South Bruce Nuclear Exploration Project

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Summary of Socio-economic Community Studies and Peer Review Findings

2023

Produced by GHD Peer Review Team for South Bruce

Introduction

The Municipality of South Bruce is one of the final two potential host locations that the Nuclear Waste Management Organization (NWMO) is considering for a Deep Geological Repository (DGR) to store Canada's used nuclear fuel (the Project). This report summarizes Socio-Economic and Infrastructure Community Studies and peer reviews prepared to help South Bruce make an informed decision about the Project.

The Municipality and NWMO worked together to prepare the 21 Socio-Economic and Infrastructure Community Studies (community studies). The community studies were authored by independent subject matter experts on behalf of the Municipality, NWMO, or both. The community studies were also subject to a peer review process. This report has been prepared by the Municipality's peer review consultants, GHD Ltd.

The community studies:

- identified baseline conditions
- assessed the potential positive and negative socio-economic and infrastructure effects of the Project in South Bruce and neighbouring municipalities
- identified and assessed options to leverage Project benefits and mitigate impacts

The community study peer reviews provided an independent assessment of study findings. Peer reviews were carried out on a continuous, interactive basis throughout study preparation.

In addition to summarizing the community studies, this report includes recommendations from the peer review to ensure the Project is consistent with South Bruce's Guiding Principles. The Guiding Principles, grouped into the seven themes below, set out the community's expectations and aspirations for the Project.

The community studies, peer reviews, and Guiding Principles are available on the Municipality's website at https://www.southbruce.ca/en/municipal-government/the-plan-for-used-nuclear-fuel.aspx.

Project Themes

- Safety and the Natural Environment
- People, Community and Culture
- Economics and Finance
- Capacity Building
- Services and Infrastructure
- Governance and Community Engagement
- Regional Benefits

Contents

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The Project and Site

In Ontario, nuclear power is used to meet approximately 50 percent of our daily electricity demand. Currently, used nuclear fuel is stored in above-ground facilities. The NWMO is proposing to secure the waste for the long term in a hard bedrock formation more than 600 metres underground in a facility called a Deep Geological Repository (DGR). In addition to the DGR, the Project includes surface facilities, an Excavated Rock Management Area (ERMA) to store excavated rock from the DGR, and a Centre of Expertise to be located in South Bruce at or near the Site.

The NWMO has identified a potential Site for the DGR and surface facilities near Concession 8 and Sideroad 25 North. The NWMO has prepared a generic model of the DGR and site layout, and a concept for the Centre of Expertise.

The Deep Geological Repository

The DGR, as it is currently proposed, will be a network of underground tunnels and placement rooms constructed at a depth of more than 600 metres below the ground's surface in rock known as the Cobourg Formation. It will be designed to safely contain and isolate used nuclear fuel over the long term.

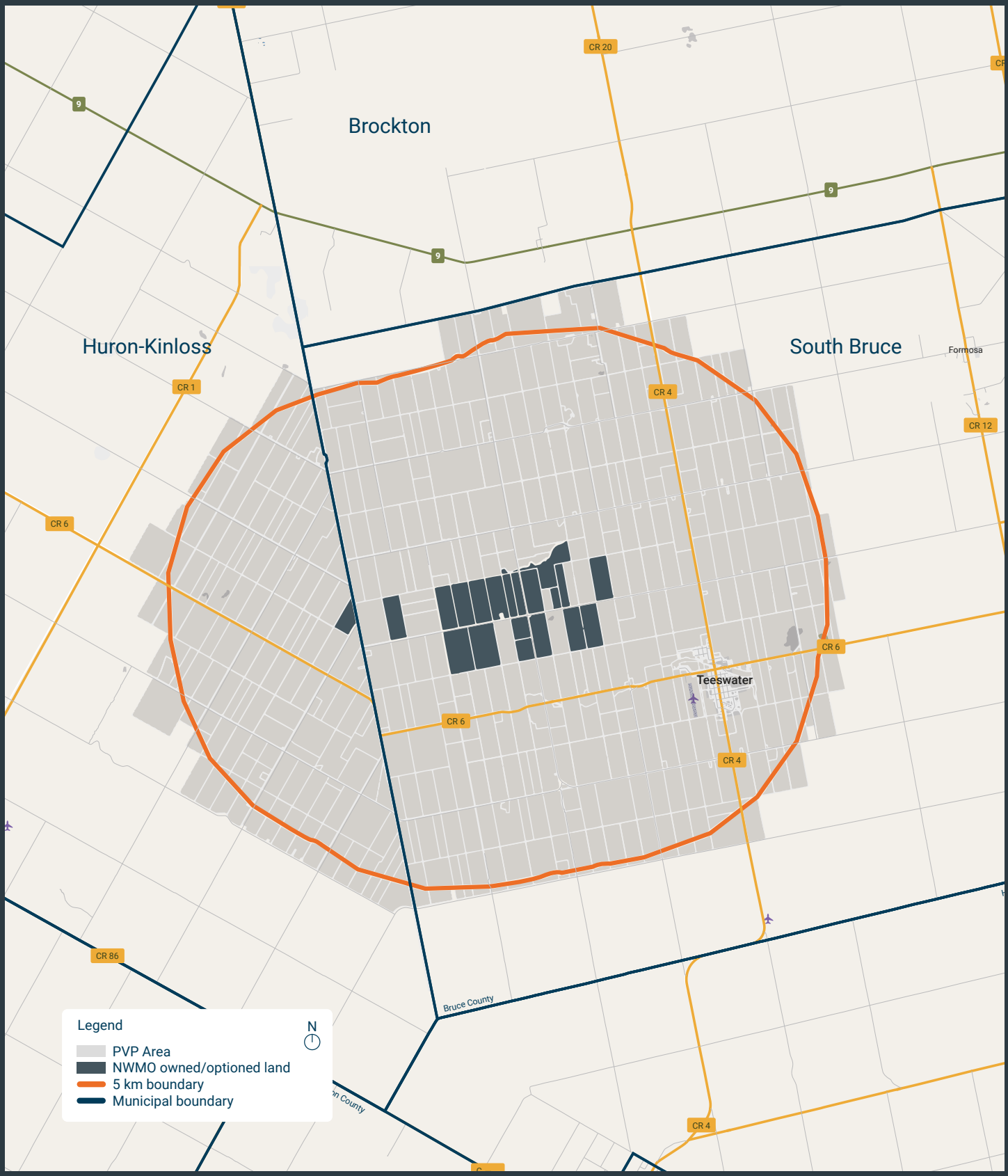
The DGR requires an underground footprint of about 1,480 acres for the underground services area and placement rooms as well as offices, maintenance facilities, technical services, monitoring and above ground testing.

The conceptual design has three vertical shafts accessing the repository to transport used fuel and storage equipment and offer ventilation. The final layout of the repository will depend on site-specific factors including site characteristics, final design of the barrier system, final safety considerations, and inventory of used fuel to be managed.

Fuel bundles will be secured in a used fuel container made of steel with a copper coating. These containers will be enclosed in bentonit clay and stored in repository rooms in the DGR.

The site will be excavated using a "controlled drill and blast" technique. Strategies will be employed to control noise, dust, and visual impact during construction and operation. A portion of excavated rock from the repository may be used in backfilling and sealing operations. The remaining rock will be moved to the ERMA.

Significant quantities of aggregate – sand, stone, and gravel (approximately 800,000 cubic metres) – will be used during construction. Additional aggregate will be required for upgrading and expanding the road network leading to and from the Site and the ERMA. This would likely be sourced from local and regional licensed suppliers. An Aggregate Resources Study was completed to ensure there is sufficient supply of aggregate within the Site area and determine if the Project would impact the local aggregate market. This study found that the greatest demand for aggregate would be during the initial two years of construction; and there is enough existing capacity for the Project as well as the existing demand for the growing local community.


