



BURNSIDE



Peer Review Report

Aggregate Resources Study Report (I21)

Municipality of South Bruce

June 08, 2022

Executive Summary

The Nuclear Waste Management Organization (NWMO) has been engaged in a multi-year, 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 Aggregate Resources Study (I21) is one of the studies being carried out by NWMO with the overall objective to determine the supply and demand for aggregate resources over the 25-year period of 2021 to 2046. The Aggregate Resources 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 Aggregate Resources 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.

The PRT is of the view that the Aggregate Resources Study provides an initial assessment to address the Study objective by determining maximum licensed extraction of aggregate resources in the Study Area and by extrapolating the past demand growth rates through the Study period. The Study concludes there is an adequate capacity of aggregate within the licenced annual capacity of the aggregate pits within MSB as well as the Core and Local Study Areas to supply aggregate for community growth and Project demand during the construction and operation phases of the Project. The highest aggregate demand is projected to occur in the 2033-2034 period during initial site construction which will increase the demand for aggregate over this short period. The Study notes that during this short-term increase in demand producers should be able to manage and produce the aggregate required.

The Study was not however able to provide a complete analysis of aggregate demand during the Study period. The aggregate demand for infrastructure improvements expansion and housing/community growth have not yet been determined and are not currently known. Additional assessment of the demands for aggregate is required to be carried out to meet the full objective of the Study. once the requirements for infrastructure and community growth are identified.

The Study identified that recycling of excavated rock should be considered. Future studies are recommended to consider the impact of the excavated rock on the potential site and area as well as opportunities for the use of this resource. The scope of work for an impact assessment of the excavated rock was beyond the parameters of this Study but should be considered as part of a future study.

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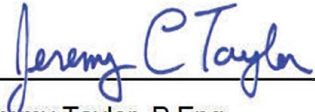
Acronyms

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

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1. Introduction

This report documents the peer review undertaken of the Aggregate Resources Study (I21) prepared by Keir Corp dated May 6, 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 Aggregate Resources Study is one of the socio-economic studies being carried out by NWMO with the overall objective to determine the demand for aggregate resources and maximum licensed extraction of aggregate resources in the study area of the NWMO's APM Project over the identified time period. The Aggregate Resources 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 NWMO and the DPRA team. As described in **Section 3**, the PRT considered several documents and information in the peer review of the Aggregate Resources 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 and a change in the direction for recycling rock materials as provided by NWMO. As a result, the current study is a beneficial initial assessment in

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

understanding baseline conditions and setting the foundation for further study/assessment of the aggregate supply and demand in future studies carried out by NWMO. The Study does inform Guiding Principles 2, 6, 21, 30, and 31 as described herein. Finally, the conclusions from the peer review are provided.

2. Peer Review Protocol

2.1 Objectives and Overview of the Peer Review Protocol Process

As mentioned, the peer review of the Aggregate Resources 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:

1. 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.

