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St. Clair Transmission Line Project

Final Environmental Study Report Highlights | February 2024

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Introduction

Hydro One is pleased to share the highlights of the Final Environmental Study Report (ESR) for the St. Clair Transmission Line Project. Completion of the Final ESR marks the end of the Class Environmental Assessment (EA) process. The Draft ESR was released for a 30-day comment period from November 6 to December 7, 2023. Comments received during that period and Hydro One's responses are documented in the Final ESR.

> This new transmission line will support local food supply and security, economic development and job creation in our region. This critical project will help ensure residents in St. Clair have reliable power for years to come.
>
> **– Jeff Agar, Mayor, St. Clair Township**

View the full Final Environmental Study Report here. HydroOne.com/StClair

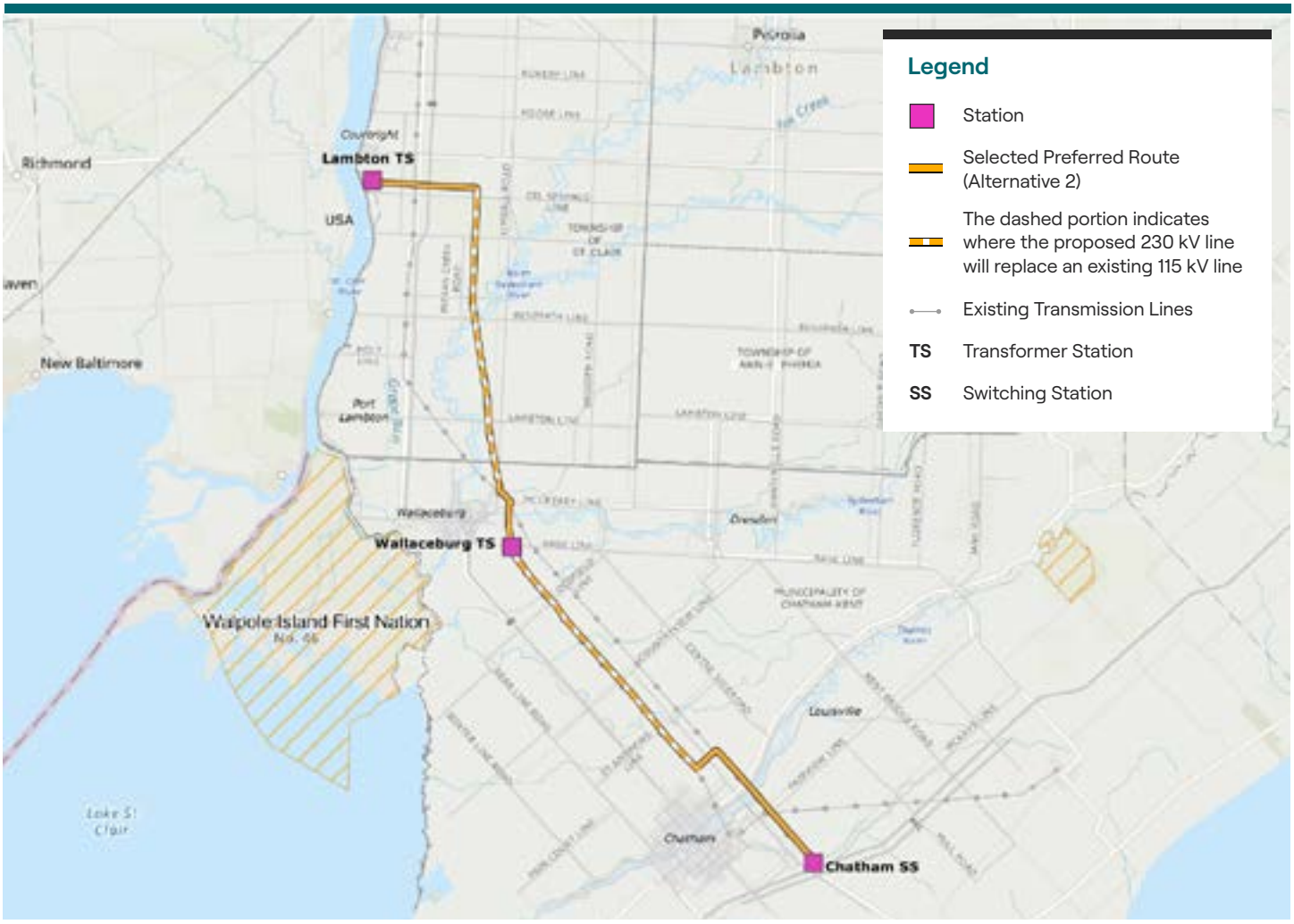
About the St. Clair Transmission Line Project