Brockton
Huron-Kinloss
South Bruce
Formosa
Teeswater
CR 20
CR 1
CR 4
CR 12
CR 6
CR 86
9
Bruce County
Legend
N
PVP Area
NWMO owned/optioned land
5 km boundary
Municipal boundary

Surface Facilities

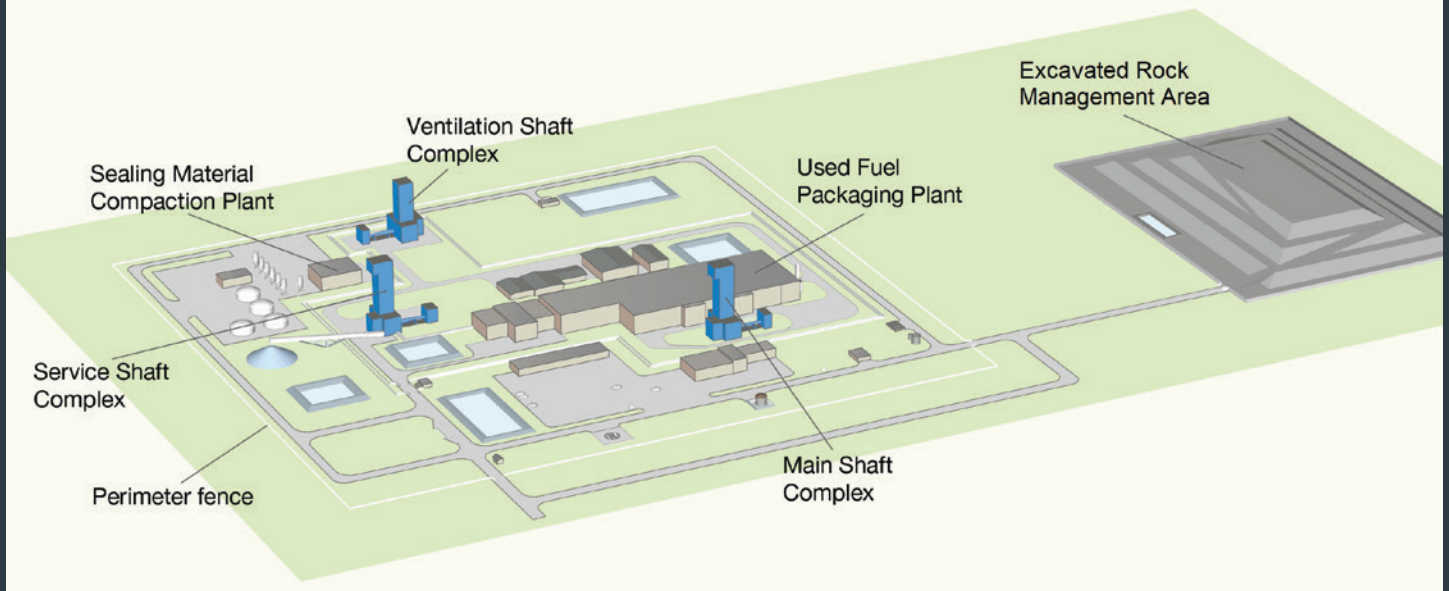
The surface facilities will require approximately 250 acres. In addition to the shafts, the Site will include security and administration areas, quality control laboratories, a sealing materials production plant and used fuel receiving and packaging plant.

Certain areas of the Site will have restricted access and the entire Site will be surrounded by perimeter security fencing.

These surface facilities will process approximately 120,000 used fuel bundles per year. Once used fuel bundles arrive at the site they will be repackaged into durable, corrosion-resistant used fuel containers, and transferred underground for placement in the DGR.

The Land Use Study confirmed that there is room to locate the facility within the potential Project site on lands that will avoid or minimize potential effects on natural environmental features and hazards, prime agricultural lands, and mineral aggregate resources. The DGR and surface facilities will be in compliance with the County Official Plan and South Bruce's Zoning by-law, consistent with Guiding Principle #33

Diagram of Project site surface facilities. Not to scale.



Excavated Rock Management Area

The ERMA will be located outside the perimeter security fence at a separate site within 5 kilometres of the DGR surface facilities. Excavated rock will be transported to ERMA from time to time during the construction and operation phases of the DGR. Depending on its location, trucks carrying excavated rock to the ERMA may use public roads or internal site roads.

Rock excavated from the DGR will be stored in lined cells forming a pile that will cover an area of approximately 61 acres (25 hectares) to a height of 15 metres. A portion of the excavated rock may be used to produce different grades of aggregate for use in the Project. Once excavation of the DGR is complete, the ERMA will be covered and planted with native plant species.

The Centre of Expertise

The Centre of Expertise is proposed to be a hub for knowledge sharing across Canada and internationally. The Centre of Expertise will be established following the site selection decision and will house active technical research, social research, and technology demonstration programs, an engineering test facility, engagement spaces, and NWMO offices. The community studies identify a number of beneficial uses for the Centre of Expertise such as agricultural training and research and as an international host facility.

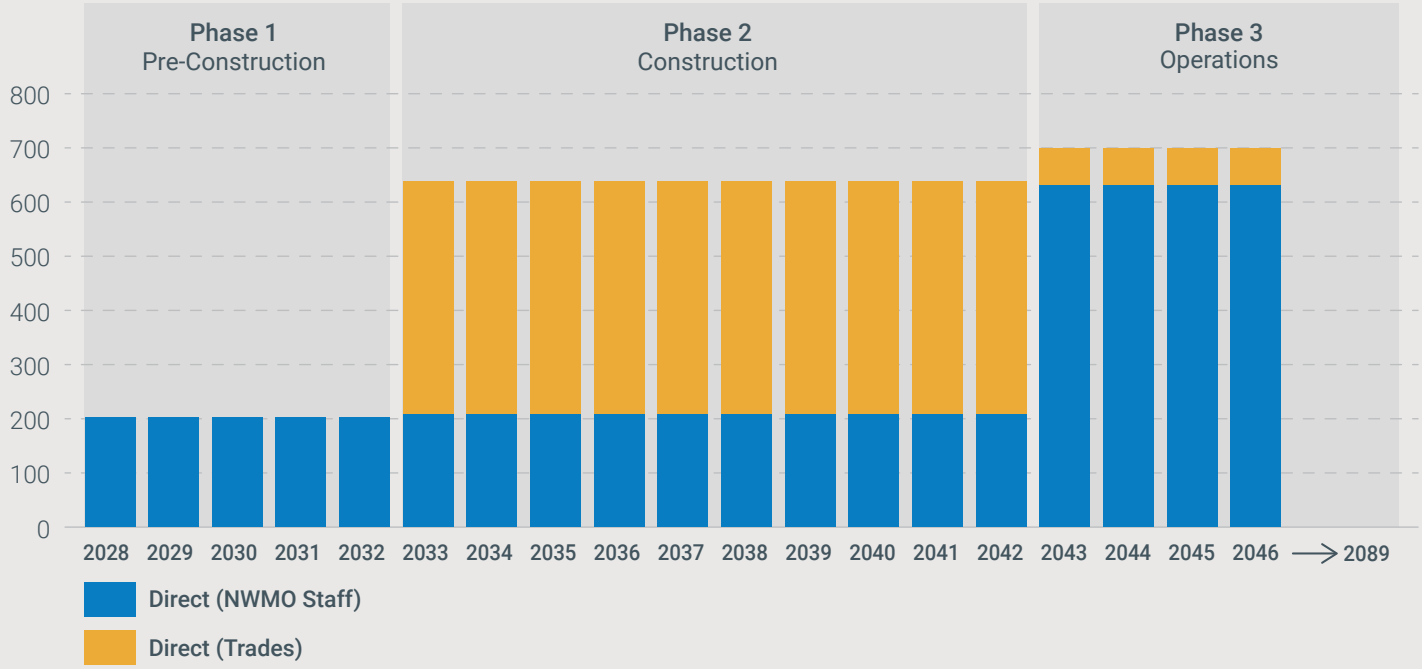
Artist rendering of one possible design for a Centre of Expertise

Project Phases

The Project will be executed in four phases:

Phase 1	Phase 2	Phase 3	Phase 4
2028 – 2033	2033 – 2043	2043 – 2089	2089 – 2159
Pre-construction planning/ design	Construction of DGR and surface facilities	Operations, including receiving and placing waste in the DGR and expansion of the underground facilities	Decommissioning and extended monitoring

The graph below summarizes the workforce required for each phase of the project. More information on the strategies to develop the workforce are included in the Economics and Finance section.



What's Next?

The NWMO will use the generic layout to develop a site-specific preliminary design. This will include how the surface facilities will be arranged within the NWMO lands, which roads will be used to access the site, and where the ERMA will be located. This will allow for assessment of site servicing options for potable water supply, sanitary wastewater, electrical power, natural gas, and high-speed internet.

The peer reviewers recommended further study of aggregate resources when plans for infrastructure improvements, housing, and community growth are further detailed to better understand local supply and demand. They also recommended that the potential impacts from establishing and operating the ERMA be undertaken once the location is known. An Excavated Rock Use Feasibility Study is recommended to optimize the beneficial use of the rock while minimizing impact to the environment and the existing aggregate market.

