeding season).

Soil testing to meet the requirements of O. Reg. 406/19 will be completed, if necessary, during geotechnical investigations prior to or during construction. If excess material is deemed suitable, Hydro One will work with landowners to explore opportunities for beneficial reuse within the property parcel. Reuse sites will be selected based on the characterization of excess soils, the need for a beneficial reuse and the volume of excess soils required. Any excess soil required to leave the site will be tracked for the Project area to the final deposit site, if required, and taken to an approved facility licensed to accept excess soil based on its characterization or other off-site location that can demonstrate beneficial reuse.

### **7.7.2 Atmospheric Environment**

#### **7.7.2.1 Climate Change**

It is important to note that the proposed Project is not a power generation project and its operation would not emit greenhouse gases. However, there would be temporary emission of fossil fuels from the vehicles and equipment used during construction and maintenance activities associated with the proposed Project. Idling of construction vehicles and equipment will be kept to a minimum and GPS or other navigational tools will be utilized to optimize routing to reduce fossil fuel emissions. The emissions directly related to the construction and maintenance of this Project would be minimal.

Hydro One recognizes that a changing climate is likely to result in an increase of unusual weather patterns and severe weather events, which could potentially damage or adversely affect infrastructure and other public facilities. The infrastructure being planned for this proposed Project will be engineered to adequately withstand the effects of climate change.



### 7.7.2.2 Air Quality

Construction activities have the potential to create temporary, localized effects on air quality in the immediate vicinity of the proposed Project. Emissions from construction activities are primarily comprised of fugitive dust and combustion products from the movement and operation of construction equipment and vehicles. These emissions, in turn, may create a nuisance or disturbance effect for local residents and land users during the construction phase.

During construction, equipment and machinery will be maintained in good working condition to minimize excessive exhaust. Idling of construction vehicles and equipment will be kept to a minimum and GPS will be available in vehicles to optimize routing to reduce fossil fuel emissions. Additional mitigation measures to reduce nuisance effects of dust and air emissions during construction include the following:

- Vehicles will not exceed posted speed limits;
- Minimize and stabilize vehicular traffic and exposed soils in high traffic areas with suitable cover material;
- Avoid excavation and other construction activities that have the potential to release airborne particulates during windy periods, to the extent practical;
- If excavation or other construction activities with a potential to release airborne particulates must occur during windy conditions, dust controls will be utilized;
- Effective dust suppression techniques, such as on-site watering, will be implemented as necessary. Non-chloride dust suppressants will be used;
- Cover or otherwise contain loose construction materials with the potential to release airborne particulates during transport, installation or removal to the extent practical; and
- Disturbed areas will be restored as soon as practical to minimize duration of soil exposure.

Emissions from maintenance activities during operation will be variable, are expected to be short-term in duration, and would occur periodically over the life of the proposed Project. Nuisance effects posed by these temporary activities are expected to be negligible and would not result in noticeable or long-term changes to local air quality.

### 7.7.3 Noise and Vibration

There is the potential for increased noise and vibration during the construction, maintenance activities; however, as noted in **Section 7.5.6**, they are anticipated to be short-term, temporary, transient, and intermittent. This is because the proposed Project is linear, and activities would be planned sequentially. The duration of construction and

maintenance activities at any one location along the transmission line corridor would be limited and intermittent: thereby, reducing the amount of time of noise and vibration at any given area. From an operational perspective, the transmission line's potential to affect noise levels is specifically associated with temporary weather events (i.e. foul-weather).

The upgrade of the Wallaceburg TS from 115 kV to 230 kV will require the installation of new 230 kV transformers at the station, which have the potential for greater noise emissions than the existing 115 kV transformers. Initial noise modelling has been conducted for the planned TS upgrade and results indicate that additional noise mitigation measures are not anticipated to be required at this time. The existing Environmental Compliance Approval will be updated to an Environmental Activity Sector Registration (EASR) for noise emissions for the Wallaceburg TS to reflect the station upgrade. Refer to **Section 7.5.6** for additional information.

#### **7.7.4 Surface Water Resources**

During construction and certain maintenance activities, the potential effects of the proposed Project on surface water include changes in surface water quantity or quality conditions in nearby municipal drains or watercourses due to site preparation, earthworks, discharge of construction water, and operation of vehicles and equipment.

##### **7.7.4.1 Potential Effects on Surface Water Quantity**

Project activities during the construction phase that have the potential to influence surface water quantity conditions in nearby municipal drains and watercourses include:

- Site preparation for the new transmission towers, construction of temporary access roads, construction of the new permanent access road to the Lambton TS, and temporary laydown areas;
- Construction adjacent to municipal drains, watercourses and in/adjacent to wetland areas; and,
- Discharge of construction water from dewatering activities.

Site preparation, including activities such as removal of vegetation, locates/daylighting of potential existing buried utilities, and construction of temporary access roads would be required in support of transmission tower installation. Vegetation removals during construction have the potential to result in a temporary increase in overland flows, potential organic and sediment loading to nearby municipal drains and watercourses, as well as potential water temperature increases in instances where vegetation removal adjacent to watercourses is required. Similarly, vehicle and construction equipment

have the potential to create temporary rutting in soils which have the potential to result in localized ponding and/or channelization leading to additional erosion of soils.

- To avoid or minimize the potential adverse effects related to vegetation removals and soil rutting on surface water quantity, the following mitigation measures would be implemented:
- Where practical, activities with potential to cause rutting, ponding/channelization or erosion will be planned during stable and dry ground conditions;
- Existing watercourse crossings and constructed access roads will be utilized to the extent practical;
- The use of Erosion Sediment Control (ESC) measures (e.g., erosion blankets/coir mats, silt socks, etc.) will be utilized, where necessary;
- Where required, temporary crossing structures will be installed for construction access at watercourses and other low-lying areas and will be removed upon completion of construction;
- The use of constructed access (e.g., mats or geotextile/crushed stone) roads will be utilized and will be monitored to ensure there is no surface ponding to minimize rutting and pooling of water;
- Vegetation removals will be minimized to the extent practical. Compatible vegetation will be retained within riparian areas adjacent to watercourses;
- Machine clearing and grubbing will be restricted near sensitive environmental areas; hand clearing will be required within watercourse banks/riparian areas;
- Replant with compatible vegetation (e.g., shrubs and native seed mix) as required;
- Where erosion is a concern, exposed soils in previously vegetated areas will be re-vegetated as practical or have other erosion or sedimentation measures applied as necessary;
- Where applicable and possible, vegetative buffers will be maintained to protect receptors;
- Construction access and laydown areas will be restored following completion of construction;
- Work will be staged to minimize the extent of exposed soils (i.e., bare soils without vegetative cover or erosion and sediment controls such as coir blankets) at any given time;
- Cleared vegetation will be relocated to designated areas away from water features;

- Topsoil will be stockpiled in designated areas away from water features and will utilize containment measures such as erosion and sediment control as appropriate;
- Disturbed areas will be stabilized and restored as soon as practical;
- Equipment operation adjacent to watercourses and wetlands will be minimized, where possible;
- Works adjacent or around water feature banks will be conducted during appropriate conditions and times of the year (e.g., dry or frozen conditions), to the extent practical;
- Vegetation buffers along water feature banks will be maintained to the extent practical, and restored; and,
- SCRCA and LTVCA will be consulted (specifically for ESC measures within regulated areas) during detail design.

With the implementation of the mitigation measures described above, vegetation removals and temporary soil rutting are not anticipated to have a long-term net effect on surface water quantity in the receiving municipal drains/watercourses.

The Project is predominantly located within agricultural lands. It is anticipated that the proposed Project will utilize existing access routes wherever practical, and the number and location of access roads would be established during the detailed design phase. Access roads will be chosen to avoid crossing municipal drains or watercourses, or use existing crossings, where practical. In the event the proposed Project requires the construction of new access roads, their construction has the potential to disrupt sheet flow of surface waters over agricultural lands. The proposed new permanent access road at the Lambton TS will replace an existing access road at the site.

To avoid or minimize the potential adverse effects associated with the installation of access roads on surface water quantity, the following mitigation measures would be implemented:

- Existing, natural drainage patterns and flows will be identified and maintained to the extent practical;
- Equalization culverts or similar methods may be used in construction of access roads. If surface water accretion issues are identified during construction, remedial measures (e.g., retroactive installation of equalization culverts within temporary access roads) will be undertaken promptly;
- Existing watercourse crossings and constructed access roads will be utilized to the extent practical;

- Construction and access planning will take into account tile drains to ensure continued function of drainage tiles to the extent practical. Discussions with landowners will be held where further information is needed to avoid adverse effects; and,
- The use of ESC measures (e.g., erosion blankets/coir mats, silt socks, etc.) will be utilized, where necessary.

With the implementation of the mitigation measures described above, installation of temporary and permanent access roads is not anticipated to have a long-term net effect on surface water quantity in the receiving municipal drains/watercourses.

Site preparation would also be required for temporary laydown areas, and conductor “pulling pads”; the locations of which have not been established. These areas would be placed away from sensitive areas (e.g., municipal drains, watercourses, wetlands, woodlots) to the extent feasible.

The removal and discharge of construction water may be required as a result of dewatering activities in holes or trenches related to foundations. Discharge is expected to occur to nearby lands, of which quantities are expected to be relatively minor. It is not expected that an Environmental Activity and Sector Registry (EASR) or Permit to Take Water (PTTW) would be required from the MECP, but this can only be established with certainty during detailed design. The discharge of construction water from dewatering activities may result in slight increases to surface water levels of aquatic features; however, much of the surface water discharged onto land could infiltrate through permeable agricultural lands.

To avoid or minimize the potential adverse effects of dewatering activities on surface water quantity, the following mitigation measures would be implemented:

- Construction water will be discharged in compliance with permits and/or approvals from MECP and the County of Lambton, Township of St. Clair, and Municipality of Chatham-Kent, as required;
- A construction water management plan will be developed prior to construction and implemented appropriately (e.g., passing discharge water through a filter bag or drum before discharge to the environment to capture sediment and slow down the water velocity, etc.);
- Where possible, opportunities to maximize retention times and reduce surface flow velocities will be executed;

- Where geotechnical conditions and engineering requirements allow, foundation types (such as helical piles) that minimize the amount of construction dewatering required will be utilized; and,
- Where practical, discharge of construction waters is to occur at least 30 m away from sensitive receptors (e.g., watercourses, wetlands, etc.). If discharge of construction waters must occur within 30 m of a watercourse or wetland, additional erosion and sediment controls will be utilized.

With the implementation of the preliminary designs and mitigation measures described above, and the short duration of the dewatering activities, these activities are not anticipated to have a long-term net effect on surface water quantity in the receiving municipal drains/watercourses.

There is potential for Project infrastructure (access roads, towers) to be located within SCRCA/LTVCA regulated lands with the potential to result in impacts to natural hazard lands, wetlands and/or areas of interference. The location of Project infrastructure will be determined during detail design. Net effects on surface water quantity in association with Project infrastructure is addressed in the text above.

To avoid or minimize potential adverse effects of Project infrastructure within SCRCA/LTVCA regulated lands on surface water quantity, the following mitigation measures would be implemented:

- SCRCA and LTVCA will be consulted during detailed design and construction planning;
- Design of the transmission line will avoid or minimize the extent to which transmission towers are located within regulated areas, to the extent practical;
- If necessary, a Permit for Development, Interference with Wetlands and Alternation to Shorelines and Watercourses will be obtained through the applicable Conservation Authority (SCRCA and LTVCA) prior to construction;
- Construction work (e.g., tower construction) within Regulated Areas will be conducted during stable (frozen/dry) ground conditions, to the extent practical (acknowledging that this will likely not be feasible in all situations); and,
- Temporary construction access through regulated areas may involve additional ESC or other environmental mitigation measures.

At the end of construction, the work areas (i.e., tower foundation areas, access roads, pulling pads and temporary laydown areas) will be seeded/re-vegetated and the temporary laydown areas would be restored to their original condition to the extent



feasible. The construction phase of the proposed Project is not anticipated to have a long-term net effect on surface water quantity.

Maintenance activities will be variable, are expected to be short-term in duration, and would occur periodically over the life of the proposed Project. Though short-term in duration, maintenance activities have the potential to result in soil rutting, disrupt sheet flow of surface water over agricultural lands, increase overland flow and mobilization/transportation of organic debris and sediment loading in nearby municipal drains and watercourses.

To avoid or minimize the potential adverse effects of maintenance activities on surface water quantity, the implementation of the mitigation measures outlined above for construction related activities (where applicable) would be implemented during maintenance activities. As a result, maintenance activities are not anticipated to have a long-term net effect on surface water quantity.

#### **7.7.4.2 Potential Effects on Surface Water Quality**

Project activities during the construction phase that have the potential to influence surface water quality conditions in nearby aquatic features (e.g., municipal drains, watercourses) include:

- Site preparation for the new transmission towers, construction of temporary and permanent access roads, and temporary laydown areas;
- Earthworks associated with the construction of access roads, temporary laydown areas, puller pads, etc.;
- Discharge of construction water from dewatering activities to nearby lands; and,
- Operation of vehicles and equipment throughout the construction phase.

Site preparation would consist of removal of vegetation, topsoil tripping and rough grading (where necessary), and stockpiling of materials. These activities would result in the temporary exposure and disturbance of soil with the potential for wind and water erosion and the transport of sediment to aquatic features. Site preparation would also result in the temporary accumulation of cleared vegetation with the potential for mobilization of organic debris and its transport to aquatic features during runoff events. Earthworks would consist of excavation, fill, and stockpiling activities, and would similarly result in disturbance and exposure of soil to wind and water erosion and the transport of sediment to aquatic features. It is expected that the transmission ROW associated with the proposed Project will be restored to similar grades at the various areas of disturbance.

Earthworks will also be required for the construction of temporary access roads as well as the new permanent access road at the Lambton TS, temporary laydown areas, and pulling pads within the various disturbed work areas along the transmission line ROW. Earthworks may also be required for the installation of temporary culverts, including excavation, preparation of culvert pipe bedding, culvert pipe placement, and backfilling. Stockpiling of soil and aggregate materials will also be required in support of earthworks.

Earthworks for the construction of temporary laydown areas, pulling pads, etc., would similarly consist of excavation, fill and sub-grade preparation, followed by the installation of crushed stone overtop of geotextile fabric. Soil and aggregate materials would be stockpiled. Earthworks would also potentially be required during foundation preparations, though, depending on the technology, this may not be required. Earthworks to support the above activities would include stockpiling of soil and aggregate materials.

The measures outlined above to avoid or minimize potential impacts the proposed Project may have on surface water quantity will also serve to avoid or minimize the potential adverse effects of site preparation and other earthwork activities on surface water quality in aquatic features.

In addition, and in support of site preparation and earthwork activities, the following ESC measures will be implemented as a mechanism to avoid and minimize impacts on surface water quality:

- An ESC plan will be developed prior to construction and ESC measures will be identified and implemented as required. Measures such as erosion blankets/coir mats, silt socks, etc., or similar, are expected to form part of the ESC plan, where appropriate;
- Areas with high erosion potential will be identified and avoided, where possible;
- Construction activities near sensitive features or areas may be suspended during extreme wet weather events, and crews will review and consider weather forecasts in their planning of such work;
- ESC installations will only be removed after disturbed areas are restored, accumulated sediment has been disposed, and construction activities in the vicinity are completed;
- In an effort to reduce potential erosion, mechanical or vegetation erosion control measures will be employed, such as buffer strips, erosion control blankets and sedimentation fences, as required;

- Equipment operation on slopes adjacent to streams will be minimized to the extent practical;
- Disturbed areas near watercourses and wetlands or sensitive environmental areas will be restored as soon as practical; and,
- ESC measures will be regularly inspected, including after each significant [ $>10$  mm] rainfall event, and repaired where necessary to maintain functionality.

With the implementation of the mitigation measures described above, and the limited duration of the construction works, site preparation and earthwork activities are not anticipated to have long-term net effects on surface water quality conditions in aquatic features.

The removal and discharge of construction water may be required as a result of dewatering activities in holes or trenches related to foundations of transmission towers. The measures outlined above to avoid or minimize discharge of construction water on surface water quantity will also serve to avoid or minimize the potential adverse effects on surface water quality. As a result, dewatering activities are not anticipated to have long-term net effects on surface water quality in the receiving aquatic features.

#### **7.7.5 Source Water Protection**

During construction and maintenance activities, there is the possibility of contamination of surface water through spills or leaks from the release of oils and fuels from vehicles and equipment. There are a number of mitigation measures to reduce the risk of contamination of source water in the unlikely event that a spill or leak occurs. These measures include the following:

- Maintain an Emergency Response Plan and have readily accessible cleanup materials and equipment at all times during construction and maintenance activities;
- Remediate spills/leaks as soon as possible upon identification and notify the MECP SAC as required;
- Refuelling will be conducted in designated areas with appropriate protective measures and equipment available; and,
- Refuelling areas will be located outside of Source Water Protection (SWP) areas to the extent practical. If refuelling must occur within SWP areas, additional protective measures (emergency spill trays, etc.) may be employed as necessary.

Construction and maintenance activities also have the potential for impacts to designated surface water Intake and Wellhead Protection Areas and Significant Groundwater Recharge Areas. Similar to the above, there are a number of Project-specific mitigation measures which will be implemented as a mechanism to reduce potential impacts. These measures include the following:

- Identify and protect surface water intake protection zones during construction and maintenance activities, as required;
- Comply with relevant legislation and policies such as: *Clean Water Act*, Provincial Policy Statement, Official Plans, and SCRCA/LTVCA Source Water Protection Plans, where applicable;
- Provincially/locally designated Vulnerable Areas (namely Wellhead Protection Areas [WPAs]; and Intake Protection Zones [IPZs]) will be avoided, where practical; and,
- Consult with Indigenous communities, SCRCA and the LTVCA and/or the County of Lambton, Township of St. Clair and Municipality of Chatham-Kent during detailed design and construction planning on Project-specific mitigation measures.

As outlined in **Section 4.6.5**, both SPAs that fall within the PSA have policies related to fuel handling and storage. Both SPAs also identify the requirement for development of a Risk Management Plan if significant threats to SWP are identified based on Project activities. Based on the scope of work for construction, operation and maintenance of the Project, significant threats to SWP have not been identified. For example, handling and storage of fuel is anticipated to be limited to the amount needed for running equipment and bulk fuel storage tanks are not required. Project-specific mitigation measures and best management practices have been detailed, above, to further minimize the potential threat within SWP areas.

#### **7.7.6 Groundwater Resources**

During construction, the potential effects of the proposed Project on groundwater include changes in water quality due to disturbance of pre-existing soil contamination which may exist, changes to existing groundwater quality or quantity due to excavation and construction dewatering, and changes in groundwater flow regime due to the installation of foundations for transmission line towers. It is not expected that there would be any effects on groundwater during the maintenance and operation phase, due to a lack of subsurface disturbance once the transmission line is operational.

Changes in groundwater due to Project activities during construction could also affect the amount of groundwater discharged to nearby watercourses and natural environmental features (e.g., vegetation, fish habitat, wetlands, etc.).

Effects on groundwater due to dewatering would be ephemeral and have a zone of influence measured in the range of several tens of metres. This effect would be limited to the construction phase only. Where geotechnical conditions and engineering requirements allow, foundation types (such as helical piles) that minimize dewatering during construction, will be used.

#### **7.7.6.1 Potential Effects on Groundwater Quality**

Contaminated soil and groundwater containment and disposal measures would be implemented according to the pertinent regulations, as required.

The regional overburden geology is dominated by the St. Clair Clay Plain that exists over much of Lambton County and Chatham-Kent and extends westerly into Essex County. The St. Clair Clay Plain is a regional aquitard that has very low groundwater flow and reduces recharge to deep aquifers. Underlying the St. Clair Clay Plain is bedrock composed of the Kettle Point Formation, which is a black, organic-rich shale. Groundwater moves very slowly in shale bedrock and competent shale also acts as an aquitard. The dominant aquifer in the Project area is found at the base of the overburden and generally consists of sand and gravel and weathered and fractured bedrock. The natural water quality is generally poor with taste and odour issues related to the shale bedrock. The clay overburden is generally thicker in the north (~50 m) and becomes thinner near Wallaceburg (~15 m) and is approximately 25 m thick near Chatham.

Shortly following the completion of the draft ESR, the Project team reviewed the results of early geotechnical investigations conducted along the preferred route and determined that these early data provided enough information to commit to the use of helical (screw) pile foundations for the transmission line structures, and that the helical pile foundations would be installed at depths of approximately 6 m to 9 m bgs. This means that even in the areas where the St. Clair Clay Plain overburden was thinnest, the foundations installed for the Project will remain within the protective clay overburden between approximately 10 m to 30 m (depending on the depth of the overburden at each specific structure location) above the top of the contact aquifer layer.

The helical pile foundations that will be used for the Project are installed by rotating the steel pile slowly into the ground. No soil is removed during this process (e.g., no excavation is required). Helical pile foundations also do not have the vibrations usually

associated with driven steel piles and as stated above, there is no excavation of soil so there are no concerns related to annular seals that are associated with drilled foundation pile systems. It is considered very unlikely that the installation of helical screw piles will impact water wells, even if wells are located relatively close to the tower foundation. Transmission line structure footings generally do not adversely affect the quality of water resources, as effects of construction are often shallow relative to deeper aquifers, temporary in duration, and often less intrusive than other construction methodologies (e.g., excavations for building foundations or driven pile footings).

No adverse effects are anticipated for changes in groundwater quality due to the construction of the proposed Project. If changes in groundwater quality were to occur, it is anticipated that groundwater quality would return to baseline conditions following the implementation of mitigation measures previously outlined above, such as containment and removal of contaminated soils.

#### **7.7.6.2 Potential Effects on Groundwater Quantity**

Groundwater base flow (quantity) is seasonally important to nearby waterbodies and natural environment features, including vegetation, fish and aquatic habitat. As noted above in **Section 7.7.6.1**, following the release of the draft ESR the Project team has confirmed that the transmission structures for the Project will utilize helical (screw) pile foundations, which do not require open excavation or construction dewatering. As such, it is predicted that there would be limited to no temporal effects on groundwater levels and quantity as a result of construction activities.

Construction is occurring predominantly within active agricultural lands. If there is a need to handle any construction waters, it is anticipated that discharge would be to nearby agricultural lands. There would be some runoff from this discharge and some infiltration.

Transmission line structure footings generally do not adversely affect the quantity of water resources, as effects of construction are often shallow relative to deeper aquifers, temporary in duration, and often less intrusive than other construction methodologies (e.g., excavations for building foundations or driven pile footings). As noted above, based on the results of early geotechnical investigations, the Project team is able to confirm that the transmission structures will utilize helical pile foundations, which do not require open excavation to install and therefore construction dewatering is not anticipated to be required during the construction of the new transmission towers.

Though currently not anticipated, if detailed design suggests that construction dewatering is required at a rate greater than 50,000 L/day, a PTTW or EASR would be



obtained from the MECP. The proposed Project would comply with applicable guidelines and legislation, including Provincial Water Quality Objectives, Ontario Drinking Water Standards, Objectives and Guidelines and *O. Reg. 153/04*. Adequate dewatering and discharge plans would be developed prior to construction, and collected water would be contained and tested prior to disposal, if required.

It is anticipated that the municipal wells and local private water wells within the area will not be significantly affected as a result of dewatering activities associated with transmission line tower foundations. If construction dewatering is required for any open excavation, the zone of influence of such dewatering activities is very localized, and the majority of water wells exploit aquifer(s) that are at a much greater depth than the proposed excavations (i.e., bedrock aquifers; **Section 4.6.4**). Where necessary, a hydrogeological assessment will be conducted to inform construction planning, permitting and management.

The effects of any dewatering activities during construction are expected to be temporary, and groundwater levels and flows are expected to return to pre-construction conditions following the construction period. The nature of the subsurface soils, the existence of a high-water table regime, and the small zone of influence to be created by construction dewatering is expected to result in a recovery to the pre-disturbance state in a matter of several days.

### **7.7.7 Designated or Special Natural Areas**

#### **7.7.7.1 East Lake St. Clair Important Bird Area**

The Project overlaps with portions of the Eastern Lake St. Clair Important Bird Area (IBA) which is identified as a critical feeding, resting and staging area for several species. The entirety of the aforementioned IBA overlap contains an existing 115 kV transmission line corridor which will be replaced with a new 230 kV transmission line to accommodate the proposed Project. Although IBAs are not legally protected in their own right, they promote conservation and stewardship of migratory stopover and staging habitat for water birds along the eastern shoreline of Lake St. Clair, while ensuring recreational practices and hunting traditions are maintained.

While the IBA was identified as a mid-point between two migratory flyways (the Atlantic and Mississippi), it is noted that the migration routes differ among species. Through the fall and spring migration field studies conducted, the local region provides migratory pathways for a diversity of bird species. While suitable habitat conditions for water birds within the IBA were not identified within the transmission ROW associated within the

proposed Project, there is potential for birds to collide with the transmission line during the construction and operational phases.

There are a number of mitigation measures to reduce the risk of bird collisions. These measures include the following:

- Replacement of the existing 115 kV transmission line within the IBA;
- Incorporate visual mitigation measures (e.g., bird diverters and/or similar measures) during detailed design as a mechanism to improve visibility of the transmission line at key areas within the IBA;
- In support of detailed design, a review of potential wildlife habitat associated with the transmission line ROW will be used to identify locations for potential visual mitigation measures;
- Towers and access roads will be located to avoid sensitive habitats, where practical;
- Vegetation removal will be completed outside of the migratory bird breeding season (i.e., April 5 to August 31, zone C1 as provided by ECCC 2018), where practical; and,
- In the event vegetation clearing is required during the breeding bird season, nest searches conducted by a qualified terrestrial/avian biologist will be completed.

#### **7.7.7.2 Significant Woodlands**

Significant woodlands were determined to occur in 32 locations within the PSA associated with the proposed Project based on a combination of the County of Lambton, St. Clair Township, and Municipality of Chatham-Kent OP schedules and significant woodland criteria, and the 2022 field survey results. Each of the significant woodland communities were considered common or secure by the province of Ontario. The new transmission ROW will traverse 7.09 ha of significant woodlands, as well as 0.28 ha of confirmed SWH for a rare vegetation community (FODM7-4; Fresh-Moist Black Walnut Lowland Deciduous Forest).

Vegetation clearing will be required for the portion of the significant woodlands within the new transmission line ROW to ensure the safe and reliable operation of the transmission line. These removals will be limited to the extent practical and will not represent a total loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible (e.g., mature woodlot, for an aggregate total of 7.09 ha) with overhead transmission line corridors, to vegetation that is compatible (e.g., shrubs and meadow species). Hydro One will undertake a Biodiversity Initiative to offset habitat loss or transition (e.g., from trees to compatible vegetation communities) that cannot

otherwise be avoided or mitigated. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.

Woodlands play an important role with Indigenous Communities as they support elements required for continued practice of Indigenous culture and rights (e.g., hunting, trapping, plant harvesting, ceremony, etc.). When viewed in a holistic manner by Indigenous communities, woodlands are home to their non-human relatives and hold spiritual and intrinsic value in both human and non-human realms.

Although vegetation clearing for the new transmission line will not represent a complete removal of vegetation on the new ROW, it will result in changes in vegetation composition within an existing woodland community (e.g., transition from taller tree/large shrub communities to shorter-growing forb and shrub communities). Such changes have the potential to produce edge effects (positive, negative and/or neutral), as well as result in habitat fragmentation (e.g., bisecting an existing woodland community). Changes in habitat composition has the potential to result in changes in habitat quality for some flora and fauna, while fragmentation of woodlands has the potential to result in a decline in species occupancy.

In addition to the above, there are a number of mitigation measures to reduce the proposed Project's impact on significant woodlands. These measures include the following:

- Minimize the extent of vegetation clearing required for the Project;
- Incompatible vegetation will be salvaged or felled as appropriate;
- Refuelling of vehicles and/or equipment will occur within a designated refuelling area located away from significant woodlands;
- Tree removals adjacent to watercourses will be cut such their root systems remain intact to maintain soil stability, and compatible bank/riparian vegetation will be retained to the extent practical;
- Tree removals and other vegetation clearing will be completed outside of the migratory bird breeding season (i.e., April 5 through August 31, nesting zone C1; ECCC, 2018) and the bat active season (i.e., March 15 to November 30), where practical;
- Where vegetation clearing is required during the breeding bird season, nest searches will be conducted by a qualified person in accordance with applicable provincial and federal requirements;
- In the event significant woodlands with the potential to support bats require tree removals, bat acoustic surveys may be completed during the month of June in

accordance with agency approved protocols to determine SAR bat habitat use (or lack thereof). Where acoustic surveys confirm SAR bat habitat use, the MECP will be consulted prior to construction regarding permitting/approvals next steps under the ESA;

- Snags (dead standing trees) and cavity trees that do not pose a risk to the construction or operation of the transmission line will be identified and retained, to the extent practical; and,
- Woodlands disturbed during construction will be restored following completion of construction with compatible native species (e.g., native seed mix and shrub stock).

Hydro One further commits to supporting Indigenous Communities with land use planning initiatives, including traditional plant rehabilitation efforts.

#### **7.7.7.3 Conservation Areas**

There are no Conservation Areas within the PSA associated with the proposed Project; therefore, no effects on Conservation Areas as a result of the proposed Project are anticipated. Peers Wetland, a SCRCA managed property (but not a formally designated Conservation Area), is located approximately 90 m away from the proposed ROW at its closest point. Though a small portion of this property lies within the PSA, this area mainly consists of parking area and a small, treed hedgerow. The associated Peers Wetland is well delineated and is approximately 115 m from the proposed Project ROW at its closest point, outside of the PSA. Therefore, no direct effects to the Peers Wetland are anticipated.

#### **7.7.7.4 Areas of Natural and Scientific Interest**

There are no ANSI's located within the PSA associated with the proposed Project; therefore, no effects on ANSIs as a result of the proposed Project are anticipated. Clay Creek Woodland is the closest ANSI and is located approximately 275 m away from the proposed Project ROW at its closest point, and outside of the PSA.

#### **7.7.7.5 Valleylands**

Three significant valleylands were identified within the PSA based on background review. All three valleylands are associated with the three major river crossings (Sydenham River, North Sydenham River, and Thames River) in association with the proposed Project. No additional topographic features or valleylands meeting criteria of Section 8.0 (Significant Valleylands) of the 2010 MNRF Natural Heritage Reference Manual were observed as a result of the 2022 field investigations. Valleylands will be considered during design with respect to tower locations. To the extent practical, work

or disturbance will be avoided within valleylands or areas adjacent to the edge of the valleylands. Additional effects and mitigation measures for valleylands associated with river crossings in support of the proposed Project are described in **Section 7.7.4**.

