

# Leaside to Main Infrastructure Refurbishment Project



**Strengthening the transmission system in  
your neighbourhood**



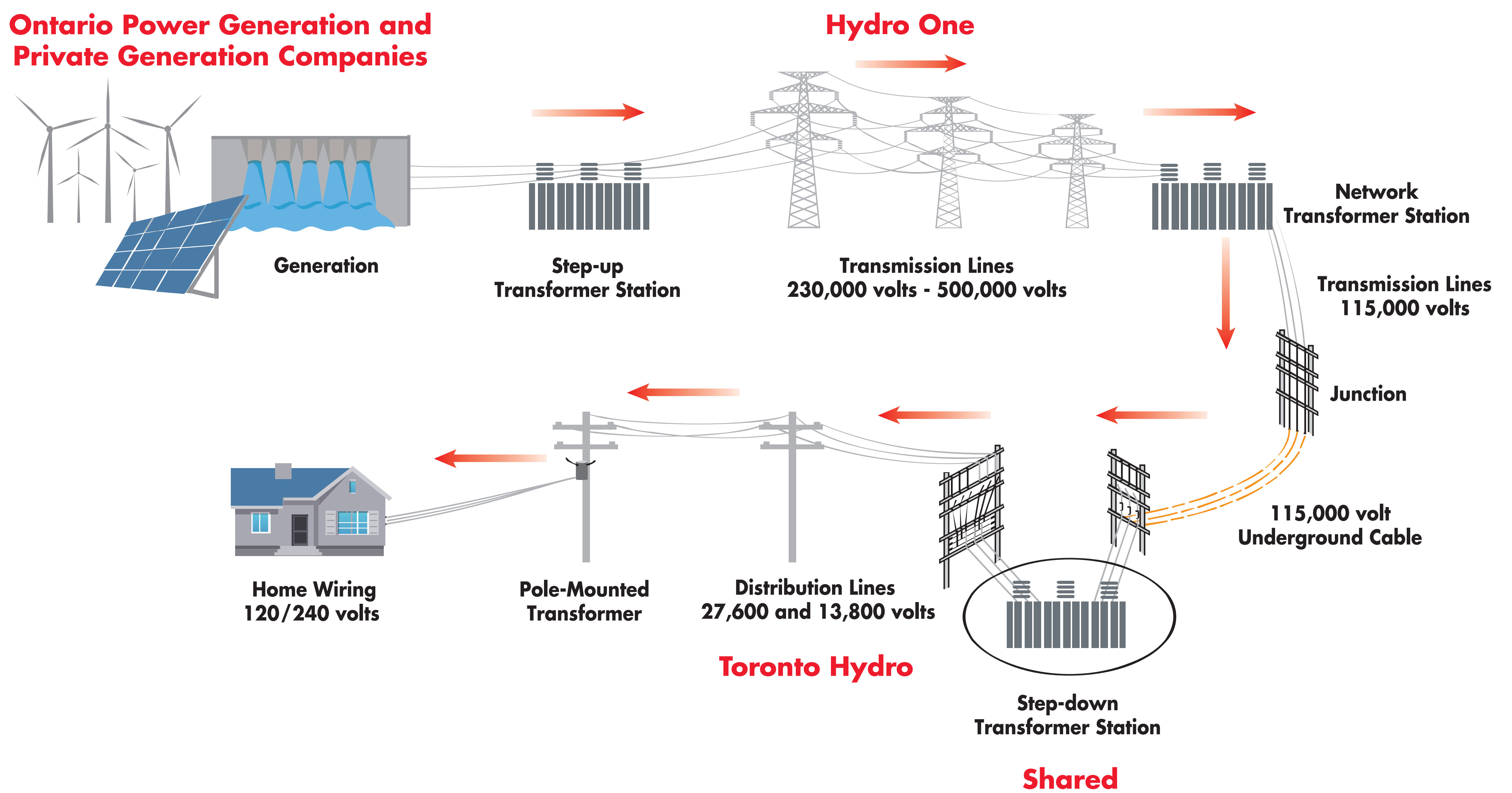
# Welcome to our Public Information Centre

## Meet our project team and learn more about:

- The proposed project in your community
- The study area for the project
- The planning and approvals process
- Construction methods
- Next steps and opportunities for your participation

We're here to listen to your comments or concerns, obtain your feedback and answer your questions.