People, Community and Culture

The Guiding Principles in the People, Community and Culture theme call for the NWMO to identify the Project's potential positive and negative socio-economic effects and identify how those effects will be enhanced or mitigated. Several community studies identify and assess the effects the Project may have on housing, recreation, social programs, vulnerable populations, education and health services. Baseline population growth will mean these services will need to be expanded regardless of whether the Project comes to South Bruce.

While project-related population growth is expected to be modest in comparison, the capabilities and capacity of these services will need to be expanded for a growing and changing population.

Impacts of Baseline Growth

South Bruce's base line population is projected to grow by about 3300 residents by 2046 (metroeconomics 2022). Like many communities, South Bruce's population is aging – over 30% of the population is over 55. It is anticipated that residents will stay in South Bruce as they retire, with new residents moving in to fill employment positions. The elderly population (75 years and over) will see the largest growth (metroeconomics 2022).

Currently, there is a shortage of affordable housing in South Bruce such as rentals and higher density homes — most of the homes in South Bruce are single-family detached. This will be a critical challenge to address as South Bruce grows (Housing Needs and Demand Analysis Study).

This baseline population growth means that the settlement area will have to be expanded in about 20 years (Land Use Study) and that community facilities and services will need to be expanded regardless of whether the Project comes to South Bruce:

- Some schools in the area are expected to be over capacity within the next 5 to 15 years (Local/Regional Education Study)
- Some recreation facilities are reaching capacity and will need to be expanded to accommodate population growth (Effects on Recreation Resources Study)
- Programs for child care, physical health, mental health, and addiction are currently experiencing pressure due to the influx of new residents and the COVID-19 pandemic (Social Programs and Vulnerable Populations Study)
- Beyond population-related effects, the author of the Effects on Recreation Resources Study noted that some recreation facilities, such as the Teeswater-Culross Community Centre and the Mildmay-Carrick Recreation Centre are at the end of their useful life and will need to be rehabilitated or replaced.

Project Impacts

South Bruce is expected to add about 3300 residents to its population by 2046 when Project operations start. In comparison, Project-related population growth is expected to be modest - about 800 new residents or 25% more than the baseline growth (metroeconomics 2022).

Baseline growth will mean housing, community facilitities and social infrastructure will need to be expanded regardless of whether the Project comes to South Bruce. Study authors concluded that the Project is not expected to have a significant impact on these services.

Guiding Principle #27 calls for the NWMO to fund the Municipality's preparation of a housing plan to ensure South Bruce residents have access to a sufficient supply of safe, secure, affordable, and well-maintained homes. The most pressing need for project-related housing would be during pre-construction for the first 200 workers.

Today's housing market is very competitive. For example, residents can choose shoreline communities with more amenities, community services and housing choices, like Kincardine (Housing Needs and Demand Analysis Study). In the Housing study's assessment options, a strategic, multi-purpose approach linking temporary and permanent housing, training, tourism, recreation and employment has the potential to help South Bruce attract Project associated workers.

The Project related growth will bring an influx of high paying jobs and potentially increase the cost of living. The Local Hiring Effects Study and Strategy notes that the current lack of housing options and new developments need to be addressed to attract new residents and remote workers. Study authors note that it will be important to make South Bruce a "place of choice" to work, live, and raise a family.

Guiding Principle #32 calls for the NWMO, in consultation with the Municipality and other local and regional partners, to prepare a strategy for community services and amenities, including health, child-care, educational and recreational facilities, to accommodate the expected population growth associated with hosting the Project in South Bruce.

Community services and infrastructure are expected to develop as the population grows. In general, the Project is not expected to significantly increase pressure on social programs and services because the population growth is moderate. While population growth brings increased pressure on social programs, the municipal tax base and funds for social programs would also increase (Social Programs and Vulnerable Populations Study).

In addition, to the potential effects discussed above, the Project may:

- Result in cost of living increases and increase the divide between 'have' and 'have nots'.
- Enhance community sustainability, multiculturalism, and community involvement. This would require more culturally appropriate services.
- Increase the depth of education programming and make more efficient use of schools.
- Create an opportunity to expand, upgrade, or modernize existing schools through higher enrollment. However, it is noted that school boards can only plan based on current enrolment, and the construction of new buildings takes several years.

Conclusions and Recommendations

South Bruce is expected to grow in the next several years. This baseline population growth will mean housing, community facilities and social infrastructure will need to be expanded regardless of whether the Project comes to South Bruce.

Project-related population growth is expected to be modest in comparison to the baseline growth that is already forecasted for South Bruce. While study authors concluded that the Project is not expected to have a significant impact on housing, recreation facilities, social programs, schools or health services, the capabilities and capacity of these services will need to be expanded for a growing and changing population.

The studies assessed two options that could support housing and social infrastructure:

- Create a Corporate Social Responsibility Program that would support education programs, scholarships, career development, programs for vulnerable people and social programs through donations and grants
- Create a participatory social monitoring program where community stakeholders would be involved in gathering social monitoring data and monitoring potential Project effects

The peer reviewers identified the need for proactive approach to attract Project-related growth and help make South Bruce a community of choice for workers, families,

and businesses. A Community Revitalization Plan is recommended to maximize the potential benefits of the Project. This plan would integrate the findings of the Housing Needs and Demand Analysis Study, Effects on Recreation Resources Study, Infrastructure Baseline Study, and Workforce Development Plan.

The Community Revitalization Plan would be a multi-faceted plan, incorporating:

- A housing growth strategy taking into consideration the anticipated demand, location, type, and timing of new housing needed
- A recreation resource implementation plan that includes what, where and when recreation resources will be needed as well as sources of funding
- A workforce development plan with programs for local hiring, worker training, youth retention and training and next generation agricultural training
- A master servicing plan to address future community requirements for potable water, wastewater, stormwater management, solid waste management, and fire services

As part of the Community Revitalization Plan, the assumption regarding the availability of an existing large and capable regional workforce needs to be reconciled with the relatively moderate increase in the Project-related South Bruce population and cost of living.

Teeswater Lions Park

Safety and the Natural Environment

The Guiding Principles in the Safety and the Natural Environment theme call for the Project to be subject to the highest standards of safety. While local emergency services would need to be enhanced to meet the needs of the Project, there are strong examples of emergency response plans at other nuclear facilities in the area that can be leveraged.

The Guiding Principles in this theme also call for the protection of the community's precious waters, land and air. Based on the generic site layout, there is sufficient area within the Site to avoid or minimize effects on sensitive environmental features. Detailed environmental studies will continue through 2024.

Regulating Safety

Guiding Principles #1 and #3 relate to the safety of the Project and calls for the NWMO to demonstrate that:

- The Project will be subject to the highest standards of safety across its lifespan of construction, operation and into the distant future
- Used nuclear fuel can be safely and securely transported to the repository site

Within Canada, the federal and provincial government support and regulate emergency response services, which are provided by counties, municipalities, health care facilities and industry. Before the construction phase in 2033, the NWMO must comply with safety standards and emergency response requirements from multiple agencies (Emergency Services Study).

Specifically for the nuclear industry, the Canadian Nuclear Safety Commission, Transport Canada and provincial regulators regulate the development and operation of nuclear facilities and transport of used nuclear fuel. In addition, the Canadian Standards Association is developing a new standard for deep geological disposal of radioactive waste (Emergency Services Study).

The Preliminary Radon Assessment for a Used Fuel Deep Geological Repository (NWMO, December 2020) indicates there is no significant radon hazard to the workers or the general public during construction or operation of the DGR. The peer review by Radiation Safety Institute of Canada agreed with the conclusions and recommended a monitoring program be developed and implemented for the Project. The NWMO is preparing an update to this assessment in 2023 by conducting a Community Safety Effects Study. This will provide the community with an understanding of the health effects of the expected level of radiation emissions potentially associated with the Project.

The objective of the Community Safety Effects Study is to provide a public summary that explains the health effects of ionizing radiation emissions potentially associated with the Project. The study will include assessing radiological hazards from Project sources.