#### **7.7.7.6 Provincially Significant Wetlands**

One PSW, Bickford Oak Woods Wetland Complex, was observed within the PSA associated with the proposed Project. In addition to the Bickford Oak Woods Wetland Complex, the wetland units observed during ELC investigations may meet criteria for significance under the Natural Heritage Reference Manual (NHRM; 2010) and OWES (MNRF, 2022) as they have the potential to provide biological, hydrological, and special feature components.

Tower locations and access roads will be located such that they will avoid wetlands, to the extent practical. The limits of wetlands will be clearly demarcated within the Environmental Management Plan to limit construction activities within wetland communities, where practical.

Generally, mitigation measures described in **Section 7.7.2, 7.7.4, and 7.7.7** would also be employed with respect to wetland areas. In general, the removal of trees and ground vegetation will be minimized during construction to the extent practical. In addition, construction activities for the proposed Project will be restricted to designated work areas. Wherever practical, access to the construction areas for the proposed Project will utilize existing access roads. Where construction access in wetlands cannot be avoided, temporary access roads and work pads will be built using measures such as mats, geotextile and crushed rock, or equivalent means, which will protect the underlying soils during construction and can be easily removed when construction is complete.

Equalization culverts, French drains or similar measures may be employed as necessary for any constructed access required within wetlands to maintain surface flow and drainage patterns during construction. Additional materials (i.e., rip-rap, filter cloth, and silt fencing) should be readily available in case they are needed promptly for erosion and/or sediment control. No maintenance or fueling of machinery will be planned to occur within 30 m of the wetland. If such work must occur within 30 m of a wetland community due to unforeseen circumstances, additional spill protection measures (e.g., portable containment) will be utilized. Any wetlands disturbed during construction will be restored following completion of construction with compatible native species (e.g., native wetland seed mix, shrub stock, or a combination of both as appropriate).

An Erosion and Sediment Control Plan will be employed to identify mitigation for wetland communities and will identify locations for protective fencing. In addition, no refuelling of vehicles and/or equipment would be permitted adjacent to wetlands (i.e., a 30 m buffer) to avoid potential spills (e.g., fuel, oil, lubricant) from migrating and entering aquatic habitats. Spill kits will be located at work areas to mitigate the effects of accidental spills or releases, should they occur during construction.

Hydro One will undertake a Biodiversity Initiative to offset habitat loss that cannot otherwise be avoided or mitigated. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes in consultation with SCRCA, LTVCA, Indigenous communities and other interested groups. Where practical, incompatible vegetation within wetland communities will be cut during firm soil conditions and will be restored with compatible vegetation (e.g., native seed mix and shrubs). Wetland areas impacted during construction (directly or indirectly) will be restored to pre-construction drainage patterns.

#### **7.7.8 Natural Heritage Features**

As mentioned previously in **Section 4.6.7**, while the majority of the PSA consists of active agricultural lands, the preferred route was identified to contain woodlands, wetlands, wildlife and SAR habitat, as well as direct and/or seasonal fish habitat.

Construction associated with the proposed Project may induce both temporary and permanent disturbance to natural heritage features. Permanent adverse effects may include the potential removal of 10.53 ha of incompatible vegetation and associated wildlife habitat to accommodate the proposed double circuit 230 kV transmission line. With exception to the 10.53 ha of incompatible vegetation removal requirements, it is anticipated that the long-term adverse effects to natural heritage features can generally be avoided or mitigated through tower placements and other mitigation measures; the locations for towers will be determined during the detailed design phase. Temporary adverse effects include those from work operations that physically, or visually disrupt wildlife during active construction. Although no effects on natural heritage features are anticipated during the maintenance and operation phase, as indicated in **Section 7.7.7.1**, there is potential for birds to collide with transmission lines during the operational phase of the proposed Project, and Hydro one commits to installing visual diverters to mitigate this effect.

Construction activities would be restricted to designated work areas and protective barriers, such as fencing, would be erected to protect adjacent features from construction related effects. For example, silt fencing and/or other sediment and erosion



control measures would be installed as required to prevent the migration of sediment-laden water from the site. In addition, vegetation removal limits would be clearly demarcated. Prior to construction, a detailed construction plan would be developed and the SCRCA and the LTVCA would be consulted for work in regulated areas.

Other measures that would be undertaken to reduce adverse effects resulting from the construction of the proposed Project include:

- Restricting access and minimizing travel/work areas to maximize retention of compatible vegetation;
- Implementing sediment and erosion controls;
- Selectively cutting and retaining compatible vegetation to promote regeneration;
- Disposing of non-salvageable limbs by chipping or removal to designated areas;
- Removal of isolated trees with the potential to support bats will occur outside of the bat active season (i.e., March 15 to November 30), to the extent practical;
- Completing exit surveys following agency approved protocols in the event isolated trees with the potential to support bats require removal during the bat active season. Removing isolated tree(s) where surveys confirm no habitat use, and completing removals between October 1 and March 31 in the event habitat use is confirmed;
- Using constructed access (mats, or geotextile and gravel), to avoid or minimize effects to soils (compaction, rutting etc.);
- Restoring compacted areas, as required;
- Retention of compatible vegetation to the extent practical; and,
- Application of erosion and sediment controls as deemed necessary.

Temporary construction access (e.g., access mats or geotextile and gravel) will be removed upon completion of construction. Temporary laydown areas will be installed during construction and these areas will be restored following removal.

Most wildlife species that have the potential to occur within the Project work areas are habituated to human activities and are mobile. For the most part, sensitive resident animals can relocate temporarily to nearby habitats through flight or via existing corridors (e.g., fencerows, watercourse riparian areas, etc.) to seek shelter as a mechanism to avoid noise and disturbance associated with construction activities and return after construction completion. Construction disturbance would be sufficiently local and transitory that little displacement of wildlife is anticipated. Hydro One acknowledges that habitat in southwestern Ontario is generally limited and fragmented; however, with the implementation of natural features and species-specific mitigation measures

outlined in **Section 7.7.7** and **Section 7.7.8**, respectively, the effect of the proposed Project on wildlife will be minimal.

Removal of vegetation has the potential to disturb nesting migratory birds. The *Migratory Birds Convention Act*, 1994 (MBCA) prohibits the disturbance, destruction or removal of a nest, egg or nest shelter of most migratory birds during the active season. In order to avoid contravention of the MBCA, vegetation removal should not be conducted during the migratory bird breeding season from April 5 to August 31 in nesting zone C1 as provided by ECCC (2018), where feasible. With respect to buildings (residential or agricultural barns) impacted by the proposed Project, additional measures to avoid bird nesting within structures (e.g., installing netting) may be considered as a mechanism to avoid impacts to breeding birds.

#### **7.7.8.1 Wetlands**

The proposed Project ROW crosses 4.07 ha of wetland (SW, SWD, SWT and WE), including 1.13 ha of PSW (Bickford Oak Woods Wetland Complex). Wetlands will be taken into account during Project planning as a mechanism to minimize project impacts.

Wetlands play an important role with Indigenous communities as they support elements required for continued practice of Indigenous culture and rights (e.g., hunting, trapping, plant harvesting, ceremony, etc.). Although vegetation clearing will not represent a loss of vegetation on the landscape, it will result in changes in vegetation composition within an existing wetland community. Such changes have the potential to produce edge effects (positive, negative and/or neutral), as well as result in habitat fragmentation (e.g., dividing an existing wetland community). Changes in habitat composition has the potential to result in changes in habitat quality for some flora and fauna, while fragmentation of wetlands has the potential to result in a decline in species occupancy.

**Section 7.7.7.6** describes Project impacts on wetlands and associated mitigation measures that would be employed with respect to wetlands during construction.

#### **7.7.8.2 Fish and Aquatic Habitat**

The proposed Project crosses several watercourses identified as direct fish habitat. Although transmission towers will be located to avoid impacts to fish and aquatic habitat, there is potential for fish and aquatic habitat to be affected short-term during the construction phase of the proposed Project through the removal of trees within riparian areas which are incompatible with overhead transmission lines (i.e. their height at maturity has potential to interfere with the safe and reliable operation of the line) and potential temporary watercourse crossings required to facilitate construction activities.

The removal of trees within riparian areas has the potential to affect fish habitat as it may reduce the amount of potential shade provided to fish and aquatic habitat, thereby influencing potential changes in water temperature; albeit over a small reach. Removal of trees within riparian areas also has the potential to affect fish and aquatic habitat cover as it would represent a reduction of potential overhanging vegetation. In instances where trees within riparian areas require removal, their root structures will remain intact (i.e., grubbing will not be conducted within riparian areas) as a mechanism to maintain their current soil stabilization characteristics. With respect to temporary watercourse crossings, potential effects on fish and aquatic habitat include alterations to riparian areas, increased turbidity and release of deleterious substances. In the event in-water works are required to support the construction of potential watercourse crossings, Hydro One or the EPC will engage with the MECP, MNRF, Conservation Authorities and/or DFO to discuss the application of timing restriction for in-water works, and to obtain necessary permits and approvals as required before the commencement of work.

Other potential disturbances to fish and aquatic habitat resulting from construction activities near water would be minimized through the development of an ESC plan, which would include mitigation measures such as crossings during low flow conditions, retaining stream bank vegetation (where practical), and storing materials away from water features. In addition, no refuelling or vehicles and/or equipment would be permitted within 30 m of a watercourse to prevent potential spills (e.g., fuel, oil, lubricant) from entering aquatic features.

As previously stated, although the transmission towers will be located to avoid impacts to fish and aquatic habitat, the aforementioned potential short-term effects on fish and aquatic habitat can be avoided and or mitigation through the application of mitigation measures included in **Sections 7.7.4, 7.7.5, and 7.7.8**. In addition, where implosive conductor splicing is utilized, work will be planned and conducted in accordance with the Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters (DFO), as deemed necessary.

### **7.7.8.3 Woodlands**

As previously mentioned, the proposed Project's transmission line ROW crosses 7.09 ha of significant woodlands, including 0.28 ha of a confirmed SWH for a rare vegetation community (FODM7-4; Fresh-Moist Black Walnut Lowland Deciduous Forest). This community is located on the northern bank of the Thames river where the new transmission line will cross (abutting an existing 230 kV transmission line and on existing transmission corridor lands that are now being utilized for the new line); while some clearing will be required for the new ROW, there is already an existing

transmission line that crosses this community. Woodlands will be taken into account during Project planning as a mechanism to minimize Project impacts. Hydro One acknowledges that woodlands are of significant importance to Indigenous communities as they are considered home to their non-human relatives who hold spiritual and intrinsic value in both the human and non-human realms.

Section 7.7.7.2 describes Project impacts on woodlands and associated mitigation measures that would be employed with respect to woodlands during construction.

#### **7.7.8.4 Species at Risk**

As noted in **Section 4.6.7**, species designated as either endangered or threatened under the ESA and SARA (where applicable) are provided species and habitat protection. Generally, impacts to SAR habitat will be avoided during detailed design, where possible. In addition, construction personnel will be aware of the potential presence of, and able to identify, SAR with the potential to occur within work areas.

From a terrestrial perspective, the ROW associated with the proposed Project was assessed to provide habitat for Wood Thrush, as well as the potential to provide habitat for SAR bats and SAR snakes. Habitat removal during the migratory bird breeding season (April 5 to August 31 in nesting zone C1: ECCC, 2018) and the bat active period (March 15 to November 30) would be avoided to the extent feasible. With respect to birds, a non-intrusive nest survey would be undertaken by a qualified individual if habitat removal is required during the April 5 to August 31 period. As removal of 4.70 ha of SAR habitat for Wood Thrush was identified in association with the preferred route alternative ROW, Environment and Climate Change Canada (ECCC) and Canadian Wildlife Services (CWS) should be consulted to determine if the aforementioned mitigation measures are sufficient to avoid contravention under the SARA.

As of January 25, 2023, Barn Swallow was down listed from Threatened to Special Concern under Schedule 1 of O. Reg. 230/08, and no longer receives species and habitat protection under the ESA. Barn Swallow and their nests (residences) are still protected under the MBCA and the SARA. In some cases, “residence” for migratory birds includes year-round protection; however, the residence description for Barn Swallow does not include year-round protection of nest or the structures that support the nests. Therefore, in the event a Barn Swallow nest or structure that supports the nest is removed outside of the migratory bird breeding season (April 5 to August 31 in nesting zone C1: ECCC, 2018), a permit under the SARA is not required. In the event there is potential for work to occur during the nesting period additional measures to

exclude Barn Swallow from nesting within structures (e.g., installing netting) may be considered as a mechanism to avoid impacts to Barn Swallow.

Although Butternut was identified within the PSA of the preferred route during the 2022 field program, it was observed to be greater than 100 m from the ROW. Due to this distance from the ROW, the root harm prevention zone of 25 m, as described under Part V of O. Reg. 830/21 and the Butternut Recovery Strategy (MECP, 2021), will not be impacted.

Given the previously observed Butternut, should additional Butternut be observed within the ROW or within 25 m of the ROW during environmental surveys in support of detail design, a formal Butternut Health Assessment (BHA) is required to confirm infection with Butternut canker and to assess the tree category. Additional surveys and genetic testing may also be required to determine genetic purity. As deemed necessary by the results of the BHA, mitigation measures such as tree protection fencing should be installed at least 1.2 m in height and in such a way that the fence cannot be altered, where feasible. Placing equipment and materials within 25 m of the trees should be avoided. Where impacts to Butternut are anticipated, removal of Butternut is eligible for conditional exemption under the ESA through activity registration under Part V of O. Reg. 830/21 so long as the conditions in the regulation are adhered to. A buffer of 25 m around any unassessed Butternut will be applied until further direction is provided as per the province's guidelines for the species.

With respect to bats, habitat with the potential to support SAR bats will be assessed for presence of habitat trees (snags, cavities) during detailed design, prior to construction for habitat retention, where possible. Contractors will be educated on the potential for bats/bat habitat which may be encountered within the general work areas. In the event potential SAR bat habitat (including buildings and trees with a 10 cm or greater diameter at breast height) requires removal in support of the proposed Project, bat visual exit surveys for man-made structures, and acoustic surveys for wooded areas, will be completed during the month of June in accordance with agency approved protocols to determine SAR bat use (or lack thereof). Construction of bat nesting boxes in certain areas may be considered to offset the loss of bat roosting habitat, where practical.

Similarly, though the proposed Project transmission line ROW is largely dominated by active agriculture, natural features (woodlands, wetlands, watercourses, etc.) have the potential to support regulated/general habitat for SAR snakes. In advance of construction, potential SAR snake habitat will be demarcated and protected from

impacts during construction, where practical. Speed limits within or adjacent to SAR snake habitat will be implemented, where practical.

Removal of 7.09 ha of incompatible vegetation (treed habitats) has the potential to impact SAR bats, while removal and temporary habitat disturbance associated with 38.89 ha of vegetation has the potential to impact SAR snake habitat. In order to avoid impacts to SAR bats, tree removals should take place during the non-active bat period (October 1 to March 31). Trees that may be impacted by removal activities should be evaluated for their potential to provide suitable bat maternity roost habitat. Similarly, habitat with the potential to support SAR snakes should be flagged and protected (where practical). In instances where incompatible vegetation with the potential to support SAR snakes requires removal, the vegetation will be removed/trimmed to the extent that it no longer impedes construction works or poses a risk to the operation of the overhead transmission lines while still maintaining their potential SAR habitat characteristics to the extent practical. Should SAR bat and/or SAR snake habitat be confirmed in association with the proposed Project transmission line ROW, the MECP will be consulted to determine if the aforementioned mitigation measures are sufficient or if permits are required through the ESA.

Both the Sydenham and North Sydenham River have been assessed as potential Blanding's Turtle habitat given their proximity to the Bossu Wetland (known Blanding's Turtle habitat). In addition, the Sydenham, North Sydenham, and Thames Rivers have the potential to support habitat for Spiny Softshell. Similar impacts and associated mitigation measures outlined above under **Section 7.7.8.1** and **7.7.8.2** would be employed with respect to potential impacts to SAR turtle habitat. In advance of construction, potential SAR turtle habitat will be screened between April 1 and September 30 prior to installing ESC measures. Sediment fencing for turtle exclusion should be installed as per the guidelines from Reptile and Amphibian Exclusion Fencing (MECP, 2021). Turtle exclusion fencing should be installed and maintained every year prior to the beginning of May to minimize the potential for turtles to nest on site.

Potential SAR reptile habitat will be mapped and assessed within the ROW and directly adjacent lands prior to construction. Daily sweeps of work areas within/directly adjacent to SAR reptile habitat will be performed during the active season (generally March 15 to October 30). If reptiles are found, they will be allowed to leave on their own accord. If a suspected SAR reptile is observed, a qualified biologist will be contacted for assistance immediately and the MECP will be informed if deemed necessary. The design of exclusion fencing for Eastern Foxsnake will include measures (e.g., increased height, an outward-facing lip, or similar) to prevent entry into work areas by climbing the



fencing. Netting type erosion control measure will be avoided over drains and rivers. As a substitute for netting type erosion control, alternative products and/or rip rap over geotextile fabric should be considered in an effort to prevent entanglement of snakes. Vehicles and equipment left idle overnight at work areas will be inspected for SAR snakes prior to use. Training on the identification of SAR relevant to the Project area, and protocols for incidental observations of SAR, will be provided to construction crews.

From an aquatic perspective, the proposed Project transmission line ROW was assessed as habitat for 17 aquatic SAR (four fish and 13 mussels) based on DFO mapping. In addition, Lilliput was also detected in association with the preferred route through eDNA analysis. The same impacts and associated mitigation measures outlined above under **Section 7.7.8.2** would be employed with respect to potential impacts to aquatic SAR. In the event the construction of watercourse crossings has the potential to impact habitat of aquatic SAR, MECP and DFO will be consulted and necessary permits and approvals would be obtained in advance of construction.

Construction personnel will be aware of the potential presence of, and able to identify, SAR with the potential to occur within the general work areas. Should SAR be encountered during construction activities, activities will be stopped until it has been determined that harm will not occur. The required activities will be assessed to determine whether the work/schedule can be modified, or mitigation measures employed, to avoid potential effects on SAR and their habitat. If avoidance of SAR and/or SAR habitat is not possible, MECP, ECCC/CWS and/or DFO will be consulted in advance of construction to discuss detailed mitigation measures and or/assess the need for permitting/approvals under the ESA, SARA or the *Fisheries Act*. Indigenous communities will also be consulted on mitigation measures to address SAR and their habitats.

#### **7.7.8.5 Wildlife and Significant Habitat**

Based on the results of the background review, ELC mapping, and results of the 2022 field investigations, the following confirmed and candidate SWH types were identified within the PSA for the preferred route:

- Candidate SWH for Bat Maternity Colonies;
- Candidate SWH for Turtle Wintering Areas;
- Candidate SWH for Turtle Nesting;
- Candidate SWH for Amphibian Breeding Habitat;
- Candidate SWH for Species Concern and Rare Wildlife Species:
- Northern Map Turtle & Snapping Turtle.

- Confirmed SWH for Bald Eagle Nesting, Foraging, and Perching Habitat;
- Confirmed SWH for Rare Vegetation Communities:
  - Fresh-Moist Black Walnut Lowland Deciduous Forest (FODM7-4)
- Confirmed SWH for Special Concern and Rare Wildlife Species:
  - Eastern Wood-pewee;
  - Wood Thrush;
  - Paper Pond shell;
  - Maple leaf Mussel;
  - Spotted Sucker;
  - Northern Map Turtle & Snapping Turtle; and,
  - Pawpaw.

Specific to the confirmed SWH for Bald Eagle Nesting, Foraging, and Perching Habitat, an existing 230 kV transmission line is located within 400 m of the Bald Eagle's nest, suggesting that there is an existing level of tolerance (i.e., the nesting pair are habituated) to the existing 230 kV transmission line. While the new 230 kV transmission line will parallel the existing 230 kV transmission line along the nest side, it will not result in a significant negative impact (i.e., no loss of forest cover within Bald Eagle SWH) on Bald Eagle nesting, foraging and perching habitat or its ecological function (OMNRF 2014). In addition, the SWHMST states that smaller buffers than those outlined may be appropriate depending on the bird's tolerance for disturbance. Given the nesting pair's existing tolerance to the transmission line as well as regular disturbances during the agricultural season, this reduced buffer was considered acceptable. Additionally, restoration of removed incompatible vegetation with compatible species (e.g., native shrubs and forbs) will mitigate the overall change in habitat where incompatible vegetation is removed.

A small number of isolated incompatible trees within 400 m of the Bald Eagle nest will require removal in support of the Project. Direct effects (e.g., incompatible vegetation removal) on forest communities within 800 m of the Bald Eagle nest are not anticipated; therefore, the ecological function of the species habitat will be retained.

During Project construction activities, the following would be taken into consideration as a mechanism to avoid and/or mitigate impacts to wildlife habitat:

- Boundaries of important wildlife habitats will be identified and the ROW boundaries flagged prior to clearing;
- Bird diverters and/or similar measures will be utilized within 400 m of the known Bald Eagle nest;

- Retention of snags and cavity trees with potential to support bats, to the extent practical;
- Retention of super canopy trees for nesting, to the extent practical;
- Trees containing stick nests and areas where active animal dens or burrows are encountered will be left undisturbed until unoccupied, as determined by a qualified person;
- Stick nests on transmission structures will be left undisturbed if eggs or young are in the nest until the young have fledged unless there is an immediate safety concern addressed. If no eggs or young are observed, the nest will be removed;
- In the event that removal of stick nests is deemed to be required during detailed design or construction, Hydro One or its EPC contractor will consult with the MNRF to discuss permitting requirements;
- Tree/vegetation clearing will be avoided during the breeding bird and bat active period (March 15th – Nov. 30th), where practical;
- Where vegetation clearing is required, some of the cleared vegetative material may be used to create brush piles along the ROW edges to promote wildlife habitat where deemed appropriate;
- General avoidance of wildlife and wildlife habitats, where practical;
- Hydro One and its EPC contractor will review the SWHMST as detailed environmental mitigation plans are developed for construction;
- In the event that collection, salvage or relocation of wildlife is required due to construction activities, Hydro One or its EPC contractor will consult with MNRF to discuss permitting requirements;
- Promotion of wildlife habitat through vegetation control;
- Retention of natural vegetation, where possible;
- Use of native plant species where restoration seeding or planting is conducted;
- Construction personnel will be educated on the potential for wildlife which may be encountered within the general work areas; and
- In-water works within turtle wintering areas during the turtle wintering season will be avoided.

#### **7.7.8.6 Invasive Species**

There is potential for the proposed Project to inadvertently facilitate the spread of invasive species that may occur within or adjacent to work areas during the construction phase. Construction staff will be educated on the identification of invasive species and the importance of avoiding their spread to new areas. Additional measures that would be undertaken to reduce the spread of invasive species include:

- Utilizing native plant species during construction restoration;
- Taking care to avoid spreading invasive species (especially invasive plant species) that occur in or adjacent to work areas and educating crews on the importance of preventing the spread of invasive species;
- Abiding by the *Invasive Species Act* regulations;
- Proper handling, containment and disposal of invasive plant material, where required;
- Inspecting and cleaning equipment and vehicles as necessary to reduce potential for spreading invasive species propagules; and
- Tracking special treatment areas (e.g., large established populations of invasive species within the ROW) for consideration when planning future maintenance works.

#### **7.7.8.7 Biodiversity Initiative**

While Hydro One always strives to avoid and mitigate potential effects to the Natural Environment, and restore areas that are affected by the Project, Hydro One acknowledges that there may be adverse effects to natural habitats that cannot be avoided, or that occur even when appropriate mitigation and restoration measures are employed. Examples include the long-term transition of incompatible vegetation such as forest communities to compatible vegetation communities such as meadows or shrub thickets. Because these net effects cannot be further avoided or mitigated, they are typically compensated for by undertaking positive environmental activities (e.g., the creation of new naturalized habitats or enhancement of existing ones at other locations).

Hydro One has committed to undertaking a biodiversity initiative specific to this Project to offset any habitat loss or transition (long-term change) that may occur as a result of the Project. The scope of the biodiversity initiative has not yet been fully determined but typically such initiatives involve the funding of third-party projects or proposals (opportunities), such as wetland and wildlife habitat creation and enhancement, or aquatic habitat restoration and enhancement activities, invasive species inventory or removal, etc. Following completion of the Class EA and OEB Leave-to-Construction processes, Hydro One will engage with interested parties to discuss the implementation of the biodiversity initiative for the Project.

### **7.8 Indigenous Culture, Values and Land Use**

As indicated in **Section 4.4.3**, there are no First Nation reserve lands located in the PSA.

Hydro One is committed to developing and maintaining relationships of mutual respect with Indigenous communities and recognizes that Indigenous communities and their lands are unique in Canada, with distinct legal, historical and cultural significance. Hydro One is committed to continue to engage with the Indigenous communities to provide regular Project updates, and actively identify and avoid geographically defined areas which support current or past traditional use for the harvesting of wildlife or fish, the harvesting of traditional plants, or use as sites of spiritual or cultural significance. Similarly, Indigenous communities will be provided opportunities to review the findings of archaeological field surveys and assessment reports.

Hydro One understands that Bald Eagles are considered sacred. Given that Bald Eagle nests were observed within the LSA, and that they occasionally build nests on transmission line structures, in the event there are eggs or young present in the nest on an existing transmission tower, it is Hydro One protocol to leave the nest until the young have fledged unless there is an immediate safety concern.

Several communities have expressed a desire to protect and mitigate adverse effects to Natural Environment features such as SAR, wildlife, fish and aquatic habitat, and natural or naturalized areas with their traditional territory that could be used for hunting, gathering, harvesting or other traditional uses. Mitigation measures to address effects to these features are described elsewhere in this chapter. Some communities expressed interest in being involved with future archaeological and Natural Environment field work. Hydro One and its consultants have been working closely with interested communities and have included representatives from interested communities in archaeological and environmental fieldwork. Indigenous communities will be provided opportunities to review the findings of archaeological field surveys and archaeological assessment reports.

As part of another transmission line project in the region, COTTEN was provided capacity to complete a CRS, which defined multiple VCs or impact aspects of the environment that the Project had potential to affect. Communities shared the findings of these studies with Hydro One. The findings of the study have been incorporated into the ESR where appropriate. **Table 7-2** has been included herein to highlight the VCs from Indigenous Community to identify mitigation and residual effects from the Project as they relate to each VC. This information will be shared with the construction contractor and will be taken into consideration during the construction planning of the proposed Project to the extent practical. This may include working with private landowners to provide potential opportunities to harvest traditional use plant species ahead of

construction, or to provide input into post-construction restoration plans for natural or naturalized areas.

COTTFN completed a CRS for another transmission line project in the region, which was provided to Hydro One. The CRS contained a description of the methodologies undertaken, including interviews with COTTFN members, and the limitations of the study. Based on the data collected in the study, it was identified that the Project area is of great importance to COTTFN members. The study identified key issues and project interactions with COTTFN VCs, which were presented as grouped into the following three categories of VCs:

- Harvesting and Traditional Use;
- Governance and Stewardship; and,
- Cultural Continuity

Each VC category represents an interest or right of these communities and contributes to forming a large portion of the basis for First Nation wellness. First Nation wellness is described as physical, spiritual, and mental well-being. It is acknowledged that each VC identified is interconnected to all of the other VCs identified. For example, Harvesting and Traditional Use rights involve the type of activities that contribute to Cultural Continuity rights. Cultural Continuity is tied to practices of harvesting through hunting, trapping, fishing, etc. which are also identified VCs. For each of the three high-level VCs, specific subjects of interest were described (e.g., Plants and Medicines, Fishing and use of waterways etc.), including a description of the historical and ongoing changes from baseline conditions and Indigenous Community members' perspectives on the effects of the transmission line project as well as general continued development and growth in Indigenous community's traditional territory.

As described above, these VCs and other information presented in the CRS have been incorporated into the ESR, including an additional environmental effects and mitigation table specific to the CRS for those VCs and aspects of the study which are directly addressable through the management of the Project (see **Table 7-2**). The VC effects assessment considered each of the potential Project effects identified in **Section 7**. The effects identified were compared against mitigation measures developed for the Project to demonstrate the commitments and mitigation measures planned to address those VCs (and subcategories within the high-level VCs) which can be addressed through management of the Chatham to Lakeshore Project (e.g., through mitigation measures during construction, or post-construction restoration). The Indigenous Community expressed an interest in participating in the planned Biodiversity Initiative. The



community discussed plans to engage closely with Hydro One over the upcoming years regarding the planned transmission projects in the region, noting the importance of acknowledging the effects these projects will have and ensuring alignment with Indigenous rights.

A community expressed concerns regarding potential effects to nearby facilities which generate revenue for the community. There may be a need for temporary (~4 to 5 days) of outages to this facility during construction. Hydro One will work with any affected transmission-connected facilities to provide advance notification and discuss potential means to mitigate the impact of these temporary outages to their operations.

**Section 7.5.1** describes Project impacts on facilities and business operations related to planned outages. Some communities have expressed an interest in participating in environmental monitoring during construction of the Project. In the interest of prioritizing the safety of all parties it has not been Hydro One's historic practice to invite external environmental monitors onto active construction sites. However, in recognition of the interest expressed by some Indigenous communities in monitoring during construction, Hydro One will work with its construction contractor to identify opportunities to safely involve Indigenous community staff in environmental monitoring work during construction.

Some communities have expressed an interest in participating in the Biodiversity Initiative that Hydro One is committing to for the proposed Project, which will seek opportunities to create or enhance habitats to offset any adverse effects to habitats as a result of the Project. Hydro One will involve interested communities in the Biodiversity Initiative, including potential of Traditional Ecological Knowledge (TEK) where that information is willingly provided.

Hydro One will continue to seek to identify community concerns and build appropriate actions into proposed Project plans to address expressed concerns.

## **7.9 Recreational Resources**

There is potential that some recreational resources (e.g., Peers Wetland and Bickford Oak Woods trails, Sydenham River, North Sydenham River and Thames River waterways) may be temporarily affected during the construction and maintenance phase of the proposed Project due to the presence of construction laydown areas within the corridor, as well as construction equipment and presence of construction crew members and traffic. Impacts during the operations phase are not anticipated.

