

Peer Review Report

Local Traffic Effects Study Report (I23)

Municipality of South Bruce July 12, 2022

Executive Summary

The Nuclear Waste Management Organization (NWMO) has been engaged in a multiyear, community driven process to identify a site where Canada's used nuclear fuel can be safely contained. The site selection process involves nine steps, with the process currently at Step 3 (Phase 2). The NWMO is now in its final screening process, and the two remaining siting areas currently being assessed under Step 3, Phase 2, are the Municipality of South Bruce (MSB) and the Township of Ignace, and their surrounding areas. The NWMO plans to complete all preliminary assessment work and to select one community/area to host the Adaptive Phased Management (APM) Project (Project) by 2023.

Building on previous work, engagement completed to-date, and MSB's 36 Guiding Principles, NWMO and MSB are working together to prepare a suite of studies which will be shared broadly with the community. The studies are being undertaken by NWMO or MSB, with some being joint efforts. The MSB has retained consultants (R.J. Burnside & Associates Limited, Deloitte, Tract Consulting) to develop a number of studies and to peer review others (GHD Limited [GHD] team) developed by NWMO and their consultants (DPRA Canada [DPRA] team). The information acquired through the studies is expected to aid MSB make informed decisions about whether the APM Project is suitable for their community, and if they are willing to consider hosting it and under what circumstances and terms.

The Local Traffic Effects Study (I23) is one of the studies being carried out by NWMO with the overall objective to assess the local traffic effects associated with the Project in the MSB and neighboring communities and identify any potential changes required to the Municipal and County road network. The Local Traffic Effects Study Draft Report was peer reviewed by Subject Matter Experts (SME) at R.J. Burnside & Associates Limited (R.J. Burnside) in combination with GHD Leadership's Team (Peer Review Team [PRT]) in accordance with the Peer Review Protocol process established jointly by MSB and NWMO. The PRT considered several documents and information in the peer review of the Local Traffic Effects Study Draft Report to aid in their understanding, focus the peer review, and develop their findings. The PRT findings and resolution of those findings are outlined in this Peer Review Report.

Overall, the PRT is of the view that the Local Traffic Effects Study has met the Work Plan at a preliminary study level. The Study contains a good initial review of the existing traffic conditions of the road networks in the study area, including review of Provincial, County and Municipal roads. The capacity analysis provides a good understanding for the major roads and intersections in the study area, identifying where further investigation may be recommended to address potential capacity issues. In addition, the Study identifies potential traffic operational issues (i.e., accommodation of vulnerable user of the road, safety), along with possible mitigation strategies, to address such issues. The Study acknowledges that future functional studies may be considered for the 'Last Mile' roads.

The Study however includes insufficient information to make conclusive statements on the overall traffic impact of the Project on the Municipal roads, without a more thorough review / detail analysis of traffic operations. Truck routes, Site access locations, detailed information on the construction activities and schedules, as well as special transport requirements required for the nuclear fuel transport, were not available at the time of completing the Study and have not been included as part of this initial baseline study work.

The assessment of the impact of the significant increases of truck and worker commuter traffic, particularly during the initial years of construction, requires additional review in future studies, pending haul routes, the location of the ERMA and Site access locations being confirmed. The determination of access locations and circulation roads internal to the Project Site should be confirmed to further assess the traffic impact from the Project, particularly with respect to the movement of the excavated rock and the import of aggregate to the Site.

The findings of the Local Traffic Effects Study should be coordinated with the Roads Conditions Effects Study, particularly as it relates to the road cross section and road structure requirements (e.g., paved shoulders), as well as right-of-way needs. The timing of the road upgrades identified may affect the timing and the rate at which the Project Site preparation work can be carried out.

The Study has informed Guiding Principles 2, 3, 7, 30, 31, and 36 and further studies are recommended to further meet these principles.

Contents

1.	. Introduction			
2.	Peer Rev	iew Protocol	2	
	2.1 C	Objectives and Overview of the Peer Review Protocol Process	2	
	2.2 K	Cey Activities Associated with the Peer Review of the Local Traffic Effects Study	4	
3.	Key Docu	umentation and Information Reviewed	Ę	
4.	Peer Rev	iew Findings and Resolution	6	
	4.1 C	Comments on the Local Traffic Effects Study	6	
	4.2 C	Comments on Adherence to the Work Plan	14	
	4.3 N	Nunicipality of South Bruce's Guiding Principles	20	
	4.4 C	Conclusions of the Peer Review	21	
Tab	ole inde	ex		
Table Table		Key Activities Associated with the Peer Review of the Local Traffic Effects Study Key Documents and Information Considered in the Peer Review of the Local Traffic	2	
Table	. 1 1	Effects Study Local Traffic Effects Study Draft Report Comment Disposition Table	5	
Table		Adherence to the Work Plan	15	
Table			20	
Fig	ure ind	ex		
Figur	e 2.1	The Peer Review Protocol Process	2	
Арр	pendice	es		
Appe Appe	ndix A ndix B ndix C ndix D	List of Socio-Economic Community Studies Peer Review Protocol Peer Review Comments Memo 36 Guiding Principles		

Acronyms

APM Adaptive Phased Management

CNSC Canadian Nuclear Safety Commission

CWB Community well-being

DPRA DPRA Canada
GHD GHD Limited

MSB Municipality of South Bruce

NWMO Nuclear Waste Management Organization

PRT Peer Review Team
SME Subject Matter Expert

Scope and limitations

R.J. Burnside and GHD have prepared this Report exclusively for the Municipality of South Bruce. All data and information contained herein is considered confidential and proprietary and may not be reproduced, published or distributed to, or for, any third party without the express prior written consent of R.J. Burnside and GHD.

Respectfully submitted by:

On behalf of Jeremy Taylor, P.Eng.,

Jeremy Taylor, P.Eng.

Regional Manager, R.J. Burnside & Associated Limited

Henry Centen, P.Eng.

Henry Conter

Project Engineer, R.J. Burnside & Associated Limited

Ian Dobrindt, MCIP, RPP, EP

Social-Economic Lead, GHD Leadership Team

Gregory D. Ferraro, P. Eng.

Project Manager, GHD Leadership Team

1. Introduction

This report documents the peer review undertaken of the Draft Local Traffic Effects Study (I23) prepared by Morrison Hershfield dated April 8, 2022 (Draft) and June 14, 2022 (Final Draft). The Nuclear Waste Management Organization (NWMO) has been engaged in a multiyear, community driven process to identify a site where Canada's used nuclear fuel can be safely contained. The site selection process involves nine steps, with the process currently at Step 3 (Phase 2). Step 3 is defined by two phases of preliminary assessments for each interested community. Phase 1 involved primarily desktop studies documenting the current socioeconomic conditions in the communities and then considering what might be the possible implications of the Adaptive Phased Management (APM) Project on community wellbeing (CWB) for each community and the wider area. For interested communities that successfully completed the initial screening in Phase 1, Phase 2 (the current phase) involves additional work to support conducting a preliminary assessment of potential suitability and narrowing the number of communities that have expressed an interest in partnering with NWMO.

The NWMO is now in its final screening process, and the two remaining siting areas currently being assessed under Step 3, Phase 2, are the Municipality of South Bruce (MSB) and the Township of Ignace, and their surrounding areas. The NWMO plans to complete all preliminary assessment work and to select one community/area to host the APM project by 2023, which then marks the beginning of the fourth step of APM implementation¹. The selection of a final site will trigger the regulatory approvals phase of the APM project. Federal approval under the *Impact Assessment Act* and licensing by the Canadian Nuclear Safety Commission (CNSC) under the *Nuclear Safety and Control Act* will be required. Meeting federal regulatory standards is imperative to achieve approval, and to withstand intense public and regulatory scrutiny.

Building on previous work, engagement completed to-date, and MSB's 36 Guiding Principles, NWMO and MSB are working together to prepare a suite of studies which will be shared broadly with the community. The list of studies is included in **Appendix A** grouped by similar topic area (MSB led, environment, infrastructure, and socio-economic). The studies are being undertaken by NWMO or MSB, with some being joint efforts. The MSB has retained consultants (R.J. Burnside, Deloitte, Tract Consulting) to develop a number of studies and to peer review others (GHD Limited [GHD] team) developed by NWMO and their consultants (DPRA Canada [DPRA] team). The information acquired through the studies is expected to aid MSB to make informed decisions about whether the APM Project is suitable for their community, and if they are willing to consider hosting it and under what circumstances and terms.

The Local Traffic Effects Study is one of the socio-economic studies being carried out by NWMO with the overall objective to assess the local traffic effects associated with the Project in the MSB and neighboring communities and identify any potential changes required to the Municipal and County road network. The Local Traffic Effects Study was peer reviewed by Subject Matter Experts (SME) at R.J. Burnside & Associates Limited (R.J. Burnside; Jeremy Taylor and Henry Centen) in combination with the GHD Leadership Team (Greg Ferraro and Ian Dobrindt) (Peer Review Team [PRT]) in accordance with the Peer Review Protocol process established jointly by MSB and NWMO. **Section 2** elaborates on the Peer Review Protocol process followed including the steps specifically followed and discussions held with NMWO and the DPRA team. As described in **Section 3**, the PRT considered several documents and information in the peer review of the Local Traffic Effects Study to aid in their understanding, focus the peer review, and develop their findings.

The results and resolution of the PRT findings are outlined in **Section 4** starting with how the Final Draft Report has been revised to address the PRT comments on the Draft Report. We note that to the extent possible most of the PRT comments have been addressed where information is available. This is followed by a review of how the Study complies with the approved Work Plan and how the Study informs the applicable Guiding Principles.

The Work Plan was generally followed with some deviations based on the availability of data. Collision data, detailed geometric and geotechnical road information, likely truck routes, access locations, detailed information on the

^{1.} Nuclear Waste Management Organization, 2020. Moving Towards Partnership - Triennial Report 2017 to 2019.

construction activities, including maintenance and monitoring requirements, as well as special transport requirements for the transportation of used nuclear fuel, were not available and have not been included as part of this initial baseline study work. The Study is a beneficial initial assessment in understanding baseline conditions and setting the foundation for further study/assessment of the local traffic effects in future studies carried out by NWMO. The Study does inform Guiding Principles 2, 3, 7, 30, 31, and 36. Finally, the conclusions from the peer review are provided at the end of **Section 4**.

2. Peer Review Protocol

2.1 Objectives and Overview of the Peer Review Protocol Process

As mentioned, the peer review of the Local Traffic Effects Study Draft Report was undertaken in accordance with the Peer Review Protocol established jointly by the MSB and the NWMO. The Peer Review Protocol had the following established objectives:

- To provide the community of the MSB with an independent review by qualified SMEs
- 2. To complete a peer review of NWMO's assessment of potential impacts and proposed benefits of locating the APM Project in MSB in comparison to existing conditions
- 3. To review how the potential impacts and proposed benefits adhere to the 36 principles that will guide the MSB's assessment of willingness to host the APM Project

With these objectives in mind, the Peer Review was conducted in a collaborative manner between the NWMO/DPRA team and the MSB/GHD team while maintaining independence during the process. **Appendix B** includes the Peer Review Protocol established in June 2021 and **Figure 2.1** summarizes the process followed.