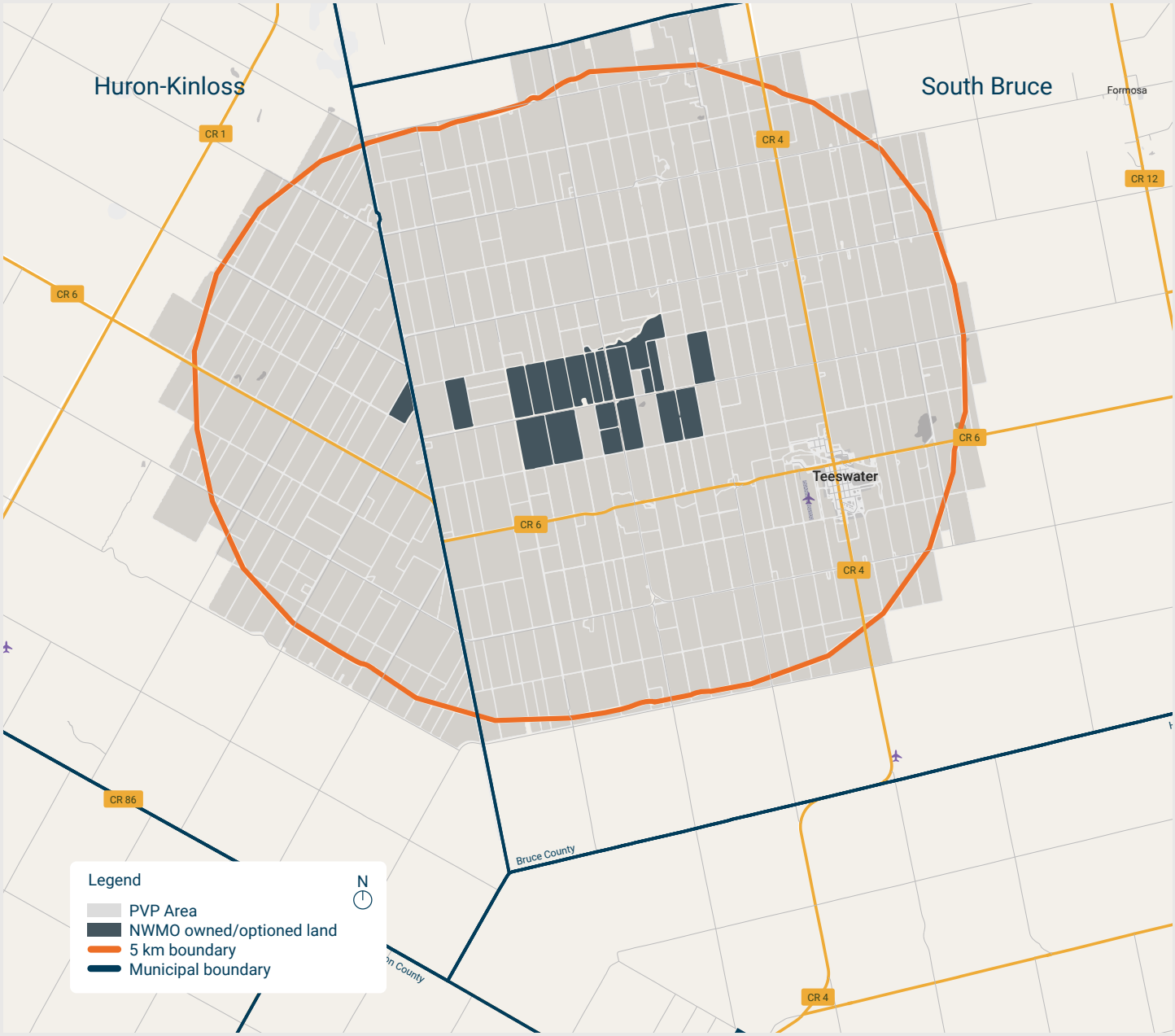
Emergency response requirements are Project-specific and would be developed following site selection during the appropriate regulatory processes. During operation, the NWMO will be required to meet strict regulations for operational controls and continual monitoring. The NWMO will also be required to demonstrate that safety requirements have been met during an extended monitoring period. The duration of this monitoring period will be decided many decades from now and will be informed by input from the host community (Emergency Services Study).

Emergency Planning Zone

An Emergency Planning Zone is an area surrounding the Site that would be established to guide emergency and evacuation response planning. The Emergency Planning Zone will be based on incident scenarios prepared during pre-construction planning. For planning purposes, the Emergency Services Study and Land Use Study used a conservative zone of 5 kilometres.

The NWMO, federal and provincial agencies and municipalities will need to plan for unique evacuation needs within the Emergency Planning Zone such as health care facilities, schools, senior residences, daycares, and the Mennonite community (Emergency Services Study). The Municipality may also create land use policies within this Zone to ensure evacuation can be appropriately planned for (Land Use Study).

The Land Use Study concluded that the development of the Project would not directly result in any land use change within the Emergency Planning Zone. Outside of Teeswater, the majority of the Emergency Planning Zone is designated for agriculture. That means that, within Emergency Planning Zone, most of the land uses that have emergency planning implications, such as residential uses, schools and institutional uses, would already be restricted or would need specific planning approvals (Land Use Study).



Emergency Services

The Emergency Services Study reviewed emergency planning needs of the Project and how local emergency planning services will need to respond. The responsibility for emergency services is shared by multiple organizations and agencies including the NWMO, the Municipality and local hospitals.

The study acknowledged that there is institutional knowledge on nuclear and underground emergency planning in the local area due to presence of Bruce Power and Compass Minerals' Goderich Salt Mine.

The Emergency Services Study reviewed existing local emergency services and concluded that South Bruce and other Municipalities will need additional emergency response capacity and capability to handle Project and non-Project related emergencies. Local- and County-level Emergency Response Plans would also need to be updated.

The study recommends implementing a model similar to the Memorandum of Understanding that exists between Bruce Power and local emergency response teams. Mutual Aid Agreements and Memorandums of Understanding allow municipalities, health care facilities and industry to support each other's emergency response services.

Municipality of South Bruce First Responders

Natural Environment

Guiding Principle #2 calls for the NWMO to demonstrate that 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. Further, Guiding Principle #6 calls for the NWMO to minimize the footprint of the repository's surface facilities as much as possible and ensure public access to the Teeswater River is maintained.

The Land Use Study concluded there is sufficient area within the Site for the DGR surface to avoid or minimize effects on existing sensitive environmental features.

Detailed environmental baseline studies are currently being completed and will continue through 2024. These studies will characterize the surrounding environment and support the detailed impact assessment should South Bruce be selected as the preferred location for the Project. The environmental studies will include an assessment on how the Project may affect the natural environment and identifies technologies and systems that are commonly used to manage potential environmental changes. The results of these studies will be available once completed.

The NWMO would return disturbed land to a usable state through a practice called land reclamation. In addition, there will be an environmental and operational monitoring program for the Project. The monitoring program will start prior to construction and will continue through the operations and decommissioning phases of the Project.

Conclusions and Recommendations

Using the generic design, the Land Use Study concluded there is sufficient area within the Site for the surface facilities that would avoid or minimize effects on sensitive environmental features.

While local emergency services would need to be enhanced to meet the needs of the Project, there are strong examples of emergency response plans at other nuclear facilities in the area that can be leveraged.

Additional studies will be needed during the pre-construction phase, when more Project details are available to identify and plan for potential emergencies (Emergency Services Study). This includes establishing a Project-specific Emergency Planning Zone, confirming site-specific emergency response requirements, preparing a Project Emergency Response Plan, and preparing Mutual Aid Agreements, which facilitate sharing of emergency services between municipalities.

Economics and Finance

Project could have a very positive impact on South Bruce's economy. In addition to the workers that the NWMO will hire directly, the Project could benefit local businesses directly as the NWMO's suppliers, or indirectly through spin-off opportunities.

A proactive approach would help optimize these bene its. Attracting businesses and workers will require investment in workforce development, economic development and village revival. Communities in the Core Study Area (South Bruce, Brockton, Huron-Kinloss, North Huron and Morris-Turnberry) can be more competitive if they work together to attract the economic activity.

Challenges that will need to be addressed include increasing competition for skilled labour, upskilling for local businesses, and championing the agricultural industry.