The St. Clair Transmission Line Project is a proposed new transmission line between St. Clair Township and the Municipality of Chatham-Kent. The project also involves an upgrade of the Wallaceburg Transformer Station, which will increase the transmission reliability and resiliency for the Wallaceburg area. After a thorough evaluation of five route alternatives, Hydro One selected the preferred route for the project in June 2023. Since 80 per cent of this route uses existing transmission corridors and upgrades an existing transmission line, it has the least effect on the values of importance to Indigenous communities, as well as to the natural environment, agricultural lands and operations. Upon filing the Final ESR with the Ministry of the Environment, Conservation and Parks on February 5, the Class EA process was officially completed and the project will proceed with detailed design and construction planning.

Working in partnership with First Nations

As part of the pathway towards Reconciliation, Hydro One has offered five First Nations in the region 50 per cent equity ownership in the transmission line component of the project and is committed to working to advance the project in partnership.

Hydro One | St. Clair Transmission Line Project



Benefits to Southwestern Ontario

As the population grows in southwestern Ontario, safe and reliable power is needed to improve reliability for homes and businesses, secure and diversify supply, and create opportunities for industries to locate in the area. Demand for electricity in the region is expected to quadruple by 2035, according to the Independent Electricity System Operator (IESO).

The St. Clair Transmission Line Project is part of a network of electricity infrastructure projects that will support the region's economic growth. The line is expected to be in service in 2028 and will bring a number of benefits to the region.

Clean electricity

The project will provide a reliable supply of clean electricity, which means communities and businesses can continue to grow.

Local food supply

The line will support local food supply and security, including helping farmers and greenhouse producers thrive.

Economic growth

The new line will unlock economic potential and job creation in the region. Along with powering homes and businesses, it will support key areas, including electric vehicle technology and the agriculture sector.

By the numbers

80 per cent
uses existing transmission corridors

450 megawatts*
of added capacity – enough to approximately power the city of London