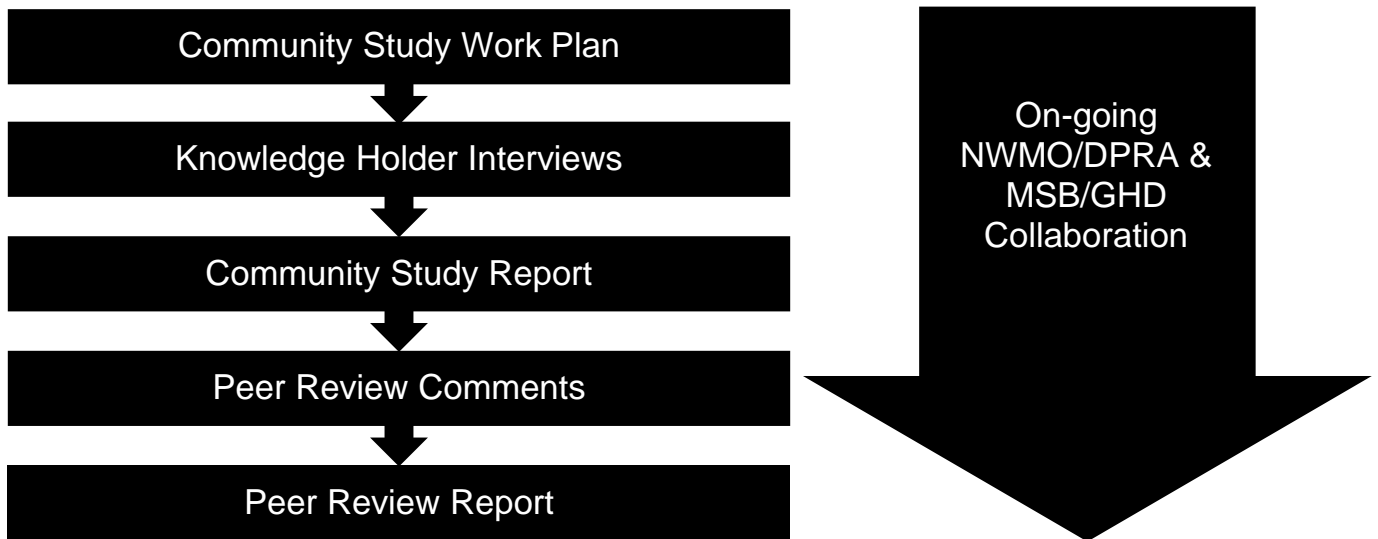


Figure 2.1 The Peer Review Protocol Process

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 Aggregate Resources 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 Aggregate Resources Study prepared by Keir Corp. The Aggregate Resources Study was initiated by Keir Corp following finalization of the Work Plan in October 2021 and culminated in the Final Draft Report being submitted to GHD on May 6, 2022.

Table 2.1 Key Activities Associated with the Peer Review of the Aggregate Resources Study

Key Activities	Date	Parties Involved
Interviews with local aggregate suppliers	July 21, 2021 August 11, 2021	R.J. Burnside (Jeremy Taylor and Henry Centen), GHD (Greg Ferraro and Ian Dobrindt), Keir Corp (Andy Keir)
Review of the Draft Southwestern Ontario Aggregate Resources Study Work Plan (I21) 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 Aggregate Resources Study Work Plan (I21) issued by DPRA (October 7, 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), Keir Corp (Andy Keir)
Review of Aggregate Resources Study Report (I21) Draft – Southwestern Ontario Community Study issued by Keir Corp (January 21, 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	February 4, 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	February 11, 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	February 18, 2022	R.J. Burnside (Jeremy Taylor and Henry Centen), GHD (Greg Ferraro and Ian Dobrindt), MSB (Catherine Simpson), NWMO (Charlene Easton), DPRA (Vicki McCulloch), Keir Corp (Andy Keir)
Issuance of the Peer Review Team formal comments disposition table on the Draft Report	February 24, 2022	R.J. Burnside (Jeremy Taylor and Henry Centen), GHD (Greg Ferraro and Ian Dobrindt)
Review of the Aggregate Resources Study Report Final Draft – Southwestern Ontario Community Study issued by Keir Corp (May 6, 2022)	May 6 - 17, 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 Aggregate Resources Study.

Table 3.1 Key Documents and Information Considered in the Peer Review of the Aggregate Resources 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).
Aggregate Resources Study - Statement of Work	Municipality of South Bruce (MSB) (May 2021)	Reviewed to understand the objectives and scope of work including inputs to the Aggregate Resources Study and its relationship to other Community Studies as envisioned by the MSB.
Knowledge Holder Interviews (Teeswater Concrete; Riley Aggregates; Local Developer; MSB Public Works)	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 Aggregate Resources Study Work Plan (I21)	DPRA Canada Inc. (October 7, 2021)	Reviewed to understand the purpose and outcome of the Aggregate Resources Study including its linkages to other Community Studies, scope and assumptions, approach, and key information sources/data collection.
Aggregate Resources Study Report (I21) Draft – Southwestern Ontario Community Study	Keir Corp (January 21, 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.
Aggregate Resources Study Report (I21) Final Draft – Southwestern Ontario Community Study	Keir Corp (May 6, 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 Aggregate Resources Study

The PRT provided their formal comments to NWMO/DPRA team on February 24, 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 Aggregate Resources 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 Aggregate Resources Study (**Table 4.1, 5th column**).

As stated in **Table 4.1**, the PRT acknowledges that the Final Draft Report has been 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:

- The location of aggregate pits identified in the Aggregate Resource Study should be considered as part of the Road Conditions and Traffic Studies including the establishment of future haul routes
- The PRT acknowledges that quantifying the available aggregate within each pit was not easily attainable data; and therefore, the Aggregate Resources Study has instead considered the maximum licensed capacity as the base line. As a result, the Study does not indicate how production and supply will physically increase to meet the aggregate demand of 2033-2034 and this needs to be assessed.
- The aggregate demand required for infrastructure improvements including road and bridges have not yet been quantified in the Aggregate Resources Study but needs to be determined and assessed in future study
- The projected population growth has been stated in the Aggregate Resources Study, but the increase in aggregate demand is indeterminant from this growth. The findings of the Infrastructure Baseline and Feasibility

Study and the Housing Needs and Demand Study should be used in forecasting aggregate demand for community growth.

