Planning Justification Report

PREPARED FOR:

Niagara Escarpment Plan Amendment & Official Plan Amendment
Walker Aggregates Inc.
Part of Lot 24-26, Conc. 12 & Part Lot 25 Conc. 11, Township of Clearview, County of Simcoe

December 2025

Your Vision

Designed | Planned | Realized

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1.0 Introduction

MacNaughton Hermsen Britton Clarkson Planning Limited ("MHBC") has been retained by Walker Aggregates Inc. to review the planning merits of several amendments to the Duntroon Quarry and Duntroon Quarry Expansion which are located west of the Osprey-Clearview Townline and are bisected by Township Road 91. The Duntroon Quarry operations are legally described as Part of Lot 24, Lot 25 and Part of Lot 26, Concession 12, and Part of Lot 25, Concession 11, in the Township of Clearview, Country of Simcoe (**Figure 1**).

As part of the approval for the Duntroon Quarry Expansion, the Township of Clearview entered into a legal agreement with Walker to close and convey a portion of Township Road 91 (former County Road) that is located between the quarry sites. The closure of this portion of Township Road 91 allowed Walker to transfer the processing plant and shipping operations from the existing Duntroon Quarry to the Duntroon Quarry Expansion site. Despite the agreement, the Township of Clearview Council passed a resolution to no longer close and convey this portion of Township Road 91. As a result of Council's decision, several amendments are now required to the approval documents that related to the Duntroon Quarry Expansion since the operations were designed on the basis that this section of Township Road 91 would be closed.

This application includes amendments to the Niagara Escarpment Plan and Township of Clearview Official Plan to allow the existing Duntroon Quarry to be used for processing and shipping aggregate material extracted from the Duntroon Quarry Expansion. As part of this application, a Niagara Escarpment Development Permit and an amendment to the *Aggregate Resources Act* (ARA) Site Plans for the Duntroon Quarry and Duntroon Quarry Expansion are also required. The Niagara Escarpment Development Permit and ARA site plan amendments also include a minor deepening of the Duntroon Quarry and Duntroon Quarry Expansion since it has been confirmed that these sites contain additional high-quality aggregate resource that can be extracted without any additional impacts on surrounding land uses.

This report provides a summary of the existing Duntroon Quarry and Duntroon Quarry Expansion, the proposed amendments, and the conclusions and recommendations of the associated technical reports. In addition, this Report provides a summary and analysis of the planning policy applicable to the site, which includes the Provincial Planning Statement (PPS), the Niagara Escarpment Plan (NEP), the County of Simcoe Official Plan, and the Township of Clearview Official Plan.

In addition to this report, the following technical reports have been prepared to assess potential impacts from the proposed amendments:

- Level 1 and 2 Water Study Report, prepared by WSP, dated October 31, 2025;
- Scoped Natural Heritage Impact Assessment, prepared by WSP, dated October 17, 2025;
- Environmental Air Quality Review Letter, prepared by RWDI, dated September 16, 2025;
- Environmental Noise Review Letter, prepared by RWDI, dated September 16, 2025;
- Geotechnical Inspection of the Haulage Tunnel, prepared by WSP, dated October 15, 2025; and
- Blasting Review Letter, prepared by RWDI, dated September 24, 2025.

2.0 Site Description and Surrounding Land Uses

2.1 Existing Duntroon Quarry Operation

The Duntroon Quarry operation is comprised of the Duntroon Quarry (ARA Licence No. 3514) and the Duntroon Quarry Expansion (ARA Licence No. 607841), which are licenced under the Aggregate Resources Act (ARA). The operation is bisected by Township Road 91 and is located west of the Osprey-Clearview Townline, in the Township of Clearview.

The Duntroon Quarry and the Duntroon Quarry Expansion are approved for mineral aggregate extraction and are licence under the ARA. The Duntroon Quarry has a licence area of approximately 57.5 hectares and the Duntroon Quarry Expansion has a licence area of approximately 65.9 hectares.

Active extraction is occurring at both the Duntroon Quarry and the Duntroon Quarry Expansion, with extraction approved to a maximum depth of 500 masl at the Duntroon Quarry and 490 masl at the Expansion. Processing and shipping from the Duntroon Quarry and Duntroon Quarry Expansion currently occurs from the Duntroon Quarry on the south side of Township Road 91. A tunnel underneath Township Road 91 allows for material to be transported from the Duntroon Quarry Expansion to the Duntroon Quarry. Current site-specific policies in the NEP and the Township of Clearview Official Plan require uses accessory to the extraction of aggregate, including processing, to be relocated to the Duntroon Quarry Expansion.

2.2 Surrounding Land Uses

As shown in **Figure 2**, the Duntroon Quarry operation is located in a predominately rural area of the Township of Clearview, surrounded by primarily agricultural, aggregate extraction, and rural residential land uses. Existing land uses within the vicinity of the operation include:

NORTH: Agricultural fields; forested areas; Nottawasaga Lookout Provincial Park; and rural residential dwellings.

EAST: Highlands Nordic; Duntroon Highlands Golf; agricultural fields; forested areas; rural residential dwellings.

SOUTH: Agricultural fields and operation; and forested areas.

WEST: Osprey-Clearview Townline; CBM's Osprey Quarry; agricultural fields; forested areas; and rural residential dwellings.

3.0 Pre-Consultation

A pre-consultation submission was made to the Township of Clearview on October 10, 2023, with a meeting subsequently held on April 17, 2024 with the Township and County. In addition, there were meetings with the NEC to discuss the proposed amendments. Comments were received on March 28, 2024 and included the following:

- Schedule A - Issue Summary & Completeness Requirements
- Schedule B - Fees & Charges Estimate
- Schedule C - Submission Breakdown & Next Steps

In addition to comments received from the Township, comments were provided by the following:

- The Nottawasaga Valley Conservation Authority (June 3, 2024)
- The County of Simcoe Planning Department (November 15, 2023)
- The County of Simcoe Transportation and Engineering Department (November 14, 2023)

Clarification was provided at the pre-consultation meeting on a number of matters and comments were provided on the Township's pre-consultation comments on April 5 and May 3, 2024, which reflected the matters discussed at the pre-consultation meeting. As a result, the Township provided updated Schedules B and C on May 7, 2024.

As part of the pre-consultation process, Terms of Reference for the following reports were also submitted and reviewed by the Township:

- Natural Environment and Water Resources Impact Assessment; and
- Haulage Tunnel Geotechnical Inspection Work.

Confirmation that all berms will be located on Walker's land within the licence was provided to the Township, as a Terms of Reference was initially requested by the Township for a security estimate associated with any proposed berms within the Township right-of-way.

In summary, the comments provide general guidance on the materials, including technical studies and plans that are required to support the proposed amendments. In general, the agencies understood the rationale for the requested amendments since a portion of Township Road 91 will no longer be closed and conveyed to Walker.

A copy of the pre-consultation record is included as **Appendix A**.

4.0 Proposal

Applications for a Niagara Escarpment Plan Amendment, Township of Clearview Official Plan Amendment, Niagara Escarpment Development Permit, and ARA Site Plan Amendment will be required to facilitate the proposed amendments.

4.1 Proposed Development

The proposed amendments seek to achieve the following at the Duntroon Quarry and Duntroon Quarry Expansion:

4.1.1 Maintain processing and shipping at the Duntroon Quarry

Processing and shipping from the Duntroon Quarry and Duntroon Quarry Expansion currently occurs from the Duntroon Quarry on the south side of Township Road 91. Current site-specific policies in the Township of Clearview Official Plan and the NEP require uses accessory to the extraction of aggregate, including processing, to be relocated to the Duntroon Quarry Expansion.

Given that Township Road 91 will no longer be closed and transferred to Walker, maintaining processing and shipping at the Duntroon Quarry, rather than moving these aspects of the operation to the Expansion, will allow for a safer entrance/exit and better visual screening of operations.

The following applications are required to facilitate maintaining the processing and shipping at the Duntroon Quarry:

- Niagara Escarpment Plan Amendment (see **Appendix B**)
- Niagara Escarpment Development Permit
- Township of Clearview Official Plan Amendment (see **Appendix C**)
- ARA Site Plan Amendment (see **Appendix D** for the proposed modifications to the Duntroon Quarry ARA site plans & **Appendix E** for the proposed modifications to the Duntroon Quarry Expansion ARA site plans)

4.1.2 Deepen the Duntroon Quarry and Expansion

Another component of the proposed modifications to operations is to deepen the Duntroon Quarry and the Expansion from +/- 500 MASL to between +/- 490 MASL and +/- 485 MASL to extract additional high quality aggregate material which has been identified within the existing Duntroon Quarry and Expansion.

The following applications are required to deepen the Duntroon Quarry and the Duntroon Quarry Expansion:

- Niagara Escarpment Development Permit
- ARA Site Plan Amendment (see **Appendix D** for the proposed modifications to the Duntroon Quarry ARA site plans & **Appendix E** for the proposed modifications to the Duntroon Quarry Expansion ARA site plans)

4.2 Niagara Escarpment Plan Amendment

As part of the approval for the Duntroon Quarry Expansion, the Township of Clearview entered into a legal agreement with Walker to close and convey a portion of Township Road 91 (former County Road) that is located between the quarry sites. The closure of this portion of Township Road 91 allowed Walker to transfer the processing plant and shipping operations from the existing Duntroon Quarry to the Duntroon Quarry Expansion site. As a result, the NEP included Policy 1.9.3.18 that pertains to the Duntroon Quarry operation and notes that uses accessory to extraction at the Duntroon Quarry Expansion, including processing, to be located at the Duntroon Quarry until such time as is necessary to:

- create an area of 18 hectares on the quarry floor in Phase 1 of the Duntroon Quarry Expansion, and
- to discontinue or relocate the accessory uses.

Despite the agreement, the Township of Clearview Council passed a resolution to no longer close and convey this portion of Township Road 91. Given that Township Road 91 will no longer be closed and transferred to Walker, maintaining processing and shipping at the Duntroon Quarry, rather than moving these aspects of the operation to the Expansion, will allow for a safer entrance/exit and better visual screening of operations.

As a result, site specific policy 1.9.3.18 is proposed to be amended to permit the continuation of processing and shipping of materials extracted from the Duntroon Quarry Expansion at the Duntroon Quarry.

A copy of the Proposed NEPA can be found as **Appendix B** to this Report.

4.3 Niagara Escarpment Development Permit

The Niagara Escarpment Development Permit application for the Duntroon Quarry and the Duntroon Quarry Expansion is to facilitate the following:

- Allow for the Duntroon Quarry to continue to be utilized for processing and shipping;
- Deepen the Duntroon Quarry and Expansion to between +/- 490 MASL and +/- 485 MASL; and
- Other associated revisions to site plans as a result of these amendments (e.g. berm locations).

Overall, the proposed Development Permit application is to permit modifications to:

- the Duntroon Quarry Expansion site plans as shown in **Appendix E**; and
- the Duntroon Quarry site plans as shown in **Appendix D** for items that are not exempt in accordance with Section 5(19) of Ontario Regulation 828/90 under the Niagara Escarpment Planning and Development Act.

4.4 Township Official Plan Amendment

As summarized in Section 4.2, the Township of Clearview Official Plan contains a site-specific policy for the Duntroon Quarry as a result of the former agreement to close and convey a portion of Township Road 91 to Walker.

Consistent with the Policy 1.9.3.18 of the NEP, Policy 13.3.4.3 of the Township Official Plan permits uses accessory to extraction at the Duntroon Quarry Expansion, including all processing facilities, to be located at the Duntroon Quarry until such time as is necessary to:

- create an area of 18 hectares on the quarry floor in Phase 1 of the Duntroon Quarry Expansion, and
- to discontinue or relocate the accessory uses.

Site specific policy 13.3.4.3 of the Township Official Plan is proposed to be amended to permit the continuation of processing and shipping of materials extracted from the Duntroon Quarry Expansion at the Duntroon Quarry.

A copy of the Proposed Township Official Plan Amendment can be found as **Appendix C** to this Report.

4.5 Aggregate Resources Act Site Plan Amendment

Walker has also applied to MNR for an ARA site plan amendment for the Duntroon Quarry and Duntroon Quarry Expansion to allow for the Duntroon Quarry to continue to be utilized for processing and shipping, to deepen the Duntroon Quarry and Expansion to between +/- 490 MASL and +/- 485 MASL, and other associated revisions to site plans as a result of these amendments (e.g. berm locations).

The proposed updates to the Duntroon Quarry and the Duntroon Quarry Expansion ARA Site Plans are included as **Appendix D** and **E** to this Report.

5.0 Planning Analysis

The following is a review of the land use planning policy framework relevant to the Proposed Development of the Site.

5.1 Niagara Escarpment Plan (2017)

The Site is located within the Niagara Escarpment Plan ("NEP") area and is designated 'Mineral Resource Extraction Area' (**Figure 3**). Section 1.9 of the NEP contains the objectives and permitted uses for the Mineral Resource Extraction Area designation. Under Section 1.9.3 the following permitted uses are identified:

- *Mineral aggregate operations licensed pursuant to the Aggregate Resources Act but not including associated facilities unless they are permitted as an accessory use*.

- *Accessory uses normally associated with the mineral aggregate operation, such as temporary offices serving the subject site, signage, crushing and washing facilities, or facilities for recycling and re- processing of mineral aggregate resources. Asphalt plants, concrete plants, brick manufacturing plants and other similar manufacturing uses shall not be permitted.*

In addition, Section 1.9.3.18 of the NEP contains the following site-specific provision related to the Duntroon Quarry Expansion:

> *Notwithstanding any other provision of this Plan, uses accessory to the extraction of aggregate from Lot 25, Concession 12 (associated with Amendment 161 to the Niagara Escarpment Plan) shall be permitted on Lot 24, Concession 12, Township of Clearview, ARA Licence No. 3514, including all processing facilities, but only for such a period of time as is necessary to: (i) create an area of 18 hectares on the quarry floor in Phase 1 of the ARA Licence on Lot 25, Concession 12 (associated with Amendment 161 to the Niagara Escarpment Plan) and (ii) to discontinue or relocate the accessory uses. An asphalt plant, concrete plant, brick manufacturing plant and any other similar manufacturing use shall not be permitted as an accessory use on Lot 24, Concession 12, Township of Clearview, ARA Licence No. 3514.*

The existing Duntroon Quarry and Duntroon Quarry Expansion are permitted uses on the Site in accordance with the NEP. However, an amendment is required to Section 1.9.3.18 to permit the continuation of processing and shipping of materials extracted from the Duntroon Quarry Expansion at the Duntroon Quarry for the life of the operation.

Amendments to the NEP can be contemplated in accordance with Section 1.2.1 of the NEP, which identifies the following provisions applicable to applications to amend the NEP:

- *Planning policies and land use designations may be changed as long as the Purpose and Objectives of the Niagara Escarpment Planning and Development Act and the Niagara Escarpment Plan are met. The Purpose Statement and Objectives in the Introduction of the Plan shall not be changed outside of the context of a full review of this Plan.*

  The application does not propose to change The Purpose Statement and Objectives in the Introduction of the Plan.

  With the proposed NEPA, the purpose of the NEP is met. Both the Duntroon Quarry and Duntroon Quarry Expansion are designated Mineral Resource Extraction Area and this application would not disrupt the maintenance of the Niagara Escarpment and land in its vicinity substantially as a continuous natural environment. Furthermore, the amendment to continue to use the existing Duntroon Quarry for processing and shipping will not result in any negative impacts to the natural environment.

  The objectives of the Niagara Escarpment Plan include the following:

  > *1. To protect unique ecologic and historic areas;*
  > *2. To maintain and enhance the quality and character of natural streams and water supplies;*
  > *3. To provide adequate opportunities for outdoor recreation;*
  > *4. To maintain and enhance the open landscape character of the Niagara Escarpment in so far as possible, by such means as compatible farming or forestry and by preserving the natural scenery;*
  > *5. To ensure that all new development is compatible with the purpose of the Plan;*
  > *6. To provide for adequate public access to the Niagara Escarpment; and*
  > *7. To support municipalities within the Niagara Escarpment Plan Area in their exercise of the planning functions conferred upon them by the Planning Act.*

  As noted above, the proposed NEPA only has the effect of maintaining processing and shipping at the Duntroon Quarry within an active quarry operation that is already disturbed. The proposed NEPA:

  - does not impact unique ecologic and historic areas;
  - does not change the quality and character of natural streams and water supplies;
  - does not impact opportunities for outdoor recreation;
  - enhances the open landscape character since the Duntroon Quarry Expansion was not designed to screen views of the processing area since this portion of Township Road 91 was to be closed and conveyed to Walker;
  - as noted above, the proposed NEPA is compatible with the purpose of the Plan;
  - does not impact public access to the Niagara Escarpment; and
  - would assist in implementing the Township of Clearview's decision to no longer close and convey this portion of Township Road 91 to Walker.

- *Sections 6.1(2.1) and 10(6) of the Niagara Escarpment Planning and Development Act require that amendments to the Niagara Escarpment Plan be justified. The justification for a proposed*

amendment to the Niagara Escarpment Plan means the rationale for the amendment, as well as reasons, arguments or evidence in support of the change to this Plan proposed through the amendment.

As part of the approval for the Duntroon Quarry Expansion, the Township of Clearview entered into a legal agreement with Walker to close and convey a portion of Township Road 91 (former County Road) that is located between the quarry sites. The closure of this portion of Township Road 91 allowed Walker to transfer the processing plant and shipping operations from the existing Duntroon Quarry to the Duntroon Quarry Expansion site. Despite the agreement, the Township of Clearview Council passed a resolution to no longer close and convey this portion of Township Road 91. As a result of Council's decision, several amendments are now required to the approval documents that related to the Duntroon Quarry Expansion since the operations were designed on the basis that this section of Township Road 91 would be closed.

Given that Township Road 91 will no longer be closed and transferred to Walker, the NEPA to maintain processing and shipping at the Duntroon Quarry, rather than moving these aspects of the operation to the Expansion, will allow for a safer entrance/exit and better visual screening of operations to maintain the open landscape character of the NEP.

- *It must be demonstrated that the proposed amendment and the expected impacts resulting from the proposed amendment do not adversely affect the purpose and objectives of the Niagara Escarpment Planning and Development Act. The proposed amendment must be consistent with the purpose and objectives of the Niagara Escarpment Planning and Development Act and the Niagara Escarpment Plan and shall be consistent with other relevant Provincial policies.*

  The proposed NEPA is consistent with the purpose and objectives of the NEP as outlined above. Please see Section 5.2 of this Report for a summary of how the proposed NEPA is consistent with the PPS.

- *Development Criteria set out in Part 2 of the Niagara Escarpment Plan will be considered in the assessment of any amendment to the Niagara Escarpment Plan.*

Section 2 of the NEP outlines the Development Criteria to be applied to all development within the NEP area. The following section addresses the Development Criteria as it relates to the proposed NEPA, as well as the proposed revisions to the ARA site plans as outlined in Section 4.5 to this Report.

Section 2.2 of the NEP provides general development criteria. As it relates to the Section 2.2, the Site is an existing, approved aggregate operation and the proposed development will have the effect of providing better visual screening of operations, while making efficient use of existing infrastructure to access a known resource. The site is an approved mineral aggregate operation, located on an existing lot of record and the site is not prone to natural hazards that will impact the proposed development.

Sections 2.3 (Existing Uses), 2.4 (Lot Creation), 2.5 (Steep Slopes and Ravines), 2.8 (Agriculture), 2.10 (Cultural Heritage), 2.11 (Recreation), 2.12 (Infrastructure), and 2.14 (Bruce Trail) are not applicable to the application. The following addresses the section of the Development Criteria that are applicable to the application.

Section 2.6 contains policies related to Development Affecting Water Resources and generally seeks to ensure that the hydrologic features and functions including the quality, quantity and character of groundwater and surface water are protected and where possible enhanced. A Level 1 and 2 Water Report was completed by WSP to review any potential impacts as a result of the proposed deepening. The Duntroon Quarry is an existing mineral aggregate operation and the Water Report confirmed that surface water and groundwater resources can be protected through existing mitigation measures already approved for the site, including continued implementation of the Adaptive Management Plan monitoring program.

Policies related to Development Affecting Natural Heritage are outlined in Section 2.7 of the NEP and seek to protect and where possible enhance natural heritage features and functions, in order to maintain the diversity and connectivity of the continuous natural environment. The Duntroon Quarry and Expansion are existing, approved aggregate operations and the application does not result in the removal of any key natural heritage features. A Natural Heritage Report was completed to assess any potential impacts as a result of the proposed deepening. The technical reports have confirmed that, in concert with the on-going Adaptive Management Plan, the proposed lowering will not have a negative effect on surrounding natural heritage features.

Section 2.9 of the NEP contains development criteria related to Mineral Aggregate Resources. Policies within this section generally seek to ensure that mineral aggregate operations and their accessory uses are compatible with the Escarpment environment. The Duntroon Quarry and Expansion is an existing, approved aggregate operation, and accessory uses from the Duntroon Quarry are already permitted to be utilized for the Duntroon Quarry Expansion. The proposal to continue to use the existing quarry for processing and shipping for the duration of the operation will have the effect of providing better visual screening of the processing plant and provides a safer entrance/exit since this portion of Township Road 91 will no longer be closed and conveyed to Walker.

The application to continue to use the existing quarry and deepen the operation will extend the life of the operation. However, the application will not change the final approved rehabilitation plan. This is considered appropriate from a planning perspective since additional high-quality mineral aggregate resources can be recovered from a site that is already disturbed, it will better maintain the open landscape character of the area since the expansion was not designed to screen the processing plant, and utilizing the existing entrance/exit is a safer alternative to switching the entrance/exit to the expansion site since this portion of Township Road 91 will no longer be closed and conveyed to Walker.

Section 2.13 of the NEP contains the development criteria related to scenic resources and landform conservation and generally seeks to ensure that development preserves the natural scenery and maintains Escarpment Related Landforms and the open landscape character of the Escarpment. As noted above, the proposed development will have the effect of providing better visual screening of operations through maintaining the processing and shipping at the Duntroon Quarry. The proposed development will otherwise not result in discernable differences in visual impacts from what is currently approved.

In conclusion, the proposed application conforms to the NEP.

5.2 Provincial Planning Statement (2024)

The Provincial Planning Statement (PPS) was issued under Section 3 of the Planning Act and it is intended to provide policy direction on land use matters which are in the Provincial interest. All land use planning decisions are required to be consistent with the PPS.

The PPS sets the policy foundation for regulating the development and use of land province-wide, helping achieve the provincial goal of meeting the needs of a fast-growing province. In particular, the PPS seeks to protect resources, including natural areas, water, aggregates and agricultural lands.

In the context of the PPS, the Site would be considered a mineral aggregate operation on rural lands. 'Mineral aggregate operation' is defined in the PPS as the following:

> *a) "lands under license or permit, other than for wayside pits and quarries, issued in accordance with the Aggregate Resources Act;*

The Duntroon Quarry and Duntroon Quarry Expansion are licenced under the ARA and are permitted uses on the Site in the context of the PPS.

Section 4.5 of the PPS contains policies related to Mineral Aggregate Resources, with Policy 4.5.1.1 stating that:

> *Mineral aggregate resources shall be protected for long-term use and, where provincial information is available, deposits of mineral aggregate resources shall be identified.*

The proposed amendment to deepen the extraction depth of the quarry is in keeping with the policy direction established under 4.5.1.1 as it will allow for a known aggregate deposit to be extracted from an existing operation where infrastructure is in place to support the extraction.

In addition, the policies of Section 4.5.2 state that:

> *1. As much of the mineral aggregate resources as is realistically possible shall be made available as close to markets as possible. Demonstration of need for mineral aggregate resources, including any type of supply/demand analysis, shall not be required, notwithstanding the availability, designation or licensing for extraction of mineral aggregate resources locally or elsewhere.*
>
> *2. Extraction shall be undertaken in a manner which minimizes social, economic and environmental impacts.*
>
> *4. Mineral aggregate operations shall be protected from development and activities that would preclude or hinder their expansion or continued use or which would be incompatible for reasons of public health, public safety or environmental impact. Existing mineral aggregate operations shall be permitted to continue without the need for official plan amendment, rezoning or development permit under the Planning Act. Where the Aggregate Resources Act applies, only processes under the Aggregate Resources Act shall address the depth of extraction of new or existing mineral aggregate operations. When a license for extraction or operation ceases to exist, policy 4.5.2.5 continues to apply.*

The proposed amendments will allow for extraction of a known mineral aggregate resource within an existing licenced operation. In addition, the amendments to maintain processing and shipping at the Duntroon Quarry and maintain the existing tunnel will allow for a safer entrance/exit and better visual screening of operations, which will minimize social impacts of the operation.

Policies within Section 4.5.3 address rehabilitation, with Policy 4.5.3 stating that

> *Progressive and final rehabilitation shall be required to accommodate subsequent land uses, to promote land use compatibility, to recognize the interim nature of extraction, and to mitigate negative impacts to the extent possible. Final rehabilitation shall take surrounding land use and approved land use designations into consideration.*

The proposed amendments will not change the final rehabilitated landform which consists of two (2) lakes.

Policies related to land use compatibility are outlined in Section 3.5 of the PPS. In general, the policies of Section 3.5 seek to minimize and mitigate any potential adverse effects from odour, noise and other contaminants from major facilities on sensitive land uses, while ensuring the long-term operational and economic viability of major facilities in accordance with provincial guidelines, standards and procedures.

The proposal would result in processing and shipping being maintained at the Duntroon Quarry rather than moving these aspects of the operation to the Expansion, which will allow for a safer entrance/exit and better visual screening of operations. In addition, noise, air quality and blasting reviews have been completed to review potential impacts of the proposed deepening. These reviews confirmed that appropriate mitigation measure are already in place to meet the relevant provincial standards and that the site can continue to operate with the change in permitted extraction depth.

Section 4.1 of the PPS contains policies related to natural heritage. Policies within this section broadly seek to ensure that natural features and areas are protected for the long-term. Similarly, Section 4.2 of the PPS contains policies related to water, which seek to protect, improve or restore the hydrologic function of sensitive surface water features and sensitive ground water features.

A Natural Heritage Report and Water Report were completed to assess any potential impacts as a result of the proposed deepening. The Duntroon Quarry is an existing mineral aggregate operation and the technical reports have confirmed that, in concert with the on-going Adaptive Management Plan, the proposed lowering will not have a negative effect on natural heritage features and that surface water and groundwater resources can be protected through the existing approved mitigation measures.

It is concluded that the proposed amendments are consistent with the policies of the PPS.

5.3 County of Simcoe Official Plan (2013)

The County of Simcoe Official Plan ("County OP") is the upper tier planning document that guides planning policy and development on a regional basis. At a broad level, the County OP seeks to protect the County's natural and cultural heritage, wisely manage resources, and promote efficient growth which achieves a high lifestyle quality, coordinate land use planning among lower tier municipalities and other jurisdictions, provide opportunities for economic development, and promote and enhance public health and safety.

Within the County OP, the Site is recognized to be located within the NEP area. Section 3.10 of the County OP contains policies related the NEP, with Section 3.10.1 stating that:

> *The Niagara Escarpment Plan designations are identified on Schedule 5.3.1. Development and the creation of new lots within the Niagara Escarpment Plan must meet the requirements of the Niagara Escarpment Plan as well as the requirements of this Plan and the Township of Clearview official plan that are not in conflict with the Niagara Escarpment Plan, and the more restrictive policies will apply.*

Similarly, Section 3.3.10 of the County OP notes that development in the NEP area is subject to compliance with the policies of Section 3.10 of the County OP and the relevant Development Criteria of Part 2 and the policies of Part 3 of the NEP. Section 3.10 of the County OP contains policies for the NEP area and notes that any new development not specifically exempted by regulation under the Niagara Escarpment Planning and Development Act shall require a Development Permit from the NEC before any other approvals or permits are issued.

A review of the NEP, including the relevant Development Criteria, and the Township of Clearview Official Plan are outlined in Sections 5.1 and 5.4 of this Report. The Duntroon Quarry is an approved mineral aggregate operation and the proposed development is a permitted use in the NEP. An NEPA and LOPA have been submitted to amend existing site-specific policies for the lands. A Niagara Escarpment Development Permit has also been applied for.

General development policies are outlined in Section 3.3 of the County OP. In accordance with the Natural Heritage policies under Section 3.3, a Natural Heritage Evaluation was completed as part of the application. This review concluded that, in concert with the on-going Adaptive Management Plan, the proposed development will not have a negative effect on natural heritage features.

Section 4.4 of the County OP contains the County's policy statement on aggregate developments. As it relates to the Proposed Development, Sections 4.4.2 and 4.4.5 note that mineral aggregate resource areas shall be protected for potential long-term use and that resource be made available to supply resource needs. The proposed amendments will allow for extraction of a known mineral aggregate resource within an existing licenced operation where infrastructure is in place to support the extraction.

As noted, a Natural Heritage Review has confirmed that the proposed development can occur without impacts to natural heritage features. Similarly, reviews of noise, blasting and air quality have confirmed that the proposed development will not result in impacts to nearby uses.

The County's policy statement on resource conservation is outlined in Section 4.5 of the County OP and includes policies related to water quality and quantity. A Level 1 and 2 Water Report was completed by WSP to review any potential impacts as a result of the proposed deepening. The Duntroon Quarry is an existing mineral aggregate operation and the Water Report confirmed that surface water and groundwater resources can be protected through the existing approved mitigation measures, including continued implementation of the Adaptive Management Plan monitoring program.

It is the opinion of the undersigned that the applications conform to the County OP.

5.4 Clearview Official Plan (2024)

The Site is located in the Township of Clearview and is subject to the Township of Clearview Official Plan ("Township OP"). Within the Township OP, the Site is identified as being within the NEP area and designated 'Mineral Resource Extraction Area' on Schedule B.

Section 4.10 of the Township OP addresses the NEP designations, with Section 4.10.12(e) stating that:

> *Outside of the Settlement Areas identified in Policy No. 4.10.1.1: lands in the "Mineral Resource Extraction Area" designation shall be subject to Part 1.9 of the NEP and to all other applicable policies in that Plan.*

A review of the proposed development in relation to the policies of the NEP is outlined in Section 5.2 to this Report.

In addition, Schedule E of the Township OP identifies the Site as being an 'Aggregate Site Authorized (Active)' (**Figure 4**) and Schedule SP-3.1 identifies the Site as being within 'Specific Policy Area 13.3.4' (**Figure 5**).

Section 13.3.4 of the Township OP pertains to the Duntroon Quarry Expansion and states the following:

> *The lands designated as "Specific Policy Area 13.3.4" on Schedule SP-3 to this Official Plan, being those lands described legally as part of Lot 24, Lot 25, and part of Lot 26, Concession No. 12, and part of Lot 25, Concession No. 11 (all formerly in the Township of Nottawasaga and now in the Township of Clearview), referred to in this section as the "subject lands" and shown in further detail on Schedule SP-3.1, shall be subject to the following special provisions, in addition to all other applicable policies of this Official Plan:*
>
> 1. *The subject lands shall be comprised of three separate sub-areas, as shown on Schedule SP3.1, which shall be referred to as:*
>   a) *the "Existing Quarry Area", being that portion of Specific Policy Area 13.3.4 situated on lands described legally as part of Lot 24, Concession No. 12 (formerly in the Township of Nottawasaga and now in the Township of Clearview), and that bears the "Mineral Resource Extraction Area" designation on Schedule B to this Plan;*
>   b) *the "Expansion Area", being that portion of Specific Policy Area 13.3.4 that bears the "Mineral Resource Extraction Area" designation, as shown on Schedule B, and that is not situated within the "Existing Quarry Area" described in Clause 13.3.4.1(a); and*
>   c) *the "Buffer Area", being that portion of Specific Policy Area 13.3.4 that is shown on Schedule B as bearing a land use designation that is not the "Mineral Resource Extraction Area" designation.*
>
> 2. *The Expansion Area shall be subject to the policies in the Niagara Escarpment Plan that apply to the "Mineral Resource Extraction Area" designation, including any policies that apply to lands associated with Amendment 161 to that Plan.*

3. *Notwithstanding anything to the contrary in this Official Plan, but subject to No. 13.3.4.4 below, uses that are accessory to the extraction of mineral aggregate resources from Lot 25, Concession No. 12 (formerly in the Township of Nottawasaga and now in the Township of Clearview), including all processing facilities, shall be permitted in the Existing Quarry Area, but only for such period of time as is necessary:*

    a) *to create an area of 18 hectares on the quarry floor in Phase I of the ARA licence on Lot 25, Concession No. 12 (formerly in the Township of Nottawasaga and now in the Township of Clearview); and*
    b) *to discontinue or relocate any such accessory uses.*

4. *Notwithstanding No. 13.3.4.3 above, no asphalt plant, concrete plant, brick manufacturing plant, or other similar manufacturing use shall be permitted as an accessory use in the Existing Quarry Area.*

5. *Notwithstanding anything to the contrary in this Official Plan, lands in the Buffer Area may be used for the installation of, access to, and facilities and services for or related to the water management and monitoring system associated with the quarry located in the Expansion Area.*

6. *Any works described in or related to any use or activity that is described in No. 13.3.4.5 above:*

    a) *shall be subject to a development permit under the Niagara Escarpment Planning and Development Act; and*
    b) *shall be undertaken in a manner that ensures that any disturbance of lands in the Buffer Area will be minimized.*

7. *The extraction of mineral aggregate resources shall not be permitted on any lands in the Buffer Area.*

Part of the proposed development seeks to amend policy 13.3.4.3 to allow for the continued processing and shipping at the Duntroon Quarry on the south side of Township Road 91. Given that Township Road 91 will no longer be closed and transferred to Walker, maintaining processing and shipping at the Duntroon Quarry, rather than moving these aspects of the operation to the Expansion, will allow for a safer entrance/exit and better visual screening of operations. No other changes to the existing site-specific provision are proposed. A copy of the Proposed OPA is included as **Appendix C** to this Report.

Section 5 of the Township OP contains policies related to Natural Heritage and Climate Change, with Sections 5.2 and 5.3 of the Township OP containing policies related to the natural heritage system and water systems and resources in the Township. A Natural Heritage Report and Water Report were completed to assess any potential impacts as a result of the proposed deepening. The Duntroon Quarry is an existing mineral aggregate operation and the technical reports have confirmed that, in concert with the on-going Adaptive Management Plan, the proposed lowering will not have a negative effect on natural heritage features and that surface water and groundwater resources can be protected through existing approved mitigation measures.

It is the opinion of the undersigned that the applications conform to the Township OP.

6.0 Summary and Findings

Based on the analysis outlined within this Report, and the conclusions of the technical studies which accompany this Application, it is the opinion of the undersigned that the Proposed Development is in the public interest and represent good planning for the following reasons:

- It is consistent with the PPS;
- It conforms to the NEP;
- It conforms to the County of Simcoe Official Plan; and
- It conforms to the Township of Clearview Official Plan.

Should you have any questions, please do not hesitate to contact the undersigned.