# Hydro One's Role in Delivering Electricity to Your Community



## Proposed Project

To ensure a continued, reliable supply of electricity to the area, Hydro One will:

1. Replace two sections of existing underground 115 kilovolt (kV) cable located between:
  - Leaside Transformer Station (TS) and Todmorden Junction (JCT) and;
  - Lumsden JCT and Main TS
2. Replace existing overhead shield wire, used to protect the line from lightning, located between:
  - Todmorden JCT and Lumsden JCT



# Project Infrastructure



Lumsden Junction

## **Junction:**

The point where a transmission line switches from overhead infrastructure to underground cables



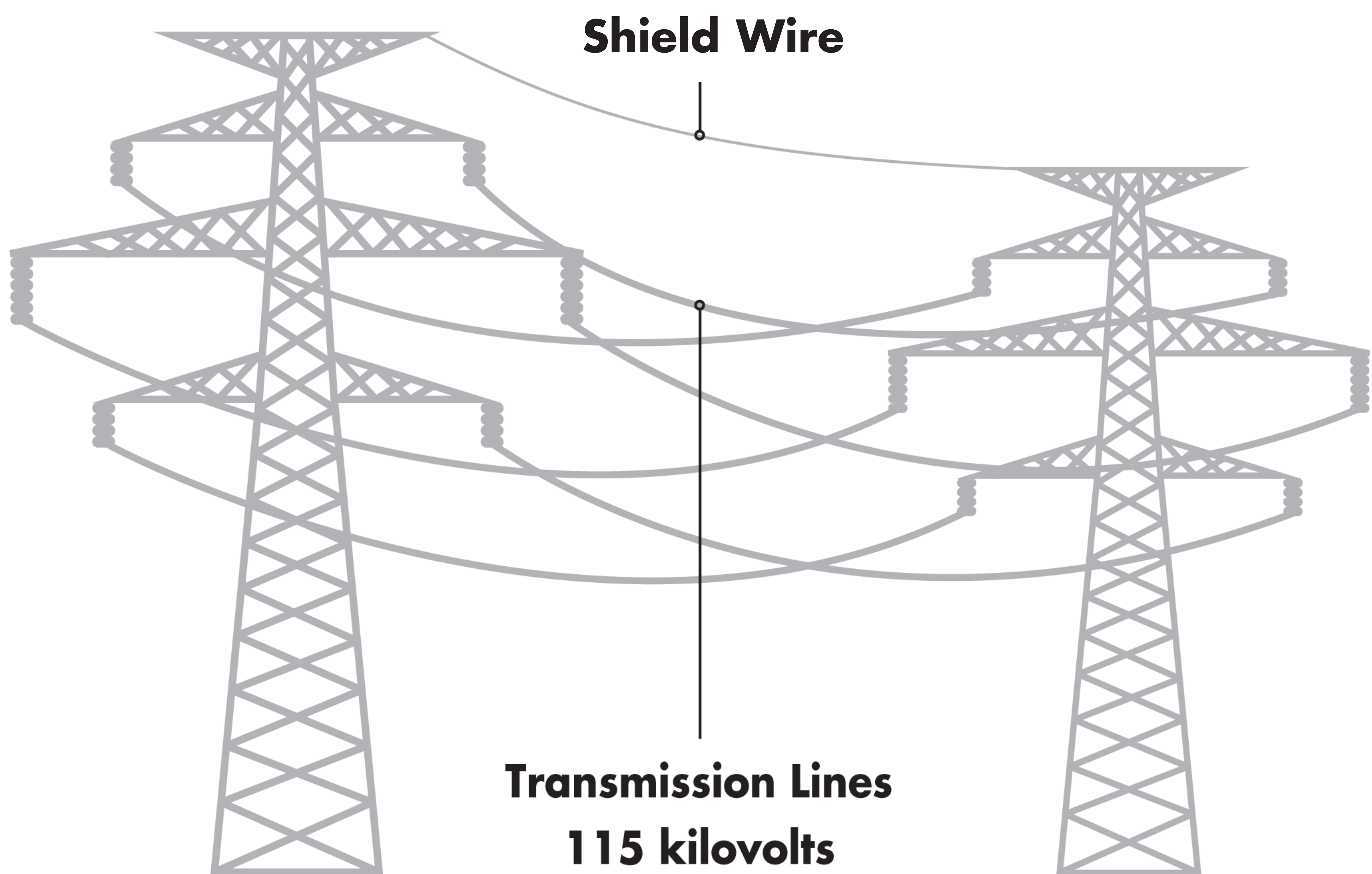
Leaside Transformer Station

## **Transformer Station:**

A station with power transformers and other electrical equipment arranged to transfer power from one voltage level to another



# Shield Wire



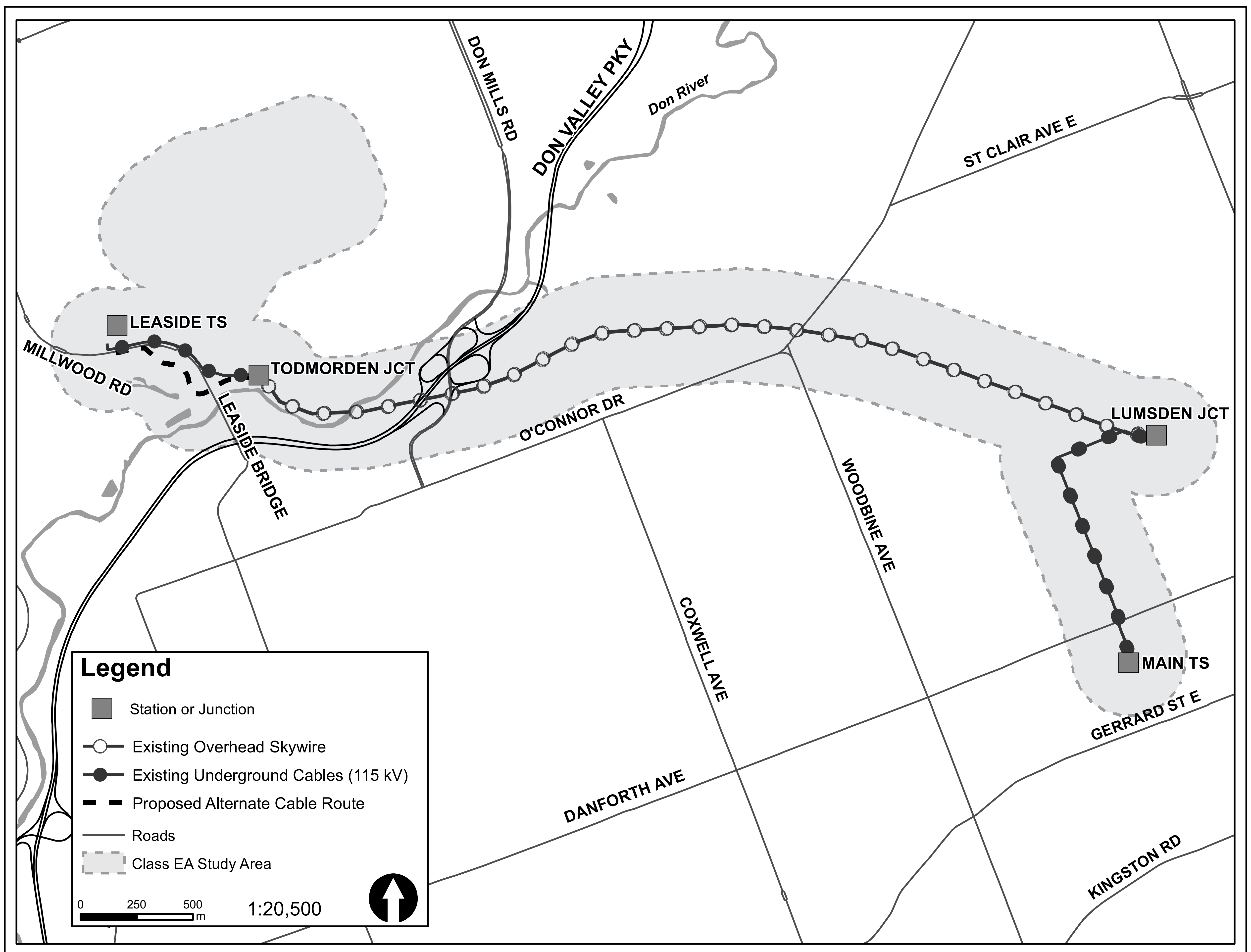
- Shield wire, also referred to as skywire, is used to protect our equipment from lightning and does not carry electricity