While there may be some temporary impacts to the enjoyment of recreational resources adjacent to the proposed Project, such impacts are expected to be short-term in nature. Advanced notice will be provided to nearby residences, farms, landowners and commercial operations, outlining the location of entry/exit points for the construction site as well as the schedule for construction work or construction related traffic in those areas. Clear and temporary road signage will also be created and installed to reflect this information. Disturbance to existing recreational resources will be avoided to the extent practical. This may include timing work to avoid seasons of heavier use. Safety precautions will be utilized throughout the Project area to protect the public such as anti-climbing devices and appropriate signage where necessary.

Hydro One will commit to working with local municipalities to identify community benefit opportunities to enhance the broader landscape.

## **7.10 Visual and Aesthetic Resources**

The proposed Project is located within predominantly flat agricultural lands, providing views that are open and expansive. Existing vertical elements include traffic and light standards, existing transmission lines and wind turbines. The majority of sensitive receptors are residences with wide views into the horizon. Many of the properties have existing tree lined wind breaks, natural features and hedgerows that offer localized privacy from adjacent visual elements.

Location of transmission structures is one of the largest factors influencing the visual effects to specific receptors. Design of the transmission line (e.g., placement of structure locations) will be visible to nearby sensitive receptors.

During detailed design (selection of transmission structure placement), consideration will be given to proximity to nearby sensitive receptors, existing visual screening (e.g., vegetation), and existing infrastructure and other landscape characteristics, in order to mitigate the net visual change resulting from the new transmission structures.

While the new transmission structures will be of a greater height, the proposed Project will repurpose approximately 41 km of an existing 115 kV transmission corridor (including replacement of the existing structures), which will significantly reduce the net visual change for nearly two-thirds (2/3) of the proposed Project's total length. Additionally, some 115 kV towers adjacent to Otter Creek will be removed and not replaced in the same location due to a technical constraint of crossing the Creek and other infrastructure.

Hydro One will work with local municipalities to identify community benefit opportunities to enhance the broader landscape (see **Section 7.5.7**).

## **7.11 Technical Considerations**

### **7.11.1 Wind Turbines**

The Municipality of Chatham Kent is host to several wind energy generation projects including wind turbines and their associated infrastructure, as well as overhead and buried collector lines. Several wind turbines are located within the same landscape as the proposed Project. Long-term effects to wind turbines or their collector systems are not anticipated as a result of the proposed Project. Owners and operators of the adjacent wind energy facilities have been notified and consulted through the Class EA process, and contact will be maintained through detail design and construction to keep them apprised of the final design of the new transmission line, construction schedules and other items of interest.

Due to the need to maintain a redundant transmission supply to the Wallaceburg TS for the duration of construction (removal of the existing N5K 115 kV transmission line, and conversion of Wallaceburg TS from 115 kV to 230 kV), there is a high probability that some brief planned outages to transmission circuits will be required to facilitate line connections during construction. These outages are anticipated to be needed for approximately four days total during construction and will only affect facilities, such as some wind farms, that are connected directly to the transmission grid (the distribution supply to homes and businesses in the area will not be affected). Hydro One will work with any affected transmission-connected facilities to provide advance notification and discuss potential means to mitigate the impact of these temporary outages to their operations.

### **7.11.2 Infrastructure Crossings**

Construction of the proposed Project will require crossings of existing linear infrastructure; including provincial Highway 40, constructed drains, railway lines, as well as running parallel to existing highways, roadways and along and over several municipal roads. Permanent or long-term impacts to existing linear infrastructure are not anticipated. Rider poles, boom-tipped riders or similar protection will be utilized during conductor stringing. Disruption to traffic on roads and highways during construction is anticipated to be temporary and short in duration. Use of temporary or rolling closures of Highways may be required to facilitate stringing activities. Where the new transmission line crosses Highway 40, setback distances provided by MTO will be respected and adhered to. Work within MTOs highway ROW or permit control area will require an

Encroachment Permit and/or Land Use Permit as well as a consultation with MTO during detailed design. Hydro One's Contractor will obtain all necessary Encroachment Permits and Land Use Permits from MTO prior to the start of construction. To facilitate construction of the aerial crossings associated with railway lines, temporary flagging operations may be required. Lastly, municipal drainage superintendents will be consulted during detailed design and construction planning to discuss effects to municipal drains. Placement of transmission structures will avoid municipal drains to the extent practical, including consideration of setbacks as communicated by the municipal drainage superintendents and their staff. Creation of new crossings will be avoided to the extent practical by using existing access and crossings and by accessing work areas from either side of drains, where feasible. Disturbed areas will be restored to a pre-disturbed state or better following the completion of construction.

## **7.12 Summary of Potential Environmental Effects, Mitigation Measures, and Net Effects**

**Table 7-1** provides a summary of potential effects, the associated mitigation, and the net effects identified for the proposed Project, during the construction and operation and maintenance phase.

Table 7-1: Summary of Potential Effects, Mitigation Measures and Net Effects

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Agricultural Resources:</b> Crop Loss	<p><b>Construction &amp; Maintenance:</b> Temporary removal of crops and soils supporting crop production, as well as permanent removal of land available for agricultural production as a result of Project infrastructure (e.g., tower footings).</p> <p>For the majority of the transmission line route, tower footings represent the only long-term loss of agricultural lands as the majority of the ROW can still be utilized for crops or pasture. However, Hydro One does recognize that individual circumstances, such as some transmission line crossing locations, may become more encumbered due to the need to maintain appropriate technical clearances from both the ground surface and other conductors, leading to additional crossing structures and lower vertical clearances. In such circumstances, there is potential for a slightly larger area (beyond the individual tower footings) of agricultural lands capable of being rendered out of production.</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• Contact will be maintained with landowners regarding work schedules and other items of interest (e.g., access roads, minimizing disturbances to existing and planned farm operations, etc.).</li><li>• Where practical, some construction and maintenance activities will be scheduled to avoid the growing season or sensitive times of year (e.g., extreme wet periods) although it is recognized that this may not be feasible in all circumstances.</li><li>• Access roads, staging areas, tower construction and stringing activities will be constructed to a minimum length and width required to accommodate the safe movement of construction equipment.</li><li>• Existing farm lanes and other existing access roads will be used whenever practical. In the event farm lanes are absent, access will be focused along field edges, to the extent practical.</li><li>• Work will be limited to the planned access roads, staging and work areas. If a later expansion to these areas is required, it will be discussed with the landowner in advance.</li><li>• Where practical, towers will be located along property lines to minimize impediment on agricultural operations.</li><li>• Lands will be restored following construction and maintenance activities (e.g., removal of temporary access roads, removal of erosion and sediment controls (ESC), disking of lands, aeration, and cultivation of soils to alleviate soil compaction where required), where feasible.</li></ul>	<p>Net effects include permanent removal of land available for agricultural production as a result of Project infrastructure (e.g., tower footings); not considered significant.</p> <p>Crop loss and lands out of production temporarily as a result of the proposed Project (e.g., during construction) will be compensated.</p>
<b>Agricultural Resources:</b> Soil Compaction	<p><b>Construction &amp; Maintenance:</b> Compaction of soil caused by movement of construction equipment or maintenance vehicles over agricultural lands.</p>	<p>In addition to the mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• Equipment with low bearing capacity will be used, where practical.</li><li>• Temporary access roads and work pads will be built in agricultural fields using measures such as mats or, geotextile and crushed rock, or equivalent means,</li></ul>	<p>No significant net effects are predicted.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		which can be easily removed when construction is complete to allow for re-cultivation of the area.	
<b>Agricultural Resources:</b> Soil Mixing	<b>Construction:</b> Potential for excavation activities to cause mixing of soil horizons, thus lowering the quality of soil.	<p>In addition to the mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• Where geotechnical conditions and engineering requirements allow, foundation types (such as helical piles) that minimize surface disturbance and does not require soil excavation or soil stripping of the foundation site will be used.</li><li>• Stripping or excavation of soils will be minimized to the extent practical.</li><li>• Where soil stripping is required, topsoil and subsoils will be removed and stockpiled separately.</li><li>• Depths of soil being removed will be carefully monitored and minimized during stripping activities.</li><li>• Volume of topsoil and subsoil salvaged for replacement or re-use on site will be maximized, where practical.</li><li>• Soils will be stripped under generally dry conditions (not saturated), such that rutting, soil mixing, or other undesired ground disturbance is minimized to the extent practical.</li><li>• Vegetation, stone piles, fencing and deleterious materials will be removed prior to stripping.</li><li>• For backfilling operations, topsoil and subsoil will be replaced in reverse order of excavation to minimize the potential for admixing and maximizing future growing potential.</li><li>• Soil cover on exposed areas within agricultural areas will be discussed with the landowner for most appropriate solution.</li><li>• Equipment and vehicle inspections and cleaning will be conducted as required during construction, to minimize the potential for inadvertent transport of trace soils between contaminated and non-contaminated agricultural fields.</li><li>• Cleaning will be conducted using a risk-based approach, whereby vehicles and equipment that have come in contact with soils will be inspected and cleaned of dirt/debris/seeds.</li></ul>	No significant net effects are predicted.



Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		<ul style="list-style-type: none"><li>Cleaning will occur in a manner that ensures that runoff is contained and waste materials can be collected.</li><li>Imported topsoil will be tested for soybean cyst nematode (SCN) or otherwise shown to be free of SCN.</li></ul>	
<b>Agricultural Resources:</b> Disturbance to Farm Operations	<b>Construction:</b> Potential to disturb farm operations including planting and harvesting schedules, spraying, tiling activities, etc. <b>Operation:</b> Impediments to the maneuverability of agricultural equipment.	In addition to the mitigation outlined above, the following additional mitigation is recommended to address these potential effects: <ul style="list-style-type: none"><li>Constructed access roads will be smooth and tapered to allow for vehicular, pedestrian, and equipment crossings, where applicable</li></ul>	Agriculture is a compatible use within overhead transmission line ROWs. Some agricultural fields will have new transmission structures. The selection of route alternative 2 as the preferred route will maximize the ability to repurpose existing transmission corridors, resulting in the least amount of net new transmission structures within agricultural fields.  No significant net effects are predicted.
<b>Agricultural Resources:</b> Vegetation Removal	<b>Operation:</b> Partial removal or fragmentation of existing hedgerows and windbreaks between agricultural land parcels.	The following mitigation is recommended to address these potential effects: <ul style="list-style-type: none"><li>Vegetation that will not affect construction or line clearances will be retained, where practical.</li><li>Hedgerows and windbreak areas impacted by construction will be replaced with compatible vegetation post-construction, in consultation with the landowner.</li><li>Hydro One will undertake a Biodiversity Initiative to offset vegetation loss or transition (e.g., from woodlot to a compatible vegetation community) that cannot otherwise be avoided or mitigated. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</li></ul>	Net effects include permanent removal of incompatible vegetation (hedgerows/windbreaks) to ensure the safe operation of the transmission line; not considered significant.  Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Agricultural Resources:</b> Contamination of Organic or Identity Preserved (IP) Crops	<b>Construction &amp; Maintenance:</b> Potential for activities, including use of herbicides to control noxious weeds or vegetation, to contaminate organic or IP crops or agricultural fields transitioning to organic/IP crop types.  Potential for inadvertent movement of trace soils between agricultural fields which contain organic or IP crops.	<p>In addition to the mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• Contact will be made with landowners to determine if organic or IP operations are present which may require additional considerations during construction planning.</li><li>• Field crews will be informed if working in organic or IP croplands.</li><li>• Equipment and vehicle inspections and cleaning will be established during construction, to minimize the potential for inadvertent transport of trace soils between contaminated and non-contaminated agricultural fields.</li><li>• Cleaning will be conducted using a risk-based approach, whereby vehicles and equipment that have come in contact with soils will be inspected and cleaned of dirt/debris/seeds as deemed necessary.</li><li>• Cleaning will occur in a manner that ensures that runoff is contained and waste materials can be collected.</li><li>• Work areas will be assessed during pre-construction activities to identify the presence of weed species, degree of infestation, and the distribution of weeds within the Project footprint and the immediately adjacent areas.</li><li>• Work areas will be monitored for weeds throughout the Project and until the Project has been completed.</li><li>• A Project-specific Weed Control Plan will be developed in consultation with landowners prior to construction, as necessary.</li><li>• The Weed Control Plan will be managed by an Ontario Professional Agrologist to meet the requirements of the municipal and land use authority.</li><li>• The transmission ROW will be monitored for establishment of weeds until construction is completed.</li><li>• Corrective measures for managing weeds may include herbicide application, mowing, and hand pulling.</li><li>• Weed control during construction will be conducted by the construction contractor.</li></ul>	No significant net effects are predicted.

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Agricultural Resources:</b> Damage to Field Tiles	<b>Construction &amp; Maintenance:</b> Potential for equipment to damage or crush existing agricultural tile drains.	<p>In addition to the mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>Landowners will be consulted to determine existing field tile locations in support of avoidance/protection measures.</li><li>Tile drains will be avoided and/or protected (e.g., through tower locations, temporary construction access), to the extent practical.</li><li>Where temporary access roads and work pads are built in agricultural fields, measures such as mats or, geotextile and crushed rock, or equivalent means will be used to protect tile drains.</li><li>Where practical, some construction and maintenance activities will be scheduled to avoid the growing season or sensitive times of year (e.g., extreme wet periods) although it is recognized that this may not be feasible in all circumstances.</li></ul>	<p>No significant net effects are predicted.</p> <p>If tile damage to tile drains occurs as a result of construction activities and/or maintenance activities, the tile will be repaired by a licensed tile drainage contractor in consultation with affected landowner.</p>
<b>Agricultural Resources:</b> Livestock Stress, Loss or Injury	<b>Construction &amp; Maintenance:</b> Potential for activities to be required within livestock managed areas (grazing fields, pastures, etc.) resulting in potential for livestock stress, injury or loss. In addition, potential use of implosive splicing may scare or startle agricultural livestock.	<p>In addition to the mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>Landowners will be informed in advance of upcoming work activities which may disturb or pose a risk to livestock, and consulted with respect to potential mitigation measures, such as moving or containing livestock, as necessary.</li><li>Field crews will be informed about livestock in the vicinity of work areas to confirm they are aware of the need to secure gates, are cognizant of noise sensitivity controls, and to ensure clean-up of construction materials and debris at the end of each day to minimize potential livestock ingestion.</li><li>If excavations cannot be closed immediately, exclusion fencing will be erected to protect livestock from entering.</li><li>Vehicles and equipment will be inspected and cleaned as necessary to prevent the potential introduction or spreading of diseases.</li><li>Existing gates and fences will be used as required. All fences and gates will be left in "as-found" condition following construction.</li></ul>	<p>No significant net effects are predicted.</p> <p>Compensation will be made for loss or injury to livestock directly resulting from activities associated with the proposed Project.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		<ul style="list-style-type: none"><li>• Livestock access control gates and fencing will be installed during construction at roads and between fenced fields as necessary to prevent escape of livestock or movement of livestock into work areas.</li><li>• Prior to any use of implosive splicing, a Blasting Communication and Management Plan will be developed outlining proper storage, security, detonation, and notification requirements.</li><li>• Area residents, municipal authorities, the police department, and other crews within 1.6 km will be notified about the use of implosive splicing, at least one week prior to the work commencing.</li><li>• Signs shall be posted on all roadways leading to a blasting area in accordance with government rules and regulations.</li><li>• Safe distances of the blasting site will be maintained from other employees, vehicles, equipment, structures, and fire hazard sources. Blasts will be performed during pre-determined times.</li></ul>	
<b>Agricultural Resources:</b> Potential GPS Signal Interference	<b>Operation:</b> Some farmers have raised concerns regarding potential for overhead transmission lines to interfere with automated or GPS-guided farm equipment, when said equipment is directly below the conductors.	Hydro One acknowledges the concerns raised, as well as insistence by some farmers currently working fields below transmission lines, that localized issues have been observed beneath the transmission lines. While we do not anticipate effects to communication systems in farm equipment, Hydro One will work with concerned farmers to collect information on the systems of concern, and contact manufacturers of these systems to gain further insight into potential concerns and possible solutions, if applicable.	<p>No significant net effects are predicted. By selecting route alternative 2 as the preferred route alternative, which will maximize the ability to repurpose existing transmission corridors, the amount of net new transmission line (compared to currently existing) located on agricultural fields will be minimized.</p> <p>While obstructions such as buildings or trees are known to block reception of GPS signals, published studies assessing these concerns indicate that overhead power line conductors are too thin to cause appreciable screening. Likewise, corona or sparking on a power line generates insufficient noise at frequencies used for GPS to interfere with its operation.</p>
<b>Archaeological Resources</b>	<b>Construction:</b> Disturbance to lands with archaeological potential.	Prior to construction, a Stage 2 Archaeological Assessment will be completed within the identified areas of archaeological potential along the new transmission line corridor in accordance with Ministry of Citizenship and Multiculturalism (MCM) requirements. In the event the Stage 2 Archaeological Assessment identifies the need for further assessment, a Stage 3 Archaeological Assessment will occur as required and as outlined in the "Standards and Guidelines for Consultant Archaeologists", Ministry of Tourism and Culture (2011).	<p>No significant net effects are predicted.</p> <p>Additional archaeological assessments will be completed as early as possible during detailed design and prior ground disturbing activities associated with construction work occurring on these areas or with acceptable avoidance and mitigation measures applied.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		<p>Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the <i>Ontario Heritage Act</i>. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the <i>Ontario Heritage Act</i>.</p> <p>The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with Ontario Regulation 30/11 the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at <a href="mailto:archaeology@ontario.ca">archaeology@ontario.ca</a>) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the <i>Ontario Heritage Act</i>.</p>	



Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Built Heritage Resources and Cultural Heritage Landscapes</b>	<b>Construction:</b> Based on the baseline findings of the Cultural Heritage Existing Conditions Report, there is the potential for project-related works to adversely affect known and potential built heritage resources and cultural heritage landscapes within the ROW.	<p>Additional studies are required to confirm potential built heritage resources and cultural heritage landscapes along the transmission line ROW for the proposed Project. To the extent practical, work will be planned in a manner that avoids adverse effects to identified built heritage resources and cultural heritage landscapes.</p> <p>In the event that built heritage resources and cultural heritage landscapes cannot be feasibly avoided and will be directly impacted through destruction, alternation, or disruption, a property specific Cultural Heritage Evaluation Report (CHER) and/or Heritage Impact Assessment (HIA) will be completed. CHERs and HIAs will be conducted as early as possible during the detailed design phase, subject to receiving permission to access the properties for these surveys. The CHER and/or HIA will confirm the cultural heritage value or interest, the heritage attribute(s) of the impacted built heritage resource and will identify adverse effects. All evaluation and assessments will be in compliance with the Hydro One Cultural Heritage Identification and Evaluation Process and MCM Standards and Guidelines.</p> <p>Appropriate mitigation or conservation measures that reduce or avoid potential adverse effects will be recommended based on the understanding of the cultural heritage value or interest, and heritage attributes of potential affected built heritage resources. With regards to vibration from construction, it is anticipated that helical (screw) pile foundations will be utilized for the Project; vibrations associated with the installation of these foundations are negligible. Construction access and laydown areas will be temporary and restored to pre-existing conditions following the completion of construction.</p>	<p>No significant net effects are predicted.</p> <p>CHERs and/or HIAs will be completed prior to construction where impacts to potential built heritage resources may occur.</p>
<b>Land Use and Communities:</b> Business Operations	<b>Construction:</b> Potential for activities to disrupt commercial or industrial operations.	<p>In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• Contact will be maintained with business owners with the potential to be impacted by construction regarding work schedule and other items of interest.</li><li>• Access to businesses will be maintained at all times during construction to the extent feasible. If existing access cannot be maintained, arrangements will be made for alternate access, including public signage as required.</li></ul>	<p>No significant net effects are predicted.</p>



Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		<ul style="list-style-type: none"><li>• Construction activities and equipment will be managed to avoid damage and disturbance to adjacent properties, structures and operations.</li><li>• Where seasonal businesses are identified, efforts will be made to avoid disruption during peak/busy seasons, to the extent practical.</li><li>• Due to the need to maintain a redundant transmission supply to the Wallaceburg TS for the duration of construction (removal of the existing N5K 115 kV transmission line, and conversion of Wallaceburg TS from 115 kV to 230 kV), there is a high probability that some brief planned outages to transmission circuits will be required to facilitate line connections during construction. These outages are anticipated to be needed for approximately four days total during construction and will only affect facilities that are connected directly to the transmission grid (the distribution supply to homes and businesses in the area will not be affected). Hydro One will work with any affected transmission-connected facilities to provide advance notification and discuss potential means to mitigate the impact of these temporary outages to their operations.</li></ul>	

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Land Use and Communities:</b> Existing and Future Land Use Designations and Potential Future Development	<b>Operation:</b> While transmission lines can be largely compatible with development, its location will introduce certain restrictions to future uses within the lands occupied by the transmission line ROW.	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>Throughout the province, development (both residential and commercial/industrial) occurs around existing transmission line corridors and stations. Uses deemed to be compatible with overhead transmission lines are often approved within transmission line ROWs. Hydro One has existing departments and processes to review proposals for developments that are planned adjacent to or within transmission line ROWs and facilitate compatible uses of these corridors.</li><li>Typically, there are no restrictions placed on development or new construction outside of the transmission line ROW itself.</li><li>Where and when future development projects or initiatives are proposed to occur along or within the ROW for the new transmission line, Hydro One will apply its existing processes to review and facilitate these future developments, including potential compatible uses within the transmission line ROW.</li><li>Hydro One will work with Municipalities to consider potential means of accommodating potential future development during design of the transmission line, within the property fabric traversed by the line.</li></ul>	<p>No significant net effects are predicted.</p> <p>While there will be restrictions to future development within 2 m of the transmission line ROW, the Project will not impede development of adjacent lands, and there will be opportunities for compatible uses to be developed within the ROW.</p>
<b>Land Use and Communities:</b> Local Roads and Traffic	<b>Construction:</b> Potential for increased traffic, including heavy equipment, on local and regional roads. In addition, stringing of conductors across highways and roadways may require temporary road closures and detours.	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>A pre and post-construction road survey will be completed to document impacts to local roads caused by heavy equipment and increased construction traffic during construction activities and will be shared with municipal staff in advance of construction work commencing.</li><li>Adherence to seasonal load restrictions.</li><li>Damage to local and regional roads as a direct result of construction activities associated with the proposed Project will be repaired.</li><li>Where required, a Traffic Control Plan will be developed and shared with local municipalities, as necessary.</li></ul>	<p>No significant net effects are predicted.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		<ul style="list-style-type: none"><li>• Construction haul routes and schedules will be shared with local municipalities in advance of construction, as necessary.</li><li>• Construction traffic will access the construction area from the existing road network at specified construction access/egress locations.</li><li>• Common parking areas will be established for construction crews.</li><li>• Conductor stringing will utilize rider poles, boom-tipped riders or other protective measures in an effort to avoid road closures and other disruptions during stringing, to the extent practical.</li><li>• If temporary road or highway closures (e.g., rolling closures) are required during stringing, access road construction, or other construction activities, the construction contractor will coordinate closely with the appropriate road authority to ensure that proper notice is provided and that required signage and traffic controls are utilized. The duration of temporary closures will be minimized to the extent practical.</li><li>• Where construction work is planned to directly affect local traffic (e.g., temporary road or lane closures), local advertisements (e.g. radio, newspaper, etc.) will be issued and road signage will be erected to provide notification/pre-construction information to area residents on timelines, and potential detours, if required.</li><li>• Traffic control officers or flag persons will be assigned to assist with construction entry/exit, as necessary.</li></ul>	

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Land Use and Communities:</b> Mud and Construction Debris	<b>Construction &amp; Maintenance:</b> Potential for tracking of mud and migration of construction debris to areas outside of the construction zone.	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• Roads will be cleaned/scraped to remove mud on an as needed basis.</li><li>• Mud mats will be installed (on an as need basis) as a mechanism to reduce the transport of mud.</li><li>• Vehicles and equipment will be regularly inspected and cleaned as necessary, construction sites will be kept generally tidy at the extent practical and waste bins will be available wherever solid wastes are generated.</li><li>• Waste materials will be collected and transported to a licensed or approved waste management facility on a regular basis.</li><li>• General clean site policies will be implemented requiring pick-up and disposal of refuse and construction waste on a regular basis.</li></ul>	No significant net effects are predicted.
<b>Land Use and Communities:</b> Electric and Magnetic Fields (EMF)	<b>Operation:</b> Potential exposure to increased EMF once the transmission line is energized.	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• EMF levels associated with the proposed Project are anticipated to remain significantly lower than the general public exposure limits.</li><li>• The proposed Project will be designed and operated in accordance with appropriate regulatory requirements.</li></ul>	<p>No significant net effects are predicted.</p> <p>Health Canada does not consider that any precautionary measures are needed regarding daily exposures to EMFs at extremely low frequencies. There is no conclusive evidence of any harm caused by exposures at levels found in Canadian homes and schools, including those located just outside the boundaries of power line corridors.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Land Use and Communities:</b> Noise & Vibration	<b>Construction, Maintenance &amp; Operations:</b> Potential disturbance as a result of noise, including potential use of implosive splicing and their associated increased vibrations levels.  The upgrade of Wallaceburg TS from 115 kV to 230 kV will require the installation of new 230 kV transformers at the station, which will likely have greater noise emissions than the existing 115 kV transformers.	In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects: <ul style="list-style-type: none"><li>• Construction will be completed in accordance with local noise control by-laws (Township of St. Clair Noise By-Law 44 of 2014 and Municipality of Chatham-Kent Noise By-Law 178-2017), or applicable exemptions.</li><li>• Noise modeling will be conducted for the planned upgrade of the Wallaceburg TS, to determine compliance with MECP noise criteria at adjacent receptors. If deemed necessary by the results of the noise modeling, noise mitigation measures (e.g., noise barriers or other engineered solutions) may be employed into the final designs for the Wallaceburg TS upgrade. The existing Environmental Compliance Approval will be updated to an Environmental Activity Sector Registration (EASR) for noise emissions for the Wallaceburg TS to reflect the station upgrade.</li><li>• Construction will be completed in general accordance with the ministry’s Publication NPC-115 “Construction Equipment”, Publication NPC-118 “Motorized Conveyance” and NPC-119 “Blasting”.</li><li>• Sensitive receptors will be identified in the Project-specific Environmental Management Plan, for consideration when planning work such as implosive splicing locations;</li><li>• As it relates to the upgrade of the Wallaceburg TS, Hydro One is committed to investigating the use of the ministry’s Publication NPC-300 “Environmental Noise Guideline – Stationary and Transportation Noise Sources – Approvals and Planning” during detailed design.</li><li>• As it relates to Project operation, Hydro One is committed to investigating the use of the ministry’s Publication NPC360 “Protocol for the Measurement and Prediction of Audible Noise from HV Transmission Lines” during detailed design.</li></ul>	No significant net effects are predicted.
<b>Natural Environment Resources - Physical Environment:</b> Spills	<b>Construction &amp; Maintenance:</b> Potential inadvertent release of deleterious substances including oil, gasoline or other liquids.	The following mitigation is recommended to address these potential effects: <ul style="list-style-type: none"><li>• Refuelling of vehicles and equipment will be completed in a designated location a minimum of 30 m away from sensitive receptors, such as designated source water</li></ul>	No significant net effects are predicted.

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		<p>protection areas, watercourses, surface drainage features, wetlands, etc.</p> <ul style="list-style-type: none"><li>• Fuelling of vehicles/equipment will occur utilizing an emergency spill tray to capture accidental release of fluids.</li><li>• Fuelling operations will require the operator to visually observe the fuelling process 100% of the time.</li><li>• If refuelling must occur outside of designated areas, additional containment or other mitigation and spill prevention measures will be utilized.</li><li>• Equipment will be inspected regularly during construction to ensure it is clean and free of leaks.</li><li>• An Emergency Response Plan and spill cleanup equipment will be maintained and be readily accessible at all times during construction and maintenance activities.</li><li>• Spills will be addressed and remediated as soon as possible after a spill.</li><li>• Areas impacted by a spill will be secured, and unauthorized personnel will be kept out of the affected area until further assessment and/or clean-up is conducted.</li><li>• Clean-up and the disposal of contaminated materials will be managed in accordance with provincial regulations and guidelines.</li><li>• Fuels, chemicals, lubricants or other deleterious substances will be stored on level ground in properly contained storage areas.</li><li>• Only approved aboveground petroleum storage tanks will be used during the construction phase of the Project, and will be stored in designated fuelling areas and with additional temporary containment measures.</li><li>• The MECP Spills Action Centre will be notified of all reportable spills.</li><li>• Work conducted near provincially/locally designated vulnerable areas (namely Wellhead Protection Areas [WPAs]; and Intake Protection Zones [IPZs]) will be avoided or limited, where practical.</li><li>• SCRCA, the LTVCA, the Township of St. Clair, the County of Lambton, Municipality of Chatham-Kent and Indigenous communities will be consulted as required in order to undertake the proper action for managing the potential threats to source water protection areas.</li></ul>	



Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		<ul style="list-style-type: none"><li>The new 230 kV transformers to be installed at the Wallaceburg TS will be situated on spill containment pits that are connected to an oil-water separator, to protect against the risk of an inadvertent release of mineral insulating oil from the transformers.</li></ul>	
<b>Natural Environment Resources - Physical Environment:</b> Waste Generation	<b>Construction &amp; Maintenance:</b> Solid and/or liquid waste will be generated.	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>Waste and recyclables will be sorted, segregated and removed to a licensed or approved waste management facility and/or recycling facility.</li><li>Excess construction materials (i.e., waste, granular fill, clay) will be removed from construction sites and areas on an ongoing basis.</li><li>Concrete wash water will not be discharged onto the ground at the Project site. All water from concrete chute washing activities will be contained in leak proof containers or in an approved settling pond.</li><li>Liquid and solid sewage wastes held in portable tanks will be removed by a licensed contractor and taken to licensed or approved disposal areas.</li><li>Waste materials will be contained and not allowed into sensitive receptors such as waterbodies, riparian areas, wetlands or agricultural fields.</li><li>Testing, handling, storage, transport and disposal of waste will be completed in accordance with applicable legislation.</li></ul>	No significant net effects are predicted.