Respectfully submitted,

MHBC



Brian Zeman, BES, MCIP, RPP

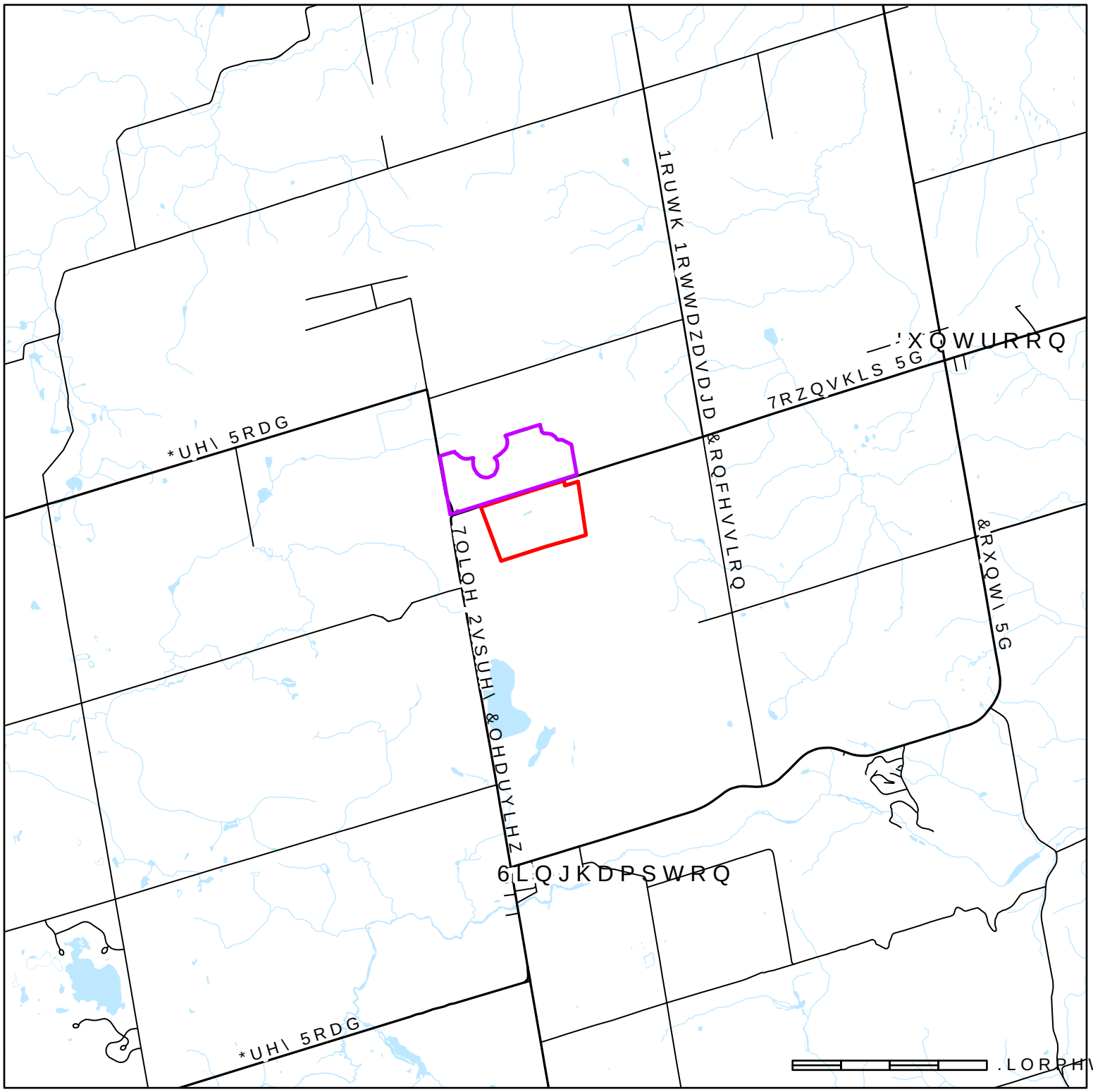
Partner



Ellen Ferris, MSc., MCIP, RPP

Associate

Figures



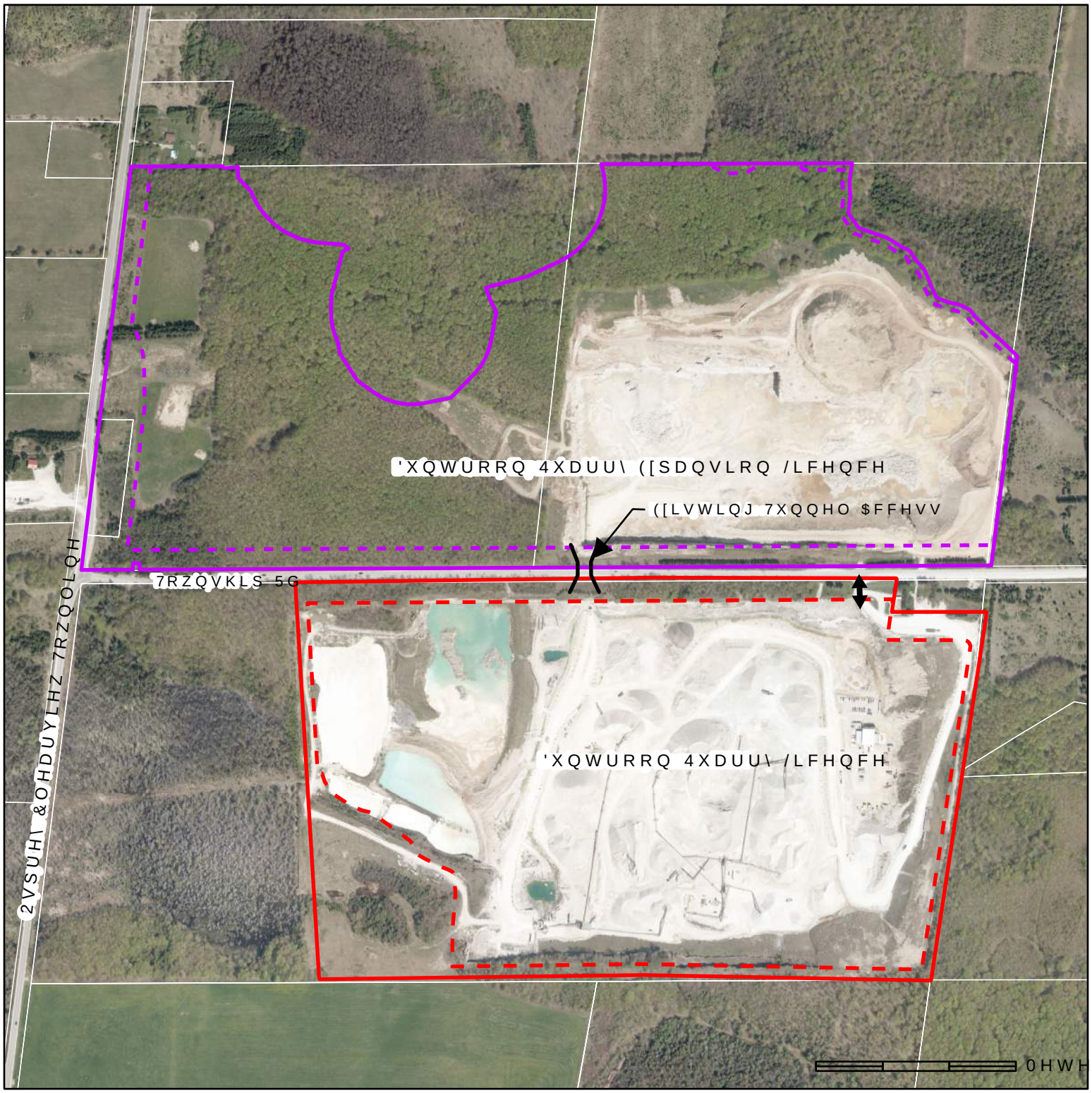
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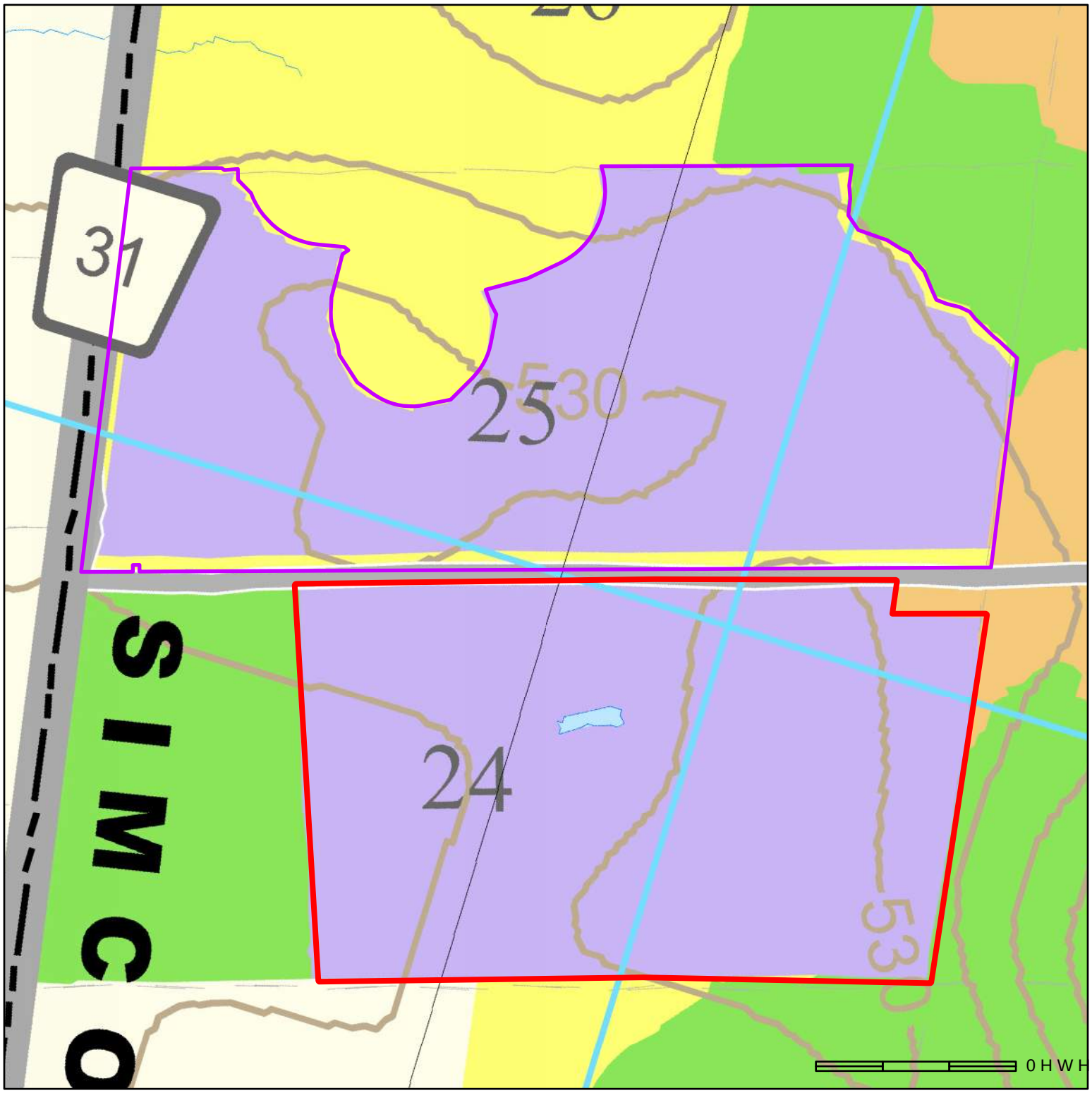
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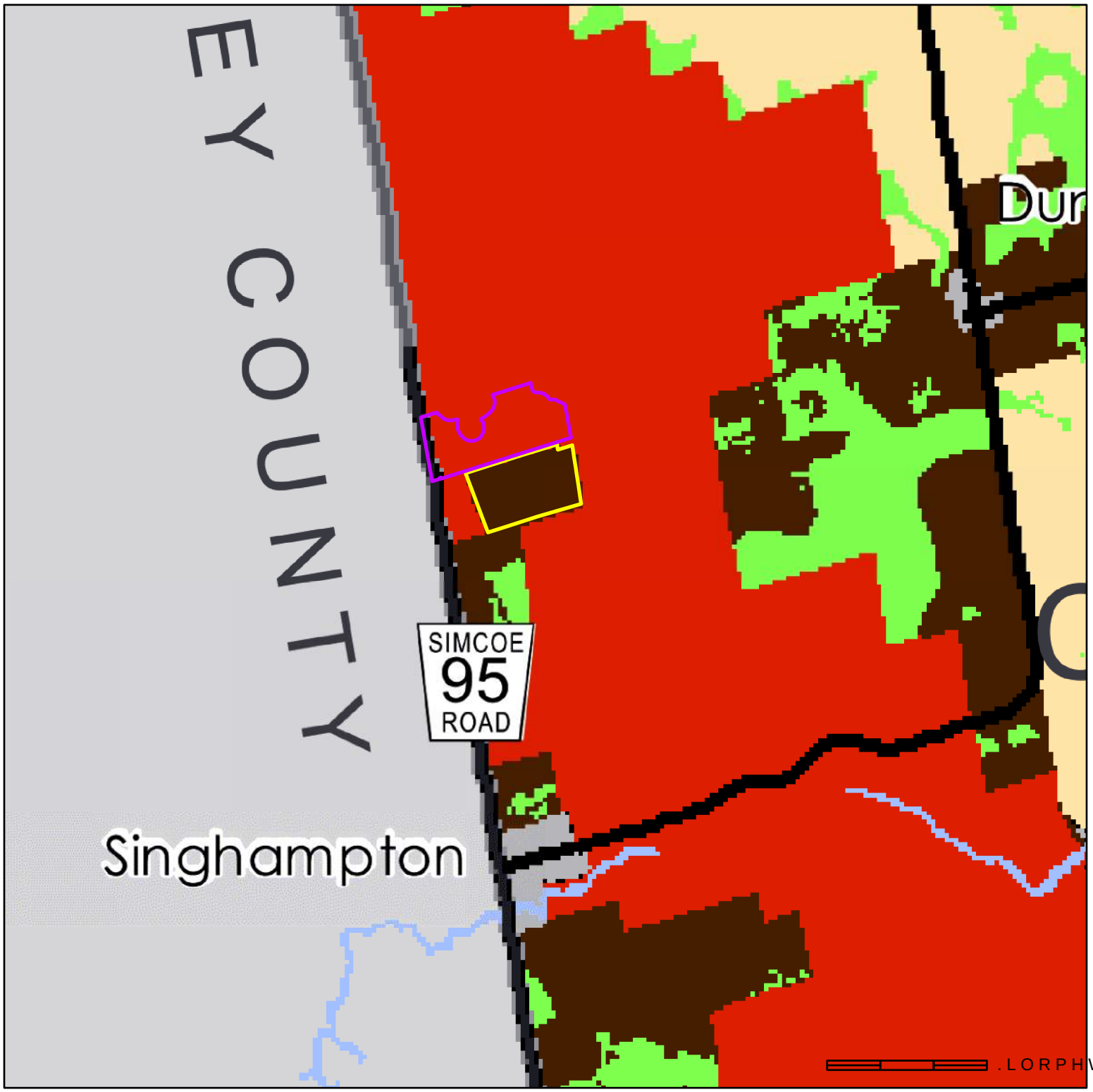
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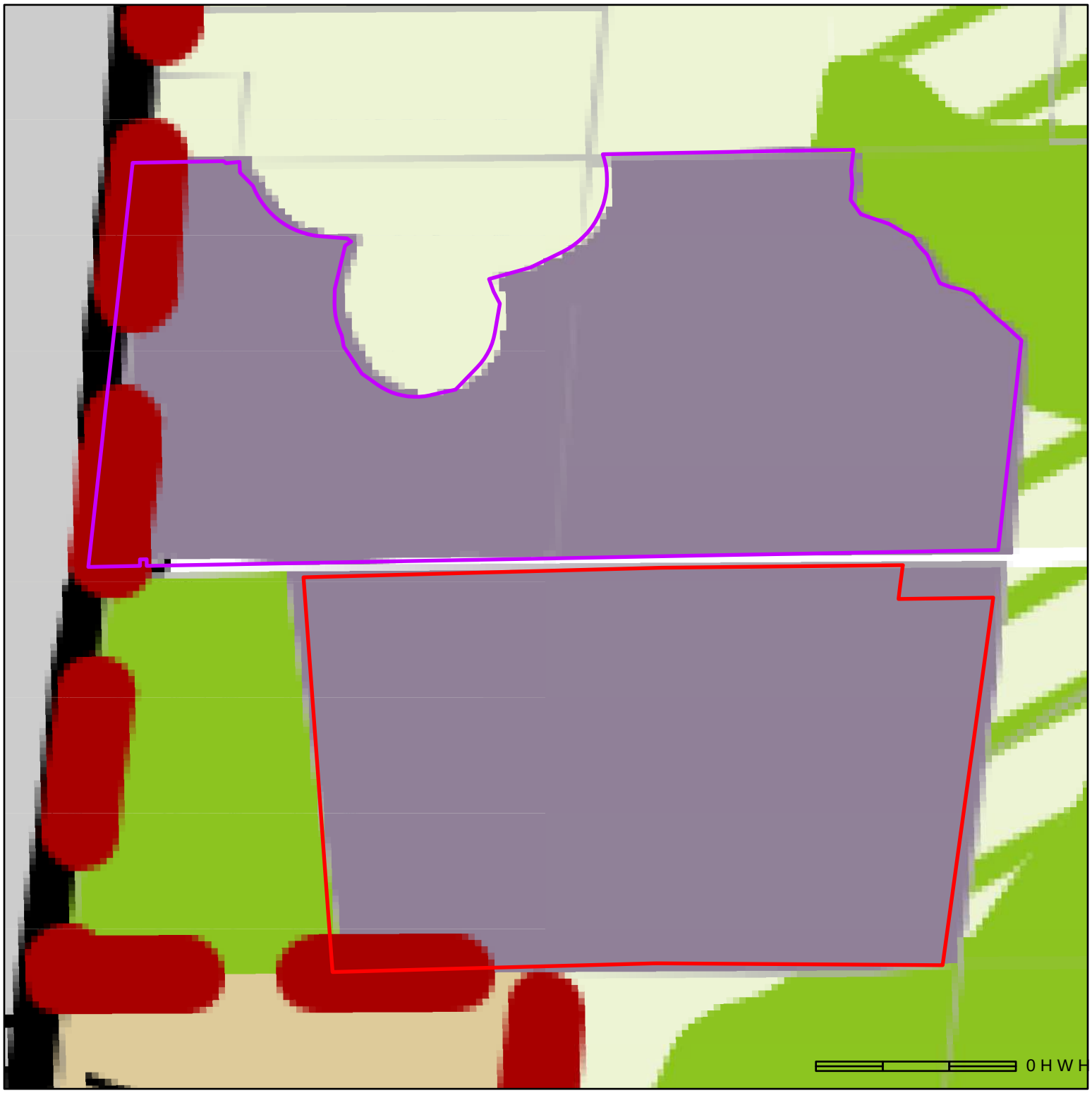
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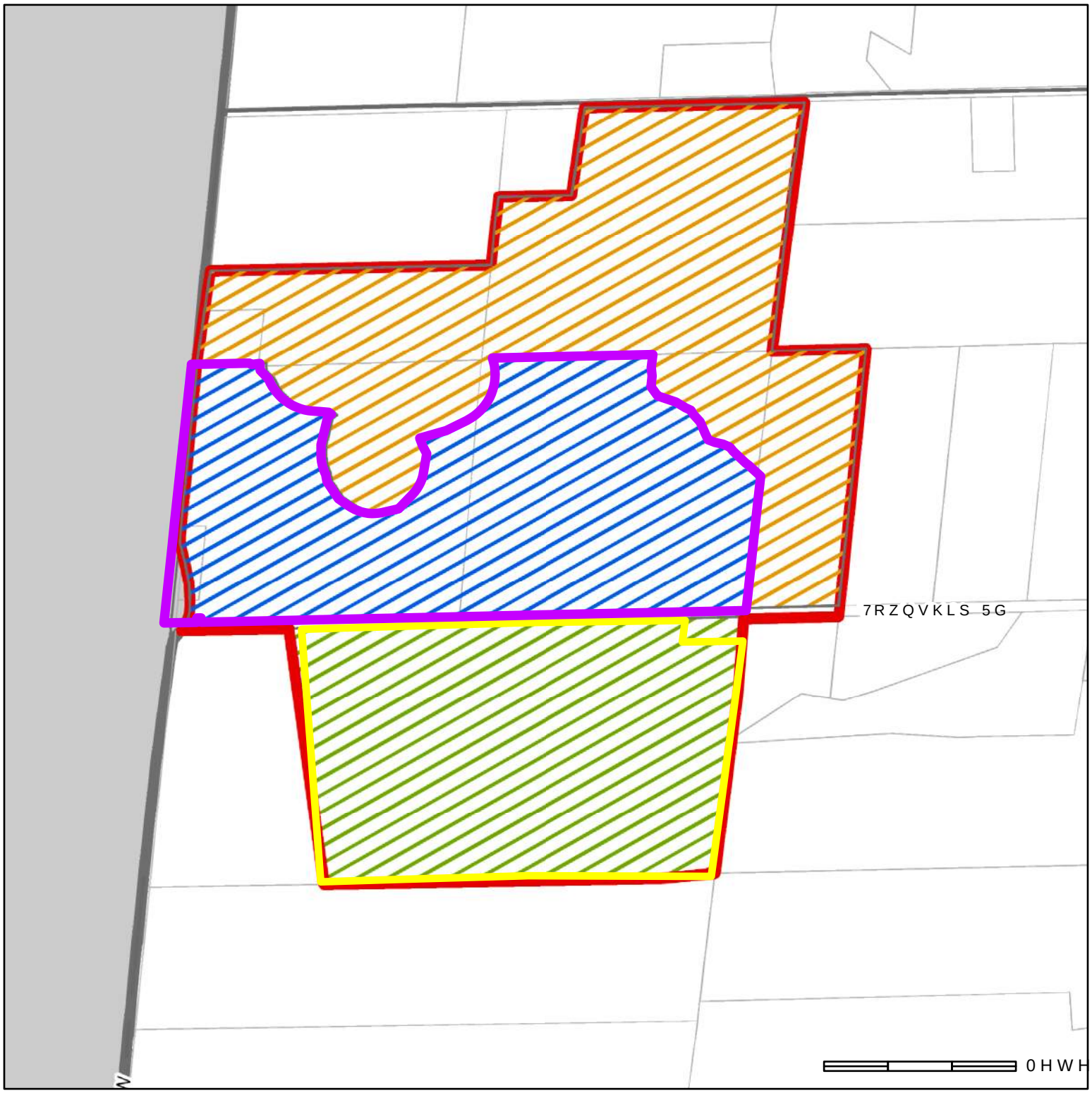
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Appendix A

Pre-Consultation

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
CELEBRATING 50 YEARS est. 1973

October 10, 2023

Amy Cann, M. Pl., MCIP, RPP
Director of Planning & Building
Township of Clearview
217 Gideon Street
Stayner, ON L0M 1S0

Dear Amy Cann:

RE: Duntroon Quarry & Duntroon Quarry Extension – Pre-consultation Request
OUR FILE 9811BN

On behalf of Walker Aggregates Inc. ("Walker"), we are pleased to submit a pre-consultation request for the Duntroon Quarry (Licence No. 3514) and Duntroon Quarry Extension (Licence No. 607841). Included as Tab #1 is a copy of the Township of Clearview Pre-consultation application form. The Duntroon Quarry operation is located west of the Osprey-Clearview Townline and is bisected by Township Road 91. An aerial overview of the operation is included as Tab #2 and the Aggregate Resources Act (ARA) site plans for each site are included as Tabs #3 & 4 respectively.

As a result of the Township of Clearview decision to no longer close and convey a portion of Township Road 91 (former County Road) to Walker, several amendments are required to the Duntroon Quarry operations since they were designed on the basis that this section of Township Road 91 would be closed. As part of this process, Walker entered into Minutes of Settlement with the Township of Clearview on July 4, 2023 which are included as Tab #5.

Further to our initial meetings with the Township, County and Niagara Escarpment Commission, the following applications are being proposed at the Duntroon Quarry and the Extension:

1. **Maintain processing and shipping at the Duntroon Quarry** – Processing and shipping from the Duntroon Quarry and Duntroon Quarry Extension currently occurs from the Duntroon Quarry on the south side of Township Road 91. Current site specific policies in the Township of Clearview Official Plan and the Niagara Escarpment Plan (NEP) require uses accessory to the extraction of aggregate, including processing, to be relocated to the Duntroon Quarry Extension in the future.

   Given that Township Road 91 will no longer be closed and transferred to Walker, maintaining processing and shipping at the Duntroon Quarry, rather than moving these aspects of the operation to the Extension, will allow for a safer entrance/exit and better visual screening of operations.

To permit the continuation of processing and shipping at the Duntroon Quarry, site specific policy 5.1.6.8 (d) from the Township of Clearview Official Plan (please note this policy is not currently found within the online consolidated version of the Official Plan) and policy 1.9.3.18 from the NEP will need to be deleted. In addition, the Niagara Escarpment Development Permits for the Duntroon Quarry (Tab #6) and the Extension (Tab #7) will need to be amended/replaced to allow for the Duntroon Quarry to continue to be utilized for processing and shipping.

Subject to approval of the plan amendments and updated Development Permits, amendments will also be required to the ARA site plans for the Duntroon Quarry and Duntroon Quarry Extension.

2. **Maintain existing tunnel between Duntroon Quarry and Extension –** Since Walker is proposing to use the existing quarry to process and ship material from the extension, maintaining the existing tunnel between the Duntroon Quarry and the Extension underneath Township Road 91 is required. Furthermore, at the completion of operations there would be no need to close the existing tunnel since the lake filling at both sites would commence at the same time and the lake levels are the same.

   The requirement to close the tunnel is included in the Niagara Escarpment Development Permits for the Duntroon Quarry (Tab #6) and the Extension (Tab #7) and these permits will need to be amended/replaced to allow for the existing tunnel to be maintained.

   Subject to approval of the updated Development Permits, amendments will also be required to the ARA site plans for the Duntroon Quarry and Duntroon Quarry Extension.

3. **Deepen the Duntroon Quarry** – Another component of the proposed modifications to operations is to deepen the Duntroon Quarry from +/- 500 MASL to +/- 490 MASL to extract additional high quality aggregate material which has been identified within the existing Duntroon Quarry. In accordance with Section 5(19) of Ontario Regulation 828/90 under the Niagara Escarpment Planning and Development Act, the portion of site licenced prior to June 10, 1975 does not require a Niagara Escarpment Development Permit. Only the portion of the site licenced after June 10, 1975 would require a Niagara Escarpment Development Permit to permit additional extraction on site. Included as Tab #8 is a figure which identifies which portions of the Duntroon Quarry were licenced prior to, and post, June 10, 1975.

   Subject to approval of a Development Permit for the portion licenced after June 10, 1975, an amendment will also be required to the ARA site plans for the Duntroon Quarry. Walker may also apply for an ARA site plan amendment for the portion of the site licenced prior to June 10, 1975 in advance of the other approvals.

Based on the nature of the required applications, we would request that Staff from the NEC, the Ministry of Natural Resources and Forestry, the County of Simcoe, and the Conservation Authorities be invited to the pre-consultation meeting.

We look forward to meeting with the Township of Clearview and other agencies to discuss the applications and should you have any questions, please do not hesitate to contact the undersigned.

Yours truly,

MHBC



Brian Zeman, BES, MCIP, RPP
President

Attachments:
- Tab 1 – Township of Clearview Pre-consultation Application Form
- Tab 2 – Aerial Overview Figure
- Tab 3 – ARA Site Plans for Duntroon Quarry
- Tab 4 – ARA Site Plans for Duntroon Quarry Extension
- Tab 5 – Minutes of Settlement between Walker and the Township of Clearview, dated July 4, 2023
- Tab 6 – NEC Development Permit #6707/S/E/2013-2014/9060
- Tab 7 - NEC Development Permit #6708/S/E/2013-2014/9061
- Tab 8 – Duntroon Quarry Areas Subject to NEC Development Permit

cc. *Kathy Woeller | NEC*
Greg Marek | County of Simcoe
Ryan Wall | Walker
Dave Munro | Walker
Kevin Kehl | Walker
Ellen Ferris | MHBC

Tab **1**

FORM P2

CLEARVIEW

PRE-CONSULTATION APPLICATION

FOR OFFICE USE ONLY:

Date Request Received: _____ Inquiry No.: _____

Thank you for your request to initiate the pre-consultation process with the Planning Department. This request form has been provided to you as a first step in the compulsory pre-consultation process and provides you with the space to outline all the information relating to your development proposal. This form must be completed if you are pursuing development that will require any of the following types of Planning Act applications:

- Official Plan Amendment Application
- Zoning By-law Amendment Application
- Draft Plan Subdivision/Condominium Application
- Site Plan Approval Application

Based on the information provided in this form, Planning Staff will provide you with a Pre-Consultation Response that will outline those items (plans and studies) that are required to initiate a formal application. Any comments produced by the Township or consulting agencies as a result of the information provided in this form are preliminary and are not to be taken as an opinion of Planning Staff or a decision of any kind. Participating in the pre-consultation process does not authorize the initiation of any construction or preparatory work on site, including the clearing of trees or vegetation or any site alteration.

Along with this completed form, all submissions must include two (2) hard copy drawings (at least 11”x17”) and a digital (PDF) copy of concept plans. Other supporting materials (i.e., plans and studies) are beneficial. Plans must show in metric the following:

- Dimension of property (frontage/area) and delineation of lot lines
- Location of existing and proposed buildings/structures
- Setbacks from existing and proposed buildings/structures to adjacent lot lines, wells, septic systems, and other buildings/structures on the property
- Location and setbacks from any features on the property including natural features (stream courses, slopes, wetlands, forests), roads, utilities, and agricultural facilities
- Size and height of existing and proposed buildings/structures

CONTACT INFORMATION

Date of Request:	October 10, 2023
Name:	MHBC (c/o Brian Zeman)
Address:	113 Collier Street
Phone Number:	705 728 0045 ext. 226
Email:	bzeman@mhbcplan.com

PROPERTY & PROPOSAL INFORMATION

Municipal Address:	9861 & 9828 County Road 91, 794533 & 794519 Osprey-Clearview Townline
Roll:	432901000827000, 432901000827100, 432901000827100, 432901000827300
Legal Address:	Pt Lots 24, 26, Lot 25, Con 12 & Pt Lot 25, Con 11, former Township of Nottawasaga, Township of Clearview
Purchase Date:	June 9, 1993, January 6, 2003, January 24, 2003 & December 2, 2005

1. Are there any easements or restrictive covenants affecting the subject lands

☑ Yes ☐ No

If yes, describe the easement or covenant and its effect:

Bell Canada Easement (794533 Osprey- Clearview Townline); and a restrictive covenant agreement No. 943424 (attached) burdening the existing quarry (9861 County Road 91) and benefiting the neighbouring lands to the south. This agreement expires in May 2027 and Walker has been in contact with the landowner.

2. Dimensions of the Subject Property (in metric units):

Frontage	+/-1,300m (main) & 1,300m (extension)	Depth	+/-600 m (main) & +/-60m (extension)
Average Width	+/-1,300m (main) & 1,300m (extension)	Area	+/- 80ha (main) & +/- 80ha (extension)

3. Describe the uses **existing** on the property:

Mineral Aggregate Operation (Duntroon Quarry & Duntroon Quarry Extension).

4. Describe the uses **proposed** on the property:

Please see enclosed cover letter - Proposed modifications to existing operation. No new uses proposed.

5. Describe the buildings/structures **existing** on the property:

Please see enclosed site plans.

6. Describe the buildings/structures **proposed** on the property:

Please see enclosed cover letter - no new buildings/structures proposed. Existing processing plant and equipment proposed to be maintained at Duntroon Quarry.

7. Describe the Planning Policy applying to the lands:

Current Official Plan Designation:	Mineral Aggregate Resource Area
Current Zoning:	n/a (NEC)

8. Describe any anticipated policy changes required to facilitate the proposed development:

Delete site specific policy 5.1.6.8 (d) from the Township Official Plan to permit the Duntroon Quarry to continue to be used for processing and shipping. See cover letter for additional details.

9. Describe the existing and proposed access and servicing applying to the lands:

	Existing	Proposed
Site Access/Entrance:	From Duntroon Quarry onto Township Rd. 91	proposed to maintain
Drinking water supply:	n/a	n/a
Wastewater treatment:	n/a	n/a
Stormwater management:	n/a	n/a

10. Describe the utilities existing and proposed to service the lands:

	Existing	Proposed
Hydro		no change
Natural Gas		no change
Telecommunications		no change

11. Describe the historic approvals and uses impacting the lands:

Issue	Description
Has the subject land or land within 120 metres of it, ever been the subject of a Zoning By-law Amendment, Minor Variance, Plan of Subdivision or Consent, Official Plan Amendment, Site Plan or Ministers Zoning Order?	☑ Yes ❒ No ❒ Unknown
If yes, specify the file number, the name of the approval authority considering it, the land it affects, its purpose, its status and its effect on the requested amendment.	Duntroon Quarry and Extension subject to previous OPA, NEPA and NEC Development Permits to facilitate mineral aggregate operation.
Has there ever been an industrial or commercial use, including gas station on the subject land or adjacent lands?	☑ Yes ❒ No ❒ Unknown
If yes, please describe:	Mineral aggregate operation
Is there a reason to believe the subject lands have been contaminated by former uses on the site or adjacent lands?	❒ Yes ☑ No ❒ Unknown
If yes, please describe:	
Has there ever been waste disposal on the subject land or adjacent lands?	❒ Yes ☑ No ❒ Unknown
If yes, please describe:	

12. Development Expectations

Please indicate your expectations regarding development timelines:

Planning Approval Date:	2024
Commencement of Construction Date:	n/a
Construction Completion Date:	n/a

Authorization of Owner

If the Applicant is not the Owner of the land that is the subject of this application, the written authorization of the Owner that the Applicant is authorized to make the application must be included with this form.

Consent of Owner to the Use & Disclosure of Personal Information

I, Ryan Wall, am the owner of the land that is the subject of this application and for the purposes of the Freedom of Information and Privacy Act, I authorize and consent to the use by or the disclosure to any person or public body of any personal information that is collected under the authority of The Planning Act for the purposes of processing this application.

Personal information contained in this form, collected and maintained pursuant to *The Planning Act*, will be used for the purpose of responding to the Application and creating a public record. The Owner's Signature acknowledges that "personal information [is] collected and maintained specifically for the purpose of creating a record available to the general public;" per Section 14(1)(c) of the *Municipal Freedom of Information and Protection of Privacy Act,* R.S.O. 1990, c. M. 56.

The applicant acknowledges that the Town considers the application forms and all supporting materials, including studies and drawings, filed with this application to be public information and to form part of the public record. With the filing of an application, the applicant consents to the Town photocopying and releasing the application and any supporting material either for its own use in processing the application or at the request of a third party, without further notification to or permission from the applicant. The applicant also hereby states that it has authority to bind its consultants to the terms of this acknowledgement.

Questions regarding the collection of information should be directed to the Clerk of the Township of Clearview, 705-428-6230, ex 224.

Sept 7, 2023
Date:

Signature of Owner:

Province of Ontario

Document General

Form 4 — Land Registration Reform Act, 1984

FOR OFFICE USE ONLY

No. 943424

CERTIFICATE OF REGISTRATION
87 APR 2 P2:11

SIMCOE
No. 51
BARRIE

LAND REGISTRAR

(1) Registry [x] Land Titles [ ] (2) Page 1 of 21 pages

(3) Property Identifier(s) Block Property Additional: See Schedule [ ]

(4) Nature of Document
RESTRICTIVE COVENANT AGREEMENT

(5) Consideration
Five ---------- Dollars $5.00

(6) Description
Burdened Lands: Lot 24, Concession 12, Township of Nottawasaga, County of Simcoe
Benefitted Lands: Parts of Lots 19, 20, 21, 22 and 23 in Concession 12 and Parts of Lot 21 in Concession 11, and Parts of Lots 11 to 22 inclusive, Plan 168, in the Township of Nottawasaga, County of Simcoe and Parts of Lots 10, 11, 14, 15 and 16, Concession A, Township of Osprey, County of Grey, more particularly described in attached schedule

New Property Identifiers — Additional: See Schedule [ ]

Executions — Additional: See Schedule [ ]

(7) This Document Contains: (a) Redescription New Easement Plan/Sketch [ ] (b) Schedule for: Description [x] Additional Parties [ ] Other [x]

(8) This Document provides as follows:

Restrictive Covenant Agreement attached hereto.

Continued on Schedule [x]

(9) This Document relates to instrument number(s)

(10) Party(ies) (Set out Status or Interest)

Name(s)	Signature(s)	Date of Signature Y	M	D
CARMARTHEN LAKE FARMS LIMITED (Owner of Benefitted Lands) by its solicitors BLAKE, CASSELS & GRAYDON	Per: T. W. Bermingham	1987	03	26

(11) Address for Service: c/o Blake, Cassels & Graydon, Box 25, Commerce Court West, Toronto, Ontario. M5L 1A9

(12) Party(ies) (Set out Status or Interest)

Name(s)	Signature(s)	Date of Signature Y	M	D
McKEAN QUARRIES LIMITED (Owner of Burdened Lands) by its solicitors CORCORAN, THOMPSON, BAULKE & WRIGHT	Per: R. C. Thompson	1987	03	26

(13) Address for Service: c/o Corcoran, Thompson, Baulke & Wright, Box 100, Collingwood, Ontario, L9Y 3Z4

(14) Municipal Address of Property
P. O. Box 340,
Collingwood, Ontario.
L9Y 3Z7

(15) Document Prepared by:
Blake, Cassels & Graydon,
Box 25,
Commerce Court West,
Toronto, Ontario.
M5L 1A9

FOR OFFICE USE ONLY

Fees and Tax	
Registration Fee	16 —
Total	16 —

Newsome and Gilbert, Limited
Form LF1333 (1/85)

April, 1985

Additional Property Identifier(s) and/or Other Information

Party:

SEELEY & ARNILL CONSTRUCTION LIMITED
by its solicitors
CORCORAN, THOMPSON, BAULKE & WRIGHT Per:.....1987 03 26
R. C. Thompson

Address for Service:

c/o Corcoran, Thompson, Baulke & Wright,
Box 100, Collingwood, Ontario. L9Y 3Z4

Party:

SAUGEEN ROAD SPRAYING COMPANY LTD.
by its solicitors
CORCORAN, THOMPSON, BAULKE & WRIGHT Per:.....1987 03 26
R. C. Thompson

Address for Service:

c/o Corcoran, Thompson, Baulke & Wright,
Box 100, Collingwood, Ontario. L9Y 3Z4

FOR OFFICE USE ONLY

SCHEDULE

FARM LANDS

FIRSTLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Nottawasaga, in the County of Simcoe, comprising the South Half of Lot 21 in the Eleventh Concession and the South-East Quarter of Lot 21 in the Twelfth Concession, together having an area of One Hundred and Fifty (150) acres more or less;

SECONDLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Nottawasaga, in the County of Simcoe, and being Lot Number 20 in the Twelfth Concession of the said Township of Nottawasaga;

THIRDLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Nottawasaga, in the County of Simcoe and being composed of,

(a) the West Half of Lot Number Twenty-One (21) in the Twelfth Concession of the said Township, and

(b) the North Half of the East Half of Lot Number Twenty-One (21) in the Twelfth Concession of the said Township,

together containing an area of One Hundred and Fifty (150) acres more or less;

FOURTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Nottawasaga, in the County of Simcoe and being composed of the South Half of Lot Twenty-Two (22) in the Twelfth Concession of the said Township;

FIFTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Nottawasaga, in the County of Simcoe and Province of Ontario, containing by admeasurement six and seven-tenths acres (6.7) be the same more or less, and being composed of the stopped up part of highway formerly comprising the whole of the unopened original allowance for road between Lot Number Twenty-One and Lot Number Twenty-Two across the Twelfth Concession of the Township of Nottawasaga and being more particularly described as follows:

PREMISING THAT all bearings herein are assumed and are referred to the bearing of the Westerly limit of the said Lots 21 and 22 as being North 09 degrees 15 minutes 00 seconds West;

COMMENCING at the south-westerly angle of the said Lot 22;

THENCE easterly along the southerly limit of the said Lot 22 and being on a course of North 73 degrees 17 minutes 45 seconds East, a distance of 4488.94 feet more or less to the South-easterly angle of said Lot 22;

THENCE Southerly across the said unopened Allowance for Road between Lots 21 and 22, and being on a course of South 08 degrees 38 minutes 30 seconds East, a distance of 66.61 feet more or less to the North-easterly angle of said Lot 21;

THENCE Westerly along the Northerly limit of the said Lot 21, and being on a course of South 73 degrees 17 minutes 45 seconds West, a distance of 4488.50 feet more or less to the North-westerly angle of the said Lot 21;

THENCE Northerly across the said unopened Allowance for Road and being along the Westerly limit of the said Concession XII upon the said premised course of North 09 degrees 15 minutes 00 seconds West, a distance of 66.56 feet more or less to the said point of commencement,

and which said portion of unopened original Allowance for Road has been shown on a Compiled Plan prepared by George J. Zubec, Ontario Land Surveyor, under date of June 5, 1962;

SIXTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Osprey, County of Grey and being composed of the South Half of Lot 15, in Concession A of said Township of Osprey, containing 60 acres be the same more or less;

SEVENTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Osprey, in the County of Grey and being composed of the North Part of Lot 15, in Concession A of said Township of Osprey being more particularly described as the Northerly Forty (40) Rods, from front to rear of the said Lot No. 15;

EIGHTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Osprey, in the County of Grey and being composed of Lot No. 16 in Concession A of the said Township of Osprey;

NINETHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Nottawasaga, in the County of Simcoe and being composed of the North Half of Lot Twenty-Two (22) in the Twelfth Concession of the said Township.

TENTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Nottawasaga, in the County of Simcoe and being composed of the South Half of Lot 23 in the Twelfth Concession in the said Township of Nottawasaga;

ELEVENTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the Township of Nottawasaga, in the County of Simcoe and being composed of the north half of Lot no. 23, Concession 12, in the said Township;

TWELFTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the Township of Nottawasaga, in the County of Simcoe, in the Province of Ontario and being composed of part of Lot 19 in Concession Twelve of the said Township and part of Lots 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22, according to a plan registered in the Registry Office for the said County as number 168, the boundaries of which said parcel may be described as follows:

Premising that bearing herein are astronomic and derived from Department of Highways Plan P-2574-9 (deposited Plan 22228);

FIRSTLY:

All of the North half of Lot 19, Concession Twelve, containing by measurement 100.84 acres, more or less.

SECONDLY:

Part of the South half of Lot 19, Concession Twelve and part of Lots 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22, according to Registered Plan 168, the coundaries of which said parcel may be described as follows:

Commencing at an iron survey bar set in the Westerly limit of the said Lot 19 and distant 291.21 feet measured Northly thereafong, from the South-west angle thereof;

Thence North 73 degrees 29 minutes 20 seconds East, along the line of a post and wire fence existing in October 1970, a distance of 178.68 feet to an iron survey bar;

Thence North 10 degrees 27 minutes 20 seconds West and following the line of a post and wire fence existing in October 1970, a distance of 32.83 feet to an iron survey bar;

Thence North 73 degrees 29 minutes 20 seconds East and following the line of a post and wire fence existing in October 1970, a distance of 282.97 feet to an iron survey bar;

Thence South 10 degrees 03 minutes 00 seconds East and being along the line of a post and wire fence existing in 1970, said fence line being the production Northerly of the line between Lots 7 and 8, according to the said Registered Plan 168, in all, a distance of 151.87 feet to an iron survey bar;

Thence North 72 degrees 14 minutes 00 seconds East, along the line of a post and wire fence existing in October 1970, a distance of 201.33 feet to an iron survey bar set in the Westerly limit of Church Street, according to the said Plan 168;

Thence North 9 degrees 19 minutes 20 seconds West, a distance of 71.90 feet to an iron survey bar marking the most Northwesterly angle of the said Church Street;

Thence North 73 degrees 26 minutes 50 seconds East, along a Northerly limit of Plan 168, a distance of 121.08 feet to an iron survey bar marking the intersection of the said Northerly limit with the line of a post and wire fence existing in October 1970;

Thence South 9 degrees 19 minutes 20 seconds East, along the existing property line as defined by the aforesaid existing post and wire fence, a distance of 227.11 feet to an iron survey bar set in the Northerly limit of the King's Highway No. 24, as widened by deposited plan 22228 (Highway's File P-2574-9);

Thence North 73 degrees 13 minutes 25 seconds East, along the said Northerly limit of Highway, a distance of 71.85 feet to a found monument marking an angle in the said limit;

Thence North 73 degrees 54 minutes 25 seconds East, continuing to follow the said Northerly limit of Highway, a distance of 912.16 feet to an iron survey bar;

Thence North 12 degrees 59 minutes 35 seconds West, a distance of 146.20 feet to an iron survey bar;

Thence North 73 degrees 38 minutes 45 seconds East, and being along the line of a post and wire fence existing in October 1970, said fence being the existing Northerly limit of the lands described in Instrument 14154, in all, a distance of 1344.69 feet to an iron survey bar set in the line of a rail and wire fence existing in October 1970;

Thence North 11 degrees 35 minutes 05 seconds West, continuing to follow the said existing fence line, a distance of 844.98 feet to its intersection with the line between the North and South halves of the said Lot 19;

Thence South 73 degrees 33 minutes 15 seconds West, along the aforesaid half lot line, a distance of 1561.96 feet to an iron survey bar marking an angle therein;

Thence South 72 degrees 12 minutes 40 seconds West, continuing to follow the said half lot line as defined by a rail fence existing in October 1970 and its production Westerly, in all, a distance of 1511.04 feet to an iron survey bar set in the Westerly limit of the said Lot 19;

Thence South 9 degrees 03 minutes 00 seconds East, along the Westerly limit of the said Lot 19, a distance of 684.59 feet to the Point of Commencement.

The herein described parcel to contain 60.30 acres and is further shown in heavy outline and designated as Part 1 on a Plan of Survey prepared by Zubek and Emo, Ontario Land Surveyors, dated October 7, 1970, a copy of which is attached to Instrument No.

Together with a right-of-way in common with all others entitled thereto in, over, along and upon a strip of land 66 feet in perpendicular width, which may be described as follows:

Beginning at an iron survey bar set in the Northly limit of the King's Highway No. 24, as widened by Deposited Plan 22228 (Highway's File P-2574-9) which may be described as follows:

Beginning at the South-east angle of Lot 19, Concession Twelve;

Thence South 73 degrees 26 minutes 50 seconds West, along the Southerly limit of the said Lot 19, a distance of 1343.25 feet to a point;

Thence North 11 degrees 35 minutes 05 seconds West, a distance of 10.00 feet to an iron survey bar and being the point of commencement of the herein described right-of-way;

Thence continuing North 11 degrees 35 minutes 05 seconds West, along a rail and wire fence existing in October 1970, a distance of 144.96 feet to an iron survey bar;

Thence South 73 degrees 38 minutes 45 seconds West, along a post and wire fence existing in October 1970, a distance of 66.24 feet to a point;

Thence South 11 degrees 35 minutes 5 seconds East, a distance of 145.12 feet to a point in the Northerly limit of the aforesaid King's Highway 24, as widened;

Thence North 73 degrees 30 minutes 25 seconds East, along the said Northerly widened limit, a distance of 66.24 feet to the Point of Commencement

more particularly described on a plan of survey prepared by Zubek and Emo, O.L.S. on October 6th, 1970 a copy of which is attached to Instrument No.341101..

THIRTEENTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the Township of Nottawasaga, in the County of Simcoe and Province of Ontario and being composed of part of Lot 11, according to a plan registered in the Registry Office for the Registry Division of Simcoe (51) as Number 168, the boundaries of which may be described as follows;

Premising that the Northerly limit of the King's Highway #24 as widened by Deposited Plan 22228 is North 73 degrees 13 minutes 25 seconds East and relating all bearings herein, thereto;

Commencing at an iron survey bar set in the Northerly limit of the aforementioned Northerly limit of King's Highway #24, which bar may be located as follows;

Beginning at the South-west angle of Lot 11, Registered Plan 168;

Thence North 9 degrees 35 minutes 35 seconds West, along the Westerly limit of the said Lot 11, a distance of 20.17 feet to its intersection with the Northerly limit of the King's Highway #24, as widened by Deposited Plan 22228;

Thence North 73 degrees 13 minutes 25 seconds East along the said Northerly limit of Highway, a distance of 60.90 feet to an iron survey bar and being the Point of Commencement of the herein described lands;

Thence continuing North 73 degrees 13 minutes 25 seconds East along the said Northerly limit of Highway, a distance of 15.00 feet to its intersection with the Easterly limit of the said Lot 11;

Thence North 9 degrees 19 minutes 20 seconds West, along the Easterly limit of the said Lot 11, a distance of 227.02 feet to the North-east angle thereof;

Thence South 73 degrees 26 minutes 50 seconds West along the Northerly limit of the said Lot 11, a distance of 15.00 feet to an iron survey bar;

Thence South 9 degrees 19 minutes 20 seconds East, a distance of 227.08 feet to the Point of Commencement.

FOURTEENTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the Township of Osprey, in the County of Grey, and being composed of Lot 14, Concession "A" of the said Township, containing 120 acres, more or less.

FIFTEENTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the Township of Osprey, in the County of Grey, in the Province of Ontario and being composed of a part of Lots 10 and 11 in Concession "A" of the said Township and a part of lot 19, North of Collingwood Street, (Village of Singhampton) according to a plan registered in the Registry Office for the South riding of the said County as number 119, the boundaries of which said parcel may be described as follows:

Premising that bearings herein are astronomic and are referred to the bearing of the road allowance between the Townships of Osprey and Nottawasaga, assumed to be North 9 degrees 17 minutes 00 seconds West;

Commencing at an iron survey bar marking the North-east angle of lot 11, Concession "A";

Thence South 9 degrees 17 minutes 00 seconds East, along the Easterly limit of the said lot 11, a distance of 504.70 feet to an iron survey bar;

Thence South 74 degrees 27 minutes 30 seconds West, a distance of 328.92 feet to an iron survey bar;

Thence South 9 degrees 07 minutes 40 seconds East, a distance of 563.65 feet to a found iron survey bar;

Thence South 6 degrees 54 minutes 30 seconds East, a distance of 334.96 feet to a found iron survey bar set in the Northerly limit of Collingwood Street, Registered Plan 119;

Thence South 80 degrees 23 minutes 00 seconds West, along the said Northerly limit of Collingwood Street, a distance of 70.12 feet to its intersection with the Westerly limit of Roger Street, Registered Plan 119;

Thence South 9 degrees 17 minutes 00 seconds East, along the said Westerly limit of Rogers Street, a distance of 56.05 feet to an iron survey bar;

Thence North 84 degrees 32 minutes 10 seconds West and being along the line of a rail fence existing in May 1969, a distance of 1000.80 feet to an iron survey bar;

Thence South 73 degrees 32 minutes 20 seconds West and being along the line of a fence existing in May of 1969, a distance of 2694.55 feet to an iron survey bar set in the Westerly limit of the said lot 11, Concession "A" as defined by a rail fence;

Thence North 9 degrees 17 minutes 00 seconds West, along the said Westerly limit of lot 11, a distance of 1068.30 feet to an iron survey bar marking the North-west angle thereof;

Thence North 73 degrees 34 minutes 20 seconds East, along the said existing Northerly limit of lot 11, a distance of 4085.15 feet to the Point of Commencement.