# Need for Leaside to Main Project

- Hydro One must refurbish aging transmission infrastructure to ensure a continued safe and reliable supply of power to Toronto Hydro customers in the area and minimize the risk of future power interruptions
- The existing underground cables were installed in the 1950s and are approaching their end of life
- Replacing the existing overhead shield wire with new fibre optic wire will enhance Hydro One's ability to monitor and control the transmission network
- This project will strengthen and modernize the electricity grid that powers your city every day

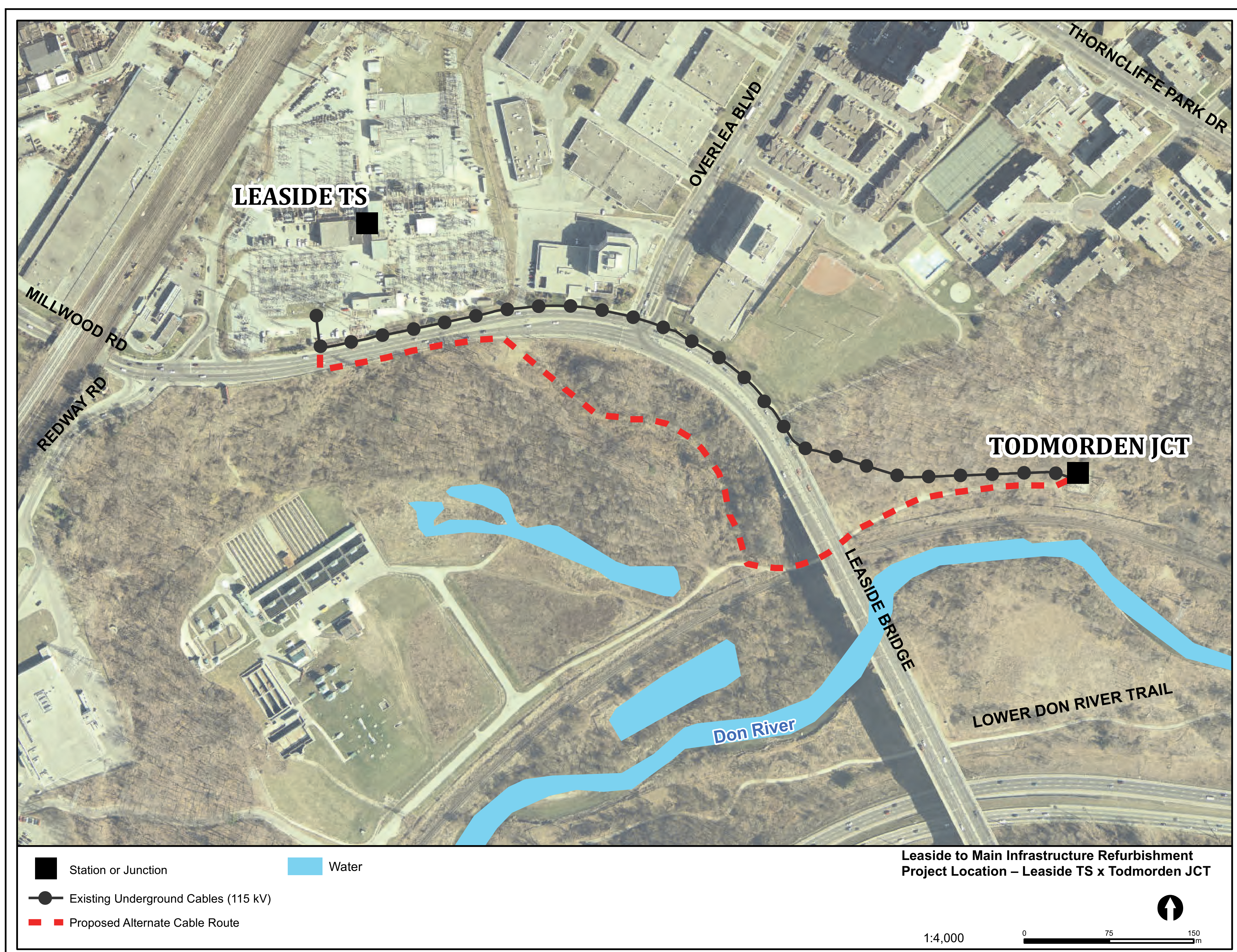


# Leaside to Main Project Study Area





# Leaside TS to Todmorden JCT Underground Cable Route



- An alternate underground cable route option between Leaside TS and Todmorden JCT has been identified
- Both the existing and alternate routes will be evaluated through the Class Environmental Assessment process