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Natural Environment Resources - Physical Environment:</b> Excess Materials Management	<b>Construction &amp; Maintenance:</b> Excess materials including topsoil and subsoil, may be produced during site excavations.	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• Soils stored on-site (e.g., in stockpiles) will be managed in accordance with Ontario Regulation 406/19.</li><li>• In the event soils are stockpiled, they will be managed in ways that are not conducive to bank swallow nesting (e.g., slopes maintained at 70° or less, and/or covered or bare soils seeded during the breeding season).</li><li>• Excess soils proposed to be removed from the site will be characterized during geotechnical investigations, or prior to, or during construction and managed in accordance with Ontario Regulation 406/19. Efforts will be made to increase the reuse of soils on-site.</li><li>• Excess soils will be managed off-site based on the quality of the material (i.e., sent for reuse or disposal). Reuse sites will be selected based on the characterization of excess soils, the need for a beneficial reuse and the volume of excess soils required.</li><li>• Acknowledgement from reuse sites will be obtained prior to the movement of excess soils.</li><li>• Soil movements will be tracked from the Project area to the final deposit site, if required.</li><li>• A notice will be submitted to the MECP for the Project, if required.</li></ul>	No significant net effects are predicted.
<b>Natural Environment Resources – Atmospheric Environment:</b> Climate Change	<b>Construction &amp; Maintenance:</b> Emissions will be generated from vehicles and equipment.	<p>In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• Equipment will be properly serviced and maintained.</li><li>• Idling of construction vehicles and equipment will be kept to a minimum and GPS or other navigation tools will be used in vehicles to optimize routing.</li><li>• The transmission line will be designed to adequately withstand the effects of climate change.</li></ul>	<p>No significant adverse net effects are predicted.</p> <p>Through the selection of route alternative 2 as the preferred route, and subsequent upgrading of the existing supply to the Wallaceburg area (including the Wallaceburg TS) from 115 kV to 230 kV, operational line losses will be significantly reduced, resulting in a more efficient transmission supply to the area.</p> <p>Additionally, maintenance and other operational tasks requiring the use of combustion engine vehicles and equipment will become more efficient due to the need to maintain one transmission corridor instead of two, resulting in decreased fossil fuel emissions over the long term.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Natural Environment Resources - Atmospheric Environment:</b> Air Quality	<b>Construction &amp; Maintenance:</b> Potential for fugitive dust and impacts to air quality from vehicle emissions.	<p>In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• Vehicles will not exceed posted speed limits.</li><li>• Minimize and stabilize vehicular traffic and exposed soils in high traffic areas with suitable cover material.</li><li>• Avoid excavation and other construction activities that have the potential to release airborne particulates during excessively windy periods, to the extent practical.</li><li>• If excavation or other construction activities with a potential to release airborne particulates must occur during windy conditions, dust controls will be utilized.</li><li>• Cover or otherwise contain loose construction materials with the potential to release airborne particulates during transport, installation or removal to the extent practical.</li><li>• Disturbed areas will be restored as soon as practical to minimize duration of soil exposure.</li><li>• Effective dust suppression techniques, such as on-site watering, will be implemented as necessary. Non-chloride dust suppressants will be used.</li></ul>	No significant net effects are predicted.
<b>Natural Environment Resources – Atmospheric Environment:</b> Noise and Vibration	<b>Construction, Maintenance &amp; Operation:</b> Potential disturbance as a result of noise, including potential use of implosive splicing and their associated increased vibrations levels. Indirect noise disturbance effects on wildlife during construction can include temporary declines in habitat occupancy, as well as changes to mobility and feeding habitat patterns.	<p>Refer to the mitigation recommended for Noise and Vibration under Land Use and Communities above.</p> <p>The Project’s Environmental Management Plan will identify nearby sensitive receptors to construction noise and vibration.</p>	No significant net effects are predicted.
<b>Natural Environment Resources - Surface Water Resources:</b> Soil Rutting & Vegetation Removals	<p><b>Construction &amp; Maintenance:</b> Potential for vehicles and equipment to create rutting in soils, creating ponding or channelization leading to additional erosion of soils.</p> <p>Vegetation removals (22.91 ha; of which 12.39 ha is compatible, with transmission lines and will be retained) have the potential for increases in both overland flow and water temperature, as well as mobilization and transport of organic debris and sediment to nearby watercourses and municipal drains.</p>	<p>In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• Where practical, activities with potential to cause rutting, ponding/channelization or erosion will be planned during stable and dry ground conditions.</li><li>• Existing watercourse crossings and constructed access roads will be utilized to the extent practical.</li><li>• Where required, temporary crossing structures will be installed for construction access at watercourses and other low-lying areas and will be removed upon completion of construction.</li></ul>	No significant net effects are predicted.

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		<ul style="list-style-type: none"><li>Existing, natural drainage patterns and flows will be identified and maintained to the extent possible.</li><li>Equalization culverts or similar methods may be used in construction of access roads. If surface water accretion issues are identified during construction, remedial measures (e.g., retroactive installation of equalization culverts within temporary access roads) will be undertaken promptly.</li><li>Compatible vegetation will be retained and buffered to protect sensitive receptors, where practical.</li><li>Machine clearing and grubbing will be restricted near sensitive environmental areas, hand clearing may be required within watercourse banks/riparian areas, where practical.</li><li>Vegetation removals will be minimized to the extent possible, and replanted/seeded with compatible vegetation as required.</li><li>Where erosion is of concern, exposed soils in previously vegetated areas will be re-vegetated as practical, or have other ESC measures (e.g., erosion blankets/coir mats, silt socks, etc.) applied as necessary.</li><li>Construction access and laydown areas will be restored following completion of construction.</li><li>Cleared vegetation will be relocated to designated areas away from aquatic features.</li><li>Equipment operation adjacent to watercourse and wetlands will be minimized, where practical.</li><li>Works adjacent or around watercourse banks will be conducted during appropriate conditions and times of the year (e.g., dry or frozen conditions), to the extent practical.</li><li>SCRCA and LTVCA will be consulted (specifically for ESC measures) during detailed design.</li></ul>	

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Natural Environment Resources - Surface Water Resources:</b> Dewatering	<b>Construction:</b> Potential increase in surface water flows resulting from dewatering activities.	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• Construction water will be discharged in compliance with permits and/or approvals from the MECP, the Township of St. Clair, the County of Lambton and Municipality of Chatham-Kent, as required.</li><li>• A construction water management plan will be developed prior to construction and implemented appropriately (e.g., passing discharge water through a filter bag or drum before discharge to the environment to capture sediment and slow down the water velocity, etc.).</li><li>• Where practical, opportunities to maximize retention times and reduce surface flow velocities will be executed.</li><li>• Where geotechnical conditions and engineering requirements allow, foundation types (such as helical piles) that minimize the amount of construction dewatering required will be utilized.</li><li>• Where practical, discharge of construction waters is to occur at least 30 metres away from sensitive features (e.g., watercourses, wetlands, etc.). If discharge of construction waters must occur within 30 m of a watercourse or wetland, erosion and sediment controls will be utilized.</li></ul>	No significant net effects are predicted.
<b>Natural Environment Resources - Surface Water Resources:</b> Erosion and Sedimentation	<b>Construction:</b> Potential for erosion, sedimentation and soil loss during site preparation and construction.	<p>In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• An ESC plan will be developed prior to construction and ESC measures will be identified and implemented as required. Measures such as erosion blankets/coir mats, silt socks, etc., or similar, are expected to form part of the ESC plan, where appropriate.</li><li>• Areas with high erosion potential will be identified and avoided, to the extent practical.</li><li>• Construction activities near sensitive features or areas may be suspended during extreme wet weather events, and crews will review and consider weather forecasts in their planning of such work.</li><li>• ESC installations will only be removed after disturbed areas are restored, accumulated sediment has been</li></ul>	No significant net effects are predicted.

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		<p>disposed, and construction activities in the vicinity are completed.</p> <ul style="list-style-type: none"><li>• In an effort to reduce potential erosion, mechanical or vegetation erosion control measures will be employed, such as buffer strips, erosion control blankets and sedimentation fences, as required.</li><li>• Equipment operation on slopes adjacent to watercourses will be minimized to the extent practical.</li><li>• Disturbed areas near watercourses and wetlands or sensitive environmental areas will be restored as soon as practical.</li><li>• ESC measures will be regularly inspected (including after each significant rainfall event &gt;10 mm) and repaired where necessary to maintain functionality.</li></ul>	
<p><b>Natural Environment Resources - Surface Water Resources:</b> Construction work within areas regulated by Conservation Authorities</p>	<p><b>Construction:</b> Potential for infrastructure (towers, watercourse crossings) to be located within Conservation Authority regulated lands.</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• SCRCA and LTVCA will be consulted during detailed design and construction planning.</li><li>• Design of the transmission line will avoid or minimize the extent to which transmission towers are located within regulated areas, to the extent practical.</li><li>• If necessary, a Permit for Development, Interference with Wetlands and Alternation to Shorelines and Watercourses will be obtained through the applicable Conservation Authority (SCRCA and LTVCA) prior to construction.</li><li>• Construction work (e.g., tower construction, temporary construction access) within regulated areas will be conducted during stable (frozen/dry) ground conditions, to the extent practical or isolated with appropriate ESC measures and other environmental mitigation measures.</li></ul>	<p>No significant net effects are predicted.</p> <p>Permit for Development, Interference with Wetlands and Alterations to Shorelines and Watercourses will be obtained in advance of construction, where necessary.</p>
<p><b>Natural Environment Resources - Source Water Protection:</b> Source Water Protection</p>	<p><b>Construction and Maintenance:</b> Potential for contamination of surface water through spills or leaks.</p>	<p>Refer to the mitigation recommended for Spills under Physical Environment.</p>	<p>No significant net effects are predicted.</p>



Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Natural Environment Resources - Source Water Protection:</b> Source Water Protection	<b>Construction:</b> Potential for impacts to private drinking water wells.	In addition to the applicable mitigation outlined above, the following mitigation is recommended to address these potential effects: <ul style="list-style-type: none"><li>• Municipal wells and local private water wells within the area are not anticipated to be affected in any measurable way by potential construction dewatering of tower foundation holes or excavations from tower construction.</li><li>• The majority of wells exploit aquifer(s) that are at much greater depth than the proposed tower excavations. In the event dewatering activities create a minor radius of influence, shallow well aquifers, groundwater levels and flows are expected to return to pre-construction conditions during the construction period.</li></ul>	No significant net effects are predicted.
<b>Natural Environment Resources - Groundwater Resources:</b> Groundwater Quality	<b>Construction:</b> Disturbance of contaminated soil has the potential to contribute to groundwater contamination.	Refer to the mitigation recommended for Spills and Excess Materials Management under Physical Environment, Soil Rutting under Surface Water Resources and for Soil Mixing under Agricultural Resources.  Hydro One has committed to the use of helical (screw) pile foundations for the transmission line structures, with helical pile foundations installed at depths of approximately 6 m to 9 m bgs. As a result, the foundations will remain within the protecting clay overburden between approximately 10 m to 30 m above the top of the contact aquifer layer.	No significant net effects are predicted.
<b>Natural Environment Resources - Groundwater Resources:</b> Groundwater Quantity	<b>Construction:</b> Disturbance and compaction to soil has the potential to inhibit infiltration.	Refer to mitigation recommended for Soil Compaction under Agricultural Resources, as well as the mitigation recommended above for groundwater quality.	No significant net effects are predicted.
<b>Natural Environment Resources - Groundwater Resources:</b> Groundwater Quantity	<b>Construction:</b> Dewatering activities/removal of groundwater have the potential to result in temporary lowering of aquifers.	Refer to mitigation recommended for Dewatering under Surface Water Resources. Additional mitigation recommended includes: <ul style="list-style-type: none"><li>• If deemed necessary, a hydrogeological assessment will be conducted to inform construction planning, permitting and management.</li></ul>	No significant net effects are predicted. Groundwater resources within the area are not anticipated to be adversely affected by dewatering of tower foundation holes or excavations from tower construction. Such effects will cease upon the completion of construction dewatering.

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Natural Environment Resources - Designated or Special Natural Areas:</b> Important Bird Area (IBA)	<b>Construction and Operation:</b> Potential for bird collisions within the Eastern Lake St. Clair IBA.	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• The entirety of the area of the IBA that is traversed by the proposed Project will involve replacement of an existing 115 kV transmission line.</li><li>• Visual mitigation measures (e.g., bird diverters and/or similar measures) will be incorporated during detailed design as a mechanism to improve bird visibility of the transmission line at key areas within the IBA.</li><li>• In support of detailed design, a review of potential wildlife habitat associated with the transmission line ROW will be used to identify locations for potential visual mitigation measures.</li><li>• Towers and access roads will be located to avoid sensitive habitats, where practical.</li><li>• Vegetation removal will be conducted outside of the migratory bird breeding season (i.e., April 5 to August 31; zone C1 as provided by ECCC 2018), where practical.</li><li>• In the event vegetation clearing is required during the breeding bird season, nest searches conducted by a qualified person will be completed in accordance with applicable provincial and federal requirements.</li></ul>	No significant net effects are predicted.
<b>Natural Environment Resources - Designated or Special Natural Areas:</b> Significant Woodlands	<p><b>Construction:</b> Removal of 7.09 ha of woodlands (transition to compatible vegetation) within the ROW. Woodland removal is associated with the following communities:</p> <ul style="list-style-type: none"><li>• FOD (0.66 ha)</li><li>• FODM2-1 (0.77 ha)</li><li>• FODM7-4 (0.28 ha)</li><li>• FODM9 (0.36 ha)</li><li>• FODM9-4 (1.07 ha)</li><li>• SW (0.12 ha)</li><li>• SWD (1.06 ha)</li><li>• WOD (2.77 ha)</li></ul> <p><b>Maintenance:</b> Vegetation management within the ROW to ensure that incompatible vegetation does not threaten the safe and reliable operation of the transmission line.</p>	<p>In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• The extent of clearing and vegetation removal required for the transmission line ROW within woodlands will be minimized to the extent practical.</li><li>• Woodlands will be taken into account when planning access, and the footprint of work areas/access within woodlands will be minimized to the extent practical.</li><li>• Incompatible vegetation will be salvaged or felled as appropriate.</li><li>• Conduct tree removals associated with woodlands outside of the migratory bird breeding season (i.e., April 5 through August 31, zone C1 as provided by ECCC 2018) and the bat active season (i.e., March 15 to November 30), where practical.</li><li>• In the event vegetation clearing is required during the breeding bird season, nest searches will be conducted</li></ul>	<p>Net effects include permanent removal of incompatible vegetation (portions of woodland) to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Hydro One will undertake a Biodiversity Initiative to offset habitat loss or transition (e.g., from woodlot to a compatible vegetation community) that cannot otherwise be avoided or mitigated. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		<p>by a qualified person in accordance with applicable provincial and federal requirements.</p> <ul style="list-style-type: none"><li>• In the event woodlands with the potential to support bats require tree removals, bat acoustic surveys for man-made structures and visual exit for wooded areas, may be completed by the contractor's Environmental Lead during the month of June in accordance with agency approved protocols to determine Species at Risk (SAR) bat habitat use (or lack thereof).</li><li>• Prior to construction, the MECP will be consulted regarding permitting/approvals next steps under the <i>Endangered Species Act, 2007</i> (ESA).</li><li>• Snags (dead standing trees) and cavity trees that do not pose a risk to the construction or operation of the transmission line will be identified and retained, to the extent practical.</li><li>• Woodlands disturbed during construction will be restored following completion of construction with compatible native species (e.g., native seed mix and shrub stock).</li></ul>	
<b>Natural Environment Resources – Natural Heritage Features:</b> Significant Valleylands	<b>Construction &amp; Maintenance:</b> Potential impacts to valleylands due to removal of vegetation, soil erosion, sedimentation, etc. Effects are associated with the following communities: Sydenham River, North Sydenham River, Thames River	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• Valleylands will be considered during detailed design with respect to tower locations.</li><li>• To the extent practical, avoid work or disturbance to the valleylands or areas adjacent to the edge of the valleylands.</li><li>• Where tree removals are required in association with valleylands the measures described below in “Natural Environment Resources - Natural Heritage Features: Vegetation” should be followed.</li></ul>	
<b>Natural Environment Resources - Designated or Special Natural Areas:</b> Significant Wetlands	<p><b>Construction:</b> Potential impacts to 4.07 ha of wetlands (includes 1.13 ha of PSW) as a result of vegetation loss, soil erosion, sedimentation, etc. Wetland effects are associated with the following community:</p> <ul style="list-style-type: none"><li>• SW (0.12 ha)</li><li>• SWD (1.06 ha)</li><li>• SWT (2.89 ha)</li><li>• -WE (0.01)</li></ul>	<p>Refer to mitigation recommended for Spills under Physical Environment, Soil Rutting &amp; Vegetation Removal under Surface Water Resources and Significant Woodland under Designated or Special Natural Areas. Additional Recommended Mitigation includes:</p> <ul style="list-style-type: none"><li>• Wetland boundaries will be clearly delineated in the Environmental Management Plan.</li><li>• Work activities and access within wetlands will be minimized to the extent practical.</li><li>• Where construction access in wetlands cannot be avoided, temporary access roads and work pads will</li></ul>	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Hydro One will undertake a Biodiversity Initiative as outlined above.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		<p>be built using measures such as mats or, geotextile and crushed rock, or equivalent means, which will protect the underlying soils during construction and can be easily removed when construction is complete.</p> <ul style="list-style-type: none"><li>• Equalization culverts, French drains or similar measures may be employed as necessary for any constructed access required within wetlands to maintain surface flow and drainage patterns during construction.</li><li>• Any wetlands disturbed during construction will be restored following completion of construction with compatible native species (e.g., native wetland seed mix, shrub stock, or a combination of both).</li><li>• Additional materials (i.e., rip rap, filter cloth, and silt fencing) should be readily available in case they are needed promptly for erosion and/or sediment control.</li><li>• No maintenance or fueling of machinery will be planned to occur within 30 m of the wetland. If such work must occur within 30 m of a wetland community due to unforeseen circumstances, additional spill protection measures (e.g., portable containment) will be utilized.</li></ul>	
<b>Natural Environment Resources - Natural Heritage Features:</b> Vegetation	<b>Construction &amp; Maintenance:</b> Removal of 22.91 ha (12.39 ha compatible, and 10.53 ha of incompatible vegetation with transmission lines) of vegetation within proposed activity work areas. Up to 12.39 ha of compatible vegetation will be retained, where practical.	<p>Refer to mitigation recommended for Hedgerows and Windbreak under Agricultural Resources and IBA and Significant Woodlands under Designated or Special Natural Areas. Additional recommended mitigation includes:</p> <ul style="list-style-type: none"><li>• Tree protection zones will be used to delineate and protect trees that do not require removal for construction activities or operation of the transmission line, as necessary.</li><li>• Non-salvageable limbs will be disposed of by chipping or removal to designated areas.</li><li>• Tree removals adjacent to watercourses will be cut such that their root systems remain intact to maintain soil stability, and compatible bank/riparian vegetation will be retained to the extent practical.</li><li>• Isolated trees (i.e., not associated with woodlands) identified by a qualified person as having the potential to support bats will be removed outside of the bat active season (i.e., March 15 to November 30).</li><li>• In the event isolated trees with the potential to support bats require removal during the bat active season, exit surveys will be completed by a qualified person</li></ul>	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Hydro One will undertake a Biodiversity Initiative as outlined above.</p>



Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		following agency approved protocols. Where surveys confirm no habitat use, the isolated tree(s) can be removed. In the event habitat use is confirmed, removals will be completed between October 1 and March 31.	
<b>Natural Environment Resources - Natural Heritage Features:</b> Vegetation	<b>Construction:</b> Accumulation of cleared vegetation.	<p>In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>Lambton County and the Municipality of Chatham-Kent are designated areas by the Canadian Food Inspection Agency (CFIA, 2022) prohibiting the movement of Ash firewood and wood Ash products. As such, wood waste will be managed in accordance with federal requirements and best practices.</li></ul>	No significant net effects are predicted.
<b>Natural Environment Resources - Natural Heritage Features:</b> Fish and Fish Habitat	<b>Construction &amp; Maintenance:</b> Potential disturbance to fish habitat as a result of vegetation loss, soil erosion, sedimentation, etc.	<p>Refer to mitigation recommended for Spills under Physical Environment. Additional recommended mitigation includes:</p> <ul style="list-style-type: none"><li>The creation of new watercourse crossings during construction will be avoided to the extent practical by using existing access and crossings (e.g., bridges, culverts) and by accessing work areas from either side of watercourses/drains.</li><li>Construction access, laydown and work areas will be planned to avoid waterbodies and potential fish habitat to the extent practical (e.g., maintaining distance from watercourse banks except where crossings exist or are required).</li><li>Disturbance to waterbodies, shorelines, riparian areas, etc. will be stabilized to prevent erosion.</li><li>An ESC plan will be developed to include mitigation measures such as constructing watercourse crossings during low flow conditions, retaining compatible stream bank vegetation, use of ESC during construction and restoration, and storing materials away from sensitive receptors (e.g., watercourses, drains, wetlands).</li><li>Project wastes will be immediately removed from and stored away from riparian areas.</li><li>No refuelling or vehicles and/or equipment will be permitted within 30 m of a watercourse to prevent potential spills (e.g., fuel, oil, lubricant) from entering aquatic features.</li><li>Disturbed areas will be restored to a pre-disturbed state or better, upon completion of construction, with</li></ul>	<p>No significant net effects are predicted.</p> <p>Hydro One will undertake a Biodiversity Initiative as outlined above where there is opportunity to create and/or enhance aquatic habitat.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		<p>compatible native species (e.g., seed mix, shrub stock, or a combination of both).</p> <ul style="list-style-type: none"><li>• If permanent or temporary works are required below the high-water mark of a watercourse with potential fish habitat, a Request for Review will be prepared and submitted to the DFO in support of a Letter of Advance and/or approvals under the Fisheries Act. Further, the MNRF will be consulted with to discuss permitting requirements under the Fish and Wildlife Conservation Act.</li><li>• If in-water works are required during construction, Hydro One or the EPC will engage with MNRF to discuss the application of timing restrictions.</li><li>• Where implosive conductor splicing is utilized, work will be planned and conducted in accordance with the Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters (DFO) as deemed necessary.</li><li>• Transmission line structures will be set back from watercourse banks and located outside of regulatory floodplains, to the extent practical.</li><li>• Work will be conducted in accordance with a permit from the applicable Conservation Authority when working within their regulated area.</li><li>• Indigenous communities will also be consulted on mitigation measures to address SAR and their habitats.</li></ul>	
<b>Natural Environment Resources - Natural Heritage Features:</b> Woodlands	<p><b>Construction:</b> Removal of 7.09 ha of woodland (transition to compatible vegetation) within the transmission ROW. Woodland removal is associated with the following communities:</p> <ul style="list-style-type: none"><li>• FOD (0.66 ha)</li><li>• FODM2-1 (0.77 ha)</li><li>• FODM7-4 (0.28 ha)</li><li>• FODM9 (0.36 ha)</li><li>• FODM9-4 (1.07 ha)</li><li>• SW (0.12 ha)</li><li>• SWD (1.06 ha)</li><li>• WO (2.77 ha)</li></ul> <p><b>Maintenance:</b> Vegetation management within the transmission ROW to ensure that incompatible</p>	<p>Refer to mitigation recommended for Significant Woodlands under Designated or Special Natural Areas.</p> <ul style="list-style-type: none"><li>• Woodlands disturbed during construction will be restored following completion of construction with compatible native species (e.g., native seed mix and shrub stock).</li></ul>	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Hydro One will undertake a Biodiversity Initiative as outlined above.</p>



Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
	vegetation does not threaten the safe and reliable operation of the transmission line.		
<b>Natural Environment Resources - Natural Heritage Features:</b> Wetlands	<b>Construction:</b> Potential impacts to 4.07 ha of wetlands as a result of vegetation loss, soil erosion, sedimentation, etc. Wetland effects are associated with the following community: <ul style="list-style-type: none"><li>• SW (0.12 ha)</li><li>• SWD (1.06 ha)</li><li>• SWT (2.89 ha)</li><li>• WE (0.01 ha)</li></ul>	Refer to mitigation recommended for Spills under Physical Environment, Soil Rutting & Vegetation Removal under Surface Water Resources, Significant Woodland under Designated or Special Natural Areas, and Significant Wetlands under Designated or Special Natural Areas.	Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.  Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.  Hydro One will undertake a Biodiversity Initiative as outlined above.
<b>Natural Environment Resources - Natural Heritage Features:</b> Species at Risk	<b>Construction &amp; Maintenance:</b> Potential disturbance or loss of SAR and/or SAR habitat.	Refer to mitigation recommended for Soil Rutting & Vegetation Removal under Surface Water Resources, Significant Woodland under Designated or Special Natural Areas and Vegetation under Natural Heritage Features. Additional mitigation includes: <ul style="list-style-type: none"><li>• Impacts to potential SAR habitat will be avoided, where possible. In the event impacts cannot be avoided, MECP will be consulted regarding permitting/approval requirements under the ESA during detailed design.</li><li>• Boundaries of SAR habitats will be identified and flagged off.</li><li>• To the extent possible, incompatible vegetation/trees with the potential to provide SAR habitat will be removed/trimmed to the extent that they no longer pose a risk to overhead transmission lines while still maintaining their potential SAR habitat characteristics.</li><li>• Snags (dead standing trees) and cavity trees with the potential to provide SAR habitat that do not pose a risk to the operation of the transmission line will be identified by a qualified person and retained to the extent practical.</li><li>• Construction personnel will be aware of the potential presence of, and able to identify, SAR with the potential to occur within the general work areas.</li><li>• Should SAR be encountered during construction activities, activities will be stopped until it has been determined that harm will not occur. The required activities will be assessed to determine whether the work/schedule can be modified, or mitigation measures employed, to avoid potential effects on SAR and their habitat.</li></ul>	Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.  Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.  Permitting under the ESA, SARA and/or the Fisheries Act will be obtained in advance of construction, where necessary.

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		<ul style="list-style-type: none"><li>• If avoidance of SAR and/or SAR habitat is not possible, MECP and/or DFO will be consulted in advance of construction to discuss detailed mitigation measures and/or assess the need for permitting/approvals under the ESA, SARA or the Fisheries Act.</li><li>• If a SAR is harmed or killed as a result of work activities, the MECP will be notified and the relevant work activities will cease within the immediate area until the species has been removed by personnel authorized to handle SAR.</li><li>• SAR observed during construction activities will be reported to the MECP, as required.</li><li>• Indigenous communities will also be consulted on mitigation measures to address SAR and their habitats.</li></ul>	
<b>Natural Environment Resources – Natural Heritage Features:</b> Species at Risk (SAR) – Bats	<b>Construction &amp; Maintenance:</b> Potential disturbance or loss of SAR and/or SAR habitat	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• The potential to impact SAR bats would be restricted to maternity sites or day-roosts.</li><li>• Assess for maternity roosts along the preferred route alternative prior to construction for habitat retention, to the extent practical.</li><li>• Educate contractors by informing them of the bat species in Ontario which receive species and habitat protection.</li><li>• Remove all buildings and trees that are 10 cm in diameter at breast height or larger between October 1 and March 31 (bat active season is March 15 to November 30). If this is not possible, conduct an exit survey paired with acoustics (man-made structures) and/or acoustic surveys (wooded areas) during the month of June prior to removal of potential habitat roost trees/buildings. Where exit/acoustic surveys identifies SAR bats entering/exiting habitat features, consult with the MECP prior to construction to discuss detailed mitigation measures and/or assess the need for permitting/approvals.</li><li>• Construction of bat nesting boxes in certain areas may be considered to offset the loss of roosting habitat.</li></ul>	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Permitting under the ESA, SARA and/or the Fisheries Act will be obtained in advance of construction, where necessary.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Natural Environment Resources – Natural Heritage Features:</b> Species at Risk (SAR) – Birds	<b>Construction &amp; Maintenance:</b> Potential disturbance or loss of SAR and/or SAR habitat	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• Habitat removal during the migratory bird breeding season (April 5 to August 31 in nesting zone C1: ECCC, 2018) will be avoided to the extent feasible.</li><li>• Non-intrusive nest surveys will be undertaken by a qualified biologist if habitat removal is required during the April 5 to August 31 period.</li><li>• In the event there is potential for work occurring within the nesting period, additional measures to exclude Barn Swallow from nesting in structures (e.g., installing netting) may be considered as a mechanism to avoid impacts to the species.</li><li>• Soil stockpiles will be managed in ways that are not conducive to bank swallow nesting (e.g. slopes maintained to 70° or less, and/or covered or bare soil seeded during the breeding season).</li></ul>	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Permitting under the ESA, SARA and/or the Fisheries Act will be obtained in advance of construction, where necessary.</p>
<b>Natural Environment Resources – Natural Heritage Features:</b> Species at Risk (SAR) – Aquatic SAR	<b>Construction &amp; Maintenance:</b> Potential disturbance or loss of SAR and/or SAR habitat	Refer to mitigation recommended for Fish and Fish Habitat under Natural Environment Resources above.	<p>No significant net effects are predicted.</p> <p>Permitting under the ESA, SARA and/or the Fisheries Act will be obtained in advance of construction, where necessary.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Natural Environment Resources – Natural Heritage Features:</b> Species at Risk (SAR) – Reptiles	<b>Construction &amp; Maintenance:</b> Potential disturbance or loss of SAR and/or SAR habitat	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• In advance of construction, map and assess for potential habitat of SAR reptiles, turtle nesting areas (which may include agricultural fields), and Blanding’s turtle habitat within the ROW and directly adjacent lands.</li><li>• Implement a speed limit (e.g., 15 km/hr) within or adjacent to SAR snake habitat.</li><li>• Perform daily sweeps of work areas within/directly adjacent to SAR reptile habitat during the active season (approximately March 15 to October 30 subject to weather conditions).</li><li>• Be vigilant in looking for the presence of snakes or reptiles. If found, allow species to leave on their own. If a suspected species at risk is observed (i.e., Blanding’s Turtle, Eastern Fox snake), then contact MECP or a qualified biologist for assistance immediately.</li><li>• A sediment fence used for exclusion should be installed as per the guidelines from Reptile and amphibian exclusion fencing (MECP, 2021). The two ends of the fence are to have a turn-around to encourage species to remain within the retained habitats.</li><li>• Turtle exclusion fencing should be installed and maintained every year prior to the beginning of May to minimize the potential for turtles to nest on site.</li><li>• If a turtle nest is identified, a 30m buffer will be employed to protect the nest and a qualified biologist will be consulted for additional guidance.</li><li>• The design of SAR exclusion fencing for Eastern Foxsnake will include measures (e.g., increased height, an outward-facing lip, or similar) to prevent entry into work areas, as well as materials which prevent snake entanglement.</li><li>• Vehicles and equipment left idle overnight at work areas will be inspected for SAR snakes prior to use.</li><li>• Training on the identification of SAR relevant to the Project area, and protocols for incidental observations of SAR, will be provided to construction crews.</li><li>• In-water works within turtle wintering areas during the turtle wintering season will be avoided.</li></ul>	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Permitting under the ESA, SARA and/or the Fisheries Act will be obtained in advance of construction, where necessary.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Natural Environment Resources – Natural Heritage Features:</b> Species at Risk (SAR) – Butternut	<b>Construction &amp; Maintenance:</b> Potential disturbance or loss of SAR and/or habitat	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• A Butternut inventory and health assessment must be completed by qualified personnel for any Butternut trees identified within the ROW or within 25 m of the ROW, where possible.</li><li>• Where impacts to Butternut are anticipated, removal of Butternut is eligible for conditional exemption under the ESA through activity registration under Part V of O. Reg. 830/21 so long as the conditions in the regulation are adhered to.</li><li>• Given that Butternut are incompatible with transmission lines, as deemed necessary by the results of any Butternut health assessments, mitigation measures will be implemented prior to commencement of work activities for Butternut located outside of the transmission ROW. Such mitigation may include, where possible:<ul style="list-style-type: none"><li>○ Tree protection fencing should be installed at least 1.2 metres in height and in such a way that the fence cannot be altered.</li><li>○ Avoid placing any material or equipment within 25 m of the Butternut.</li><li>○ Indigenous communities will also be consulted on mitigation measures to address SAR and their habitats.</li></ul></li></ul>	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Permitting under the ESA, SARA and/or the Fisheries Act will be obtained in advance of construction, where necessary.</p>



Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Natural Environment Resources - Natural Heritage Features:</b> Wildlife Habitat	<b>Construction &amp; Operation:</b> Potential disturbance or loss of wildlife habitat, including habitat fragmentation.	<p>Refer to mitigation recommended for Significant Woodland under Designated or Special Natural Areas, Species at Risk (SAR) under Natural Heritage Features, and Vegetation under Natural Heritage Features. Additional mitigation includes:</p> <ul style="list-style-type: none"><li>• Boundaries of important wildlife habitats will be identified and the ROW boundaries flagged prior to clearing.</li><li>• Trees containing stick nests and areas where active animal dens or burrows are encountered will be left undisturbed until unoccupied, as determined by a qualified person.</li><li>• Where vegetation clearing is required, some of the cleared vegetative material may be used to create brush/habitat piles along the ROW edges, where appropriate.</li><li>• Birds of prey may construct stick nests on transmission structures. Osprey nests are most common on transmission structures, but Bald Eagle nests are occasionally encountered. If there are eggs or young in the nest, it is Hydro One protocol to leave the nest until the young have fledged unless there is an immediate safety concern to be addressed. If there are no eggs or young observed, the nest will be removed and replaced.</li><li>• In the event that removal of stick nests is deemed to be required during detailed design or construction, Hydro One or its EPC contractor will consult with the MNRF to discuss permitting requirements.</li><li>• Construction personnel will be educated on the potential for wildlife which may be encountered within the general work areas.</li><li>• In-water works within turtle wintering areas during the turtle overwintering period will be avoided.</li><li>• In the event that collection, salvage or relocation of wildlife is required due to construction activities, Hydro One or its EPC contractor will consult with MNRF to discuss permitting requirements.</li></ul>	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Hydro One will undertake a Biodiversity Initiative as outlined above.</p>
<b>Natural Environment Resources – Natural Heritage Features:</b> Wildlife Habitat – Bald Eagle	<b>Construction &amp; Maintenance:</b> Potential disturbance or loss of Bald Eagle individuals and/or habitat.	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• To the extent practical, clearing of vegetation will be avoided within a 400 m radius of documented Bald</li></ul>	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p>



Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
	Two Bald Eagle nests were identified within the LSA. Bald Eagle individuals were also observed incidentally during the 2022 field program.	<p>Eagle nests within the species nest-building and breeding season (mid-February to end of August).</p> <ul style="list-style-type: none"><li>Retain super canopy trees for nesting to the extent practical.</li><li>In the event that removal of stick nests is deemed to be required during detailed design or construction, Hydro One or its EPC contractor will consult with the MNRF to discuss permitting requirements.</li></ul>	<p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Hydro One will undertake a Biodiversity Initiative as outlined above.</p>
<b>Natural Environment Resources - Natural Heritage Features:</b> Invasive Species	<b>Construction:</b> Potential for inadvertent spread of invasive species propagules through the movement of soil, debris and/or plant material via construction vehicles and equipment.	<p>Refer to mitigation recommended for Agricultural Resource effects. Additional mitigation includes:</p> <ul style="list-style-type: none"><li>Construction crews will be educated on the importance of avoiding inadvertent spread of invasive species, and to identify the invasive species that are known to occur or are likely to occur within work areas.</li><li>Areas identified as having invasive species present will be considered during access and construction planning. Stands of invasive plant species will be avoided to the extent practical during construction.</li><li>Equipment and vehicle inspections and cleaning will be established during construction, to minimize the potential for inadvertent transport of invasive species propagules.</li><li>Crews will be educated and informed of invasive species known or with potential to occur in work areas.</li><li>Special treatment areas (e.g., large established populations of invasive species within the ROW) will be tracked for consideration when planning future maintenance works.</li></ul>	No significant net effects are predicted.
<b>Indigenous Culture, Values and Land Use</b>	<b>All Phases:</b> Potential to affect Indigenous Community interests.	<ul style="list-style-type: none"><li>Indigenous communities have expressed interest in being involved with future archaeological and Natural Environment field work. Hydro One and its consulting archaeologist and ecologist will work with interested communities to include representatives from interested communities in archaeological and environmental fieldwork.</li><li>Indigenous communities will be provided opportunities to review the findings of archaeological field surveys and archaeological assessment reports.</li><li>If archaeological artefacts are encountered during construction, work in the vicinity will cease and a licensed archaeologist will be engaged immediately to ensure compliance with the Ontario Heritage Act.</li></ul>	No significant net effects are predicted.

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		<ul style="list-style-type: none"><li>Hydro One understands that Bald Eagles are considered sacred. Bald Eagles occasionally build nests on transmission line structures; if there are eggs or young in the nest on existing transmission towers, it is Hydro One protocol to leave the nest until the young have fledged unless there is an immediate safety concern to be addressed. If there are no eggs or young, the nest will be removed and replaced.</li><li>Should Hydro One become aware of a deceased Bald Eagle along the transmission line corridor, we will note their location and inform interested communities, in the event that they would like to provide a ceremony.</li><li>Several communities have expressed a desire to protect and mitigate adverse effects to natural environment features such as SAR, wildlife and aquatic habitat, and natural or naturalized areas within their traditional territory that could be used for hunting, gathering, harvesting or other traditional uses. Mitigation measures to address effects to these features are described above under Natural Heritage Features.</li><li>A community expressed concerns regarding potential effects to nearby facilities which generate revenue for the community. There may be a need for temporary (~4 to 5 days) of outages to this facility during construction. Hydro One will work closely with any generators or large customers that may be affected by temporary transmission outages during construction to attempt to mitigate these when planning the outages (i.e., timing outages during planned maintenance periods to the extent practical).</li><li>Some communities may conduct Traditional Ecological Knowledge (TEK) studies. Should these communities wish to share some or all of the findings of these studies with Hydro One and the construction contractor, this information will be taken into consideration during the construction planning of the proposed Project to the extent practical. This may include working with private landowners to provide potential opportunities to harvest traditional use plant species ahead of construction, or to provide input into post-construction restoration plans for natural or naturalized areas.</li></ul>	

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
		<ul style="list-style-type: none"><li>Some communities have expressed an interest in participating in the Biodiversity Initiative that Hydro One is committing to for the proposed Project, which will seek opportunities to create or enhance habitats to offset any adverse effects to habitats as a result of the Project. Hydro One will involve interested communities in the Biodiversity Initiative, including potential incorporation of TEK where that information is willingly provided.</li></ul>	
<b>Recreational Resources</b>	<b>Construction &amp; Maintenance:</b> Potential for temporary disturbance to tourism and enjoyment of recreational resources (e.g., trails, etc.).	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>Though there may be temporary impacts to the enjoyment of recreational resources adjacent to the proposed Project, such impacts are expected to be short-term in nature.</li><li>Advanced notice will be provided to nearby residences, farms, landowners and commercial operations, outlining the location of entry/exit points for the construction site as well as the schedule for construction work or construction related traffic in those areas. Clear and temporary signage will be created and installed to reflect this information.</li><li>Disturbance to existing recreational resources will be avoided, to the extent practical. This may include timing work to avoid seasons of heavier use.</li><li>Safety precautions will be utilized throughout the Project area to protect the public such as anti-climbing devices and appropriate signage, where necessary.</li></ul>	<p>No significant net effects are predicted.</p> <p>Hydro One will commit to working with local municipalities to identify community benefit opportunities to enhance the broader landscape.</p>
<b>Visual and Aesthetic Resources:</b> Visibility of the Project by Sensitive Receptors	<b>All Phases:</b> Potential visual impacts to sensitive receptors with views of the Project.	Location of transmission structures is one of the largest factors influencing the visual effects to specific receptors. Design of the transmission line (e.g., placement of structure locations) will consider visibility to nearby sensitive receptors.	<p>Construction of the new transmission structures will result in a visual change to the landscape.</p> <p>Hydro One will commit to working with local municipalities to identify community benefit opportunities to enhance the broader landscape.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<b>Technical Considerations:</b> Wind Turbines	<b>Construction &amp; Operation:</b> The transmission line will be constructed and operated within proximity to adjacent established wind energy facilities, including turbines and overhead or buried collector lines.	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• Direct impacts to existing wind energy facilities or their transmission lines are not anticipated as part of the Project.</li><li>• Contact will be maintained with wind facility operators regarding work schedule and other items of interest.</li><li>• Due to the need to maintain a redundant transmission supply to the Wallaceburg TS for the duration of construction (removal of the existing N5K 115 kV transmission line, and conversion of Wallaceburg TS from 115 kV to 230 kV), there is a high probability that some brief planned outages to transmission circuits will be required to facilitate line connections during construction. These outages are anticipated to be needed for approximately four days total during construction and will only affect facilities, such as some wind farms, that are connected directly to the transmission grid (the distribution supply to homes and businesses in the area will not be affected). Hydro One will work with any affected transmission-connected facilities to provide advance notification and discuss potential means to mitigate the impact of these temporary outages to their operations.</li></ul>	No significant net effects are predicted.
<b>Technical Considerations:</b> Infrastructure Crossings	<b>All Phases:</b> Permanent overhead crossing of Highway 40 (Communication Road), as well as construction of a new transmission line parallel to other highways, including municipal roads.	<p>Refer to mitigation recommended for Local Roads &amp; Traffic under Land Use Communities. Additional mitigation includes:</p> <ul style="list-style-type: none"><li>• Permanent impacts to Highway 40 or any other municipal road crossings are not anticipated as part of this project.</li><li>• Temporary or rolling closure of Highway 40 may be required to facilitate stringing, and duration of any temporary closures will be minimized to the extent practical.</li><li>• Where the new transmission line crosses Highway 40, setback distances provided by the MTO will be respected.</li><li>• Work within the MTO Highway 40 ROW will require an Encroachment Permit and/or a Land Use Permit as well as consultation and input from Ministry staff during design.</li></ul>	No significant net effects are predicted.

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
Technical Considerations: Infrastructure Crossings	Construction: Underground utility crossing.	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• Equipment with low bearing capacity will be used, where feasible.</li><li>• Temporary and permanent access roads and work pads will be built using mats or geotextile and crushed rock, and/or other protective measures will be implemented as deemed necessary.</li><li>• Contact will be maintained with applicable utility operators regarding work schedule and other items of interest.</li></ul>	No significant net effects are predicted.
Technical Considerations: Infrastructure Crossings	Construction and Operation: Permanent overhead crossing of the existing railway line ROWs.	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"><li>• Temporary flagging operations of railway lines may be required to facilitate construction of the aerial crossing.</li><li>• Hydro One will work with applicable rail authorities during design.</li></ul>	No significant net effects are predicted.
Technical Considerations: Infrastructure Crossings	All Phases: Crossings of constructed drains.	<p>Refer to applicable mitigation recommended for Fish and Fish Habitat under Natural Heritage Features and Spills under Physical Environment. Additional mitigation includes:</p> <ul style="list-style-type: none"><li>• Municipal drainage superintendents will be consulted during design and construction planning, to discuss any potential effects to municipal drains.</li><li>• Placement of transmission structures will avoid municipal drains to the extent practical, including consideration of setbacks as communicated by the municipal drainage superintendents and their staff.</li><li>• The creation of new crossings during construction will be avoided to the extent practical by using existing access and crossings (e.g., bridges, culverts) and by accessing work areas from either side of drains, where feasible.</li><li>• Disturbed areas will be restored to a pre-disturbed state or better following completion of construction.</li></ul>	No significant net effects are predicted.



Table 7-2: Valued Components Shared by an Indigenous Community, Summary of Potential Effects, Mitigation Measures and Residual Effects

Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
Wild foods, Hunting	Removal of vegetation (potential habitat for game species or wild forage). The new transmission line ROW could result in the removal of desired species that could interfere with the safe operation of transmission towers/lines including wild foods and medicines that are often found in forested areas.	<ul style="list-style-type: none"><li>• Tree protection zones will be used to delineate and protect trees that do not require removal for construction activities or operation of the transmission line, as necessary.</li><li>• Tree removals adjacent to watercourses will be cut such that their root systems remain intact to maintain soil stability, and compatible bank/riparian vegetation will be retained to the extent practical.</li><li>• Vegetation removals will be minimized to the extent possible, and replanted/seeded with compatible vegetation as required. Communities will have opportunities to review and provide input into restoration/revegetation plans (e.g., species selection).</li><li>• Conduct vegetation removal outside of the migratory bird breeding season (i.e., April 5 to August 31; zone C1 as provided by ECCC 2018), where practical. In the event vegetation clearing is required during the breeding bird season, nest searches conducted by a qualified person will be completed in accordance with applicable provincial and federal requirements.</li><li>• The extent of clearing and vegetation removal required for the transmission line ROW within woodlands will be minimized to the extent practical.</li><li>• Woodlands will be taken into account when planning access, and the footprint of work areas/access within woodlands will be minimized to the extent practical.</li><li>• Boundaries of important wildlife habitats will be identified and flagged prior to clearing.</li><li>• Trees containing stick nests and areas where active animal dens or burrows are encountered will be left undisturbed until unoccupied, as determined by a qualified person.</li><li>• Promotion of wildlife habitat through vegetation control and brush piles.</li><li>• Construction personnel will be aware of the potential for wildlife which may be encountered with the within the general work areas.</li><li>• Areas where incompatible vegetation is removed for the new ROW, will be restored following construction with compatible native species.</li><li>• There may be potential opportunities to harvest traditional use plant species and wild foods ahead of construction. This may require permission from private landowners as well as coordination between several communities (if interested), and Hydro One can help to facilitate these opportunities where they may exist or be identified by communities.</li></ul>	<p>Effects are expected to include the permanent removal of vegetation that at maturity could compromise the safe operation of the transmission line; these removals represent a very small portion of the new/expanded transmission line corridor as the majority of the new corridor will occur on agricultural fields, and the preferred route has low overall effects to the type of vegetation of concern when compared to other route alternatives.</p> <p>The removal of unsafe vegetation will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible. Hydro One will work with Indigenous communities to identify desired species (e.g., wild food and medicines) that can be included in post-construction restoration plantings.</p> <p>Hydro One will also work with Indigenous communities to design and undertake a Biodiversity Initiative to offset vegetation loss or transition (e.g., from woodlot to a compatible vegetation community) that cannot otherwise be avoided or mitigated. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>





Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<b>Fishing and use of waterways</b>	<p>Crossings of many watercourses (such as the Thames River) will involve replacement of an idle 115 kV transmission, such that the new ROW may be wider but will not represent a "brand new" watercourse crossing.</p> <p>Watercourses will be spanned by overhead transmission and in-channel works are generally not required, unless crossings (e.g., temporary construction crossings) cannot otherwise be avoided. Any new construction crossings will be temporary in nature.</p> <p>Some riparian areas with incompatible vegetation (e.g., trees) within the new or expanded ROW will have this vegetation removed, although compatible riparian vegetation (e.g., shrubs, grasses, sedges etc) will be retained and restored.</p>	<ul style="list-style-type: none"><li>• The creation of new water crossings during construction will be avoided to the extent feasible by using existing access and crossings (e.g., bridges, culverts) and by accessing work areas from either side of watercourses/drains, where practical.</li><li>• Construction access, laydown and work areas will be planned to avoid waterbodies and potential fish habitat to the extent practical (e.g., maintaining distance from watercourse banks except where crossings exist or are required).</li><li>• Disturbance to waterbodies, shorelines, riparian areas, etc. will be stabilized to prevent erosion.</li><li>• Tree removals adjacent to watercourses will be cut such that their root systems remain intact to maintain soil stability, and compatible bank/riparian vegetation will be retained to the extent practical.</li><li>• Machine clearing and grubbing will be restricted near sensitive environmental areas, hand clearing may be required within watercourse banks/riparian areas, where practical.</li><li>• Project wastes will be stored and/or removed from all riparian areas immediately.</li><li>• Disturbed areas will be restored to a pre-disturbed state or better, upon completion of construction, with compatible native species (e.g., seed mix, shrub stock, or a combination of both).</li><li>• If permanent or temporary works are required below the high water mark of a watercourse with potential fish habitat, a Request for Review will be prepared and submitted to the DFO in support of a Letter of Advance and/or approvals under the Fisheries Act.</li><li>• Transmission line structures will be set back from watercourse banks and located outside of regulatory floodplains, to the extent practical.</li><li>• Work will be conducted in accordance with a permit from the applicable Conservation Authority when working within their regulated areas.</li></ul>	<p>While there will be a change to some riparian areas (removal of incompatible vegetation and transition to compatible vegetation), any net effects to fish or fishing and other uses of waterways are predicted to be very localized to the transmission line corridor and minor in nature.</p> <p>Where opportunities are identified, Hydro One will work with Indigenous communities to design and execute a Biodiversity Initiative to create or enhance habitats such as aquatic and riparian habitats. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>

Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
Fishing and use of waterways	During construction, work near watercourses/riparian areas (including the construction of temporary watercourse crossings) has the potential to cause erosion or sedimentation of watercourses.	<ul style="list-style-type: none"><li>• The creation of new watercourse crossings during construction will be avoided to the extent practical by using existing access and crossings (e.g., bridges, culverts) and by accessing work areas from either side of watercourses/drains.</li><li>• An Erosion and Sediment Control (ESC) ESC plan will be developed to include mitigation measures such as constructing watercrossings during low flow conditions, retaining compatible stream bank vegetation, use of ESC during construction and restoration, and storing materials away from sensitive receptors (e.g., watercourses, drains, wetlands).</li><li>• Where erosion is of a concern, exposed soils in previously vegetated areas will be re-vegetated as practical, or have other ESC measures applied as necessary.</li><li>• Where practical, activities with potential to cause rutting, ponding/channelization or erosion will be planned during stable and dry ground conditions.</li><li>• Where required, temporary crossing structures will be installed for construction access at watercourses and other low-lying areas and will be removed upon completion of construction.</li><li>• Existing, natural drainage patterns and flows will be identified and maintained to the extent possible.</li><li>• Equalization culverts or similar methods may be used in construction of access roads.</li><li>• Construction access and laydown areas will be restored following completion of construction.</li><li>• Cleared vegetation will be relocated to designated areas away from aquatic features.</li><li>• Equipment operation adjacent to water features will be minimized, where practical.</li><li>• Works adjacent or around watercourse banks will be conducted during appropriate conditions and times of the year (e.g., dry or frozen conditions), to the extent practical.</li><li>• Construction activities near sensitive features or areas may be suspended during extreme wet weather events, and crews will review and consider weather forecasts in their planning of such work.</li><li>• ESC installations will only be removed after disturbed areas are restored, accumulated sediment has been disposed, and construction activities in the vicinity are completed.</li><li>• In an effort to reduce potential erosion, mechanical or vegetation erosion control measures will be employed, such as buffer strips, erosion control blankets and sedimentation fences, as required.</li><li>• Equipment operation on slopes adjacent to streams will be minimized to the extent practical.</li><li>• Waste materials will be contained and not allowed into sensitive receptors such as waterbodies, riparian areas, wetlands or agricultural fields.</li><li>• Disturbed areas near water features or sensitive environmental areas will be restored as soon as practical.</li><li>• ESC measures will be regularly inspected (including after each significant rainfall event; &gt;10 mm) and repaired where necessary to maintain functionality.</li></ul>	Erosion and sediment control measures have proven to be effective at controlling these issues, and are only required temporarily during the construction phase of the project, and will be regularly inspected and repaired as required. Any sedimentation or erosion effects that do occur will be temporary in nature and therefore effects on the fish population and human health are anticipated to be minor and not significant.

Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<b>Fishing and use of waterways</b>	During construction, there is the potential for inadvertent release of deleterious substances including oil, gasoline or other liquids (i.e., spills)	<ul style="list-style-type: none"><li>• Refuelling of vehicles and equipment will be completed in a designated location located away from sensitive receptors, such as designated source water protection areas, watercourses, surface drainage features, wetlands, etc.</li><li>• Fuelling of vehicles/equipment will occur utilizing an emergency spill tray to capture any accidental release of fluids.</li><li>• Fuelling operations will require the operator to visually observe the fuelling process 100% of the time.</li><li>• If refuelling must occur outside of designated areas, additional containment or other mitigation and spill prevention measures will be utilized.</li><li>• Equipment will be inspected regularly during construction to ensure it is clean and free of leaks.</li><li>• An Emergency Response Plan and spill cleanup equipment will be maintained and be readily accessible at all times during construction and maintenance activities.</li><li>• Spills will be addressed and remediated as soon as possible after a spill.</li><li>• Areas impacted by a spill will be secured, and unauthorized personnel will be kept out of the affected area until further assessment and/or clean-up is conducted.</li><li>• Clean-up and the disposal of contaminated materials will be managed in accordance with provincial regulations and guidelines.</li><li>• Fuels, chemicals, lubricants or other deleterious substances will be stored on level ground in properly contained storage areas.</li><li>• Only approved aboveground petroleum storage tanks will be used during the construction phase of the Project, and will be stored in designated fuelling areas and with additional temporary containment measures.</li><li>• Work conducted near Provincially/locally designated Vulnerable Areas (namely Wellhead Protection Areas [WHPAs]; Intake Protection Zones [IPZs]; and Highly Vulnerable Aquifers [HVAs]) will be avoided or limited, where practical.</li><li>• SCRCA, the LTVCA, the Township of St. Clair, the County of Lambton and Municipality of Chatham-Kent will be consulted as required in order to undertake the proper action for managing the potential threats to source water protection areas.</li><li>• The MECP Spills Action Centre (SAC) will be notified of all reportable spills.</li></ul>	Given the protections that will be utilized during construction to prevent spills and the response procedures that will be developed to address minor spills during construction should they occur, no significant net effects on fisheries and water quality are anticipated.
<b>Fishing and use of waterways</b>	During operation of overhead transmission lines, herbicides are one of many tools that Hydro One employs to manage incompatible vegetation within the transmission line ROW to ensure the safe and reliable operation of the line.	<ul style="list-style-type: none"><li>• Any herbicide use will be planned in accordance with integrated pest management standards and to limitations such as setbacks from water bodies and other best practices.</li><li>• Restoration with compatible vegetation species will compete with incompatible species that require treatment, and will help to reduce and/or postpone the eventual need for vegetation management of incompatible species.</li></ul>	No significant net effects are anticipated, due to the relatively small areas of the new St. Clair Transmission Line corridor that currently contain incompatible vegetation (areas that may require vegetation management during operation of the line) and adherence to the appropriate standards and protocols during application of herbicides.

Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<b>Plants and medicines</b>	<p>The new transmission line ROW would remove species that at maturity would be unsafe during transmission line operations and restore with compatible species, so any plant medicines found in forested areas would be negatively affected but species that utilize meadow/thicket habitats may be positively affected.</p> <p>Black walnut trees, specifically mentioned, are considered incompatible and would need to be removed. Wild onions/leeks are also a forest understory species that could be affected, if present.</p> <p>Some berry species (e.g., raspberry, blackberry) may benefit from additional thicket/meadow communities and forest edges created along the ROW.</p> <p>Other medicines and species of interest would need to be identified by communities (in some manner) in order to assess specifically- an alternate way of doing this could be through habitat type.</p> <p>Burdock was found generally along hedgerows and is fairly common, but could be affected by construction. Neither sweetgrass nor sweetflag was identified during the vegetation inventory along the preferred route.</p>	<ul style="list-style-type: none"><li>• Tree protection zones will be used to delineate and protect trees that do not require removal for construction activities or operation of the transmission line, as necessary.</li><li>• Tree removals adjacent to watercourses will be cut such that their root systems remain intact to maintain soil stability, and compatible bank/riparian vegetation will be retained to the extent practical.</li><li>• Vegetation removals will be minimized to the extent possible, and replanted/seeded with compatible vegetation as required. Communities will have opportunities to review and provide input into restoration/revegetation plans (e.g., species selection).</li><li>• Conduct vegetation removal outside of the migratory bird breeding season (i.e., April 5 to August 31; zone C1 as provided by ECCC 2018), where practical. In the event vegetation clearing is required during the breeding bird season, nest searches conducted by a qualified person will be completed in accordance with applicable provincial and federal requirements.</li><li>• The extent of clearing and vegetation removal required for the transmission line ROW within woodlands will be minimized to the extent practical.</li><li>• Woodlands will be taken into account when planning access, and the footprint of work areas/access within woodlands will be minimized to the extent practical.</li><li>• Boundaries of important wildlife habitats will be identified and flagged prior to clearing.</li><li>• Trees containing stick nests and areas where active animal dens or burrows are encountered will be left undisturbed until unoccupied, as determined by a qualified person.</li><li>• Promotion of wildlife habitat through vegetation control and brush piles.</li><li>• Areas where incompatible vegetation is removed for the new ROW, will be restored following construction with compatible native species.</li><li>• There may be potential opportunities to harvest traditional use plant species and wild foods ahead of construction. This may require permission from private landowners as well as coordination between several communities (if interested), and Hydro One can help to facilitate these opportunities where they may exist or be identified by communities. This may include opportunities to collect seeds or fruit (e.g., black walnut), as large trees are not able to be transplanted.</li></ul>	<p>Net effects include permanent removal of vegetation that at maturity could compromise the safe operation of the transmission line; these removals represent a very small portion of the new/expanded transmission line corridor as the majority of the new corridor will occur on agricultural fields, and the preferred route has low overall effects to incompatible vegetation when compared to other route alternatives.</p> <p>The removal of unsafe vegetation will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is unsafe for transmission line operations, to vegetation that is compatible. Hydro One will work with Indigenous communities to identify desired species (e.g., wild food and medicines) that can be included in post-construction restoration plantings.</p> <p>Hydro One will also work with Indigenous communities to design and undertake a Biodiversity Initiative to offset vegetation loss or transition (e.g., from woodlot to a compatible vegetation community) that cannot otherwise be avoided or mitigated. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>





Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<b>Declines in resource quantities (e.g., availability of healthy animals and plants, for both harvesting purposes and as indicators of overall ecosystem health)</b>	See above rows on Wild foods/hunting, Fishing, and plants and medicines for effects to these resource quantities	See above rows on Wild foods/hunting, Fishing, and plants and medicines	See above rows on Wild foods/hunting, Fishing, and plants and medicines
<b>Changes to migratory birds, migratory bird habitat and bird harvesting</b>	There is potential for birds to collide with the overhead transmission, and the overhead transmission traverses a portion of the Lake St. Clair Important Bird Area (IBA).	<ul style="list-style-type: none"><li>• The majority of the area of the IBA that is traversed by the proposed Project will involve replacement of an existing idle 115 kV transmission line.</li><li>• Visual mitigation measures (e.g., bird diverters and/or similar measures) will be incorporated during detailed design as a mechanism to improve bird visibility of the transmission line within the IBA.</li><li>• In support of detailed design, a review of potential wildlife habitat associated with the transmission line ROW will be used to identify locations for potential visual mitigation measures.</li><li>• Towers and access roads will be located to avoid sensitive habitats, where practical.</li><li>• Conduct vegetation removal outside of the migratory bird breeding season (i.e., April 5 to August 31; zone C1 as provided by ECCC 2018), where practical.</li><li>• In the event vegetation clearing is required during the breeding bird season, nest searches conducted by a qualified person will be completed in accordance with applicable provincial and federal requirements.</li><li>• Birds of prey may construct stick nests on transmission structures. Osprey nests are most common on transmission structures, but Bald Eagle nests are occasionally encountered. If there are eggs or young in the nest, it is Hydro One protocol to leave the nest until the young have fledged unless there is an immediate safety concern to be addressed. If there are no eggs or young observed, the nest will be removed and replaced.</li><li>• Construction personnel will be aware of the potential for wildlife which may be encountered with the within the general work areas.</li></ul>	<p>Overhead transmission lines have potential for bird collisions, and while installation of visual mitigation (bird diverters) in key areas has been proven to be effective at reducing the number of these collisions, there remains the potential that some birds may collide with the transmission line. Approximately two thirds of the new transmission line, including the majority of the distance within the Lake St. Clair IBA, consists of an existing idle transmission line which will be removed and replaced by the new transmission line, such that this section does not represent a new feature on the landscape but rather an incremental increase in size of an existing feature. As a result, no significant effects to the migratory bird population, migratory bird habitat, or bird harvesting, are anticipated.</p> <p>Where opportunities are identified, Hydro One will work with Indigenous communities to design and execute a Biodiversity Initiative to create or enhance habitats, which will contribute to availability of bird habitat in the region. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>

Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<b>Agricultural impacts to water quality</b>	<p>Hydro One does not control individual farmers' practices on their fields, and as such cannot influence factors which may affect the overall quality of runoff from agricultural fields.</p> <p>During construction there may be some temporary effects to existing agricultural drainage infrastructure.</p> <p>During construction, a project-specific Weed Control Plan will be developed in consultation with landowners prior to construction, as necessary. The transmission ROW will be monitored for establishment of weeds until the Project is completed, and corrective measures for managing weeds may include herbicide application, mowing, and hand pulling. Weed control during construction will be conducted by the construction contractor.</p>	<ul style="list-style-type: none"><li>• The Weed Control Plan will be managed by an Ontario Professional Agrologist to meet the requirements of the municipal and land use authority.</li><li>• The mitigation measures listed above for Fishing and use of waterways will serve to address surface water quality affects from construction in general.</li></ul>	<p>Overall, the St. Clair Transmission Line project will not significantly affect or contribute to agricultural impacts to water quality, as any use of herbicides or pesticides through the weed control plan for construction would be very small in comparison to existing uses on surrounding agricultural fields. Any additional effects from the project are expected to be temporary in nature (i.e., during the construction phase only).</p> <p>Where opportunities are identified, Hydro One will work with Indigenous communities to design and execute a Biodiversity Initiative that could include opportunities that address the issue of confidence of community members to practice their rights in areas of agricultural land use, by enabling the creation of, or enhancements to habitats in and adjacent to existing natural features and designated areas or within communities and Reserve lands.</p>
<b>Increased contamination of water and wild food sources</b>	<p>During operation of overhead transmission lines, herbicides are one of many tools that Hydro One employs to manage incompatible vegetation within the transmission line ROW to ensure the safe and reliable operation of the line.</p>	<ul style="list-style-type: none"><li>• Any herbicide use will be planned in accordance with integrated pest management standards and to limitations such as setbacks from water bodies and other best practices.</li><li>• Restoration with compatible vegetation species will compete with incompatible species that require treatment, and will help to reduce and/or postpone the eventual need for vegetation management of incompatible species.</li></ul>	<p>Any residual effects are anticipated to be very minor, due to the relatively small areas of the new St. Clair Transmission Line corridor that currently contain incompatible vegetation (areas that may require vegetation management during operation of the line) and adherence to the appropriate standards and protocols during application of herbicides.</p>



Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
Increased contamination of water and wild food sources	During construction, there is the potential for inadvertent release of deleterious substances including oil, gasoline or other liquids (i.e., spills)	<ul style="list-style-type: none"><li>• Refuelling of vehicles and equipment will be completed in a designated location a minimum of 30 m away from sensitive receptors, such as designated source water protection areas, watercourses, surface drainage features, wetlands, etc.</li><li>• Fuelling of vehicles/equipment will occur utilizing an emergency spill tray to capture any accidental release of fluids.</li><li>• Fuelling operations will require the operator to visually observe the fuelling process 100% of the time.</li><li>• If refuelling must occur outside of designated areas, additional containment or other mitigation and spill prevention measures will be utilized.</li><li>• An Emergency Response Plan and spill cleanup equipment will be maintained and be readily accessible at all times during construction and maintenance activities.</li><li>• Spills will be addressed and remediated as soon as possible after a spill.</li><li>• Areas impacted by a spill will be secured, and unauthorized personnel will be kept out of the affected area until further assessment and/or clean-up is conducted.</li><li>• Clean-up and the disposal of contaminated materials will be managed in accordance with provincial regulations and guidelines.</li><li>• Fuels, chemicals, lubricants or other deleterious substances will be stored on level ground in properly contained storage areas.</li><li>• Only approved aboveground petroleum storage tanks will be used during the construction phase of the Project, and will be stored in designated fuelling areas and with additional temporary containment measures.</li><li>• Work conducted near Provincially/locally designated Vulnerable Areas (namely Wellhead Protection Areas [WHPAs]; Intake Protection Zones [IPZs]; and Highly Vulnerable Aquifers [HVAs]) will be avoided or limited, where practical.</li><li>• SCRCA, the LTVCA, the Township of St. Clair, the County of Lambton and Municipality of Chatham-Kent will be consulted in order to undertake the proper action for managing the potential threats to source water protection areas.</li><li>• The MECP Spills Action Centre (SAC) will be notified of all reportable spills.</li></ul>	Given the protections that will be utilized during construction to prevent spills and the response procedures that will be developed to address minor spills during construction should they occur, no significant net effects to fisheries or water quality are anticipated.
Impacts to sense of place and human health	There will be some visual changes along the transmission line route with the construction of new towers, or the replacement of idle 115 kV towers with taller 230 kV towers.	<ul style="list-style-type: none"><li>• The repurposing of the idle 115 kV transmission line will mitigate the overall visual change of the project by replacing existing transmission towers.</li><li>• The section of the idle transmission line corridor being repurposed includes many of the larger watercourse crossings required (e.g., Thames River), such that these crossings will involve the replacement of the existing transmission line crossing rather than the construction of a brand new transmission line crossing.</li><li>• Incompatible vegetation removed during construction will be restored with compatible, native plant species, to mitigate the overall change in vegetation communities.</li></ul>	Construction of the new transmission structures will result in a visual change to the landscape, primarily in portions of the corridor where the transmission line is a new feature on the landscape.

Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
Impacts to sense of place and human health	<p>The new transmission line will emit Electromagnetic fields (EMF). EMFs are invisible forces that surround electrical equipment, power cords, and wires that carry electricity.</p> <p>EMFs are strongest when close to their source. As you move away from the source, the strength of the fields fades rapidly.</p>	<ul style="list-style-type: none"><li>• EMF levels associated with the proposed Project are anticipated to remain significantly lower than the general public exposure limits.</li><li>• The proposed Project will be designed and operated in accordance with appropriate regulatory requirements.</li></ul>	<p>No effects to human health are predicted.</p> <p>Exposure to extremely low frequency EMF such as those produced by transmission lines has been extensively studied. Health Canada does not consider that any precautionary measures are needed regarding daily exposures to EMFs at extremely low frequencies. There is no conclusive evidence of any harm caused by exposures at levels found in Canadian homes and schools, including those located just outside the boundaries of power line corridors.</p>
Habitat destruction (Species at Risk)	<p>There is potential for the project to disturb Species at Risk (SAR), and to cause a loss of SAR habitat (or transition to other habitat types which do not provide the same habitat values)</p>	<ul style="list-style-type: none"><li>• In addition to the mitigation measures mentioned above relating to terrestrial and aquatic habitats in general, the following specific mitigation measures will be utilized to address potential SAR habitat:</li><li>• Impacts to potential SAR habitat will be avoided, where possible. In the event impacts cannot be avoided, MECP will be consulted regarding permitting/approval requirements under the ESA during detailed design.</li><li>• Boundaries of SAR habitats will be identified and flagged off.</li><li>• To the extent possible, incompatible vegetation/trees with the potential to provide SAR habitat will be removed/trimmed to the extent that they no longer pose a risk to overhead transmission lines while still maintaining their potential SAR habitat characteristics.</li><li>• Snags (dead standing trees) and cavity trees with the potential to provide SAR habitat that do not pose a risk to the operation of the transmission line will be identified and retained to the extent practical.</li><li>• Construction personnel will be aware of the potential presence of, and able to identify, SAR with the potential to occur within the general work areas.</li><li>• Should SAR be encountered during construction activities, activities will be stopped until it has been determined that harm will not occur. The required activities will be assessed to determine whether the work/schedule can be modified, or mitigation measures employed, to avoid potential effects on SAR and their habitat.</li><li>• If avoidance of SAR and/or SAR habitat is not possible, MECP and/or DFO as well as Indigenous communities will be consulted to mitigate the impact of the activities and/or assess the need for permitting/approvals under the ESA, SARA or the Fisheries Act.</li><li>• If as SAR is harmed or killed as a result of work activities, the MECP will be notified and the relevant work activities will cease within the immediate area until the species has been removed by personnel authorized to handle SAR.</li><li>• In-water works within turtle wintering areas during the turtle overwintering period will be avoided.</li><li>• SAR observed during construction activities will be reported to the MECP, as required.</li></ul>	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Permitting under the ESA, SARA and/or the Fisheries Act will be obtained in advance of construction, where necessary.</p> <p>The Biodiversity Initiative for the project will include projects involving the creation and enhancement of natural habitats, including potential SAR habitats.</p>

Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<b>Introduction or inadvertent spread of invasive species</b>	Potential for inadvertent spread of invasive species propagules through the movement of soil, debris and/or plant material via construction vehicles and equipment.	<ul style="list-style-type: none"><li>Construction crews will be educated on the importance of avoiding inadvertent spread of invasive species, and to identify the invasive species that are known to occur or are likely to occur within work areas.</li><li>Areas identified as having invasive species present will be considered during access and construction planning. Stands of invasive plant species will be avoided to the extent practical during construction.</li><li>Equipment and vehicle inspections and cleaning will be established during construction, to minimize the potential for inadvertent transport of invasive species propagules.</li><li>Crews will be educated and informed of invasive species known or with potential to occur in work areas.</li><li>Special treatment areas (e.g., large established populations of invasive species within the ROW) will be designated and tracked for future maintenance works.</li></ul>	<p>No significant increases (if any) of invasive species are anticipated, largely due to the relatively small areas of natural vegetation affected by the project and the currently existing prevalence of invasive species in the surrounding landscape. Hydro One will work with Indigenous communities to identify species of interest that could be utilized during post-construction restoration plantings, to establish native species plant cover.</p> <p>Hydro One will also work with Indigenous communities to design and undertake a Biodiversity Initiative for the project that may include projects which involve inventory, control and/or removal of certain invasive species as a form of habitat enhancement.</p>

## 7.13 Cumulative Effects Assessment

The Cumulative Effects Assessment (CEA) for the Project has been completed in accordance with the Class EA for Minor Transmission Facilities requirements: “The assessment will include the proposed undertaking and any other proposed undertakings in the immediate project area where documentation is available (e.g., other environmental assessments”). For this Project, the CEA involved the consideration of Project effects combined with effects from other proposed undertakings in the immediate Project area (overlapping the 500 m LSA) where documentation was publicly available. To extend a CEA beyond the immediate Project area (i.e., to assess trajectories of change over time on a broader regional basis) is outside the scope of the Class EA and Hydro One’s ability to influence, control, or reasonably predict.

### 7.13.1 Regional and Historic Cumulative Effects to Aboriginal Treaties and Indigenous Rights

Hydro One recognizes and appreciates the legacies of settlement, including agricultural and land conversion and development activities have, and continue to put pressure on Indigenous communities’ current and future use of lands and resources. Hydro One’s role is to provide the necessary electrical infrastructure based on regional planning assessments and direction provided by the IESO. In the case of the Project and other Hydro One projects in southwestern Ontario, the need for this new infrastructure has been identified by IESO in their regional planning framework and demand forecasts, with a formal direction provided to Hydro One to undertake planning, and eventually construction and operation of the necessary transmission infrastructure. Additionally, the OEB was issued an Order-in-Council (#875/2022) to amend Hydro One’s transmission license to include the development and construction of the Project. As such, Hydro One is acting on the direction provided by IESO, as well as direction provided by the Crown via the OEB, to design and build the Project.

### 7.13.2 Project Inclusion List

**Figure 7-1** provides an overview of known projects that overlap with the LSA which have been included in this CEA. As summarized in **Table 7-3**, overlapping projects have been categorized into the following three tiers (in decreasing order of information available):

1. Projects with completed and publicly available impact assessments or environmental assessments;
2. Known current, and future Hydro One projects where the environmental assessment (including selection of a preferred alternative) is not yet completed

but where, as owners of transmission line infrastructure, Hydro One has a reasonable understanding of what future potential effects may be; and

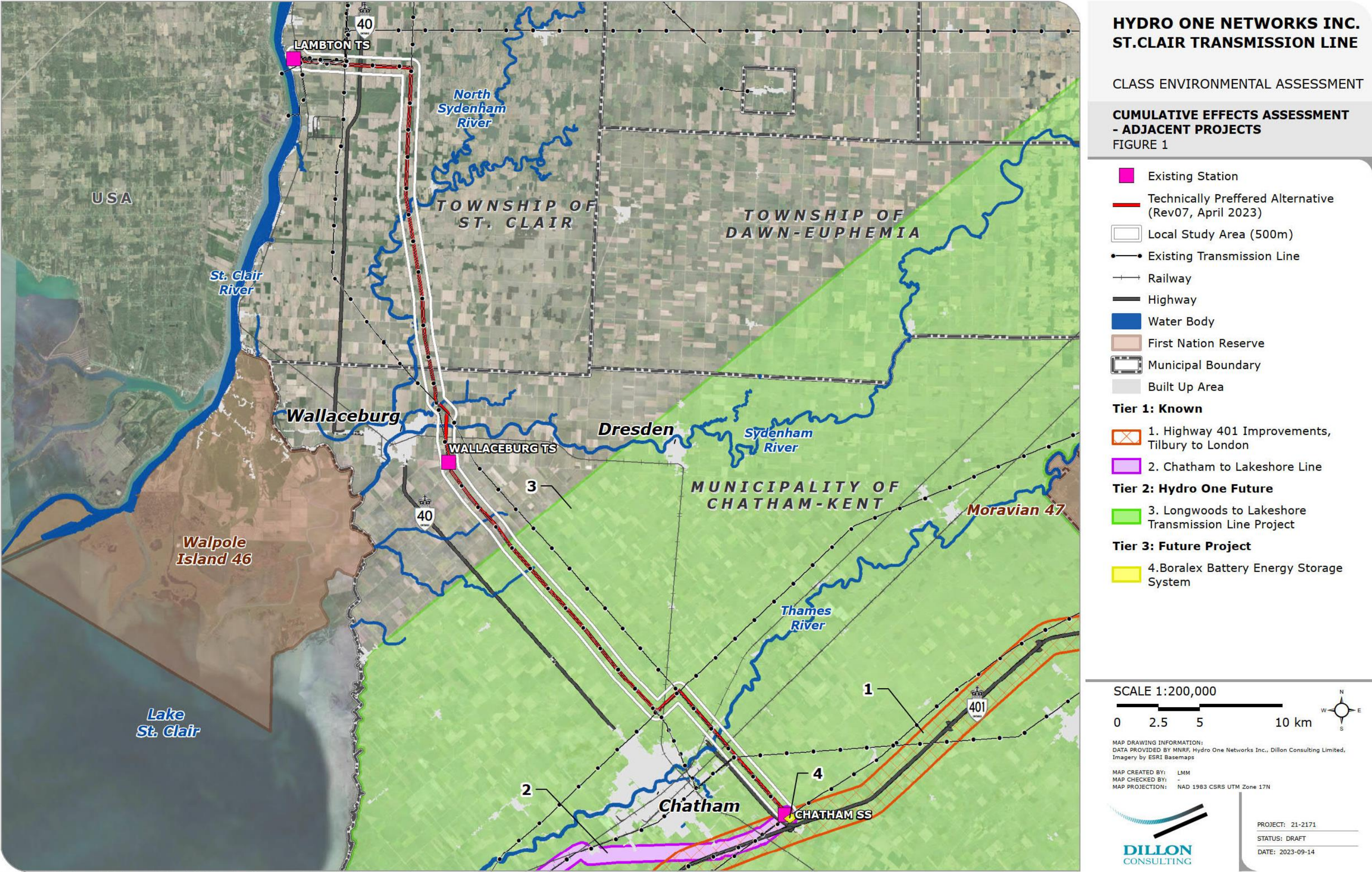
3. Other future projects where proponents have not yet started or completed an environmental assessment or other planning study such that insufficient information is publicly available to meaningfully assess interactions with the Project. It is noted that for these future projects, this Class EA and CEA will be available for consideration to their benefit, including the potential to assess cumulative effects of the Project combined with those future projects.

**Table 7-3: Projects Included in the Cumulative Effects Assessment**

Project Name	Proponent	Interaction with Chatham to Lakeshore Project
<b>Tier 1 Projects: Effects Assessment Documentation Publicly Available</b>		
<b>Highway 401 Improvements, Tilbury to London</b>	Ministry of Transportation, Ontario	The proposed highway 401 improvements overlap with the St. Clair Transmission Line Project in the area of the Chatham SS.
<b>Chatham to Lakeshore Transmission Line Project</b>	Hydro One Networks Inc.	Chatham to Lakeshore Transmission Line Project connects to the Chatham SS, which is also a terminal station for the St. Clair Transmission Line Project.
<b>Tier 2 Projects: Hydro One Planned Future Undertakings with Owner Predicted High-Level Effect Knowledge</b>		
<b>Longwoods to Lakeshore Transmission Line Project</b>	Hydro One Networks Inc.	Longwoods to Lakeshore Transmission Line has the potential to overlap with the St Clair Transmission Line Project.
<b>Tier 3 Projects: Future Projects in Area where Assessment of Effects are not yet known</b>		
<b>Battery Energy Storage System</b>	Boralex	The proposed Battery Energy Storage System project overlaps with the LSA of the St. Clair Transmission Line near the Chatham SS.



Figure 7-1: Cumulative Effects Assessment





### 7.13.3 Analysis of Cumulative Effects

**Table 7-4:** Cumulative Effects Assessment summarizes the cumulative effects analysis completed for Tier 1 and Tier 2 projects on the Project Inclusion List. Cumulative effects were assessed by looking at each project's effects assessment tables, identifying potential temporary and long-term effects and net effects for each project and assessing potential for cumulative effects of multiple projects overlapping the Project LSA. Cumulative effects were analyzed from a "temporary effect" or a "long-term effect" perspective. Temporary effects are effects primarily related to construction activities associated with the respective infrastructure. Long-term effects represent potential project effects that may be experienced over the life of the project. It is noted, however, that some long-term effects are related to periodic maintenance activities which will not be persistent throughout the entire lifespan of the project but will be limited to periodic maintenance events (e.g., maintenance vehicles tracking mud on local roads will only occur if and when maintenance activities are required in muddy areas).

Table 7-4: Cumulative Effects Assessment

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Agricultural Resources: Crop Loss	Yes Temporary removal of crops and soils supporting crop production.	Yes Permanent removal of land available for agricultural production as a result of Project infrastructure.	Yes Any indirect impacts would be temporary (construction vehicles on side roads).	Yes The preferred interchange improvements, emergency access ramps and new road connections are expected to result in some direct and indirect impacts to agriculture.	Yes Temporary removal of crops and soils supporting crop production.	Yes Permanent removal of land available for agricultural production as a result of Project infrastructure.	Yes Reasonable to assume there will be a temporary removal of crops and soils supporting crop production.	Yes Reasonable to assume there will be a permanent removal of land available for agricultural production as a result of project infrastructure.	Yes Multiple projects have a potential to temporarily remove crops and soils from agricultural production to accommodate construction activities of multiple projects. If multiple projects are under construction at the same time this may result in a temporary cumulative effect of reduced agricultural production.	Yes Multiple projects have a potential to permanently remove agricultural land from production to accommodate new infrastructure. Multiple projects on the landscape will compound this effect.	Not Considered Significant Long-term permanent removal of land available for agricultural production is not considered significant in the larger landscape of southern Ontario. Agriculture is a compatible use within overhead transmission line ROWs and the extent of agricultural land permanently removed from transmission line projects is limited to the tower footings themselves.

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Agricultural Resources: Soil Compaction	Yes Compaction of soil caused by movement of construction equipment over agricultural land.	Yes Compaction of soil caused by movement of vehicles over agricultural land as a result of periodic maintenance activities.	No Not Applicable	No Not Applicable	Yes Compaction of soil caused by movement of construction equipment over agricultural land.	Yes Compaction of soil caused by movement of vehicles over agricultural land as a result of periodic maintenance activities.	Yes Reasonable to assume there will be compaction of soil caused by movement of construction equipment over agricultural land.	Yes Reasonable to assume there will be compaction of soil caused by movement of maintenance vehicles over agricultural land.	No Multiple projects have the potential for isolated soil compaction within their respective project limits. Cumulative effects are not anticipated as Project-specific mitigation measures can be implemented to address effect.	No Multiple projects have identified isolated soil compaction in operation and during maintenance phases, Project-specific mitigation measures can be employed to mitigation the effects.	Not Considered Significant Effects from multiple projects can be mitigated or restored (e.g., post-construction alleviation of compaction) at a project level.
Agricultural Resources: Soil Mixing	Yes Potential for excavation activities to cause mixing of soil horizons, thus lowering the quality of soil.	Yes Potential for excavation activities to cause mixing of soil horizons, thus lowering the quality of soil.	No Not Applicable.	No Not Applicable.	Yes Potential for excavation activities to cause mixing of soil horizons, thus lowering the quality of soil.	Yes Potential for excavation activities to cause mixing of soil horizons, thus lowering the quality of soil.	Yes Reasonable to assume there is potential for excavation activities to cause mixing of soil horizons.	Unknown Potential for effect unknown until project impact assessments and preferred route is identified.	No Multiple projects have the potential for soil mixing within their respective project limits. Cumulative effects are not anticipated as Project-specific mitigation measures can be implemented to address effect.	No Not Applicable.	Not Considered Significant Effects from multiple projects can be mitigated at a project level.

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Agricultural Resources: Disturbance to Farm Operations	<b>Yes</b> Potential to disturb farm operations including planting and harvesting schedules, spraying, tiling activities, etc.	<b>Yes</b> Impediments to the maneuverability of agricultural equipment as a result of periodic maintenance activities.	<b>Yes</b> Any indirect impacts would be temporary (construction vehicles on side roads).	<b>No</b> Not Applicable.	<b>Yes</b> Potential to disturb farm operations including planting and harvesting schedules, spraying, tiling activities, etc.	<b>Yes</b> Impediments to the maneuverability of agricultural equipment as a result of periodic maintenance activities.	<b>Yes</b> Reasonable to assume there is potential to disturb farm operations.	<b>Yes</b> Reasonable to assume there will be permanent impediments to the maneuverability of agricultural equipment.	<b>No</b> Multiple projects have the potential to temporarily disturb farm operations within their respective project limits. Cumulative effects are not anticipated as Project-specific mitigation measures can be implemented to address effect.	<b>No</b> Multiple projects have potential to create impediments to maneuverability of agricultural equipment. However, impediments would not impact the larger agricultural community and effects would be on a site-by-site basis. Project-specific mitigation measures can be implemented to address effect.	<b>Not Considered Significant</b> Effects from multiple projects can be mitigated at a project level.

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Agricultural Resources: Vegetation Removal	No Not Applicable.	Yes Partial removal or fragmentation of existing natural features, hedgerows and windbreaks between agricultural land parcels as a result of periodic maintenance activities.	No Not Applicable.	No Not Applicable.	No Not Applicable.	Yes Partial removal or fragmentation of existing hedgerows and windbreaks between agricultural land parcels as a result of periodic maintenance activities.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	No Not Applicable.	No Multiple projects will result in removal or fragmentation of natural features, hedgerows and windbreaks between agricultural land parcels as a result of period maintenance activities. Cumulative effects are not anticipated as Project-specific mitigation measures can be implemented to address this effect.	Not Considered Significant Effects from multiple projects can be mitigated or restored at a project level.
Agricultural Resources: Contamination of Organic or Identity Preserved (IP) Crops	Yes Potential for activities, including use of herbicides to control noxious weeds or vegetation, to contaminate organic or IP crops or agricultural fields transitioning to organic/IP crop types.	Yes Potential for activities, including use of herbicides to control noxious weeds or vegetation, to contaminate organic or IP crops or agricultural fields transitioning to organic/IP crop types as a result of periodic maintenance activities	No Not Applicable.	No Not Applicable.	Yes Potential for activities, including use of herbicides to control noxious weeds or vegetation, to contaminate organic or IP crops or agricultural fields transitioning to organic/IP crop types.	Yes Potential for activities, including use of herbicides to control noxious weeds or vegetation, to contaminate organic or IP crops or agricultural fields transitioning to organic/IP crop types as a result of periodic maintenance activities	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	No Multiple projects have the potential for contamination of organic or IP crops. Cumulative effects are not anticipated as Project-specific mitigation measures can be implemented to address effect.	No Multiple projects have the potential for contamination of organic or IP crops. Cumulative effects are not anticipated as Project-specific mitigation measures can be implemented to address effect.	Not Considered Significant Effects from multiple projects can be mitigated at a project level.

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
<b>Agricultural Resources: Damage to Field Tiles</b>	<b>Yes</b> Potential for equipment to damage or crush existing agricultural tile drains.	<b>No</b> Not Applicable.	<b>Yes</b> Any indirect impacts would be temporary (construction vehicles on side roads).	<b>No</b> Not Applicable.	<b>Yes</b> Potential for equipment to damage or crush existing agricultural tile drains.	<b>No</b> Not Applicable.	<b>Yes</b> Reasonable to assume potential for equipment to damage or crush existing agricultural tile drains during construction	<b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.	<b>No</b> Multiple projects have the potential for temporary impacts to agricultural tile drains. Cumulative effects are not anticipated as Project-specific mitigation measures can be implemented to address effect.	<b>No</b> Not Applicable.	<b>Not Considered Significant</b> Effects from multiple projects can be mitigated or repaired (post-construction) at a project level.
<b>Agricultural Resources: Livestock Stress, Loss or Injury</b>	<b>Yes</b> Potential for activities to be required within livestock managed areas (grazing fields, pastures, etc.) resulting in potential for livestock stress, injury or loss. In addition, potential use of implosive splicing may scare or startle agricultural livestock.	<b>Yes</b> Potential for activities to be required within livestock managed areas (grazing fields, pastures, etc.) resulting in potential for livestock stress, injury or loss as a result of periodic maintenance activities	<b>No</b> Not Applicable.	<b>No</b> Not Applicable.	<b>Yes</b> Potential for activities to be required within livestock managed areas (grazing fields, pastures, etc.) resulting in potential for livestock stress, injury or loss. In addition, potential use of implosive splicing may scare or startle agricultural livestock.	<b>Yes</b> Potential for activities to be required within livestock managed areas (grazing fields, pastures, etc.) resulting in potential for livestock stress, injury or loss as a result of periodic maintenance activities	<b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.	<b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.	<b>No</b> Multiple projects have a potential to temporarily impact agricultural livestock through induced stress, loss or injury during construction and maintenance phases. Cumulative effects are not anticipated as Project-specific mitigation measures can be implemented to address effect.	<b>No</b> Multiple projects have a potential to temporarily impact agricultural livestock through induced stress, loss or injury during construction and maintenance phases. Cumulative effects are not anticipated as Project-specific mitigation measures can be implemented to address effect.	<b>Not Considered Significant</b> Effects from multiple projects can be mitigated at a project level.



Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Agricultural Resources: Potential GPS Signal Interference	No Not Applicable.	Yes Some farmers have raised concerns regarding potential for overhead transmission lines to interfere with automated or GPS-guided farm equipment, when said equipment is directly below the conductors.	No Not Applicable.	No Not Applicable.	No Not Applicable.	Yes Some farmers have raised concerns regarding potential for overhead transmission lines to interfere with automated or GPS-guided farm equipment, when said equipment is directly below the conductors.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Yes Reasonable to assume construction of the new transmission line will raise concerns regarding potential for overhead transmission lines to interfere with automated or GPS-guided farm equipment when said equipment is directly below the conductors.	No Not Applicable.	Yes Multiple projects have the potential to increase concerns related to interruption to GPS-guidance systems and automation equipment in proximity to conductors.	Not Considered Significant Published studies assessing these concerns indicate that overhead power line conductors are too thin to cause appreciable screening. Hydro One acknowledges the concerns raised that localized issues have been observed beneath the transmission lines. While we do not anticipate effects to communication systems in farm equipment, Hydro One will work with concerned farmers to collect information on the systems of concern.

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Archaeological Resources	No Not Applicable.	No Not Applicable.	No Not Applicable.	No Not Applicable.	No Not Applicable.	No Not Applicable.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	No Not Applicable.	No Not Applicable.	No Not Applicable.
Built Heritage Resources and Cultural Heritage Landscapes	No Not Applicable.	Potential Based on the baseline findings of the Cultural Heritage Existing Conditions Report and Cultural Heritage Preliminary Impact Assessment, there is the potential for project-related works to adversely affect known and potential built heritage resources and a potential cultural heritage landscape within the study area. Further cultural heritage studies will be conducted during detailed design. The Project will cross the Thames River, a recognized Canadian Heritage River, however this crossing occurs adjacent to an existing crossing and will not directly affect the River.	No Not Applicable.	No Not Applicable.	No Not Applicable.	No Based on the baseline findings of the Cultural Heritage Existing Conditions Report, there is the potential for project-related works to adversely affect known and potential built heritage resources within the study area. No cultural heritage landscapes were identified in the study area associated with the preferred route for the new transmission line.	Unknown Not Applicable.	Unknown Not Applicable.	No Not Applicable.	No Not Applicable.	No Not Applicable.

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Land Use and Communities: Business Operations	<b>Yes</b> Potential for activities to disrupt commercial or industrial operations (construction), including temporary transmission outages during construction which may affect some facilities that are connected directly to the transmission system.	<b>No</b> Not Applicable.	<b>No</b> Not Applicable.	<b>No</b> Not Applicable.	<b>Yes</b> Potential for activities to disrupt commercial or industrial operations (construction).	<b>No</b> Not Applicable.	<b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.	<b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.	<b>Yes</b> Multiple projects have identified potential for disruption to local business operations as a result of Project-specific activities. If multiple projects proceed simultaneously , the compounding effect to local business may result in a negative socio-economic effect that will be temporary in nature and duration.	<b>No</b> Not Applicable.	<b>Not Considered Significant</b> Not considered significant because potential impacts to business operations will be temporary in nature and can be mitigated on a Project-specific basis.

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Land Use and Communities: Existing and Future Land Use Designations and Potential Future Development	No Not Applicable.	Yes While transmission lines can be largely compatible with development, its location within areas zoned to allow future commercial/industrial development, or otherwise targeted/identified for future development potential, will introduce certain restrictions to future uses within the lands occupied by the transmission line ROW.	No Not Applicable.	Yes Adjacent property is required to accommodate improvements to the six highway interchanges.	No Not Applicable.	Yes While transmission lines can be largely compatible with development, its location within areas zoned to allow future commercial/ industrial development, or otherwise targeted/identified for future development potential, will introduce certain restrictions to future uses within the lands occupied by the transmission line ROW.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	No Not Applicable.	Yes Several projects have identified the need to acquire designated, or potential, future development lands. This acquisition or building of infrastructure in close proximity will also result in encroachment impacts and Right-of-way restrictions on future development.	Not Considered Significant While several projects have identified potential impacts to designated, or potential, future development lands, the impact is known ahead of the development taking place. There are numerous examples across the province of land development occurring around existing transmission corridors.