140
construction workers employed

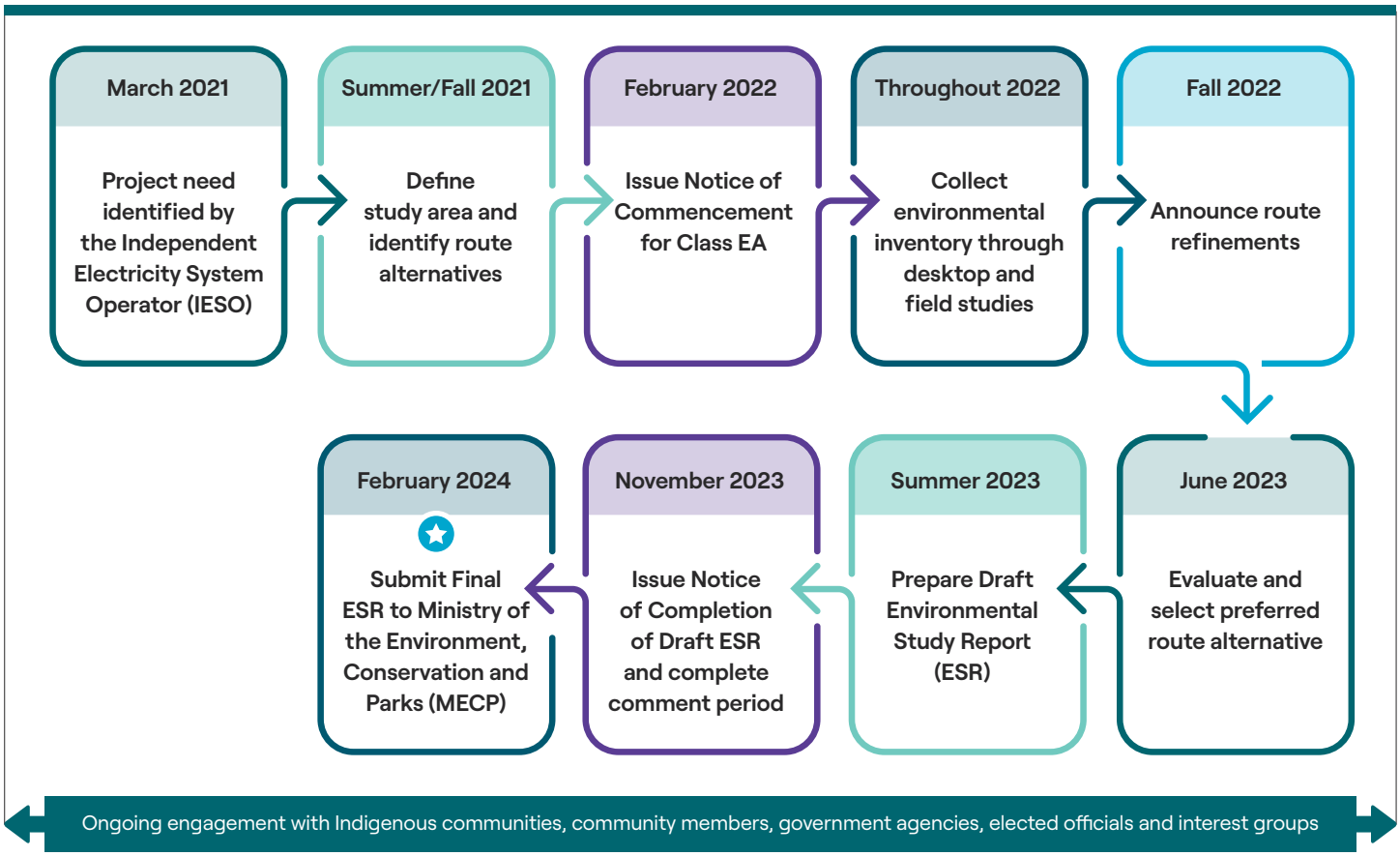
> The impact of this new line, once built, will be remarkable for the region. We continue to work very closely with Hydro One and offer feedback from our members, which is critical as the project continues to move ahead.
>
> **– Louis Roesch, Director, Essex and Kent, Ontario Federation of Agriculture (OFA)**

* Source: Southwest Ontario Bulk Planning (ieso.ca)

About the Class Environmental Assessment

The Class EA is a streamlined planning process for transmission projects that have a predictable range of environmental effects and have industry-standard measures that can be implemented to limit them.

HOW THE PROCESS WORKS



The Final Environmental Study Report:

- Describes the existing conditions in the area surrounding the project
- Details the consultations we have undertaken with Indigenous communities, community members, government agencies, elected officials and interest groups
- Outlines the process to evaluate route alternatives and select the preferred one
- Predicts and assesses potential environmental effects
- Identifies the actions we will take to minimize and avoid potential negative project effects
- Provides a summary of the comments received on the Draft ESR and Hydro One's responses to those comments

What We Heard During the Comment Period

During the comment period for the Draft ESR, Hydro One received important feedback from Indigenous communities, the Ministry of the Environment, Conservation and Parks, local governments, property owners, interest groups and the public.

These groups shared the importance of:

- Restoring natural habitats in the region (such as post-construction restoration work and the Biodiversity Initiative) including the use of native plant species and local seed sources
- Considering effects to agricultural lands
- Considering effects to water, including source water protection areas, groundwater resources and water wells
- Considering effects to animals and wildlife habitat, including bald eagles known to nest in the vicinity of the project
- Measures to address the potential for inadvertent spread of invasive species and agricultural pests
- Use of constructed access (such as temporary access roads) during construction to avoid moving dirt, topsoil and plant material
- Indigenous community involvement in upcoming archaeological assessment field surveys
- Continuing to consult with Indigenous communities on detailed construction mitigation plans, such as site-specific measures to mitigate effects to Species at Risk

They also shared:

- Interest in further consultation on regional planning studies conducted by the Independent Electricity System Operation (IESO)
- Requests to further consider and assess operational noise from transmission lines

Questions were shared on:

- The removal of old transmission towers
- Property owner compensation
- Clean energy in the province
- The evaluation of the route alternatives and selection of the preferred route
- The studies and assessments that have been conducted to date for the project

Comments from the comment period and responses from Hydro One are included in Section 3.13 of the Final ESR.