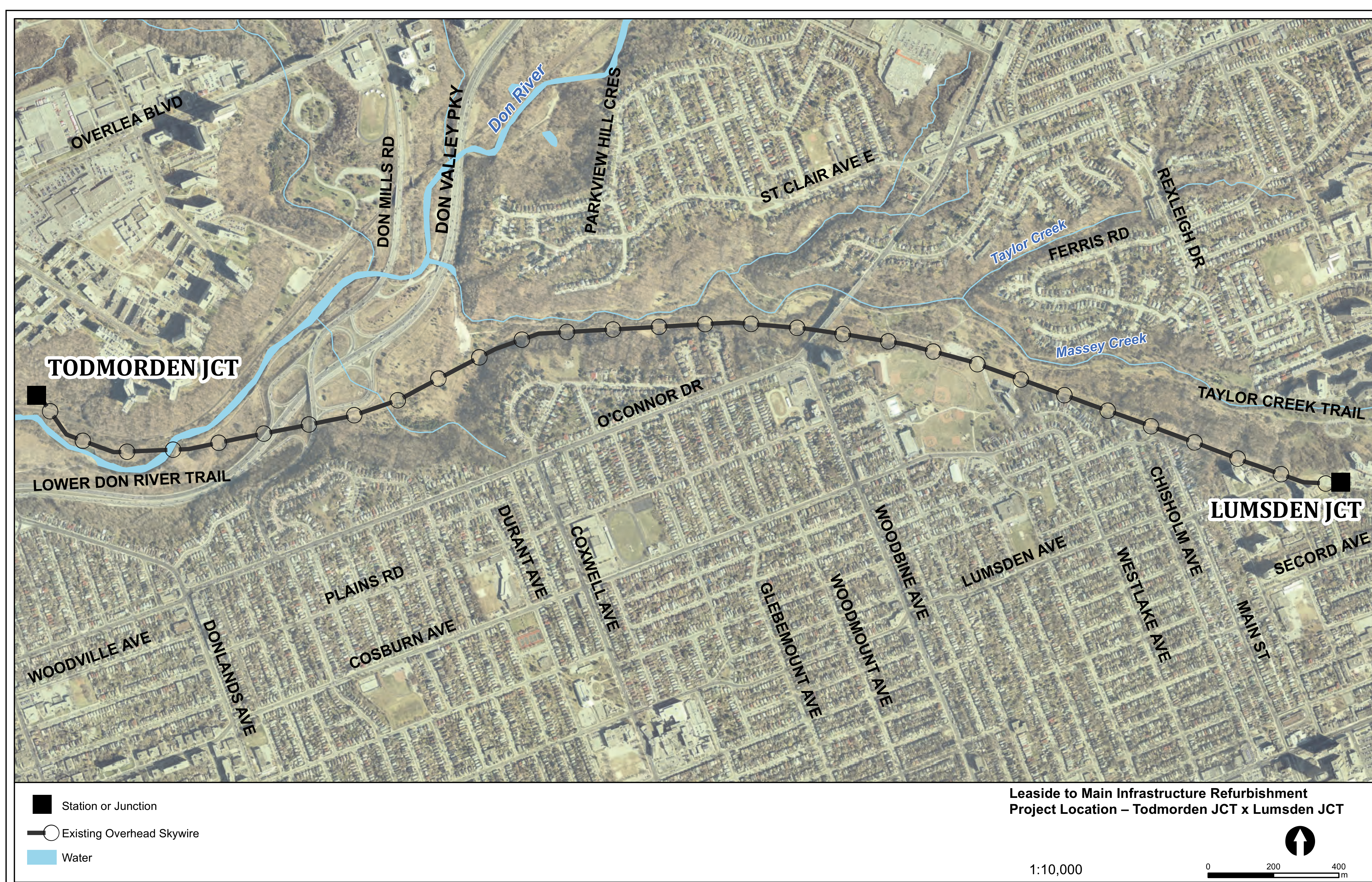


# Lumsden JCT to Main TS Underground Cable Route





