

Roads and Traffic

The Municipality of South Bruce and the Nuclear Waste Management Organization (NWMO) are conducting a wide range of studies to inform the community's willingness to host the NWMO Project. All studies are also being reviewed by peer reviewers who are subject matter experts in their field. The Road Conditions Effects Study and the Local Traffic Effects Study were presented at the Community Liaison Committee (CLC) meeting on July 21st, 2022.

Highlights

- The biggest change in traffic associated with the Project would occur on roads surrounding the Deep Geological Repository. Workers travelling to/from the site along with trucks carrying aggregate, supplies, material, and used nuclear fuel will generate increased traffic.
- Trucks will be required to use designated haul routes. Some roads on the haul route will need to be widened and rehabilitated or reconstructed to accommodate trucks. These roads will need to be 13-meters (42-feet) wide with paved shoulders, similar to what parts of Highway 9 look like now.
- Many of the rural county and municipal roads in South Bruce are two lanes without adequate shoulders and with gravel surfaces.
- Increased traffic could lead to unsafe conditions, particularly for vulnerable road users like cyclists and pedestrians as well as for horse-drawn buggies and school buses which frequent rural county and municipal roads. Additional review of shoulder widening and surface improvements will be needed once haul routes are determined.

Addressing Our Guiding Principles

The studies address several of the community's 36 Guiding Principles to determine if the Project is right for South Bruce. They relate to whether the Project will bring meaningful benefit to the community, specifically:

- 2.** The NWMO must demonstrate to the satisfaction of the Municipality that sufficient measures will be in place to ensure the natural environment will be protected, including the community's precious waters, land and air, throughout the Project's lifespan of construction, operation and into the distant future.
- 3.** The NWMO must demonstrate to the satisfaction of the Municipality that used nuclear fuel can be safely and securely transported to the repository site.
- 7.** The NWMO must commit to preparing construction management and operation plans that detail the measures the NWMO will implement to mitigate the impacts of construction and operation of the Project.
- 30.** The NWMO will prepare a review of the existing and projected capacity of South Bruce's road network and will commit to providing appropriate funding for any required upgrades to the road network.
- 31.** The NWMO will enter into a road use agreement with the Municipality that identifies approved transportation routes during construction and operation of the Project and ensures proper funding for maintenance and repair of municipal roads and bridges used for the Project.
- 36.** The NWMO must demonstrate to the satisfaction of the Municipality that the Project will benefit the broader region outside of the community of South Bruce, including local Indigenous communities.

Learn more about the...

Local Traffic Effects Study

Study By Morrison Hershfield Ltd. **Peer Review Conducted By** R.J. Burnside and Associates

NWMO-led Study:

The NWMO's consultants conducted this study. South Bruce hired independent consultants to peer review the studies, and confirm the methodologies and findings.

What was the scope and purpose of the study?

- To understand potential traffic effects of the Project on the municipal and county road network.
- Establish existing and projected baseline traffic conditions.
- Forecast future levels, pre-screen potential road capacity, and evaluate possible operational and safety issues.
- Explore potential strategies to mitigate and improve the effects of the Project on traffic.

How was the study conducted?

- Interviews were conducted with local individuals who had experience in road network configuration, local travel patterns, and vulnerable road users. Experienced individuals included staff from municipal, township, and county offices, as well as local organizations.
- Modelling was used to apply the 2016 Highway Capacity Manual to various traffic scenarios, sketches, and preliminary facility screenings.
- Field work included traffic counts and observing typical road use during the week.
- Experts reviewed secondary research from other key data sources such as NWMO Project documents relating to traffic and other applicable information from local/regional organizations.

What did South Bruce's peer reviewers say?

- Future studies should include a more detailed review of operational functionality and safety of haul routes and commuter routes, including impacts to other users like farm vehicles, horse-drawn buggies, cyclists, and pedestrians.
- The location for storage and haul routes for transportation of excavated rock must be confirmed to fully assess the impacts of the Project on traffic along road networks external to the Project.
- The review suggested developing a maintenance and monitoring program for traffic operations, particularly during heavier construction periods, to ensure safe travel and quick response to changing conditions.

What did we learn?