Hydro One conducts a number of on-the-ground field studies to truly understand the areas where our projects will take shape. As part of the Class EA for the St. Clair Transmission Line Project, we have conducted habitat and wildlife surveys, including of birds, fish and amphibians, as well as studies of archaeological and built heritage resources, among other studies.

> Southwestern Ontario is growing, and we understand this network of electricity infrastructure projects is critical to help meet the energy demand that our region will experience over the next several years. We will continue to work with Hydro One throughout the engagement process to ensure clean and reliable energy will continue to power southwestern Ontario for years to come.
>
> **– Darrin Canniff, Mayor, Municipality of Chatham-Kent**

Our Commitments

Hydro One has committed to key actions based on engagement to date, including direct feedback during the Draft ESR comment period. These are reflected in the Final ESR.

We will:

- Take actions that limit or avoid effects to natural habitats, water, agricultural lands and the socio-economic environment
- Conduct a Biodiversity Initiative to offset the loss or long-term change to habitats that may occur as a result of this project
- Continue working with property owners to understand the unique features of their property
- Take measures to avoid the inadvertent spread of invasive species and agricultural pests
- Work with Indigenous communities, municipalities, local communities, and stakeholders to find opportunities to enhance the community benefits with this project

Related specifically to groundwater sources and water wells, we will:

- Ensure tower foundations remain between approximately 30 feet to 100 feet (depending on the depth of the soil) above the top of the aquifer layer
- Not use pile driving to install tower foundations
- Use helical (screw) piles to minimize ground disturbances

> Local community participation is integral to infrastructure development, and we will integrate feedback directly into the design, development, construction, operations and maintenance of this project as Hydro One continues to invest in southwest Ontario, to ensure energy is available when and where it is needed.
>
> **– Sonny Karunakaran, Vice President, Strategic Projects and Partnerships, Hydro One**

Read more about Hydro One's commitments in Section 7 of the Final ESR.

Overall Conclusions

Overall, the report concludes that potential effects can be effectively managed using industry standard environmental mitigation measures. We will take specific actions to limit and avoid any potential effects on agriculture, plants and wildlife, water, quality of life and more.

The Final ESR also outlines that:

- The project is helping to meet current and future electricity needs in Ontario
- There is a potential for increased economic opportunity in the region
- The project benefits outweigh its impacts

Key actions Hydro One will continue to take

Working with property owners

We're committed to working with property owners to understand the unique features of their property. We will work closely with property owners where the project traverses their property to find solutions.

Biodiversity Initiative

Hydro One will conduct a Biodiversity Initiative to offset the loss or long-term change to habitats that may occur as a result of this project. Hydro One will engage with Indigenous communities, municipalities, conservation authorities, environmental interest groups and any other interested parties to discuss the implementation of the Biodiversity Initiative.

Enhancing community benefits

We work with municipalities, local communities and stakeholders to find opportunities to contribute to the areas around our projects in a positive way, recognizing that community benefits can be varied and diverse.

Several Hydro One initiatives conserve and protect Ontario's biodiversity, such as planting to create habitat for pollinators, creating nesting platforms for birds and working with local organizations to restore wetlands.

Discover more at
HydroOne.com/StClair

Highlights: Indigenous Culture, Values and Resources

This section summarizes how we will minimize or avoid effects to Indigenous culture, values and resources during construction and operations.

Indigenous Culture, Values and Land Use

What we found

The project study area is located within the traditional territory of several Indigenous communities. Communities were engaged early in the planning process and have been providing meaningful early inputs to ensure their perspectives and concerns are articulated in the ESR. Stewardship of the land and protection of species at risk and wildlife are culturally significant and important to these communities. Additionally, the protection of cultural resources and recognition of Indigenous historical land uses are also part of our continued engagement.

What we'll do

- Provide opportunities for Indigenous communities to monitor all archaeological field surveys and review reports
- Share Environmental Management Plans with communities for their review and input
- Work with our construction contractor and identify ways to safely involve Indigenous partner communities in environmental monitoring during construction
- Involve interested communities in our Biodiversity Initiative and explore how Traditional Ecological Knowledge can be applied
- Continue to engage with Indigenous communities throughout the life of the project to ensure their concerns are understood and solutions are collaborative

Key takeaway

We are committed to our relationships with Indigenous communities and understand that their early and on-going participation and collaboration throughout the life of the project is important.