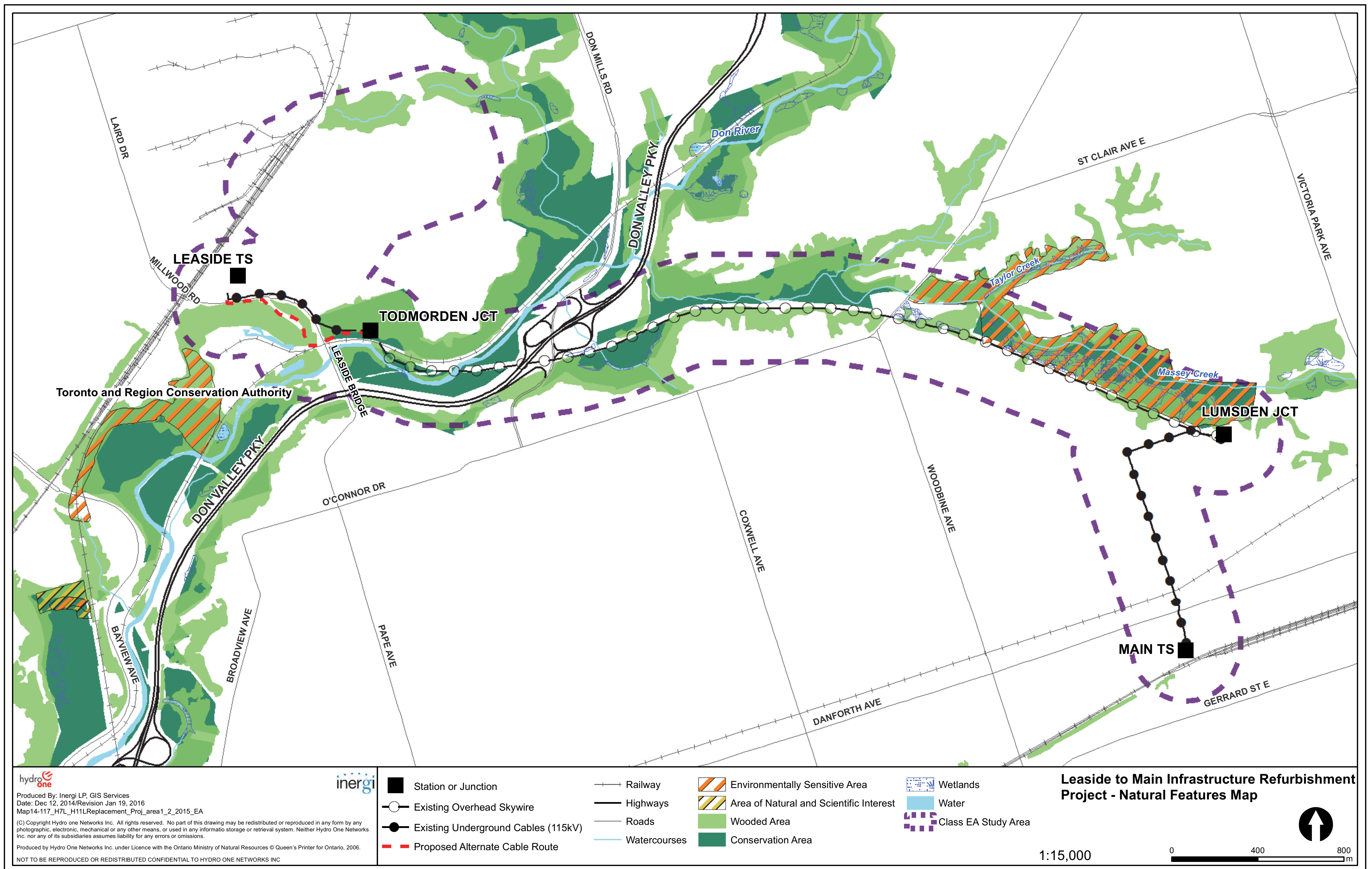
# Todmorden JCT to Lumsden JCT Shield Wire Replacement