The herein described parcel to contain 99.81 acres, more or less, and is further shown in heavy outline on a Plan of Survey prepared by Zubek and Emo, Ontario Land Surveyors, dated June 10, 1969, a copy of which is attached to Instrument No.

THIS AGREEMENT made in quadruplicate as of the 5th day of May, 1984,

B E T W E E N:

CARMARTHEN LAKE FARMS LIMITED, a corporation incorporated under the laws of the Province of Ontario,

(hereinafter referred to as the "Farm")

- and -

McKEAN QUARRIES LIMITED, a corporation incorporated under the laws of the Province of Ontario,

(hereinafter referred to as "McKean")

- and -

SEELEY & ARNILL CONSTRUCTION LIMITED, a corporation incorporated under the laws of the Province of Ontario,

(hereinafter referred to as "S & A")

- and -

SAUGEEN ROAD SPRAYING COMPANY LTD., a corporation incorporated under the laws of the Province of Ontario.

WHEREAS:

(A) McKean owns and operates a limestone quarry (the "McKean Quarry"), which is situate upon lands adjoining lands owned by the Farm;

(B) McKean represents that it owns the lands described in Schedule "A" to this Agreement (the "McKean Lands") upon which the McKean Quarry is operated;

(C) The operation of the McKean Quarry otherwise than in accordance with the terms of this Agreement would cause irreparable harm to the Farm Lands, as hereinafter defined, and to the feed-lot operations carried on by the Farm.

NOW THEREFORE this Agreement witnesses that in consideration of the sum of $5.00 now paid by the Farm to McKean, and to each of the other parties to this Agreement, and other valuable consideration, the receipt and sufficiency of which is acknowledged, the parties hereto covenant and agree, each with the other, as follows:

1. In this Agreement, "Town Line Road" means that portion of the road commonly referred to as the Town Line Road and which is situate on the boundary between the Township of Osprey in the County of Grey and the Township of Nottawasaga in the County of Simcoe, and which is fronted on either side by lands owned by the Farm.

2. McKean shall not sell, lease, transfer or assign its interest in the McKean Quarry and the McKean Lands or any part thereof unless the purchaser, lessee, assignee or transferee first executes an agreement with the Farm upon the same terms and conditions as those contained in this Agreement provided that nothing contained herein shall restrict or affect the bona fide granting of security interests in the McKean Quarry and the McKean Lands to secure the indebtedness of McKean.

3. McKean shall not grant to any other person any right, licence or permission to quarry the McKean Lands or any part or parts thereof.

4. The McKean Quarry shall at all times be operated in accordance with the following terms and conditions, which the parties hereto acknowledge to be reasonable constraints for the protection of the adjoining lands and particularly the lands identified and described in Schedule "B" (the "Farm Lands"):

(a) McKean shall use its best efforts to monitor and control all truck traffic to and from the McKean Quarry so as to ensure that trucks do not use the Town Line Road unnecessarily or when there is an

alternative route which can be used and which does not involve any significant increase in the costs of transportation (including labour, fuel and depreciation) from the costs of transportation associated with use of the route over the Town Line Road. Furthermore, McKean shall use its best efforts to ensure that all drivers of trucks travelling to or from the McKean Quarry obey all speed, loading, half-load and other traffic regulations in the vicinity, and McKean will not deal with or load any driver who is shown to have:

(i) persistently failed to observe traffic regulations, whether or not that driver is charged or convicted, or

(ii) used the Town Line Road in contravention of the limitations set forth above in this clause 4(a).

(b) Crushing and blasting operations shall be confined to the hours between 7:00 a.m. and 7:00 p.m. on weekdays and 7:00 a.m. and 1:00 p.m. on Saturdays. Drilling shall only take place between 7:00 a.m. and 6:00 p.m. on weekdays. Whenever possible times of blasting shall be arranged by agreement with the Farm but in any event reasonable notice of all blasting shall be given to the Farm.

(c) Subject to clause 5, no quarrying on the McKean Lands shall take place below the level of 512 metres above the Canadian Geodetic Datum nor shall any quarrying take place in areas of the McKean Lands which the Farm, acting reasonably, may designate in writing as a "buffer zone" between the McKean Quarry and the Farm Lands, which buffer zone shall not exceed 50 feet in width.

(d) No vehicle carrying or capable of carrying aggregate,

and whether loaded or not, shall travel to or from the McKean Quarry on the Town Line Road at a speed in excess of 50 kilometers per hour (30 miles per hour).

(e) S & A shall use its best efforts to cause the municipality to apply such surface treatments as are appropriate and necessary, and shall take such other action as may reasonably be required, to maintain a dust free surface on the Town Line Road.

5. In the event that all limestone which can be mined economically has been removed from those parts of the McKean Lands which are above the level of 512 metres above Canadian Geodetic Datum and which are not designated as a buffer zone, then McKean may agree with the Farm or its assignee as to the implementation and maintenance of such measures as the Farm or its assignee reasonably considers necessary to protect the Farm and the Farm Lands and the local water table and surface water quantity and quality characteristics, and thereupon but not otherwise proceed to quarry on the McKean Lands below the level of 512 metres above Canadian Geodetic Datum.

6. It is the intention of the parties to this Agreement that this Agreement shall be registered on title to the McKean Lands and that the obligations hereof shall run with and bind the McKean Lands in favour of the Farm Lands.

7. The parties shall execute such further documents and take such actions as may be required to give effect to the terms and intent of this Agreement.

8. This Agreement shall enure to the benefit of and shall be binding upon the respective successors and assigns of the parties hereto.

IN WITNESS WHEREOF the parties hereto have

executed this Agreement.

Address for Notices

CARMARTHEN LAKE FARMS LIMITED

Title - President

Title - SECRETARY c/s

We have authority to bind the corporation.

Singhampton, Ontario.
N0C 1M0
Attention: Catherine
Atkinson-Crang

McKEAN QUARRIES LIMITED

Title - PRESIDENT

Title - c/s

We have authority to bind the corporation.

P. O. Box 340,
Collingwood, Ontario.
L9Y 3Z7
Attention: David Arnill

SEELEY & ARNILL CONSTRUCTION LIMITED

Title - PRES.

Title - c/s

We have authority to bind the corporation.

P. O. Box 340,
Collingwood, Ontario.
L9Y 3Z7
Attention: David Arnill

SAUGEEN ROAD SPRAYING COMPANY LTD.

Title -

Title - DIRECTOR c/s

We have authority to bind the corporation.

South Street,
Durham, Ontario.
N0G 1R0
Attention: Paul Arnill

Schedule "A"

McKean Lands

ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the Township of Nottawasaga, in the County of Simcoe, and being composed of all of Lot 24, Concession 12 in the said Township.

SCHEDULE "B"

FARM LANDS

FIRSTLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Nottawasaga, in the County of Simcoe, comprising the South Half of Lot 21 in the Eleventh Concession and the South-East Quarter of Lot 21 in the Twelfth Concession, together having an area of One Hundred and Fifty (150) acres more or less;

SECONDLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Nottawasaga, in the County of Simcoe, and being Lot Number 20 in the Twelfth Concession of the said Township of Nottawasaga;

THIRDLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Nottawasaga, in the County of Simcoe and being composed of,

(a) the West Half of Lot Number Twenty-One (21) in the Twelfth Concession of the said Township, and

(b) the North Half of the East Half of Lot Number Twenty-One (21) in the Twelfth Concession of the said Township,

together containing an area of One Hundred and Fifty (150) acres more or less;

FOURTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Nottawasaga, in the County of Simcoe and being composed of the South Half of Lot Twenty-Two (22) in the Twelfth Concession of the said Township;

FIFTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Nottawasaga, in the County of Simcoe and Province of Ontario, containing by admeasurement six and seven-tenths acres (6.7) be the same more or less, and being composed of the stopped up part of highway formerly comprising the whole of the unopened original allowance for road between Lot Number Twenty-One and Lot Number Twenty-Two across the Twelfth Concession of the Township of Nottawasaga and being more particularly described as follows:

PREMISING THAT all bearings herein are assumed and are referred to the bearing of the Westerly limit of the said Lots 21 and 22 as being North 09 degrees 15 minutes 00 seconds West;

COMMENCING at the south-westerly angle of the said Lot 22;

THENCE easterly along the southerly limit of the said Lot 22 and being on a course of North 73 degrees 17 minutes 45 seconds East, a distance of 4488.94 feet more or less to the South-easterly angle of said Lot 22;

THENCE Southerly across the said unopened Allowance for Road between Lots 21 and 22, and being on a course of South 08 degrees 38 minutes 30 seconds East, a distance of 66.61 feet more or less to the North-easterly angle of said Lot 21;

THENCE Westerly along the Northerly limit of the said Lot 21, and being on a course of South 73 degrees 17 minutes 45 seconds West, a distance of 4488.50 feet more or less to the North-westerly angle of the said Lot 21;

THENCE Northerly across the said unopened Allowance for Road and being along the Westerly limit of the said Concession XII upon the said premised course of North 09 degrees 15 minutes 00 seconds West, a distance of 66.56 feet more or less to the said point of commencement,

and which said portion of unopened original Allowance for Road has been shown on a Compiled Plan prepared by George J. Zubec, Ontario Land Surveyor, under date of June 5, 1962;

SIXTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Osprey, County of Grey and being composed of the South Half of Lot 15, in Concession A of said Township of Osprey, containing 60 acres be the same more or less;

SEVENTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Osprey, in the County of Grey and being composed of the North Part of Lot 15, in Concession A of said Township of Osprey being more particularly described as the Northerly Forty (40) Rods, from front to rear of the said Lot No. 15;

EIGHTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Osprey, in the County of Grey and being composed of Lot No. 16 in Concession A of the said Township of Osprey;

NINETHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Nottawasaga, in the County of Simcoe and being composed of the North Half of Lot Twenty-Two (22) in the Twelfth Concession of the said Township.

TENTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate lying and being in the Township of Nottawasaga, in the County of Simcoe and being composed of the South Half of Lot 23 in the Twelfth Concession in the said Township of Nottawasaga;

ELEVENTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the Township of Nottawasaga, in the County of Simcoe and being composed of the north half of Lot no. 23, Concession 12, in the said Township;

TWELFTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the Township of Nottawasaga, in the County of Simcoe, in the Province of Ontario and being composed of part of Lot 19 in Concession Twelve of the said Township and part of Lots 11 to 22 inclusive, according to a plan registered in the Registry Office for the said County as number 168, the boundaries of which said parcel may be described as follows:

Premising that bearings herein are astronomic and derived from Department of Highways Plan P-2574-9 (deposited plan 22228);

FIRSTLY:-

All of the North half of Lot 19, Concession Twelve, containing by admeasurement 100.84 acres, more or less.

SECONDLY:-

Part of the South half of Lot 19, Concession Twelve and part of Lots 11 to 22, inclusive, according to Registered Plan 168, the boundaries of which said parcel may be described as follows:

Commencing at an iron survey bar set in the Westerly limit of the said Lot 19 and distant 291.21 feet measured Northly thereal ong, from the South-west angle thereof;

Thence North 73 degrees 29 minutes 20 seconds East, along the line of a post and wire fence existing in October 1970, a distance of 178.68 feet to an iron survey bar;

Thence North 10 degrees 27 minutes 20 seconds West and following the line of a post and wire fence existing in October 1970, a distance of 32.83 feet to an iron survey bar;

Thence North 73 degrees 29 minutes 20 seconds East and following the line of a post and wire fence existing in October 1970, a distance of 282.97 feet to an iron survey bar;

Thence South 10 degrees 03 minutes 00 seconds East and being along the line of a post and wire fence existing in 1970, said fence line being the production Northerly of the line between Lots 7 and 8, according to the said Registered Plan 168, in all, a distance of 151.87 feet to an iron survey bar;

Thence North 72 degrees 14 minutes 00 seconds East, along the line of a post and wire fence existing in October 1970, a distance of 201.33 feet to an iron survey bar set in the Westerly limit of Church Street, according to the said Plan 168;

Thence North 9 degrees 19 minutes 20 seconds West, a distance of 71.90 feet to an iron survey bar marking the most Northwesterly angle of the said Church Street;

Thence North 73 degrees 26 minutes 50 seconds East, along a Northerly limit of Plan 168, a distance of 121.08 feet to an iron survey bar marking the intersection of the said Northerly limit with the line of a post and wire fence existing in October 1970;

Thence South 9 degrees 19 minutes 20 seconds East, along the existing property line as defined by the aforesaid existing post and wire fence, a distance of 227.11 feet to an iron survey bar set in the Northerly limit of the King's Highway No. 24, as widened by deposited plan 22228 (Highway's File P-2574-9);

Thence North 73 degrees 13 minutes 25 seconds East, along the said Northerly limit of Highway, a distance of 71.85 feet to a found monument marking an angle in the said limit;

Thence North 73 degrees 54 minutes 25 seconds East, continuing to follow the said Northerly limit of Highway, a distance of 912.16 feet to an iron survey bar;

Thence North 12 degrees 59 minutes 35 seconds West, a distance of 146.20 feet to an iron survey bar;

Thence North 73 degrees 38 minutes 45 seconds East, and being along the line of a post and wire fence existing in October 1970, said fence being the existing Northerly limit of the lands described in Instrument 14154, in all, a distance of 1344.69 feet to an iron survey bar set in the line of a rail and wire fence existing in October 1970;

Thence North 11 degrees 35 minutes 05 seconds West, continuing to follow the said existing fence line, a distance of 844.98 feet to its intersection with the line between the North and South halves of the said Lot 19;

Thence South 73 degrees 33 minutes 15 seconds West, along the aforesaid half lot line, a distance of 1561.96 feet to an iron survey bar marking an angle therein;

Thence South 72 degrees 12 minutes 40 seconds West, continuing to follow the said half lot line as defined by a rail fence existing in October 1970 and its production Westerly, in all, a distance of 1511.04 feet to an iron survey bar set in the Westerly limit of the said Lot 19;

Thence South 9 degrees 03 minutes 00 seconds East, along the Westerly limit of the said Lot 19, a distance of 684.59 feet to the Point of Commencement.

The herein described parcel to contain 60.30 acres and is further shown in heavy outline and designated as Part 1 on a Plan of Survey prepared by Zubek and Emo, Ontario Land Surveyors, dated October 7, 1970, a copy of which is attached to Instrument No.

Together with a right-of-way in common with all others entitled thereto in, over, along and upon a strip of land 66 feet in perpendicular width, which may be described as follows:

Beginning at an iron survey bar set in the Northly limit of the King's Highway No. 24, as widened by Deposited Plan 22228 (Highway's File P-2574-9) which may be described as follows:

Beginning at the South-east angle of Lot 19, Concession Twelve;

Thence South 73 degrees 26 minutes 50 seconds West, along the Southerly limit of the said Lot 19, a distance of 1343.25 feet to a point;

Thence North 11 degrees 35 minutes 05 seconds West, a distance of 10.00 feet to an iron survey bar and being the point of commencement of the herein described right-of-way;

Thence continuing North 11 degrees 35 minutes 05 seconds West, along a rail and wire fence existing in October 1970, a distance of 144.96 feet to an iron survey bar;

Thence South 73 degrees 38 minutes 45 seconds West, along a post and wire fence existing in October 1970, a distance of 66.24 feet to a point;

Thence South 11 degrees 35 minutes 5 seconds East, a distance of 145.12 feet to a point in the Northerly limit of the aforesaid King's Highway 24, as widened;

Thence North 73 degrees 30 minutes 25 seconds East, along the said Northerly widened limit, a distance of 66.24 feet to the Point of Commencement

more particularly described on a plan of survey prepared by Zubek and Emo, O.L.S. on October 6th, 1970 a copy of which is attached to Instrument No. .

THIRTEENTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the Township of Nottawasaga, in the County of Simcoe and Province of Ontario and being composed of part of Lot 11, according to a plan registered in the Registry Office for the Registry Division of Simcoe (51) as Number 168, the boundaries of which may be described as follows;

Premising that the Northerly limit of the King's Highway #24 as widened by Deposited Plan 22228 is North 73 degrees 13 minutes 25 seconds East and relating all bearings herein, thereto;

Commencing at an iron survey bar set in the Northerly limit of the aforementioned Northerly limit of King's Highway #24, which bar may be located as follows;

Beginning at the South-west angle of Lot 11, Registered Plan 168;

Thence North 9 degrees 35 minutes 35 seconds West, along the Westerly limit of the said Lot 11, a distance of 20.17 feet to its intersection with the Northerly limit of the King's Highway #24, as widened by Deposited Plan 22228;

Thence North 73 degrees 13 minutes 25 seconds East along the said Northerly limit of Highway, a distance of 60.90 feet to an iron survey bar and being the Point of Commencement of the herein described lands;

Thence continuing North 73 degrees 13 minutes 25 seconds East along the said Northerly limit of Highway, a distance of 15.00 feet to its intersection with the Easterly limit of the said Lot 11;

Thence North 9 degrees 19 minutes 20 seconds West, along the Easterly limit of the said Lot 11, a distance of 227.02 feet to the North-east angle thereof;

Thence South 73 degrees 26 minutes 50 seconds West along the Northerly limit of the said Lot 11, a distance of 15.00 feet to an iron survey bar;

Thence South 9 degrees 19 minutes 20 seconds East, a distance of 227.08 feet to the Point of Commencement.

FOURTEENTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the Township of Osprey, in the County of Grey, and being composed of Lot 14, Concession "A" of the said Township, containing 120 acres, more or less.

FIFTEENTHLY

ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the Township of Osprey, in the County of Grey, in the Province of Ontario and being composed of a part of Lots 10 and 11 in Concession "A" of the said Township and a part of lot 19, North of Collingwood Street, (Village of Singhampton) according to a plan registered in the Registry Office for the South riding of the said County as number 119, the boundaries of which said parcel may be described as follows:

Premising that bearings herein are astronomic and are referred to the bearing of the road allowance between the Townships of Osprey and Nottawasaga, assumed to be North 9 degrees 17 minutes 00 seconds West;

Commencing at an iron survey bar marking the North-east angle of lot 11, Concession "A";

Thence South 9 degrees 17 minutes 00 seconds East, along the Easterly limit of the said lot 11, a distance of 504.70 feet to an iron survey bar;

Thence South 74 degrees 27 minutes 30 seconds West, a distance of 328.92 feet to an iron survey bar;

Thence South 9 degrees 07 minutes 40 seconds East, a distance of 563.65 feet to a found iron survey bar;

Thence South 6 degrees 54 minutes 30 seconds East, a distance of 334.96 feet to a found iron survey bar set in the Northerly limit of Collingwood Street, Registered Plan 119;

Thence South 80 degrees 23 minutes 00 seconds West, along the said Northerly limit of Collingwood Street, a distance of 70.12 feet to its intersection with the Westerly limit of Roger Street, Registered Plan 119;

Thence South 9 degrees 17 minutes 00 seconds East, along the said Westerly limit of Rogers Street, a distance of 56.05 feet to an iron survey bar;

Thence North 84 degrees 32 minutes 10 seconds West and being along the line of a rail fence existing in May 1969, a distance of 1000.80 feet to an iron survey bar;

Thence South 73 degrees 32 minutes 20 seconds West and being along the line of a fence existing in May of 1969, a distance of 2694.55 feet to an iron survey bar set in the Westerly limit of the said lot 11, Concession "A" as defined by a rail fence;

Thence North 9 degrees 17 minutes 00 seconds West, along the said Westerly limit of lot 11, a distance of 1068.30 feet to an iron survey bar marking the North-west angle thereof;

Thence North 73 degrees 34 minutes 20 seconds East, along the said existing Northerly limit of lot 11, a distance of 4085.15 feet to the Point of Commencement.

The herein described parcel to contain 99.81 acres, more or less, and is further shown in heavy outline on a Plan of Survey prepared by Zubek and Emo, Ontario Land Surveyors, dated June 10, 1969, a copy of which is attached to Instrument No.

As of May 5, 1984

CARMATHEN LAKE FARMS LIMITED

and

McKEAN QUARRIES LIMITED

and

SEELEY & ARNILL CONSTRUCTION LIMITED

and

SAUGEEN ROAD SPRAYING COMPANY LTD.

A G R E E M E N T

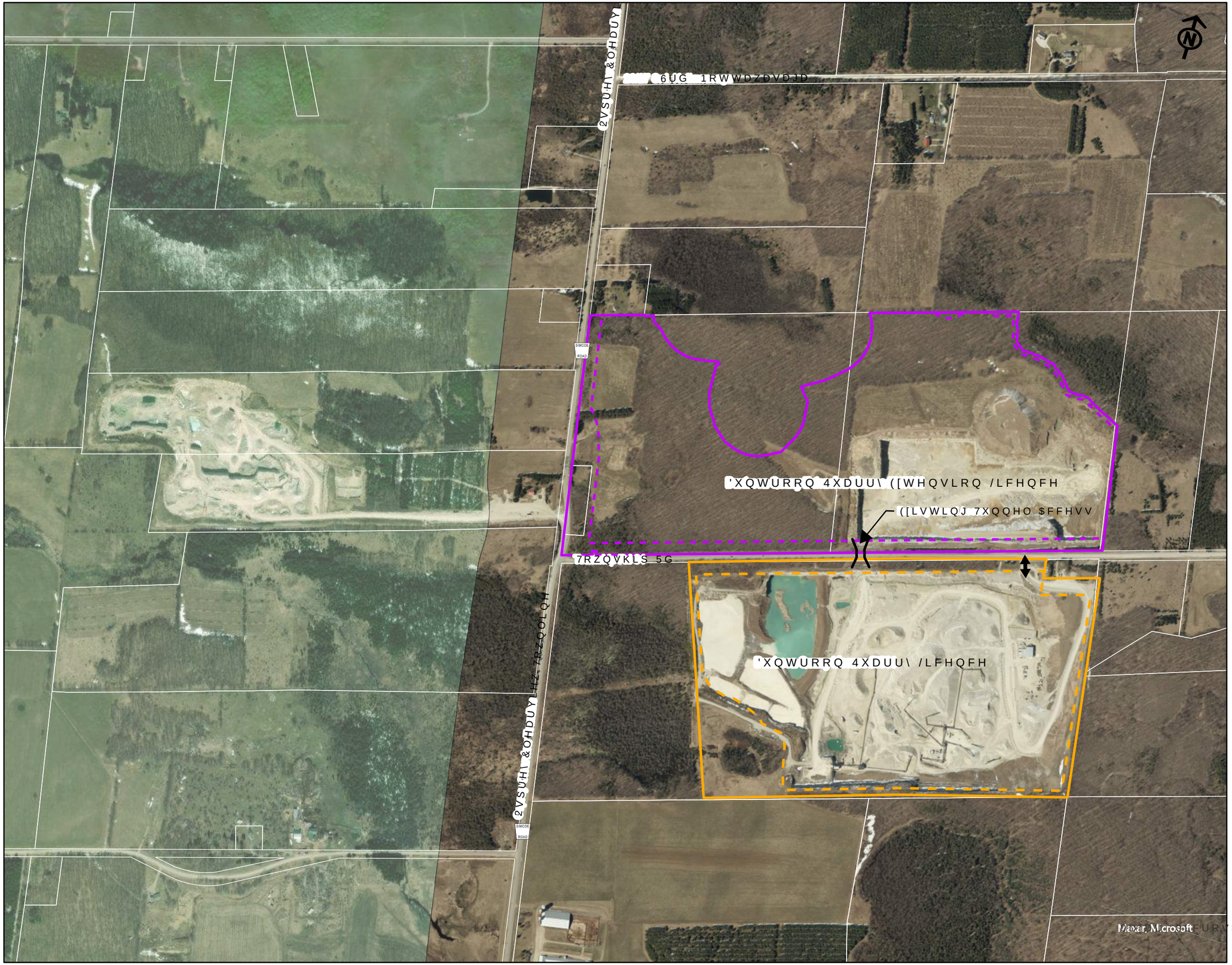
BLAKE, CASSELS & GRAYDON
Box 25, Commerce Court West
Toronto, Ontario

(GFGP)

180

Form LF1833 (1/86)

Tab **2**



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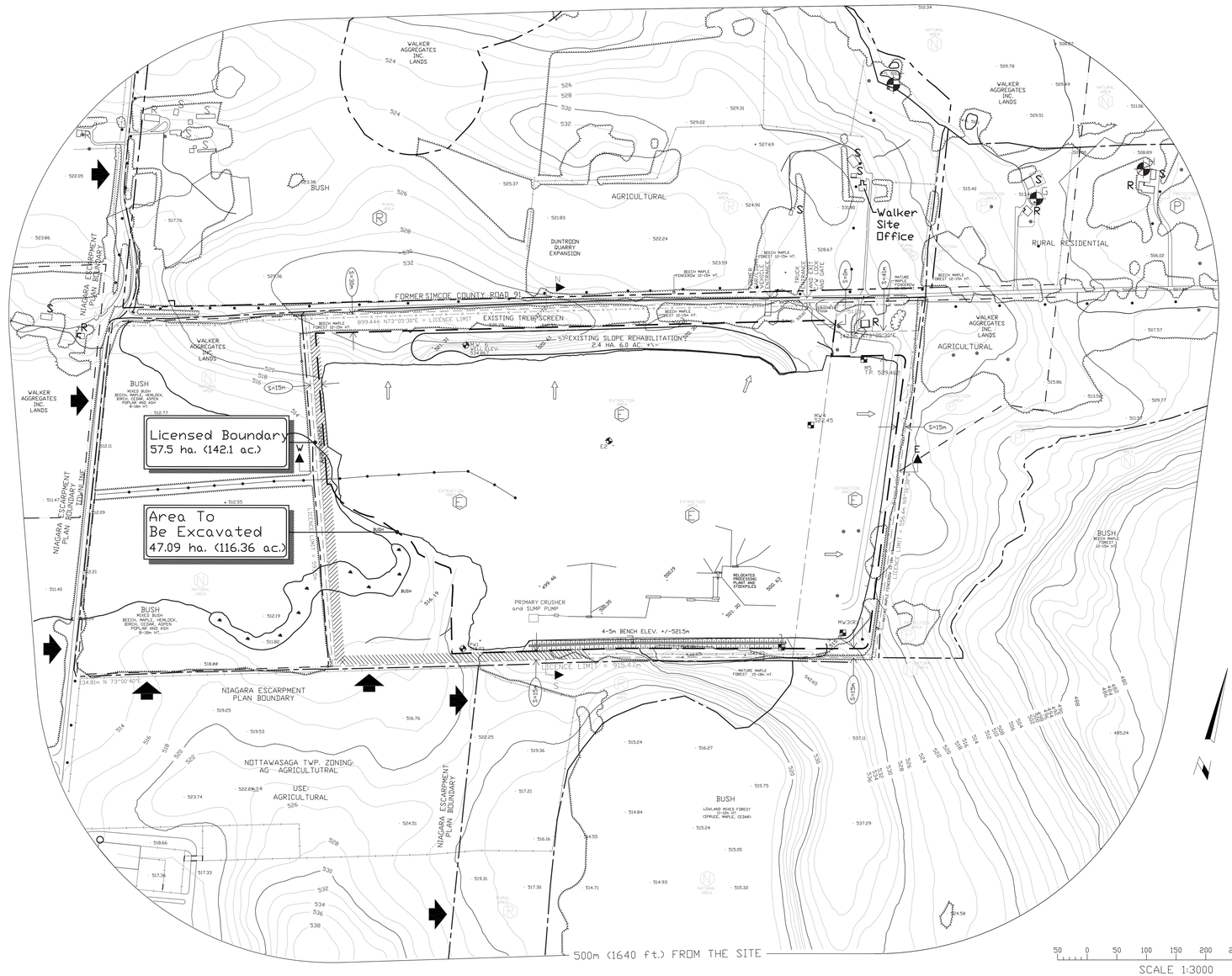
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%1 :DONHU 'XQWURRQ 4XDUU\ $

PLANNING
URBAN DESIGN
& LANDSCAPE
ARCHITECTURE

Tab **3**



Notes

1. BOUNDARY OF PROPERTY TAKEN FROM 1970 LEGAL SURVEY PREPARED BY ZUBEK, EMO AND PATTEN LTD.
2. EXISTING TREE SCREENS TAKEN FROM JUNE 1989 MNR AIRPHOTO, CONFIRMED BY OCTOBER 1989 VEGETATION SURVEY.
3. WATER WELL DATA TAKEN FROM "WATER WELL RECORDS FOR ONTARIO, SIMCOE, 1946-77", MINISTRY OF THE ENVIRONMENT, 1981; NOVEMBER, 1989 SITE SURVEY, AND "HYDROGEOLOGY OF PROPOSED EXPANSION OF THE McKEAN QUARRY", TROW, DAMES & MOORE, MARCH, 1991. THE WATER TABLE, AS SHOWN ON THE TYPICAL SECTIONS, HAS BEEN DETERMINED FROM ANALYSIS OF THIS INFORMATION.
4. TOPOGRAPHIC BASE MAPPING FOR SITE AND 500m SURROUNDING FROM 1:8000 NOVEMBER 1989 AERIAL PHOTOGRAPHY PREPARED DECEMBER 1989, BY INTERA KENTING EARTH SCIENCES. MAPPING WAS THEN UPDATED FROM DECEMBER 1991, ELECTRONIC FIELD SURVEY BY LONG ASSOCIATES CONSULTING LIMITED.
5. EXISTING AND MONITOR WELL TABLE

	NAME	ELEV.	DEPTH.	BOTTOM	STATIC	FOUND	TYPE
E2	SHED	520.97	N/A	N/A	517.97	N/A	DRILLED
MW2(R)	MONITOR	520.16	20.79	497.94	510.84	N/A	DRILLED
MW3(R)	MONITOR	515.56	N/A	N/A	506.11	N/A	DRILLED
MW4	MONITOR	522.45	39.91	482.00	507.36	N/A	DRILLED
MW5	MONITOR	529.43	46.08	483.28	514.45	N/A	DRILLED
MW6	MONITOR	534.87	36.44	497.17	519.75	N/A	DRILLED
PW1	TEST WELL	518.73	9.40	509.33	511.45	N/A	DRILLED
CLF1	FARM WELL	521.05	N/A	N/A	511.73	N/A	DRILLED
CLF2	FARM WELL	519.23	N/A	N/A	511.69	N/A	DRILLED
F	MILLARS	515.00	2.7		N/A	N/A	DUG
G	STRIBLING	512.50	7.5		N/A	N/A	N/A
H	SACCUCI	509.00	N/A	N/A	N/A	N/A	DRILLED

6. THE OPERATOR INTENDS TO CONVEY TO THE BRUCE TRAIL ASSOCIATION LAND AS IDENTIFIED IN NOTE 9, PAGE 3 OF 5.
7. ALL EXISTING FENCES TO BE IMPROVED OR REPLACED TO PROVIDE HEAVY DUTY FENCE 1.2m MINIMUM HEIGHT.
8. FENCING ALONG THE WESTERLY BOUNDARY MAY NOT BE FEASIBLE, IN SOME AREAS, DUE TO THE PRESENCE OF DENSE BUSH AND SWAMP. IN THESE AREAS, SIGNS TO BE POSTED EVERY 30m (100') WHICH READ "DANGER - OPEN QUARRY". IF NOT ON LICENSED BOUNDARY THEN FENCE WILL BE CONSTRUCTED ON EXTREME WEST BOUNDARY OF PROPERTY.

Final Approved Plan "AMENDMENT"
Date: April 14, 2015
Signature:
Ministry of Natural Resources
Midhurst District Office

APPROVED BY MINISTRY OF NATURAL RESOURCES

SIGNATURE _____ DATE Aug 29/02

APPLICANT:

Walker Aggregates Inc.

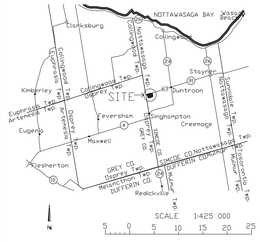
P.O. Box 100,
Thorold, Ontario
L2V 3Y8

DECLARATION OF PURPOSE:

THIS SITE PLAN HAS BEEN PREPARED TO COMPLY WITH THE PROVISIONS OF SECTION 69 OF THE AGGREGATE RESOURCES ACT AND REPLACES THE SITE PLAN ORIGINALLY SUBMITTED AS PART OF A LICENCE APPLICATION UNDER THE PITS AND QUARRIES CONTROL ACT AND REGULATIONS.

Notes

1. PLAN COMPILED FROM INFORMATION FROM R.G. ROBINSON AND ASSOC. LTD. RECIEVED AUGUST 1996. AND UPDATED BY MHBC PLANNING LTD., JULY 2014.



LEGEND

- LICENSED BOUNDARY
- AREA TO BE EXCAVATED
- WALKER AGGREGATES INC. LANDS
- DUNTROON QUARRY EXPANSION LANDS
- 540 EXISTING CONTOURS
- 528.5 SPOT ELEVATIONS
- OFFSITE FENCES
- LICENSED BOUNDARY FENCING
- S=15m ← WIDTH OF EXCAVATION SETBACK AREA, METRES
- TOPSOIL BERM/STOCKPILE
- B.M. ▷ BENCH MARK - CONCRETE RADIO TOWER BASE AT 531.61m
- SURFACE DRAINAGE
- BOUNDARY OF EXISTING DISTURBED AREA
- E2 EXISTING WELLS
- M3 MONITOR WELLS
- R RESIDENCE
- S SHED

NIAGARA ESCARPMENT DESIGNATIONS

- Plan Boundary
- Designation Boundary
- E Mineral Resource Extraction Area
- N Escarpment Natural Area
- P Escarpment Protection Area
- R Escarpment Rural Area

NO.	REVISIONS	DATE	INITIAL
6.	TO FACILITATE DUNTROON QUARRY EXPANSION	JULY 11/14	A.J.M.
5.	UPDATE TOP OF FACE	NOV.03/11	A.J.M.
4.	TEMPORARY RAMP TO QUARRY FLOOR	SEP.05/03	
3.	REVISE ENTRANCE/EXCAVATION FACE	SEP.19/02	
2.	GENERAL REVISIONS	SEP.20/01	D.G.S.
1.	CHANGE LOCATION OF PRIMARY CRUSHER	JAN.25/00	D.G.S.

BRENT CLARKSON IS AUTHORIZED BY THE MINISTRY OF NATURAL RESOURCES PURSUANT TO SECTION 8 OF THE AGGREGATE RESOURCES ACT TO PREPARE AND SUBMIT SITE PLANS

MacNaughton Hermsen Britton Clarkson Planning Limited

DUNTROON QUARRY

PT.LOT 24 CONCESSION 12
TOWNSHIP OF CLEARVIEW, COUNTY OF SIMCOE
LICENCE NO 3514

WALKER AGGREGATES INC.
P.O. BOX 100,
THOROLD, ONTARIO
L2V 3Y8

EXISTING FEATURES

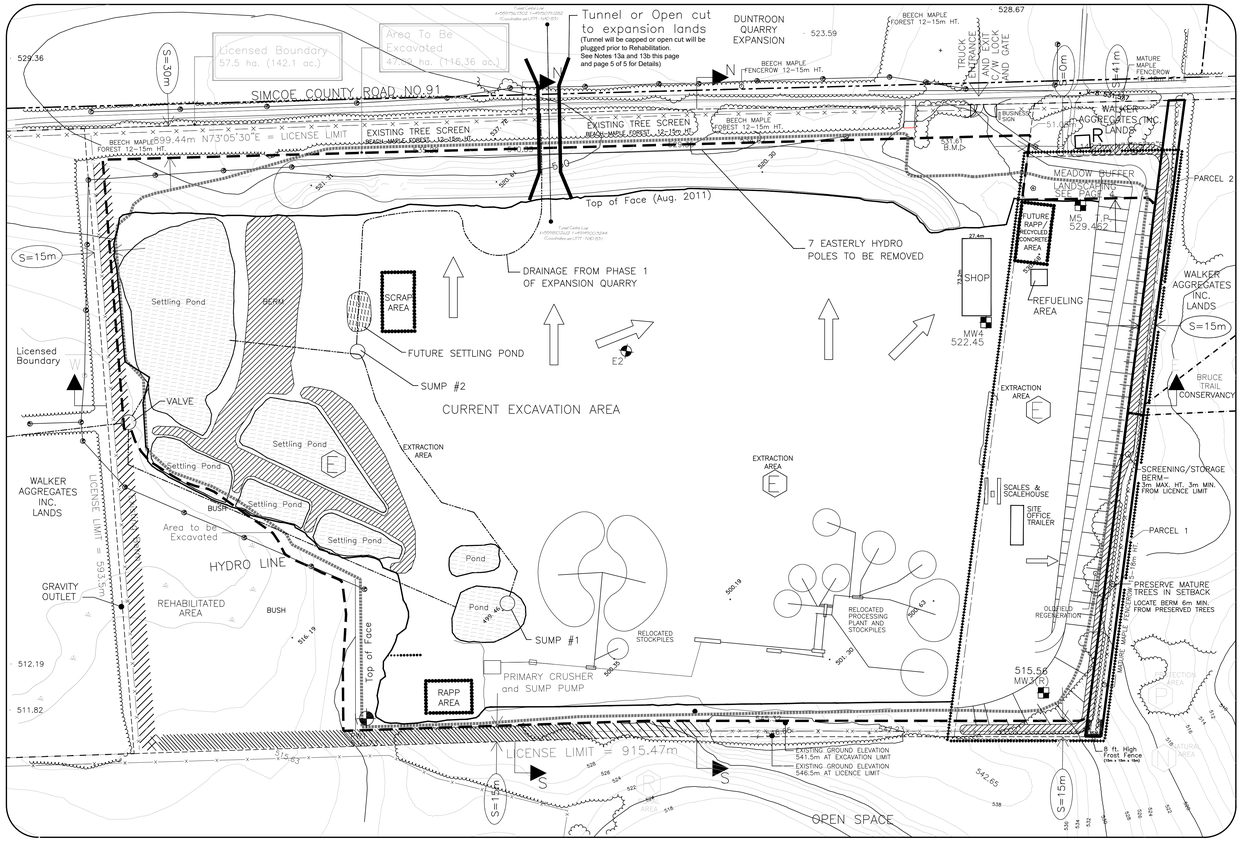
ZUBEK, EMO AND PATTEN LTD.
ONTARIO LAND SURVEYORS

39 Stewart Road, Collingwood Ontario (705) 445-8107

SCALE - 1 : 3000

DATE - AUGUST 25, 1997
JOB # 78-84-8, EXIST.DGN

3716/22



SCALE 1:2000

Ministry of Northern Development, Mines, Natural Resources and Forestry

APPROVED

Under the *Aggregate Resources Act*

Date: April 14, 2015

NOTES

1. TOPSOIL AND OVERBURDEN ARE TO BE STRIPPED,STOCKPILED AND KEPT IN SEPARATE BERMS AS SHOWN ON THE PLAN, GRADED WITH 3:1 SLOPES, SEEDED AND MAINTAINED FOR REHABILITATION.
2. THE EXCAVATION DIRECTION SHALL GENERALLY FOLLOW AS SHOWN ON THE PLAN BUT MAY VARY DUE TO THE LIMESTONE QUALITY AND MARKET DEMAND.
3. WELL DATA IS FROM THE HYDROGEOLOGY REPORT PREPARED BY TROW, DAMES AND MOORE DATED MARCH 1991, AND ADDITIONAL MONITORING WELLS INSTALLED IN 1989 AND 1995. THE LICENSEE SHALL ESTABLISH A PROGRAM FOR THE ON AND OFF SITE WELLS IN ACCORDANCE WITH THE CONDITIONS ATTACHED TO THE PERMIT TO TAKE WATER No. 96-P-5019 WHICH ALSO REQUIRES THAT A REPORT BE SUBMITTED TO THE M.O.E. & M.N.R. ON AN ANNUAL BASIS.
4. DUST SHALL BE MITIGATED ON SITE, INTERNAL HAUL ROUTES USING WATER OR OTHER APPROVED SUPPRESSANTS.
5. THE COMPANY HAS A SPILLS CONTINGENCY PROGRAM IN EFFECT.
6. REFUELING OF EQUIPMENT WILL BE CARRIED OUT IN A DESIGNATED AREA, FUEL STORAGE TANKS SHALL CONFORM TO THE INSTALLATION AND MAINTENANCE REQUIREMENTS OF THE GASOLINE HANDLING ACT.
7. THE LICENSEE SHALL MONITOR ALL BLASTS FOR GROUND VIBRATIONS AND BLAST OVERPRESSURE IN ACCORDANCE WITH THE CURRENT PROVINCIAL GUIDELINES AND REGULATIONS, ALL REPORTS SHALL BE RETAINED ON FILE AND MADE AVAILABLE UPON REQUEST TO THE M.O.E. AND THE M.N.R.
8. SCRAP WILL BE STORED IN THE DESIGNATED AREA AS SHOWN ON THE PLAN.
9. FENCES AS SHOWN ARE 1.2m HIGH POST AND WIRE AND SHALL BE MAINTAINED FOR THE LIFE OF THE QUARRY.
10. EQUIPMENT FOR EXTRACTION AND PROCESSING WILL INCLUDE DRILL RIGS, LOADERS, TRUCKS, BULLDOZERS, CRUSHERS, SCREENING, CONVEYERS, WASH PLANT, ASPHALT PLANT, MAINTENANCE SHOP,TRANSFORMERS AND DIESEL GENERATING PLANTS.
11. THE LICENSEE SHALL ENSURE THAT ANY WATER LEAVING THE LICENSED SITE MEETS THE SURFACE WATER QUALITY GUIDELINES OF THE M.O.E. AND M.N.R.
12. THE HEIGHT OF THE EXTRACTION FACE SHALL AT ALL TIMES BE IN COMPLIANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT.

13a. FOR DETAILS ON THE OPEN CUT TO THE EXPANSION LANDS, SEE QUARRY ACCESS SLOT AND PLUG DESIGN OPEN CUT COUNTY ROAD 91 DESIGN BRIEF, PREPARED BY C.C. TATHAM & ASSOCIATES LTD. DATED APRIL 21, 2014

13b. FOR DETAILS ON THE TUNNEL SCENARIO, SEE WALKER INDUSTRIES / WALKER AGGREGATES INC. DUNTROON QUARRY TUNNEL, TOWNSHIP OF CLEARVIEW, SIMCOE COUNTY, ONTARIO, DESIGN BRIEF, PREPARED BY GOLDER ASSOCIATES DATED MARCH 11, 2015.