Hydro One has retained licensed archaeologists to conduct archaeological assessments for the new transmission line corridor. We are currently conducting archaeological field surveys on areas with identified archaeological potential, to ensure that any archaeological resources found are appropriately managed and protected.

Explore more about what we studied and found in Section 7.8 of the Final ESR.

Highlights: Natural Environment

This section highlights how we will limit or avoid significant effects to the natural environment in the project area, including air and water.

Source Water, Surface Water and Groundwater

What we found

Project activities, including dewatering (removal of groundwater) and potential spills, could affect the quantity and quality of surface water. However, as noted in the Final ESR, we plan to use helical (screw) piles for the transmission structure foundations, which do not require construction dewatering so this potential effect will be minimized. We are continuing to engage with local conservation authorities and community groups on this as the detailed design progresses.

What we'll do

- Engage with local conservation authorities and community groups during the design phase of the project
- Use helical (screw) pile foundations to minimize ground disturbance
- Ensure tower foundations remain between approximately 30 feet to 100 feet (depending on the depth of the soil) above the top of the aquifer layer
- Develop a construction management plan that uses techniques like passing discharge water through a filter bag or drum
- Restore any disturbed areas near watercourses, adjacent wetlands or sensitive areas as soon as practical
- Maintain an Emergency Response Plan to deal with any spills and have cleanup materials and equipment ready at all times
- Refuel vehicles and equipment 30m away, where practical, from sensitive areas, such as source water protection areas and wetlands, and use spill trays
- Store fuels, chemicals, lubricants or other harmful substances on ground level in properly contained storage areas, and regularly inspect equipment for leaks

Key takeaway

With the measures described here, and based on the work done to date, the project is not expected to have any significant net effects on surface water quality, groundwater, watercourses or aquatic features. We will continue to consult and engage with local conservation authorities and community groups during the design phase of the project.

Explore more about what we studied and found in Section 7.7 of the Final ESR.

Atmospheric Environment (Air Quality, Emissions and Noise)

What we found

Dust and other emissions during a project like this can be a nuisance for those living in the area, and there is a potential for increased noise. However, we've identified several measures to limit or avoid these effects.

What we'll do

- Cover or otherwise contain loose construction materials being transported that could release airborne particles
- Minimize dust by using non-chloride dust suppressants and techniques like on-site watering, especially in work areas that might be exposed to windy conditions
- Maintain vehicles and equipment to minimize excessive exhaust, minimize idling and use GPS to find the best routes that reduce fossil fuel emissions
- Complete construction in accordance with local noise control by-laws
- Conduct noise modelling for the Wallaceburg Transformer Station and if necessary, take measures such as using noise barriers or other engineered solutions

Key takeaway

We will take measures to mitigate nuisance noise and dust during construction and ensure that the community will be informed of construction plans.

The St. Clair Transmission Line Project will enable southwestern Ontario homes and businesses to access low-carbon electricity.

Explore more about what we studied and found in Section 7.7.2 of the Final ESR.

Trees, Wildlife and Fish

What we found

Construction activities could disturb wildlife, including species at risk, and the removal of trees could reduce the shade for fish and aquatic habitats in the project area. There is also the possibility that the project could inadvertently spread non-native or invasive species. We've developed multiple mitigation measures to address this. In addition, some construction will take place on or near provincially significant woodlands, wetlands and valleylands. We've identified several ways these possible effects from the project can be reduced.

What we'll do

- Keep trees and plants that will not affect construction or line clearances, where practical
- Replace hedgerows and windbreaks (lines of trees and plants around agricultural lands) with compatible vegetation after construction, in consultation with the landowner
- Remove vegetation outside of migratory bird breeding season and bat active seasons where practical
- Leave root systems intact to maintain soil stability, where practical
- Install silt fences and other barriers to protect sensitive features
- Cross fish and aquatic habitat areas during low flow conditions where practical
- Continue to consult with regulatory agencies, municipalities and Indigenous communities on detailed construction plans and measures to avoid or mitigate effects to wildlife and Species at Risk
- Keep stream bank vegetation where practical and store materials away from water features
- Review potential wildlife habitats and identify locations to put up potential visual mitigation measures, like bird diverters including in areas close to known Bald Eagle nests
- Restore any woodlands that have been disturbed with compatible vegetation once construction is complete
- Undertake a Biodiversity Initiative to offset any habitat loss that can't be avoided or mitigated
- Manage any temporary soil stockpiles to avoid Bank Swallows nesting

Key takeaway

Most wildlife species within the project area are used to human activities, and they can relocate temporarily to other nearby habitat until construction is over. Wildlife such as birds and snakes will be taken into account in the design of tower locations, and wetlands will be restored to pre-construction draining patterns once construction is over.