South Bruce's Economic Outlook

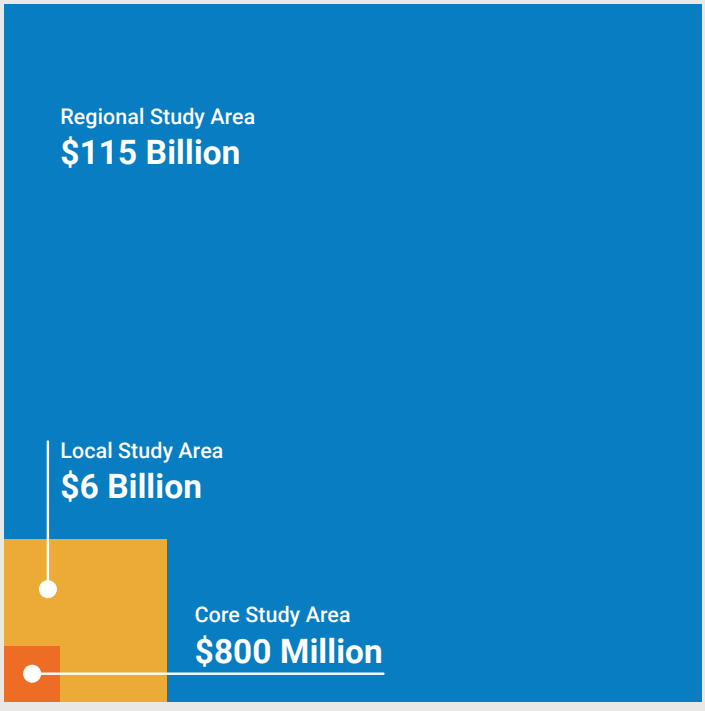
South Bruce is a relatively small player in the regional economy. It's dominated by agriculture and construction – farms make up almost 50% of businesses. Other communities in the Regional Study Area like Wellington, Middlesex, Oxford, and Waterloo have bigger economies and will be better positioned to respond to Project needs.

The economy is growing at a moderate rate due to pressure from the Greater Golden Horseshoe. Much of the population is nearing retirement, and these workers will need to be replaced (Regional Economic Development Study Report).

Opportunities for local hiring

Guiding Principle #20 calls for a local employment and training strategy to ensure Project employees are located within South Bruce and the surrounding communities.

The NWMO's hiring would increase around 2028 during the pre-construction planning phase. During construction (2033 to 2042) over 600 people will be employed by the NWMO. During operations beginning in 2043, about 700 people will work at the Site and the Centre of Expertise in South Bruce. This will be a mix of existing employees relocating to South Bruce and new hires. In addition, about 550 spin-off jobs are expected to be created in the Core Area Study communities of South Bruce, Huron-Kinloss, Brockton, North Huron and Morris-Turnberry (metroeconomics).



Economic contribution of the Regional, Local and Core Study Areas

During construction, the NWMO will need above-ground construction trades, below-ground mining trades, and aggregate extraction workers. During operations, the NWMO will need senior managers, accountants, engineers, scientists, equipment operators and production workers (Labour Baseline Study). The workforce with these occupation types currently exists more in the Regional

Study Area (i.e., Wellington, Middlesex, Oxford, and Waterloo) than in South Bruce (Workforce Development Study, Local Hiring Effects Study). Below-ground mining trades, which will be needed during construction are concentrated in Northern Ontario (Workforce Development Study).

The Workforce Development Study recommends workforce development programs, such as partnering with education institutions and in-community training, to meet the Project's requirements and develop a local pool of talent.

The Local Hiring Effects Study notes that the success of South Bruce is influenced by its ability to foster a steady supply of skilled labour. South Bruce and the other municipalities in the Core Study Area — are not as strongly positioned as other communities in the larger region. South Bruce should play a critical role in informing and contributing to workforce wraparound supports, such as transit, infrastructure, housing, and quality of life, that will make South Bruce a "place of choice" (Local Hiring Effects Study).

While local hiring would benefit the local economy, it has the potential to create challenges for existing businesses. Existing businesses face workforce shortages and competition from larger population centres. The NWMO is likely to have some intrusion in the local job market given it will be a high wage employer (Workforce Development Study). The Local Hiring Effects Study and Strategy outlines strategies to support local businesses, such as Digital Main Street, a program that assists small businesses with their adoption of technology.

Opportunities for local businesses

Guiding Principles #21 and #22 call for the NWMO to create opportunities for local businesses.

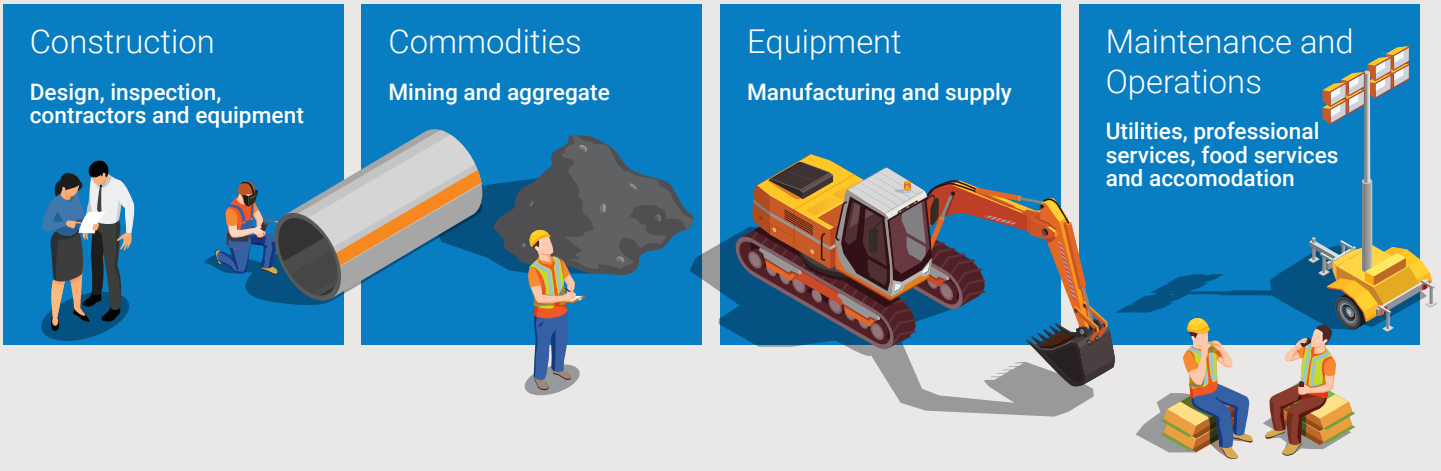
The Project is expected to generate about $300 million annually direct and indirect economic activity between approximately now and 2046 for South Bruce's economy (metroeconomics). Local businesses may benefit by becoming a supplier to the NWMO or by providing spin-off goods and services to the local community – everything from home construction and real estate agents, to groceries and hair salons.

The NWMO will need a variety of suppliers including nuclear and non-nuclear construction, equipment providers, and maintenance and operation services. Most of these types of business exist in South Bruce and, with upskilling, the South Bruce construction sector could address potential non-nuclear construction needs of the Project (Economic Development Project Effects and Strategy).

Becoming a supplier to the NWMO would provide businesses a steady revenue and open up opportunities with other industrial and commercial customers (Economic Development Project Effects and Strategy). Study authors noted small businesses like those in South Bruce, have unique vulnerabilities that need to be considered:

- Limited capacity to quickly mobilize to expand business revenues
- Competition with larger and more attractive population centers for the limited labour pool
- Limited commercial and industrial (employment) lands and local infrastructure
- Limited financial resources from the Municipality

NWMO Supply Chain



Local businesses need to be confident the NWMO will commit to local procurement (Economic Development Project Effects and Strategy).

With respect to spin-off opportunities, community-wide economic benefits include:

- Increased population coming to South Bruce to live and work in the community and the correlating increased tax base
- Potential increase in the number of higher paying jobs in South Bruce
- Enhancement of a proactive business community which encourages existing businesses/operations to expand or start up
- Additional businesses/operations attracted to creating economic opportunities and investing in South Bruce

Study authors encouraged a proactive approach including training, upskilling, and commitments from the NWMO for local procurement. In addition to being a desirable place to do business, South Bruce must be a desirable place for workers to live. Village Revival is a strategic objective that focuses on creating healthy and vibrant communities (Economic Development Project Effects and Strategy).

Focus Area: Retaining and attracting youth to South Bruce

Guiding Principle #15 specifically addresses the need to provide opportunities for youth. South Bruce commissioned a study to develop a strategy focused on this very issue.

The Economic Development Study on Youth recommended a strategic plan that focusses on talent development, attraction, and retention, as well as positioning the area with a labour force that is resilient and responsive to current and emerging labour demands. This strategy will involve attracting youth to trades, agriculture and engineering, and related STEM positions. It also focuses on encouraging entrepreneurship and innovation, and promoting diversity, equity, inclusion, and quality of life.

Study authors noted the importance of improving infrastructure, housing options and lifestyle amenities to attract graduates. As well, they recommended increased dialogue and collaboration with youth serving organizations and educators.

Focus Area: Protecting and enhancing South Bruce agriculture

South Bruce's agricultural sector is responsible for nearly one-third of local jobs and half of local businesses. In addition to traditional commodities, agricultural support businesses also contribute to this sector. (Agricultural Business Impact Study).