14. AS LONG AS THE TOWNSHIP OF CLEARVIEW OWNS COUNTY ROAD 91, THE DESIGN, CONSTRUCTION AND OPERATION OF ANY TUNNEL, WHETHER IT BE A SMALL TUNNEL TO ACCOMMODATE A CONVEYOR SYSTEM FOR MOVEMENT OF AGGREGATE MATERIALS, OR A LARGE TUNNEL TO ALLOW MOVEMENT OF QUARRY ROCK TRUCKS, SHALL BE TO THE SATISFACTION OF THE TOWNSHIP OF CLEARVIEW. THIS SHALL REQUIRE THE ENTERING INTO OF AN AGREEMENT AND COMPLIANCE WITH ASSOCIATED APPROPRIATE CONDITIONS AND REQUIREMENTS, ALSO TO THE SATISFACTION OF CLEARVIEW. A FULL OPEN CUT THROUGH COUNTY ROAD 91 SHALL ONLY BE PERMITTED AT SUCH TIME AS THAT PORTION OF COUNTY ROAD 91 IS STOPPED UP, CLOSED AND CONVEYED TO THE QUARRY OPERATOR.
15. UPON CLOSURE OF COUNTY ROAD 91 ABUTTING THE WALKER LANDS, THIS SITE SHALL BE SECURED.
16. PRIOR TO THE CONSTRUCTION OF THE TUNNEL OR ROAD CUT A GEOTECHNICAL ENGINEERING STUDY WILL BE PREPARED TO ENSURE THE SAFE CONSTRUCTION OF THE TUNNEL OR ROAD CUT AND TO DEMONSTRATE THE ABILITY TO PERMANENTLY CLOSE THE TUNNEL OR ROAD CUT. THE GEOTECHNICAL ENGINEERING STUDY SHALL BE CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE PROVINCE OF ONTARIO.
17. A PROCESSING PLANT PROCESSING MATERIAL FROM THE QUARRY EXPANSION SITE (LICENCE NO. 607841) IS PERMITTED ON THIS SITE BUT ONLY FOR SUCH PERIOD OF TIME AS IS NECESSARY TO CREATE SUFFICIENT QUARRY FLOOR ON THE QUARRY EXPANSION SITE TO THE NORTH TO ACCOMMODATE A PROCESSING PLANT FACILITY AND THE STOCKPILES, OFFICE, SCALES SCALE HOUSE AND OTHER RELATED USES, BEING AN AREA OF 18 HA. ONCE THE QUARRY FLOOR OF THE QUARRY EXPANSION SITE TO THE NORTH AT ELEVATION 500 MASL REACHES AN AREA OF 18 HA, THE PROCESSING PLANT SHALL BE RELOCATED TO THE QUARRY EXPANSION SITE, THE TUNNEL OR OPEN CUT SHALL BE PLUGGED IN ACCORDANCE WITH NOTES 13A OR 13B (THIS PLAN) AND THIS QUARRY SHALL BE REHABILITATED.

OPERATIONS

1. THE DIRECTION OF EXTRACTION SHALL GENERALLY BE FROM THE SOUTH EAST CORNER OF THE SITE IN A NORTH WESTERLY DIRECTION AS SHOWN ON THE PLAN WITH A MAXIMUM DEPTH OF 500 m.
2. THE DESIGNATED PROCESSING AND STOCKPILE AREA IS AS OUTLINED ON THE PLAN, HOWEVER AS EXTRACTION PROGRESSES TO THE NORTH IT MAY BE NECESSARY TO STOCKPILE SOME OF THE MATERIAL ON THE 514 m LEVEL.
3. IT IS INTENDED TO RELOCATE THE PRIMARY CRUSHER TO THE 500m ELEVATION WHEN THERE IS AN AREA LARGE ENOUGH, THIS AREA MAY ALSO BE USED TO STOCKPILE MATERIAL.
4. THE MAINTENANCE SHOP, PROCESSING PLANT, WASH PLANT, PONDS AND ASPHALT PLANT WILL ALSO BE RELOCATED ELSEWHERE ON THE SITE AS EXTRACTION CONTINUES.
5. AREAS HAVE BEEN DESIGNATED ON THE SITE PLAN TO ALLOW FOR STOCKPILING OF COLD MIX ASPHALT, AND CONCRETE/ASPHALT TO BE RECYCLED INTO GRANULAR PRODUCTS
6. AREAS HAVE BEEN DESIGNATED ON THE SITE PLAN AS A TEMPORARY STORAGE FOR THE FINES FROM THE WASH POND UNTIL IT CAN BE USED AS BACKFILL FOR REHABILITATION.
7. PROGRESSIVE REHABILITATION PROGRAM SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE ENVIRONMENTAL FEATURES OUTLINED ON PAGES 4-5 AND 5-5 OF THE SITE PLANS AND THE DETAILED RESTORATION MANAGEMENT PLAN PREPARED BY SAAR ENVIRONMENTAL LTD. DATED 1996 AND UPDATED OCTOBER 2000.

8a. CLEAN INERT FILL MAY BE IMPORTED TO FACILITATE THE ESTABLISHMENT OF 2:1 (HORIZONTAL: VERTICAL) SLOPES ON THE QUARRY FACES. THE LICENSEE/ PERMITTEE MUST ENSURE THAT THE MATERIAL IS TESTED AT THE SOURCE, BEFORE IT IS DEPOSITED ON-SITE, TO ENSURE THAT THE MATERIAL MEETS THE MINISTRY OF THE ENVIRONMENT (MOE) CRITERIA UNDER TABLE 1 OF MOE'S SOILS, GROUND WATER AND SEDIMENT STANDARDS FOR USE UNDER PART XV.1 OF THE ENVIRONMENTAL PROTECTION ACT. SAMPLING RESULTS WILL BE PROVIDED TO MNR UPON REQUEST.

8b. NOTWITHSTANDING NOTE 8a, WHERE THE IMPORTED MATERIAL IS NOT BEING PLACED WITHIN 1.5 METRES OF THE SURFACE, THE CRITERIA UNDER TABLE 1 FOR SODIUM ADSORPTION RATIO AND ELECTRICAL CONDUCTIVITY DO NOT HAVE TO BE MET.

VARIATIONS FROM OPERATIONAL STANDARDS

5.1 EXCAVATION WILL BE ALLOWED WITHIN THE 30 METRE SETBACK ALONG COUNTY ROAD 91 FOR PURPOSES OF THE TUNNEL OR OPEN CUT.

Notes
1. PLAN COMPILED FROM INFORMATION FROM R.G. ROBINSON AND ASSOC. LTD. RECEIVED AUGUST 1996 AND UPDATED BY MHBC PLANNING LTD., MARCH 2015



LEGEND

- LICENSED BOUNDARY
- AREA TO BE EXCAVATED
- WALKER AGGREGATES INC. LANDS
- DUNTROON QUARRY EXPANSION LANDS
- EXISTING CONTOURS
- 522.5 SPOT ELEVATIONS
- OFFSITE FENCES
- FENCE ON LICENSED BOUNDARY
- EXCAVATION SETBACK AREA (METRES)
- B.M. BENCH MARK – CONCRETE RADIO TOWER BASE AT 531.610m
- E2 EXISTING WELLS SEE TABLE
- MW5 MONITOR WELLS SEE TABLE
- DEVELOPMENT PERMIT AREA (7.5 HA.) NEC PERMIT NO. 37YA/S/E/96-91/266
- GENERAL DIRECTION OF EXTRACTION
- PERIMETER ROAD
- BRUCE TRAIL ASSOCIATION

NIAGARA ESCARPMENT DESIGNATIONS

- Designation Boundary
- (E) Mineral Resource Extraction Area
- (P) Escarpment Protection Area
- (N) Escarpment Natural Area
- (R) Escarpment Rural Area

NO.	REVISIONS	DATE	INITIAL
1	EXTRACTION LIMITS/GENERAL	AUG.09/01	D.G.S.
2	GENERAL REVISIONS	AUG.27/01	D.G.S.
3	GENERAL REVISIONS	AUG.30/01	D.G.S.
4	GENERAL REVISIONS	SEP.17/01	D.G.S.
5	GENERAL REVISIONS	SEP.20/01	D.G.S.
6	ADD FROST FENCE/SHIFT CONVEYANCE LINE	AUG.14/02	D.G.S.
7	REVISE ENTRANCE/EXCAVATION FACE	SEP.19/02	D.G.S.
8	RELOCATE STOCKPILES, PLANT TO FLOOR RELOCATE INTERNAL ROADS	NOV.13/06	J.F.D.
9	ADD OPERATIONS NOTE 8a & 8b REVISE INTERNAL ROAD/RAMP	JAN.14/10	G.D.
10	REVISE NORTH FACE	NOV.03/11	A.M.
11	GENERAL REVISIONS	JULY.16/12	A.M.
12	GENERAL REVISIONS	SEPT. 4/12	A.M.
13	TO FACILITATE DUNTROON QUARRY EXPANSION	JULY 11/14	A.M.
14	NOTES REGARDING REHABILITATION OF TUNNEL/OPEN CUT	MAR. 16/15	D.G.S.

BRENT CLARKSON IS AUTHORIZED BY THIS LICENCE OF NATURAL RESOURCES PURSUANT TO SEC. 8(1) OF THE AGGREGATE RESOURCES ACT TO PREPARE AND CERTIFY SITE PLANS.

7050 Weston Road
Suite #230
Woodbridge, ON L4L 8G7
T: (905) 761.5588
F: (905) 761.5589
www.mhbcplan.com
MHBC
Planning and Urban Design & Resource Development

DUNTROON QUARRY

PART OF LOT 24 CONCESSION 12
TOWNSHIP OF CLEARVIEW, COUNTY OF SIMCOE
LICENCE NO 3514

WALKER AGGREGATES INC.
P.O. BOX 100,
THOROLD, ONTARIO
L2V 3Y8

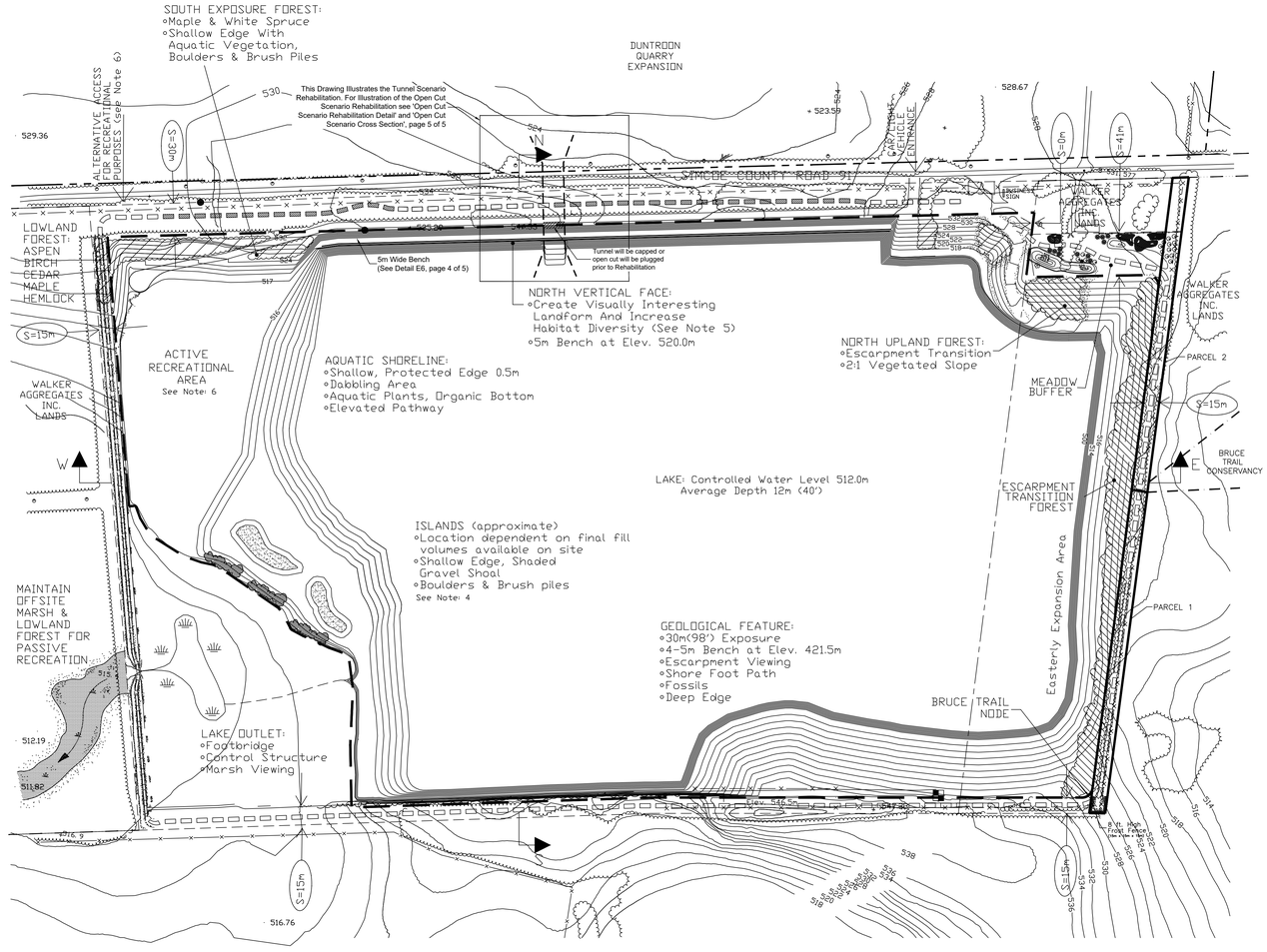
OPERATIONAL PLAN

ZUBEK, EMO AND PATTEN LTD.
ONTARIO LAND SURVEYORS
39 Stewart Road, Collingwood Ontario (705) 445-4810

SCALE – 1 : 2000

DATE – AUGUST 25,1997
JOB # 78-84-8, OPER.DGN

3/16/22



Notes

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
2. FOR GENERAL NOTES SEE PAGE 2.
3. FOR ALL CROSS SECTIONS SEE PAGE 4.
4. THE CONTOUR MAPPING WAS PREPARED BY LONG ASSOCIATES CONSULTING LIMITED IN MAY 31, 1993
5. PROPERTY BOUNDARY AND CORRESPONDING INFORMATION WAS DERIVED FROM AN EXISTING SITE PLAN PREPARED BY ZUBEK, EMO AND PATTEN LTD.
6. TOPOGRAPHIC INFORMATION IS RELATED TO THE BENCH MARK REFERRED TO.
7. PLAN COMPILED FROM INFORMATION FROM R.G. ROBINSON AND ASSOC. LTD. RECEIVED AUGUST 1996
8. PLAN UPDATED BY MHBC PLANNING LTD., AUGUST 2001, AND MARCH 2015

50 40 30 20 10 0 50 100 150 200 250meters

SCALE 1:2000

Ministry of Northern Development, Mines, Natural Resources and Forestry

APPROVED

Under the *Aggregate Resources Act*

Date: April 14, 2015

Notes

1. THE DUNTROON QUARRY COMPRISING OF A LICENSED AREA OF 49.81 ha. (123.08 ac.) WAS LICENSED AS P710197 DURING THE EARLY 1970'S. AN ADDITIONAL 7.5 ha. WAS LICENSED IN JUNE 1992 AS P716459, SUBJECT TO A NIAGARA ESCARPMENT DEVELOPMENT PERMIT. THE TOTAL LICENSED AREA IS +/-57.5 ha (142.1 ac.) THE FINAL REHABILITATION PLAN PROVIDES FOR A 36.0 ha LAKE. THE LAKE SECTION OF THE QUARRY WILL BE EXCAVATED TO AN AVERAGE ELEVATION OF 500.0m. PERIMETER ELEVATIONS VARY SUBSTANTIALLY FROM 512.0m, NEAR THE SOUTHWEST CORNER TO 546.5m, AT THE PEAK OF THE GEOLOGICAL FEATURE IN THE SOUTHEAST SECTOR.
2. A VARIETY OF LAKE EDGE TREATMENTS ARE PROPOSED, TO SUPPORT A RANGE OF COMPLIMENTARY AFTER USES. ACTIVITIES IN THE EASTERLY SECTOR WILL INCLUDE AN ACTIVE TRAIL SYSTEM AREA AND REFORESTED SLOPES. THE 546.5m HEIGHT OF LAND WILL BE RETAINED, AS A GEOLOGICAL FEATURE, PROVIDING A SUBSTANTIAL EXPOSURE OF THE AMABEL DOLOSTONE AND FOSSILS, INCLUDING CRINOIDS, STROMATOPOROIDS, CORALS, NAUTILOIDS AND BRACHIOPODS. A FENCE SHALL BE ERECTED AT THE TOP OF THE FEATURE TO THE SATISFACTION OF THE MINISTRY OF NATURAL RESOURCES.
3. THE WESTERLY EDGE ABUTS AN UNLICENSED AREA, DESIGNATED ESCARPMENT NATURAL AREA, SUPPORTING A MIXED LOWLAND WOODLOT. THIS SHORELINE WILL SUPPORT A SHALLOW, PROTECTED EDGE, WITH AQUATIC PLANTS AND ORGANIC BOTTOM, TO PROVIDE A DEGREE OF WATERFOWL HABITAT. AQUATIC PLANT SPECIES WILL BE SELECTED AND ESTABLISHED DURING THE FINAL STAGES OF LAKE AND SHORELINE DEVELOPMENT.
4. THE EXISTING BERM LOCATED ALONG THE WESTERLY LIMIT OF THE SITE, TO BE USED FOR BACKFILL ALONG ENTIRE ELEVATION TO CREATE ISLANDS LOCATED IN LAKE PORTION OF THE QUARRY.
5. PORTIONS OF THE NORTHERLY SHORELINE WILL BE DEVELOPED WITH ACCESS ROAD AND UPLAND FOREST, WITH SOUTH EXPOSURE, TO EXTEND THE EXISTING IMMATURE FOREST BUFFER. THE REMAINING PORTION OF THE NORTHERLY SHORELINE MAY BE LEFT EXPOSED AS VERTICAL FACE, WITH A 5.0m WIDE BENCH AT ELEVATION 520.0. THIS WILL CREATE A VISUALLY INTERESTING LANDFORM AND INCREASE HABITAT DIVERSITY.
6. THE FINAL REHABILITATION PLAN INCLUDES 5 SPECIFIC FEATURES AS SHOWN, TO PROVIDE FOR RECREATIONAL AND NATURAL RESOURCE ACTIVITIES AND CONNECTION TO THE BRUCE TRAIL SYSTEM. AN AREA TO ACCOMMODATE RECREATIONAL ACTIVITIES MAY BE PROVIDED IN THE NORTHWEST CORNER. THE AREA SHALL BE GRADED AND SEEDED ACCORDINGLY. AN ALTERNATIVE ACCESS TO THE RECREATIONAL AREA AT LOCATION SHOWN IS SUBJECT TO APPROVAL OF THE COUNTY OF SIMCOE.
7. THE OPERATOR WILL GRADE, TOPSOIL AND SEED THE ACTIVE RECREATION AREA, DURING FINAL REHABILITATION. THIS AREA WILL THEN BE REDEVELOPED FOR PRIVATE RECREATIONAL AFTER USES.
8. THE CONTROL STRUCTURE WILL BE ASSUMED AND MAINTAINED BY THE LICENSEE AND UPGRADED IF AND WHEN NECESSARY TO THE SATISFACTION OF THE MINISTRY OF NATURAL RESOURCES.
9. WHEN FINAL REHABILITATION OF EASTERLY SIDE SLOPE IS COMPLETE, PARCEL 1 & 2 WILL BE CONVEYED TO THE BRUCE TRAIL CONSERVANCY.
10. REHABILITATION AREAS

	HA.	AC.	%
TOTAL LICENSED AREA	57.5	142.1	100
LESS SETBACKS	6.4	15.8	11.1
LESS EXISTING REHABILITATION	2.4	6.0	4.2
NET AREA TO BE REHABILITATED (INCLUDES PROPOSED LAKE)	48.7	120.3	84.7

Rehabilitation Components

Meadow Buffer
◦See Page 4

Escarpment Transition Forest
◦Beech, Maple, White Spruce
◦Choke Cherry, Hawthorn, Sumac
◦Legume and Wildflower Ground Cover

Shoreline
◦See Page 4 Edge Standards

Aquatic Vegetation
◦See Page 4

South Exposure Forest
◦Maple, White Spruce
◦Sumac, Choke Cherry,
◦Crab Apple, Hawthorn
◦Legume and Wildflower Ground Cover
◦See this Page



PART OF LOT 24
CONCESSION 12
(FORMERLY TOWNSHIP OF NOTTAWASAGA)
TOWNSHIP OF CLEARVIEW
COUNTY OF SIMCOE

LEGEND

- LICENSED BOUNDARY
- AREA TO BE EXCAVATED
- WALKER AGGREGATES INC. LANDS
- DUNTROON QUARRY EXPANSION LANDS
- 540 EXISTING CONTOURS
- 522.5 SPOT ELEVATIONS
- FENCES
- S=15m WIDTH OF EXCAVATION SETBACK AREA, METRES
- 520 PROPOSED CONTOURS
- EXISTING TRAIL SYSTEM
- PROPOSED TRAIL SYSTEM
- BRUCE TRAIL ASSOCIATION

NO.	REVISIONS	DATE	INITIAL
11	REVISE NORTH FACE TO SHOW 5m WIDE BENCH AND TUNNEL/OPEN CUT INFORMATION	MAR.16/15	D.G.S.
10	TO FACILITATE DUNTROON QUARRY EXPANSION	JL.Y.11/14	A.J.M.
9	GENERAL REVISIONS	JL.Y.16/12	A.J.M.
8	REVISE NORTH FACE & NOTES 5 AND 9	NOV.03/11	A.J.M.
7	REVISE ENTRANCE/EXCAVATION FACE	SEP.19/02	D.G.S.
6	ADD FROST FENCE/SHIFT CONVEYANCE LINE	AUG.14/02	D.G.S.
5	REVISIONS AS PER TOWNSHIP COMMENTS	FEB.13/02	D.G.S.
4	GENERAL REVISIONS	SEP.17/01	D.G.S.
3	GENERAL REVISIONS	AUG.30/01	D.G.S.
2	GENERAL REVISIONS	AUG.27/01	D.G.S.
1	GENERAL REVISIONS	AUG.13/01	D.G.S.

BRENT CLARKSON IS AUTHORIZED BY THE MINISTRY OF NATURAL RESOURCES PURSUANT TO SECTION 8 OF THE AGGREGATE RESOURCES ACT TO PREPARE AND CERTIFY SITE PLANS.

MacNaughton Hermsen Britton Clarkson Planning Limited

DUNTROON QUARRY

PART OF LOT 24 CONCESSION 12
TOWNSHIP OF CLEARVIEW, COUNTY OF SIMCOE
LICENCE NO 3514

WALKER AGGREGATES INC.

P.O. Box 100,
Thorold, Ontario
L2V 3Y8

PROGRESSIVE REHABILITAION PLAN

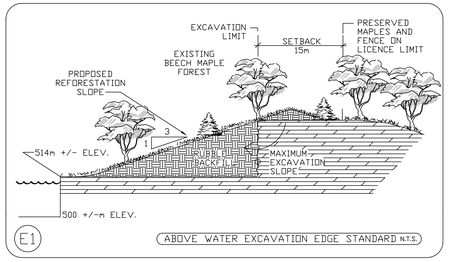
ZUBEK, EMO AND PATTEN LTD.
ONTARIO LAND SURVEYORS

39 Stewart Road, Collingwood Ontario (705) 445-4910

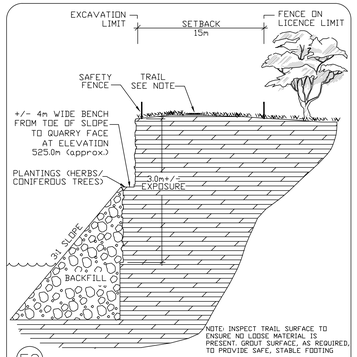
SCALE - 1 : 2000

DATE - OCT.9, 1997
JOB # 78-84-8, REHAB.DGN

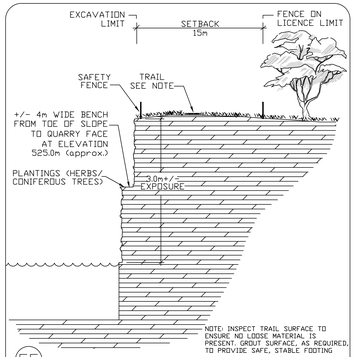
3/16/02



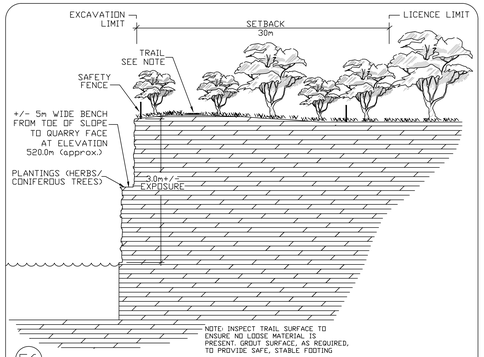
E1 ABOVE WATER EXCAVATION EDGE STANDARD N.T.S.



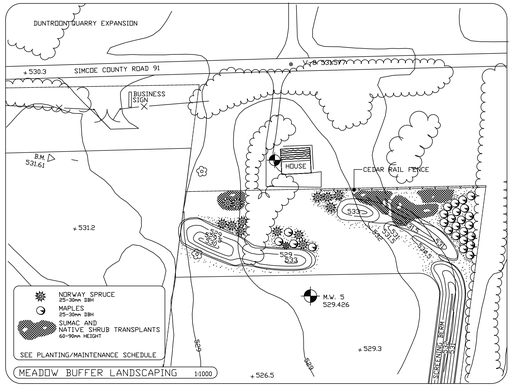
E2 GEOLOGICAL FEATURE EDGE STANDARD 1:250



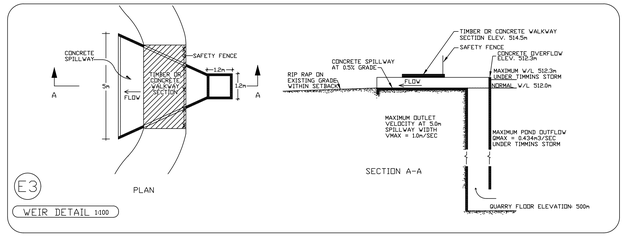
E5 GEOLOGICAL FEATURE EDGE STANDARD 1:250



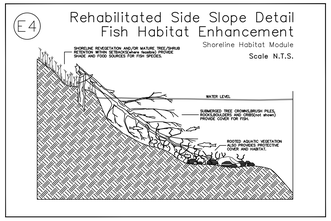
E6 GEOLOGICAL FEATURE EDGE STANDARD 1:250



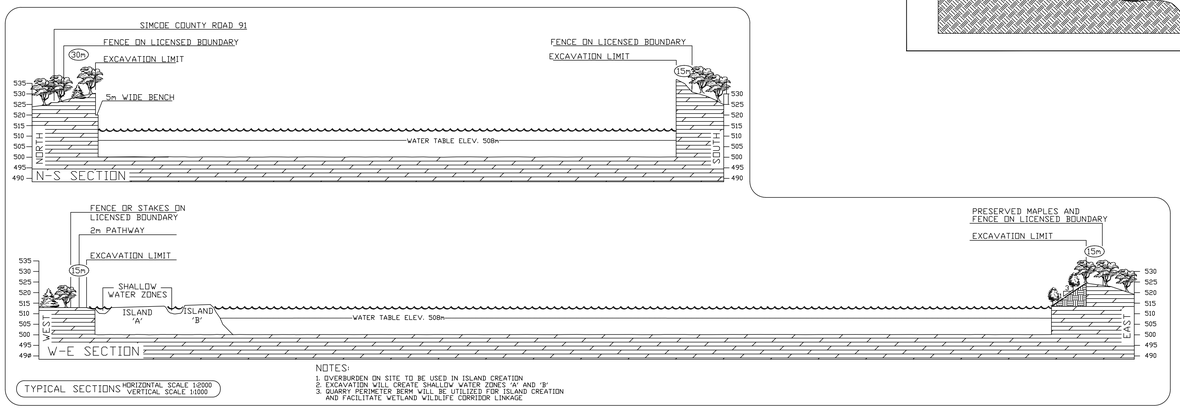
MEADOW BUFFER LANDSCAPING 1:1000



E3 PLAN
SECTION A-A
WEIR DETAIL 1:100

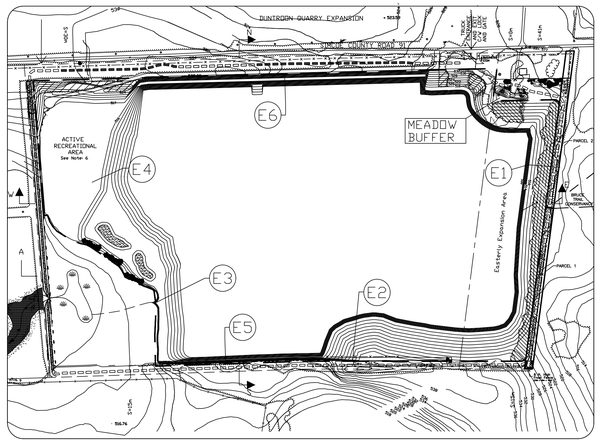


E4



TYPICAL SECTIONS HORIZONTAL SCALE 1:2000 VERTICAL SCALE 1:1000

NOTES:
1. OVERBURDEN ON SITE TO BE USED IN ISLAND CREATION
2. EXCAVATION WILL CREATE SHALLOW WATER ZONES 'A' AND 'B'
3. QUARRY PERIMETER BERM WILL BE UTILIZED FOR ISLAND CREATION AND FACILITATE WETLAND WILDLIFE CORRIDOR LINKAGE



Notes

1. PLAN COMPILED FROM INFORMATION FROM DRAWINGS BY R.G. ROBINSON AND ASSOC. LTD. RECEIVED AUGUST 1996, AND UPDATED BY MHBC PLANNING LTD., MARCH 2015.

Ministry of Northern Development, Mines, Natural Resources and Forestry

APPROVED

Under the *Aggregate Resources Act*

Date: April 14, 2015

PART OF LOT 24
CONCESSION 12
(FORMERLY TOWNSHIP OF NOTTAWASAGA)
TOWNSHIP OF CLEARVIEW
COUNTY OF SIMCOE

NO.	REVISIONS	DATE	INITIAL
12	REVISE NORTH FACE TO SHOW 5m WIDE BENCH	MAR.6/15	D.G.S.
11	TO FACILITATE DUNTROON QUARRY EXPANSION	JLY.11/14	A.M.
10	ADD 'E6' DETAIL AS PER MNR COMMENTS	FEB6/13	A.M.
9	GENERAL REVISIONS	JLY.16/12	A.M.
8	REVISE NORTH SOUTH CROSS SECTION	NOV.03/11	A.M.
7	REVISE ENTRANCE/EXCAVATION FACE	SEP.19/02	D.G.S.
6	ADD FROST FENCE/SHIFT CONVEYANCE LINE	AUG14/02	D.G.S.
5	REVISIONS AS PER TOWNSHIP COMMENTS	FEB13/02	D.G.S.
4	GENERAL REVISIONS	SEP.17/01	D.G.S.
3	GENERAL REVISIONS	AUG.30/01	D.G.S.
2	GENERAL REVISIONS	AUG.27/01	D.G.S.
1	GENERAL REVISIONS	AUG13/01	D.G.S.

BRENT CLARKSON IS AUTHORIZED TO PREPARE THIS PLAN UNDER THE AUTHORITY OF NATURAL RESOURCES PURSUANT TO SECTION 12 OF THE AGGREGATE RESOURCES ACT TO PREPARE AND CERTIFY SITE PLANS.

MacNaughton Hermsen Britton Clarkson Planning Limited
MHBC

DUNTROON QUARRY

PART OF LOT 24 CONCESSION 12
TOWNSHIP OF CLEARVIEW, COUNTY OF SIMCOE
LICENCE NO 3514

WALKER AGGREGATES INC
P.O. BOX 100,
THORNLD, ONTARIO
L2V 3Y8

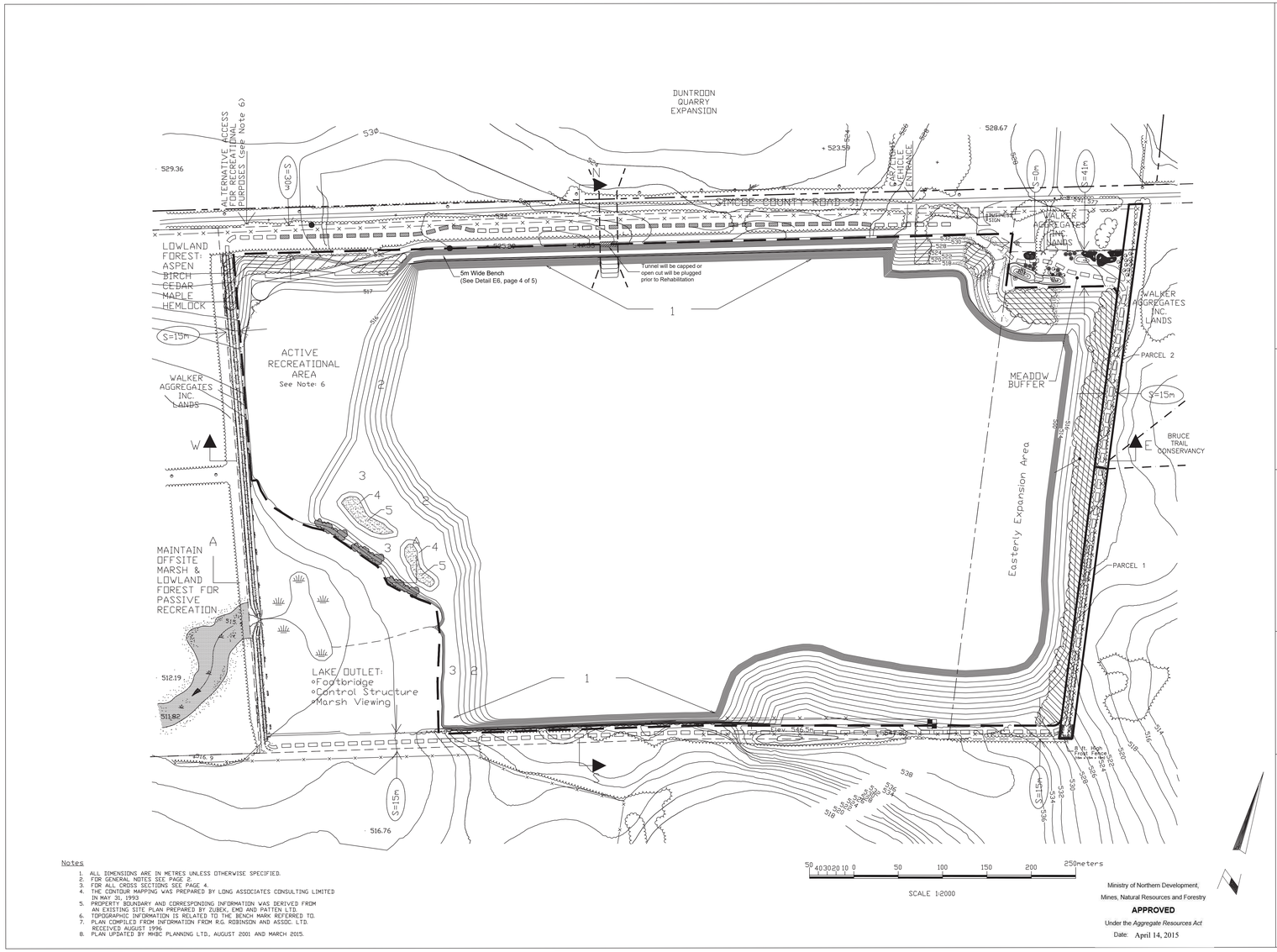
TYPICAL CROSS SECTIONS

ZUBEK, EMO AND PATTEN LTD.
ONTARIO LAND SURVEYORS

39 Stewart Road, Collingwood Ontario (705) 445-4168

SCALE - 1 : AS SHOWN

DATE - OCT.9, 1997
JOB # 78-84-8, REHAB.DGN



Notes

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
2. FOR GENERAL NOTES SEE PAGE 2.
3. FOR ALL CROSS SECTIONS SEE PAGE 4.
4. THE CONTOUR MAPPING WAS PREPARED BY LONG ASSOCIATES CONSULTING LIMITED IN MAY 31, 1993
5. PROPERTY BOUNDARY AND CORRESPONDING INFORMATION WAS DERIVED FROM AN EXISTING SITE PLAN PREPARED BY ZUBEK, EMO AND PATTEN LTD.
6. TOPOGRAPHIC INFORMATION IS RELATED TO THE BENCH MARK REFERRED TO.
7. PLAN COMPILED FROM INFORMATION FROM R.G. ROBINSON AND ASSOC. LTD. RECEIVED AUGUST 1996
8. PLAN UPDATED BY MHBC PLANNING LTD., AUGUST 2001 AND MARCH 2015.

Ministry of Northern Development, Mines, Natural Resources and Forestry

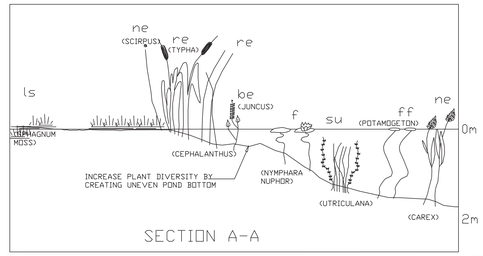
APPROVED

Under the *Aggregate Resources Act*

Date: April 14, 2015

Notes

1. ORIGINAL REHABILITATION PLANS PREPARED BY LONG AND ASSOCIATES CONSULTING LIMITED, APPROVED BY THE MINISTRY OF NATURAL RESOURCES ON MAY 30, 1993.
2. PLAN COMPILED FROM INFORMATION FROM PLANS PREPARED BY R.G. ROBINSON AND ASSOCIATES LTD.
3. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
4. FOR GENERAL NOTES SEE DWG. No. 2.
5. FOR ALL CROSS SECTIONS SEE DWG. No. 4.
6. THE CONTOUR MAPPING WAS PREPARED BY M.N.R. AIR PHOTO IN OCTOBER 1989.
7. PROPERTY BOUNDARY AND CORRESPONDING INFORMATION WAS DERIVED FROM AN EXISTING SITE PLAN PREPARED BY ZUBEK, EMO AND PATTEN LTD.
8. TOPOGRAPHIC INFORMATION IS RELATED TO THE BENCH MARK REFERRED TO.



SECTION A-A

AQUATIC VEGETATION TYPE SYMBOLS

re	ROBUST EMERGENTS	ff	FREE FLOATING VEGETATION
ne	NARROW LEAFED EMERGENTS	ls	LOW SHRUBS
be	BROAD LEAFED EMERGENTS	ts	TALL SHRUBS
f	FLOATING PLANTS	gc	GROUND COVER (MOSS, HERBS)
su	SUBMERGED VEGETATION	dh,dc	DEAD HARDWOODS, DEAD CONIFERS
u	UNVEGETATED		

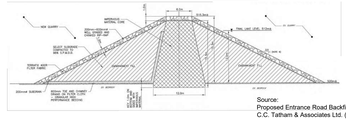
VEGETATION COMMUNITY TYPES

1. CLIFF FACE (FERN ASSEMBLAGE AND CONIFERS)
2. AQUATIC MARSH COMMUNITY (>0.25m TO 2.0m LIMIT)
3. SEMI-AQUATIC MARSH COMMUNITY (AS ABOVE BUT UPSLOPE IN LESS WATER: <0.25m TO HIGH AND DRY)
4. THICKET SWAMP (AS ABOVE BUT ONLY A FEW CENTIMETRES OF WATER)

5 MAN MADE ISLAND

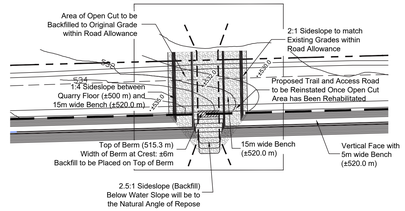
FUTURE WOODLANDS

Open Cut Scenario Cross Section Scale 1:500



Source: Proposed Entrance Road Backfill Detail (Dwg. SSK-1) C.C. Tatham & Associates Ltd. (April 21, 2014)

Open Cut Scenario Rehabilitation Scale 1:500





PART OF LOT 24
CONCESSION 12
(FORMERLY TOWNSHIP OF NOTTAWASAGA)
TOWNSHIP OF CLEARVIEW
COUNTY OF SIMCOE

LEGEND

- LICENSED BOUNDARY
- N.E.P. DESIGNATION BOUNDARY
- AREA TO BE EXCAVATED
- WALKER AGGREGATES INC. LANDS
- DUNTROON QUARRY EXPANSION LANDS
- 540 EXISTING CONTOURS
- 525.5 SPOT ELEVATIONS
- FENCES
- S=15m WIDTH OF EXCAVATION SETBACK
- 540 PROPOSED CONTOURS
- EXISTING TRAIL SYSTEM
- PROPOSED TRAIL SYSTEM
- BENCH
- BRUCE TRAIL ASSOCIATION

NO.	REVISIONS	DATE	INITIAL
11	REVISE NORTH FACE TO SHOW 5m WIDE BENCH AND TUNNEL/OPEN CUT INFORMATION	MAR.16/15	D.G.S.
10	TO FACILITATE DUNTROON QUARRY EXPANSION	JLY.11/14	A.M.
9	GENERAL REVISIONS	JLY.16/12	A.M.
8	REVISE NORTH FACE	NOV.03/11	A.M.
7	REVISE ENTRANCE/EXCAVATION FACE	SEP.19/02	D.G.S.
6	ADD FROST FENCE/SHIFT CONVEYANCE LINE	AUG.14/02	D.G.S.
5	REVISIONS AS PER TOWNSHIP COMMENTS	FEB.13/02	D.G.S.
4	GENERAL REVISIONS	SEP.17/01	D.G.S.
3	GENERAL REVISIONS	AUG.30/01	D.G.S.
2	GENERAL REVISIONS	AUG.27/01	D.G.S.
1	GENERAL REVISIONS	AUG.14/01	D.G.S.

BRENT CLARKSON IS AUTHORIZED BY THE MINISTRY OF NATURAL RESOURCES AND FORESTRY PURSUANT TO SECTION 8(4) OF THE AGGREGATE RESOURCES ACT TO PREPARE AND CERTIFY SITE PLANS.