Wildlife and aquatic life within the area includes bats, migratory birds and the Blanding Turtle, among other species

Explore more about what we studied and found in Section 7.7.8 of the Final ESR.

Highlights: Socio-Economic Environment

This section summarizes how we will limit or avoid disruptions and other effects to local agricultural operations, land use and communities.

Agricultural Lands, Crops and Soil

What we found

Construction activities will require temporarily removing some crops and could compact or affect soil quality. We will work to limit or avoid these effects. While most effects will be temporary, there will be some permanent loss of agricultural land for production of crops within the new towers' physical footprint. We will work with landowners to compensate those losses.

What we'll do

- Aim to schedule construction outside of heavy growing seasons and extreme wet periods, and strip soil under generally dry conditions, where practical
- Locate towers along property lines wherever practical so it doesn't impede on agricultural spaces
- Stockpile topsoil and subsoils separately and salvage as much as possible for replacement and reuse where stripping is necessary
- Establish a weed control plan in collaboration with landowners that will be managed by a professional agrologist during construction
- Test any topsoil brought in from external locations for Soybean Cyst Nematode
- Compensate all lands losing long-term production of crops in accordance with Hydro One's crop loss/crop lands out of production policies
- Contact landowners to determine if organic or Identity Preserved (IP) operations are present, which may require additional considerations during construction planning

Key takeaway

Agricultural operations can continue with the transmission line. We will take steps to avoid disturbances to farmland and the preferred route will limit net new structures built on fields.

Some farmers have raised concerns about the potential for overhead transmission lines to interfere with automated or GPS-guided farm equipment. While we do not anticipate effects to communication systems in farm equipment, we will work with concerned farmers to collect information on the systems and contact manufacturers of these systems to gain further insight into potential concerns and possible solutions, if applicable.

Explore more about what we studied and found in Section 7.1 of the Final ESR.

Field Tiles

What we found

Adequate drainage of agricultural fields is critical to local farmers due to the naturally wet conditions of the region. Some construction and maintenance activities have the potential to interfere with the infrastructure used to drain agricultural fields (such as tile drains), which may result in poor drainage which in turn, adversely affects agricultural operations. We have identified a number of avoidance, mitigation and restoration measures that we can employ to address these concerns.

What we'll do

- Work with landowners to locate, identify and avoid or protect tile drains, to the extent practical
- Use constructed access (e.g., wooden matting or geotextile and crushed rock) to build temporary access roads and work pads during construction, which will help protect tile drains

Key takeaway

Measures to avoid and mitigate disturbance to tile drains will be undertaken during construction and in consultation with landowners, and if any tile drains are damaged during construction they will be repaired by a licensed tile drainage contractor.

Agriculture is an important part of southwestern Ontario's regional economy. Most agricultural land use in southwestern Ontario is designated for production of cash crops and agricultural greenhouses.

Explore more about what we studied and found in Section 7.1 of the Final ESR.

Livestock

What we found

Construction and maintenance activities will happen near pastures and grazing fields. Some planned work will create noise that may startle livestock, potentially causing stress, injury, or loss. We will work with farmers to provide advanced notice to minimize the effects.

What we'll do

- Provide advance notice to landowners about upcoming work so they can move or contain livestock. Field crews will also be made aware of livestock in the area to ensure they secure gates and clean up debris so livestock doesn't ingest it
- Protect livestock by setting up fencing that keeps them from entering a work area, using existing fencing and gates as required and leaving them "as is" once construction is over

Key takeaway

Construction activities that could affect livestock will be temporary. We will notify farmers in advance of upcoming work where practical.

Most farms and rural operations in Ontario are Hydro One customers. We proudly provide a reliable supply of power to small dairy operations, mid-sized greenhouses and large-scale agriculture facilities.

Explore more about what we studied and found in Section 7.1 of the Final ESR.