The Project has the potential to make it harder for farms if the following effects are not addressed:

- Farms have an aging workforce nearing retirement. To stay viable, the agricultural sector needs to attract new workers. Like other local businesses, farms may have a difficult time competing against wages paid by the Project for skilled labour
- Farmers need to use local roads to move equipment. Increased Project-related traffic will make this even more challenging

In addition, some farmers have concerns about how the Project would impact the agricultural character of South Bruce, whether food produced near the Site would be stigmatized, and whether farm property values would decrease.

The Agricultural Business Impact Study found no evidence that proximity to a nuclear facility creates a risk to agriculture yield, product safety, or commodity prices. However, the study authors recommended a commodity value protection program to ensure farmers are protected.

Since agricultural businesses will not have the same Project-related opportunities as other businesses, study authors identified several options for how the Project could be leveraged to support local agriculture. For example, the Centre of Expertise could support an agricultural research, training, and business centre.

Focus Area: Making South Bruce a tourist destination

While South Bruce is not a major tourist destination right now, the Tourism Industry Effects Study highlighted the potential to leverage the Centre of Expertise to draw tourists to the area. If the NWMO and South Bruce decide to develop the Centre of Expertise as a tourism attraction, complete with staff and programming, it could generate as much as $7.5 million in annual spin-off visitor spending. Given how vital agriculture is in South Bruce, study authors also recommended fostering agritourism.

Like other economic development strategies, the study authors noted that proactive investment in the tourism industry is required for South Bruce to maximize the potential benefits of hosting the Project.

Working Collectively to Turn Opportunity into Reality

The Core Study Area municipalities will be more competitive if they work together (Economic Development Project Effects & Strategy, Regional Economic Development Study).

This collaborative approach could be accomplished through a Core Study Area Economic Development Collaborative, described in the Regional Economic Development Study. Potential members of the collaborative include South Bruce, Huron-Kinloss, Brockton, Morris-Turnberry, North Huron, and the Saugeen Ojibway Nation with potential involvement of the NWMO, the local business community and institutions. The Economic Development Project Effects & Strategy also noted the need to build connections with other regional and workforce entities, supply chain employers, the NWMO, industry partners, education and training facilities, community organizations, and energy and industrial based membership.

Study authors noted that the key ingredients for a successful collaborative are trust, alignment, broad thinking, and teaming. In addition, an economic development strategy would be more successful if it is integrated with other community interests such as housing, infrastructure and workforce development (Regional Economic Development Study).

Hosting Agreement

In addition to the strategies discussed above, the Economic Development Project Effects & Strategy provided guidance for potential Community Benefits or a Hosting Agreement. This type of agreement provides a foundation to describe desired outcomes and performance measures. There are different types of benefits South Bruce can explore, including cash payments, tax revenue, local employment commitments, property value protection and capacity funding.

Conclusions and Recommendations

The community studies and peer reviews recommended the preparation of a Community Revitalization Plan to attract workers and families to reside in South Bruce and an Economic Development Strategy Update to make South Bruce investment ready for new and existing businesses.

Both plans would be multi-faceted. The Community Revitalization Plan would incorporate:

- A tourism strategy with a business plan for the Centre of Expertise to be an international host facility and enhance opportunities for the local tourism industry
- A workforce development plan with programs for local hiring, worker training, youth retention and training, and next generation agricultural training.

The Community Revitalization Plan would be integrated with the housing growth strategy and recreation resource implementation plan described in the above sections.

Considerations for success

The Economic Development Strategy Update would incorporate:

- A collaborative Economic Development Corporation for local business retention and attraction;
- An economic development monitoring program;
- An investment readiness plan; and
- An agriculture impact monitoring program to advance growth initiatives for agriculture, agribusiness and agritech, and monitor commodity safety, commodity values and property values

Teeswater Concrete

Services and Infrastructure

The Guiding Principles in the Services and Infrastructure theme call on the NWMO to provide funding for any required improvements to municipal infrastructure and road network, for maintenance and repair of municipal roads and bridges used for the Project, and to ensure there are sufficient community services and amenities.

Whether the Project comes to South Bruce or not, municipal infrastructure will require expansions or upgrades to accommodate baseline population growth. Some of South Bruce's municipal services are close to capacity and are already scheduled for expansions. The Project would mean that some upgrades and expansions would need to be advanced to accommodate the additional population.

With respect to traffic and roads, trucks would be required to use designated haul routes during construction and operation. Where required, the designated haul routes may need to be reconstructed and/or widened to accommodate the truck traffic and slow moving agricultural vehicles, horse and buggies, and cyclists.

Traffic and Roads

To assess the potential impact of the Project on local roads and traffic, study authors looked at traffic volumes, how the current roads function and the current condition of roads, intersections and bridges.

Most of the roads in South Bruce are typical two-lane rural or urban roads. Roads are shared by passenger vehicles, trucks, slow moving agricultural vehicles, horse and buggies, pedestrians, and cyclists. This unique mix of road users was considered by study authors.

Some roads and intersections require improvements regardless of whether the Project comes to South Bruce. For example, traffic signals are recommended for the intersection of County Road 4 and County Road 6 in Teeswater (Local Traffic Effects Study).

If the Project is located in South Bruce, trucks would be required to use designated haul routes during construction and operation. Since most roads and bridges in South Bruce were not designed for heavy trucks, the designated haul route roads and bridges may need to be reconstructed or rehabilitated to handle the truck weights (Road Conditions Effects Study). Some intersections may also be upgraded through the addition of traffic signals, stop signs, and/or turning lanes (Local Traffic Effects Study).

The additional non-heavy load traffic volume generated by the Project will be within the capacity of the existing road network. However, the Traffic Impact Study recommends widening haul route roads to mitigate effects on how the road network functions, in particular for slow moving agricultural vehicles, horse and buggies, cyclists and pedestrians.

During construction (2033 - 2042), most of the Project-related traffic will be trucks. Approximately 100 trucks will travel to the Site daily, moving excavated rock from the Site to the Excavated Rock Management Area, and bringing in aggregate and other construction materials and supplies.

During operation, forecasted to start in 2042, truck traffic will decrease to and from about 40 trucks daily, bringing supplies and used fuel transport packages to the Site.

In addition, about 700 workers are expected to commute to and from the Site and the Centre of Expertise every day

during operations. In addition to the use of designated haul routes, the Local Traffic Effects Study provided other options to help mitigate traffic effects. For example, the NWMO staff could have staggered shifts and shuttle services could be offered.

Once locations have been confirmed for the Site entrance, Excavation Rock Management Area, and Centre of Expertise, additional studies will be needed to confirm upgrades needed to roads, bridges, and intersections.

Infrastructure

Infrastructure and utilities include potable water supply and distribution, waste water collection and treatment, storm water management, natural gas, electrical power and internet. Baseline population growth means that most municipal infrastructure will need to be expanded or upgraded in the next 25 years. If the Project is located in South Bruce, Project-related growth will mean some of these upgrades and expansions would need to be advanced (Infrastructure Baseline and Feasibility Study)

An expansion of the drinking water and wastewater systems in Mildmay is already planned as they are close to capacity. The drinking water system in Teeswater and the wastewater systems in Teeswater and Formosa are in the process of being upgraded and will have several years of capacity left (Infrastructure Baseline and Feasibility Study).

South Bruce's landfills have about 20 years of capacity remaining. A recently purchased compactor means they will likely be able to stay open longer before reaching their permitted capacity. The additional population growth from the Project could shorten the life of the landfills by about one year. Since these landfills do not accept institutional commercial, or industrial waste, a private contractor will collect waste from the Site and Centre of Expertise for disposal at a landfill outside of South Bruce (Infrastructure Baseline and Feasibility Study).

Natural gas and electrical power distribution systems will be expanded by the providers as part of the community expansion and development plan. High speed internet will be brought to the community in support of the Project.

Conclusions and Recommendations

The conclusions from the community studies and recommendations from the peer review findings identified the need for a more detailed Traffic Management Plan to confirm the upgrades and improvements for roads, bridges, and intersections and provide a framework for a traffic and road condition maintenance and monitoring program. The Plan should be prepared once the Site entrance, Excavated Rock Management Area, and Centre of Expertise locations.

For infrastructure, continued work and updating of the Community Master Servicing Plan is recommended to better determine the capacity, timing and location of additional infrastructure needed for base population growth as well as Project related growth. This should be integrated with the Housing Growth Strategy.

Regional Benefits

Guiding Principle #36 calls for the NWMO to demonstrate that the Project will benefit the broader region outside of the community of South Bruce. The Regional Economic Development Study focusses on these benefits.