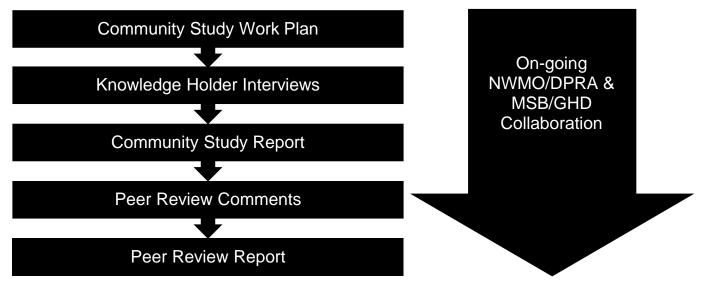


Figure 2.1 The Peer Review Protocol Process

With Figure 2.1 in mind, the following identifies the primary activities carried out by the PRT:

Community Study Work Plan

 Review the Statement of Work associated with the Community Study (CS) prepared by MSB (May 2021) to better understand the stated objectives

- Gain a greater understanding of the APM Project and area conditions including reviewing and providing comments on NWMO's Project design reports and considering responses received from NWMO
- Hold on-going discussions as required with the NWMO/DPRA team providing input where appropriate (e.g., data sources to be reviewed, study area boundaries, knowledge holders to be interviewed, etc.)
- Review and provide comments on the draft Work Plan associated with the CS prepared by the NWMO/DPRA team and consider responses received from the NWMO/DPRA team as part of them finalizing the Work Plan before its implementation

Knowledge Holder Interviews

- Attend Knowledge Holder interviews organized by NWMO to listen firsthand, ask questions, and seek clarifications. Review and provide comments on draft meeting minutes prepared by NWMO.
- Hold on-going discussions as required with the GHD Leadership Team (e.g., receive Project updates and information, ask questions, seek clarification, etc.)

Community Study Report

- Attend CS Draft Report Status Update Meetings organized by the NWMO/DPRA team
- Review the CS Draft Report prepared by the NWMO/DPRA team
- Review the CS Final Report prepared by the NWMO/DPRA team

Peer Review Comments

- Develop a preliminary list of comments including initial impressions, observations, and any potential issues and/or concerns with the CS Draft Report based on several documents and information as described in **Section 3**
- Attend a CS Draft Report Check-in Meeting with the GHD Leadership Team and MSB to discuss the preliminary list of comments and confirm those to be provided to the NWMO/DPRA team
- Provide the preliminary list of comments on the CS Draft Report to the NWMO/DPRA team for their understanding of the PRT's initial impressions, observations, and any potential issues and/or concerns
- Attend a CS Draft Report Working Session with the NWMO/DPRA team to discuss the preliminary list of comments and work through them collectively in a collaborative manner. Through the Working Session some comments were determined not to be applicable to the CS based on the clarifying discussions. In addition, through the Working Session it was agreed that those comments associated with the Draft Report's structure, or to such items like how sources or exhibits are referenced, or spelling and grammar, would be excluded and the focus would be more on content and substance as it related to the final Work Plan.
- In some situations, it was agreed to between the GHD Leadership Team/MSB and the NWMO/DPRA team that certain sections of the CS Draft Report or the entire document itself should be revised and resubmitted for review because of the nature and extent of the preliminary comments provided. In the situations of the entire document, the formal set of comments were held pending receipt of the revised CS Draft Report. Upon receipt, the revised CS Draft Report was reviewed, the preliminary comments updated accordingly for submission, and further discussions were held between the GHD Leadership Team/MSB and the NWMO/DPRA team prior to formal comments being submitted.
- Submit the formal set of comments on the CS Draft or revised Draft Report to the NWMO/DPRA team for their review and responses
- Review the responses from the NWMO/DPRA team to the formal set of comments and ensure there were no significant outstanding issues and/or concerns

Peer Review Report

- Prepare the draft Peer Review Report and submit to MSB for review
- Finalize the draft Peer Review Report based on any comments received and provide to MSB

2.2 Key Activities Associated with the Peer Review of the Local Traffic Effects Study

With the preceding process in mind, **Table 2.1** lists the key activities associated with the Peer Review carried out by the PRT comprising the SMEs at R.J. Burnside (Jeremy Taylor and Henry Centen) in combination with the GHD Leadership Team (Greg Ferraro and Ian Dobrindt) for the Local Traffic Effects Study prepared by Morrison Hershfield. The Local Traffic Effects Study was initiated by Morrison Hershfield following finalization of the Work Plan in October 2021 and culminated in the Final Draft Report being submitted to GHD on June 14, 2022.

Table 2.1 Key Activities Associated with the Peer Review of the Local Traffic Effects Study

Key Activities	Date	Parties Involved
Interviews with Road Authorities (Bruce County, MSB, Huron County, Huron Kinloss)	October 13, 2021 – October 20, 2021	R.J. Burnside (Jeremy Taylor and Henry Centen), GHD (Greg Ferraro and Ian Dobrindt), Morrison Hershfield (Brad Hewton and Andres Baez Rodriguez), Keir Corp. (Andy Keir)
Review of the Draft Southwestern Ontario Local Traffic Study Work Plan (I23) issued by DPRA (August 11, 2021)	August 2021 – October 2021	R.J. Burnside (Jeremy Taylor and Henry Centen), GHD (Greg Ferraro and Ian Dobrindt)
Issuance of the Peer Review Team comment disposition table on the Draft Work Plan	September 14, 2021	R.J. Burnside (Jeremy Taylor and Henry Centen), GHD (Greg Ferraro and Ian Dobrindt)
Review of the Final Southwestern Ontario Local Traffic Study Work Plan (I23) issued by DPRA (October 8, 2021)	October 2021 – April 2022	R.J. Burnside (Jeremy Taylor and Henry Centen), GHD (Greg Ferraro and Ian Dobrindt)
Peer Review Team and DPRA Project Status Update Meeting for the Aggregate Resources, Infrastructure, Roads and Traffic Studies	October 28, 2021, December 13, 2021, and January 12, 2022	R.J. Burnside (Jeremy Taylor and Henry Centen), GHD (Greg Ferraro and Ian Dobrindt), NWMO (Charlene Easton), DPRA (Vicki McCulloch), Morrison Hershfield (Brad Hewton and Andres Baez Rodriguez), Keir Corp (Andy Keir)
Review of Local Traffic Study Report (I23) Draft – Southwestern Ontario Community Study issued by Morrison Hershfield (April 8, 2022)	January 2022 – April 2022	R.J. Burnside (Jeremy Taylor and Henry Centen), GHD (Greg Ferraro and Ian Dobrindt)
Peer Review Team Check-in Meeting to review/confirm preliminary comments	April 29, 2022	R.J. Burnside (Jeremy Taylor and Henry Centen), GHD (Greg Ferraro and Ian Dobrindt), MSB (Catherine Simpson)
Issuance of the Peer Review Team preliminary comment disposition table on the Draft Report to DPRA	May 5, 2022	R.J. Burnside (Jeremy Taylor and Henry Centen), GHD (Greg Ferraro and Ian Dobrindt)
Peer Review Team and DPRA Project Update Meeting to discuss/understand the preliminary comments	May 10, 2022	R.J. Burnside (Jeremy Taylor and Henry Centen), GHD (Greg Ferraro and Ian Dobrindt), MSB (Catherine Simpson), NWMO (Charlene Easton), DPRA (Vicki McCulloch), Morrison Hershfield (Brad Hewton and Andres Baez Rodriguez), Keir Corp (Andy Keir)
Issuance of the Peer Review Team formal comments disposition table on the Draft Report	June 2, 2022	R.J. Burnside (Jeremy Taylor and Henry Centen), GHD (Greg Ferraro and Ian Dobrindt)
Review of the Local Traffic Study Report Final Draft – Southwestern Ontario Community Study issued by Morrison Hershfield (June 14, 2022)	June 14 - 20, 2022	R.J. Burnside (Jeremy Taylor and Henry Centen), GHD (Greg Ferraro and Ian Dobrindt)

3. Key Documentation and Information Reviewed

As stated, several documents and information were considered by the PRT in carrying out the Peer Review Protocol. **Table 3.1** lists the key documents and information considered by the PRT in the review of the Local Traffic Effects Study.

Table 3.1 Key Documents and Information Considered in the Peer Review of the Local Traffic Effects Study

Document Name/Information	Author/Source/Date	Description/Application
Implementing Adaptive Phased Management 2021 to 2025	Nuclear Waste Management Organization (NWMO) (March 2021)	Reviewed to understand the Project planning timelines. The PRT provided comments (November 18, 2021) for NWMO's consideration and response (January 27, 2022).
Local Traffic Effects Study - Statement of Work	Municipality of South Bruce (MSB) (May 2021)	Reviewed to understand the objectives and scope of work including inputs to the Local Traffic Effects Study and its relationship to other Community Studies as envisioned by the Municipality of South Bruce (MSB).
Knowledge Holder Interviews (Bruce County; MSB Public Works; Huron County; Township of Huron-Kinloss; Teeswater Concrete)	NWMO (August – October 2021)	Attended in-person to listen firsthand, ask questions, and seek clarifications as part of gaining an understanding of key knowledge holders' perspectives on the Project. Reviewed and provided comments on draft meeting minutes prepared by NWMO prior to their issuance to meeting attendees.
Deep Geological Repository Conceptual Design Report – Crystalline / Sedimentary Rock (APM-REP-00440-0211-R000)	NWMO (September 2021)	All members of the PRT reviewed the Executive Summary to obtain an understanding of the below ground facility. Subsequently, additional sections of the Report were reviewed, by certain members of the PRT as appropriate, to obtain a greater level of understanding specific to their areas of study (e.g., Facility Design and Operation, Aggregate Resources Study, Local Traffic Effects Study, Waste Management, etc.). The PRT provided comments (November 18, 2021) for NWMO's consideration and response (January 27, 2022).
Deep Geological Repository Transportation System Conceptual Design Report - Crystalline / Sedimentary Rock (APM-REP- 00440-0209-R001)	NWMO (September 2021)	Reviewed if the transportation of used fuel was applicable to the areas of study (e.g., Aggregate Resources Study, Local Traffic Effects Study, etc.). The PRT provided comments (November 18, 2021) for NWMO's consideration and response (January 27, 2022).
APM 2021 DGR Lifecycle Cost Estimate Update Summary Report (NWMO-TR-2021-11 R001)	NWMO (September 2021)	Reviewed to better understand the scope and magnitude of the Project components. The PRT provided comments (November 18, 2021) for NWMO's consideration and response (January 27, 2022).

Document Name/Information	Author/Source/Date	Description/Application
Community Studies Planning Assumptions	NWMO (October 18, 2021)	Reviewed to understand certain parameters for the Project. The PRT provided comments (November 18, 2021) for NWMO's consideration and response (January 27, 2022).
Southwestern Ontario Local Traffic Study Work Plan (I23)	DPRA Canada Inc. (October 8, 2021)	Reviewed to understand the purpose and outcome of the Local Traffic Effects Study including its linkages to other Community Studies, scope and assumptions, approach, and key information sources/data collection.
Local Traffic Study Report (I23) Draft – Southwestern Ontario Community Study	Morrison Hershfield (April 8, 2022)	The draft output/deliverable from completing the final Work Plan for review by the PRT.
South Bruce and Area Growth Expectations Memo	metroeconomics (February 7, 2022)	Reviewed to understand the assessment of the potential for economic and demographic growth over the period from 2022 to 2046 of the Core Study Area including MSB both from the perspectives of growth independent of the Project as well as the result of the Project.
Local Traffic Study Report (I23) Final Draft – Southwestern Ontario Community Study	Morrison Hershfield (June 14, 2022)	The final output/deliverable from completing the final Work Plan for confirmation by the PRT.