MHBC MacNaughton Hermsen Britton Clarkson Planning Limited

DUNTROON QUARRY

PART OF LOT 24 CONCESSION 12
TOWNSHIP OF CLEARVIEW, COUNTY OF SIMCOE
LICENCE NO. 3514

WALKER AGGREGATES INC.
P.O. Box 100,
Thorold, Ontario
L2V 3Y8

VEGETATION COMMUNITY AND FINAL REHABILITATION PLAN

ZUBEK, EMO AND PATTEN LTD.
ONTARIO LAND SURVEYORS
39 Stewart Road, Collingwood Ontario (705) 445-4910

SCALE - 1:2000

DATE - OCT.9, 1997
JOB # 78-84-8, REHAB.DGN

PAGE 5 OF 5

3/16/02

Tab **4**

Existing Features

Legend

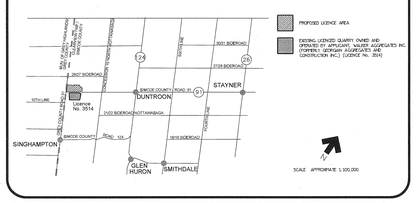
- Expansion Licence Boundary
- Limit of Extraction — ALL SETBACKS DRAWN TO SCALE. EXISTS IN SETBACKS AND SHOWN LABELLED DISTANCES
- Lots and Concessions
- Building/Structure — LOCATION AND USE FOR BUILDINGS ON SITE AND WITHIN 120m ARE SHOWN ON THIS PLAN
- Existing Driveway
- Field/Service Entrance — MAINTAINED AND REGULATED BY A GATE WHICH SHALL BE LOCKED AT ALL TIMES THE QUARRY IS NOT IN OPERATION UNLESS OTHERWISE NOTED ON THIS PLAN.
- Entrance/Exit (OPERATIONAL) — MAINTAINED AND REGULATED BY A GATE WHICH SHALL BE LOCKED AT ALL TIMES THE QUARRY IS NOT IN OPERATION UNLESS OTHERWISE NOTED ON THIS PLAN.
- Direction of Surface Drainage (IF ANY)
- Existing Fence — POST AND WIRE FARM FENCE UNLESS OTHERWISE NOTED
- Existing Spot Elevation (MASL)
- Niagara Escarpment Plan Boundary
- Cross Sections (FOR DETAILS SEE PAGE 4 OF 4)
- South Quarry Licence Boundary — EXISTING DUNROON QUARRY LICENCE No. 3514
- Walker Aggregates Inc. Lands
- Hydro Pole Line
- Niagara Escarpment Designation Boundary — BOUNDARIES ARE INTERPRETED BASED ON 1:50,000 N.E.P. MAP 5 AND DETAILED ON SITE INSPECTIONS
- Existing Stream
- Entrance to Phase 1
- Existing Vegetation
- Wetland Boundary (Surveyed & Estimated)
- Pond
- Elevation, Contour (MASL)
- Parcel Fabric
- Existing Ditch

NOTES:

1. TOPOGRAPHIC INFORMATION PREPARED BY NORTHWAY-PHOTOMAP INC. AND GENERATED FROM AERIAL PHOTOGRAPHY FLOWN IN SPRING OF 2002. CONTOUR INTERVAL IS 2.0m, WITH FULL 10m INTERPOLATED CONTOURS. ALL ELEVATIONS ARE INDICATED IN METRES ABOVE SEA LEVEL (MASL). SPOT ELEVATIONS IN ROB ROY UNIT 2 WETLAND BASED ON SURVEY BY ZUBER, EYO, PATTEN & THOMSON, SEPTEMBER 2007.
2. LICENCE BOUNDARY COMPILED FROM EXISTING ARA SITE PLANS ORIGINALLY PREPARED BY ZUBER, EYO AND PATTEN LTD.; DAVE T. HULSE ENTERPRISES INC. BOUNDARY OF AREA TO BE LICENCED TAKEN FROM PRELIMINARY PLAN OF SURVEY PREPARED BY ZUBER, EYO, PATTEN AND THOMSON LTD., JANUARY 2003, AND PLAN 51R-4729 PREPARED BY ZUBER AND EYO, JUNE 13, 1975.
3. ZONING INFORMATION OBTAINED FROM MUNICIPALITY OF GREY HIGHLANDS ZONING BY-LAW 10-1978. NIAGARA ESCARPMENT PLAN DESIGNATIONS TAKEN FROM MAP 5 NIAGARA ESCARPMENT PLAN, MINISTRY OF NATURAL RESOURCES, JUNE 1, 2005.
4. ALL MEASUREMENTS SHOWN ON THIS PLAN ARE IN METRES.
5. BOUNDARY OF AREA TO BE LICENCED 65.93 ha. 162.93 (ac.)
   AREA TO BE EXTRACTED 58.49 ha. 144.52 (ac.)
6. HYDROGEOLOGICAL INFORMATION OBTAINED FROM "GEOLOGICAL REPORT AND LEVEL 2 HYDROGEOLOGICAL ASSESSMENT" DATED SEPTEMBER 2005, AND "LEVEL 2 HYDROGEOLOGICAL ASSESSMENT ADDENDUM" DATED OCTOBER 2007 PREPARED BY JAGGER HIMS LIMITED
7. THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENCE, CATEGORY 2.
8. HIGH MEASURED GROUNDWATER LEVELS VARY FROM 509 MASL TO 526 MASL ACROSS THE SITE.

Final Approved Plan
Date: Sept 4, 2014
Signature:
Ministry of Natural Resources
Midhurst District Office

Key Map



I ACKNOWLEDGE AND SHALL CARRY ON MY OPERATION IN ACCORDANCE WITH THIS SITE PLAN AND THE QUARRY LICENCE IS ISSUED.

LICENCE / SIGNATURE

DATE 20 August 2014

THIS SITE PLAN HAS BEEN PREPARED UNDER THE DIRECTION OF V. BRENT CLARKSON, WHO IS QUALIFIED TO PREPARE AND CERTIFY SITE PLANS PURSUANT TO SECTION 8(4) OF THE AGGREGATE RESOURCES ACT.

V. BRENT CLARKSON, MA MCIP RPP for MHBC PLANNING

DATE 19 August 2014

BRENT CLARKSON IS AUTHORIZED BY THE MINISTRY OF NATURAL RESOURCES PURSUANT TO SECTION 13(2) OF THE AGGREGATE RESOURCES ACT TO PREPARE AND CERTIFY SITE PLANS.

Scale 1:3,000

0 25 50 100 150m

NORTH

DRAFT REVISIONS		APPROVED LICENCE SITE PLAN AMENDMENTS
2014 - 1	MAY 30, 2014	
2014 - 2	JUNE 24, 2014	
2014 - 3	JULY 11, 2014	
2014 - 4	AUG 19, 2014	
2014 - 5		
2014 - 6		
2014 - 7		

MHBC

MacNaughton Hermsen Britton Clarkson Planning Limited
PLANNING, URBAN DESIGN & LANDSCAPE ARCHITECTURE
7050 Weston Road, Suite #230, Woodbridge, Ontario L4L 8G7
Telephone (905) 761-5588 FAX (905) 761-5589 e-mail clarkson@mhbcplan.com

PROJECT NAME:

Duntroon Quarry Expansion

Job No. 1861 'S' VALVER CLEAR SPEC #DRTPLAN
Des. By A.M./D.S./J.D./C.T. Chkd. By B.C.

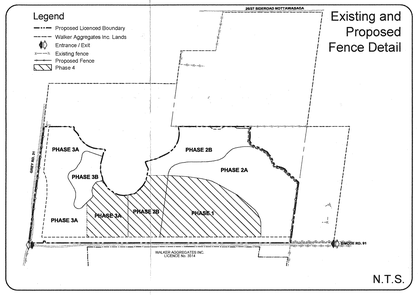
Lot 25 and Part Lot 26,
Concession XII and
Part Lot 25, Concession XI
Clearview Township
Simcoe County

walker industries

Walker Aggregates Inc.

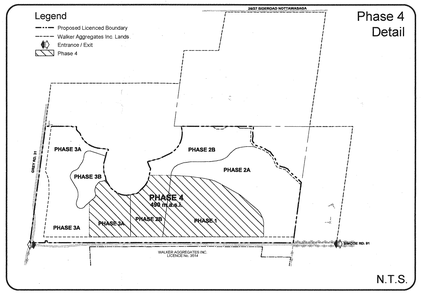
Walker Industries Holdings Limited
Aggregates and Construction Group
P.O. Box 100 Thorold Ontario
L2V 3Y8

18/08/2014



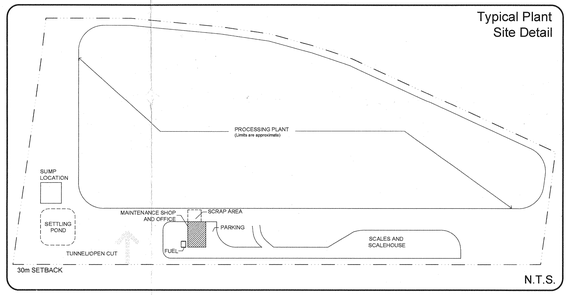
Existing and Proposed Fence Detail

N.T.S.



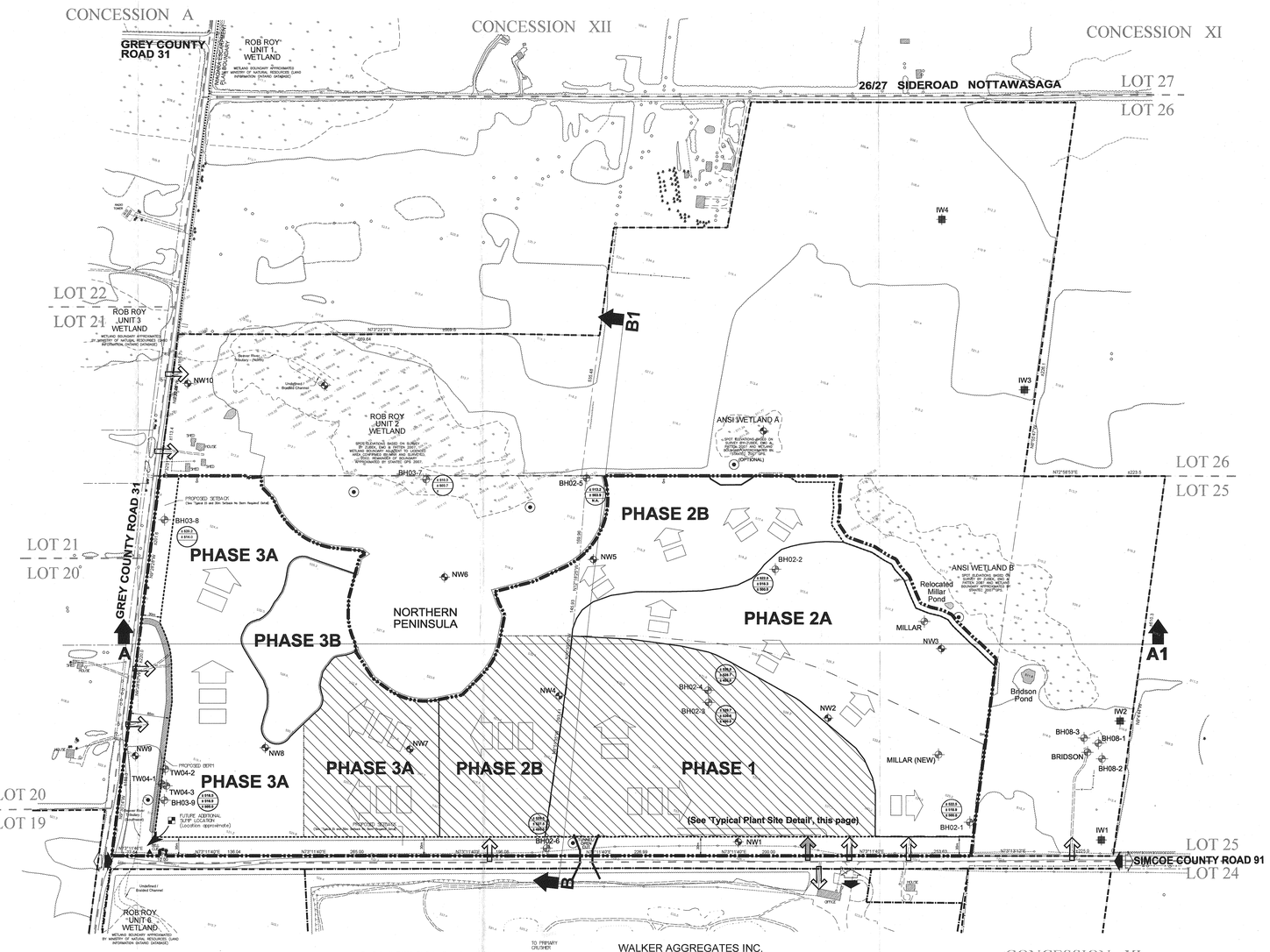
Phase 4 Detail

N.T.S.



Typical Plant Site Detail

N.T.S.



GENERAL NOTES (cont'd):

12C. PRIOR TO COMMENCEMENT OF EXTRACTION, THE OPERATOR SHALL SUBMIT DETAILS OF THE PROPOSED METHODS OF CONVEYING WATER FROM THE PROPOSED QUARRY LAKE TO ROB ROY 2 AND ANSI A WETLAND AND ANSI B WETLAND TO THE SATISFACTION OF THE MNR AND NDCA IN CONSULTATION WITH THE GREY SAUBLE CONSERVATION AUTHORITY AND THE NOTTAWASAGA VALLEY CONSERVATION AUTHORITY.

13. DURING THE INITIAL STAGE OF DEVELOPING PHASE 1, A TUNNEL OR OPEN CUT FOR TRUCKS AND/OR CONVEYORS WILL BE CREATED UNDERNEATH OR THROUGH THAT PORTION OF COUNTY ROAD 91, WHICH IS CLOSED. THIS PASSAGE WILL PERMIT TRANSPORT OF EXTRACTED MATERIAL FROM THE PHASE 1 AREA TO THE EXISTING PROCESSING PLANT WITHIN LICENCE No. 3514, AND WILL PERMIT THE TRANSPORT OF EXTRACTED MATERIAL FROM LOT 24 TO THE RELOCATED PROCESSING PLANT. SEE "PLANT SITE" AND "TYPICAL PLANT SITE DETAIL" THIS PAGE.

14. A PROCESSING PLANT (PROCESSING MATERIAL FROM THIS SITE (LOT 25, CONCESSION 12, TOWNSHIP OF CLEARVIEW) IS PERMITTED ON LANDS TO THE SOUTH (LOT 24, CONCESSION 12, TOWNSHIP OF CLEARVIEW, ARA LICENCE No. 3514) BUT ONLY FOR SUCH PERIOD OF TIME AS IS NECESSARY TO CREATE SUFFICIENT QUARRY FLOOR ON THIS SITE TO ACCOMMODATE THIS FACILITY AND THE STOCKPILES, OFFICE, SCALES, SCALE HOUSE AND OTHER RELATED USES, BEING AN AREA OF 18 HA. ONCE THE QUARRY FLOOR AT ELEVATION 500 MASL REACHES AN AREA OF 18 HA, THE PROCESSING PLANT SHALL BE RELOCATED TO THIS SITE AND THE QUARRY UNDER LICENCE No. 3514 SHALL BE REHABILITATED IN ACCORDANCE WITH THE ARA LICENCE AND SITE PLANS. THIS PERMISSION INCLUDES ALL RELATED PRODUCTION FACILITIES. SEE "TYPICAL PLANT SITE DETAIL" THIS PAGE.

15. UPON RELOCATION OF THE PROCESSING PLANT AND SCALES/SCALE HOUSE FROM LOT 24 TO THE "PLANT SITE" SHOWN ON THIS PAGE, THE TUNNEL/OPEN CUT WILL BE FILLED AND SEALED.

16. IN ADDITION, A PORTABLE CRUSHING/SCREEN PLANT MAY BE LOCATED ADJACENT TO THE ACTIVE FACE WITHIN PHASES 1, 2A, 2B, 3A, 3B (SUBJECT TO GENERAL NOTES 21 AND 22) AND 4 INCLUSIVE. THE PLANT SHALL BE LOCATED ON THE QUARRY FLOOR. IN ADDITION, STOCKPILES OF RECYCLABLE CONCRETE AND ASPHALT FOR PROCESSING WILL BE LOCATED ON SITE. THE MAXIMUM HEIGHT OF STOCKPILES AND ALL PROCESSING EQUIPMENT IS 20 METRES FROM THE QUARRY FLOOR.

17. ONCE THE OVERBURDEN IS STRIPPED AND STORED IN THE BERM SHOWN, OR STOCKPILED FOR FUTURE USE, EXTRACTION WILL TAKE PLACE IN PHASE 1, IN A NORTHERLY, EASTERLY AND WESTERLY DIRECTION. DEWATERING WILL TAKE PLACE TO CREATE A DRY WORKING FLOOR. WATER WILL BE PUMPED FROM THE QUARRY FLOOR AND DISCHARGED IN ACCORDANCE WITH THE PERMIT TO TAKE WATER AND THE ENVIRONMENTAL COMPLIANCE APPROVAL. NO LATER THAN THREE YEARS FROM COMMENCEMENT OF EXTRACTION, THE RELOCATED PILLAR POND SHALL BE CONSTRUCTED AS SHOWN ON THIS PAGE AS FURTHER DESCRIBED IN THE "PILLAR CVA POND RELOCATION CONCEPTS (CONSOLIDATED REPORT, STANTEC 2010, APPENDIX 'E'). THERE SHALL BE NO STRIPPING OF TOPSOIL OR OVERBURDEN, AND NO EXTRACTION, WITHIN 50 METRES OF THE EXISTING PILLAR POND UNTIL SUCH TIME AS SELF SUSTAINING VEGETATION AND ACTIVE EROSC BREEDING HAVE BEEN ESTABLISHED AT THE RELOCATED PILLAR POND AS DETERMINED THROUGH THE ADAPTIVE MANAGEMENT PLAN.

18. PRIOR TO EXTRACTION WITHIN PHASE 2A, THE BOUNDARY OF THE WETLANDS TO THE NORTH AND NORTH EAST (ROB ROY UNIT 2 WETLAND AND ANSI WETLAND A AND ANSI WETLAND B) SHALL BE SURVEYED AND STAKED, TO THE SATISFACTION OF MNR. NO EXTRACTION SHALL TAKE PLACE WITHIN 100 METRES OF THE STAKED BOUNDARY OF ROB ROY UNIT 2 WETLAND OR WITHIN 30 METRES OF THE STAKED BOUNDARY OF ANSI WETLAND A AND ANSI WETLAND B.

19. AS EXTRACTION WITHIN PHASE 1 APPROACHES A DEPTH OF 500 MASL, STRIPPING OF PHASE 2A MAY COMMENCE. EXTRACTION WITHIN PHASE 2A SHALL EXTEND EASTERLY AND NORTHERLY FROM THE QUARRY FACE IN PHASE 1. PRIOR TO STRIPPING OF LANDS IN PHASE 2B, THE LICENCEE SHALL PREPARE A REFORESTATION ASSESSMENT TO DEMONSTRATE TO THE TOWNSHIP OF CLEARVIEW THAT THE PLANTED WOODLAND IN THE PROPOSED REFORESTATION AREA (SEE PLANTING LOCATION DETAIL, PAGE 2B OF 4) IS ECOLOGICALLY SUCCESSFUL. STRIPPING OF LANDS IN PHASE 2B CAN ONLY PROCEED IN THE EVENT THE REFORESTATION IS ECOLOGICALLY SUCCESSFUL. EXTRACTION WITHIN PHASE 2B WILL NOT TAKE PLACE UNTIL THE REFORESTATION ASSESSMENT DEMONSTRATES THAT THE PLANTED WOODLAND IS ECOLOGICALLY SUCCESSFUL.

20. EXTRACTION IN PHASE 2B WILL BE UNDERTAKEN FROM EAST TO WEST AND SOUTH TO NORTH FROM PHASES 1 AND 2A RESPECTIVELY.

21. PHASES 3A AND 3B WILL PROGRESS SIMULTANEOUSLY OR MERGE AS ONE PHASE IN A WESTERLY AND NORTHERLY DIRECTION IF THE REQUIREMENTS OF GENERAL NOTE 22 ARE FULFILLED. IF GENERAL NOTE 22 HAS NOT BEEN FULFILLED AND PHASE 3A PROCEEDS INDEPENDENT OF PHASE 3B, PHASE 3B WILL PROGRESS IN A NORTHERLY DIRECTION ONCE GENERAL NOTE 22 HAS BEEN FULFILLED. IN THE EVENT PHASE 3B IS NOT EXTRACTED, IN PART OR IN ITS ENTIRETY, A 100 METRE WIDE BEDROCK CONNECTION BETWEEN THAT PORTION OF PHASE 3B RETAINED AND THE NORTHERN PENINSULA SHALL BE RETAINED AND NOT BE EXTRACTED.

22. NOTWITHSTANDING THAT PHASE 3B IS LOCATED WITHIN THE EXTRACTION AREA, QUARRY RELATED ACTIVITIES, INCLUDING SITE ALTERATION AND/OR EXTRACTION, ARE ONLY PERMITTED WITHIN PHASE 3B AT SUCH TIME AS:

i) A PERMIT UNDER SECTION 17(2) C) OF THE ENDANGERED SPECIES ACT, 2007 FOR THE REMOVAL OF THE RETAINABLE BUTTERNUT TREES WITHIN PHASE 3B HAS BEEN GRANTED BY THE MINISTRY OF NATURAL RESOURCES, OR
ii) THE RETAINABLE BUTTERNUT TREES DOCUMENTED ON SITE JUNE 2009 DECLINE AS A RESULT OF BUTTERNUT CANKER TO A DEGREE WHERE THEY ARE NO LONGER CONSIDERED RETAINABLE; AND NO OTHER RETAINABLE BUTTERNUT TREES ARE FOUND ON SITE; OR
iii) THE STATUS OF BUTTERNUT (AS LISTED ON THE SPECIES AT RISK IN ONTARIO LIST) IS CHANGED AND THE RESULT IS SUCH THAT BUTTERNUT IS NO LONGER SUBJECT TO SECTION 9 OR 10 OF THE ENDANGERED SPECIES ACT 2007, AND
iv) EXTRACTION IN PHASE 3B IS IN KEEPING WITH OTHER RELEVANT POLICIES AND LEGISLATION APPLICABLE TO BUTTERNUT AT THAT TIME.

FOR GREATER CLARITY REGARDING SCENARIO (i) ABOVE, IN THE EVENT THAT ONLY A PORTION OF PHASE 3B NO LONGER HAS RETAINABLE BUTTERNUT TREES, EXTRACTION IS ONLY PERMITTED PROVIDED THAT THE PORTION OF PHASE 3B WHICH CONTINUES TO HAVE RETAINABLE BUTTERNUT TREES, INCLUDING THE 25 METRE SETBACK, IS CLEARLY DEMARCATED AND FENCED AND IS NOT SUBJECT TO EXTRACTION.

23. PRIOR TO COMPLETION OF PHASE 2B, STRIPPING OF TOPSOIL AND OVERBURDEN WITHIN PHASE 3A WILL COMMENCE. THESE MATERIALS WILL BE STOCKPILED OR USED FOR PROGRESSIVE REHABILITATION.

24. WHEN THE QUARRY FLOOR REACHES THE WESTERLY LIMIT OF PHASE 3A, A SUMP WILL BE CREATED IN THE AREA SHOWN ON THE PLANS. WATER WILL BE DISCHARGED AT THE LOCATIONS IDENTIFIED AS QUARRY DEWATERING DISCHARGE LOCATIONS AS IDENTIFIED ON THE SITE PLANS, OR AS REFINED OR AUGMENTED THROUGH AN ADAPTIVE MANAGEMENT PLAN (APP) APPROVED BY THE MINISTRY OF NATURAL RESOURCES (MNR).

25. PHASE 4 - AS PHASE 3A IS NEARING COMPLETION A FURTHER LIFT WILL BE INITIATED TO AN ELEVATION OF 490 MASL (SEE PHASE 4 DETAIL THIS PAGE). WHEN NECESSARY, THE PERMANENT PLANT WILL BE DISASSEMBLED AND MOVED OFF SITE. PROCESSING WILL CONTINUE WITH USE OF A PORTABLE PROCESSING PLANT. PROGRESSIVE REHABILITATION OF PHASE 3A (OR COMBINED PHASES 3A AND 3B) WILL CONTINUE.

26. UPON COMPLETION OF EXTRACTION TO AN ELEVATION OF 490 MASL IN PHASE 4, REHABILITATION OF THE SITE IS TO BE COMPLETED AND DEWATERING WILL CEASE. OVERFLOW SILLS AND CHANNELS AND, IF NECESSARY, OUTLET CONTROL STRUCTURES WILL BE CREATED TO ALLOW POSITIVE DRAINAGE FROM THE LAKE TO ROB ROY UNIT 2 WETLAND, ANSI WETLAND A AND ANSI WETLAND B. UNTIL THE LAKE IS FULL, IT MAY BE NECESSARY TO CONTINUE TO DISCHARGE WATER TOWARDS THE WETLANDS UNTIL SUCH TIME AS IT HAS BEEN DEMONSTRATED TO THE SATISFACTION OF THE MINISTRY OF NATURAL RESOURCES THAT THE WETLANDS ARE SELF-SUSTAINING AS DEMONSTRATED THROUGH MONITORING IN THE APP.

27. ON SITE MOBILE EQUIPMENT TO BE USED WITHIN THE LICENCE AREA WILL INCLUDE, BUT IS NOT LIMITED TO, LOADERS, HAUL TRUCKS, SCRAPERS, BULLDOZERS, BACKHOES, DRILLS, AND A PORTABLE AND PERMANENT PROCESSING PLANT.

28. THE HOURS OF OPERATION ARE:

Activity	Monday to Friday	Saturday
Stripping	7:00 am to 5:00 pm	8:00 am to 3:00 pm
Drilling	7:00 am to 5:00 pm	8:00 am to 3:00 pm
Blasting	8:00 am to 5:00 pm	8:00 am to 3:00 pm
Operations (including processing)	6:00 am to midnight	7:00 am to 3:00 pm
Shipping	6:00 am to 5:00 pm	None
Maintenance	24 hours a day	24 hours a day

NOTE: SHOWN CLOSED EXCEPT FOR MAINTENANCE OUTSIDE THESE HOURS, ANY ACTIVITY CAN ONLY TAKE PLACE ON AN EMERGENCY BASIS AT THE REQUEST OF THE MINISTRY OF TRANSPORTATION, THE COUNTY OF SIMCOE, THE TOWNSHIP OF CLEARVIEW, OR OTHER PUBLIC ROAD AUTHORITY.

29. NO ACTIVITIES SHALL OCCUR ON STATUTORY HOLIDAYS AS DEFINED IN ACCORDANCE WITH THE EMPLOYMENT STANDARDS ACT EXCEPT THAT CANADA DAY CAN BE TAKEN AS AN ALTERNATIVE DAY. MAINTENANCE MAY OCCUR ON HOLIDAYS.

30. BLASTING COULD OCCUR DAILY IN ACCORDANCE WITH PROVINCIAL STANDARDS.

31. THE MAXIMUM TONNAGE TO BE REMOVED ANNUALLY FROM THIS SITE IS 2.5 MILLION TONNES, IN COMBINATION WITH LICENCE No. 3514.

32. REHABILITATION WILL BE PROGRESSIVE DURING QUARRY OPERATIONS AS SUFFICIENT AREAS BECOME AVAILABLE. OVERBURDEN FROM PHASE 1 MAY ALSO BE USED FOR THE CONSTRUCTION OF THE BERM AT THE WEST SIDE OF PHASE 3A.

33. OFF SITE AGGREGATE MATERIAL REQUIRED FOR BLENDING PURPOSES MAY BE IMPORTED AND STOCKPILED IN THE PERMANENT PROCESSING PLANT AREA. STOCKPILES OF IMPORTED MATERIAL WILL NOT EXCEED 20 METRES. ANY IMPORT FILL BROUGHT ONTO THE SITE IS REQUIRED TO BE PRE-SCREENED AND TESTED IN ACCORDANCE WITH VALKER AGGREGATES INC. EARTH IST ENVIRONMENTAL MANUAL "IMPORT FILL ACCEPTANCE PROCEDURE."

34. FOR DETAILS ON PROGRESSIVE AND FINAL REHABILITATION REFER TO PLAN 3 OF 4 ENTITLED "REHABILITATION PLAN".

TECHNICAL REPORTS (REPORTS PREPARED IN SUPPORT OF THE CLASS A LICENCE APPLICATION CATEGORY 2):

1. GEOLOGICAL REPORT AND LEVEL 2 HYDROGEOLOGICAL ASSESSMENT, DUNTROON QUARRY EXPANSION, SEPTEMBER 2005, JAGGER HIMS LIMITED
2. LEVEL 2 HYDROGEOLOGICAL ASSESSMENT ADDENDUM AND CUMULATIVE IMPACT ASSESSMENT, OCTOBER 2007, JAGGARS HIMS LIMITED
3. GROUNDWATER AND SURFACE WATER MONITORING PROGRAM - 2007 REPORT, OCTOBER 2007, JAGGER HIMS LIMITED
4. ESCARPMENT EROSION INTERPRETATION, MAY 2007, JAGGER HIMS LIMITED
5. WATER RESOURCES MONITORING PROGRAM SUMMARY REPORT (2006-2009), MARCH 2010, GENIVAR CONSULTANTS LP
6. 2008/2009 HYDROGEOLOGICAL TESTING SUMMARY REPORT, MARCH 2010, GENIVAR CONSULTANTS LP
7. NATURAL ENVIRONMENT LEVEL 2 DUNTROON QUARRY EXPANSION, SEPTEMBER 2005, STANTEC CONSULTING LIMITED
8. LEVEL 2 NATURAL ENVIRONMENT REPORT TECHNICAL REPORT ADDENDUM: RESPONSE TO AGENCY COMMENTS AND CUMULATIVE EFFECTS ASSESSMENT, OCTOBER 2007, STANTEC CONSULTING LIMITED
9. CONSOLIDATED NATURAL ENVIRONMENT REPORT, MARCH 2010, STANTEC CONSULTING LIMITED
10. AGRICULTURAL IMPACT ANALYSIS, SEPTEMBER 27, 2007, STANTEC CONSULTING LIMITED
11. VISUAL IMPACT ASSESSMENT FOR DUNTROON QUARRY EXPANSION, SEPTEMBER 2005, STANTEC CONSULTING LIMITED
12. VISUAL IMPACT ASSESSMENT REPORT ADDENDUM, SEPTEMBER 2007, STANTEC CONSULTING LIMITED
13. DUNTROON QUARRY VISUAL SIMULATIONS, OCTOBER 2009, STANTEC CONSULTING LIMITED
14. SOUND IMPACT ANALYSIS, DUNTROON QUARRY EXPANSION, OCTOBER 4, 2007, VALCOUSTICS CANADA LIMITED
15. BLASTING IMPACT ASSESSMENT, DUNTROON QUARRY EXPANSION, SEPTEMBER 2005, GOLDER ASSOCIATES
16. ADDENDUM TO BLASTING IMPACT ASSESSMENT, SEPTEMBER 23, 2007, GOLDER ASSOCIATES
17. ARCHAEOLOGICAL RESOURCE ASSESSMENT, DUNTROON QUARRY EXPANSION, SEPTEMBER 2005, ARCHAEOLOGICAL ASSESSMENTS LIMITED
18. CUMULATIVE IMPACT ASSESSMENT, APRIL 10, 2007, AND STAGE 2 ARCHAEOLOGICAL ASSESSMENT OF OUTSTANDING SECTION, MAY 2007, ARCHAEOLOGICAL ASSESSMENTS LTD.
19. CULTURAL HERITAGE CUMULATIVE IMPACT ASSESSMENT FOR DUNTROON, APRIL 10, 2007, UNTERPLAN MCPHAIL ASSOCIATES
20. TRAFFIC IMPACT ASSESSMENT, DUNTROON QUARRY EXPANSION, OCTOBER 2007, ITRANS CONSULTING

CONSULTANTS RECOMMENDATIONS (NOT INCLUDED IN PREVIOUS NOTES OR SITE PLAN)

SEE PAGE 2B OF 4

VARIATIONS TO OPERATIONAL STANDARDS

AS PROVIDED BY SECTION 1.2.2.5 THE FOLLOWING STANDARDS HAVE BEEN VARIED:

5.1 NO FENCE WILL BE REQUIRED ALONG THE NORTH LIMIT OF THE LICENCED BOUNDARY, AS SHOWN ON THE EXISTING AND PROPOSED FENCE DETAIL ON THIS PAGE. NO FENCE WILL REQUIRED ALONG THE SOUTH LIMIT OF THE LICENCED BOUNDARY, PROVIDED FENCES AND GATES ARE INSTALLED AND OR MAINTAINED AT THE EAST AND WEST SITE ENTRANCE IN ACCORDANCE WITH THE EXISTING AND PROPOSED FENCE DETAIL (THIS PAGE).

5.10 EXCAVATION WILL BE ALLOWED WITHIN 30 METRES OF A WATERBODY AS FOLLOWS AND AS SHOWN ON THIS PLAN THE SURFACE WATER FEATURE ADJACENT TO PHASE 3A.

5.1 EXCAVATION WILL BE ALLOWED WITHIN THE 30 METRE SETBACK ALONG FORMER SIMCOE ROAD 91, FOR PURPOSES OF THE TUNNEL OR OPEN CUT TO THE EXISTING OPERATION. LIMITED AMOUNTS OF AGGREGATE AND OVERBURDEN MAY BE REMOVED ALONG THE NORTHERN, WESTERN AND EASTERN LIMITS IN ASSOCIATION WITH THE INSTALLATION OF THE RECHARGE MITIGATION SYSTEM IF REQUIRED. IN ADDITION, THERE SHALL BE A 0.0 m SETBACK FROM THE EASTERN LICENCE LIMIT AND THE NORTHERN LICENCE LIMIT IN THE LOCATIONS WHERE A SETBACK IS NOT REQUIRED FROM THE ANSI WETLAND A AND WETLAND B, AND WETLAND 3. FINALLY, THERE SHALL BE A 0.0 m SETBACK WHERE THE LICENCE BOUNDARY ABUTS THE NORTHERN PENINSULA. THIS IS IN RECOGNITION OF VALKER AGGREGATE INC.'S OWNERSHIP OF THE LANDS TO THE EAST AND THE NORTH ACQUIRED FOR BUFFER PURPOSES AND IN RECOGNITION THAT THE LICENCE BOUNDARY IS SETBACK 120 m FROM ROB ROY UNIT 2 WETLAND AND 100 m FROM COLONY 1 OF THE AMERICAN HART'S TONGUE FERN.

5.16 EXCESS TOPSOIL AND OVERBURDEN MAY BE REMOVED FROM THIS SITE AND TRANSPORTED TO THE ADJACENT LICENCE No. 3514.

5.19 A VERTICAL FACE IS PERMITTED FOR AESTHETIC PURPOSES AS SHOWN ON PAGE 3 OF 4 OF THESE PLANS.

5.20 LIMITED AMOUNTS OF AGGREGATE AND/OR OVERBURDEN MAY BE REMOVED FROM THE SETBACKS TO FACILITATE THE CONSTRUCTION OF THE RECHARGE MITIGATION SYSTEM. THE ONLY REMOVAL OF AGGREGATE WITHIN THE SETBACK IS THAT WHICH IS REQUIRED FOR THE RECHARGE MITIGATION AND NOTHING FURTHER.

PRESCRIBED CONDITIONS

3.1 DUST WILL BE MITIGATED ON SITE.

3.2 WATER OR ANOTHER PROVINCIALLY APPROVED DUST SUPPRESSANT WILL BE APPLIED TO INTERNAL HAUL ROADS AND PROCESSING AREAS AS OFTEN AS REQUIRED TO MITIGATE DUST.

3.3 PROCESSING EQUIPMENT WILL BE EQUIPPED WITH DUST SUPPRESSANT OR COLLECTION DEVICES, WHERE THE EQUIPMENT CREATES DUST AND IS BEING OPERATED WITHIN 300 METRES OF THE RECEPTOR.

3.4 ANY RECOMMENDATIONS AND/OR RECOMMENDED MONITORING PROGRAM IDENTIFIED IN THE TECHNICAL REPORT WILL BE DESCRIBED ON THE SITE PLAN AND ALL RECORDS WILL BE RETAINED BY THE LICENCEE AND MADE AVAILABLE UPON REQUEST BY THE MINISTRY OF NATURAL RESOURCES FOR AUDIT PURPOSES.

3.5 A SPILLS CONTINGENCY PROGRAM WILL BE DEVELOPED PRIOR TO SITE PREPARATION.

PRESCRIBED CONDITIONS CONTINUED ON PAGE 2B of 4

Operational 2A of 4 Plan

Legend

- Expansion Licence Boundary
- Limit of Extraction (ALL SETBACKS DRAWN TO SCALE. EXCEPT 0m SETBACKS AND SHOWN LABELLED DISTANCES)
- Lots and Concessions
- Field/Service Entrance (MAINTAINED AND REGULATED BY A GATE WHICH WILL BE CLOSED AT ALL TIMES THE QUARRY IS NOT IN OPERATION UNLESS OTHERWISE NOTED ON THIS PLAN)
- Entrance/Exit (OPERATIONAL) (MAINTAINED AND REGULATED BY A GATE WHICH WILL BE CLOSED AT ALL TIMES THE QUARRY IS NOT IN OPERATION UNLESS OTHERWISE NOTED ON THIS PLAN)
- Entrance to Phase 1
- Direction of Excavation
- Excavation Face (SEE NOTES ON THIS PAGE FOR DETAILED DESCRIPTION)
- BH02-6 Existing Well Monitor Location (INFORMATION FROM GROUNDWATER REPORT AND LEVEL 2 HYDROGEOLOGICAL ASSESSMENT BY JAGGER HIMS, SEPT. 2005)
- Quarry Dewatering Discharge Locations (WITHIN LICENCE BUT NO EXTRACTION PERMITTED (LOCATIONS SHOWN ARE APPROXIMATE))
- Proposed Additional Well Monitor Locations
- Dual Purpose Monitor/ Recharge Injection Well Locations (LOCATIONS SHOWN ARE APPROXIMATE)
- Existing Driveway
- Cross Sections (FOR DETAILS SEE PAGE 4 OF 4)
- South Quarry Licence Boundary (EXISTING EXTRACTION QUARRY LICENCE No. 3514)
- Walker Aggregates Inc. Lands
- 320.6 Existing Spot Elevation (MASL)
- Wetland Boundary (Surveyed & Estimated)
- Existing Stream
- Pond
- Plant Site (SEE TYPICAL PLANT SITE DETAIL THIS PAGE.)
- Building/Structure (LOCATION AND USES FOR BUILDINGS ON SITE AND WITHIN 120m AND SHOWN ON THIS PLAN)
- Existing Vegetation
- Existing Fence (POST AND WIRE FARM FENCE UNLESS OTHERWISE NOTED)
- Proposed Berms
- 490.0 / 485.0 / 480.0 Proposed Elevations (MASL) / EXISTING ELEVATION / TOP OF ROCK / MAXIMUM DEPTH OF EXTRACTION
- Niagara Escarpment Plan Boundary
- Phase 4

GENERAL NOTES:

1. EXTRACTION WITHIN LOT 25, CON. 12 WILL COMMENCE PRIOR TO COMPLETION OF QUARRYING AND FINAL REHABILITATION WITHIN EXISTING QUARRY IN LOT 24, CON 12 (LICENCE No. 3514). OPERATIONS WILL PROCEED SIMULTANEOUSLY IN BOTH THE EXISTING AND EXPANSION AREAS.
2. THE LICENCE AREA IS 65.93 HA AND THE EXTRACTION AREA IS 58.49 HA. THE LICENCE BOUNDARY AND THE EXTRACTION LIMIT AROUND THE NORTHERN PENINSULA IS SETBACK A COMBINATION OF 120 METRES FROM THE ROB ROY UNIT 2 WETLAND AS SURVEYED AND CONFIRMED BY MNR IN 2002, TOGETHER WITH 100 METRES FROM COLONY 1 OF THE AMERICAN HART'S TONGUE FERN AS MAPPED BY STANTEC IN FIGURE NO. 1.0 DATED REVISED JULY 16, 2009 (MNR LETTER TO NDC JULY 17, 2009 (CH 37, VOLUME 1.5, PAGE 19302).
3. THE SITE PLANS DEPICT A SCHEMATIC SEQUENCE FOR DEVELOPMENT OF THE SITE BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION. EXTRACTION ELEVATIONS ARE APPROXIMATE. LIMITED VARIATIONS DURING OPERATIONS AND REHABILITATION OF THE SITE WILL BE PERMITTED IN ORDER TO ADJUST TO ANY VARIABLE RESOURCE AND MARKET CONDITIONS OR HYDROLOGIC REQUIREMENTS. ANY MAJOR VARIATION OR DEVIATION FROM THE SITE PLANS WILL ONLY BE PERMITTED BY AMENDMENT.
4. SETBACK LIMIT FROM ALL MUNICIPAL ROAD ALLOWANCES IS A MINIMUM OF 30 METRES. AREAS ALONG SETBACKS WILL BE BACKFILLED WITH OVERBURDEN AND REHABILITATED NO STEEPER THAN 2:1, EXCEPT FOR AREAS OF EXPOSED VERTICAL FACES AS SHOWN ON PAGE 3 OF 4. SLOPES WILL BE SEEDED AS SOON AS POSSIBLE AFTER FINAL GRADING TO CONTROL WIND BLOWN DUST AND EROSION.
5. NO ROADS SHALL BE CONSTRUCTED WITHIN THE SETBACK AREAS EXCEPT AS A FARM ACCESS AND/OR A TEMPORARY ACCESS FOR STRIPPING OF EXTRACTION AREAS, REHABILITATION OR BERMING PURPOSES. A MINOR GRASSED LANEWAY WILL ALSO BE PERMITTED IN THE SETBACK AREA IMMEDIATELY NEXT TO THE NORTH AND NORTHEAST EXTRACTION LIMIT TO ACCESS IRRIGATION AND MONITORING STATIONS.
6. TOPSOIL, SUBSOIL, OVERBURDEN AND AGGREGATE STOCKPILES SHALL BE LOCATED WITHIN THE EXTRACTION AREA AND NOT WITHIN 30 METRES OF THE LICENCE BOUNDARY. THE HEIGHT OF STOCKPILES SHALL NOT EXCEED 20 METRES IN HEIGHT FROM THE QUARRY FLOOR.
7. TOPSOIL, SUBSOIL AND OVERBURDEN WILL BE STRIPPED, STORED AND REPLACED SEPARATELY WHEREVER THERE ARE DISTINGUISHABLE LAYERS AND SUFFICIENT THICKNESS TO ALLOW HANDLING IN THIS MANNER. IF REQUIRED, TOPSOIL, SUBSOIL AND OVERBURDEN MAY BE TRANSPORTED TO THE LICENCE No. 3514 AND USED INTERMITTENTLY FOR REHABILITATION. EXCESS TOPSOIL AND OVERBURDEN ARE TO BE RETAINED AND STABILIZED FOR FUTURE REHABILITATION.
8. QUARRYING OF THE AMABEL FORMATION WILL BE UNDERTAKEN IN UP TO THREE LIFTS TO A MAXIMUM DEPTH OF 391 METRES.
9. FENCING WILL BE COMPLETED PRIOR TO ANY DISTURBANCE ASSOCIATED WITH THE SITE PREPARATION. FENCING WILL BE COMPLETED IN ACCORDANCE WITH THE EXISTING AND PROPOSED FENCE DETAIL AS SHOWN ON THIS PAGE. EXISTING RESIDENCES AND BUILDINGS WILL BE DEMOLISHED PRIOR TO EXTRACTION WITHIN THE PHASE WHERE THEY ARE LOCATED.
10. NO LATER THAN THREE YEARS AFTER THIS LICENCE IS ISSUED, TREE PLANTING AND TRANSPLANTING WILL BE UNDERTAKEN FOR PURPOSES OF: 1) REFORESTATION AS SHOWN ON THE PLANTING LOCATION DETAIL (PAGE 2B OF 4) OF THE TYPICAL PLANTING BLOCK DETAIL (PAGE 3 OF 4) IN FIGURE 2.0, ALTERNATE BLOCK REFORESTATION, OF CHARLTON REPLY WITNESS STATEMENT MARCH 31, 2010 AND AS FURTHER DESCRIBED IN THE REFORESTATION PLANTING PLAN DUNTROON QUARRY EXPANSION CONSOLIDATED REPORT 2010, APPENDIX "D"); AND 2) FOR PURPOSES OF VISUAL MITIGATION AS SHOWN ON THE PLANTING LOCATION DETAIL (PAGE 2B OF 4). THE VISUAL MITIGATION PLANTING LAYOUT DETAIL AND THE VISUAL MITIGATION PLANTING DETAIL (PAGE 2B OF 4). ALL PLANTINGS SHALL BE KEPT HEALTHY AND DEAD MATERIAL SHALL BE REPLACED AS REQUIRED
11. ALL SCRAP AND USED MACHINERY GENERATED THROUGH THE OPERATIONS WITHIN THIS LICENCE WILL BE STORED IN THE PROCESSING AREA AS SHOWN, A MINIMUM OF 30m FROM THE BOUNDARY OF THE SITE AND WILL BE DISPOSED OF ON AN ONGOING BASIS. TIMBER RESOURCES AND STUMPS REMOVED DURING SITE PREPARATION WILL BE SALVAGED AS SAW LOGS/POSTS AND/OR FUEL WOOD, PILED/HID FOR ONSITE USE IN REHABILITATION OR RETAINED FOR USE IN REHABILITATED HABITAT STRUCTURES WHERE POSSIBLE.