- Existing shield wire will be replaced with fibre optic wire, capable of monitoring and controlling high voltage equipment
- Shield wire replacement is not subject to the *Environmental Assessment Act*, but is included in the scope of this project



# Environmental Features Map





## Approvals Process

- The replacement of underground transmission cables is subject to the provincial *Environmental Assessment Act*, and is being planned in accordance with the process outlined in the *Class Environmental Assessment (Class EA) for Minor Transmission Facilities (1992)*
- The Class EA process is an effective way of ensuring that minor transmission projects that have a predictable range of effects are planned and carried out in an environmentally acceptable manner
- As part of the Class EA consultation process, a draft Environmental Study Report (ESR) will be available for a public review and comment period once studies are complete



# Class Environmental Assessment

- If no concerns are expressed during the public review and comment period, a final ESR will be filed with the Ontario Ministry of the Environment and Climate Change (MOECC)
- If concerns are expressed during the review and comment period, Hydro One will attempt to resolve them to complete the Class EA process
- If Hydro One cannot satisfy all of the concerns raised during the review period, a written request (Part II Order) asking for a higher level of assessment (Individual Environmental Assessment) can be submitted to the MOECC



# What does the Class EA Process Consider?

The Class EA process will identify potential project effects related to:

- Business and residential property owners
- Planned land uses and existing infrastructure
- Terrestrial and aquatic resources
- Environmentally sensitive areas
- Archaeological and heritage resources
- Recreational resources



# Environmental Mitigation Measures

Measures to reduce, prevent or mitigate potentially adverse environmental effects during design, construction and operation could include:

- Controlling noise, mud, dust, traffic disturbances and other nuisance effects during construction
- Protecting cultural heritage resources
- Minimizing soil erosion and compaction
- Minimizing effects on terrestrial and aquatic resources
- Environmental management during construction and operation