- Many of the existing rural county and municipal roads in South Bruce have two-lanes without adequate shoulders, widths, or surfaces. In addition to cars and trucks, these rural roads are used by farm vehicles, horse-drawn buggies, cyclists, and pedestrians.
- Traffic in the Study Area is about 20% higher in the summer.
- Most roads in the Study Area operate at below 60% capacity, with no congestion spillover and ample opportunities for passing. Some road sections will reach capacity limits as a result of expected growth even without the Project.
- The roads surrounding the DGR would experience the most significant traffic change. Workers, aggregate trucks, supplies, materials, and used nuclear fuel will increase traffic on these routes.
- Improvement options to potential haul route road sections of particular interest for horse-drawn buggies, cyclists, pedestrians and slow-moving vehicles (e.g., agricultural machinery) were also described.

Learn more about the...

Road Conditions Effects Study

Study By Morrison Hershfield Ltd. **Peer Review Conducted By** R.J. Burnside and Associates

NWMO-led Study:

The NWMO's consultants conducted this study. South Bruce hired independent consultants to peer review the studies, and confirm the methodologies and findings.

What was the scope and purpose of the study?

- To describe the existing conditions of roads that would potentially be used to transport workers, equipment, materials, and used nuclear fuel during construction and operation.
- Identify potential improvements to roads, culverts, and bridges in the Study Area.
- Identify options for measures which could be implemented to maintain the roads during construction, such as monitoring and cleaning strategies.

How was the study conducted?

- Interviews were conducted with county, municipal, and township staff who have an understanding of current municipal infrastructure conditions and the road networks.
- Experts conducted field work to better understand road conditions in the Study Area. Using the *Pavement Design and Rehabilitation Manual (MTO, 2013)*, researchers looked at pavement type, level of distress, and what maintenance had been done.
- Secondary data was collected from NWMO Project documents and the *Local Traffic Effects Study*.

What did South Bruce's peer reviewers say?

- The review suggested developing a maintenance and monitoring program for traffic operations, particularly during heavier construction periods, to ensure safe travel and quick response to changing conditions.
- The findings of the *Local Traffic Effects Study* and future traffic studies should be included in the *Road Conditions Effects Study*, particularly related to design improvements for traffic efficiency.
- Confirm the location for the storage of excavated rock, as well as the haul routes for the transportation of this rock and the impact the transport will have on road conditions and traffic flow.
- Conduct a more extensive review of the structural and geotechnical condition requirements of the road network and the "Last Mile"—that is, roads to and from the site.

What did we learn?

- Roads will require rehabilitation and/or reconstruction over the life of the Project. However, Project-related traffic increases may shorten the lifespan of some roads.
- Roads in the "Last Mile" section will warrant improvements if they are used as haul routes or access roads to accommodate heavy loads and to eliminate seasonal road restrictions.
- Specific road conditions and improvements should be reassessed once official haul and access routes are established.
- Independent of the Project, existing bridges and culverts in the "Last Mile" have been identified for rehabilitation or replacement. If they are determined to be part of site-access or haul routes, then Project requirements would need to be considered in the scope of work.

Stay Involved!

The studies play an important role in ensuring that we can make an informed decision about the Project. There are a number of ways you can stay involved, and learn more.

- Read the full study reports and peer review reports:
 - Visit www.southbruce.ca/Studies for electronic copies.
 - Visit the Municipal Office, or the Mildmay, Teeswater, or Formosa libraries to view print copies.
- Attend the upcoming Community Liaison Committee (CLC) meetings where studies are being presented.
- More information about upcoming meetings can be found on the municipal calendar.

August 4th, 2022 7 p.m. via Zoom
CLC Meeting on "South Bruce Economy"

August 18th, 2022 7 p.m. via Zoom
CLC Special Meeting on "Focus on Youth and Families"

Questions and Comments

- If you have questions or comments about the studies and peer reviews, they can be submitted through our community engagement tool: www.southbruceswitchboard.ca
- The South Bruce Nuclear Exploration Project Team will be pleased to direct your question or comment to the appropriate person (consultant, study manager, etc.) as required.
- We will make every effort to provide a timely response. Thank you again for taking an interest in, and learning about the Project studies.

About the Project

Nuclear power is used in several provinces. In Ontario, it supplies about half of our electricity. The used nuclear fuel from power plants is currently stored securely above-ground at seven sites across Canada.

The NWMO is tasked with finding a safe, permanent solution. Globally, storing the waste in a reinforced facility deep underground is considered the safest long-term option.

The proposed South Bruce facility would be about 660-metres underground, with a Centre of Expertise and other facilities built above ground. About half of the waste that will be stored in this facility is expected to come from within Bruce County.

The Municipality of South Bruce is one of two municipalities in the site selection process. After the NWMO comes to an agreement with an informed and willing host community, a federal licensing and Impact Assessment process will begin. These detailed studies will further ensure it is safe for the community and the local environment.