- The potential for recycling operations and reuse of the excavated rock generated from construction of the Project Site has been included in the Aggregate Resources Study, but the options for optimising the reuse of the excavated rock and the impact on the demand of aggregate from licenced pits should be further investigated
- The current study utilises a four municipality Core Study Area excluding the Municipality of Morris-Turnberry, which is included in the Core Study Areas for all other community studies. As such, any future aggregate resources study work should include the Municipality of Morris-Turnberry within the Core Study Area.

Table 4.1 Aggregate Resources Study Draft Report 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	The Aggregate Resources Study Draft Report was reviewed for content as well as adherence to the work plan and statement of work that were established in 2021. There are some changes in the report from the work plan that has occurred. It is recommended that an explanation be included within the report for any changes from either the work plan or the statement of work. There are also some sections missing from the work plan and statement of work that should either be added or explained within the report.	The changes to the work plan will be noted in the report	Comment satisfactorily addressed.
3	General	It is recommended that a section be added to the report to summarize how the aggregate study provides information useful in assessing project alignment with the 36 Guiding Principles, specifically numbers 2, 6, 7, 21, 22, 30, and 31.	Agreed	Comment was partially addressed; Section 1.3.1 was added to the report, which identified the applicable Guiding Principles, but how they were specifically informed by the Aggregate Resource Study is not described.
4	1.3 (1)	It is recommended that the reasoning for the change in the objective of this study to identify the maximum licensed extraction of aggregate resources compared to the work plan that was to identify the existing supply of aggregate be provided.	The reasoning will be added	Comment satisfactorily addressed. Reasoning that information was not available was noted in the report.
5	1.3 (2) 2.1 (1 b) 3.1.2 3.1.4 5.3	It would be beneficial if some investigation on the status and relative level of availability of the MSB aggregate pits (33) was noted within this report.	The revised report describes the options for doing this, and recommends steps for additional study (potentially as part of the future EA process, if the Project is located in MSB)	Comment satisfactorily addressed. Noted that future studies could further assess the quantity of available aggregate beyond current licensing.
6	1.3 (2) 1.3.3 (1 b) 1.3.3 (3) 2.5.4 4.1.2 5.2	It is recommended that the aggregate demands for the NWMO project include the potential infrastructure improvements required in the 2021 to 2032 period, prior to Site construction, to align with the work plan. Specifically, consideration for the “Last Mile” infrastructure improvements. It is recommended that	<ul style="list-style-type: none"> – Community Growth Projections will be added to the report. This will allow a comparison of growth in aggregate demand to community growth – The report will acknowledge that “Last Mile” infrastructure requirements for aggregate are not included in this report, but will identify 	Comment was partially addressed. The effects of community growth by increased housing demand, infrastructure expansion and road improvements are not included. The Report noted that infrastructure expansion should be considered in future studies. Community population

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
		the projected community growth for this project, in this period, be considered as well.	this for further study (potentially as part of the future EA process if the Project is located in MSB)	growth was added to the report, but no change to future aggregate demand was identified. The PRT is of the view a more detailed assessment of the future demand be carried out as part of a future study once pertinent input information becomes available
7	1.3 (2)	There are several comments related to the excavated rock and aggregate available on-site. It is recommended that items #5 regarding recycling of excavated rock and #6 regarding the aggregate supplied from the NWMO project, from the statement of work, be listed within the objectives of this report, and additional analysis, within the report, be provided.	<ul style="list-style-type: none"> - The revised Report will clarify and clearly differentiate excavated rock and aggregate available on-site. - The revised report will recommend that further study (potentially as part of the future EA process if the Project is located in MSB) look at these items in the future - This will be addressed in the changes from the work plan section (as per comment 1) 	Comment satisfactorily addressed. Excavated rock has been noted and future studies are recommended to determine impact of using excavated rock to the aggregate demand from licensed pits.
8	1.3 (2) 5.7	It is recommended that a definition of excavated rock be provided in the report, as compared to aggregate supply on-site. The report refers to both aggregate and excavated rock as resources available on-site in a number of locations. Clear understanding and consistency between the two types of supply would be beneficial throughout the report.	Clarification will be added to the revised report (as per comment 7)	Comment satisfactorily addressed. Definition provided in the report.
11	4.3.3 5.7	It is recommended that excavated rock and aggregate supply on-site be clearly defined within the report to eliminate confusion over the use of aggregate on-site. With this clearer definition, it is recommended that recycling options for excavated rock be included within this section, as noted in the work plan.	Yes. As per comment 7.	Comment satisfactorily addressed. Report recommends future study / analysis for management of excavated rock.