4. Peer Review Findings and Resolution

4.1 Comments on the Local Traffic Effects Study

The PRT provided their formal comments to NWMO/DPRA team on June 2, 2022, in the form of a memo and comment disposition table (**Appendix C**). As per on-going discussions between the PRT and the NWMO/DPRA team, the focus of the peer review and resolution of comments was to be on those of a more substantive nature. As a result, while **Appendix C** lists all the formal comments on the Local Traffic Effects Study, **Table 4.1** (3rd **column**) lists only those comments of a more substantive nature in the Comment Disposition Table. In reply, NWMO/DPRA provided a documented response describing how and where the formal comments were to be addressed in the Final Draft Report (**Table 4.1**, 4th **column**). Upon receipt, the PRT reviewed the Final Draft Report to ensure the documented responses were, in fact, incorporated into the Local Traffic Effects Study (**Table 4.1**, 5th **column**).

As stated in **Table 4.1**, the PRT acknowledges that the Final Draft Report will be updated in response to PRT comments, but there are still several comments that were only partially addressed. As a result, the PRT recommends that the following should be considered in any future follow up studies undertaken by NWMO to fully respond to those comments:

- Expand the preliminary high-level capacity review to a more detailed operational review of the functionality and safety of the haul routes and commuter routes that connect the Project site to the arterial road networks. The operational criteria related to the "Last Mile" Municipal local roads should address the specific needs of that subset of the road network, including its ability to accommodate the increased truck and commuter traffic, as well as impacts at specific locations (e.g., travel through Teeswater).
- Identify the traffic impacts of haul routes, particularly to and from aggregate pits that will be chosen to supply the
 Project, with consideration of the increased intensity of truck traffic in the initial period of construction operations.
- Confirm the location and strategy related to the movement of the excavated rock and its impact on traffic operations on the road network external to the Project Site.

- Undertake a detailed review of the safety of the traffic operations on the road network, including the transport of the Used Nuclear Fuel, emergency response requirements, and impacts to non-vehicular travel (e.g., agricultural equipment, horse and buggy, cyclists, pedestrian), as well as speeding and passing opportunity considerations.
- Consider including maintenance and monitoring requirements of traffic operations, particularly during the heavier construction periods, in the future studies, to ensure that the conditions for safe travel are maintained on the road network and that agreements/funding for timely response to traffic issues are developed.
- Coordinate the findings of the Roads Conditions Community Study, and future road condition studies, with the Local Traffic Effects Study, particularly as it relates to the road cross section and road structure requirements (e.g., paved shoulders), as well as right-of-way needs.

Local Traffic Effects Study Draft Report Comment Disposition Table Table 4.1

Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
1	General	It would be beneficial to provide information on how the Study specifically informs the Guiding Principles be provided.	The principles that MSB identified as having alignment with the Local Traffic Study were provided in February 2022, As requested by MSB, the relevant principles are included in the report; refer to Subsection 1.3. The <i>Road Conditions Study</i> is relevant to MSB Guiding Principles (2020) #2, #3, #7, #30, #31 and #36. The <i>Local Traffic Study</i> provides information directly relevant to Principles #30 and #31 and contributes more generally to Principles #2, #3, #7 and #36.	Comment satisfactorily addressed in revised report.
			MH can add text in the revised report to indicate linkages with future work/studies. For example, in Section 1.3 will add:	
			"The Local Traffic Study provides information that the NWMO and MSB can use to inform agreements and funding arrangements (as described by Principles #30 and #31) in the future as part of negotiations of a draft hosting agreement and/ or subsequent studies/ discussions if the South Bruce Area is ultimately selected as the Project location. For clarity, development of these types of agreements/arrangements is not part of the objectives / work plan for this study." Similar text can also be added to the Section 6 Options Assessment, and in the Section 7 Summary.	
2	General	The Project includes a repository for used nuclear fuel and a related Centre of Expertise. The report has provided a highlevel assessment of the local traffic effects of the Project on the Municipal and County road network, establishing existing and projected traffic volumes / types, options for potential road improvements and other mitigation measures to accommodate these traffic volumes / types, identifying	 Truck traffic was included in the 4-step traffic model (Section 4.2.2) as per info provided by NWMO. Therefore, their impact has been also accounted for. In the revised report, MH will identify further analysis of MSB roads as an option for future studies including but not limited to additional in-depth two-lane roadway analysis (i.e., passing lanes, LOS), safety reviews, and context-sensitive review for local 	Comment satisfactorily addressed in revised report.

Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
		further study requirements and options for a proposed monitoring program. It is recommended that the Municipal Roads within MSB be further evaluated beyond the Summer Average Daily Traffic (SADT) capacity since the % of volume increase to current is significant for Municipal Roads. In addition, the impact of truck traffic on the Municipal Roads should be considered within the assessment.	roadways (i.e. land uses, operational, agricultural vehicles, % increase of truck traffic that will interrelate with AT, safety).	
3	General	Access for emergency services to the Site needs to be considered. It is recommended that access parameters / routes be identified for such access and integrate with the Emergency Services Study.	The draft Emergency Services Study (March 2022) does not go this far in terms of specific identification of emergency access to the potential Project site. NWMO's site planning/design has not advanced to that level of detail at this point in the study process. This will be addressed in future studies, if the South Bruce Area is ultimately selected as the Project location.	Comment expected to be addressed by future work/studies.
10	2.2.2	It is recommended to note that intersection capacity utilization (ICU) is a high-level review of potential congestion only. It is recommended that that future intersection studies be undertaken to forecast the volume/capacity and Level of Service at intersections to confirm intersection improvement requirements (i.e., turning lanes, traffic controls, signal adjustments, etc.).	In the revised report, MH will identify suggestions/ options such as this for future studies that will be required to further understand traffic context and potential effects, if the Project is located in the South Bruce Area.	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.
11	2.2.3	Safety field observations were relatively cursory. It is recommended that future studies be undertaken to establish collision rates and related causative factors for mitigation.	In the revised report, MH will identify suggestions/ options such as this for future studies that will be required to further understand traffic context such as collision rates, if the Project is located in the South Bruce Area.	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads

Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
12	2.4	It is recommended to explain why some information required was not available. While acknowledging that specific access points to the Site are not currently available, it is recommended that future detailed studies be carried out to identify constraints and opportunities to accessing the Site. Elaborate on traffic requirements for the UNF transport, from the AECOM, 2021 report.	Section 2.4 identifies information available for this study; however, it does not elaborate on why this information is not available. In the revised report, MH will identify suggestions/ options such as this for future studies that will be required to further understand constraints and opportunities for site access, if the Project is located in the South Bruce Area.	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads
18	3.2	It is recommended in future studies for Municipal Roads the analysis should be more of a functional analysis rather than strictly capacity analysis. Additional criteria beyond the SADT should be completed for the impact analysis to Municipal Roads (e.g., % of existing SADT to proposed SADT, agricultural interaction, passing opportunities). The Municipal Roads within MSB are not likely ever intended to operate at 11,500 ADT).	 The SADT analysis is intended as a screening tool to identify segments of concern that require further investigation in future studies. As noted above, Further analysis of MSB roads will be identified for future studies including but not limited to additional in-depth two-lane roadway analysis (i.e., passing lanes, LOS), safety reviews, and context-sensitive review for local roadways (i.e., land uses, operational, agricultural vehicles, % increase of truck traffic that will interrelate with AT, safety). 	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.
22	3.2 Table 3	Future detailed studies should be recommended to review the operational / functional adequacy of the 'Last Mile' roads to accommodate the traffic volumes/types forecasted, beyond the capacity criteria considered in this Study.	As noted above, Further analysis of MSB roads will be identified for future studies including but not limited to additional indepth two-lane roadway analysis (i.e., passing lanes, LOS), safety reviews, and context-sensitive review for local roadways (i.e., land uses, operational, agricultural vehicles, % increase of truck traffic that will interrelate with AT, safety).	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.

Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
23	4.1 Table 4	Reference to "Ignace" should be "South Bruce". Comments to be included to confirm that excavated rock is transported within the Site and not affecting external road network.	Table will be revised. NWMO has confirmed that the location of the Excavated Rock Management Area/ERMA has not been finalized at this time. However, at present, it is NWMO's plan to store all of the excavated rock material on site. This will be reflected in the report text.	Comment satisfactorily addressed in revised report.
24	4.1 Table 4	Add summary of findings of <i>Emergency</i> Services Study related to providing emergency access to the Project Site.	As per comment 3 above, Emergency Services Study does not go this far in terms of specific identification of emergency access to the site at this point in the study process.	Acknowledged.
25	4.2.1	The average daily trips per employee at the Project Site and Centre of Expertise (i.e., 3.34 trip/employee, total two-way) is based on the average rate established for Industrial Parks (Code 130) from the trip generation manual (Institute of Transportation Engineers, ITE). The ITE studies are based on operations at industrial facilities. Further assessment should be provided to confirm the applicability of these rates for preconstruction and construction operations.	 ITE rates were used to estimate commuting staff vehicle traffic during operation Pre/Construction traffic trip generation is based on estimated trips for excavation, aggregates and construction material as provided by NWMO (NWMO, November 24, 2021). 	Acknowledged.
26	4.2.1 Table 6	The table provides average daily trips to the various communities in the study area, however future studies are recommended to establish trip distribution once additional details on the Site access locations are identified.	A colour graduated scale was used in the table to convey relative impact (based on directionality) to/from the various communities, with red being the highest and green the lowest impact. — A note will be added to recommend refined distribution/assignment of trips once additional details on site access(es) become available.	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.

Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
27	4.2.2 Table 7	The truck traffic is averaged over the construction period (10 years). It should be noted that the average trucks / week will significantly increase during certain periods (e.g., first two-years of construction etc.) and should be adjusted accordingly, Also, the trucks / week indicated appear to be one-way trips and therefore should be doubled to account for two-way traffic. The majority of truck traffic is related to the granular material, concrete aggregate and excavated rock. Confirm if truck traffic, required to complete improvements to access roads/bridges, is not included in the table and should be added, including in the short-term pre-construction period (i.e., before 2033).	 Truck traffic round trip assumptions were provided by NWMO Nov 24, 2021 (Community Studies Planning Assumptions – South Bruce Traffic). Comment and graphic will be included regarding distribution of trips during construction. Trips on Table are Roundtrips (Twoway) as provided by NWMO. Additional clarifications/assumptions will be made regarding assumptions of traffic for road/bridge improvements. Passenger car equivalent factor will be applied to truck traffic. 	Comment satisfactorily addressed in revised report.
28	4.2.2 Table 8	Distribution via CR4 appears to be understated. South 2 distribution should be to/from CR4, rather than Hwy 9. Future studies are recommended to confirm distribution once additional details on the Site access locations are identified. The major truck generator operations/distribution should be confirmed in future studies (i.e., concrete / aggregate supply and removal of excavated rock).	A note will be added to recommend refined distribution/assignment of trips as part of future studies, once additional details on site access(es) become available.	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.
29	5.1	Future studies are recommended to review the operational / functional adequacy of the 'Last Mile' roads to accommodate the traffic volumes / types forecasted, beyond the capacity criteria considered in this study.	As noted above, further analysis of MSB roads will be identified for future studies including but not limited to additional indepth two-lane roadway analysis (i.e., passing lanes, LOS), safety reviews, and context-sensitive review for local roadways (i.e., land uses, operational, agricultural vehicles, % increase of truck traffic that will interrelate with AT, safety).	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.

Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
30	5.1	Future review of functional road considerations is recommended, particularly for the Last Mile roads in the core area, particularly on roads that have other users (e.g., horse and buggy, cyclists) and where passing lanes and shoulders are a concern.	As noted above, further analysis of MSB roads will be identified for future studies including but not limited to additional indepth two-lane roadway analysis (i.e., passing lanes, LOS), safety reviews, and context-sensitive review for local roadways (i.e., land uses, operational, agricultural vehicles, % increase of truck traffic that will interrelate with AT, safety).	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.
32	6.1	The 'Last Mile' Municipal Roads should be listed for future study, considering the magnitude of the cumulative impact of the Project and background growth.	A list of potential 'last mile' MSB roads for future study will be added, in coordination with the <i>Road Conditions Study</i>	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.
33	6.2 Table 11	It is recommended detailed Synchro analysis of intersection operations, based on HCM LOS for the various movements at the intersection be undertaken as part of future study to confirm intersection improvements associated with the project.	In the revised report, MH will identify suggestions/ options such as this for future studies that will be required to further understand traffic context and potential effects, if the Project is located in the South Bruce Area.	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.
37	7.1 (1)	Conclusion that there are no substantial negative impacts, in terms of operational constraints from the Project, over and above background growth impacts, cannot be fully concluded by this high-level study. Future studies are recommended to confirm mitigation measures to address traffic impacts.	Language will be revised.	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.
38	7.1 (3)	It is concluded that the low capacity- utilization ratios indicate virtually unlimited availability of gaps for passing manoeuvres. We recommend that future studies be provided to confirm the safety of passing on the roads in the study area.	Language will be revised to clarify capacity-utilization ratios in a wider analysis framework for future studies. As noted above, further analysis of MSB roads will be identified for future studies including but not limited to additional indepth two-lane roadway analysis (i.e., passing lanes, LOS), safety reviews, and context-sensitive review for local roadways (i.e., land uses, operational, agricultural vehicles, % increase of truck traffic that will interrelate with AT, safety).	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.

Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
39	7.1 (5)	Additional future study is recommended for roads that are near-to-capacity. It is recommended that future detailed study be provided for all roads that are used for access or goods supply for the project, between the Provincial Highways and the Site.	Language will be revised. As noted above, further analysis of MSB roads will be identified for future studies including but not limited to additional indepth two-lane roadway analysis (i.e., passing lanes, LOS), safety reviews, and context-sensitive review for local roadways (i.e., land uses, operational, agricultural vehicles, % increase of truck traffic that will interrelate with AT, safety).	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.
40	7.1 (7)	It should be recommended that future studies be completed to confirm passing opportunities and safety for vulnerable road users in the road network within the study area.	Language will be revised. As noted above, further analysis of MSB roads will be identified for future studies including but not limited to additional indepth two-lane roadway analysis (i.e., passing lanes, LOS), safety reviews, and context-sensitive review for local roadways (i.e., land uses, operational, agricultural vehicles, % increase of truck traffic that will interrelate with AT, safety).	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads
43	Appendix D	It would be beneficial to provide an overall summarization of the safety issues identified in the field review work and include in main body of report.	This will be provided in the revised report.	Comment satisfactorily addressed in revised report.

4.2 Comments on Adherence to the Work Plan

The Local Traffic Effects Study complies with the approved Work Plan with a few noted exceptions as indicted in **Table 4.2**.

The PRT is of the view that the Work Plan was generally followed with some deviations based on the availability of data. Detailed geometric and geotechnical road information, likely truck routes, access locations, detailed information on the construction activities, including maintenance and monitoring requirements, as well as special transport requirements for the nuclear fuel transport, were not available as part of this initial baseline study work. As a result, this preliminary study is a beneficial initial assessment in understanding baseline conditions and setting the foundation for further study/assessment of the traffic operations in future studies carried out by NWMO.

Table 4.2 Adherence to the Work Plan

Step #	Step	Description of Activities	Peer Review Comments	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments
Step 1	Data Collection – Secondary/ Primary; updated Project assumptions; information from other related community studies	 a. Background review b. Data gap assessment Annual Average Daily Traffic counts (AADTs), Intersection Counts, vehicle classification, Collision data (if available) GIS base municipal mapping c. Field work d. Collect Network Traffic Data from neighbouring municipalities and the Ontario Ministry of Transportation (MTO) e. Conduct 4-hour counts for up to eight locations, if necessary 	Collision data was not obtained. The data should be collected and assessed as part of recommended future studies.	Will be incorporated into discussion of future study needs in the revised report	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed collision analysis on the Municipal roads.
Step 2	Provide Inputs to and take Outputs from Other Studies	a. Complete baseline road network inventory • Study Area Baseline Road Network Inventory (road classification, laning, review as-builts drawings, signage, posted speeds, etc.) • Identify roads used by the Mennonite community that will	As-built drawings for roads not available. Future studies should obtain geometric and geotechnical data. Capacity review is high-level. Future studies should obtain operational information (operational delay, passing constraints). Likely truck routes for the Project have not been defined and no origin-destination review was included for truck traffic. It is recommended that future studies assess operations, once access locations and haul routes	Will be incorporated into discussion of future study needs in the revised report	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address functional and contextual impact of the Project on the Municipal roads.

Step # Step Description of Activities Peer Review	Comments How and Where Comments Peer Review Responses to DPRA Comments
meed to enable horse and carriage b. Complete baseline conditions assessment (operations, capacity) • Highway Capacity Manual (HCM) Two-Lane Highway Sections Capacity Analysis (Synchro) • Collision Data Review (if available) • Prepare baseline network overview map c. Complete travel demand forecasting • Develop Trip Generation Analysis Scenarios for Construction and Operation Phases based on Employment projections (peak demand as provided by others) • Develop travel demand forecasting model spreadsheets • Estimate Travel Demand and likely routes of Used Nuclear Full Transporters (Trucks)	are Addressed DPRA Comments ed future confirm that ations will meet cort cout in the afe and Secure Canada's

Step #	Step	Description of Activities	Peer Review Comments	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments
		Review the Safe and Secure Transportation of Canada's Used Nuclear Fuel for special transport requirements that may apply Travel Mode Assumptions/adjustments Trip Distribution Assumptions based on current O-D trends or engineering judgement Trip assignment onto available road networks based on shortest path principles			
Step 3	Analysis and assessment, identification of effects management options	a. Complete background and post-development conditions assessment (capacity/operations/ safety) a. Estimate background traffic data for study horizons based on historic growth traffic estimates or as indicated by the municipality b. Prepare Post-Development Network Traffic Model spreadsheets. c. Evaluate HCM Capacity conditions for two-lane	Summary network traffic exhibits were not provided for construction period or post-construction period. Potential road safety impacts of the Project and potential mitigation measures need to be addressed as part of future recommended studies. The studies which should be based on operational criteria (e.g., LOS delays, functional classifications). Maintenance and monitoring during construction was not considered.	Summary network traffic exhibits will be provided with the revised report for preconstruction, construction and operations period. Potential road safety impact assessment and mitigation will be included as part of the recommended set of future studies. Maintenance and monitoring during construction was not part of the scope. A recommendation on the matter will be added to the revised report for future studies.	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address functional and contextual impact of the Project on the Municipal roads.

Step #	Step	Descript	tion of Activities	Peer Review Comments	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments
			nway segments oss the network			
		ope dev	eluate intersection eration for post- relopment scenarios nchro)			
		cap sec inte pote	ntify network racity impacts (road tions and resections) and ential mitigation asures			
		net pos	pare summary work exhibits for t-development narios			
		consider generate potentia (i.e., traf intersect Safe and Transpot Used Not special to	future road safety rations for Site ed traffic and I countermeasures. ffic controls, speeds, tion configuration, d Secure ortation of Canada's uclear Fuel for transport ments requirements)			
		data and studies	o considerations d findings from other that are pertinent to ect study			
		results,	s of modelling alternative measures scenario ns			

Step #	Step	Description of Activities	Peer Review Comments	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments
		e. Provide options for feasible improvements, potential traffic management options, or other mitigation measures (i.e., employee travel options)			
		f. Provide options for traffic monitoring programs			
		g. Other Transportation Demand Management programs			
Step 4	Observations and Conclusions	a. Prepare a summary of findings b. Set out observations and conclusions			

4.3 Municipality of South Bruce's Guiding Principles

The Local Traffic Effects Study informs select principles of the 36 guiding principles established by MSB. The Municipality published a Project Visioning report based on community workshops held in January 2020 that identified areas of community concern and opportunities. Based on the Project Visioning report and further public consultation, MSB passed a Council resolution endorsing the 36 principles that will guide their assessment of willingness to host the APM Project. In light of their importance to MSB, the principles have been individually linked to each of the studies as appropriate to ensure that they were fully considered or accounted for in completing the work (**Appendix D**).

Six of the 36 principles are linked to the Local Traffic Effects Study: numbers 2, 3, 7, 30, 31, and 36. **Table 4.3** lists the six principles and how the Local Traffic Effects Study informs those principles.

Table 4.3 The Principles Associated with the Local Traffic Effects Study

Principle # and Description	Consideration of the Principle in the Study
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.	The Local Traffic Effects Study informs Guiding Principle 2 by forecasting the existing and future traffic load on the existing road system, describing the traffic effects associated with the Project, identifying options for potential road / traffic improvements and other mitigation measures. The options for a monitoring program for traffic operations should be further developed in future studies, once additional information is available (e.g., haul routes, access locations.
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.	The Local Traffic Effects Study informs Guiding Principle 3 by providing a preliminary identification of the traffic constraints / opportunities for goods movement to / from the DGR site.
manaported to the repository site.	Specific routes for the transport of Used Nuclear Fuel (USF) are not available and will be subject to regulatory approval.
	The PRT recommends that future detailed traffic operational studies be completed by NWMO to ensure that potential routes are adequately designed and maintained to accommodate the transport of UNF.
7. The NWMO must commit to preparing construction management and operation plans that detail the measures the NWMO	The Local Traffic Effects Study forecasts project-specific travel demand for both the work force and construction materials traffic loads, based on key findings from other NWMO Community Studies.
will implement to mitigate the impacts of construction and operation of the Project.	The PRT recommends that future studies be completed to identify specific haul routes and the mitigation of construction and operation of the Project on these routes The result of the traffic studies should be incorporated into the future road condition studies, to identify road improvement needs and mitigation requirements.
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.	The Local Traffic Effects Study provides a preliminary review of the existing and projected volumetric capacity of the MSB road network in the study area. The PRT recommends that future detailed studies be completed to fully identify the upgrade requirements to the road network, the timing of the upgrades and the funding of such upgrades,
	The impact of the significant increases of truck traffic, particularly during the initial years of construction, requires further reviews in future studies, pending haul routes and access locations being confirmed.
	The Local Traffic Effects Study acknowledges the need for future study and provides direction in the future work required to validate the initial work that has been completed.