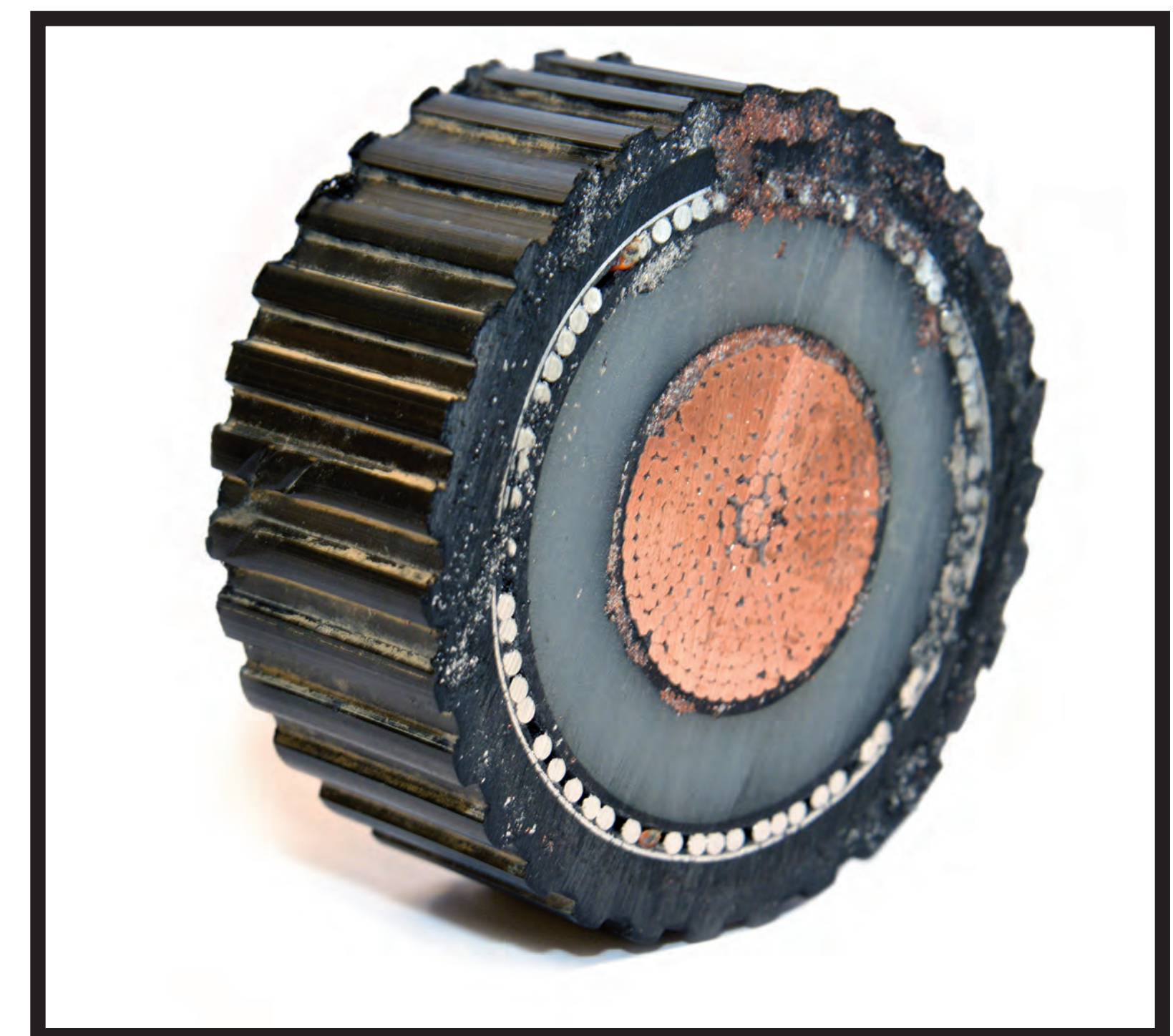
Please share your comments and feedback with us!



# Replacing the Underground Cable



Example of trenching



Cross Linked Polyethylene Cable

- Existing cables will be replaced with cross linked polyethylene (XLPE) cables, encased within concrete ducts
- Modern XLPE cables are easier to install and do not contain insulating oil
- Duct banks will be approximately 10 feet deep by 4 feet wide (3 m x 1.2 m)
- Surface trenching and installation of concrete duct will occur in short sections



## Replacing the Shield Wire

- Crews will manually climb towers to pull new shield wire
- Temporary roads may be required for vehicle access to tower structures



# Biodiversity

- Some vegetation may need to be removed to undertake construction activities
- During the Class EA, we will work with interested parties to ensure that adverse effects to vegetation and other natural features are avoided or mitigated where feasible
- A Biodiversity Initiative will be implemented to compensate for effects to the natural environment





# Timeline

PUBLIC AND STAKEHOLDER CONSULTATION

Briefing for City of Toronto elected officials	December 2015
Class Environmental Assessment initiated	January 2016
Public Information Centre #1 <i>Introduction to project</i>	February 8 & 10, 2016
Community Walks in the project areas	Spring 2016
Public Information Centre #2	May/June 2016
Notice of Completion & Draft Environmental Study Report available for a 45-day review period	June - August 2016
Final Environmental Study Report filed with the Ministry of the Environment and Climate Change	August 2016
Anticipated start of construction	End of 2016, contingent on the outcome of the Class EA process



# Your input is important to us

Thank you for joining us at this Public Information Centre.

Please join our project mailing list and complete a comment form before you go.

To share concerns or request information call or email us at:

Telephone: 416-345-6799

Email: [Community.Relations@HydroOne.com](mailto:Community.Relations@HydroOne.com)

[www.HydroOne.com/Projects/LeasidettoMain](http://www.HydroOne.com/Projects/LeasidettoMain)