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
13	3.1.5	It is recommended that the report consider and provide comments with respect to the baseline growth for MSB, and how the forecasted increase in growth from the NWMO project will impact the demand for aggregate. It would be beneficial if the baseline growth that was assumed for the future aggregate demand analysis be integrated with the other studies such as housing and infrastructure.	<ul style="list-style-type: none"> - As per comment 6 community growth will be added to the report to compare against the forecast growth in aggregate demand. - Will reflect early March decision on how to reconcile the County of Bruce growth plan and metroeconomics' growth expectations / projections 	Comment was partially addressed. Community growth was added to the report, but no change to future aggregate demand was identified. See comment No. 6 above.
18	4.2.3	It is recommended that additional comments on the significant increase in supply (145% above baseline) from MSB should be noted here. Although maximum licensed area is noted, comments regarding how production will meet the increase in demand and the impact on MSB would be beneficial in the report.	<ul style="list-style-type: none"> - NWMO/Keir will follow-up with MSB Public Works for their insights. - If not able to get the additional information, alternatively will speak about this in general terms in the final report. 	Comment was partially addressed. Specific comments on how the increase in demand within MSB will be managed are not included. As a result, the PRT recommends that this be addressed through a future study.
20	4.2	It is recommended that additional statements in this section be provided outlining the large increase in demand over the MSB baseline and what strategies would be required to meet the increase in production.	See comment 18.	Comment was partially addressed.
21	5.1	It is recommended that the statement should be qualified that no on-site validation was completed and is based on desktop review only to align with the statement of work and work plan.	Agreed	Comment satisfactorily addressed.
23	5.5	It is recommended that the expected impact to MSB be separated from the expected impact on the core and local study areas. It is also recommended that comments regarding the ability for production to meet demands be included within the report and this summary statement.	Ok	Comment was partially addressed. Comment added indicating production will meet demand, but no support to statement was provided in 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
25	5.8	It is recommended that additional analysis be provided in the report to support the comments in this section. It is recommended that quantification of the excavated rock available be completed in this report to provide a reference to other studies (such as roads/traffic).	Discussion of how excavated rock will be quantified in future study (perhaps as part of the future EA if the Project is located in MSB)	Comment satisfactorily addressed. Recommended that future studies be completed to review the management of excavated rock.

4.2 Comments on Adherence to the Work Plan

The Aggregate Resources Study largely complies with the approved Work Plan with a few noted exceptions as indicated in **Table 4.2**. The PRT understands that the Aggregate Resources Study was unable to provide the existing aggregate production and capacity remaining because the data was not readily available. Consequently, the Study has utilized the licensed capacity as the baseline supply to indicate the impact of the Project on the aggregate supply. Additionally, the impact of infrastructure improvements and community growth demand has not been incorporated into the aggregate demand at this time, but as mentioned, should be considered in future studies. The reuse of excavated rock was discussed within the Study with the recommendation that future studies be undertaken to provide further information on this Project component.

Table 4.2 Adherence to the Work Plan

Step #	Step	Description of Activities	Peer Review Comments
Step 1	Data Collection – Secondary/ Primary; updated Project assumptions; information from other related community studies	<p>Baseline Supply – Existing Sources</p> <ul style="list-style-type: none"> a. Catalogue the existing aggregate supply within the study area b. Database of existing sources will include information on source type, resources available, consumption rate, quality, distance to the project site and other key variables c. Estimate the capacity remaining of the existing sources d. Estimate the aggregate made available through recycling operations e. Confirm estimates based on secondary sources with interviews with a limited group of local aggregate producers and the Ontario Sand Stone and Gravel Association (OSSGA) <p>Baseline Supply – Potential Future Sources</p> <ul style="list-style-type: none"> a. Identify potential future sources of aggregate within the study area based on environmental, planning and 	<p>Baseline supply was established based only on licensed capacity since production capacity and remaining aggregate resource volumes were not available without an extensive Site by Site review and participation with private operators.</p> <p>Aggregate supply through recycling operations of the Project were not quantified but identified to be investigated in a further study.</p> <p>Baseline demand was based on past use and did not consider impact of housing demand and infrastructure expansion required for community growth in the study area.</p>