Principle # and Description	Consideration of the Principle in the Study
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.	The Local Traffic Effects Study provides a preliminary review of the potential routes to be used for construction and operation of the Project. The PRT recommends that future studies be completed to identify specific haul routes and operating routes, together with monitoring requirements, to ensure that proper approvals / funding / agreements are implemented for maintenance and repair of roads and bridges used for the Project. The monitoring program should be sufficient to identify the causative factors necessitating the maintenance and repairs of the municipal roads and bridges, and responsibilities for implementing appropriate responses.
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.	The Local Traffic Effects Study provides a preliminary review of potential travel routes that may be impacted in the broader region outside of MSB. The PRT recommends that future studies be completed to further develop and coordinate the details of mitigation works required along the routes in these broader areas. The Local Traffic Effects Study, together with more detailed future studies, can provide information that may be used in other Community Studies to assess the costs (e.g., road improvements, growth requirements) versus benefits (e.g., Development Charges, additional tax revenue from growth).

4.4 Conclusions of the Peer Review

The PRT is of the view that the Local Traffic Effects Study subject to the available information was carried out in accordance with the approved Work Plan. The Study provides a preliminary assessment of the traffic volumes expected from the Project (DGR development and the Centre of Expertise) and background growth. The capacity analysis provides a good understanding of the major roads and intersections in the study area, identifying where further investigation may be recommended to address potential capacity issues. In addition, the Study identifies potential traffic operational issues (i.e., accommodation of vulnerable users, safety), along with possible mitigation strategies, to address such issues. The Study acknowledges that future functional studies may be considered for the 'Last Mile' roads.

The comparative analysis of traffic impacts, with and without the Project, has been largely based on high-level corridor capacity criteria of the roads, rather than the detailed Level of Service and functional capacity of the road network, which is of particular importance on the local Municipal roads.

The Study includes insufficient information to make conclusive statements on the overall traffic impact of the Project on the Municipal roads, without a more thorough review / detail analysis of traffic operations. Truck routes, Site access locations, detailed information on the construction activities and schedules, as well as special transport requirements required for the nuclear fuel transport, were not available at the time of completing the Study and have not been included as part of this initial baseline study work.

The assessment of the impact of the significant increases of truck and worker commuter traffic, particularly during the initial years of construction, requires additional review in future studies, pending haul routes, the location of the ERMA and Site access locations being confirmed. The determination of access locations and circulation roads internal to the Project Site should be confirmed to further assess the traffic impact from the Project, particularly with respect to the movement of the excavated rock and the import of aggregate to the Site.

The following items should be considered in future study work, as additional information becomes available:

- Expand the preliminary high-level capacity review to a more detailed operational review of the functionality and safety of the haul routes and commuter routes that connect the Project site to the arterial road networks. The operational criteria related to the "Last Mile" Municipal local roads should address the specific needs of that subset of the road network, including its ability to accommodate the increased truck and commuter traffic, as well as impacts at specific locations (e.g., travel through Teeswater).
- Identify the traffic impacts of haul routes, particularly to and from the aggregate pits that will be chosen to supply
 the Project, with consideration of the increased intensity of truck traffic in the initial period of construction
 operations

- Confirm the location and strategy related to the movement of the excavated rock and its impact on traffic operations on the road network external to the Project Site
- Undertake a detailed review of the safety of the traffic operations on the road network, including the transport of the Used Nuclear Fuel, emergency response requirements, and impacts to non-vehicular travel (e.g., agricultural equipment, horse and buggy, cyclists, pedestrian), as well as speeding and passing opportunity considerations
- Consider including maintenance and monitoring requirements of traffic operations, particularly during the heavier construction periods, in the future studies, to ensure that the conditions for safe travel are maintained on the road network and that agreements/funding for timely response to traffic issues are developed
- Coordinate the findings of the Roads Conditions Community Study, and future road condition studies, with the
 Local Traffic Effects Study, particularly as it relates to the road cross section and road structure requirements
 (e.g., paved shoulders), as well as right-of-way needs. The timing of the road upgrades identified may affect the
 timing and the rate at which the Project Site preparation work can be carried out.

The PRT has found that the Study informs Guiding Principles, specifically 30 and 31, however future studies are recommended to fully identify the upgrade requirements to the road network and the funding of such upgrades, as well as to identify specific haul routes and operating routes for the Project, along with the required road use agreement and funding for maintenance and repair of such routes. The Study also informs Guiding Principles 2, 3, 7, and 36, as it is one of the contributing factors to these other Guiding Principles.

Appendices

Appendix A

List of Socio-Economic Community Studies



Appendix A. List of Socio-Economic Community Studies

ID	Study Name	Study Proponent	Lead Consultant
E01	Local Economic Development Study & Strategy	MSB	Deloitte
E02	Economic Development Program - Youth	MSB	Deloitte
E03	Local Hiring Effects Study & Strategy	MSB	Deloitte
E04	Demographics	MSB	Keir Corp.
E05	Agricultural Task Force/Agricultural Business Impact Study	MSB	Deloitte
E06	Fiscal Impact and Public Finance	MSB	Watson & Associates Economists
E07	Tourism Industry Effects & Strategy	MSB	Deloitte
E08	Housing Needs and Demand Analysis Study	NWMO, MSB	Keir Corp.
E09	Labour Baseline Study	NWMO	Keir Corp.
E10	Workforce Development Study	NWMO	Keir Corp.
E11	Regional Economic Development Study	NWMO	Keir Corp.
E12	Property Value Monitoring Program		
I21	Aggregate Resources Study	NWMO, MSB	Keir Corp.
122	Infrastructure Baseline and Feasibility Study	NWMO	Morrison Hershfield
123	Local Traffic Effects Study	NWMO	Morrison Hershfield
124	Road Conditions Effects Study	NWMO	Morrison Hershfield
S13	Effects on Recreational Resources	MSB	Tract Consulting
S14	Local/Regional Education Study	NWMO, MSB	DPRA
S15	Land Use Study	NWMO, MSB	DPRA
S16	Social Programs Study	NWMO, MSB	DPRA
S17	Emergency Services Study	NWMO	DPRA
S18	Vulnerable Populations Baseline and Effects Study	NWMO	DPRA
S19	Effects on Community Safety		
S20	Community Health Programs and Health Infrastructure Study	NWMO	DPRA

Appendix B

Peer Review Protocol



South Bruce Consultants Peer Review Protocol

Protocol for Peer Review Process

- The scope of the peer review is variable for each NWMO study (Study). The scope and objective of each Study is variable. The Study may include development of information, data and documents in the form of a:
 - Statement of Work
 - Work plan
 - Baseline conditions
 - Modeling/prediction/forecast of future conditions
 - An assessment of impact/benefits

Not all NWMO studies will include each of the above listed elements. While a collaborative peer review approach is to be used, it is important to maintain independence during the peer review process.

- Develop an initial understanding of NWMO inputs to conducting the Study including timing, availability and sources of information.
- 3. Meet with NWMO and their consultants to
 - compile a list of information/documents that will need to be reviewed as part of the Peer Review
 - compile a list of parties/agencies providing information for use in preparing the Study
 - identify additional information/sources that may be pertinent to the Study
- Undertake an initial review of the information/documents assembled and developed for the Study
 - Peer review of the SoW will include information and data pertaining to some or all of the following elements:
 - i.) Statement of Work (SoW)
 - ii.) Work plan
 - iii.) Baseline conditions
 - Provide questions/comments to NWMO on the available information/documents and ensure they have been adequately addressed with the community in mind.
- Conduct peer review of the Study findings as they are developed which may include the following: 5.
 - i.) Project design(s)
 - ii.) Modeling of future conditions
 - iii.) Impact assessment approach
 - iv.) Impact assessment findings
 - v.) Analysis of reliability
 - If warranted, work with NWMO and their consultants to conduct a site visit
- Meet with NWMO and their consultants to:
 - Seek clarifications of the information/documents reviewed
 - Ensure a full understanding of the assessment approach and findings
 - Present the preliminary peer review findings (concurrences and concerns)

- Provide questions/comments and peer review findings and ensure they have been adequately addressed with the community in mind.
- 7. Review NWMO draft reports
 - Complete a detailed review of the draft reports
 - Identify omissions and/or inconsistencies if they occur with SOW and Work Plan
- 8. Prepare draft Peer Review Report for submission to South Bruce for comments.
 - Include a summary of peer review observations, findings, and comments
- 9. South Bruce will review with RedBrick for communications to public
- 10. Finalize and present the Peer Review Report to South Bruce and NWMO
- 11. Each consultant will need to provide a presentation of the findings of the peer reviews to the CLC.

Table of Contents for Peer Review Report

- 1. Introduction
 - a. State the purpose of the Peer Review Report (Report)
 - b. Provide capsule summary of the proposed Project
 - c. Identify the NWMO Study that is being peer reviewed
 - d. Identify the NWMO Statement of Work for completing the Study (i.e., SOW from EOI or update)
 - e. Identity participants involved in conducting the Study
 - f. Identify the time period the Study work and Peer Review was carried out
- 2. Peer Review Objectives and Process
 - a. State objectives for conducting the Peer Review which include
 - To provide the community of SB with independent review by qualified subject matter experts
 - ii. To complete a peer review of the NWMO Assessment of potential impacts and proposed benefits in comparison to existing conditions
 - iii. To review how the potential impacts and proposed benefits adhere to the 36 principles that will guide the assessment of willingness to host the Project.
 - b. Describe the Peer Review Process Undertaken
 - i. Describe the Peer Review process that was carried out.
 - ii. List activities completed (e.g., site visits, work plan review, data review, report review, meetings, etc.)
- Documentation and Information Reviewed
 - a. List NWMO study specific information reviewed which may include:
 - i. Scope of work
 - ii. Detailed work plan
 - iii. Baseline Conditions
 - iv. Assessment Approach
 - v. Assessment Findings
 - b. List parties/agencies involved in providing information into the study
 - c. List all documents/meetings/data/additional information and include a short summary of each
- 4. Peer Review Findings and Resolution
 - a. Baseline Conditions Report (concurrences and concerns and resolution)

- b. Impact Assessment (IA) Report
 - i. IA approach (concurrences and concerns and resolution)
 - ii. IA findings (concurrences and concerns and resolution)
- c. Conclusions of peer review
- d. Adherence to the 36 principles which are pertinent to the study
- 5. Summary

Appendix C

Peer Review Comments Memo



Memorandum

June 02, 2022 - updated June 23, 2022

То	Dave Rushton/Catherine Simpson, Municipality of South Bruce			
Copy to				
From	Greg Ferraro and Ian Dobrindt/AD/mm	Tel	+1 519 884 0510	
Subject	Local Traffic Effects Study (I23) Draft Report – Peer Review Comments	Project no.	11224152-MEM-26	

1. Introduction

This memo provides the Municipality of South Bruce (South Bruce) peer review team's comments on the Local Traffic Effects Study (I23) Draft Report (Draft Report) prepared by Morrison Hershfield (April 8, 2022) for your consideration and internal circulation as per the South Bruce Nuclear Exploration Project joint study review flow process. In addition, the memo will be submitted to the Nuclear Waste Management Organization (NWMO) and their consultants (DPRA Canada, Morrison Hershfield) by GHD Limited (GHD) as per the peer review protocol process.