Land Use, Business Operations and Local Roads

What we found

Some construction work will be required in industrial areas like the western Township of St. Clair. The project crosses multiple types of current land use designations and will support most types of future land use. There is the potential for increased traffic and some temporary closures on local and regional roads. We will take steps to limit or avoid the effects on local communities.

What we'll do

- Maintain contact with business owners and make arrangements for alternate access prior to construction, if necessary
- Avoid peak/busy seasons to the extent practical
- Complete pre and post-construction road surveys to document effects on local roads and share findings with municipal staff before construction work begins
- Clean or scrape roads to remove mud and debris as needed
- Restore any roads that are affected to their previous condition
- Develop a Traffic Control Plan as needed and share it with local municipalities, as necessary
- Use rider poles, boom-tipped riders or other protective measures for stringing conductors, in an effort to avoid road closures, to the extent practical
- Issue local ads and put up road signage when construction work is planned to directly affect local traffic
- Assign traffic control officers as necessary

Key takeaway

Any effects on local businesses, roads and traffic are expected to be temporary and we will take steps to limit the effects.

The project will not impede future development of adjacent lands, and there will be opportunities for compatible uses to be developed.

Explore more about what we studied and found in Section 7.5 of the Final ESR.

Electric and Magnetic Fields (EMF)

What we found

There will be a small increase in EMF in proximity to the transmission line or within the right of way once the transmission line is energized but these remain significantly lower than the general public exposure limits.

What we'll do

- Design and construct the project in accordance with appropriate regulatory requirements

Key takeaway

No significant net effects are predicted.

Hydro One takes safety very seriously and we design and operate our equipment in accordance with all regulatory requirements. Health Canada has found no conclusive evidence of adverse effects caused by EMF exposure from transmission lines. It also does not consider that any precautionary measures are needed regarding daily exposures to EMFs at extremely low frequencies.

Explore more about what we studied and found in Section 7.5.5 of the Final ESR.

Archaeological and Cultural Heritage Resources

What we found

Southwestern Ontario contains many areas with known or potential archaeological and cultural heritage resources. While these were important considerations in shaping the project to date, additional study is needed prior to construction work commencing on these areas.

What we'll do

- Invite Indigenous communities to attend archaeological field surveys to observe the work and any findings
- Cease all activities and engage a licensed archaeologist in the event archaeological material is encountered during construction
- Conduct additional Built and Cultural Heritage studies on features with known or potential Cultural Heritage Value or Interest (CHVI)

Key takeaway

Additional archaeological and cultural heritage studies will be conducted where known or potential resources may be affected by the project. And the results and findings of these studies will inform the need for further assessments or other mitigation measures that may need to be implemented during construction.

Areas with potential for archaeological resources as identified in the Stage 1 Archaeological Assessment, are now undergoing Stage 2 surveys. These began in Fall 2023 and will continue in 2024.

Explore more about what we studied and found in Section 7.3 of the Final ESR.

Recreation

What we found

Tourism and recreational resources, such as trails, could potentially be disturbed but the effects will be short term. There may also be potential effects to people and places with views of the project.

What we'll do

- Provide advanced notice to nearby residences, farms, landowners and commercial operations and put up signage related to construction disturbances
- Avoid disturbing existing recreational resources, to the extent practical, by timing work to avoid seasons of heavier use
- Use safety precautions to protect the public, such as anti-climbing devices and appropriate signage, where necessary
- Consider visibility to nearby people and places in the design the transmission line (e.g., placement of structure locations)
- Work with local municipalities to identify community benefit opportunities to enhance the broader landscape

Key takeaway

No significant net effects to recreation in the area around the project are predicted. We will take steps to limit the possible effects.

We work with municipalities, local communities and stakeholders to find opportunities to contribute to the areas around our projects in a positive way, recognizing that community benefits can be varied and diverse.

Explore more about what we studied and found in Section 7.9 of the Final ESR.

Final Environmental Study Report

Hydro One has completed the Final Environmental Study Report for the St. Clair Transmission Line Project and submitted it to the Ministry of the Environment, Conservation and Parks. This marks the end of the Class Environmental Assessment process.

View the Final ESR online.
HydroOne.com/StClair

For questions or comments, contact Hydro One Community Relations

1-877-345-6799 | Community.Relations@HydroOne.com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