Step #	Step	Description of Activities	Peer Review Comments
		<p>agricultural constraints combined with existing area geological information</p> <p>b. Map the future potential sources. Estimate the aggregate source attributes (source type, quality, distance to project, etc.)</p> <p>Baseline Demand</p> <p>a. Identify the current demand for aggregate demand within the study area</p> <p>b. Forecast the increase in demand for aggregate over time based on a correlation with the baseline economic activity in the study area</p>	
Step 2	Provide Inputs to and take Outputs from Other Studies	<p>a. Share data and findings with other community studies being conducted by the MSB and NWMO</p> <p>b. Take into considerations data and findings from other studies that are pertinent to the subject study</p>	<p>Forecasts for growth in population, housing and employment were based on the <i>Growth Expectations Memorandum</i>, prepared by metroeconomics for MSB, however growth in aggregate demand from this growth was not quantified.</p> <p>The forecasts of supply and demand for aggregates was used in the <i>Local Traffic Study</i> and the <i>Road Conditions Study</i> to quantify truck traffic volumes and distribution, as well as last-mile upgrade assessments. However, specific haul routes and access route information could not be obtained and will be subject to future studies.</p>
Step 3	Analysis and assessment, identification of effects management options	<p>Baseline Supply vs Demand Analysis</p> <p>a. Forecast the available supply of aggregate produced within the study area based on production rates, demand within the study area, demand on aggregate from outside the study area</p> <p>b. Forecast when/if baseline demand will require the development of potential future sources of aggregate to meet demand within the study area</p> <p>APM Project Impacts</p> <p>a. Develop an aggregate demand forecast for the APM project during construction and operations</p> <p>b. Develop a supply forecast based on processing excavated materials from the APM project</p> <p>c. Analyze the challenges and limitations of using aggregate obtained through processing of excavated materials from the APM Project</p>	<p>Baseline supply was based on licensed capacity, forecasted available production was not completed.</p> <p>Aggregate demands for the Project were established but did not include external infrastructure expansion required in part as a result of the Project. The report did not quantify the impact of community growth from the Project to the aggregate demand.</p> <p>The use of excavated rock was recommended to be investigated through further studies.</p>

Step #	Step	Description of Activities	Peer Review Comments
		<ul style="list-style-type: none"> d. Overlay the Impacts of the APM project (Demand and Supply) on the baseline supply and demand analysis e. Develop potential effects management options, based on the identified potential Project effects; options could include mitigation/enhancement measures, management options or other possibilities 	
Step 4	Observations and Conclusions	<ul style="list-style-type: none"> a. Summarize findings b. Set out observations and conclusions 	Report has provided initial conclusions and identifies that additional study and assessment is required.

4.3 Municipality of South Bruce’s Guiding Principles

The Aggregate Resources 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**).

Five of the 36 principles are linked to the Aggregate Resources Study: numbers 2, 6, 21, 30, and 31. **Table 4.3** lists the five principles and how the Aggregate Resources Study informs those principles.

Table 4.3 The Principles Associated with the Aggregate Resources Study

Principle # and Description	Consideration of the Principle in the Study
<p>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.</p>	<p>The Aggregate Resources Study informs Guiding Principle # 2 by identifying the quantity of aggregate material required for the Project Site construction and the availability of that material within the Municipality. The report has indicated that new licensed areas are not necessarily required to meet the demand forecasted for the construction of the Site. The Study has indicated that all excavated material is part of previously licensed aggregate pits already approved for the production of aggregate.</p> <p>The report (Section 5.11) identifies that opportunities exist for recycling of the excavated rock that will be a product of the construction on the Site. The report has also identified that future studies on the recycling and reuse of the excavated rock are recommended, and this would consider the impact on the environment.</p>
<p>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.</p>	<p>The Aggregate Resources Study informs Guiding Principle #6 by identifying that there are a number of existing aggregate licensed areas available to supply the demand of aggregate required for the construction of the Project Site. Further studies have been recommended to review the management of the excavated rock area which will affect the surface facilities. Recommendations for consideration of potential recycling options would help to minimize the long-term footprint of the surface facility.</p>
<p>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.</p>	<p>The Aggregate Resources Study informs Guiding Principle #21 by indicating that supply of aggregate can be completed from existing licensed pits within MSB, the Core Study Area or the Local Study Area. This supply of aggregate will create opportunities for local businesses.</p> <p>The Study also indicates that NWMO does not plan to have excavated rock available for commercial use thereby disrupting the supply/demand from existing businesses within the area.</p> <p>The Study indicates that the excavated rock could be recycled through other means that would not negatively affect the supply from existing producers.</p>
<p>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.</p>	<p>The Aggregate Resources Study was not required to provide details regarding the road network capacity and potential upgrades that is noted within Guiding Principle #30. The Study has however provided information regarding the location for the supply of aggregate material which can be utilized by other studies that are being prepared to focus more on Guiding Principle #30. Specifically, the volume of aggregate material and potential sources within MSB has been identified and can be utilized by the Road Conditions Effects and Local Traffic Effects Community Studies.</p>

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 Aggregate Resources Study informs Guiding Principle #31 by indicating the availability of aggregate resources within the Municipality and surrounding area that could be utilized for the construction of the Site. These locations and quantities can be utilized by other studies to determine transportation construction routes and potential impacts to existing municipal roads.

4.4 Conclusions of the Peer Review

The PRT is of the view that the Aggregate Resources Study subject to available information was carried out in accordance with the approved Work Plan. The Study provides and initial assessment of the licenced production capacity of the existing aggregate suppliers within MSB and the Core and Local Study Areas. The potential Project demand and timing of the demand is identified subject to potential on-Site recycling of the excavated rock generated from the Project Site construction.