2. Peer review approach

The peer review of the Draft Report was carried out by R.J. Burnside and GHD. The peer review process was completed in alignment with the peer review protocol that was developed to support a collaborative approach between NWMO and South Bruce while maintaining independence during the process. In accordance with the peer review protocol process, R.J. Burnside (Subject Matter Expert) and GHD (Lead Consultant) considered the following information during our individual reviews of the Local Traffic Effects Study Draft Report:

- Local Traffic Effects Study Statement of Work (May 2021)
- Southwestern Ontario Local Traffic Study Work Plan (I23), prepared by DPRA Canada Inc. (October 8, 2021)
- Knowledge holder interviews
- Peer review comments on NWMO's draft project description for South Bruce community studies memo prepared by GHD Limited (November 18, 2021) and responded to by NWMO (January 27, 2022)
- South Bruce and area growth expectations memo prepared by metroeconomics (February 7, 2022)

Both R.J. Burnside and GHD reviewed the Draft Report having the following questions in mind:

- Are there any significant concerns, issues, and/or omissions with the Draft Report?
- What are our initial observations/impressions on the Draft Report?
 - Has the work plan been complied with?

- Has pertinent information gained from knowledge holder interviews been included?
- Has a previous NMWO response of deferring a peer review team comment to the Draft Report task been complied with?
- Have peer review comments made during the community study workshops been addressed?
- Does the Draft Report reflect the most current information available?

R.J. Burnside and GHD held an internal 10-day Peer Review Check-In Meeting working through the preceding questions. Following this, we shared our initial observations/preliminary comments with NWMO and their consultant during a discussion on May 10, 2022, where questions were asked, clarifications were sought, and suggestions were offered. Following this discussion, our substantive comments were finalized as listed in the Comment Disposition Table (**Table 1**).

3. Peer review comments

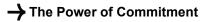
As stated, **Table 1** lists our combined comments on the Draft Report. It is understood that NWMO and their consultants will provide responses to these comments and address each comment where appropriate as part of finalizing the report.

Based on completion of the peer review and follow up discussions with NWMO and their consultants, the Draft Report provided a preliminary assessment of the traffic expected from this Project on South Bruce and neighbouring communities. Considering the information obtained and level of assessment completed, it is recommended that further studies be undertaken to assess the potential effects of the Project on municipal roads beyond capacity and consider their functionality and safety and identify required improvements. The recommended further studies need to assess the potential effects of the designated haul routes to/from the Project site on municipal roads once they have been determined by NWMO. Specific objectives of the recommended studies are included in **Table 1** to align and advance the preliminary information provided in the current Study.

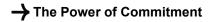
The Local Traffic Study as described in the Draft Report complies with NWMO's Work Plan in terms of estimating the increase in traffic to South Bruce and neighbouring communities. However, there are several activities from the Work Plan that remain outstanding as specified in **Table 2**. As certain information is not currently available at this point in the Project planning/design the outstanding activities are recommended to be addressed in the future recommended studies where appropriate.

Table 1 Local Traffic Effects Study Comment Disposition Table

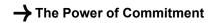
Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
1	General	It would be beneficial to provide information on how the Study specifically informs the Guiding Principles be provided.	The principles that MSB identified as having alignment with the Local Traffic Study were provided in February 2022, As requested by MSB, the relevant principles are included in the report; refer to Subsection 1.3. The <i>Road Conditions Study</i> is relevant to MSB Guiding Principles (2020) #2, #3, #7, #30, #31 and #36. The <i>Local Traffic Study</i> provides information directly relevant to Principles #30 and #31 and contributes more generally to Principles #2, #3, #7 and #36.	Comment satisfactorily addressed in revised report.
			MH can add text in the revised report to indicate linkages with future work/studies. For example, in Section 1.3 will add:	
			"The Local Traffic Study provides information that the NWMO and MSB can use to inform agreements and funding arrangements (as described by Principles #30 and #31) in the future as part of negotiations of a draft hosting agreement and/ or subsequent studies/ discussions if the South Bruce Area is ultimately selected as the Project location. For clarity, development of these types of agreements/arrangements is not part of the objectives / work plan for this study." Similar text can also be added to the Section 6 Options Assessment, and in the Section 7 Summary.	
2	General	The Project includes a repository for used nuclear fuel and a related Centre of Expertise. The report has provided a high-level assessment of the local traffic effects of the Project on the Municipal and County road network, establishing existing and projected traffic volumes / types, options for potential road improvements and other mitigation measures to accommodate these traffic volumes / types, identifying	 Truck traffic was included in the 4-step traffic model (Section 4.2.2) as per info provided by NWMO. Therefore, their impact has been also accounted for. In the revised report, MH will identify further analysis of MSB roads as an option for future studies including but not limited to additional in-depth two-lane roadway analysis (i.e., passing lanes, LOS), safety reviews, and 	Comment satisfactorily addressed in revised report.



Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
		further study requirements and options for a proposed monitoring program. It is recommended that the Municipal Roads within MSB be further evaluated beyond the Summer Average Daily Traffic (SADT) capacity since the % of volume increase to current is significant for Municipal Roads. In addition, the impact of truck traffic on the Municipal Roads should be considered within the assessment.	context-sensitive review for local roadways (i.e. land uses, operational, agricultural vehicles, % increase of truck traffic that will interrelate with AT, safety).	
3	General	Access for emergency services to the Site needs to be considered. It is recommended that access parameters / routes be identified for such access and integrate with the Emergency Services Study.	The draft Emergency Services Study (March 2022) does not go this far in terms of specific identification of emergency access to the potential Project site. NWMO's site planning/design has not advanced to that level of detail at this point in the study process. This will be addressed in future studies, if the South Bruce Area is ultimately selected as the Project location.	Comment expected to be addressed by future work/studies.
4	1.3.2 Figure 1	It would be beneficial to show location of Project Site on maps, if available, integrate with Land Use Study.	Project site is shown on revised maps.	Comment satisfactorily addressed in revised report.
5			The temporal boundaries described in Section 1.3.3 are common to all of the community studies reports, and were agreed to by both NWMO and the MSB/GHD in the October 2021 work plans.	Comment satisfactorily addressed in revised report.
6	1.3.4	Outline any assumptions made relative to allocation of workforce and housing in Core vs Local study areas. Integrate with Housing Needs and Demand Analysis Study.	A note was added to Section 1.3.4 of the revised Report. Further discussion is included in Section 4.2.	Comment satisfactorily addressed in revised report.
7	2.1	Appendix B lists knowledge holder interviews. It would be beneficial to provide summary of any traffic-related information that was gained by these interviews.	A summary of key transportation-related information will be added to section 2.2.1 of the revised Report (See comment 9 below).	Comment satisfactorily addressed in revised report.



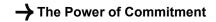
Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
8	2.2 Table 1	It would be beneficial to identify roads currently used by the Mennonite community within the Core Study Area. Confirm if previous traffic count data was available for roads in MSB.	Acknowledged. Roads currently used by the Mennonite community were identified in Section 3.2. They will be further highlighted for benefit of the reader. Available traffic data was summarized in Section 2.2 Table. An additional footnote will be added confirming MSB data (if any).	Comment satisfactorily addressed in revised report.
9	2.2.1	Elaborate on the rationale for the choice of knowledge-holder interviews and why all municipalities in the Core Study Area were not included. Summarize any important information obtained from the interviews.	 A brief rationale is provided in section 2.2.1. In addition to the knowledge holder interviews described in Section 2.2.1 / Appendix B, MH also met with the CAOs/staff from neighbouring municipalities (Brockton, Huron-Kinloss, and North Huron) on November 18, 2021 to review the work plan, proposed data collection and fieldwork for both the <i>Local Traffic</i> and <i>Road Conditions</i> studies. This is noted in Section 2.1 of the report. Morris-Turnberry was included in the Core-Study Area after completion of the interview process. Brockton selected to participate in written form. As noted in the response to comment #11, MH will include a summary of key findings from the interviews in the revised report. 	Comment satisfactorily addressed in revised report.
10	2.2.2	It is recommended to note that intersection capacity utilization (ICU) is a high-level review of potential congestion only. It is recommended that that future intersection studies be undertaken to forecast the volume/capacity and Level of Service at intersections to confirm intersection improvement requirements (i.e., turning lanes, traffic controls, signal adjustments, etc.).	In the revised report, MH will identify suggestions/ options such as this for future studies that will be required to further understand traffic context and potential effects, if the Project is located in the South Bruce Area.	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.
11	2.2.3	Safety field observations were relatively cursory. It is recommended that future	In the revised report, MH will identify suggestions/ options such as this for future	Comment satisfactorily addressed in revised report. The report acknowledges the need for



Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
		studies be undertaken to establish collision rates and related causative factors for mitigation.	studies that will be required to further understand traffic context such as collision rates, if the Project is located in the South Bruce Area.	future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads
12	information required was not available. While acknowledging that specific access points to the Site are not currently available, it is recommended that future detailed studies be carried out to identify constraints and opportunities to accessing the Site. Elaborate on traffic requirements for the UNF transport, from the AECOM,		Section 2.4 identifies information available for this study; however, it does not elaborate on why this information is not available. In the revised report, MH will identify suggestions/ options such as this for future studies that will be required to further understand constraints and opportunities for site access, if the Project is located in the South Bruce Area.	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads
13	13 3.1 Figure 2 Elaborate on the assumptions used to establish the roads to be included as commuter routes and material / shipping routes, including road jurisdiction, road classification, housing location, interaction with Bruce Nuclear Power Plant etc. Concession 8 is mislabelled as County Road 24.		Addressed to be consistent with Roads Study. Mislabelling fixed in revised report.	Comment satisfactorily addressed in revised report.
14	3.1	Replace the term "Concession Roads" with "Municipal Roads" to better reflect their lower tier jurisdiction.	Addressed in the revised report.	Comment satisfactorily addressed in revised report.
15	Also reference Highway 21 as a higher quality, existing highway providing north-south connectivity to the broader study area.		Addressed in the revised report.	Comment satisfactorily addressed in revised report.
16	3.1 Table 2	It is recommended to include an additional figure showing the road surface types and jurisdictions (Provincial, County, Municipal) in the study area. List unposted speed as being assumed 80kph (unposted). Define "dirt" road (gravel?). Note that Concession 8 has a chipseal surface, while accommodating 18% trucks.	Map may be considered to be more relevant in the <i>Road Conditions Study</i> , but is beyond the scope of the <i>Local Traffic</i> Study. A new column in Table 2 Section 3.1 will be added to include surface type for each road listed. Noted in revised report that Concession 8 has a chipseal surface, while accommodating 18% trucks.	Comment satisfactorily addressed in revised report.