12A. AS SOON AS IS PRACTICAL FOLLOWING BERM CONSTRUCTION, BERMS WILL BE SEEDED WITH APPROPRIATE GRASS/LEGUME MIXTURE TO CONTROL WIND BLOWN DUST AND EROSION THAT MAY OCCUR.

12B. PRIOR TO THE COMMENCEMENT OF SHIPPING OF QUARRY PRODUCT FROM LOT 25, CONCESSION XII, THE IMPROVEMENTS TO FORMER COUNTY ROAD 91 AND SIDEROAD 26/27 AS CONTEMPLATED BY THE ROAD SETTLEMENT AGREEMENTS BE UNDERTAKEN TO THE SATISFACTION OF THE TOWNSHIP OF CLEARVIEW.

I ACKNOWLEDGE AND FINALLY CARRY ON MY OPERATION IN ACCORDANCE WITH THIS SITE PLAN UPON WHICH MY LICENCE IS BASED.

LICENSEE / SIGNATURE

26 August 2014
DATE

THIS SITE PLAN WAS BEEN PREPARED UNDER THE DIRECTION OF W. BRENT GUARNON, MA MCIP RPP WHO IS QUALIFIED TO PREPARE AND CERTIFY SITE PLANS PURSUANT TO SECTION 10(4) OF THE AGGREGATE RESOURCES ACT.

W. Brent Guarnon
W. BRENT GUARNON, MA MCIP RPP for PMBC PLANNING

19 August 2014
DATE

BRENT GUARNON IS AUTHORIZED BY THE MINISTRY OF NATURAL RESOURCES PURSUANT TO SECTION 10(4) OF THE AGGREGATE RESOURCES ACT TO PREPARE AND CERTIFY SITE PLANS

Scale 1:3,000

0 25 50 100 150m

NORTH

DRAFT REVISIONS		APPROVED LICENCE SITE PLANS AMENDMENTS
Date	Issue	
2009-11-30	Draft #1	
2010-01-18	Draft #2	
2010-03-31	Draft #3	
2010-04-30	Draft #4	
2010-05-31	Draft #5	
2010-06-30	Draft #6	
2010-07-30	Draft #7	
2010-08-30	Draft #8	

MHBC

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Operational Plan 2B of 4

Legend

- Expansion Licence Boundary
- Limit of Extraction — ALL SETBACKS DRAWN TO SCALE, EXCEPT 0m SETBACKS AND SHOW LABELLED DISTANCES
- South Quarry Licence Boundary — EXISTING DUNTROON QUARRY LICENCE No. 3514
- Walker Aggregates Inc. Lands

PRESCRIBED CONDITIONS (cont'd)

3.6 REFUELING AND MAINTENANCE OF MOBILE ON-SITE EQUIPMENT (NOT OFF SITE HAULAGE TRUCKS) WILL TAKE PLACE ON AN IMPERVIOUS PAD DESIGNED TO CONTROL FUEL SPILLS (IF ANY), ABOVE GROUND FUEL TANKS SHALL BE DOUBLE WALLED IN ACCORDANCE WITH THE TECHNICAL STANDARDS AND SAFETY ACT AND THE ONTARIO LIQUID FUELS HANDLING CODE AND THE FUEL OIL CODE. ALL FUEL STORAGE AND REFUELING OPERATIONS WILL BE CARRIED OUT IN THE AREA SHOWN AS "FUEL" ON THE TYPICAL PLANT SITE DETAIL. MOBILE FUEL DISPENSERS WILL BE USED TO TRANSPORT FUEL TO THE SITE AND TO REFUEL THE PORTABLE PROCESSING PLANT AND MOBILE EQUIPMENT. FUEL STORAGE AND SPILLS CONTINGENCY PLANS AS SET OUT IN WALKER'S EARTH 1ST PROTOCOL AND EMERGENCY RESPONSE HANDBOOK SHALL BE IMPLEMENTED AS REQUIRED.

3.7 IF REQUIRED, AN ENVIRONMENTAL COMPLIANCE APPROVAL WILL BE OBTAINED FOR THE DISCHARGE SYSTEM TO BE USED ON SITE.

3.8 IF REQUIRED, AN ENVIRONMENTAL COMPLIANCE APPROVAL WILL BE OBTAINED FOR PROCESSING EQUIPMENT TO BE USED ON SITE.

3.9 IF REQUIRED, A PERMIT TO TAKE WATER WILL BE OBTAINED FOR UTILIZING GROUND AND/OR SURFACE WATER.

3.10 THE LICENCEE WILL MONITOR ALL BLASTS, GROUND VIBRATIONS AND BLASTS OVERPRESSURE AND WILL OPERATE TO ENSURE COMPLIANCE WITH CURRENT PROVINCIAL GUIDELINES.

3.11 BLASTING WILL NOT OCCUR ON A HOLIDAY OR BETWEEN THE HOURS OF 6:00 PM ON ANY DAY AND 8:00 AM ON THE FOLLOWING DAY.

3.12 ALL BLAST MONITORING REPORTS MUST BE RETAINED BY THE LICENCEE AND MADE AVAILABLE UPON REQUEST BY THE MINISTRY OF NATURAL RESOURCES FOR AUDIT PURPOSES.

CONSULTANTS RECOMMENDATIONS (NOT INCLUDED IN PREVIOUS NOTES OR SITE PLAN)

HYDROGEOLOGY

1. PUMPING OF WATER THAT ACCUMULATES IN THE EXCAVATION AS A RESULT OF DIRECT PRECIPITATION, SURFACE WATER RUNOFF, AS WELL AS SOME GROUNDWATER INFLOW, WILL BE REQUIRED IN ORDER TO MAINTAIN DRY WORKING CONDITIONS ACROSS THE QUARRY FLOOR.
2. WATER THAT ACCUMULATES ON THE QUARRY FLOOR WILL BE CHANNELLED INTO THE MAIN SUMP FOR RE-USE. EXCESS WATER WILL BE REMOVED BY PUMPING. PRIOR TO PUTTING OFF-SITE THE OWNER SHALL OBTAIN AN ENVIRONMENTAL COMPLIANCE APPROVAL PURSUANT TO THE OWRA WHICH SHALL ENSURE APPROPRIATE WATER QUALITY DISCHARGE STANDARDS.
3. WATER ACCUMULATED IN THE AREAS NOTED ABOVE WILL BE USED IN THE FOLLOWING ORDER OF PRIORITY FOR (1) MITIGATION OF OFF SITE IMPACTS IN ACCORDANCE WITH THESE SITE PLANS, OR AS REFINED OR AUGMENTED BY AN ADAPTIVE MANAGEMENT PLAN APPROVED BY THE MINISTRY OF NATURAL RESOURCES (2) DUST CONTROL AND ROAD CLEANING, (3) FOR AGGREGATE PROCESSING OPERATIONS, AND (4) FOR IRRIGATION OF LANDSCAPED AREAS.
4. AGGREGATE PROCESS WATER WILL BE DIRECTED TO A SETTLING POND SYSTEM FOR REMOVAL OF FINES AND CLEAN WATER WILL BE RETURNED TO THE SUMP OR OTHER SOURCE WATER PONDS FOR REUSE.
5. A SUMP, EXTENDING BELOW THE QUARRY FLOOR, IS TO BE LOCATED WITHIN THE PHASE 1 EXTRACTION AREA FOR QUARRY PROCESSING PURPOSES (SEE TYPICAL PLANT SITE DETAIL, PAGE 2A OF 4). ONCE THE QUARRY FLOOR HAS REACHED 500 MASL AND WILL REMAIN IN THAT GENERAL LOCATION THROUGH THE LIFE OF THE QUARRY. THE SUMP IS TO BE SIZED TO PROVIDE SUFFICIENT STORAGE OF WATER PRODUCED IN WASHING OPERATIONS FOR THE LIFE OF THE QUARRY. (I.E. APPROXIMATELY 50 METRES BY 50 METRES AT THE MINIMUM DEPTH OF 5 METRES). THE SUMP WILL BE DEEPENED AND ENLARGED AS NECESSARY TO ACCOMMODATE THE FINAL EXTRACTION (DOWN TO ELEVATION 490 MASL) NEAR THE PHASE 1 AREA. IN ADDITION, A SECOND SUMP MAY BE CREATED AND WILL FOLLOW THE EXTRACTION FACE FOR ONGOING QUARRY DEWATERING.
6. IMPLEMENT GROUNDWATER AND SURFACE WATER MONITORING PROGRAMS AS DESCRIBED BELOW, OR AS REFINED OR AUGMENTED IN AN ADAPTIVE MANAGEMENT PLAN APPROVED BY THE MINISTRY OF NATURAL RESOURCES.

GENERAL

MONITORING SHALL BE UNDERTAKEN BY A QUALIFIED PERSON AS DEFINED BY THE MINISTRY OF THE ENVIRONMENT FOLLOWING CONTEMPORARY INDUSTRY STANDARDS.

MONITORING LOCATIONS EXISTING AS OF JUNE 2010 ARE SHOWN IN FIGURE 2-1 OF THE WATER RESOURCES MONITORING PROGRAM SUMMARY REPORT (2006-2009), MARCH 2010, GENIVAR CONSULTANT LP.

MONITORING IS SUBJECT TO LANDOWNER PERMISSION FOR LOCATIONS ON PRIVATE PROPERTY.

PERFORMANCE INDICATOR TRIGGER MONITORING PROGRAM

(A) SURFACE WATER CHANNEL FLOW AND TEMPERATURE SHALL BE MONITORED AT THE FOLLOWING LOCATIONS:

i) PRETTY RIVER TRIBUTARY SYSTEM: SW3B, SW7, SW7A, SW3B, AND CONTROL STATION
ii) DATTEAUX CREEK TRIBUTARY SYSTEM: SW4, SW4A, SW5, AND CONTROL STATION
iii) BEAVER RIVER TRIBUTARY SYSTEM: SW1, SW2, SW2A, SW2B, SW2C, AND STATION IN ROB ROY PSW UNIT 3 AT THE RAVEST SINK POINT CHANNEL (TO BE INSTALLED PRIOR TO EXTRACTION).

STAGE-DISCHARGE RELATIONSHIPS SHALL BE DEVELOPED FOR EACH LOCATION. CONTROL STATIONS WILL BE IDENTIFIED IN CONSULTATION WITH THE NOTTAWASAGA VALLEY CONSERVATION AUTHORITY.

MONITORING SHALL BE CONDUCTED AS FOLLOWS:

i) HOURLY: WATER LEVEL AND TEMPERATURE WILL BE RECORDED BY A DATALOGGER AT ALL STATIONS. STATIONS SW3A, SW7, SW7A, SW3B AND THE CONTROL STATIONS SHALL BE EQUIPPED WITH LOGGER-TO-WEB REAL TIME DATA TRANSFER CAPABILITY;
ii) MONTHLY: DOWNLOAD DATA FROM THE DATALOGGER AT ALL STATIONS. MEASUREMENT OF FIELD pH, TEMPERATURE, CONDUCTIVITY AND DISSOLVED OXYGEN.
iii) QUARTERLY: MEASUREMENT OF STREAMFLOW AS CHECK ON STAGE-DISCHARGE RELATIONSHIPS.
iv) ANNUALLY: SAMPLE FOR WATER QUALITY PARAMETERS INCLUDING: pH, TEMPERATURE, DISSOLVED OXYGEN, SPECIFIC CONDUCTANCE ALKALINITY, HARDNESS, COLOUR, TOTAL SUSPENDED SOLIDS MAJOR AND MINOR ION CONSTITUENTS, NUTRIENTS, AMMONIA, TOTAL PETROLEUM HYDROCARBONS AND BTEX (BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE).

(B) SURFACE WATER ESCARPMENT SPRINGS SHALL BE MONITORED AT THE FOLLOWING LOCATIONS

i) PRETTY RIVER TRIBUTARY SYSTEM: SW3G, SW3H4, SW77
ii) DATTEAUX CREEK TRIBUTARY SYSTEM: SW3G, SW3 SERIES OF SPRINGS

MONITORING SHALL BE CONDUCTED AS FOLLOWS:

i) BI-WEEKLY DURING JULY AND AUGUST AND MONTHLY DURING ALL OTHER TIMES OF THE YEAR: TEMPERATURE AND, AS A MINIMUM, A VISUAL ASSESSMENT OF FLOW CONDITIONS (PRESENCE/ABSENCE). MANUAL MEASUREMENT OF FLOW WHEN PRACTICAL.
ii) ANNUALLY: SAMPLE FOR WATER QUALITY FOR PARAMETERS INCLUDING: pH, TEMPERATURE, DISSOLVED OXYGEN, SPECIFIC CONDUCTANCE ALKALINITY, HARDNESS, COLOUR, TOTAL SUSPENDED SOLIDS MAJOR AND MINOR ION CONSTITUENTS, NUTRIENTS, AMMONIA, TOTAL PETROLEUM HYDROCARBONS AND BTEX (BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE), BACTERIOLOGICAL CONTENT (E. COL) TOTAL COLIFORM AND HETEROTROPHIC PLATE COUNT) AT SW3G AND SW3SC (SOURCES USED AS RESIDENTIAL/FARM WATER SUPPLIES).

(C) VALLEY WATER LEVELS SHALL BE MONITORED AT THE FOLLOWING LOCATIONS:

i) ROB ROY SWAMP PSW UNIT #2: DRYMPOINT MONITORS DP5 AND DP7;
ii) ROB ROY SWAMP PSW UNIT #6: DRYMPOINT MONITORS DP3, DP4 AND DP8;
iii) ROB ROY SWAMP PSW UNIT #3: THICKET SWAMP DRYMPOINT DRYMPOINT MONITOR
iv) ANSI WETLAND A: DRYMPOINT MONITOR DP6;
v) ANSI WETLAND B: DRYMPOINT MONITORS BRESON DP AND DP9;
vi) REFERENCE WETLANDS SHALL BE IDENTIFIED IN CONSULTATION WITH THE NOTTAWASAGA VALLEY CONSERVATION AUTHORITY.

DP7, DP8, DP4 AND ROB ROY SWAMP UNIT #3 THICKET SWAMP DRYMPOINT MONITOR SHALL BE INSTALLED PRIOR TO EXTRACTION.

MONITORING SHALL BE CONDUCTED AS FOLLOWS:

i) BI-WEEKLY DURING MAY, JUNE AND JULY AND MONTHLY DURING ALL OTHER TIMES OF THE YEAR.
MANUAL GROUNDWATER LEVEL (ANDOE MONITOR) AND PIEZOMETRIC SURFACE WATER LEVEL AND TEMPERATURE (OUTSIDE MONITOR). THIS MONITORING SHALL BE INTEGRATED WITH THE LONG-TERM DATALOGGER MONITORING IN WETLANDS.

CONSULTANTS RECOMMENDATIONS (cont'd):

(D) QUARRY DISCHARGE WATER SHALL BE MONITORED AS FOLLOWS:

SAMPLE QUARRY SUMP(S) QUARTERLY FOR WATER QUALITY PARAMETERS INCLUDING: pH, TEMPERATURE, DISSOLVED OXYGEN, SPECIFIC CONDUCTANCE ALKALINITY, HARDNESS, COLOUR, TOTAL SUSPENDED SOLIDS MAJOR AND MINOR ION CONSTITUENTS, NUTRIENTS, AMMONIA, TOTAL PETROLEUM HYDROCARBONS AND BTEX (BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE), BACTERIOLOGICAL CONTENT (E. COL) TOTAL COLIFORM AND HETEROTROPHIC PLATE COUNT).

QUARRY DISCHARGE WATER QUALITY SHALL BE AS SPECIFIED BY THE MINISTRY OF THE ENVIRONMENT IN THE CERTIFICATE OF APPROVAL FOR DISCHARGE, TREATMENT OF DISCHARGE WATER FOR CONTROL OF BACTERIOLOGICAL CONTENT AND/OR PROVISION OF POINT-OF-USE TREATMENT SYSTEMS FOR RESIDENTIAL WATER SUPPLIES SHALL BE AS REQUIRED BY THE MINISTRY OF ENVIRONMENT.

LONG-TERM TREND GROUNDWATER AND SURFACE WATER MONITORING PROGRAM

(A) CLIMATE DATA SHALL BE COMPILED TO PROVIDE MONTHLY AND ANNUAL WATER BUDGETS AS FOLLOWS:

i) REGIONAL CLIMATE DATA USING SHANTY BAY CLIMATE STATION OR EQUIVALENT.
ii) LOCAL CLIMATE DATA USING THE WEATHER STATION ESTABLISHED AT THE EXISTING QUARRY OFFICE OR EQUIVALENT.

(B) GROUNDWATER SHALL BE MONITORED AT THE FOLLOWING LOCATIONS:

i) DUNTROON EXISTING QUARRY:

a) THE MONITORING PROGRAM FOR THE DUNTROON EXISTING QUARRY SHALL CONTINUE AS REQUIRED UNDER THAT QUARRY'S PERMIT TO TAKE WATER No. 1668-66SNHS, OR AS MAY BE AMENDED BY THE MINISTRY OF THE ENVIRONMENT FROM TIME TO TIME.
b) ON-SITE AT PWM9-1, BH98-4, BH98-7, BH98-12, DP1, DP2, DP3, DP4, AND NEW OFFICE WELL.
c) AT CARPATHIAN LAKE FARMS WELLS CLF1, CLF2, CLF3, CLF4, AND CLF5.
d) AT QUARRY PROPERTY MONITORS 1S2-5, 1S3-C, 1S3-D, 1S4-A, OW3-4, OW3-11, OW5-2 AND OW6-3.
e) AT PRIVATE RESIDENTIAL WATER SUPPLY WELLS ARMSTRONG, DEWITT, FARRIER, HERMANOCK SAMPSON, SKIPPEN, SWINTON, WISMAK, AND YOUNG.
f) FORMER BRIDSON AND MILLAR FARM WELLS (NOW OWNED BY WALKER AGGREGATES).

i) DUNTROON EXPANSION QUARRY:

a) EXISTING MONITORS BH02-1, BH02-2, BH02-3, BH02-4, BH02-5, BH02-6, BH03-7~1, BH03-7~1, BH03-8 AND BH03-9.
b) DRYMPOINT MONITORS BRESON DP, DP5, DP6, TW04-1, TW04-2, TW04-3, BH08-1, BH08-2 AND BH8-3
c) NEW MONITORS TO BE INSTALLED PRIOR TO EXTRACTION AS IDENTIFIED ON OPERATIONAL PLAN PAGE 2A OF 4.
d) NEW DRYMPOINT MONITORS TO BE INSTALLED PRIOR TO EXTRACTION DESIGNATED AS DP7 IN ROB ROY PSW UNIT #2, DP8 IN ROB ROY PSW UNIT #6 AND DP4 IN ANSI WETLAND B AND DUG POND DRYMPOINT IN ROB ROY PSW UNIT #3.
e) FOUR NEW DUAL-PURPOSE MONITOR/RECHARGE INJECTION WELLS TO BE INSTALLED WITHIN TWO (2) YEARS OF THE COMMENCEMENT OF OPERATIONS AS SHOWN ON OPERATIONAL PLAN (PAGE 2A OF 4).
f) NEW GROUNDWATER MONITORING NEST, TO PROVIDE SOIL WATER TABLE, SHALLOW BEDROCK AND DEEP BEDROCK MONITORS TO BE INSTALLED WITHIN TWO (2) YEARS OF COMMENCEMENT OF OPERATIONS AT A LOCATION ON WALKER AGGREGATES PROPERTY WEST OF ROB ROY PSW UNIT #2 AND EAST OF GREY ROAD 31 AS SHOWN ON OPERATIONAL PLAN 2A OF 4.
g) EXISTING GROUNDWATER MONITORS BH02-5 AND BH03-7 TO BE UPGRADED WITHIN TWO (2) YEARS OF COMMENCEMENT OF OPERATIONS TO INCLUDE SOIL WATER TABLE, SHALLOW BEDROCK AND DEEP BEDROCK MONITOR.

MONITORING SHALL BE CONDUCTED AS FOLLOWS:

i) HOURLY: GROUNDWATER LEVEL RECORDED BY AN AUTOMATED SAMPLING DEVICE AT NEW MONITORS AS SHOWN ON OPERATIONAL PLAN PAGE 2A OF 4 AND AT EXISTING MONITORS BH02-1, BH02-4, BH03-7~1, BH03-8, BH08-1, AND BRESON WELL (VALKER AGGREGATES INC PROPERTY);
ii) TWICE PER DAY: GROUNDWATER LEVEL RECORDED BY A DATALOGGER AT RESIDENTIAL WELLS DEWITSKY AND FARRIER, AND WETLAND DRYMPOINT MONITORS DP2, DP5, DP6 AND BRESON DP, WETLAND DRYMPOINT MONITOR IN ROB ROY #3 DUG POND, THE FOUR NEW DUAL-PURPOSE MONITOR/RECHARGE INJECTION WELLS, AND THE GROUNDWATER MONITORING NEST ON WALKER AGGREGATES PROPERTY WEST OF ROB ROY PSW UNIT #2 AND EAST OF GREY ROAD 31.
iii) MONTHLY: DOWNLOAD ALL DATALOGGERS AND MANUAL WATER LEVEL READINGS AT ALL GROUNDWATER MONITORS;
iv) QUARTERLY: WATER QUALITY AT QUARRY SUMP IN EXISTING QUARRY AND IN PHASE 1 WHEN DEVELOPED FOR WATER QUALITY PARAMETERS INCLUDING pH, TEMPERATURE, DISSOLVED OXYGEN, SPECIFIC CONDUCTANCE ALKALINITY, HARDNESS, COLOUR, TOTAL SUSPENDED SOLIDS MAJOR AND MINOR ION CONSTITUENTS, NUTRIENTS, AMMONIA, TOTAL PETROLEUM HYDROCARBONS AND BTEX (BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE), BACTERIOLOGICAL CONTENT (E. COL) TOTAL COLIFORM AND HETEROTROPHIC PLATE COUNT);
v) ANNUALLY: WATER QUALITY AT PRIVATE RESIDENTIAL/ FARM WATER SUPPLIES AT DEWITSKY WELL FARRIER WELL, SW3G (W. ERAMOSA SPRING SOURCE) AND SW3SC (NYE ERAMOSA SPRING SOURCE). WATER QUALITY PARAMETERS SHALL INCLUDE pH, TEMPERATURE, DISSOLVED OXYGEN, SPECIFIC CONDUCTANCE ALKALINITY, HARDNESS, COLOUR, TOTAL SUSPENDED SOLIDS MAJOR AND MINOR ION CONSTITUENTS, NUTRIENTS, AMMONIA, TOTAL PETROLEUM HYDROCARBONS AND BTEX (BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE), BACTERIOLOGICAL CONTENT (E. COL) TOTAL COLIFORM AND HETEROTROPHIC PLATE COUNT).

WATER QUALITY SHALL BE COMPARED TO ONTARIO DRINKING WATER STANDARDS FOR GROUNDWATER AND PROVINCIAL WATER QUALITY OBJECTIVES FOR SURFACE WATER, AS APPROPRIATE.

(C) SURFACE WATER SHALL BE MONITORED AT THE FOLLOWING LOCATIONS:

i) SURFACE WATER MONITORING STATIONS IDENTIFIED ABOVE IN THE PERFORMANCE INDICATOR TRIGGER PROGRAM SHALL BE INCORPORATED INTO THE LONG-TERM TREND SURFACE WATER MONITORING PROGRAM.
ii) BEAVER RIVER TRIBUTARY BASIN: BH03-7 SG1 AND BH03-7 SG2 IN ROB ROY PSW UNIT #2, DUNTROON EXISTING QUARRY FLOOR SUMP (SW4), AND PIT 1 DUG POND OUTLET CHANNEL IN ROB ROY SWAMP PSW UNIT #3 (TO BE INSTALLED PRIOR TO EXTRACTION);
iii) BATTEAUX CREEK BASIN: SW7, SW8, SW10, SW11E, SW13, SW14, SW21, SW21A, SW21B, SW22, SW22A, SW22C, AND SW22D; AND
iv) PRETTY RIVER BASIN: SW3D, AND SW3SC.

MONITORING SHALL BE CONDUCTED AS FOLLOWS:

i) HOURLY: WATER LEVEL (STAGE) AND TEMPERATURE RECORDED BY AN AUTOMATED SAMPLING DEVICE. STATIONS SW3D, SW3SE AND SW21C (SUBJECT TO LANDOWNER PERMISSION);
ii) MONTHLY: TEMPERATURE AND MANUAL MEASUREMENT OF FLOW WHEN PRACTICAL OTHERWISE VISUAL ESTIMATE (PRESENCE/ABSENCE) AT SW7, SW8, SW13, SW14, SW21, SW21A, SW22B, SW22, SW22A, SW22C, AND SW22D. WATER LEVEL AND TEMPERATURE AT BH03-7~SG1 AND BH03-7~SG2.
iii) WEEKLY: TEMPERATURES AND MANUAL MEASUREMENTS OF FLOW AT DUG POND OUTLET CHANNEL IN ROB ROY SWAMP PSW UNIT # 3 (TO BE INSTALLED PRIOR TO EXTRACTION). FREQUENCY SHALL BE WEEKLY UNTIL SUCH TIME THAT A STAGE-DISCHARGE RELATIONSHIP IS ESTABLISHED. MANUAL FLOW AND TEMPERATURE MONITORING SHALL BE MONTHLY THEREAFTER.

7. IMPLEMENT MITIGATION MEASURES TO PROTECT OFF SITE FEATURES IN ACCORDANCE WITH THESE SITE PLANS OR AS REFINED OR AUGMENTED BY AN ADAPTIVE MANAGEMENT PLAN APPROVED BY THE MINISTRY OF NATURAL RESOURCES, INCLUDING:

(A) DISCHARGE OF EXCESS WATER FROM THE QUARRY INTO THE SURFACE WATER SYSTEM AT THE FOLLOWING LOCATIONS AS GENERALLY SHOWN ON PAGE 2A OF 4 AS REQUIRED TO MAINTAIN SEASONAL CONDITIONS:

i) THE SURFACE WATER POND IN THE SOUTHWEST CORNER OF THE EXPANSION AREA. A SECONDARY SUMP OR STORAGE POND MAY BE DEVELOPED ON THE QUARRY FLOOR IN THE SOUTHWEST CORNER TO FACILITATE DISCHARGE AT THIS LOCATION.
ii) THE WETLAND AREA NORTH OF THE EXTRACTION AREA IN PHASE 3A AND NORTHEAST OF THE EXTRACTION AREA IN PHASE 2A;
iii) THE WETLAND AREA ASSOCIATED SURFACE WATER SYSTEM TO THE EAST OF THE EXTRACTION AREA IN PHASE 2B.

THE QUARRY SUMP(S) CONTAINING DISCHARGE LOCATIONS ARE SHOWN ON PAGE 2A OF 4 AND ARE CONSIDERED TO BE WITHIN THE LICENCE. NO EXTRACTION IS PERMITTED BEYOND THE LIMITS OF THE LICENCE BOUNDARY ILLUSTRATED ON PAGE 2A OF 4.

(A)# REQUIRED. GROUNDWATER RECHARGE WELLS SHALL BE INCORPORATED IN THE SETBACK ALONG THE WESTERN PERIMETER, AND IN THE BUFFER LANDS ADJACENT TO THE NORTHERN AND EASTERN LIMITS OF EXTRACTION. THE RECHARGE WELLS WILL MAINTAIN SEASONAL FLOWS AT THE ESCARPMENT SPRINGS AND WATER LEVEL/FLOW CONDITIONS IN THE WETLANDS. THE ACTUAL NUMBER AND LOCATION OF THE RECHARGE WELLS AND THE RECHARGE PUMPING RATE, WILL BE DETERMINED AT THE TIME OF INSTALLATION AND WILL DEPEND ON LOCAL CONDITIONS, BASED ON ONGOING MONITORING.

GROUNDWATER RECHARGE WELLS ARE ALSO CONSIDERED TO BE WITHIN THE LICENCE BEYOND THE LIMITS SHOWN ON THIS PLAN. NO EXTRACTION SHALL BE PERMITTED WITHIN THE LICENCE AREA BEYOND THE LIMITS SHOWN ON THIS PLAN.

(B) THE NEED FOR AND TIMING OF IMPLEMENTATION OF ONE OR MORE OF THE ABOVE NOTED MITIGATION MEASURES WILL BE DETERMINED BASED ON PERFORMANCE INDICATOR TRIGGERS AS SUCH AREA SPECIFIC EQUIPMENT INVENTORIES NOTES 5 AND 6 BELOW.

EITHER TRIGGER VALUES WILL BE SET BASED ON HISTORIC MONITORING INFORMATION AS IDENTIFIED IN THE 2006-2009 WATER RESOURCES MONITORING REPORT AND SHALL BE USED DURING THE FIRST FIVE (5) YEARS OF OPERATION

PRIOR TO EXTRACTION, LOCATION-SPECIFIC GREEN, YELLOW AND RED INTERIM TRIGGERS SHALL BE SET USING THE FOLLOWING METHODOLOGY, OR AS REFINED OR AUGMENTED IN AN ADAPTIVE MANAGEMENT PLAN APPROVED BY THE MINISTRY OF NATURAL RESOURCES:

i) RED ZONE TRIGGER:

FLOW: LOWEST MONTHLY VALUE RECORDED DURING THE PERIOD OF RECORD. TRIGGER PERIOD IS YEAR ROUND EXCEPT WHEN FROZEN.

TEMPERATURE: HIGHEST MONTHLY VALUE RECORDED DURING THE PERIOD OF RECORD. TRIGGER PERIOD IS JUNE THROUGH SEPTEMBER.

WETLAND VEGETATION TOO DRY: MORE THAN ONE MONTH WHERE THE WATER LEVEL IS BELOW A DRY YEAR HYDROGRAPH FOR THAT MONTH OR ANY TIME THAT THE WATER LEVEL IS BELOW THE LOWEST HISTORIC WATER LEVEL RECORDED FOR THAT MONTH PLUS 10%. TRIGGER PERIOD IS MAY TO FALL (GROWING SEASON).

WETLAND VEGETATION TOO WET: MORE THAN ONE MONTH WHERE THE WATER LEVEL IS ABOVE A WET YEAR HYDROGRAPH FOR THAT MONTH OR ANY TIME THAT THE WATER LEVEL RISES ABOVE THE HIGHEST HISTORIC WATER LEVEL RECORDED FOR THAT MONTH PLUS 10%. TRIGGER PERIOD IS SPRING TO FALL (GROWING SEASON).

AMPHIBIAN HABITAT: BREEDING PONDS HAVE NO STANDING WATER DURING THE SHORT BREEDING PERIOD (MARCH TO 2ND WEEK OF JULY).

ii) YELLOW ZONE TRIGGER:

FLOW: 10% ABOVE RED ZONE TRIGGER OR THIRD LOWEST MONTHLY FLOW VALUE RECORDED DURING THE PERIOD OF RECORD, WHICHEVER IS THE HIGHER VALUE. TRIGGER PERIOD IS SAME AS FOR RED ZONE.

TEMPERATURE: 10% BELOW THE RED ZONE TRIGGER. TRIGGER PERIOD IS SAME AS FOR RED ZONE.

WETLAND VEGETATION TOO DRY: WATER LEVELS ARE 15 TO 20% HIGHER THAN THE WATER LEVELS IN THE RED ZONE. TRIGGER PERIOD IS SAME AS FOR RED ZONE.

WETLAND VEGETATION TOO WET: WATER LEVELS ARE 15 TO 20% LOWER THAN THE WATER LEVELS IN THE RED ZONE. TRIGGER PERIOD IS SAME AS FOR RED ZONE.

AMPHIBIAN HABITAT: DEPTH OF CRITICAL PONDS IS BELOW BOX OF HISTORICAL MINIMUM WATER LEVEL DEPTH DURING EXTENDED BREEDING PERIOD (MARCH TO 2ND WEEK OF AUGUST).

iii) GREEN ZONE:

FLOW: ANY VALUE ABOVE YELLOW ZONE TRIGGER

TEMPERATURE: ANY VALUE BELOW YELLOW ZONE TRIGGER

WETLAND VEGETATION: ANY VALUE NOT IN THE RED ZONE OR YELLOW ZONE.

AMPHIBIAN HABITAT: ANY VALUE NOT IN THE RED ZONE OR YELLOW ZONE.

AFTER FIVE (5) YEARS OF OPERATION LONG-TERM TRIGGER VALUES WILL BE SET BY REFERENCE TO WATER FLOW, WATER LEVEL, AND WATER TEMPERATURE CORRELATION RELATIONSHIPS TO BE ESTABLISHED BETWEEN CONTROL LOCATIONS THAT WILL NOT BE IMPACTED BY QUARRY OPERATIONS AND MONITORING STATIONS USING A METHODOLOGY APPROVED BY THE MINISTRY OF NATURAL RESOURCES OR AS REFINED OR AUGMENTED IN AN ADAPTIVE MANAGEMENT PLAN APPROVED BY THE MINISTRY OF NATURAL RESOURCES.

(D) THE BUFFER LANDS LOCATED TO THE NORTH AND EAST OF THE EXTRACTION AREA DESIGNATED ESCARPMENT RURAL, ESCARPMENT PROTECTION OR ESCARPMENT NATURAL MAY BE USED FOR INSTALLATION OF ACCESS TO FACILITIES AND SERVICING FOR, AND RELATED TO, THE WATER MANAGEMENT AND MONITORING SYSTEM. ANY SUCH WORKS SHALL BE SUBJECT TO THE NEC DEVELOPMENT PERMIT AND ANY DISTURBANCE OF BUFFER LANDS SHALL BE PERMITTED EXTRACTION SHALL NOT BE PERMITTED ON THE BUFFER LANDS.

(E) PRIOR TO THE CONSTRUCTION OF ANY MITIGATION MEASURE OR CONTINGENCY MITIGATION MEASURE OUTSIDE THE LIMITS OF EXTRACTION, ITS DESIGN SHALL BE APPROVED BY THE MNR, AND INCLUDED IN THE APP UNLESS THE DESIGN OF THE MEASURE HAS BEEN APPROVED PURSUANT TO A PERMIT ISSUED UNDER ANOTHER STATUTE SUCH AS THE ONTARIO WATER RESOURCES ACT (E.G. PERMIT TO TAKE WATER, ENVIRONMENTAL COMPLIANCE APPROVAL).

8. PRIOR TO EXTRACTION OF PHASE 1, THE ADAPTIVE MANAGEMENT PLAN (APP) WILL BE FINALIZED (INCLUDING A PECHANSKY FOR FINANCIAL SECURITY TO GUARANTEE THE POST EXTRACTION LAKE FILLING MITIGATION AND MONITORING) IN CONSULTATION WITH REVIEW AGENCIES AND BE APPROVED BY THE MINISTRY OF NATURAL RESOURCES. THE SITE SHALL BE OPERATED IN COMPLIANCE WITH THE APP, THE ADAPTIVE MANAGEMENT PLAN SHALL REMAIN OPERATIONAL UNTIL THE LAKE HAS FILLED AND A LICENCE IS ISSUED PURSUANT TO THE AGGREGATE RESOURCES ACT. THE APP PLAN SHALL INCORPORATE THE REQUIREMENTS OF GENERAL NOTES 5 AND 25, HYDROGEOLOGIC MONITORING PROGRAM NOTE 10, NATURAL ENVIRONMENT NOTES 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, REHABILITATION PLAN NOTES 4, 5, AND 6, AND THE FOLLOWING:

(A) EVERY 5 YEARS, OR AS REQUIRED, THE ADAPTIVE MANAGEMENT PLAN SHALL BE REVIEWED AND UPDATED IN CONSULTATION WITH REVIEW AGENCIES, INCLUDING THE TOWNSHIP, IN ORDER THAT THE UPDATED ADAPTIVE MANAGEMENT PLAN REQUIREMENTS WILL BE BASED ON CURRENT DATA AND OPERATING EXPERIENCE. ANY FURTHER REFINEMENT OR AUGMENTATION OF MATTERS ARISING FROM FINAL APPROVAL OF THE ADAPTIVE MANAGEMENT PLAN BY THE MINISTRY OF NATURAL RESOURCES SHALL NOT REQUIRE AN AMENDMENT TO THIS SITE PLAN.

ANY FURTHER REFINEMENT OR AUGMENTATION OF MATTERS ARISING FROM FINAL APPROVAL OF THE ADAPTIVE MANAGEMENT PLAN BY THE MINISTRY OF NATURAL RESOURCES SHALL NOT REQUIRE AN AMENDMENT TO THIS SITE PLAN.

9. IN THE EVENT EXTRACTION TAKES PLACE ABOVE EXTRACTION IN THE MAQ QUARRY TO THE WEST, IT MAY BE NECESSARY TO INSTALL GROUNDWATER RECHARGE WELLS ALONG THE WEST SIDE OF PHASE 3A IF IT IS DETERMINED THAT IT IS REQUIRED AS A RESULT OF ONGOING MONITORING. FURTHER, IN THE EVENT THAT IT IS NECESSARY TO RESTORE GROUNDWATER LEVELS IN THE QUARRY, IT MAY BE NECESSARY TO CONSTRUCT A HYDRAULIC BARRIER SUCH AS A POND AGAINST THE WEST WALL OF PHASE 3A, AND/OR IN COMBINATION WITH GROUTING OF THE WEST WALL OF PHASE 3A.

10. IN THE EVENT A POTENTIALLY PROBLEMATIC WATER BEARING KARST FEATURE IS ENCOUNTERED DURING QUARRY OPERATIONS, THE OPERATOR SHALL DEVELOP A POND OR OTHER HYDRAULIC BARRIER AGAINST THE WALL, GROUT OFF THE FEATURE, BUILD A SOIL BOTTOMED AGAINST THE WALL OR ANY COMBINATION OF ONE OR MORE OF THESE METHODS.

NATURAL ENVIRONMENT

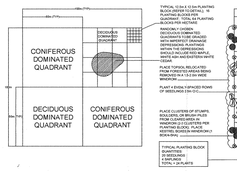
1. PRIOR TO CESSATION OF PUMPING FROM THE SUMP IN PHASE 3A TO THE SURFACE WATER FEATURE, A BEAVER RIVER FISH HABITAT ENHANCEMENT PROGRAM WILL BE DEVELOPED AND IMPLEMENTED.
2. NO LATER THAN THREE YEARS AFTER THIS LICENCE IS ISSUED, UNDERTAKE PROPOSED REFORESTATION AT LOCATIONS SHOWN ON THE PLANTING LOCATION DETAIL (THIS PAGE), IN ACCORDANCE WITH THE TYPICAL PLANTING BLOCK DETAIL (PAGE 3 OF 4), AND FIGURE 2.0, ALTERNATIVE BLOCK REFORESTATION OF CHARLTON PEAT'S WITNESS STATEMENT MARCH 31, 2010 AND AS FURTHER DESCRIBED IN THE REFORESTATION PLANTING PLAN DUNTROON QUARRY EXPANSION (CONSOLIDATED REPORT: STANTEC 2010, APPENDIX "D"). THE ECOLOGICALLY-BASED REFORESTATION PROGRAM SHALL INCORPORATE THE MOST EFFECTIVE METHODS OF QUICKLY RE-ESTABLISHING FUNCTIONAL FOREST ATTRIBUTES SUCH AS CANOPY COVER AND HORIZONTAL AND VERTICAL DIVERSITY AS FURTHER DESCRIBED IN THE REFORESTATION PLANTING PLAN DUNTROON QUARRY EXPANSION (CONSOLIDATED REPORT: STANTEC 2010, APPENDIX "D").
3. PRIOR TO EXTRACTION OF PHASE 1, THE ADAPTIVE MANAGEMENT PLAN (APP) WILL BE FINALIZED IN CONSULTATION WITH REVIEW AGENCIES AND FINAL APPROVAL BY THE MINISTRY OF NATURAL RESOURCES, AND THE SITE SHALL BE OPERATED IN COMPLIANCE WITH THE APP. THE ADAPTIVE MANAGEMENT PLAN WILL INCLUDE SPECIFICS ON WATER QUALITY, QUANTITY, TEMPERATURE AND MONITORING TO ENSURE THE ECOLOGICAL FUNCTIONS OF WETLANDS, SPRINGS AND STREAMS ARE MAINTAINED. THE APP SHALL ALSO INCLUDE APPROPRIATE MONITORING AND MITIGATION PROTOCOLS TO ENSURE THE VIABILITY AND SUCCESS OF COLONY 1 OF THE AMERICAN HART'S TONGUE FERN TO THE SATISFACTION OF MNR.
4. NO EXTRACTION OR SITE PREPARATION WILL TAKE PLACE UNTIL THE MINISTR

Rehabilitation 3 of 4 Plan

Typical Planting Block Detail

SCALE N.T.S.

TYPICAL ONE HECTARE PLANTING UNIT
10000 sq.m.
Not to Scale



TYPICAL 10.0m X 10.0m PLANTING BLOCK (WIDTH) AT 1666 PLANTS/HA. 416 PLANTS PER QUADRANT. TOTAL 64 PLANTING BLOCKS PER HECTARE

DECIDUOUS DOMINATED QUADRANTS TO BE GRADED TO CREATE DEPRESSIONAL PLANTING AREAS. DECIDUOUS DOMINATED SHRUBS INCLUDED RED MAPLE, SILVER MAPLE AND WESTERN WHITE CEDAR.

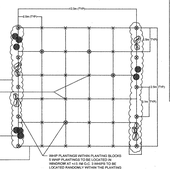
PLACE TOPSOIL, RELOCATED FROM PLANTING AREAS WHERE REMOVED IN A 1.5m DIA WIDE WINDROW.

PLANT 4 EVEN-TOPPED ROWS OF SEEDLINGS 2.5m O.C.

PLACE CLUSTERS OF STUMPS, ROCK LEVEL OR BRUSH PILES WHERE REMOVED OR RANDOM (2-3 CLUSTERS PER HECTARE) AS PER NOTES ABOVE/BELOW/ON ROW SPAN

TYPICAL PLANTING BLOCK QUANTITIES
416 DECIDUOUS
0 SHRUBS
TOTAL = 24 PLANTS

TYPICAL PLANTING BLOCK LAYOUT
156.25 sq.m.
Scale 1:100



SWAP PLANTINGS WITHIN PLANTING BLOCKS 5 SWAP PLANTINGS TO BE LOCATED 2m HEADROOM W/ 1x3 m MIN O.C. 3 SWAPS TO BE LOCATED WITHIN 5m OF EDGE OF PLANTING BLOCK. DECIDUOUS SWAPS TO BE CON-SPECIFIC WITH ADJACENT COMPONENTS AND TO BE IN BLOCK IN SIZE.