The following Study items that remain partially outstanding:

- The Study has provided an initial understanding of impacts on the study area aggregate resources from the Project. The aggregate deposits within the study areas are identified, however based on the limitations of available data and the proprietary nature of the information to each aggregate pit owner, the Study has not provided a volume of existing aggregate remaining at existing licensed pits. Further study should be carried out to determine the remaining site life of the existing licenced pits at the current production rates.
- The peak demand for aggregate has been identified at the start of the construction period of 2033-2034. The Study states that the demand is well within the licensed production capacity of the existing aggregate pits located within the MSB as well as the Core and Local Study Areas. However, the PRT recommends that a future study should be completed to identify how the private aggregate industry will be able to meet the demands identified in the Study.
- The demand for aggregate for road expansions and improvements has not been included in the Study. As a result, the PRT recommends that a future study should identify the aggregate demand for the years leading up to the start of Site construction for road improvements required to support community growth and to create the required haul routes and access routes to the Project Site.
- The projected population growth has been stated in the Aggregate Resources Study, but the increase in aggregate demand is indeterminant from this growth. The findings of the Infrastructure Baseline and Feasibility Study and the Housing Needs and Demand Study should be used in forecasting aggregate demand for community growth
- With regards to recycling and reuse of excavated rock, the Study has identified potential opportunities for this material. The Study did not provide a quantity of excavated rock or how the impact of this rock on the environment could be minimized. The Study has noted that the current intention of the NWMO is not to use the excavated rock for commercial use. The PRT recommends that a future study further investigate and quantify the potential opportunities for recycling and reuse of the excavated rock.

In addition, the location of aggregate pits identified in the Aggregate Resource Study should be considered as part of the Road Conditions Effects and Local Traffic Effects Community Studies so that this relevant information including the establishment of future haul routes is appropriately captured and considered as part of the Project.

Also, further studies are needed to assess the impact of the excavated rock on the environment and further review recycling and reuse options to meet Guiding Principles #2 and #6.

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.
I22	Infrastructure Baseline and Feasibility Study	NWMO	Morrison Hershfield
I23	Local Traffic Effects Study	NWMO	Morrison Hershfield
I24	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

1. 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.

2. 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
4. 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.
5. Conduct peer review of the Study findings as they are developed which may include the following:
 - 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
6. 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. Identify 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
 - i. 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.)
3. 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

February 24, 2022 – updated May 24, 2022

To	Dave Rushton/Catherine Simpson, Municipality of South Bruce		
Copy to			
From	Greg Ferraro and Ian Dobrindt/AD/kf	Tel	+1 519 884 0510
Subject	Aggregate Resources Study (I21) Draft Report – Peer Review Comments Disposition Table	Project no.	11224152-MEM-17

1. Introduction

This memo provides the Municipality of South Bruce (South Bruce) peer review team’s comments on the Aggregate Resources Study (I21) Draft Report (Draft Report) prepared by Keir Corp (January 21, 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, Keir Corp) 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 Aggregate Resources Study Draft Report:

- Aggregate Resources Study - Statement of Work (May 2021)
- Southwestern Ontario Aggregate Resources Study Work Plan (I21), prepared by DPRA Canada inc. (October 7, 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 metro economics (February 2, 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 statement of work and 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 discussed our initial observations and confirmed our combined preliminary comments on the Draft Report at our 10-day peer review check-in meeting. Following this, R.J. Burnside and GHD shared our initial observations/preliminary comments with NWMO and their consultants through a discussion where questions were asked, clarifications were sought, and suggestions were offered. Following this discussion, our comments were further revised and are listed in the attached comment disposition table (**Table 1**).

3. Peer review comments

As stated above, the comment disposition table (**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 inputs presented in the Draft Report are found to support the overall objective to determine the demand for aggregate resources and maximum licensed extraction of aggregate resources in the study area of the NWMO project over the identified time period.

In general, the study as described in the Draft Report substantially complies with the statement of work and work plan in terms of study areas and information developed and included.