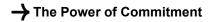
Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
17	3.2	Elaborate on the differentiation of Annual Average Daily Traffic (AADT) vs. Summer Average Daily Traffic (SADT) vs. link Level of Service (LOS) planning capacity. Local roads are noted to have less than 1,000 AADT, while capacity analysis is based on 11,500 Average Daily Traffic (ADT) (LOS D).	A paragraph clarifying the concepts will be included in Section 3.2.	Comment satisfactorily addressed in revised report.
18	3.2	It is recommended in future studies for Municipal Roads the analysis should be more of a functional analysis rather than strictly capacity analysis. Additional criteria beyond the SADT should be completed for the impact analysis to Municipal Roads (e.g., % of existing SADT to proposed SADT, agricultural interaction, passing opportunities). The Municipal Roads within MSB are not likely ever intended to operate at 11,500 ADT).	 The SADT analysis is intended as a screening tool to identify segments of concern that require further investigation in future studies. As noted above, Further analysis of MSB roads will be identified for future studies including but not limited to additional in-depth two-lane roadway analysis (i.e., passing lanes, LOS), safety reviews, and context-sensitive review for local roadways (i.e., land uses, operational, agricultural vehicles, % increase of truck traffic that will interrelate with AT, safety). 	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.
19	3.2	Confirm if there are any design enhancements currently in place to accommodate the horse and buggy traffic on CR6 and CR1.	To be confirmed and if appropriate, a brief commentary will be added in Section 3.2.	Comment satisfactorily addressed in revised report.
20	3.2	It would be beneficial to provide some explanation for the significant truck traffic currently on Concession 8 (10% to 18%).	Additional note of clarification will be added to Section 3.2.	Comment satisfactorily addressed in revised report.
21	3.2	Confirm whether the traffic growth on the Provincial Highway (1.6% per annum) is applicable to apply to the County Roads.	No historic traffic data was available for County Roads. The 1.6% annual growth is based on nearby provincial roads trends. This reflects a conservative scenario appropriate for a planning study of this nature.	Acknowledged.
22	3.2 Table 3	Future detailed studies should be recommended to review the operational / functional adequacy of the 'Last Mile' roads to accommodate the traffic volumes/types	As noted above, Further analysis of MSB roads will be identified for future studies including but not limited to additional indepth two-lane roadway analysis (i.e., passing lanes, LOS), safety reviews, and	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational,

Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
		forecasted, beyond the capacity criteria considered in this Study.	context-sensitive review for local roadways (i.e., land uses, operational, agricultural vehicles, % increase of truck traffic that will interrelate with AT, safety).	functional and contextual impact of the Project on the Municipal roads.
23	Bruce". Comments to be included to confirm that excavated rock is transported within the Site and not affecting external road network.		Table will be revised. NWMO has confirmed that the location of the Excavated Rock Management Area/ERMA has not been finalized at this time. However, at present, it is NWMO's plan to store all of the excavated rock material on site. This will be reflected in the report text.	Comment satisfactorily addressed in revised report.
24	4.1 Table 4	Add summary of findings of <i>Emergency</i> Services Study related to providing emergency access to the Project Site.	As per comment 3 above, Emergency Services Study does not go this far in terms of specific identification of emergency access to the site at this point in the study process.	Acknowledged.
25	4.2.1 The average daily trips per employee at the Project Site and Centre of Expertise (i.e., 3.34 trip/employee, total two-way) is based on the average rate established for Industrial Parks (Code 130) from the trip generation manual (Institute of Transportation Engineers, ITE). The ITE studies are based on operations at industrial facilities. Further assessment should be provided to confirm the applicability of these rates for preconstruction and construction operations.		 ITE rates were used to estimate commuting staff vehicle traffic during operation Pre/Construction traffic trip generation is based on estimated trips for excavation, aggregates and construction material as provided by NWMO (NWMO, November 24, 2021). 	Acknowledged.
26	4.2.1 Table 6	The table provides average daily trips to the various communities in the study area, however future studies are recommended to establish trip distribution once additional details on the Site access locations are identified.	A colour graduated scale was used in the table to convey relative impact (based on directionality) to/from the various communities, with red being the highest and green the lowest impact. - A note will be added to recommend refined distribution/assignment of trips once additional details on site access(es) become available.	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.

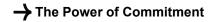


Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
27	4.2.2 Table 7	The truck traffic is averaged over the construction period (10 years). It should be noted that the average trucks / week will significantly increase during certain periods (e.g., first two-years of construction etc.) and should be adjusted accordingly, Also, the trucks / week indicated appear to be one-way trips and therefore should be doubled to account for two-way traffic. The majority of truck traffic is related to the granular material, concrete aggregate and excavated rock. Confirm if truck traffic, required to complete improvements to access roads/bridges, is not included in the table and should be added, including in the short-term pre-construction period (i.e., before 2033).	 Truck traffic round trip assumptions were provided by NWMO Nov 24, 2021 (Community Studies Planning Assumptions – South Bruce Traffic). Comment and graphic will be included regarding distribution of trips during construction. Trips on Table are Roundtrips (Twoway) as provided by NWMO. Additional clarifications/assumptions will be made regarding assumptions of traffic for road/bridge improvements. Passenger car equivalent factor will be applied to truck traffic. 	Comment satisfactorily addressed in revised report.
28	4.2.2 Table 8	Distribution via CR4 appears to be understated. South 2 distribution should be to/from CR4, rather than Hwy 9. Future studies are recommended to confirm distribution once additional details on the Site access locations are identified. The major truck generator operations/distribution should be confirmed in future studies (i.e., concrete / aggregate supply and removal of excavated rock).	A note will be added to recommend refined distribution/assignment of trips as part of future studies, once additional details on site access(es) become available.	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.
29	5.1	Future studies are recommended to review the operational / functional adequacy of the 'Last Mile' roads to accommodate the traffic volumes / types forecasted, beyond the capacity criteria considered in this study.	As noted above, further analysis of MSB roads will be identified for future studies including but not limited to additional indepth two-lane roadway analysis (i.e., passing lanes, LOS), safety reviews, and context-sensitive review for local roadways (i.e., land uses, operational, agricultural vehicles, % increase of truck traffic that will interrelate with AT, safety).	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.
30	5.1	Future review of functional road considerations is recommended, particularly for the Last Mile roads in the core area, particularly on roads that have other users (e.g., horse and buggy,	As noted above, further analysis of MSB roads will be identified for future studies including but not limited to additional indepth two-lane roadway analysis (i.e., passing lanes, LOS), safety reviews, and	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.

Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
		cyclists) and where passing lanes and shoulders are a concern.	context-sensitive review for local roadways (i.e., land uses, operational, agricultural vehicles, % increase of truck traffic that will interrelate with AT, safety).	
31	to provide additional comments on any		corrected in revised report. - Additional comments on transition rural to urban areas will be added.	
32	32 6.1 The 'Last Mile' Municipal Roads should be listed for future study, considering the		future study will be added, in coordination report. The report acknowledge	
33	6.2 Table 11 It is recommended detailed Synchro analysis of intersection operations, based on HCM LOS for the various movements at the intersection be undertaken as part of future study to confirm intersection improvements associated with the project.		In the revised report, MH will identify suggestions/ options such as this for future studies that will be required to further understand traffic context and potential effects, if the Project is located in the South Bruce Area.	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.
34	6.3.1	Comment should be provided on shoulder requirements to accommodate cyclists in accordance with OTM Book 18	The OTM Book 18 will be checked and requirements summarized (1-2 paragraph) included.	Comment satisfactorily addressed in revised report.
35			To be confirmed and commented on as appropriate in the revised report.	Comment satisfactorily addressed in revised report.
36	36 Confirm that the proposed 13-metre paved surface for 'Last Mile' roads can be practically accommodated within the existing road right-of-ways, and is confirmed in the <i>Road Conditions Study</i> .		Findings/ potential options will be coordinated/consistent with the <i>Road Conditions Study</i> .	Comment satisfactorily addressed in revised report.
37	7.1 (1)	Conclusion that there are no substantial negative impacts, in terms of operational constraints from the Project, over and above background growth impacts, cannot	Language will be revised.	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational,



Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
		be fully concluded by this high-level study. Future studies are recommended to confirm mitigation measures to address traffic impacts.		functional and contextual impact of the Project on the Municipal roads.
38	utilization ratios indicate virtually unlimited availability of gaps for passing manoeuvres. We recommend that future studies be provided to confirm the safety of passing on the roads in the study area.		Language will be revised to clarify capacity-utilization ratios in a wider analysis framework for future studies. As noted above, further analysis of MSB roads will be identified for future studies including but not limited to additional indepth two-lane roadway analysis (i.e., passing lanes, LOS), safety reviews, and context-sensitive review for local roadways (i.e., land uses, operational, agricultural vehicles, % increase of truck traffic that will interrelate with AT, safety).	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.
39	7.1 (5)	Additional future study is recommended for roads that are near-to-capacity. It is recommended that future detailed study be provided for all roads that are used for access or goods supply for the project, between the Provincial Highways and the Site.	Language will be revised. As noted above, further analysis of MSB roads will be identified for future studies including but not limited to additional indepth two-lane roadway analysis (i.e., passing lanes, LOS), safety reviews, and context-sensitive review for local roadways (i.e., land uses, operational, agricultural vehicles, % increase of truck traffic that will interrelate with AT, safety).	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads.
40	7.1 (7)	It should be recommended that future studies be completed to confirm passing opportunities and safety for vulnerable road users in the road network within the study area.	Language will be revised. As noted above, further analysis of MSB roads will be identified for future studies including but not limited to additional indepth two-lane roadway analysis (i.e., passing lanes, LOS), safety reviews, and context-sensitive review for local roadways (i.e., land uses, operational, agricultural vehicles, % increase of truck traffic that will interrelate with AT, safety).	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address operational, functional and contextual impact of the Project on the Municipal roads
41	7.1 (9)	A number of roads are shown to have high truck traffic percentages during the peak hour. Truck traffic increases should be further considered on a daily basis and	Language will be revised.	Comment satisfactorily addressed in revised report.



Comment Number	Report Section Reference	Formal Substantive Comments from Peer Review on the Draft Report	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments based on the Final Draft Report
		during periods of increased construction activities on the Site.		
42	Appendix C	It would be beneficial to provide a map of the 8 locations that had turning movement counts completed and the hours of such counts. The schematics of the road network have been broken down by various travel modes, however the pedestrian mode is included twice and the auto mode has been omitted and should be provided. The sources of the AADT data should be confirmed. It would be beneficial to provide a similar road network diagram for forecasted growth scenario.	 Additional figure will be included. Schematics will be correctly provided. Sources of AADT will be included in figure. Similar network diagram will be provided for forecasted growth scenario. 	Comment satisfactorily addressed in revised report.
43	Appendix D	It would be beneficial to provide an overall summarization of the safety issues identified in the field review work and include in main body of report.	This will be provided in the revised report.	Comment satisfactorily addressed in revised report.