PLANTING LIST

CONIFEROUS DOMINATED PLANTING BLOCKS
Plant the following species ensuring a mix of 10% deciduous and 90% coniferous

Deciduous (to make up planting block):
10 % of 24 plants may be:
Sugar Maple
Large-tooth Aspen
Largetooth Aspen
Basswood

Coniferous (3 plants per planting block):
Combination and distribution of:
White Pine
White Spruce

Shrubs(This is 0 plants per planting block):
Choose:
1 - White Pine
1 - Eastern White Spruce
1 - Sugar Maple

DECIDUOUS DOMINATED PLANTING BLOCKS
Plant the following species ensuring a mix of 10% coniferous and 90% deciduous. Recommended species distribution listed below.

Deciduous (10 plants per planting block):
10 % of 24 plants may be:
Red Oak
White Ash
Largetooth Aspen
Basswood
Basswood

90% of 10 plants may be:
Red Oak
Sugar Maple
Beech
Black Cherry
Ironwood
Black Walnut
White Ash
Basswood

Coniferous (1 plants per planting block):
Combination and distribution of:
White Pine
White Spruce
Eastern White Cedar
White Spruce

Shrubs(This is 0 plants per planting block):
Choose:
1 - Sugar Maple
1 - Choke Cherry or Black Cherry
1 - White Pine

NOTES

ASSUMPTIONS AND OBJECTIVES FOR THE REFORESTATION PLAN

1. All proposed new plantings will consist of native trees identified in the plant list, which provide similar species composition to adjacent and nearby natural areas.
2. Massing of new plant communities are located in such a manner to create continuity between, and enhancement to the existing forested natural areas on the Walker owned land as well as with adjacent lands. The goal is to achieve long-term improvements to the ecological function of the local area landscape and wildlife corridors.
3. All existing residential buildings located within the proposed reforestation areas will be removed prior to planting.
4. All lands identified for reforestation are owned by Walker Aggregates Inc.

SEEDING

1. Seeding will be required over the entire 53.2 hectares of reforested lands regardless if the land is planted with trees or left for natural regeneration. Seed mixes have been chosen for their ability to grow in harsh conditions, to provide cover for the new plantings, provide habitat for wildlife and control the growth of invasive plant species.
2. Where a former agricultural field is proposed for reforestation, one year prior to tree planting, plough then disk entire reforestation area and sow with a seed mix identified in the seeding list. Once it is time to plant the area, plough a single furrow for the plantings and sow planted seed only expressed soil.
3. In former old fields proposed for reforestation, plough single furrow and seed exposed soil at time of planting only.
4. Sow during calm weather (winds less than 10km/h) on bare soil (the seed area has been plowed).
5. Seed mix application to be done in a consistent and thorough fashion covering entire site.
6. Reseeding may be required in areas where germination has failed or areas have been eroded.

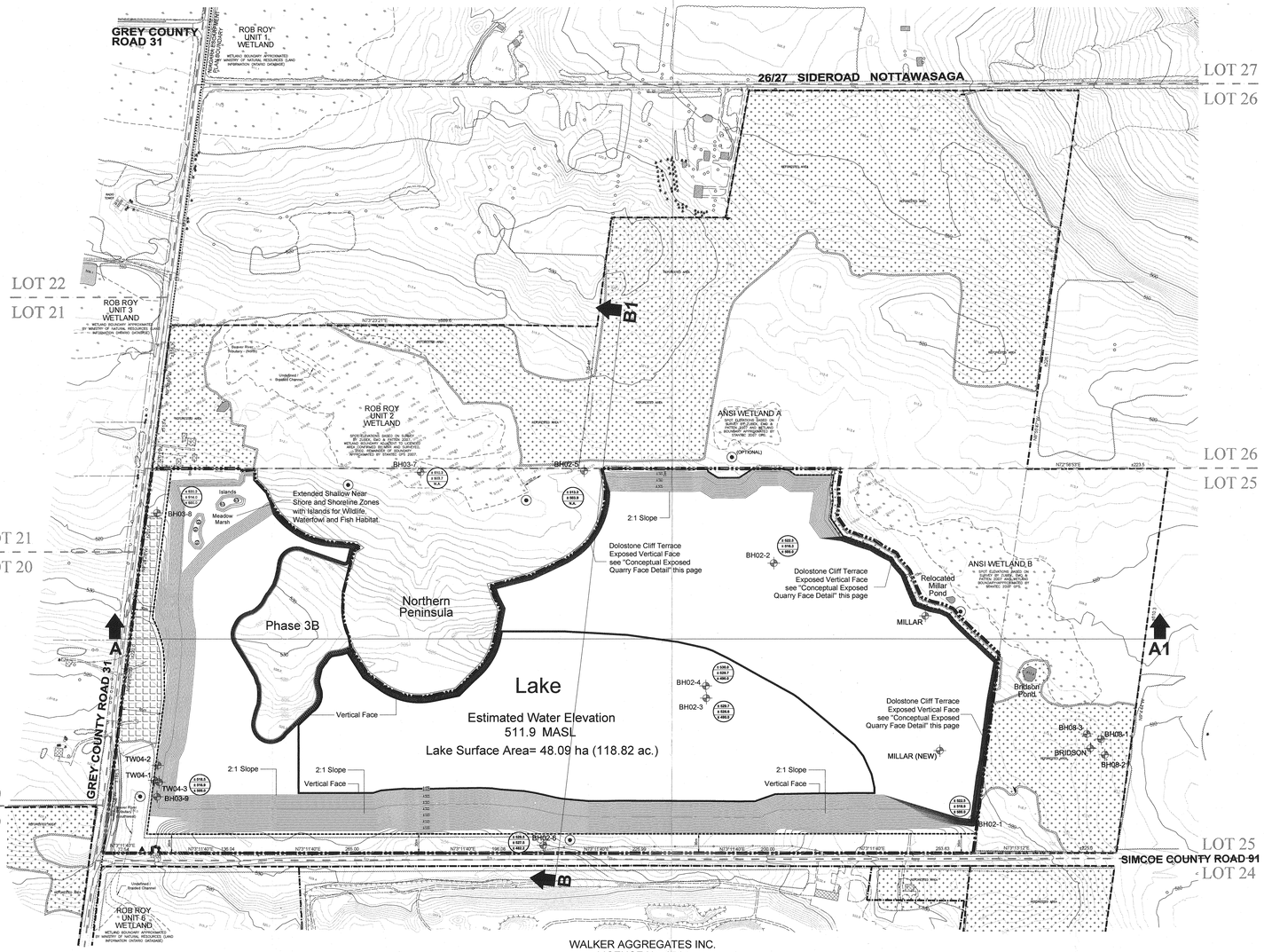
PLANTING

1. Machine or hand plant tree seedlings and simultaneously apply Simazine in a 1.0m band straddling the center of all planting rows. Alternatively, plant tree seedlings in a single furrow of soil turned over by plough on center of planting row.
2. Collect topsoil from cleared forest area. May wood chips from cleared trees and brush into soil. In every fifth planting row, deposit a 1.5-2.0m band of topsoil on the surface prior to planting at a depth of 6-10" (150-200mm). Hand plant tree saplings at +/-3.1m on center in raised topsoil windrows.
3. Collect tree stumps, boulders, and brush during forest clearing. Place in clusters throughout the windrows. Provide 2-3 clusters per planting block.
4. Install tree guards on all seedlings and saplings.
5. For the following three years, check all tree guards and replace as required. Provide 1 application of Simazine each spring or fall. Mow area between rows once in September.
6. All plant materials are to be thoroughly watered immediately after installation. Water once per week for the first four weeks and then sufficiently the reafter to maintain optimum growing conditions.
7. Plants are not to be installed or transplanted during extreme heat, drought or other undesirable conditions.

CONCESSION A

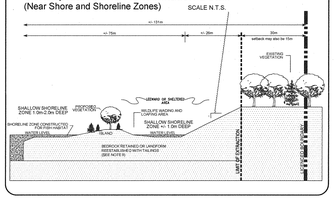
CONCESSION XII

CONCESSION XI

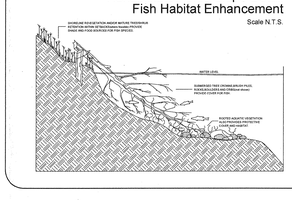


WALKER AGGREGATES INC.
LICENCE No. 3514

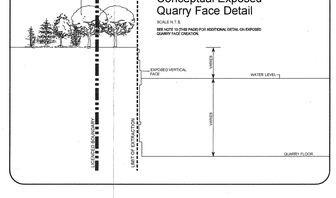
Conceptual Island Rehabilitation Detail
(Near Shore and Shoreline Zones)
SCALE N.T.S.

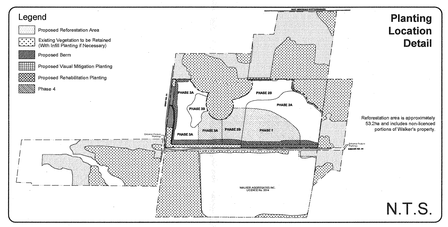


Rehabilitated Side Slope Detail
Fish Habitat Enhancement
Scale N.T.S.



Conceptual Exposed Quarry Face Detail
SCALE N.T.S.
SEE NOTE 10 FOR PHASE PLOT FOR ADDITIONAL DETAIL ON EXPOSED QUARRY FACE OPERATION





Final Approved Plan
Date: Sept 4, 2014
Signature:
Ministry of Natural Resources
Midhurst District Office

Legend

- Expansion Licence Boundary
- South Quarry Licence Boundary (EXISTING DUNTROON QUARRY LICENCE No. 3514)
- Limit of Extraction (ALL SETBACKS SHOWN TO SCALE. EXCEPT 0m SETBACKS AND OTHERS LABELLED DISTANCES)
- Walker Aggregates Inc. Lands
- Lots and Concessions
- Existing Elevation and Contour (MASL)
- Existing Spot Elevation (MASL)
- Proposed Elevation and Contour (MASL)
- Building/Structure (LOCATION AND USE FOR BUILDINGS ON SITE AND WITHIN 120m ARE SHOWN ON THIS PLAN)
- Proposed Elevations (MASL) EXISTING ELEVATION / TOP OF ROCK / MAXIMUM DEPTH OF EXTRACTION
- Existing Fence (POST AND WIRE / WIRE FENCE UNLESS OTHERWISE NOTED)
- Existing Vegetation
- Existing Wetland Boundary (Surveyed & Estimated)
- Reforested Area (SEE TYPICAL PLANTING BLOCK DETAIL (THIS PAGE))
- Pond
- BH02-6 Existing Well Monitor Location (INFORMATION FROM GEOLOGICAL REPORT AND LEVEL 2 HYDROGEOLOGICAL ASSESSMENT BY JAQUELINE HAKL SEPT. 2009)
- Niagara Escarpment Plan Boundary
- Quarry Dewatering Discharge Locations (WITHIN LICENCE BUT NO EXTRACTION PERMITTED) (LOCATIONS SHOWN ARE APPROXIMATE)
- Existing Driveway
- Excavation Face (SEE NOTES ON PAGE 2A-2F FOR DETAILED DESCRIPTION)
- Proposed Visual Mitigation Planting (SEE VISUAL MITIGATION PLANTING LAYOUT DETAIL AND VISUAL MITIGATION PLANTING DETAIL (PAGE 2B OF 4))
- Existing Stream
- Cross Sections (FOR DETAILS SEE PAGE 4 OF 4)

GENERAL NOTES:

1. THE QUARRY WILL BE PROGRESSIVELY REHABILITATED. FINAL QUARRY SLOPES WILL BE ESTABLISHED AS THE LIMITS OF EXTRACTION IN THE AREA ADJACENT TO THEM ARE REACHED. GENERALLY, THE FINAL FLOOR ELEVATION WILL BE 510.0 MASL (BATTER OF PHASE 4) AND 8.4m MASL IN PHASE 4, BUT WILL VARY SLIGHTLY ACROSS THE SITE.
2. REHABILITATED SIDE SLOPES WILL BE ESTABLISHED USING A CUT-FILL METHOD. THE MAJORITY OF SIDE SLOPES WILL HAVE A SLOPE OF AT LEAST 2 HORIZONTAL METRES FOR EVERY VERTICAL METRE. THE SLOPE WILL BE MORE GRADUAL AT THE WATER'S EDGE. WHERE NEAR SHORE ZONES AND ISLANDS ARE TO BE ESTABLISHED (SEE CONCEPTUAL ISLAND REHABILITATION DETAIL, THIS PAGE), SHORELINE AREAS WILL BE GRADED TO PROVIDE IRREGULARLY SHAPED SHORE AREAS TO ENHANCE HABITAT DIVERSITY AND COVER.
3. CLEAN INERT FILL (E.G. TOPSOIL, OVERBURDEN) MAY BE IMPORTED TO FACILITATE QUARRY REHABILITATION. ONLY SUFFICIENT MATERIAL TO CREATE A 2:1 (HORIZONTAL/VERTICAL) GRADE MAY BE IMPORTED. ANY INERT FILL BROUGHT ONTO THE SITE IS REQUIRED TO BE PRE-SCREENED AND TESTED IN ACCORDANCE WITH WALKER AGGREGATES INC. EARTH 1ST ENVIRONMENTAL MANUAL "INERT FILL ACCEPTANCE PROCEDURE", AT THE REQUEST OF MNR, THE LICENCEE WILL CONDUCT RANDOM SAMPLING OF THE IMPORTED MATERIAL TO ENSURE THAT IT MEETS THE PRIORITY OF THE ENVIRONMENT'S (POE) CRITERIA UNDER TABLE 1 OF "RECORD OF SITE CONDITION (ROSC) GROUND WATER AND SEDIMENT STANDARDS FOR USE UNDER PART XV.1 OF THE ENVIRONMENTAL PROTECTION ACT". SAMPLING RESULTS WILL BE APPROVED TO MNR UPON REQUEST.

   NOTWITHSTANDING THIS CONDITION, WHERE THE IMPORTED MATERIAL IS NOT BEING PLACED WITHIN 1.5 METRES OF THE SURFACE, THE CRITERIA UNDER TABLE 3 FOR SOIL/GROUNDWATER PH/EC AND ELECTRICAL CONDUCTIVITY DO NOT HAVE TO BE MET.
4. AS PART OF PROGRESSIVE REHABILITATION, THE 2:1 SIDESLOPES ABOVE AN ELEVATION OF 513 MASL SURROUNDING THE PROPOSED LAKE WILL BE SEEDED AND PLANTED WITH NATIVE TREE SPECIES IN A DENSITY AND PLACEMENT SIMILAR TO THE TYPICAL PLANTING BLOCKS LAYOUT SPECIFIED FOR THE REFORESTATION AREAS (SEE TYPICAL PLANTING BLOCK DETAIL, THIS PAGE). FOR OPERATIONAL PURPOSES, SLOPES SHALL NOT INCLUDE THE NATURAL REGENERATION SLOPES SHOWN ON PHASE PLOT FIGURE 3/3A. ALSO, THE BLOCK REHABILITATION, AS SHOWN ON PHASE PLOT FIGURE 3/3A, IS NOT REQUIRED TO BE COMPLETED UNTIL THE QUARRY IS NEARING THE END OF ITS LIFE. THE SLOPES WITH TREE PLANTINGS AND ALL SLOPE PLANTINGS FORMING PART OF THE REHABILITATION PLAN SHALL BE KEPT HEALTHY AND DEAD MATERIAL SHALL BE REPLACED AS REQUIRED.
5. THE QUARRY WILL FILL WITH WATER TO AN ESTIMATED WATER ELEVATION OF 511.9 MASL AS PART OF REHABILITATION. THE ESTIMATED WATER ELEVATION IS BASED ON THE LAKE ELEVATION OF THE ADJACENT QUARRY. ADDITIONAL REHABILITATION MAY BE REQUIRED TO ALLOW POSITIVE DRAINAGE FROM THE LAKE TO THE WETLANDS IF IT IS DETERMINED THROUGH THE ADAPTIVE MANAGEMENT PLAN OR THE HYDROGEOLOGIC MODELLING THAT THE PREDICTED LAKE LEVEL OF 511.9 MASL FOR THE EXPANSION QUARRY MAY NOT BE ACHIEVED. ADDITIONAL DEPTH AND THE EXTENSION OF THE EXISTING QUARRY IN LOT 24, CONCESSION 12 MAY BE PROPOSED SO AS TO INCREASE THE LAKE ELEVATION IN THE EXISTING QUARRY AND THEREBY ASSIST IN RAISING THE LAKE ELEVATION IN THE EXPANSION QUARRY.
6. THE PROCESSING PLANT AND RELATED PRODUCTION EQUIPMENT SHALL BE REMOVED FROM THE EXTRACTION AREA FOLLOWING COMPLETION OF EXTRACTION AND REMOVAL OF THE LAST OF THE PROCESSED MATERIAL. ALL OTHER BUILDINGS AND EQUIPMENT WILL BE REMOVED FROM THE EXTRACTION AREA PRIOR TO LAKE FILLING AND NO LATER THAN 5 MONTHS OF THE COMPLETION OF REHABILITATION.
7. ADDITIONAL DETAILS ARE INCLUDED ON THE "CONCEPTUAL EXPOSED QUARRY FACE DETAIL", CONCEPTUAL ISLAND REHABILITATION DETAIL" AND REHABILITATED SIDE SLOPE DETAIL/FISH HABITAT ENHANCEMENT (THIS PAGE).
8. SHALLOW SHORELINE ZONES WILL BE CREATED AND TREATED TO MAXIMIZE HABITAT POTENTIAL, COVER AND STRUCTURE DIVERSITY. WILL BE PROVIDED BY INCORPORATING BRUSH PILES, LOGS, STUMPS AND BOULDERS ALONG THE SHORELINE ZONE BOTH ABOVE AND BELOW THE WATER.
9. THE EXTENDED SHALLOW SHORELINE ZONE (APPROPRIATE LOCATION SHOWN ON PLAN) WILL BE CREATED ON-SITE USING ON-SITE MATERIAL. A VARIETY OF SUBSTRATES WILL BE INCORPORATED AROUND THE EDGE OF THE ISLANDS. THESE MAY INCLUDE, BUT ARE NOT LIMITED TO BOULDERS, GRAVEL, SAND AND MUCK. SHOALS TO PROMOTE FISH HABITAT WILL BE CREATED NEAR THE ISLANDS. THE LOCATION AND CONFIGURATION OF THE EXTENDED SHALLOW SHORELINE ZONE MAY BE ADJUSTED BASED ON FIELD CONDITIONS ENCOUNTERED DURING THE QUARRY OPERATIONS. IF SUCH CONDITIONS ARE ENCOUNTERED, A LESSER PROPORTION OF QUARRY FINES SHALL BE REQUIRED IN THE FILL PER TO REDUCE THE GROUNDWATER OUTFLOW. IF SUCH CONDITIONS ARE ENCOUNTERED, THEORIC MAY ALSO BE OPPORTUNITIES TO CREATE WETLAND SEEPAGE AREAS WITH THE POTENTIAL TO SUPPORT SPECIALIZED WETLAND VEGETATION. THE LOCATION, CONSTRUCTION AND VEGETATION OF THE EXTENDED SHALLOW SHORELINE ZONE WILL BE GUIDED BY THESE SITE PLANS, OR AS REFINED OR AUGMENTED BY AN ADAPTIVE MANAGEMENT PLAN APPROVED BY THE MINISTRY OF NATURAL RESOURCES. IN ADDITION, GROUTING TECHNIQUES ARE AVAILABLE TO CONTROL EXCESSIVE INFLOW OF GROUNDWATER TO THE QUARRY DURING EXTRACTION OPERATIONS, AND/OR THE OUTFLOW OF WATER FROM THE FINAL LAKE THROUGH THE QUARRY WALLS.
10. A PORTION OF THE QUARRY FACE ALONG THE NORTHEAST AND EAST LIMIT OF THE EXTRACTION AREA AND ALONG THE NORTHERN PENINSULA AREA WILL BE LEFT VERTICAL AND EXPOSED IN ORDER TO PROVIDE FURTHER DIVERSITY AND VISUAL INTEREST (SEE "CONCEPTUAL EXPOSED QUARRY FACE DETAIL, THIS PAGE). THE QUARRY FACE IN THESE AREAS WILL BE IRREGULAR TO CREATE SMALL CREVICES AND LEDGES, ANY REHABILITATION OF THE VERTICAL FACES WHICH ABUT THE NORTHERN PENINSULA OR ANY WETLAND B SHALL BE FROM THE QUARRY FLOOR.
11. THE AREA TO BE REHABILITATED IS 58.49 HA (144.53 AC).
12. IN THE EVENT PHASE 3B IS NOT EXTRACTED IN PART, OR IN ITS ENTIRETY, A 100m WIDE BEDROCK CONNECTION BETWEEN THAT PORTION OF PHASE 3B RETAINED AND THE NORTH PENINSULA AREA SHALL BE RETAINED AND THE EDGE OF PHASE 3B WILL UNDERTAKE BE LEFT WITH EXPOSED VERTICAL FACES AS SHOWN. NO ATTEMPT TO THIS SITE PLAN IS REQUIRED IF EXTRACTION OF PHASE 3B TAKES PLACE IN ACCORDANCE WITH NOTE 22, GENERAL NOTES, PAGE 2A OF 4.
13. IN THE EVENT RECEPTORS LOCATED AT 2960LB GREY ROAD 31 ARE REMOVED, AND EXTRACTION TAKES PLACE IN ACCORDANCE WITH NOTE 1, NOISE, PAGE 2 OF 4, REHABILITATION SHALL BE MODIFIED ACCORDINGLY WITHOUT AMENDMENT TO THIS PLAN.
14. PRIOR TO COMMENCEMENT OF EXTRACTION WITHIN EACH OF THE INITIAL THREE PHASES (PHASE 1, PHASE 2A/2B AND PHASE 3A/3B) SHOWN ON THE APPROVED SITE PLANS, THE OPERATOR SHALL POST FINANCIAL SECURITY, TO BE HELD BY AN INDEPENDENT PARTY, IN AN AMOUNT EQUAL TO ONE-THIRD OF THE COST OF ONGOING WATER MANAGEMENT AND MONITORING ACTIVITIES THAT MAY BE REQUIRED DURING THE QUARRY REHABILITATION AND LANDFILLING PERIOD. THE SECURITY, OR THE BALANCE THEREOF TOGETHER WITH ANY ACCUMULATED INTEREST, SHALL BE RETURNED TO THE OPERATOR UPON SUCCESSFUL COMPLETION OF THE REHABILITATION AND UPON SURRENDER OF THE LICENCE.
15. ALL DISCHARGE AREAS, MONITORING WELLS AND ANY RECHARGE WELLS SHALL ALSO BE FULLY REHABILITATED OR DECOMMISSIONED.

I ACKNOWLEDGE AND SHALL CARRY ON MY OPERATION IN ACCORDANCE WITH THIS SITE PLAN AND WITH MY LICENCE IS ISSUED.

LICENCE / SIGNATURE
20 August 2014
DATE

THIS SITE PLAN HAS BEEN PREPARED UNDER THE DIRECTION OF W. BRENT CLARKSON, MA (NOP 1999) WHO IS QUALIFIED TO PREPARE AND CERTIFY SITE PLANS PURSUANT TO SECTION 9(4) OF THE AGGREGATE RESOURCES ACT.

W. BRENT CLARKSON, MA (NOP 1999) for MHBC PLANNING
19 August 2014
DATE

BRENT CLARKSON IS AUTHORIZED BY THE MINISTRY OF NATURAL RESOURCES PURSUANT TO SECTION 9(4) OF THE AGGREGATE RESOURCES ACT TO PREPARE AND CERTIFY SITE PLANS.

Scale 1:3,000
0 25 50 100 150m

DRAFT REVISIONS		APPROVED LICENCE SITE PLAN AMENDMENTS
MAY 14, 2013	AUG 19, 2014	
NOVEMBER 19, 2013	SEPT 18, 2014	
DEC 19, 2013		
JAN 16, 2014		
MARCH 19, 2014		
APR 16, 2014		
MAY 19, 2014		
MAY 28, 2014		
JUNE 19, 2014		
JULY 18, 2014		

MHBC

MacNaughton Hermsen Britton Clarkson Planning Limited
PLANNING, URBAN DESIGN & LANDSCAPE ARCHITECTURE
7050 Weston Road, Suite #230, Woodbridge, Ontario L4L 8G7
Telephone (905) 761-5588 FAX (905) 761-5589 e-mail clarkson@mhbplan.com

PROJECT NAME:
Duntroon Quarry Expansion

Job No. 1851 'E' VALLEY CLEAR SPEC #ENGLAW
Dwn. By A.M.D.S./J.D./C.T. Chkd. By B.C.

Lot 25 and Part Lot 26,
Concession XII and
Part Lot 25, Concession XI
Clearview Township
Simcoe County

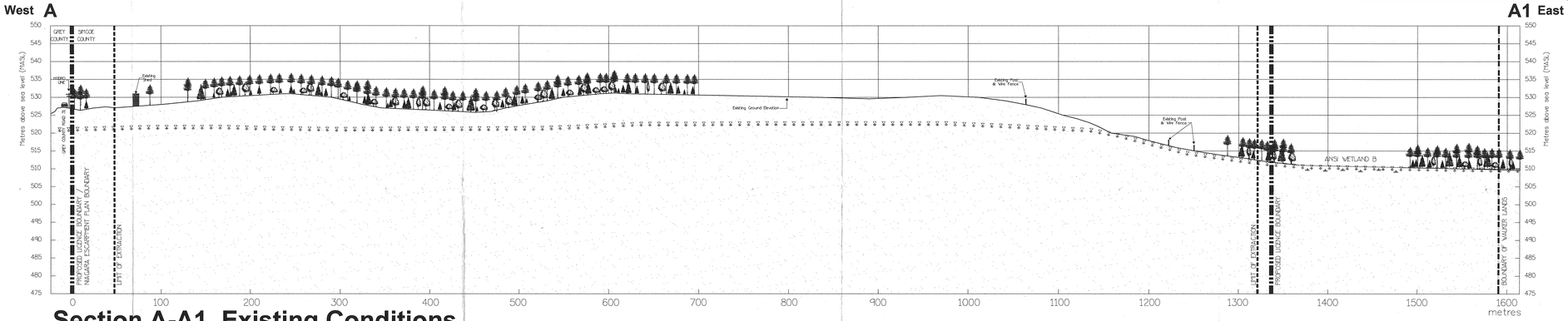
Walker Aggregates Inc.

Walker Industries Holdings Limited
Aggregates and Construction Group
P.O. Box 100 Thorold Ontario
L2V 3Y8

18/08/2014

West **A**

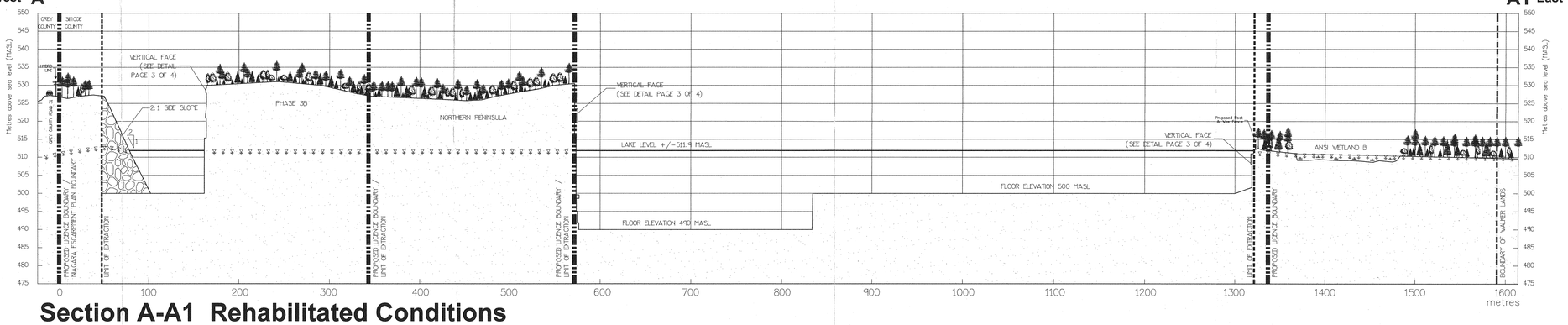
A1 East



Section A-A1 Existing Conditions

West **A**

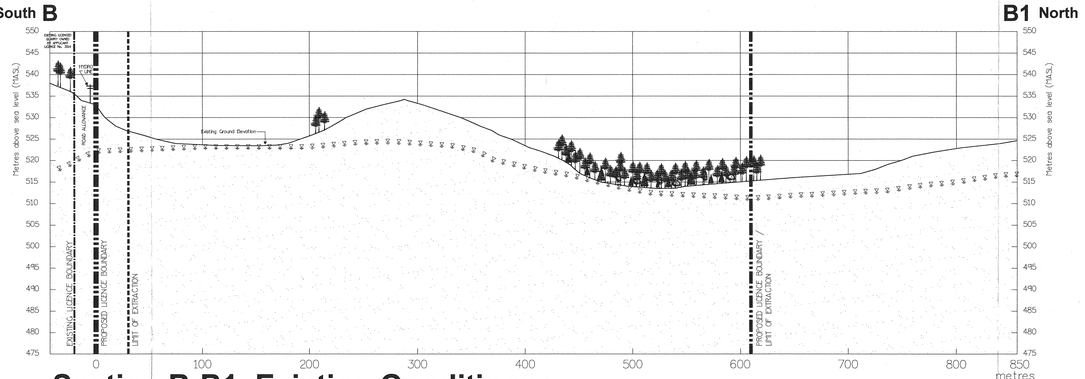
A1 East



Section A-A1 Rehabilitated Conditions

South **B**

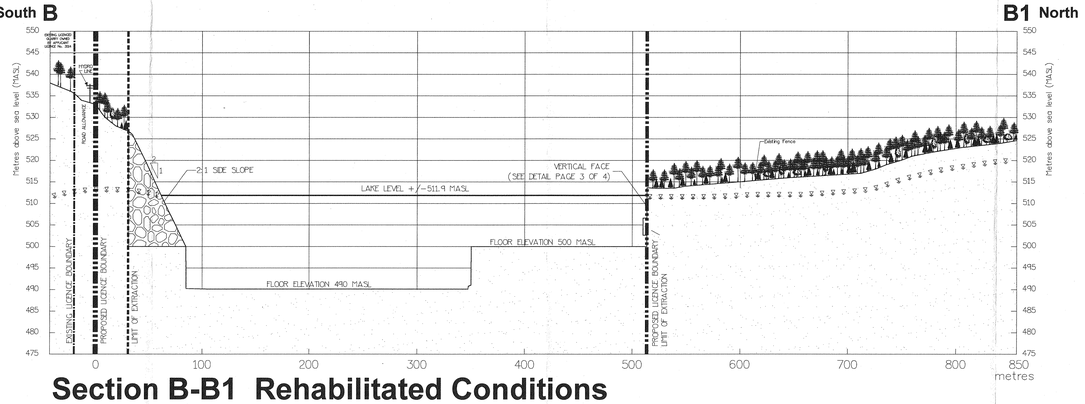
B1 North



Section B-B1 Existing Conditions

South **B**

B1 North



Section B-B1 Rehabilitated Conditions

Cross Sections

Legend

- Walker Aggregates Inc. Lands
- Limit of Extraction (ALL SETBACKS DRAWN TO SCALE, EXCEPT 6m SETBACKS SEE PAGES 1, 2A AND 3 FOR LABELLED DISTANCES)
- Expansion Licence Boundary
- South Quarry Licence Boundary (EXISTING EXTraction QUARRY LICENCE No. 5014)
- Swamp or Wetland
- Ground Water Table (DOLOSTONE AQUIFER, SEE NOTE 3 THIS PAGE)
- For Details of Plan View see Pages 1, 2A & 3 of 4

NOTES:

1. TOPOGRAPHIC INFORMATION PROVIDED BY NORTHWAY-PHOTOMAP INC. AND GENERATED FROM AERIAL PHOTOGRAPHY FLOWN IN SPRING OF 2002. CONTOUR INTERVAL IS 2.0m, WITH 1.0m INTERPOLATED CONTOURS. ALL ELEVATIONS ARE INDICATED IN (MASL).
2. HYDROGEOLOGICAL INFORMATION OBTAINED FROM "GEOLOGICAL REPORT AND LEVEL 2 HYDROGEOLOGICAL ASSESSMENT" DATED SEPTEMBER 2005 AND "LEVEL 2 HYDROGEOLOGICAL ASSESSMENT ADDENDUM" DATED OCTOBER 2007 PREPARED BY JAGGER HIMS LIMITED INDICATES THE GROUND WATER TABLE ACROSS THE LICENCED AREA VARIES SEASONALLY FROM ±509 MASL TO ±511 MASL IN THE TOPOGRAPHICALLY LOW AREAS, TO ±518 MASL TO ±535 MASL IN THE TOPOGRAPHICALLY HIGH AREAS.
3. CROSS SECTIONS PLOTTED FROM ABOVE REFERENCED TOPOGRAPHIC INFORMATION.
4. FOR PLAN VIEW OF CROSS SECTIONS, SEE "EXISTING FEATURES" PLAN, PAGE 1 OF 4 AND "REHABILITATION" PLAN, PAGE 3 OF 4.
5. SEE TYPICAL PLANTING BLOCK DETAIL (PAGE 3 OF 4) AND GENERAL NOTE 4 (PAGE 3 OF 4) FOR ADDITIONAL INFORMATION ON SLOPE TREATMENTS.
6. GROUNDWATER ELEVATIONS SHOWN ARE BASED ON ASSUMPTION THAT THE MAD QUARRY (WEST OF GREY COUNTY ROAD 31) IS OPERATING AT THE SAME TIME AND IS REHABILITATED AT THE SAME TIME AS THIS LICENCE.

Final Approved Plan
Date: Sept 4, 2014.
Signature:
Ministry of Natural Resources
Midhurst District Office

I ACKNOWLEDGE AND SHALL CARRY ON MY OPERATION IN ACCORDANCE WITH THIS SITE PLAN UPON WHICH MY LICENCE IS BASED.
LICENCE / SIGNATURE
20 August 2014
DATE

THIS SITE PLAN HAS BEEN PREPARED UNDER THE DIRECTION OF W. BRENT CLARKSON, MA MCIP RPP WHO IS QUALIFIED TO PREPARE AND CERTIFY SITE PLANS PURSUANT TO SECTION 8(4) OF THE AGGREGATE RESOURCES ACT.
W. Brent Clarkson
W. BRENT CLARKSON, MA MCIP RPP for MHBC PLANNING
19 August 2014
DATE

BRENT CLARKSON IS AUTHORIZED BY THE MINISTRY OF NATURAL RESOURCES PURSUANT TO SECTION 8(4) OF THE AGGREGATE RESOURCES ACT TO PREPARE AND CERTIFY SITE PLANS.

Scales
Horizontal 1:2,000
Vertical 1:500
Vertical Exaggeration 4x
Unless Otherwise Noted on Plan

DRAFT REVISIONS		APPROVED LICENCE SITE PLAN AMENDMENTS
	MAY 29, 2013	
	AUGUST 29, 2013	
	NOV 29, 2013	
	JAN 29, 2014	
	MAR 29, 2014	
	JUNE 29, 2014	
	SEPT 29, 2014	

MHBC

MacNaughton Hermsen Britton Clarkson Planning Limited
PLANNING, URBAN DESIGN & LANDSCAPE ARCHITECTURE
7050 Weston Road, Suite #230, Woodbridge, Ontario L4L 8G7
Telephone (905) 761-5588 FAX (905) 761-5589 e-mail clarkson@mhbcplan.com

PROJECT NAME:
Duntroon Quarry Expansion

Job No. 1855 'E' WALKER CLEAR SITE +DEEPLAKE
Dwn. By A.M.D.S./J.D.C. | Chkd. By B.C.

Lot 25 and Part Lot 26,
Concession XII and
Part Lot 25, Concession XI
Clearview Township
Simcoe County

walker industries

Walker Aggregates Inc.

Walker Industries Holdings Limited
Aggregates and Construction Group
P.O. Box 100 Thorold Ontario
L2V 3Y8

18/08/2014

Tab **5**

MINUTES OF SETTLEMENT

BETWEEN:

THE CORPORATION OF THE TOWNSHIP OF CLEARVIEW

("Township")

-and-

WALKER AGGREGATES INC.

("Walker")

WHEREAS the Township and Walker are collectively referred to as the Parties;

AND WHEREAS pursuant to Minutes of Settlement involving the Parties and the County of Simcoe ("**County**") dated April 9, 2010 ("**2010 MOS**"), the Parties agreed to certain road improvement work, transfers, restrictions and financial obligations to be completed in anticipation of and in preparation for the issuance of an *Aggregate Resources Act* licence for the Walker Expansion Quarry in Lot 25 and Part Lot 26, Concession 12 and Part Lot 25, Concession 11, Township of Clearview ("**Expansion Quarry**");

AND WHEREAS jurisdiction and ownership of Simcoe County Road 91 from its intersection with Grey Road 31/Simcoe Road 95 to its intersection with Simcoe Road 124 was, with the exception of the most easterly 100 metres, transferred by the County to the Township as of February 25, 2010 by County By-law No. 5894 and is now under the jurisdiction and ownership of the Township and known as Township Road 91 ("**TR91**");

AND WHEREAS pursuant to the 2010 MOS the Township was required to close and convey TR91 to Walker following the completion of certain road improvements to Sideroad 26/27 Nottawasaga ("**SR 26/27 Improvements**");

AND WHEREAS the Township and Walker entered into a Road Improvement Agreement dated October 16, 2014 which required Walker to secure its contribution of Seven Million Five Hundred Thousand Dollars ($7,500,000) toward the cost of the SR 26/27 Improvements and other road improvements as provided in the 2010 MOS;

AND WHEREAS Walker provided an irrevocable letter of credit in favour of the Township in the amount of Seven Million Five Hundred Thousand Dollars ($7,500,000) on October 9, 2014 in accordance with the terms of the Road Improvement Agreement;

AND WHEREAS the Township is unable to complete the SR 26/27 Improvements on any reasonable basis because of provincial intervention resulting in significant delay and increase in costs including the need for a Niagara Escarpment Development Permit and Niagara Escarpment Plan Amendment, as well as the December 22, 2022 determination by the Environmental Assessment Branch of the Ministry of Environment, Conservation and Parks ("**MECP**") that the SR 26/27 Improvements require a Schedule C Class Environmental Assessment;

AND WHEREAS the Parties have agreed that it is not in the public interest to close TR91 without the SR 26/27 Improvements being made;

AND WHEREAS keeping TR91 open will require certain modifications to the Expansion Quarry and to the Walker Existing Quarry located on Lot 24, Concession 12, Township of Clearview ("**Existing Quarry**");

NOW WITNESSETH that in exchange for the payment of two dollars ($2.00) of lawful money of Canada each paid to the other, the receipt and sufficiency being hereby acknowledged, and other good and valuable consideration the Parties agree as follows:

1. The recitals above are correct and form part of the terms of these Minutes of Settlement ("**Minutes**").

2. Walker agrees:

    a. not to pursue the closure and conveyance to it of TR91; and

    b. not to pursue the Township having to complete further SR 26/27 Improvements; and

    c. to support the Township's position that no costs be awarded to any participant as a result of the Township's withdrawal of its application to the Niagara Escarpment Commission for the Development Permit and Plan Amendment related to the SR 26/27 Improvements.

3. In exchange for Walker's agreement set out in paragraph 2, the Township agrees to provide Walker with the letter attached as **Schedule "A"** within five (5) business days of execution of these Minutes.

4. In further exchange for Walker's agreement set out in paragraph 2, the Township agrees to support the following modifications to be made by Walker to the Expansion Quarry and the Existing Quarry:

a. Keeping the tunnel between the Existing Quarry and the Expansion Quarry open for the duration of the life of the Expansion Quarry and after final rehabilitation;

b. Not flooding the Existing Quarry until extraction is complete at the Existing Quarry and the Expansion Quarry and final rehabilitation has commenced;

c. Keeping the processing plant in the Existing Quarry for the duration of the life of the Expansion Quarry;

d. Constructing berms on Walker's lands along TR91 and, if required, along the Township right-of-way to screen the Expansion Quarry for safety and visual impact purposes;

e. Deepening the final level of the Existing Quarry from 500 metres above sea level to 490 metres above sea level; and

f. Other minor modifications to implement the above-noted changes as required.

5. The Township acknowledges that the operational changes set out in paragraph 4 will require the following approvals for the Existing Quarry and the Expansion Quarry:

a. Amendments to the Niagara Escarpment Plan;

b. Niagara Escarpment Plan Development Permits;

c. Amendment to the Township's Official Plan;

d. Amendments to the *Aggregate Resources Act* site plans; and

e. Amendments to the Adaptive Management Plan.

6. The Township agrees to support Walker's pursuit of the approvals set out in paragraph 5. The Township also agrees to support any other approvals that the Township, the County, the Niagara Escarpment Commission ("**NEC**"), the Minister of Natural Resources and Forestry ("**MNRF**") or the MECP may require to facilitate the modifications referred to in paragraph 4 as well as any other changes deemed necessary by Walker to facilitate the modifications referred to in paragraph 4.

7. The term "support" in paragraphs 4, 5 and 6 shall include:

a. Making public statements of support for the modifications and required approvals if requested by Walker;

b. Expressing the Township's agreement with the modifications and required approvals in discussions with the County, the NEC, the MNRF, the MECP and such other organizations or entities as may reasonably be required;

c. Providing written comments in support of the modifications and required approvals if asked for written comments by the County, the NEC, the MNRF, the MECP or such other organizations or entities as may reasonably be required; and

d. Attending to support Walker at any necessary Ontario Land Tribunal or other hearings.

8. Walker agrees to reimburse the Township's reasonable costs of providing support as set out in paragraph 7. Prior to the Township incurring any costs for which it will seek reimbursement, Walker and the Township will enter into an agreement setting out the proposed work program and estimate for any such costs.

9. The Parties agree to execute such further and other agreements as may be necessary or advisable from time to time to give effect to the full intent and meaning of these Minutes. Each of the Parties agrees to carry out its individual responsibilities as expeditiously as possible.

10. No party shall call into question in any proceeding or action in court or before any administrative tribunal, the authority or right of any party to enter into these Minutes. This provision may be pleaded in any action or proceeding as a complete estoppel of the right.

11. The invalidity, inoperability or unenforceability of any provision of these Minutes shall not affect the validity or enforceability of any other provision hereof and any such invalid, inoperable or unenforceable provision shall be deemed to be severable.

12. These Minutes constitute a legally binding agreement between the Parties and shall enure to the benefit of and be binding upon the Parties hereto and their respective successors and assigns.

13. These Minutes shall be construed and enforced in accordance with the laws of the Province of Ontario and the laws of Canada applicable thereto and shall be treated in all respects as an Ontario contract.

14. Where these Minutes require notice to be delivered by one party to the other, such notice shall be in writing and delivered either personally, by email transmission, by courier or by prepaid registered mail at the addresses noted below.

Walker:

Walker Industries Holdings Limited
P.O. Box 100
Thorold, ON L2V 3Y8

Attention: Mr. Ryan Wall, Executive Vice President, Aggregates & Construction
Tel: 705-445-2300 ext. 4234
Email: RWall@walkerind.com

Township:

The Corporation of the Township of Clearview
217 Gideon Street
Stayner, ON L0M 1S0

Attention: Director of Legislative Services/Clerk
Email: shelmkay@clearview.ca

15. These Minutes may be executed in counterparts, all of which shall constitute one agreement when taken together, and shall be deemed to be an original agreement. Counterparts may be executed either in original or electronically transmitted and Parties adopt any signatures received by facsimile machine or other means of electronic communication as original signatures of the Parties.