Table 1 Aggregate Resources Study Draft Report (I21) 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	The Aggregate Resources Study Draft Report was reviewed for content as well as adherence to the work plan and statement of work that were established in 2021. There are some changes in the report from the work plan that has occurred. It is recommended that an explanation be included within the report for any changes from either the work plan or the statement of work. There are also some sections missing from the work plan and statement of work that should either be added or explained within the report.	The changes to the work plan will be noted in the report	Comment satisfactorily addressed.
2	General	Some of the comments are repeated in several sections. These comments have been provided once and referenced to the number of sections.	N/A	N/A
3	General	It is recommended that a section be added to the report to summarize how the aggregate study provides information useful in assessing project alignment with the 36 Guiding Principles, specifically numbers 2, 6, 7, 21, 22, 30, and 31.	Agreed	Comment was partially addressed; Section 1.3.1 was added to the report, which identified the applicable Guiding Principles, but how they were specifically informed by the Aggregate Resource Study is not described.
4	1.3 (1)	It is recommended that the reasoning for the change in the objective of this study to identify the maximum licensed extraction of aggregate resources compared to the work plan that was to identify the existing supply of aggregate be provided.	The reasoning will be added	Comment satisfactorily addressed. Reasoning that information was not available was noted in the report.
5	1.3 (2) 2.1 (1 b) 3.1.2 3.1.4 5.3	It would be beneficial if some investigation on the status and relative level of availability of the MSB aggregate pits (33) was noted within this report.	The revised report describes the options for doing this, and recommends steps for additional study (potentially as part of the future EA process, if the Project is located in MSB)	Comment satisfactorily addressed. Noted that future studies could further assess the quantity of available aggregate beyond current licensing.
6	1.3 (2) 1.3.3 (1 b) 1.3.3 (3) 2.5.4 4.1.2 5.2	It is recommended that the aggregate demands for the NWMO project include the potential infrastructure improvements required in the 2021 to 2032 period, prior to Site construction, to align with the work plan. Specifically, consideration for the	– Community Growth Projections will be added to the report. This will allow a comparison of growth in aggregate demand to community growth	Comment was partially addressed. The effects of community growth by increased housing demand, infrastructure expansion and road improvements are not included. The Report noted that infrastructure

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
		“Last Mile” infrastructure improvements. It is recommended that the projected community growth for this project, in this period, be considered as well.	<ul style="list-style-type: none"> – The report will acknowledge that “Last Mile” infrastructure requirements for aggregate are not included in this report, but will identify this for further study (potentially as part of the future EA process if the Project is located in MSB) 	<p>expansion should be considered in future studies. Community population growth was added to the report, but no change to future aggregate demand was identified.</p> <p>The PRT is of the view a more detailed assessment of the future demand be carried out as part of a future study once pertinent input information becomes available</p>
7	1.3 (2)	There are several comments related to the excavated rock and aggregate available on-site. It is recommended that items #5 regarding recycling of excavated rock and #6 regarding the aggregate supplied from the NWMO project, from the statement of work, be listed within the objectives of this report, and additional analysis, within the report, be provided.	<ul style="list-style-type: none"> – The revised Report will clarify and clearly differentiate excavated rock and aggregate available on-site. – The revised report will recommend that further study (potentially as part of the future EA process if the Project is located in MSB) look at these items in the future – This will be addressed in the changes from the work plan section (as per comment 1) 	<p>Comment satisfactorily addressed.</p> <p>Excavated rock has been noted and future studies are recommended to determine impact of using excavated rock to the aggregate demand from licensed pits.</p>
8	1.3 (2) 5.7	It is recommended that a definition of excavated rock be provided in the report, as compared to aggregate supply on-site. The report refers to both aggregate and excavated rock as resources available on-site in a number of locations. Clear understanding and consistency between the two types of supply would be beneficial throughout the report.	Clarification will be added to the revised report (as per comment 7)	<p>Comment satisfactorily addressed.</p> <p>Definition provided in the report.</p>
9	4.3.1 5.7	It is recommended that clarification be provided for this comment, given that the footprint of the Site is different than the licensed area. It may be beneficial to expand on this comment that the analysis in the report has been based on external supply.	<ul style="list-style-type: none"> – The revised report will make clear that it is based on external supply – The Site and the footprint will be further defined in the Project description 	<p>Comment has been partially addressed.</p> <p>Noted that all aggregate is to be externally supplied from the Site and excavated rock is not considered part of the aggregate supply. 4.3.1 still indicates that there is unlicensed aggregate available within the Project Site.</p>
10	4.3.2 5.7	In addition to a clearer definition, it is also recommended that the statement that the NWMO project will not have an impact on aggregate supply, be reconsidered, as it is stated previously in the report that	<ul style="list-style-type: none"> – Comments regarding Project impact on supply will be clarified – Excavated rock will be addressed as per comment 7. 	<p>Comment has been partially addressed.</p> <p>Noted that excavated rock will not be available for commercial supply.</p>