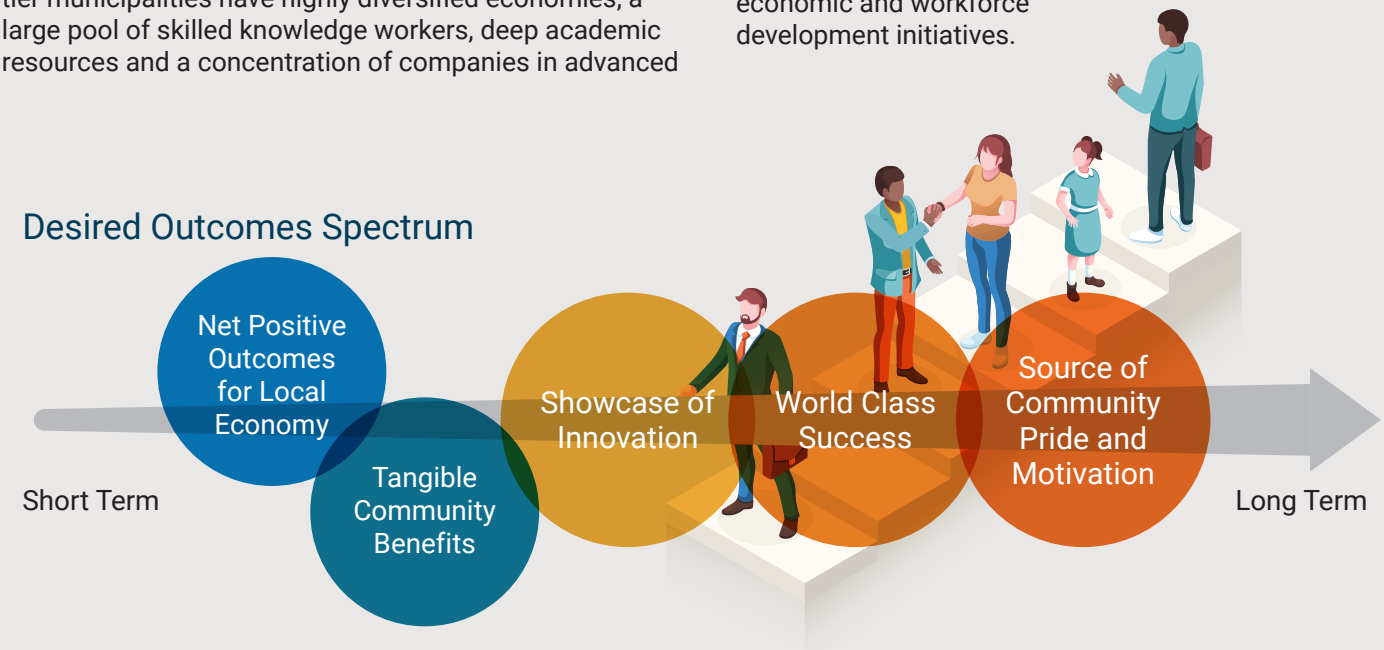
Regional Economic Development

The Regional Economic Development Study discusses how a development like the Project creates value and contributes to the well-being of community members through the various direct and spin-off economic opportunities. The Project is a moderate size long-term undertaking. Not only is the Project important at the local, provincial, and national levels, but it is also important globally. The study authors suggest the following target outcome for the Project:

- A showcase for innovation
- A source of community pride and motivation
- A net positive system of initiatives/opportunities
- A world class success

The study authors found the strength of the regional economy is to the influence of the Wellington, Middlesex, and Oxford counties and Region of Waterloo. These upper-tier municipalities have highly diversified economies, a large pool of skilled knowledge workers, deep academic resources and a concentration of companies in advanced manufacturing, food processing and information technology. The regional economy with its heavy manufacturing base and skilled labour pool can provide capabilities to meet specific supply chain requirements of the Project. This regional economy has the capability to meet the needs of the Project

The study sets out a strategy for both regional and local economic development, including foundational strategies to enable growth and opportunities to build a system of connections between residents, government, agencies, institutions and businesses. These strategies are driven by the aspirations of the community and its value proposition. Recommendations are made for enabling Project derived economic development which are summarized as being development ready, sell the community, and collaborate regionally. The study presents the concept of South Bruce and its neighbours establishing an Economic Development Collaborative team to build relationships, make connections, identify opportunities, and deliver on economic and workforce development initiatives.



Regional Road Network

The Local Economic Development study identifies indirect and induced employment opportunities resulting from Project workers living within the Core Study Area communities. The peer review found that the Project will result in an improved road network in South Bruce and the neighbouring municipalities.

While the purpose of the road improvements is to safely manage the Project supply chain and Project workers, it will also benefit the economy within the broader South Bruce area. Both the Agricultural Business Impact Study and the Tourism Industry Effects Study noted road network improvements could mitigate increased truck traffic and the potential concerns of the increased traffic mixing with agriculture machinery and Mennonite buggies. The Municipality could also capitalize on the road network improvements to draw tourists into the community.

Conclusions and Recommendations

The conclusions from the community studies and recommendations from the peer review findings identified the need for a Core Study Area Economic Development Collaborative with neighbouring municipalities to leverage the capabilities of the strong regional economy and skilled labour pool. This will create benefits for the regional and local economies together. The Collaborative will enable South Bruce and neighbouring municipalities to compete and realize their share of the Project's- economic benefits. South Bruce will need to initiate establishing and setting the mandate for the Collaborative.

Capacity Building

The Guiding Principles in the Capacity Building theme call for the NWMO to provide capacity funding to South Bruce to complete the community studies, facilitate the peer review process, and participate in regulatory processes, such as the impact assessment process and licencing. In addition, Guiding Principle #27 calls for the NWMO to fund a housing plan to ensure residents have access to a sufficient supply of safe, secure, affordable, and well-maintained homes.

Community Studies, Peer Review Process and Regulatory Process

The community studies summarized in this report have been prepared to help South Bruce better understand the baseline conditions of the community and the potential socio-economic effects of the Project on South Bruce and neighbouring municipalities.

All of these studies, as well as the peer reviews, have been funded by the NWMO through the Municipality's Multi-Year Funding Agreement with NWMO, in accordance with Guiding Principles #24 and #25. The community studies were authored by independent subject matter experts working on behalf of the Municipality or the NWMO, and the peer reviews were an independent assessment of study findings.

As they are completed, all studies are posted on the Municipality's website. Study authors also presented the results of each study to the Community Liaison Committee, and the Municipality distributed a summary of each study to residents.

As a host community, the Municipality will participate in the upcoming regulatory approval process should South Bruce be selected by the NWMO as the preferred location.

Housing Growth Strategy

As described within the community studies and peer reviews, the Project has the potential for both benefits and negative effects on South Bruce. With the support of the NWMO, the Municipality will have the tools and capacity to enhance the Project's benefits and mitigate the negative effects. One of the key initiatives is providing housing for both the baseline and Project derived growth.

The Housing Needs and Demand Analysis Study sets out current conditions and housing markets for South Bruce. The shortage of affordable housing can contribute to Project related socio-economic impacts as discussed in the People, Community and Culture Theme. The preferred approach is to encourage new residents to live in South Bruce and the surrounding municipalities. The Housing Needs and Demand Analysis Study identified the need for housing that is affordable and satisfies the aspirations of Project workers and their families.

The Local Hiring Effects Study and Strategy identified marketing the community for talent attraction as a key strategy, and identified the need for South Bruce to revitalize the community and develop a Housing Growth Strategy. To meet the capacity needs of South Bruce's growing population the Housing Growth Strategy should address topics such as affordable housing, accessible housing needs, use of development incentives, temporary and permanent accommodations, attracting Project associated workers to live in the Municipality, built infrastructure to service growth and social infrastructure.