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Land Use and Communities: Local Roads and Traffic	<b>Yes</b> Potential for increased traffic, including heavy equipment, on local and regional roads. In addition, stringing of conductors across highways and roadways may require temporary road closures and detours.	<b>No</b> Not Applicable.	<b>Yes</b> The exact construction staging/sequencing will be determined during the subsequent detail design phase. This will include a review of maintaining Highway 401 as two lanes in each direction at all times or reducing Highway 401 to one lane per direction in construction phases. Full access between Highway 401 and all of the interchanges is expected to be maintained during construction. Short term, off-peak closures may be required during some operations. This will be confirmed during detail design.	<b>No</b> Not Applicable.	<b>Yes</b> Potential for increased traffic, including heavy equipment, on local and regional roads. In addition, stringing of conductors across highways and roadways may require temporary road closures and detours.	<b>No</b> Not Applicable.	<b>Yes</b> Reasonable to assume the potential increase in traffic, including heavy equipment on local and regional roads.	<b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.	<b>Yes</b> Several projects have identified temporary impacts from construction local road networks. This includes potential road closures, increased traffic, infrastructure crossings etc. If multiple projects proceed simultaneously impacts could be compounded having a negative effect on the larger road network.	<b>No</b> Not Applicable.	<b>Not Considered Significant</b> Not considered significant because potential impacts to local roadways would be temporary in nature. Road closures or disruptions to traffic require approvals from local municipalities or MTO prior to construction. Local municipalities and MTO have processes in place to coordinate multi-project impacts and mitigate network disruptions.
Land Use and Communities: Mud and Construction Debris	<b>Yes</b> Potential for tracking of mud and migration of construction debris to areas outside of the construction zone.	<b>Yes</b> Potential for tracking of mud and migration of construction debris to areas outside of the construction zone as a result of periodic maintenance activities	<b>Yes</b> Surplus materials will be generated during construction, such as old pavement, guardrail materials, and concrete.	<b>No</b> Not Applicable.	<b>Yes</b> Potential for tracking of mud and migration of construction debris to areas outside of the construction zone.	<b>Yes</b> Potential for tracking of mud and migration of construction debris to areas outside of the construction zone as a result of periodic maintenance activities.	<b>Yes</b> Reasonable to assume potential for tracking of mud and migration of construction debris to areas outside of the construction zone.	<b>Yes</b> Reasonable to assume potential for tracking of mud and migration of construction debris to areas outside of the construction zone.	<b>Yes</b> Several projects have identified temporary effects from construction activities. Effects can be mitigated through Project-specific mitigation measures.	<b>No</b> Not Applicable.	<b>Not Considered Significant</b> Not considered significant because potential impacts are temporary in nature and can be mitigated through Project-specific measures.

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Land Use and Communities: Electric and Magnetic Fields (EMF)	No Not Applicable.	Yes Potential for increased EMF once the transmission line is energized.	No Not Applicable.	No Not Applicable.	No Not Applicable.	Yes Potential for increased EMF once the transmission line is energized.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Yes Reasonable to assume construction of the new transmission line will result in potential increased EMF once the transmission line is energized.	No Not Applicable.	Yes Multiple projects have the potential to increase EMF once transmission lines are energized.	Not Considered Significant Organizations such as Health Canada, World Health Organization (WHO) and ICNIRP indicate members of the public in the vicinity of transmission lines do not need to take precautionary measures to protect from fields produced by electricity at extremely low frequencies because exposures, which includes transmission infrastructure. EMF values are expected to remain significantly below the ICNIRP exposure guidelines.



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Land Use and Communities: Noise & Vibration	<b>Yes</b> Potential disturbance as a result of noise, including potential use of implosive splicing and their associated increased vibrations levels.	<b>No</b> Not Applicable.	<b>Yes</b> Construction noise issues.	<b>Yes</b> Noise mitigation was reviewed at specific locations where noise levels exceeded MTO/MOE noise criteria (e.g., ≥65 Decibels A [dBA]). However, the assessment concluded that noise mitigation is not technically and/or economically feasible. Thus, noise mitigation is not recommended.	<b>Yes</b> Potential disturbance as a result of noise, including potential use of implosive splicing and their associated increased vibrations levels.	<b>Yes</b> Potential disturbance as a result of noise as a result of periodic maintenance activities.	<b>Yes</b> Reasonable to assume potential disturbance as a result of construction.	<b>Yes</b> Reasonable to assume potential disturbance as a result of noise.	<b>Yes</b> Several projects have identified noise and vibration effects associated with construction. Should several projects proceed at the same time these effects could be compounded.	<b>Yes</b> Several projects have indicated a potential for increased noise and vibration during operations and maintenance phases. Once built, these projects combined could have an increased negative effect resulting from increased background noise and vibration.	<b>Not Considered Significant</b> Noise and vibration during construction and maintenance is temporary in nature. Specific operations are required to comply with site specific Environmental Compliance Approvals, Licenses, authorizations and/or noise regulations.
Natural Environment Resources - Physical Environment: Spills	<b>Yes</b> Potential inadvertent release of deleterious substances including oil, gasoline or other liquids.	<b>Yes</b> Potential inadvertent release of deleterious substances including oil, gasoline or other liquids as a result of periodic maintenance activities.	<b>Yes</b> Comprehensive drainage, spills and sediment and erosion control plans will be in place during all stages of construction and operation of the site to avoid potential impacts to surface water and groundwater.	<b>Yes</b> Comprehensive drainage, spills and sediment and erosion control plans will be in place during all stages of construction and operation of the site to avoid potential impacts to surface water and groundwater.	<b>Yes</b> Potential inadvertent release of deleterious substances including oil, gasoline or other liquids.	<b>Yes</b> Potential inadvertent release of deleterious substances including oil, gasoline or other liquids as a result of periodic maintenance activities.	<b>Yes</b> Reasonable to assume the potential inadvertent release of deleterious substances including oil, gasoline or other liquids.	<b>Yes</b> Reasonable to assume the potential inadvertent release of deleterious substances including oil, gasoline or other liquids.	<b>Yes</b> Several projects have identified the inadvertent release of deleterious substances as a potential during construction activities. Project-specific mitigation and spill response can be implemented to mitigate concerns.	<b>Yes</b> Several projects have identified the inadvertent release of deleterious substances as a potential during operation phases. Project-specific mitigation and spill response can be implemented to mitigate concerns.	<b>Not Considered Significant</b> While several projects have identified the risk of inadvertent release of deleterious substances the risk is at a Project-specific level, Project-specific mitigation plans and spill response plans can be developed to manage Project-specific risks.

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Natural Environment Resources - Physical Environment: Waste Generation	Yes Solid and/or liquid waste will be generated.	Yes Solid and/or liquid waste will be generated as a result of periodic maintenance activities	Yes Surplus materials will be generated during construction, such as old pavement, guardrail materials, and concrete.	No Not Applicable.	Yes Solid and/or liquid waste will be generated.	Yes Solid and/or liquid waste will be generated as a result of periodic maintenance activities.	Yes Reasonable to assume solid and/or liquid waste will be generated.	Yes Reasonable to assume solid and/or liquid waste will be generated.	Yes Several projects have potential to generate waste materials during construction which may have effects to local communities if not handled properly. Project specific mitigation measures can be implemented to mitigate concerns.	Yes Several projects have potential to generate waste materials during maintenance activities which may have effects to local communities if not handled properly. Project specific mitigation measures can be implemented to mitigate concerns.	Not Considered Significant Several projects have potential to generate waste materials during construction and maintenance activities which may have effects to local communities if not handled properly. Project specific mitigation measures can be implemented to mitigate concerns.

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Physical Environment: Excess Materials Management	Yes Excess materials including topsoil and subsoil, may be produced during site excavations.	Yes Excess materials including topsoil and subsoil, may be produced during site excavations as a result of periodic maintenance activities.	Yes Surplus materials will be generated during construction, such as old pavement, guardrail materials, and concrete.	No Not Applicable.	Yes Excess materials including topsoil and subsoil, may be produced during site excavations.	Yes Excess materials including topsoil and subsoil, may be produced during site excavations as a result of periodic maintenance activities.	Yes Reasonable to assume that excess materials including topsoil and subsoil, may be produced during site excavations.	Yes Reasonable to assume that excess materials including topsoil and subsoil, may be produced during site excavations.	Yes Several projects have potential to generate excess materials during construction which may have effects to local communities if not handled properly. Project specific mitigation measures can be implemented to mitigate concerns.	Yes Several projects have potential to generate excess materials during maintenance activities which may have effects to local communities if not handled properly. Project specific mitigation measures can be implemented to mitigate concerns.	Not Considered Significant Several projects have potential to generate excess materials during construction and maintenance activities which may have effects to local communities if not handled properly. Project specific mitigation measures can be implemented to mitigate concerns.

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Atmospheric Environment: Climate Change	Yes Emissions will be generated from vehicles and equipment.	Yes Emissions will be generated from vehicles and equipment as a result of periodic maintenance activities.	No Not Applicable.	No Not Applicable.	Yes Emissions will be generated from vehicles and equipment.	Yes Emissions will be generated from vehicles and equipment as a result of periodic maintenance activities.	Yes Reasonable to assume emissions will be generated from vehicles and equipment.	Yes Reasonable to assume emissions will be generated from vehicles and equipment.	Yes Several projects have identified increased potential for greenhouse gas emission releases associated with construction equipment not normally in operation in the construction area. These releases have potential to contribute to climate change through greenhouse gas emission releases. When combined, these projects together may produce larger emissions than individually on their own.	Yes Several projects have identified increased potential for greenhouse gas emission releases associated with operation activities. These releases have potential to contribute to climate change through greenhouse gas emission releases. When combined, these projects together may produce larger emissions than individually on their own.	Not considered significant While it is acknowledged that development of these projects will create emissions during construction and maintenance contributing to greenhouse gas releases, the emission sources (individual vehicles) are not considered significant in the context of the small overlapping project areas.

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Natural Environment Resources - Atmospheric Environment: Air Quality	Yes Potential for fugitive dust and impacts to air quality from vehicle emissions.	Yes Potential for fugitive dust and impacts to air quality from vehicle emissions as a result of periodic maintenance activities.	Yes Standard mitigation will be used for dust control during construction.	No Not Applicable.	Yes Potential for fugitive dust and impacts to air quality from vehicle emissions.	Yes Potential for fugitive dust and impacts to air quality from vehicle emissions as a result of periodic maintenance activities.	Yes Reasonable to assume the potential for fugitive dust and impacts to air quality from vehicle emissions.	Yes Reasonable to assume the potential for fugitive dust and impacts to air quality from vehicle emissions.	Yes Several projects have identified increased potential for negative air quality effects through construction releases of dust and airborne particulates. These releases will be temporary in nature and Project-specific mitigation can be implemented to mitigate Project specific effects.	Yes Several projects have identified increased potential for negative air quality effects through maintenance activity releases of dust and airborne particulates. These releases will be temporary in nature and Project specific mitigation can be implemented to mitigate Project specific effects.	Not Considered Significant Not considered significant because potential impacts are temporary in nature and can be mitigated through Project specific measures.

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources – Atmospheric Environment: Noise and Vibration	Yes Potential disturbance as a result of noise, including potential use of implosive splicing and their associated increased vibrations levels.	Yes Potential disturbance as a result of noise from periodic maintenance activities.	Yes Construction noise issues.	Yes Noise mitigation was reviewed at specific locations where noise levels exceeded MTO/MOE noise criteria (e.g., ≥65 dBA). However, the assessment concluded that noise mitigation is not technically and/or economically feasible. Thus, noise mitigation is not recommended.	Yes Potential disturbance as a result of noise, including potential use of implosive splicing and their associated increased vibrations levels.	Yes Potential disturbance as a result of noise from periodic maintenance activities.	Yes Reasonable to assume potential disturbance as a result of noise, including potential use of implosive splicing and their associated increased vibrations levels.	Yes Reasonable to assume potential disturbance as a result of noise, including potential use of implosive splicing and their associated increased vibrations levels.	Yes Several projects have identified noise and vibration effects associated with construction. Should several projects proceed at the same time these effects could be compounded.	Yes Several projects have indicated a potential for increased noise and vibration during operations and maintenance phases. Once built, these projects combined could have an increased negative effect resulting from increased background noise and vibration.	Not Considered Significant Noise and vibration during construction is temporary in nature. Specific operations are required to comply with site specific Environmental Compliance Approvals, Licenses, authorizations and/or noise regulations.



Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Surface Water Resources: Soil Rutting & Vegetation Removals	<p><b>Yes</b> Potential for vehicles and equipment to create rutting in soils, creating ponding or channelization leading to additional erosion of soils.</p> <p>Vegetation removals have the potential for increases in both overland flow and water temperature, as well as mobilization and transport of organic debris and sediment to nearby watercourses and municipal drains.</p>	<p><b>Yes</b> Potential for vehicles and equipment to create rutting in soils, creating ponding or channelization leading to additional erosion of soils as a result of periodic maintenance activities.</p> <p>Vegetation removals have the potential for increases in both overland flow and water temperature, as well as mobilization and transport of organic debris and sediment to nearby watercourses and municipal drains as a result of periodic maintenance activities.</p>	<p><b>Yes</b> The majority of the direct removal impacts are into the median areas. At least a component of the direct impacts at the interchanges can be considered temporary in that they are improvements to existing interchanges, so the removals are usually combined with removal and potential re-naturalization of abandoned sections of ramp/roadway. Other areas of vegetation will be temporarily disturbed for construction access.</p>	<p><b>Yes</b> Direct impacts to the right-of-way vegetation where construction is proposed are not anticipated to be significant due to the character, function and minor extent of the removal.</p> <p>A number of individual roadside trees found throughout the project study area are expected to be removed due to grading requirements.</p>	<p><b>Yes</b> Potential for vehicles and equipment to create rutting in soils, creating ponding or channelization leading to additional erosion of soils.</p> <p>Vegetation removals have the potential for increases in both overland flow and water temperature, as well as mobilization and transport of organic debris and sediment to nearby watercourses and municipal drains.</p>	<p><b>Yes</b> Potential for vehicles and equipment to create rutting in soils, creating ponding or channelization leading to additional erosion of soils as a result of periodic maintenance activities.</p> <p>Vegetation removals have the potential for increases in both overland flow and water temperature, as well as mobilization and transport of organic debris and sediment to nearby watercourses and municipal drains as a result of periodic maintenance activities.</p>	<p><b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.</p>	<p><b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.</p>	<p><b>Yes</b> Several projects have identified soil rutting and vegetation removals effects associated with construction.</p>	<p><b>Yes</b> Several projects have indicated a potential for soil rutting and vegetation removals during operations and maintenance phases.</p>	<p><b>Not Considered Significant</b> Not considered significant because potential impacts are temporary in nature and can be mitigated through Project-specific measures.</p>

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Natural Environment Resources - Surface Water Resources: Dewatering	Yes Potential increase in surface water flows resulting from dewatering activities.	No Not Applicable.	Yes Uncontrolled runoff during construction or operation of the Highway 401 improvements could result in contamination of groundwater through infiltration of potential contaminants, and/or surface water as a result of potential contaminants or sediment. There is also the potential for secondary effects via impacts to groundwater and surface water quality in relation to the watercourses within the study area.	No Not Applicable.	Yes Potential increase in surface water flows resulting from dewatering activities.	No Not Applicable.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Yes Several projects have identified potential negative effects from dewatering activities during construction. These effects are temporary in nature and Project-specific mitigation can be utilized to mitigate Project specific concerns.	No Not Applicable.	Not Considered Significant Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.
Natural Environment Resources - Surface Water Resources: Erosion and Sedimentation	Yes Potential for erosion, sedimentation and soil loss during site preparation and construction.	No Not Applicable.	Yes Without the implementation of appropriate mitigation measures, creation of erosion and generation of sediment during excavation and grading activities associated with the construction of the proposed improvements may impact the watercourses/municipal drains within the study area.	No Not Applicable.	Yes Potential for erosion, sedimentation and soil loss during site preparation and construction.	No Not Applicable.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Yes Several projects have identified increased potential for erosion and sedimentation during construction activities. Project specific mitigation measures can be implemented to manage erosion and sedimentation issues.	No Not Applicable.	Not Considered Significant Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
<b>Natural Environment Resources - Surface Water Resources: Construction work within areas regulated by Conservation Authorities</b>	<b>Yes</b> Potential for infrastructure (towers, watercourse crossings) to be located within Conservation Authority regulated lands.	<b>Yes</b> Potential for infrastructure (towers, watercourse crossings) to be located within Conservation Authority regulated lands.	<b>No</b> Not Applicable.	<b>No</b> Not Applicable.	<b>Yes</b> Potential for infrastructure (towers, watercourse crossings) to be located within Conservation Authority regulated lands.	<b>Yes</b> Potential for infrastructure (towers, watercourse crossings) to be located within Conservation Authority regulated lands.	<b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.	<b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.	<b>Yes</b> Several projects have potential for infrastructure to be located within Conservation Authority regulated lands. Project specific mitigation measures can be implemented to mitigate concerns.	<b>Yes</b> Several projects have potential for infrastructure to be located within Conservation Authority regulated lands. Project specific mitigation measures can be implemented to mitigate concerns.	<b>Not Considered Significant</b> Not considered significant because project specific mitigation measures can be implemented to mitigate concerns.
<b>Natural Environment Resources - Source Water Protection: Source Water Protection (SWP)</b>	<b>Yes</b> Potential for contamination of surface water through spills or leaks.  Potential for impacts to designated surface water Intake and Wellhead Protection Area(s) and Significant Groundwater Recharge Areas.  Potential for impacts to private drinking water wells.	<b>Yes</b> Potential for contamination of surface water through spills or leaks as a result of periodic maintenance activities.  Potential for impacts to designated surface water Intake and Wellhead Protection Area(s) and Significant Groundwater Recharge Areas as a result of periodic maintenance activities.	<b>Yes</b> Uncontrolled runoff during construction or operation of the Highway 401 improvements could result in contamination of groundwater through infiltration of potential contaminants, and/or surface water as a result of potential contaminants or sediment. There is also the potential for secondary effects via impacts to groundwater and surface water quality in relation to the watercourses within the study area.	<b>No</b> Not Applicable.	<b>Yes</b> Potential for contamination of surface water through spills or leaks. Potential for impacts to designated surface water Intake and Wellhead Protection Area(s) and Significant Groundwater Recharge Areas. Potential for impacts to private drinking water wells.	<b>Yes</b> Potential for contamination of surface water through spills or leaks as a result of periodic maintenance activities. Potential for impacts to designated surface water Intake and Wellhead Protection Area(s) and Significant Groundwater Recharge Areas as a result of periodic maintenance activities.	<b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.	<b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.	<b>Yes</b> Several projects have identified potential for effects to source water protection during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	<b>Yes</b> Several projects have identified potential for effects to source water protection during maintenance activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	<b>Not Considered Significant</b> Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.

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Natural Environment Resources - Groundwater Resources: Groundwater Quality and Quantity	Yes Disturbance of contaminated soil has the potential to contribute to groundwater contamination. Disturbance and compaction to soil has the potential to inhibit infiltration. Dewatering activities / removal of groundwater have the potential to result in temporary lowering of aquifers.	No Not Applicable.	Yes Uncontrolled runoff during construction of the Highway 401 improvements could result in contamination of groundwater through infiltration of potential contaminants, and/or surface water as a result of potential contaminants or sediment. There is also the potential for secondary effects via impacts to groundwater and surface water quality in relation to the watercourses within the study area.	No Not Applicable.	Yes Disturbance of contaminated soil has the potential to contribute to groundwater contamination. Disturbance and compaction to soil has the potential to inhibit infiltration. Dewatering activities / removal of groundwater have the potential to result in temporary lowering of aquifers.	No Not Applicable.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Yes Several projects have identified potential for effects to groundwater quality during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	No Not Applicable.	Not Considered Significant Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Designated or Special Natural Areas: Important Bird Area (IBA)	Yes Potential for bird collisions within the Eastern Lake St. Clair IBA.	Yes Potential for bird collisions within the Eastern Lake St. Clair IBA.	No Not Applicable.	No Not Applicable.	Yes Potential for bird collisions within the Eastern Lake St. Clair IBA.	Yes Potential for bird collisions within the Eastern Lake St. Clair IBA.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Yes Several projects have identified potential for bird collision within the Eastern Lake St. Clair IBA during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	Yes Several projects have identified potential for bird collision within the Eastern Lake St. Clair IBA during operation. Project specific mitigation measures can be implemented to manage potential temporary effects.	Not Considered Significant While it is acknowledged that development of these projects within the IBA have the potential for bird collisions, both the Chatham to Lakeshore and St. Clair Transmission Line projects include repurposing existing infrastructure within the IBA, as well as commitments for visual mitigation. Effects from multiple projects can be mitigated at a project level.



Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Designated or Special Natural Areas: Significant Woodlands	Yes Removal of portions of woodlands (transition to compatible vegetation) within the ROW.	Yes Vegetation management within the ROW to ensure that incompatible vegetation does not threaten the safe and reliable operation of the transmission line.	No Not Applicable.	No Not Applicable.	Yes Removal of portions of woodlands (transition to compatible vegetation) within the ROW.	Yes Vegetation management within the ROW to ensure that incompatible vegetation does not threaten the safe and reliable operation of the transmission line.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Yes Several projects have identified potential for effects to significant woodlands during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	Yes Several projects have identified potential for effects to significant woodlands during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	Not Considered Significant Not considered significant because project specific mitigation measures can be implemented to mitigate concerns. No significant woodlands overlap between projects.
Natural Environment Resources - Designated or Special Natural Areas: Significant Valleylands	Yes Potential for vegetation removal within proposed activity work areas.	Yes Vegetation management within the ROW to ensure that incompatible vegetation does not threaten the safe and reliable operation of the transmission line.	No Not Applicable.	No Not Applicable.	No Not Applicable.	No Not Applicable.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	No Not Applicable.	No Not Applicable.	No Not Applicable.
Natural Environment Resources - Designated or Special Natural Areas: Significant Wetlands	Yes Potential disturbance due to vegetation removal, soil erosion, sedimentation, etc.	No Not Applicable.	No Not Applicable.	No Not Applicable.	No Not Applicable.	No Not Applicable.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	No Not Applicable.	No Not Applicable.	No Not Applicable.
Natural Environment Resources - Natural Heritage Features: Vegetation	Yes Accumulation of cleared vegetation. Removal of vegetation	No Not Applicable.	Yes Direct impacts to right-of-way vegetation in proposed construction area is not anticipated significant due to character, function,	Yes Direct impacts to right-of-way vegetation in proposed construction area is not anticipated	Yes Accumulation of cleared vegetation. Removal of vegetation within	No Not Applicable.	Unknown Potential for effect unknown until the project impact assessments and preferred	Unknown Potential for effect unknown until the project impact assessments and preferred	Yes Several projects have identified potential for effects to vegetation	No Not Applicable.	Not Considered Significant Vegetation removal is required for several



Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
	within proposed activity work areas.		and minor extent of removal. Majority of direct removal impacts are into median areas. A component of the direct impacts at the interchanges can be considered temporary in that they are improvements to existing interchanges; removals are often combined with removal and potential re-naturalization of abandoned sections of ramp/roadway. Other areas of vegetation will be temporarily disturbed for construction access. Individual roadside trees throughout the project study area are expected to be removed for grading requirements.	significant due to character, function, and minor extent of removal. Majority of the direct removal impacts are into median areas. A component of the direct impacts at the interchanges can be considered temporary in that they are improvements to existing interchanges; removals are often combined with removal and potential re-naturalization of abandoned sections of ramp/roadway. Other areas of vegetation will be temporarily disturbed for construction access. Individual roadside trees throughout the project study area are expected to be removed due to grading requirements.	proposed activity work areas.		route is identified.	route is identified.	during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.		projects, however within the area of overlap there are minimal vegetation removals anticipated. Project specific mitigation measures can be implemented to restore vegetation where possible. Compared to the larger landscape the anticipated project footprint areas are not expected to result in a significant level of vegetation removal. Nonetheless, when viewed in a holistic manner, Hydro One acknowledges that woodlands are of significant importance to Indigenous communities as they are considered home to their non-human relatives who

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
											<p>hold spiritual and intrinsic value in both the human and non-human realms.</p> <p>Hydro One has committed to undertaking a Biodiversity Initiative for the projects listed here to offset the changes in vegetation communities by funding the creation and enhancement of habitats in the region.</p>
<b>Natural Environment Resources - Natural Heritage Features: Fish and Fish Habitat</b>	<b>Yes</b> Potential disturbance to fish habitat as a result of vegetation loss, soil erosion, sedimentation, etc.	<b>Yes</b> Potential disturbance to fish habitat as a result of vegetation loss, soil erosion, sedimentation, etc. as a result of periodic maintenance activities.	<b>Yes</b> Impact on fish habitat due to culvert extensions, new culverts and potential realignments.	<b>Yes</b> Impact on fish habitat due to culvert extensions, new culverts and potential realignments.	<b>Yes</b> Potential disturbance to fish habitat as a result of vegetation loss, soil erosion, sedimentation, etc.	<b>Yes</b> Potential disturbance to fish habitat as a result of vegetation loss, soil erosion, sedimentation, etc. as a result of periodic maintenance activities.	<b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.	<b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.	<b>Yes</b> Several projects have identified potential for effects to fish and fish habitat during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	<b>Yes</b> Several projects have identified potential for permanent changes or effects to fish and fish habitat at specific water crossing locations and as a result of ancillary project activities.	<b>Not Considered Significant</b> Project specific mitigation measures carried out through permitting, approvals and license requirements can mitigate project specific concerns at the project level.
<b>Natural Environment Resources - Natural Heritage</b>	<b>Yes</b> Removal of woodlot (transition to compatible	<b>Yes</b> Vegetation management within the transmission ROW to ensure that	<b>Yes</b> Removal of individual roadside trees.	<b>Yes</b> Removal of individual roadside trees.	<b>Yes</b> Removal of woodlands (transition to compatible	<b>Yes</b> Vegetation management within the transmission	<b>Unknown</b> Potential for effect unknown until the project impact	<b>Unknown</b> Potential for effect unknown until the project impact	<b>No</b> Several projects have identified potential for	<b>No</b> Several projects have identified potential for effects to	<b>No</b> Woodland removal is required for several

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Features: Woodlands	vegetation) within the transmission ROW.	incompatible vegetation does not threaten the safe and reliable operation of the transmission line.			vegetation) within the transmission ROW.	ROW to ensure that incompatible vegetation does not threaten the safe and reliable operation of the transmission line.	assessments and preferred route is identified.	assessments and preferred route is identified.	effects to woodlands during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	woodlands during maintenance activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	projects, however within the areas of overlap there are no woodland removals anticipated. Project specific mitigation measures can be implemented to restore vegetation where possible. Compared to the larger landscape the anticipated project footprint areas are not expected to result in a significant level of woodland removal. Nonetheless, when viewed in a holistic manner, Hydro One acknowledges that woodlands are of significant importance to Indigenous communities as they are considered home to their non-human relatives who

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
											hold spiritual and intrinsic value in both the human and non-human realms.
Natural Environment Resources - Natural Heritage Features: Wetlands	Yes Potential disturbance due to vegetation removal, soil erosion, sedimentation, etc.	Yes Vegetation management within the transmission ROW to ensure that incompatible vegetation does not threaten the safe and reliable operation of the transmission line.	No Not Applicable.	No Not Applicable.	Yes Potential disturbance due to vegetation removal, soil erosion, sedimentation, etc.	No Not Applicable.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Yes Several projects have identified potential for effects to wetlands during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	No Not Applicable.	No Wetland removal is required for several projects, however within the area of overlap there are no wetland removals anticipated. Project specific mitigation measures can be implemented to restore vegetation where possible. Compared to the larger landscape the anticipated project footprint areas are not expected to result in a significant level of wetland removal. Nonetheless, when viewed in a holistic manner, Hydro One acknowledges that woodlands

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
											are of significant importance to Indigenous communities as they are considered home to their non-human relatives who hold spiritual and intrinsic value in both the human and non-human realms.
Natural Environment Resources - Natural Heritage Features: Species at Risk (SAR)	Yes Potential disturbance or loss of SAR and/or SAR habitat during construction.	Yes Potential disturbance or loss of SAR and/or SAR habitat during maintenance activities.	No Not Applicable.	No Not Applicable.	Yes Potential disturbance or loss of SAR and/or SAR habitat during construction.	Yes Potential disturbance or loss of SAR and/or SAR habitat during maintenance activities.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Yes Several projects have identified potential for effects to species at risk during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	Yes Several projects have identified potential for effects to species at risk during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	Not Considered Significant Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific mitigation measures, including those carried out through potential permitting and/or through conditional exemptions under the Endangered Species Act, 2007.

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Natural Heritage Features: Wildlife Habitat	Yes Potential disturbance or loss of wildlife habitat, including habitat fragmentation during construction.	Yes Potential disturbance or loss of wildlife habitat, including habitat fragmentation during maintenance activities.	Yes Loss of wildlife during construction. Localized impacts due to removal of common vegetation /habitat. Localized potential for nesting by some species in adjacent vegetation that may be disturbed by the construction activities. Wildlife crossings.	No Not Applicable.	Yes Potential disturbance or loss of wildlife habitat, including habitat fragmentation during construction.	Yes Potential disturbance or loss of wildlife habitat, including habitat fragmentation during maintenance activities.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Yes Several projects have identified potential for effects to wildlife and wildlife habitat during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	Yes Several projects have identified potential for effects to wildlife and wildlife habitat during maintenance activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	Not Considered Significant Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.
Natural Environment Resources - Natural Heritage Features: Invasive Species	Yes Potential for inadvertent spread of invasive species propagules through the movement of soil, debris and/or plant material via construction vehicles and equipment.	No Not Applicable.	No Not Applicable.	No Not Applicable.	Yes Potential for inadvertent spread of invasive species propagules through the movement of soil, debris and/or plant material via construction vehicles and equipment.	No Not Applicable.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Unknown Potential for effect unknown until the project impact assessments and preferred route is identified.	Yes Several projects have identified potential for effects from invasive species during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	No Not Applicable.	Not Considered Significant Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.



Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Indigenous community valued components and interests	<b>Yes</b> Potential to affect traditional territories of Indigenous communities impacting areas of harvesting and hunting in the ROW during construction, as well as potential for temporary outages associated with a nearby project which generates revenue for a community.	<b>Yes</b> Potential to affect traditional territories of Indigenous communities impacting areas of harvesting and hunting in the ROW during operation of the transmission line.	<b>No</b> Not Applicable.	<b>No</b> Not Applicable.	<b>Yes</b> Potential to affect traditional territories of Indigenous communities impacting areas of harvesting and hunting in the ROW during construction.	<b>Yes</b> Potential to affect traditional territories of Indigenous communities impacting areas of harvesting and hunting in the ROW during operation of the transmission line.	<b>Yes</b> Reasonable to assume there will be effects to traditional territories of Indigenous communities impacting areas of harvesting and hunting in the ROW during construction.	<b>Yes</b> Reasonable to assume there will be effects to traditional territories of Indigenous communities impacting areas of harvesting and hunting in the ROW during operation.	<b>Yes</b> Several projects have identified potential for temporary effects to Indigenous communities from construction activities including lands with potential for harvesting and hunting activities.	<b>Yes</b> Several projects have identified potential for permanent effects to Indigenous communities from infrastructure activities including effects to lands with potential for harvesting and hunting activities.	Based on project specific mitigation and project specific net effects coupled with habitat offsetting commitments, cumulative effects will continue to be managed at the project level, including through habitat offsets to address net effects, in consultation with Indigenous communities.
Recreational Resources	<b>Yes</b> Potential for temporary disturbance to tourism and enjoyment of recreational resources (e.g., trails, etc.) from construction equipment.	<b>Yes</b> Potential for temporary disturbance to tourism and enjoyment of recreational resources (e.g., trails, etc.) from maintenance activities.	<b>No</b> Not Applicable.	<b>No</b> Not Applicable.	<b>Yes</b> Potential for temporary disturbance to tourism and enjoyment of recreational resources (e.g., trails, etc.) from construction equipment.	<b>Yes</b> Potential for temporary disturbance to tourism and enjoyment of recreational resources (e.g., trails, etc.) from maintenance activities.	<b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.	<b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.	<b>Yes</b> Several projects have identified potential for effects to recreational resources during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	<b>Yes</b> Several projects have identified potential for effects to recreational resources during maintenance activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	<b>Not Considered Significant</b> Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Visual and Aesthetic Resources: Visibility of the Project by Sensitive Receptors	<b>Yes</b> Potential visual impacts to sensitive receptors with views of the Project during construction.	<b>Yes</b> Potential permanent visual impacts to sensitive receptors with views of the Project during its operation.	<b>No</b> Not Applicable.	<b>No</b> Not Applicable.	<b>Yes</b> Potential visual impacts to sensitive receptors with views of the Project during construction.	<b>Yes</b> Potential permanent visual impacts to sensitive receptors with views of the Project during its operation.	<b>Yes</b> Reasonable to assume there will be potential visual impacts to sensitive receptors with views of the project during construction.	<b>Yes</b> Reasonable to assume there will be permanent visual impacts to sensitive receptors with views of the project during its operation.	<b>Yes</b> Several projects have identified potential for negative visual effects associated with construction activities.	<b>Yes</b> Several projects have identified potential for negative visual effects associated with permanent construction of project infrastructure. Multiple projects being constructed in the same area could compound this effect.	<b>Not Considered Significant</b> Several projects have identified potential for visual changes. Not considered significant because the area of overlap between projects is small and occurs in areas with multiple existing transmission lines and infrastructure.
Technical Considerations: Wind Turbines	<b>Yes</b> Potential for activities to disrupt facilities such as wind farms including temporary transmission outages during construction which may affect some facilities that are connected directly to the transmission system.	<b>No</b> Not Applicable.	<b>No</b> Not Applicable.	<b>No</b> Not Applicable.	<b>No</b> Not Applicable.	<b>No</b> Not Applicable.	<b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.	<b>Unknown</b> Potential for effect unknown until the project impact assessments and preferred route is identified.	<b>No</b> Not Applicable.	<b>No</b> Not Applicable.	<b>No</b> Not Applicable.

Environmental Concern	St. Clair Transmission Line - Temporary Effect	St. Clair Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London - Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Chatham to Lakeshore Transmission Line Project - Temporary Effect	Chatham to Lakeshore Transmission Line Project - Long-Term Effect	Longwoods to Lakeshore Transmission Line Project - Temporary Effect	Longwoods to Lakeshore Transmission Line Project - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Technical Considerations: Infrastructure Crossings	Yes Temporary construction activities overhead of Highway 40 (Communication Road). Temporary construction activities over underground utility crossing. Temporary construction activities overhead of existing railway line ROWs. Temporary construction activities overhead of constructed drains.	Yes Permanent overhead crossing of Highway 40 (Communication Road). Permanent Underground utility crossing. Permanent overhead crossing of the existing railway line ROWs. Permanent crossings of constructed drains.	No Not Applicable.	No Not Applicable.	Yes Temporary construction activities overhead of Highway 401, Highway 77 and Highway 40 (Communication Road). Temporary construction activities over underground utility crossing. Temporary construction activities overhead of existing railway line ROWs. Temporary construction activities overhead of constructed drains.	Yes Permanent overhead crossing of Highway 401, Highway 77 and Highway 40 (Communication Road). Permanent Underground utility crossing. Permanent overhead crossing of the existing railway line ROWs. Permanent crossings of constructed drains.	Yes Reasonable to assume there will be temporary infrastructure conflicts during construction activities.	Yes Reasonable to assume there will be infrastructure effects as a result of permanent construction of project infrastructure.	Yes Several projects have identified potential for temporary infrastructure conflicts during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	Yes Several projects have identified potential for infrastructure effects as a result of permanent construction of project infrastructure. Project specific mitigation measures can be implemented to manage potential effects.	Not Considered Significant Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.

#### 7.13.4 Summary of Cumulative Effects

The potential cumulative effects for the Project were assessed by considering potential effects from other undertakings that interact and overlap with the Project LSA (500 m from the preferred route for the Project). Potential effects were determined based on publicly available information from completed Environmental Assessments where possible, or based on anticipated potential project effects from other Hydro One projects being planned nearby.

The CEA determined that there are no areas of environmental concern that will result in a significant cumulative effect. The mitigation measures outlined for the Project, summarized in **Table 7-1**, provide adequate Project-specific mitigation that remain effective after considering cumulative effects from the other projects. In the event some or all of the projects identified proceed concurrently, temporary construction-related effects can be further coordinated for mitigation with project proponents.

## 8 Effects Monitoring

The purpose of effects monitoring is to confirm the extent of the proposed Project's environmental effects by comparing the actual effects with the predicted effects, to verify the effectiveness of mitigation measures, and to determine whether additional measures are warranted. Monitoring also confirms that the commitments, conditions of approval, where applicable, and compliance with other environmental legislation are met. An Environmental Specialist will be assigned to the Project for the duration of construction to monitor construction activities and provide guidance on needed field changes.

As previously noted in **Section 7**, a Project-specific Environmental Management Plan will be prepared following the completion of the Class EA process and before the start of construction. The Environmental Management Plan will:

- Summarize legislative requirements;
- Summarize environmental commitments set out in the final ESR, and terms and conditions of approval, if any;
- Ensure the documentation of pre-construction site conditions, where necessary;
- Provide specific directions to construction personnel on the implementation of environmental mitigation measures, response plans, and other information (e.g., identification of SAR);
- Ensure supporting protection plans have been implemented during construction;
- Describe the environmental monitoring process and frequency to be undertaken during construction;
- Outline steps to be taken when documenting monitoring and identify procedures for follow-up actions, as required; and,
- Provide specific directions on the post-construction restoration of work areas and access locations.

Some Indigenous communities have expressed an interest in participating in environmental monitoring during construction of the Project. With regards to environmental monitoring during construction, in the interest of prioritizing the safety of all parties it has not been Hydro One's historic practice to invite external monitors onto active construction sites. However, in recognition of the interest expressed by some Indigenous communities in monitoring during construction, Hydro One will work with its construction contractor to identify opportunities to safely involve Indigenous community staff in environmental monitoring work during construction.

At the end of construction, an as-constructed plan will be prepared to guide ongoing operation and maintenance activities. The plan will document “as constructed” conditions as well as ongoing monitoring requirements, if required.



## 9 Conclusion

Hydro One is seeking approval under the *Environmental Assessment Act* to construct a new 230 kV double-circuit transmission line based on direction provided by IESO in March 2021. The new 230 kV transmission line will be approximately 64 km in length and will be located between the Lambton TS in St. Clair Township and the Chatham SS in the Municipality of Chatham-Kent. As the preferred route will repurpose a portion of an existing 115 kV transmission corridor, the Project will also involve removal of the existing transmission structures, conductor and components associated with the existing 115 kV transmission corridor section that will be repurposed. The Project will also involve an upgrade of the Wallaceburg TS from 115 kV to 230 kV, a new access road to Lambton TS, as well as expansion of the Lambton TS and Chatham SS to facilitate the connection of the new transmission line.

The purpose of the Project is to ensure sufficient bulk transfer capabilities to supply the forecast load in the Windsor-Essex region and surrounding Chatham area in the near-to mid-term, and to improve the deliverability of resources in the Lambton-Sarnia area for intra-zonal and provincial supply.

Following receipt of the IESO letter in March 2021, Hydro One conducted a preliminary assessment to identify viable route alternatives for the new 230 kV transmission line. As a result of this exercise, five viable route alternatives were identified. Based on information obtained during the early stages of the Class EA process, Hydro One made three refinements to the route alternatives in October 2022.

Since the Notice of Commencement in February 2022, municipal, provincial and federal government officials, staff and agencies, Indigenous communities, potentially affected and interested persons, and interest groups were consulted. Given the ongoing COVID-19 pandemic government mandated lockdowns at the start of the Class EA, the traditional in-person meetings typically associated with Community Open Houses were replaced with Virtual Open Houses and Virtual Live Discussions for the first round of COHs. The second round of COHs included both in person and virtual components. The third round of COHs included in person events only, supplemented with an informational video and other materials that were made available on the Project web page. A total of three rounds of COH's for the general public and stakeholders were held (#1 – March 9 and 10, 2022, #2 - November 8-10 and November 23, 2022 and #3 – June 26 -28, 2023). Additionally, an interactive online mapping platform was hosted on the Project web page since the commencement of the Class EA process, with regular updates to reflect the progress of the Project and Class EA.

A Technical Advisory Committee was established to help inform the comparative evaluation process used to select the preferred route for the new 230 kV transmission line. The purpose of the TAC was to provide a platform for Hydro One to present information, hold discussions and draw upon the experience and knowledge of individuals and organizations. The TAC consisted of representatives from Indigenous communities, government agencies, municipalities, and interest groups. Three rounds of virtual TAC workshops were held (#1 – May 5, 2022, #2 – September 13, 2022, and #3 – June 1, 2023).

Feedback received from the various public engagement activities and the TAC was used to complete a Multi-Criteria Decision Making Analysis in support of the Class EA. The results of this analysis determined that route alternative 2 was selected as the preferred route.

Potential short- and long-term environmental effects were identified for the proposed Project and corresponding mitigation measures were developed to address these effects. Based on information collected, project design and implementation of the proposed mitigation measures, no significant net adverse environmental effects are expected.

This draft ESR was made available for public comment for 30 days, from November 6, 2023, to 4:30 PM on December 7, 2023. Additionally, in response to requests received from some Indigenous Communities and the Ministry of the Environment, Conservation and Parks (MECP), Hydro One extended the draft ESR comment period as requested. Caldwell First Nation (CFN) requested an extension of 8 days (December 15, 2023) allowing a 38-day total for the comment period. The MECP and COTTFFN requested an extension of 15 days (December 22, 2023) allowing for 45 days total for the comment period. Hydro One has made best efforts to respond and resolve issues raised by concerned parties during the comment period. Comments received during this period, and Hydro One's responses, are documented in this final ESR. No Section 16 Order requests were submitted to the ministry and/or Hydro One in support of the Project. Hydro One sought and received input from two provincial ministries (the Ministry of Natural Resources and Forestry and the Ministry of Citizenship and Multiculturalism) not originally reported in the final ESR submitted in February 2024. This input has been incorporated into this updated final ESR document, as published in May 2024.

Upon filing of this final ESR with the MECP, the proposed Project will be implemented in full compliance with the requirements of the Class EA process as outlined in the final ESR, incorporating input obtained throughout the planning process. Hydro One will

obtain the necessary environmental approvals and permits required for the proposed project prior to construction.

## 10 References

- Aboriginal Affairs and Northern Development Canada (AANDC), 2012. GeoViewer Interactive Map. Accessed from: <http://geo.aandc-aadnc.gc.ca/geoviewer-geovisualiseur/index-eng.html>
- Agriculture and Agri-Food Canada, Canada Land Inventory, Soil Capability for Agriculture (2013). Available online: <http://sis.agr.gc.ca/cansis/publications/maps/cli/1m/agr/index.html>
- Barnett, P.J., Cowan, W.R. and Henry, A.P. 1991. Quaternary geology of Ontario, southern sheet; Ontario
- Bat Conservation International. 2023. Species profiles. Accessed from: <http://www.batcon.org/resources/media-education/species-profiles>
- Bird Studies Canada. 2009. Marsh Monitoring Program Participant's Handbook for Surveying Marsh Birds. 2009 Edition. 17 pages.
- Cadman, M.D., D.A. Sutherland, G.G. Beck, D. Lepage, and A.R. Couturier [eds.]. 2007. Atlas of the Breeding Birds of Ontario, 2001-2005. Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature, Toronto, xxii + 706 p.
- Canadian Food Inspection Agency (CFIA). 2022. Hazards of Moving Firewood. <https://inspection.canada.ca/plant-health/forestry/don-t-move-firewood/firewood/eng/1330963478693/1330963579986>
- Canadian Heritage River System (CHRS). 2022. Thames River. [https://web.archive.org/web/20100328171450/http://www.chrs.ca/Rivers/Thames/Thames-F\\_e.htm](https://web.archive.org/web/20100328171450/http://www.chrs.ca/Rivers/Thames/Thames-F_e.htm)
- Canadian National Railway Company (CN). 2023. Maps & Network – Interactive Maps. Available online: <https://www.cn.ca/en/our-services/maps-and-network/>
- Canada Land Inventory (CLI). 1998. *National Soil DataBase, Agriculture and Agri-Food Canada*. Retrieved from: [http://sis.agr.gc.ca/cansis/publications/maps/cli/250k/agr/cli\\_250k\\_agr\\_40j\\_g.jpg](http://sis.agr.gc.ca/cansis/publications/maps/cli/250k/agr/cli_250k_agr_40j_g.jpg)
- Chapman and Putnam. 1984. Physiography of Southern Ontario; Ontario Geological Survey, Map P.2715. Scale 1: 600 000.

- County of Lambton. 2020. County of Lambton Official Plan. Available from:  
<https://www.lambtononline.ca/en/business-and-development/official-plan.aspx>
- Crins, W.J., Gray, P.A., Uhlig, P.W.C., Wester, M.C. 2009. The Ecosystems of Ontario, Part 1: Ecozones and Ecoregions. Ministry of Natural Resources and Forestry. Science and Information Branch. Inventory, Monitoring and Assessment Section. Retrieved From: <https://files.ontario.ca/mnrf-ecosystemspart1-accessible-july2018-en-2020-01-16.pdf>
- Dobbyn, J. 1994. Atlas of the Mammals of Ontario. Federation of Ontario Naturalists, Don Mills. ON 120 pp.
- Dillon Consulting Limited (Dillon), WSP Global Inc. (WSP). 2004. Essex Region/Chatham-Kent Region Groundwater Study Volume1: Geologic/Hydrologic Evaluation. Accessed from: <https://essexregionconservation.ca/wp-content/uploads/2019/01/Essex-Region-Chatham-Kent-GW-Study-Volume-1.pdf>.
- Dillon Consulting Limited (Dillon). 2022. Natural Environment Field Program Terms of Reference. April 2022. pg 29.
- Eastern Foxsnake Recovery Team. 2010. Recovery strategy for the Eastern Foxsnake (*Pantherophis gloydi*) – Carolinian and Georgian Bay populations in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources, Peterborough, Ontario. vi + 39 pp.
- Endangered Species Act (ESA), 2007, S.O. 2007, c. 6.
- Environment and Climate Change Canada (ECCC). 2018. General nesting periods of migratory birds in Canada. Retrieved from:  
<https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html#toc0>
- Environment and Climate Change Canada (ECCC). 2019. Species at Risk Public Registry. Accessed from: <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html>
- Environmental Assessment Act (EA Act), S.C. 1992, c. 37Environment Canada (EC). 2022. Air Quality Health Index – Sarnia and Chatham Stations. Retrieved from: [https://weather.gc.ca/airquality/pages/onaq-010\\_e.html](https://weather.gc.ca/airquality/pages/onaq-010_e.html)

- Fehr, R., Macbeth, J. & Sands Macbeth, S. (2019). Chief of this River: Zhaawni-binesi and the Chenail Ecarté lands. *Ontario History*, 111(1), 19–35.  
<https://doi.org/10.7202/1059964ar>
- Fisheries and Oceans Canada (DFO). (2017). Mapleleaf, *Quadrula quadrula* (Great Lakes - Western St. Lawrence population). Accessed from: <http://www.dfo-mpo.gc.ca/species-especes/profiles-profils/mapleleaf-feuillederable-gl-eng.html>
- Fisheries and Oceans Canada. (DFO). 2023. Aquatic Species at Risk Map. Accessed from: <https://www.dfo-mpo-gc.ca/species-especes/sara-leg/map-carte/index-eng.html>
- Government of Canada. 2013. Canada Land Inventory Level-I Digital Data. Soil Capability for Agriculture. Accessed from:  
<http://sis.agr.gc.ca/cansis/nsdb/cli/class.html>
- Government of Canada. 2019. Historical Weather Data. Courtright and Chatham WPCP. Retrieved from:  
[https://climate.weather.gc.ca/historical\\_data/search\\_historic\\_data\\_e.html](https://climate.weather.gc.ca/historical_data/search_historic_data_e.html)
- Government of Canada. 2023. Canadian Climate Normals 1981 – 2010. Retrieved from:  
[https://climate.weather.gc.ca/climate\\_normals/](https://climate.weather.gc.ca/climate_normals/)
- Health Canada. 2022. Power lines and electrical products: Extremely low frequency electric and magnetic fields. Available from: <https://www.canada.ca/en/health-canada/services/health-risks-safety/radiation/everyday-things-emit-radiation/power-lines-electrical-appliances.html>
- Hydro One Networks Inc. (Hydro One). 2022. Class Environmental Assessment for Minor Transmission Facilities. pg. 155.
- Independent Commission on Non-Ionizing Radiation Protection (ICNIRP). 2020. RF EMF Guideline 2020. <https://www.icnirp.org/en/activities/news/news-article/rf-guidelines-2020-published.html>
- Independent Electricity System Operator (IESO). 2021. IESO Letter to Hydro One re Transmission Line from Chatham to Lambton. Available from:  
<https://www.ieso.ca/en/Get-Involved/Regional-Planning/Southwest-Ontario/Chatham-Kent-Lambton-Sarnia>



- Independent Electricity System Operator (IESO). 2021. Need for Bulk System Reinforcements West of London. Available from: <https://www.ieso.ca/en/Get-Involved/Regional-Planning/Southwest-Ontario/Chatham-Kent-Lambton-Sarnia>
- Institute of Electrical and Electronics Engineers (IEEE). 2019. IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz. Available from: <https://standards.ieee.org/ieee/C95.1/4940/>
- International Commission on Non-Ionizing Radiation Protection (ICNIRP). 2020. ICNIRP Guidelines for Limiting Exposure to Electromagnetic Fields (100 kHz to 300 GHz). Available from: <https://www.icnirp.org/en/activities/news/news-article/rf-guidelines-2020-published.html>
- Kavanagh, R.J., Hoggarth, C.T. 2017. Guidance for Maintaining and Repairing Municipal Drains in Ontario. Central and Arctic Region Fisheries and Oceans Canada. Burlington, Ontario. Retrieved from: <https://www.dsao.net/images/Documents/Dart/General/Guidance-for-Maintaining-and-Repairing-Municipal-Drains-in-Ontario-March-7-2017-V1.0.pdf>
- Lee, H. T., Bakowsky, W. D., Riley, J., Bowles, J., Puddister, M., Uhlig, P., & McMurray, S. 1998. Ecological land classification for southern Ontario: First approximation and its application. Ontario Ministry of Natural Resources, South Central Region, Science Development and Transfer Branch.
- Lee, H. 2008. Draft ecological land classification for Southern Ontario. London, Ontario: Ontario Ministry of Natural Resources.
- Malone, M., and Firelight Research Inc. 2021. Caldwell First Nation Traditional Ecological Knowledge Preliminary Study for Hydro One's Chatham-Kent to Lakeshore Line Project. Final Report. August 10, 2021.
- Malone, M., and Firelight Research Inc. 2021. Chippewas of the Thames First Nation Culture and Rights Study Specific to Hydro One's Proposed Chatham-Kent to Lakeshore Line Project. Final Report. December 14, 2021.
- Migratory Birds Convention Act. 1994. (S.C., 1994, c. 22). Available from: <https://laws-lois.justice.gc.ca/eng/acts/m-7.01/>

- Ministry of Agriculture, Food and Rural Affairs (OMAFRA). 2022. AgMaps. Available online:  
<https://www.lioapplications.lrc.gov.on.ca/AgMaps/Index.html?viewer=AgMaps.AgMaps&locale=en-CA>
- Ministry of Agriculture, Food and Rural Affairs (OMAFRA). 2022. Agricultural Resource Inventory. Available online:  
<https://geohub.lio.gov.on.ca/documents/cf961d62ee1345c7b191808c9d60a4d7/about>
- Ministry of Energy, Northern Development and Mines (ENDM) 1991. Bedrock Geology of Ontario; Map 2544.
- Ministry of Energy, Northern Development and Mines (ENDM). 2012. Surficial Geology of Southern Ontario. Accessed from: <https://data.ontario.ca/dataset/surficial-geology-of-southern-ontario>
- Ministry of Energy, Northern Development and Mines (ENDM). 2022. Mining Lands Administration System (MLAS) Map Viewer. Available online:  
<https://www.gisapplication.lrc.gov.on.ca/Html5Viewer261/index.html?viewer=mlas.mlas&locale=en-CA>
- Ministry of Energy, Northern Development and Mines (ENDM). 2017. Abandoned Mines. Accessed from: <http://www.mndm.gov.on.ca/en/mines-and-minerals/applications/ogsearch/abandoned-mines>
- Ministry of the Environment and Climate Change (MOECC). 2016. Environmental Noise Guideline - Stationary and Transportation Sources - Approval and Planning (NPC-300). Accessed from: <https://www.ontario.ca/page/environmental-noise-guideline-stationary-and-transportation-sources-approval-and-planning>
- Ministry of the Environment, Conservation and Parks (MECP). 2011. Guide to EA Requirements for Electricity Projects. Available from:  
<https://www.ontario.ca/page/guide-environmental-assessment-requirements-electricity-projects>

- Ministry of Environment, Conservation and Parks (MECP). 2019. Recovery Strategy for the Butler's Gartersnake (*Thamnophis butleri*) in Ontario. Ontario Recovery Strategy Series. Prepared by the Ministry of the Environment, Conservation and Parks, Peterborough, Ontario. iv + 6 pp. + Appendix. Adoption of the Recovery Strategy for the Butler's Gartersnake (*Thamnophis butleri*) in Canada (Environment Canada 2018).
- Ministry of Environment, Conservation and Parks (MECP). 2021. Map: Well Records. Accessed online: <https://www.ontario.ca/environment-and-energy/map-well-records>
- Ministry of the Environment, Conservation and Parks (MECP). 2020. Ontario's Ambient Air Quality Criteria (AAQC). Accessed from: <https://files.ontario.ca/mecp-ambient-air-quality-criteria-list-en-2020-05-01.pdf>
- Ministry of the Environment, Conservation and Parks (MECP). 2022. Air Quality Health Index (AQHI) Chatham. Accessed from: [https://weather.gc.ca/airquality/pages/onaq-024\\_e.html](https://weather.gc.ca/airquality/pages/onaq-024_e.html)
- Ministry of the Environment, Conservation and Parks (MECP). 2022. Air Quality Health Index (AQHI) Sarnia. Accessed from: [https://weather.gc.ca/airquality/pages/onaq-025\\_e.html](https://weather.gc.ca/airquality/pages/onaq-025_e.html)
- Ministry of the Environment Conservation and Parks (MECP). 2022. Bickford Oak Woods Conservation Reserve Management Plan. <https://www.ontario.ca/page/bickford-oak-woods-conservation-reserve-management-plan>
- Ministry of the Environment Conservation and Parks (MECP). 2022. Source Water Protection Information Atlas. Accessed from: <https://www.lioapplications.lrc.gov.on.ca/SourceWaterProtection/index.html?viewer=SourceWaterProtection.SWPViewer&locale=en-CA>
- Ministry of Natural Resources and Forestry (MNRF). 2000. Significant Wildlife Habitat Technical Guide. 151 p.
- Ministry of Natural Resources and Forestry (MNRF). 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement 2005. 2<sup>nd</sup> Edition.

- Ministry of Natural Resources and Forestry (MNRF). 2022. Ontario Wetland Evaluation System – Northern Manual. 2nd Ed. Queen’s Printer for Ontario, Toronto, ON. 215 p.
- Ministry of Natural Resources and Forestry (MNRF). 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E. 48 p. Accessed from: <http://docs.files.ontario.ca/documents/4813/schedule-3e-2015-final-s.pdf>
- Ministry of Natural Resources and Forestry (MNRF). 2014a. Ontario Wetland Evaluation System. Southern Ontario Manual. 3<sup>rd</sup> Edition, Vers. 3.3.
- Ministry of Natural Resources and Forestry (MNRF). 2014b. Significant Wildlife Habitat Mitigation Support tool. Version 2014. Accessed from: <https://docs.ontario.ca/documents/4773/mnr-swhmist-accessible-2015-03-10.pdf>
- Ministry of Natural Resources and Forestry (MNRF). 2019. Bobolink General Habitat Description. Accessed from: <https://www.ontario.ca/page/bobolink-general-habitat-description>
- Ministry of Natural Resources and Forestry (MNRF). 2022. Make a Natural Heritage Map. Accessed from: [https://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR\\_NHLUPS\\_NaturalHeritage&viewer=NaturalHeritage&locale=en-CA](https://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-CA)
- Ministry of Natural Resources & Forestry (MNRF). 2019. Species at risk in Ontario. Accessed from: <https://www.ontario.ca/page/species-risk-ontario>
- Ministry Natural Resources and Forestry (MNRF). 2022. Forest Resource Inventory. <https://www.ontario.ca/page/forest-resources-inventory>
- Ministry Natural Resources and Forestry (MNRF). 2023. Make a Topographic Map. [https://www.lioapplications.lrc.gov.on.ca/MakeATopographicMap/index.html?viewer=Make\\_A\\_Topographic\\_Map.MATM](https://www.lioapplications.lrc.gov.on.ca/MakeATopographicMap/index.html?viewer=Make_A_Topographic_Map.MATM)
- Ministry Natural Resources and Forestry (MNRF). 2023. Ontario Watershed Information Tool (OWIT) – Ontario Flow Assessment Tool. <https://www.lioapplications.lrc.gov.on.ca/OWIT/index.html?viewer=OWIT.OWIT&locale=en-CA>

- Ministry of Citizenship and Multiculturalism (MCM). 2010. Standards and Guidelines for Conservation of Provincial Heritage Properties. Accessed from:  
[http://www.mtc.gov.on.ca/en/publications/Standards\\_Conservation.pdf](http://www.mtc.gov.on.ca/en/publications/Standards_Conservation.pdf)
- Ministry of Citizenship and Multiculturalism (MCM). 2011. Standards and Guidelines for Consultant Archaeologists. Accessed from: <https://files.ontario.ca/mhstci-standards-guidelines-consultant-archaeologists-en-2022-03-29.pdf>
- Municipality of Chatham-Kent. 2017. Noise By-Law No. 178-2017, By-Law to provide for the regulation and prohibition of usual noises or noises likely to disturb the public and for the prevention of public nuisances.
- Municipality of Chatham-Kent. 2018. Chatham-Kent Official Plan, Action Toward Sustainability. 358 pp.
- Ontario Nature. 2023. *Reptiles and amphibians of Ontario*. Accessed from: from:  
<https://ontarionature.org/programs/community-science/reptile-amphibian-atlas/species/>
- Poisson, G., and M. Ursic. 2013. Recovery Strategy for the Butternut (*Juglans cinerea*) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources, Peterborough, Ontario. v+12 pp. + Appendix vii + 24 pp.  
Adoption of the Recovery Strategy for the Butternut (*Juglans cinerea*) in Canada (Environment Canada 2010).
- Provincial Policy Statement (PPS). 2020. Provincial Policy Statement, 2020. Under the Planning Act.
- Railway Association of Canada. 2012. Maps/Rail Atlas. Map: Ontario Railways.  
Accessed from: <https://www.proximityissues.ca/reference/maps/>
- Species at Risk Act (SARA). 2002. S.C. 2002, c. 29.
- Statistics Canada. 2017. St. Clair Township census profile. Accessed from:  
<https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=3538003&Geo2=PR&Code2=35&SearchText=St.%20Clair&SearchType=Begins&SearchPR=01&B1=All&GeoLevel=PR&GeoCode=3538003&TABID=1&type=0>

- Statistics Canada. 2017. Municipality of Chatham-Kent census profile. Accessed from:  
<https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CMACA&Code1=556&Geo2=PR&Code2=35&SearchText=Chatham-Kent&SearchType=Begins&SearchPR=01&B1=All&GeoLevel=PR&GeoCode=556&TABID=1&type=0>
- St. Clair Region Conservation Authority (SCRCA). 2022. Peers Wetland. Accessed from: <https://www.scrca.on.ca/locations/peers-wetland/>
- Thames-Sydenham and Region Source Protection Committee (TSRSPC). 2023. Source Protection Plan. Available from:  
<https://www.sourcewaterprotection.on.ca/approved-source-protection-plan/>
- Timmins Martelle Heritage Consultants Inc. (TMHC). 2022. Stage 1 Archaeological Assessment. Class EA for Minor Transmission Facilities. Hydro One Networks Inc. (HONI). St. Clair Transmission Line Project. May 2022. 123 pp.
- Township of St. Clair. 2005. Township of St. Clair Official Plan. Retrieved from:  
<https://www.stclairtownship.ca/official-plan/>
- Township of St. Clair. 2014. Noise By-Law No. 44, By-Law for regulating and prohibiting within the Township of St. Clair noise or noises likely to disturb the inhabitants.
- World Health Organization (WHO). 2014. Electromagnetic Fields.  
[https://www.who.int/health-topics/electromagnetic-fields#tab=tab\\_1](https://www.who.int/health-topics/electromagnetic-fields#tab=tab_1)
- WSP Global Inc. (WSP). 2022. St. Clair to Chatham New Transmission Line Project. Culture Heritage Existing Conditions Report. pg. 207.