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
		aggregate demand will increase with this project. It is also recommended that the report should consider that excavated rock may be removed from the Site in the future within this section. Analysis in this section to meet the work plan and statement of work is further recommended.		Recommended future study on options for excavated rock.
11	4.3.3 5.7	It is recommended that excavated rock and aggregate supply on-site be clearly defined within the report to eliminate confusion over the use of aggregate on-site. With this clearer definition, it is recommended that recycling options for excavated rock be included within this section, as noted in the work plan.	Yes. As per comment 7.	Comment satisfactorily addressed. Report recommends future study / analysis for management of excavated rock.
12	3.1.4 3.1.7 4.3.1	It is recommended that Palmer's report provide summary tables for any values that are to be referenced to Keir's report. It would be beneficial for a clear summary of assumptions that were used to calculate the 114 million tonnes of aggregate available, as well as a summary of the assumptions used to calculate the 16.5 million tonnes of aggregate.	Agreed	Comment satisfactorily addressed. Table has been included in report.
13	3.1.5	It is recommended that the report consider and provide comments with respect to the baseline growth for MSB, and how the forecasted increase in growth from the NWMO project will impact the demand for aggregate. It would be beneficial if the baseline growth that was assumed for the future aggregate demand analysis be integrated with the other studies such as housing and infrastructure.	<ul style="list-style-type: none"> - As per comment 6 community growth will be added to the report to compare against the forecast growth in aggregate demand. - Will reflect early March decision on how to reconcile the County of Bruce growth plan and metroeconomics' growth expectations / projections 	Comment was partially addressed. Community growth was added to the report, but no change to future aggregate demand was identified. See comment No. 6 above.
14	3.1.6	It would be beneficial to provide some insight and context from the interviews regarding the large increase in annual demand that was recorded in 2020. It would be beneficial to also explain within the report if this was an abnormal increase or continued increased demand within MSB.	<ul style="list-style-type: none"> - NWMO/Keir will follow-up with MSB Public Works to get this information. - If we aren't able to get the additional interviews within the scope of this community study, alternatively we could speak about this in general terms. 	Comment satisfactorily addressed. Comment added to report indicating one time exception for additional extraction.

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
15	3.2	It is recommended that similar comments for 3.1.4 and 3.1.7 apply to the core study area and local study area as to those that were noted within the MSB section.	Agreed	Comment satisfactorily addressed.
16	3.4.1	It would be beneficial if some comments from the interviews were included in the report to support the reluctance from the industry to share specifics on available resources remaining.	Agreed	Comment satisfactorily addressed.
17	4.1.1	It is recommended that the table be updated to note the quantities are in tonnes and based on the NWMO Community Studies Planning Assumptions report, dated October 2021.	Agreed	Comment satisfactorily addressed.
18	4.2.3	It is recommended that additional comments on the significant increase in supply (145% above baseline) from MSB should be noted here. Although maximum licensed area is noted, comments regarding how production will meet the increase in demand and the impact on MSB would be beneficial in the report.	<ul style="list-style-type: none"> – NWMO/Keir will follow-up with MSB Public Works for their insights. – If not able to get the additional information, alternatively will speak about this in general terms in the final report. 	Comment was partially addressed. Specific comments on how the increase in demand within MSB will be managed are not included. As a result, the PRT recommends that this be addressed through a future study.
19	4.2.5	It would be beneficial if additional comments on the impact to the core and local study area being less than the impact on MSB were noted.	Agreed	Comment satisfactorily addressed.
20	4.2	It is recommended that additional statements in this section be provided outlining the large increase in demand over the MSB baseline and what strategies would be required to meet the increase in production.	See comment 18.	Comment was partially addressed.
21	5.1	It is recommended that the statement should be qualified that no on-site validation was completed and is based on desktop review only to align with the statement of work and work plan.	Agreed	Comment satisfactorily addressed.
22	5.3	It is recommended that additional information within the report be provided to justify the statement that by 2046 existing licensed facilities will be exhausted.	Statement to be removed	Comment satisfactorily addressed.

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	5.5	It is recommended that the expected impact to MSB be separated from the expected impact on the core and local study areas. It is also recommended that comments regarding the ability for production to meet demands be included within the report and this summary statement.	Ok	Comment was partially addressed. Comment added indicating production will meet demand, but no support to statement was provided in report.
24	5.6	It would be beneficial to comment on the timing and impact of planning for the expansion of new aggregate pits.	Timing of pit expansion would need further interviews	Comment partially addressed, but further studies to identify how demand will be met are recommended.
25	5.8	It is recommended that additional analysis be provided in the report to support the comments in this section. It is recommended that quantification of the excavated rock available be completed in this report to provide a reference to other studies (such as roads/traffic).	Discussion of how excavated rock will be quantified in future study (perhaps as part of the future EA if the Project is located in MSB)	Comment satisfactorily addressed. Recommended that future studies be completed to review the management of excavated rock.

Appendix D

36 Guiding Principles

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.
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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.
24. 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.
25. 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.
26. 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.
27. 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.

Capacity Building

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.
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)

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!

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Visit our website:
www.southbruce.ca

Visit our community engagement tool:
www.southbruceswitchboard.ca

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