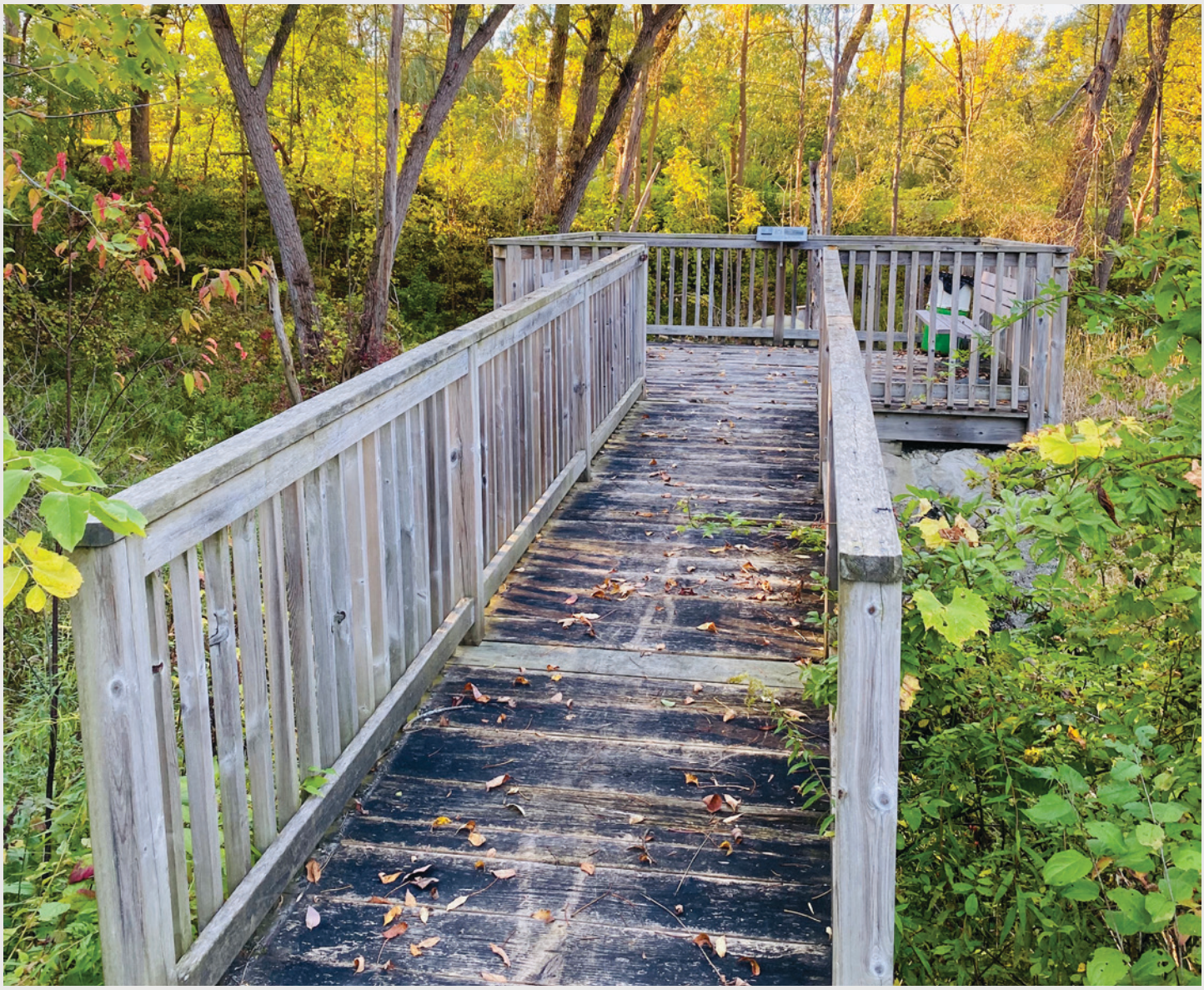
Conclusions and Recommendations

The Housing Growth Strategy should be prepared and integrated with the strategies and actions developed in the Local Hiring Effects Study and Strategy and the Workforce Development Study. It should inform and support the Community Revitalization Plan. The Land Use Study and the Infrastructure Baseline and Feasibility Study should be considered as they outline the current potential constraints to housing growth and the actions required to prepare South Bruce for future growth.

Governance and Community Engagement

The Guiding Principles in the Governance and Community Engagement theme call for the NWMO to provide the Municipality with an ongoing and active role in the governance of the Project during construction and operation and for engagement with local residents on community vision, expectations, principles, and concerns.

The Studies described in this Summary include several options for the Municipality together with the NWMO to contribute to programs such as a Participatory Social Monitoring and Corporate Social Responsibility programs.



Summary and Conclusions

The community studies were prepared to help South Bruce better understand the baseline conditions of the community and the potential socio-economic effects of the Project on South Bruce and neighbouring municipalities. Each study was subject to the comprehensive peer review process.

The Studies show that the identified potential Project effects can be managed with proper planning and resources. They also show that the Municipality and the NWMO have a significant role to play in preparing the community for the Project, enhancing the positive effects and mitigating the negative effects.

South Bruce is expected to grow in the next several years independent of the Project, there is an opportunity to capture the additional population growth generated from the Project during its planning and construction phases. This growth will need to be planned for, and places to accommodate residential, commercial, and industrial growth will need to be identified. Along with this, the capabilities and capacity of infrastructure, roads, education, recreation, health, emergency services, and social services will need to be expanded for a growing and changing population.

Taking a proactive approach to housing and community development will help the Municipality attract Project-based workers to South Bruce. There is an opportunity to leverage the area's natural beauty, agriculture, and rural quality of life in this effort.

Village revitalization is needed to accommodate growth, meet the aspirations of the new workers, and help make South Bruce a community of choice. An economic development plan is needed to create a strong local talent pipeline, enable an environment for business growth, and revitalize the community for talent retention and attraction readiness.

If the Project comes to South Bruce, a three-pronged approach is recommended to manage impacts and realize the benefits of growth:

1

Community Revitalization Plan

Ensure built and social infrastructure has capacity and capability to support community growth.

2

Economic Development Strategy Update

Make South Bruce investment ready for new and existing businesses, attract new businesses and leverage existing strengths.

3

Infrastructure, Service and Program Expansions

Maximize benefits by attracting workers and families to reside in South Bruce and preparing for growth.

Appendices

Community Studies List

Study Name	Study Proponent	Report Author	Peer Review
Preliminary Design Report	NWMO	NWMO	GHD Ltd.
Community Studies Planning Assumptions	NWMO	NWMO	
South Bruce and Area Growth Expectations (PDF)	MSB	metroeconomics	Deloitte LLC, GHD Ltd.
Municipality of South Bruce Economic Development Project Effects & Strategy (PDF)	MSB	Deloitte LLC	GHD Ltd.
Municipality of South Bruce Economic Development Program - Youth	MSB (PDF)	Deloitte LLC	GHD Ltd.
Local Hiring Effects Study & Strategy	MSB	Deloitte LLC	GHD Ltd.
Municipality of South Bruce Agricultural Business Impact Study	MSB	Deloitte LLC	GHD Ltd.
Municipality of South Bruce Tourism Industry Effects & Strategy	MSB	Deloitte LLC	GHD Ltd.
Housing Needs and Demand Analysis Study	NWMO, MSB	Keir Corp.	Deloitte LLC, GHD Ltd.
Labour Baseline Study	NWMO	Keir Corp.	Deloitte LLC, GHD Ltd.
Workforce Development Study	NWMO	Keir Corp.	Deloitte LLC, GHD Ltd.
Regional Economic Development Study	NWMO	Keir Corp.	Deloitte LLC, GHD Ltd.
Aggregate Resources Study	NWMO, MSB	Keir Corp.	R. J. Burnside & Associates, GHD Ltd.
Infrastructure Baseline and Feasibility Study	NWMO	Morrison Hershfield	R. J. Burnside & Associates, GHD Ltd.
Local Traffic Effects Study	NWMO	Morrison Hershfield	R. J. Burnside & Associates, GHD Ltd.
Road Conditions Effects Study	NWMO	Morrison Hershfield	R. J. Burnside & Associates, GHD Ltd.
Effects on Recreational Resources	MSB	Tract Consulting Inc.	GHD Ltd.
Local/Regional Education Study	NWMO, MSB	DPRA Canada Inc	Deloitte LLC, GHD Ltd.
Land Use Study	NWMO, MSB	DPRA Canada Inc., MHBC Planner Ltd. Planning	GHD Ltd.
Emergency Services Study	NWMO	DPRA Canada Inc., Independent Environmental Consultants	GHD Ltd.
Vulnerable Populations Baseline and Effects Study and Social Programs Study	NWMO	DPRA Canada Inc.	GHD Ltd.

Community studies available online at https://www.southbruce.ca/en/municipal-government/studies-and-reports.aspx

Community participation is key to an informed decision, a message from the Municipality of South Bruce

Community engagement and consultation on the Project has been ongoing.

In 2021, an independent consultant, GHD Ltd., gathered public feedback on how the community wanted to measure its willingness to be a host, and what it needed to know to make that decision. Based on this input, Council voted in December of that year, that willingness should be decided by public referendum.

Prior to this, community input helped develop 36 Guiding Principles that sum up the community's expectations for the Project and guide our engagement with the NWMO.

We encourage you to learn about and explore the Project with us, as we look at what it could mean for our community, and if it is a good fit.

For more information, please contact:

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