Table 2 Assessment of the study work plan – Table 1. Local Traffic Effects Study Approach

Step #	Step	Description of Activities	Peer Review Comments	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments
Step 1	Data Collection – Secondary/ Primary; updated Project assumptions; information from other related community studies	 a. Background review b. Data gap assessment Annual Average Daily Traffic counts (AADTs), Intersection Counts, vehicle classification, Collision data (if available) GIS base municipal mapping c. Field work d. Collect Network Traffic Data from neighbouring municipalities and the Ontario Ministry of Transportation (MTO) e. Conduct 4-hour counts for up to eight locations, if necessary 	Collision data was not obtained. The data should be collected and assessed as part of recommended future studies.	Will be incorporated into discussion of future study needs in the revised report	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed collision analysis on the Municipal roads.
Step 2	Provide Inputs to and take Outputs from Other Studies	a. Complete baseline road network inventory • Study Area Baseline Road Network Inventory (road classification, laning, review as-builts drawings, signage, posted speeds, etc.) • Identify roads used by the Mennonite community that will	As-built drawings for roads not available. Future studies should obtain geometric and geotechnical data. Capacity review is high-level. Future studies should obtain operational information (operational delay, passing constraints). Likely truck routes for the Project have not been defined and no origin-destination review was included for truck traffic.	Will be incorporated into discussion of future study needs in the revised report	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address functional and contextual impact of the Project on the Municipal roads.

Step # Step	Description of Activities	Peer Review Comments	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments
	need to enable horse and carriage b. Complete baseline conditions assessment (operations, capacity) • Highway Capacity Manual (HCM) Two-Lane Highway Sections Capacity Review • Intersection Capacity Analysis (Synchro) • Collision Data Review (if available) • Prepare baseline network overview map c. Complete travel demand forecasting • Develop Trip Generation Analysis Scenarios for Construction and Operation Phases based on Employment projections (peak demand as provided by others) • Develop travel demand forecasting model spreadsheets • Estimate Travel Demand and likely routes of Used Nuclear	It is recommended that future studies assess operations, once access locations and haul routes have been established by NWMO. The recommended future studies need to confirm that Project site operations will meet the special transport requirements set out in the regulations for Safe and Secure Transportation of Canada's Used Nuclear Fuel.		

Step #	Step	Description of Activities	Peer Review Comments	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments
		Fuel Transporters (Trucks) Review the Safe and Secure Transportation of Canada's Used Nuclear Fuel for special transport requirements that may apply Travel Mode Assumptions/adjustme nts Trip Distribution Assumptions based on current O-D trends or engineering judgement Trip assignment onto available road networks based on shortest path principles			
Step 3	Analysis and assessment, identification of effects management options	a. Complete background and post-development conditions assessment (capacity/operations/ safety) a. Estimate background traffic data for study horizons based on historic growth traffic estimates or as indicated by the municipality b. Prepare Post-Development Network	Summary network traffic exhibits were not provided for construction period or post-construction period. Potential road safety impacts of the Project and potential mitigation measures need to be addressed as part of future recommended studies. The studies which should be based on operational criteria (e.g., LOS delays, functional classifications). Maintenance and monitoring during construction was not considered.	Summary network traffic exhibits will be provided with the revised report for preconstruction, construction and operations period. Potential road safety impact assessment and mitigation will be included as part of the recommended set of future studies. Maintenance and monitoring during construction was not part of the scope. A recommendation on the matter will be added to the revised report for future studies.	Comment satisfactorily addressed in revised report. The report acknowledges the need for future detailed studies to address functional and contextual impact of the Project on the Municipal roads.

Step # Step	Description of Activities	Peer Review Comments	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments
	Traffic Model spreadsheets.			
	c. Evaluate HCM Capacity conditions for two-lane highway segments across the network			
	d. Evaluate intersection operation for post-development scenarios (Synchro)			
	e. Identify network capacity impacts (road sections and intersections) and potential mitigation measures			
	f. Prepare summary network exhibits for post-development scenarios			
	b. Review future road safety considerations for Site generated traffic and potential countermeasures. (i.e., traffic controls, speeds, intersection configuration, Safe and Secure Transportation of Canada's Used Nuclear Fuel for special transport			
	requirements requirements) c. Take into considerations data and findings from other			

Step #	Step	Description of Activities	Peer Review Comments	How and Where Comments are Addressed	Peer Review Responses to DPRA Comments
		studies that are pertinent to the subject study			
		d. Analysis of modelling results, alternative countermeasures scenario conditions			
		e. Provide options for feasible improvements, potential traffic management options, or other mitigation measures (i.e., employee travel options)			
		f. Provide options for traffic monitoring programs			
		g. Other Transportation Demand Management programs			
Step 4	Observations and	Prepare a summary of findings			
	Conclusions	b. Set out observations and conclusions			

Appendix D 36 Guiding Principles

Appendix B Peer Review Protocol

South Bruce Guiding Principles for NWMO's Site **Selection Process**

The Nuclear Waste Management Organization (NWMO) is seeking an informed and willing host for a deep geologic repository (DGR) to safely store Canada's used nuclear fuel, and a Centre for Expertise. To guide its work, South Bruce held a comprehensive visioning process in 2019 and 2020 to get input on what people cared about most in relation to the Project. The process, in addition to other community input and feedback resulted in the creation of 36 Guiding Principles which focus on safety for people and the environment, ensuring the Project brings meaningful benefits to the community, and ensuring the municipality has a voice in decision-making.

The principles were adopted by Council resolution and they have guided municipal activities and engagement related to the Project. South Bruce is seeking NWMO commitments on how it would meet or address these 36 expectations and aspirations for the Project. This is a key step in determining whether the Project is right for the community and will help people make an informed decision when a public referendum is held to measure willingness to be a host community.

Safety and the Natural Environment



- 1. The NWMO must demonstrate to the satisfaction of the Municipality that the Project will be subject to the highest standards of safety across its lifespan of construction, operation and into the distant future.
- 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.
- 4. The NWMO will ensure that the repository site will not host any nuclear waste generated by other countries.

- 5. The NWMO must commit to implementing the Project in a manner consistent with the unique natural and agricultural character of the community of South Bruce.
- 6. The NWMO will minimize the footprint of the repository's surface facilities to the extent it is possible to do so and ensure that public access to the Teeswater River is maintained, subject to meeting regulatory requirements for the repository.
- 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.

People, Community and Culture



- 8. The NWMO must demonstrate to the satisfaction of the Municipality that it has built broad support for the Project within the community of South Bruce.
- 9. The Municipality will, in collaboration with community members, develop and establish an open and transparent process that will allow the community to express its level of willingness to host the Project.
- 10. The NWMO will identify the potential for any positive and negative socio-economic impacts of the Project on South Bruce and surrounding communities and what community benefits it will contribute to mitigate any potential risks.
- 11. The NWMO, in consultation with the Municipality, will establish a property value protection program to compensate property owners in the event that property values are adversely affected by the NWMO's site selection process and the development, construction and/or operation of the Project.
- 12. The NWMO, in consultation with the Municipality, will establish a program to mitigate losses to business owners in the event that their business is adversely affected by the NWMO's site selection process and the development, construction and/or operation of the Project.
- 13. The NWMO, in partnership with the Municipality, will develop a strategy and fund a program to promote the agriculture of South Bruce and the surrounding communities.
- 14. The NWMO, in partnership with the Municipality, will develop a strategy and fund a program to promote tourism in South Bruce and the surrounding communities.

- 15. The NWMO, in partnership with the Municipality, will commit to implement programs to engage with and provide opportunities for youth in the community, including investments in education and the provision of scholarships, bursaries and other incentives for youth to remain in or return to the community.
- 16. The NWMO will implement the Project in a manner that promotes diversity, equality and inclusion.
- 17. The Municipality recognizes the important historic and contemporary roles Indigenous peoples have and continue to play in the stewardship of the lands we all call home and will, in the spirit of Reconciliation, work with the NWMO and local Indigenous peoples to build mutually respectful relationships regarding the Project.
- 18. The NWMO will commit to relocate the working location of a majority of its employees to South Bruce as soon as it is reasonably practicable to do so after the completion of the site selection process.
- 19. The NWMO will, in consultation with the Municipality, establish a Centre of Expertise at a location within South Bruce to be developed in conjunction with the Project.

Economics and Finance



- 20. The NWMO, in consultation with the Municipality, will commit to implementing a local employment and training strategy with the objective of ensuring that the majority of employees for the Project are located within South Bruce and surrounding communities.
- 21. The NWMO, in consultation with the Municipality, will commit to implementing a business opportunities strategy that will provide opportunities for qualified local businesses to secure agreements that support the Project and that requires the NWMO to take all reasonable steps to create opportunities for qualified local businesses to benefit from the Project.
- 22. The NWMO will commit to implementing a procurement strategy for the Project that gives preference to the selection of suppliers who can demonstrate economic benefit to South Bruce and surrounding communities.
- 23. The NWMO will enter into an agreement with the Municipality providing for community benefit payments to the Municipality.

Capacity Building [0]



- 24. The NWMO will cover the costs incurred by the Municipality in assessing community well-being and willingness to host the Project.
- 25. The NWMO will fund the engagement of subject matter experts by the Municipality to undertake peer reviews of Project reports and independent assessments of the Project's potential impacts on and benefits for the community as determined necessary by the Municipality.

- 26. The NWMO agrees to cover the costs of the Municipality's preparation for and participation in the Project's regulatory approval processes, including the Canadian Nuclear Safety Commission's licencing process and the assessment of the Project under the Impact Assessment Act (or other similar legislation), that are not otherwise covered by available participant funding.
- 27. The NWMO will fund the Municipality's preparation of a housing plan to ensure that the residents of South Bruce have access to a sufficient supply of safe, secure, affordable and well-maintained homes.
- 28. The NWMO will prepare a review of the existing emergency services in South Bruce and provide appropriate funding for any additional emergency services required to host the Project in South Bruce.
- 29. The NWMO will prepare an infrastructure strategy that addresses any municipal infrastructure requirements for the Project and will commit to providing appropriate funding for any required upgrades to municipal infrastructure required to host the Project in South Bruce.
- 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.

Capacity Building (continued) 0

32. The NWMO, in consultation with the Municipality and other local and regional partners, will prepare a strategy to ensure there are sufficient 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.

33. The NWMO will comply with the Municipal Official Plan and zoning by-law and seek amendments to the Official Plan and zoning by-law as necessary to implement the Project.

Regional Benefits +

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.



Governance and Community Engagement

- 34. The NWMO will provide the Municipality with an ongoing and active role in the governance of the Project during the construction and operation phases of the Project.
- 35.The NWMO will continue to engage with community members and key stakeholders to gather input on community vision, expectations and principles, including concerns, related to the Project.

Reach out anytime with your questions, comments, concerns, or if you are seeking more information. We would be happy to hear from you!

South Bruce Nuclear Exploration Team:

Morgan Hickling, CLC Project Coordinator sbclc@southbruce.ca

Dave Rushton, Project Manager drushton@southbruce.ca

Catherine Simpson, Community Engagement Officer csimpson@southbruce.ca

Steve Travale, Communications/ Public Relations Officer stravale@southbruce.ca

Visit our website: www.southbruce.ca

Visit our community engagement tool: www.southbruceswitchboard.ca

Sign up to get Project updates direct to your inbox: forms.southbruce.ca/Stay-Connected

Stay Connected! Follow us online:

f @municipalityofsouthbruce

@municipalityofsouthbruce

▼ @MunSouthBruce



Municipality of South Bruce PO Box 540 | 21 Gordon St. E Teeswater, Ontario NOG 2S0

Phone: 519-392-6623 Fax: 519-392-6266