IN WITNESS WHEREOF, the Parties have executed these Minutes of Settlement on the dates set out below.

Date: July 4, 2023

THE CORPORATION OF THE TOWNSHIP OF CLEARVIEW

Per: _____

Name: Doug Measures

Title: Mayor

Per: _____

Name: Sasha Helmkay

Title: Clerk

We have authority to bind the Municipality.

Date: July 4, 2023

WALKER AGGREGATES INC.

Per: _____

Name: Ryan Wall

Title: Executive Vice President, Aggregates & Construction

I have authority to bind the Corporation.

SCHEDULE "A"

Aug 2 / 2023

*, 2023

Walker Aggregates Inc.
2800 Townline Road
PO Box 100
Thorold, Ontario
L2V 3Y8

Attention: Ryan Wall

RE: Township Confirmation of ARA Site Plan Compliance

The Township of Clearview previously confirmed to the Ministry of Natural Resources and Forestry ("**MNRF**") that the improvements to former County Road 91 and Sideroad 26/27 as contemplated by the Minutes of Settlement between County of Simcoe, the Township of Clearview and Walker Aggregates Inc. dated April 9, 2010 ("the **Minutes of Settlement**"), the ARA License Number 607841 Site Plan Note 12B on page 2A of the ARA Site Plan ("**ARA Site Plan Note 12B**") and the October 16, 2014 Road Improvement Agreement between Walker Aggregates Inc. and the Corporation of the Township of Clearview ("the **Road Improvement Agreement**") have been undertaken to the satisfaction of the Township of Clearview.

ARA Site Plan Note 12B states that "Prior to the commencement of shipping of quarry product from Lot 25, Concession XII, the improvements to former County Road 91 and Sideroad 26/27 as contemplated by the Road Settlement Agreements be undertaken to the satisfaction of the Township of Clearview." [emphasis added]

The improvements contemplated to Sideroad 26/27 are defined in the Minutes of Settlement as "improvement of Clearview Township 26/27 Sideroad between the 10th Concession and Grey Road 31 / Simcoe Road 95 to the standard of a rural gravel surface Township road."

As noted in the Road Improvement Agreement, improvements were made to Sideroad 26/27 and the Township continues to maintain this road as and when required and in accordance with provincial legislation.

The contemplated improvements to former County Road 91 are outlined on Schedule B of the Road Improvement Agreement and have been completed.

Accordingly, we hereby confirm that improvements to Sideroad 26/27 and to former County Road 91 were undertaken to the satisfaction of the Township of Clearview in accordance with the Minutes of Settlement, ARA Site Plan Note 12B and the Road Settlement Agreement.

Yours truly,

The Corporation of the Township of Clearview

Mayor

CAO

Tab **6**

Niagara Escarpment Commission

99 King Street East
P.O. Box 308
Thornbury, ON N0H 2P0
Tel. No. (519) 599-3340
Fax No. (519) 599-6326
www.escarpment.org

Commission de l'escarpement du Niagara

99, rue King est
p.o.b. 308
Thornbury ON N0H 2P0
No de tel. (519) 599-3340
Télécopieur (519) 599-6326
www.escarpment.org

Niagara Escarpment Commission
An agency of the Government of Ontario

July 31, 2014

Walker Industries Holdings Ltd
Aggregates and Construction Group
P.O. Box 100
Thorold, ON L2V 3Y8

Dear Walker Industries Holdings Ltd:

Re: Development Permit # 6707/S/E/2013-2014/9060
Lot 24, Concession 12
Township of Clearview, Simcoe County

Enclosed please find your **Development Permit** issued by the Niagara Escarpment Commission in accordance with the direction of the Joint Board. The information contained in this Permit constitutes the information (use details, construction details, Site Plans, etc.) reflected in the Order of the Joint Board, Case No.: 08-094, dated July 17, 2014. Your development must proceed in accordance with this information, and with the **Conditions of the Development Permit**.

Please note that changes or alterations to the approved use details, construction details or the Site Plans are not permitted (see Condition 5).

If you have any questions, please contact me at 519-599-3740 or rick.watt@ontario.ca.

Yours truly,

Rick Watt
Senior Planning Coordinator

c Ken Lucyshyn, Walker Industries
Brent Clarkson, MHBC
Brent Armstrong, MNR
MOECC
Nottawasaga Valley Conservation Authority
Ministry of Tourism, Sport & Culture
Township of Clearview
Scott Patterson, CBO, Township of Clearview
County of Simcoe

Niagara Escarpment Commission

99 King Street East
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Niagara Escarpment Commission
An agency of the Government of Ontario

NIAGARA ESCARPMENT DEVELOPMENT PERMIT

#6707/S/E/2013-2014/9060

FILE NUMBER: S/E/2013-2014/9060

APPLICANT: Walker Aggregates Inc
AGENT: n/a
OWNER: same as applicant

LOCATION: Lot 24, Concession 12, Township of Clearview, Simcoe County

DESCRIPTION of PROPOSED DEVELOPMENT:

In accordance with the decision of the Joint Board on the 18th day of June, 2012 (CH Case No.08-094):

(i) the use of a processing plant and accessory buildings, facilities, and structures associated with the extraction of aggregate from Lot 25, Concession 12, Township of Clearview (associated with Amendment 161 to the Niagara Escarpment Plan) for an interim period within the existing quarry in Lot 24, Concession 12, Township of Clearview, *Aggregate Resources Act Licence* No. 3514; and

(ii) the construction and interim use of a tunnel or road cut created for the hauling of aggregate from Lot 25, Concession 12, Township of Clearview (Amendment 161 to the Niagara Escarpment Plan) to Lot 24, Concession 12, Township of Clearview, *Aggregate Resources Act* Licence No. 3514.

Pursuant to the authority to issue Development Permits under Section 24 of the *Niagara Escarpment Planning and Development Act, R.S.O. 1990, Chapter N.2*, delegated by the Minister of Natural Resources and Forestry under Section 25 of the *Act*, the Niagara Escarpment Commission hereby issues this **DEVELOPMENT PERMIT** for the proposed development described above, **subject to the attached Conditions**.

This Development Permit is transferable, unless prohibited by a Condition of this Development Permit, provided the new Permit holder develops strictly in accordance with the Conditions of this Development Permit.

Date: July 31, 2014

DEVELOPMENT PERMIT CONDITIONS

#6707/S/E/2013-2014/9060

1. All of the interim accessory uses as set out in Permitted Use #20 of Part 1.9 of the Niagara Escarpment Plan (2005) shall be relocated to Lot 25, Concession 12, Township of Clearview within four (4) years of an 18 ha area being created on the quarry floor of Lot 25, Concession 12, Township of Clearview.

2. Prior to the construction of the tunnel or road cut a geotechnical engineering study will be prepared to ensure the safe construction of the tunnel or road cut and to demonstrate the ability to permanently close the tunnel or road cut. The geotechnical engineering study shall be certified by a professional engineer licenced to practice in the Province of Ontario.

3. Where it is determined to be necessary, a building permit for the tunnel or road cut shall be obtained from the Township of Clearview prior to any work commencing on the tunnel or road cut.

4. The tunnel or road cut created for the hauling of aggregate from Lot 25, Concession 12, Township of Clearview to Lot 24, Concession 12, Township of Clearview, *Aggregate Resources Act* Licence No. 3514 shall be closed within four (4) years of the time the accessory uses have vacated the licence area of *Aggregate Resources Act* Licence No. 3514.

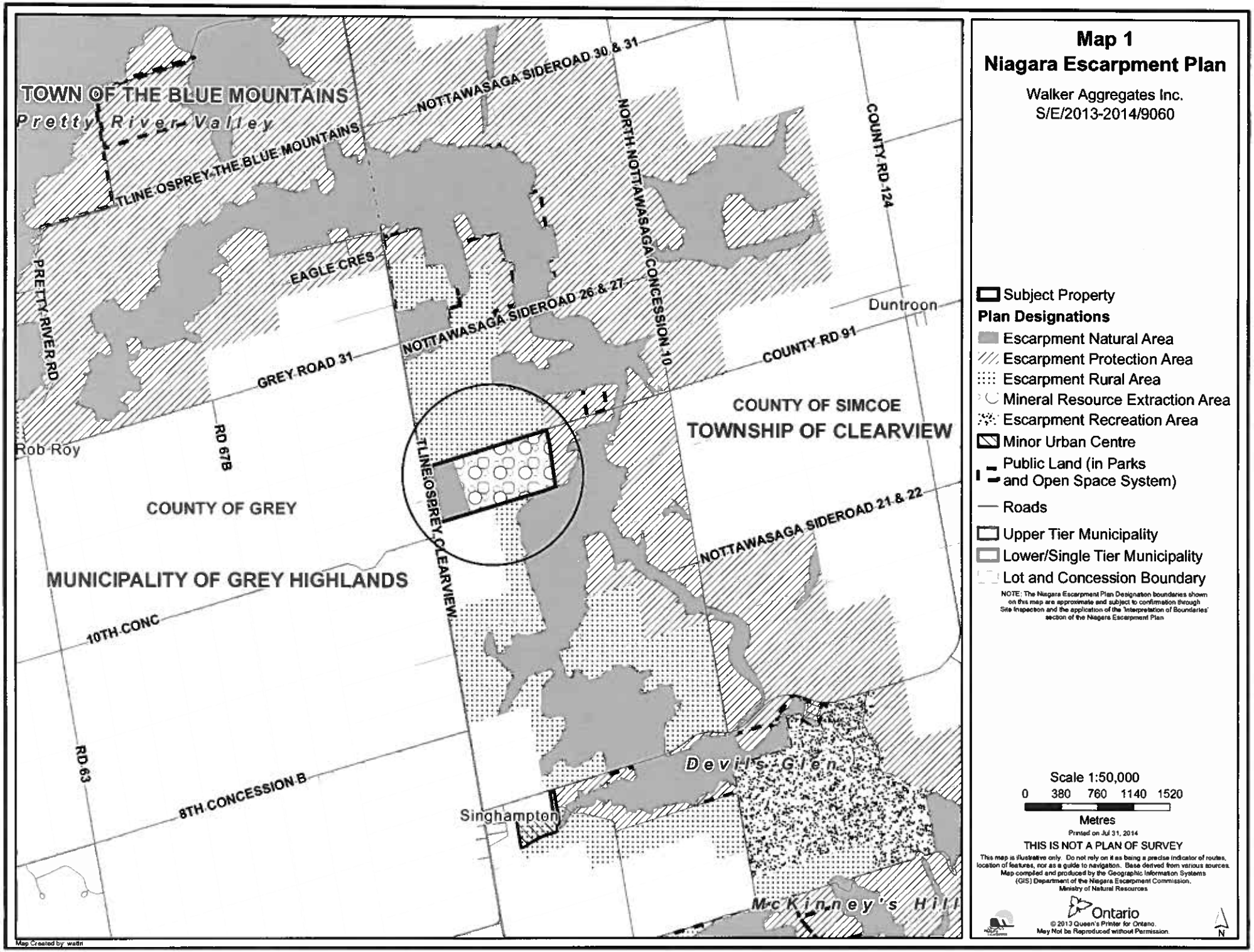
5. Non-fulfillment or breach of any one of these conditions shall render this Development Permit void.

6. A site inspection(s) of the property may be undertaken by the Niagara Escarpment Commission to ensure that the Development complies with the conditions of this Development Permit. Persons may accompany the Commission representative on the site inspection(s) who possess expert or special knowledge related to the conditions of this Development Permit.

7. No building permit or other licence, certificate, permit or other similar permission related to the Development shall be issued or be considered to be in force unless this Development Permit is in effect.

8. This Development Permit shall expire three years from its date of issuance unless a valid *Aggregate Resources Act* Licence is in effect.

9. The Development shall take place in accordance with the site plan of *Aggregate Resources Act* Licence No. 3514 and these Development Permit conditions.



Map 1
Niagara Escarpment Plan

Walker Aggregates Inc.
S/E/2013-2014/9060

- Subject Property

Plan Designations

- Escarpment Natural Area
- Escarpment Protection Area
- Escarpment Rural Area
- Mineral Resource Extraction Area
- Escarpment Recreation Area
- Minor Urban Centre
- Public Land (in Parks and Open Space System)
- Roads
- Upper Tier Municipality
- Lower/Single Tier Municipality
- Lot and Concession Boundary

NOTE: The Niagara Escarpment Plan Designation boundaries shown on this map are approximate and subject to confirmation through Site Inspection and the application of the 'Interpretation of Boundaries' section of the Niagara Escarpment Plan

Scale 1:50,000

0 380 760 1140 1520

Metres

Printed on Jul 31, 2014

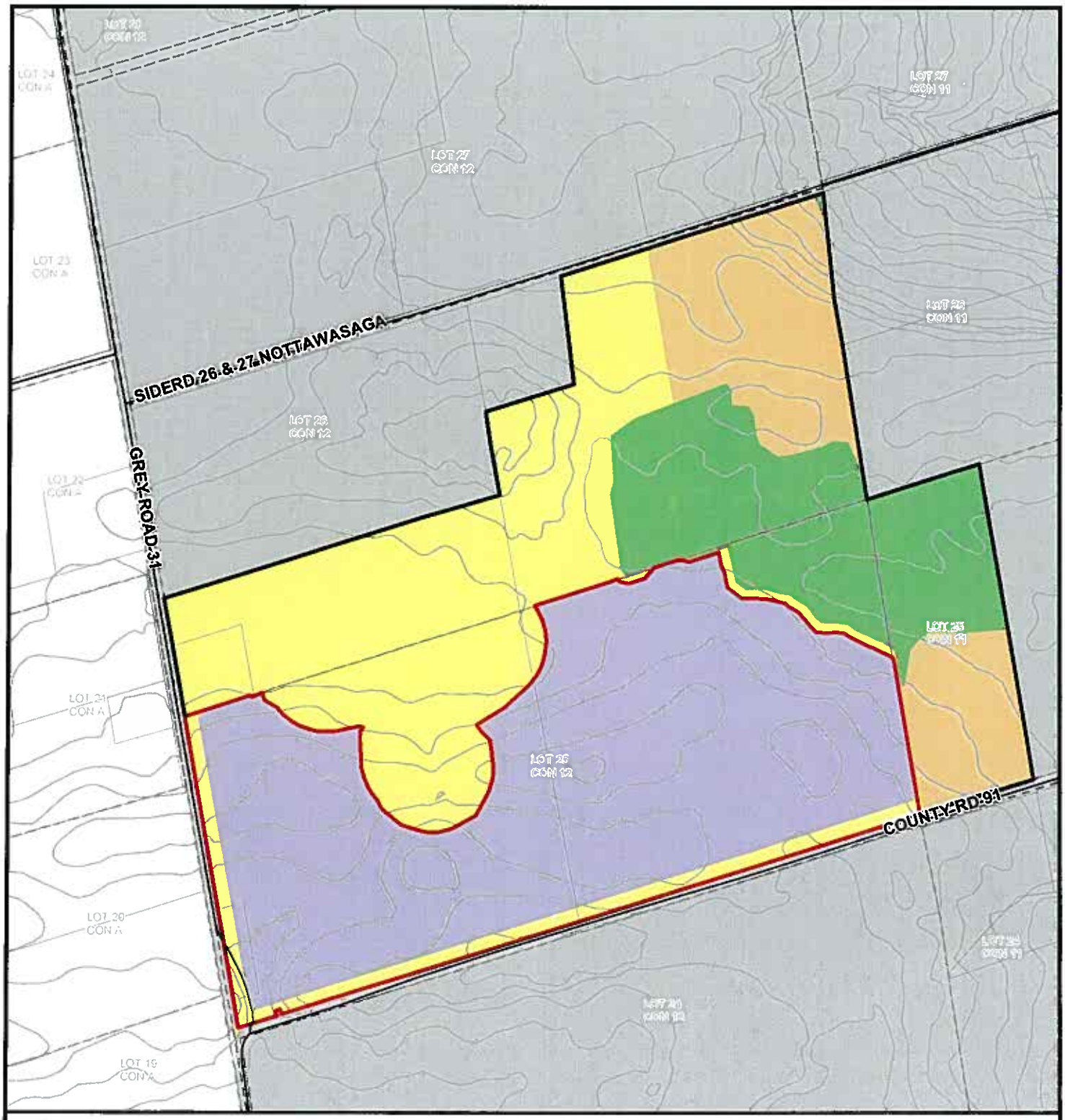
THIS IS NOT A PLAN OF SURVEY

This map is illustrative only. Do not rely on it as being a precise indicator of routes, location of features, nor as a guide to navigation. Base derived from various sources. Map compiled and produced by the Geographic Information Systems (GIS) Department of the Niagara Escarpment Commission, Ministry of Natural Resources

Ontario

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N



SCHEDULE A
FOR AMENDMENT PS 161 05

(Approved Pursuant to the Decision of the Joint Board Dated June 18, 2012)

Ontario

- Escarpment Natural Area
- Escarpment Protection Area
- Escarpment Rural Area
- Mineral Resource Extraction Area
- Subject Lands
- Licence Area
- Area of Niagara Escarpment Plan Outside of Amendment PS 161 05

N

The Niagara Escarpment Plan Designations shown on this map are approximate and subject to confirmation through site inspection and the application of the "Interpretation of Boundaries" section of the Niagara Escarpment Plan.

This map is not a legal document and may contain errors or ommissions

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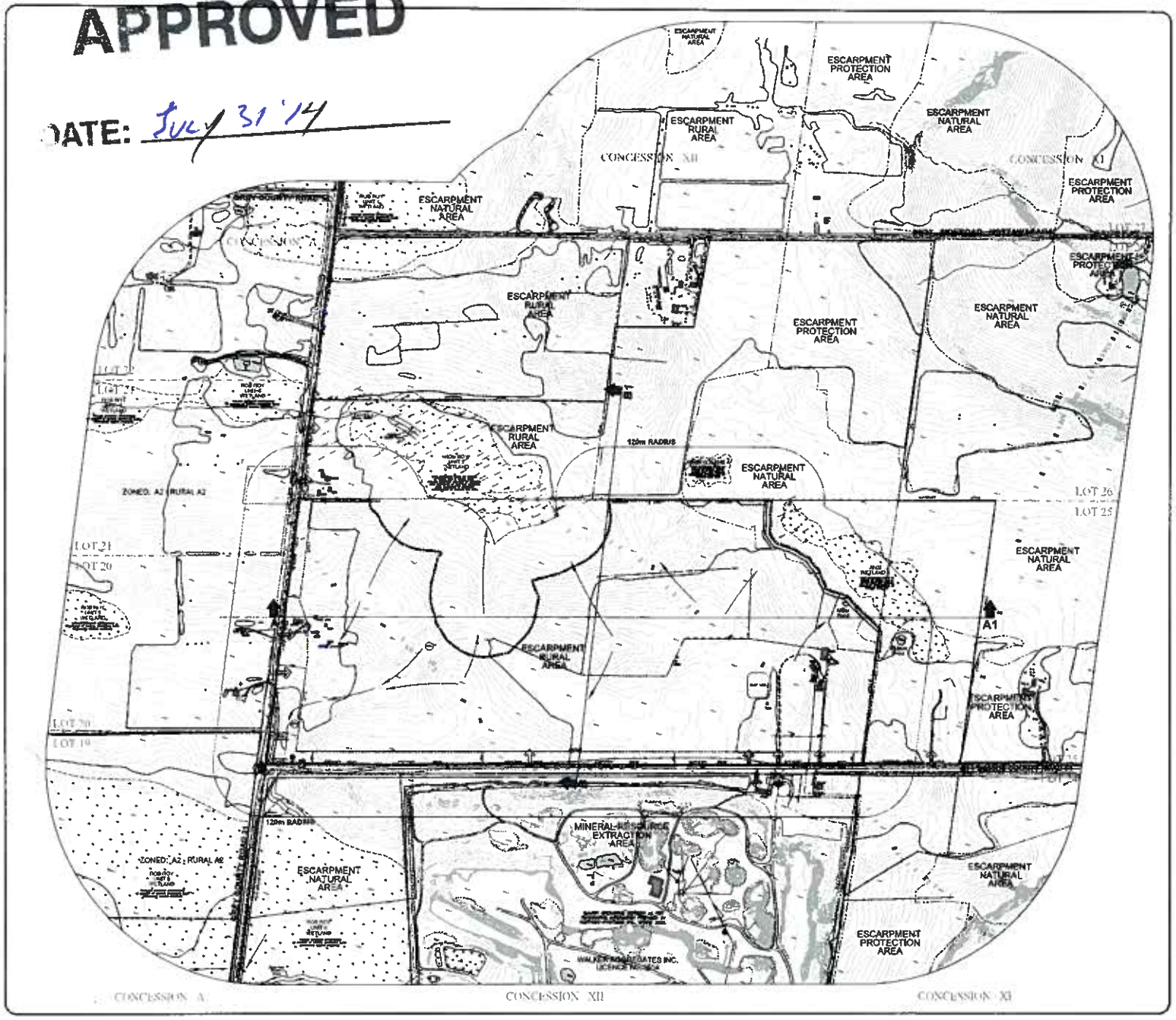
Metres

SOURCE:
Base derived from the Ontario Digital Topographic Database. Scale 1:10000

Map Compiled and Produced by the Geographic Information Systems (GIS) Department of the Niagara Escarpment Commission, Ministry of Natural Resources

NEC
APPROVED

DATE: July 31 '14



Existing Features

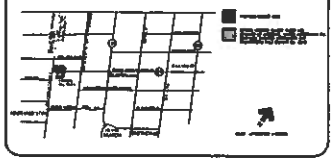
1 of 4

Legend

- Expansion Licence Boundary
- North Quarry Licence Boundary
- Limit of Extraction
- Walker Aggregates Inc. Lands
- Lots and Concessions
- Hydro Pole Line
- Building/Structure
- Niagara Escarpment Designation Boundary
- Existing Driveway
- Existing Stream
- Right/Left-in Entrance
- Entrance to Phase 1
- Entrance/Exit
- Existing Vegetation
- Direction of Surface Drainage
- Wetland Boundary
- Existing Fence
- Pond
- Existing Spot Elevation
- Elevation, Contour
- Niagara Escarpment Plan Boundary
- Parcel Fabric
- Cross Sections
- Existing Ditch

NOTES:

Key Map



Scale 1:3000

MHBC — Meridian Harwood Brown Clayton Planning Limited

PROJECT NAME:
Duntroon Quarry Expansion

Lot 25 and Part Lot 26, Concession XII and Part Lot 25, Concession XI
Clearview Township
Simcoe County

Walker Industries — Walker Aggregates Inc.

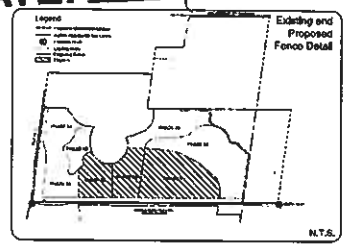
Walker Industries Holdings Limited
Aggregates and Construction Group

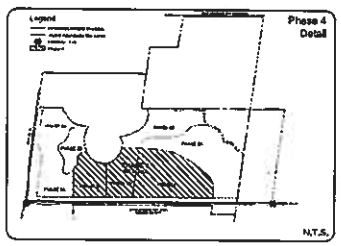
28/05/2014

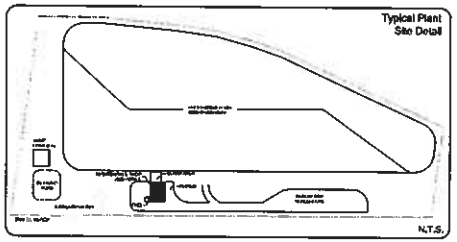
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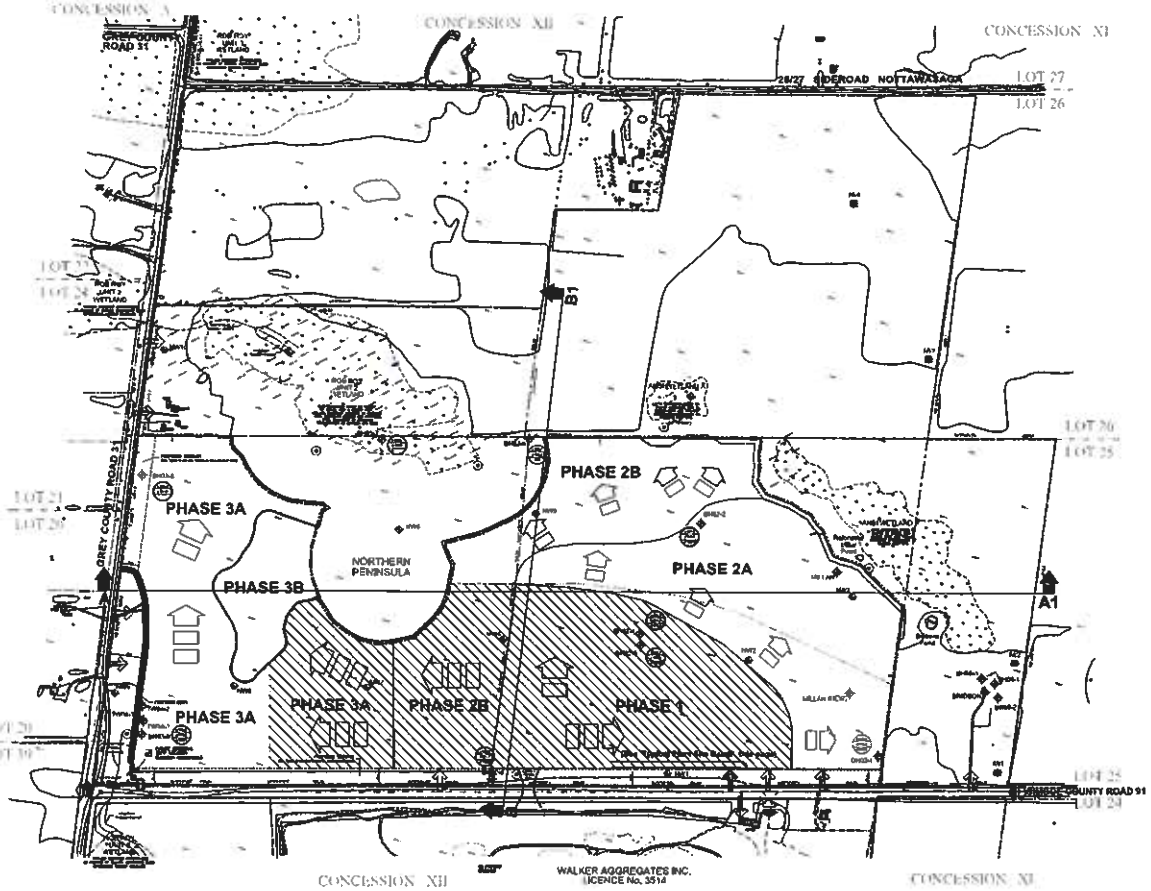
APPROVED

DATE: July 31 '14









GENERAL NOTES (cont'd):

Operational Plan 2A of 4

Legend

- Expansion Licence Boundary
- Limit of Extraction
- Lots and Concessions
- Field/Service Entrance
- Entrance/Exit
- Entrance to Phase 1
- Direction of Excavation
- Excavation Face
- Existing Wall Monitor Location
- Quarry Dewatering Discharge Locations
- Proposed Additional Well Monitor Locations
- Dual Purpose Monitor/ Recharge Injection Well Locations
- Existing Driveway
- Cross Section
- South Quarry Licence Boundary
- Walker Aggregates Inc. Lands
- Existing Spot Elevation
- Wetland Boundary
- Existing Stream
- Pond
- Plant Site
- Building/Structure
- Existing Vegetation
- Existing Fence
- Proposed Berms
- Proposed Elevations
- Niagara Escarpment Plan Boundary
- Phase 4

GENERAL NOTES

Scale 1:3000

MacLaren Hemson Brown Clarkson Planning Limited

PROJECT NAME:

Duntroon Quarry Expansion

Lot 25 and Part Lot 26, Concession XII and Part Lot 25, Concession XI
Clearview Township
Simcoe County

Walker Aggregates Inc.

Walker Industries Holdings Limited
Aggregates and Construction Group

NEC
APPROVED
DATED July 31'14

Operational 2B of 4 Plan

Legend

- Expansion Licence Boundary
- Limit of Extraction
- South Quarry Licence Boundary
- Walker Aggregates Inc. Lands

PREDESCRIBED CONDITIONS (cont'd)

CONSULTANTS RECOMMENDATIONS (NOT INCLUDED IN PREVIOUS NOTES OR SITE PLANS)

GENERAL

Scale As Noted

MHBC — MacNaughton Hermsen Britton Clarkson Planning Limited

PROJECT NAME:
Duntroon Quarry Expansion

Lot 25 and Part Lot 26, Concession XII and Part Lot 25, Concession XI Clearview Township Simcoe County

Walker Industries Holdings Limited
Aggregates and Construction Group

Walker Aggregates Inc.

CONSULTANTS RECOMMENDATIONS (cont'd)

Legend

Planting Location Detail

N.T.S.

Visual Mitigation Planting Layout Detail

Scale 1:200

Visual Mitigation Planting Detail (N.T.S.)

Typical Setback Detail (15m and 30m) No Berm Required

N.T.S.

Setback Detail - Phase 2 Berm Required

N.T.S.

28/05/2014

NEC APPROVED

DATE: July 31 '14

Rehabilitation Plan 3 of 4

Legend

- Expansion Licence Boundary
- South Quarry Licence Boundary
- Limit of Extraction
- Walker Aggregates Inc. Lands
- Lots and Concessions
- Existing Elevation and Contour
- Existing Tree Elevation
- Proposed Elevation and Contour
- Proposed Elevations
- Existing Fence
- Existing Vegetation
- Existing Wetland Boundary
- Reforested Area
- Pond
- Existing Well Monitor Location
- Niagara Escarpment Plan Boundary
- Quarry Dewatering Discharge Location
- Existing Driveway
- Extraction Face
- Proposed Visual Mitigation Planting
- Existing Stream
- Cross Sections

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Typical Planting Block Detail

CONCESSION X CONCESSION XII CONCESSION XI

GREYSTONES ROAD 31

1ST SIDEROAD NOTTAWASAGA

LOT 27
LOT 26
LOT 25
LOT 24
LOT 23
LOT 22
LOT 21
LOT 20
LOT 19

Northern Peninsula

Phase 3B

Lake

Estimated Water Elevation
511.9 MASL
Lake Surface Area= 48.00 ha (118.62 ac.)

SIMCOE COUNTY ROAD 91

WALKER AGGREGATES INC.
LICENCE No. 5514

Conceptual Island Rehabilitation Detail

Rehabilitated Side Slope Detail
Fish Habitat Enhancement

Conceptual Exposed Quarry Face Detail

Planting Location Detail

N.T.S.

Scale 1:3000

MacNaughton Hermsen Britton Clarkson Planning Limited

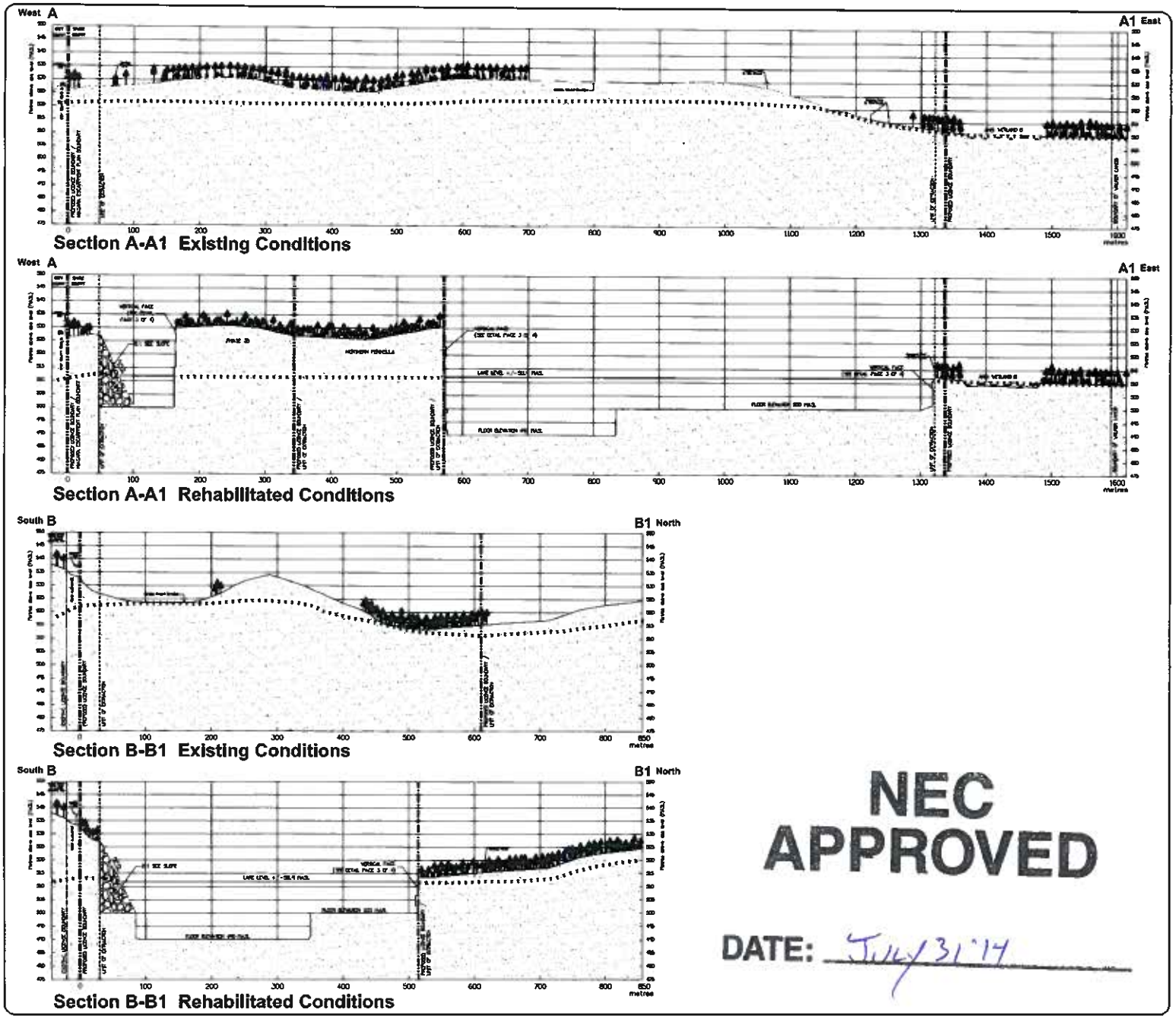
PROJECT NAME:
Duntroon Quarry Expansion

Lot 25 and Part Lot 26,
Concession XII and
Part Lot 25, Concession XI
Clearview Township
Simcoe County

Walker Aggregates Inc.

Walker Industries Holdings Limited
Aggregates and Construction Group

28/05/2014



Cross Sections

4 of 4

Legend

NOTES

NEC APPROVED

DATE: July 31 '14

Scales
Horizontal 1:2000
Vertical 1:500
Vertical Exaggeration 4x
Unless Otherwise Noted on Plan

Dunroon Quarry Expansion

Lot 25 and Part Lot 26,
Concession XII and
Part Lot 25, Concession XI
Clearview Township
Simcoe County

Walker Industries Holdings Limited
Aggregates and Construction Group

Walker Aggregates Inc.

28/05/2014

Tab **7**

Niagara Escarpment Commission

99 King Street East
P.O. Box 308
Thornbury, ON N0H 2P0
Tel. No. (519) 599-3340
Fax No. (519) 599-6326
www.escarpment.org

Commission de l'escarpement du Niagara

99, rue King est
p.o.b. 308
Thornbury ON N0H 2P0
No de tel. (519) 599-3340
Télécopieur (519) 599-6326
www.escarpment.org

Niagara Escarpment Commission
An agency of the Government of Ontario

July 31, 2014

Walker Industries Holdings Ltd
Aggregates and Construction Group
P.O. Box 100
Thorold, ON L2V 3Y8

Dear Walker Industries Holdings Ltd:

Re: Development Permit # 6708/S/E/2013-2014/9061
Lot 25 & Part Lot 26, Concession 12 & Part Lot 25, Concession 11
Township of Clearview, Simcoe County

Enclosed please find your **Development Permit** issued by the Niagara Escarpment Commission in accordance with the direction of the Joint Board. The information contained in this Permit constitutes the information (use details, construction details, Site Plans, etc.) reflected in the Order of the Joint Board, Case No.: 08-094, dated July 17, 2014. Your development must proceed in accordance with this information, and with the **Conditions of the Development Permit**.

Please note that changes or alterations to the approved use details, construction details or the Site Plans are not permitted (see Conditions 1 and 5).

If you have any questions, please contact me at 519-599-3740 or rick.watt@ontario.ca.

Yours truly,

Rick Watt
Senior Planning Coordinator

c Ken Lucyshyn, Walker Industries
Brent Clarkson, MHBC
Brent Armstrong, MNR
MOECC
Nottawasaga Valley Conservation Authority
Ministry of Tourism, Sport & Culture
Township of Clearview
Scott Patterson, CBO, Township of Clearview
County of Simcoe

Niagara Escarpment Commission

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Niagara Escarpment Commission
An agency of the Government of Ontario

NIAGARA ESCARPMENT DEVELOPMENT PERMIT

6708/S/E/2013-2014/9061

FILE NUMBER: S/E/2013-2014/9061

APPLICANT: Walker Aggregates Inc.
AGENT: n/a
OWNER: same as applicant

LOCATION: Lot 25 & Part Lot 26, Concession 12 & Part Lot 25, Concession 11
Township of Clearview, Simcoe County

DESCRIPTION of PROPOSED DEVELOPMENT:

To establish and operate a quarry in accordance with the decision of the Joint Board on the 18th day of June, 2012 (CH Case No. 08-094).

Pursuant to the authority to issue Development Permits under Section 24 of the *Niagara Escarpment Planning and Development Act, R.S.O. 1990, Chapter N.2*, delegated by the Minister of Natural Resources and Forestry under Section 25 of the *Act*, the Niagara Escarpment Commission hereby issues this **DEVELOPMENT PERMIT** for the proposed development described above, **subject to the attached Conditions**.

This Development Permit is transferable, unless prohibited by a Condition of this Development Permit, provided the new Permit holder develops strictly in accordance with the Conditions of this Development Permit.

Date: July 31, 2014

DEVELOPMENT PERMIT CONDITIONS

#6708/S/E/2013-2014/9061

1. Non-fulfillment or breach of any one of the conditions shall render the Development Permit void.

2. A site inspection(s) to the property may be undertaken by the Niagara Escarpment Commission to ensure that the development complies with the conditions of the Development Permit. Persons may accompany the Commission representative on the site inspection(s) who possess professionally recognized expert or special knowledge related to the conditions of the Development Permit.

3. No building permit or other licence, certificate, permit, or other permission relating to development shall be issued or be considered to be in force unless a Development Permit is in effect.

4. The Development Permit shall expire three (3) years from its date of issuance unless the development has commenced and a valid quarry licence and other related approvals, as necessary, has/have been issued within three (3) years.

5. Development shall take place in accordance with the Operational Plan and the Rehabilitation Plan (the "Plans") prepared by MacNaughton Hermsen Britton Clarkson Planning Limited dated revised May 24, 2011 and further revised September 25, 2012, October 11, 2012 and March 18, 2014 and submitted for the purpose of the Category 2 - Class "A" request for licence through the Ministry of Natural Resources and Forestry, or in accordance with any revision or other change to the Plans as may be recommended and approved by the Ministry of Natural Resources and Forestry.

6. No grading of the existing contours in the area of the licence is permitted with the exception of that which is a necessary part of a quarry operation in the "Mineral Resource Extraction Area" including (but not restricted to) stripping of overburden, construction of berms, internal haul routes, stockpiling of overburden, removal and stockpiling of aggregate, drainage works, mitigation works, reforestation and progressive and final rehabilitation.

7. Grading and site alteration shall be permitted within the “Escarpment Rural Area” designation, in accordance with the Adaptive Management Plan, to include (but not restricted to) berm construction, reforestation, monitoring, recharge ponds, injection wells, piping, related services and facilities and for temporary stockpiling of overburden generated from the implementation/installation of the long term surface water and ground water mitigation and management systems, and, if needed, for short term and long term water mitigation systems.

8. Minor grading and site alteration shall be permitted within the "Escarpment Protection Area" and the "Escarpment Natural Area" designations, in accordance with the Adaptive Management Plan, to provide for reforestation, monitoring and possible mitigation measures such as recharge ponds, injection wells, piping, and related services and facilities.

9. Screening and landscaping of the quarry operation shall occur pursuant to the "Plans" and said "Plans" shall be provided to the Niagara Escarpment Commission.

10. The Amendment to the Township of Clearview Official Plan to permit the expansion of the Walker Duntroon Quarry shall be approved. Such amendment shall not conflict with Niagara Escarpment Plan Amendment 161.

11. This Development Permit shall not issue until the Niagara Escarpment Commission has been notified by the Ministry of Natural Resources and Forestry that a Category 2, Class A Licence to permit a quarry below water pursuant to the *Aggregate Resources Act* is ready to be issued in accordance with the directions and Site Plans directed by the Joint Board in Case No. 08-094 as finally approved by the Minister of Natural Resources and Forestry. Once the Development Permit is issued in accordance with the Joint Board's direction, and as approved by the Minister of Natural Resources and Forestry, a copy of the approved licence and Site Plans shall be filed with the Niagara Escarpment Commission and these shall be the Site Plans and licence referred to under Condition 5.

12. This Development Permit allows the installation of monitoring and injection wells, piping, associated servicing and facilities, and the temporary stockpiling of overburden related to the implementation of the surface water and ground water management systems and, if needed, water mitigation measure systems, both inside and outside the licenced boundary. The quarry operator shall implement all relevant requirements of the Adaptive Management Plan. The quarry operator shall also implement all requirements imposed by the Ministry of Natural Resources and Forestry and/or the Ministry of the Environment and Climate Change, the independent third party that is holding the financial securities for the Adaptive Management Plan, in respect to the on- and off-site long term operation, management, and monitoring of this system.

13. The proposed plantings on lands located within, and to the north and east of, the *Aggregate Resources Act* licence area shall be as set out on the "Plans".

14. The quarry operator shall obtain a Permit-To-Take-Water (PTTW) from the Ministry of Environment and Climate Change (MOECC), as required, for the proposed quarry dewatering and an Environmental Compliance Approval (ECA) for the discharge of excess water. The quarry operator shall comply with the terms and conditions of the PTTW and the ECA.

15. Prior to the commencement of extraction within each of the three phases shown on the *Aggregate Resources Act* Site Plans, the quarry operator shall post financial security, to be held by an independent party, in an amount equal to one-third of the cost of ongoing water management and monitoring activities that may be required during the quarry rehabilitation and lake filling period. The security, or the balance thereof together with any accumulated interest, shall be returned to the quarry operator upon successful completion of the rehabilitation and upon surrender of the licence.

16. Prior to commencement of extraction, the quarry operator shall notify the Niagara Escarpment Commission of the Ministry of Natural Resources and Forestry approval of an appropriate Adaptive Management Plan (AMP) as set out on the *Aggregate Resources Act* Site Plans (Operational Plan, Page 2A of 4 and 2B of 4).

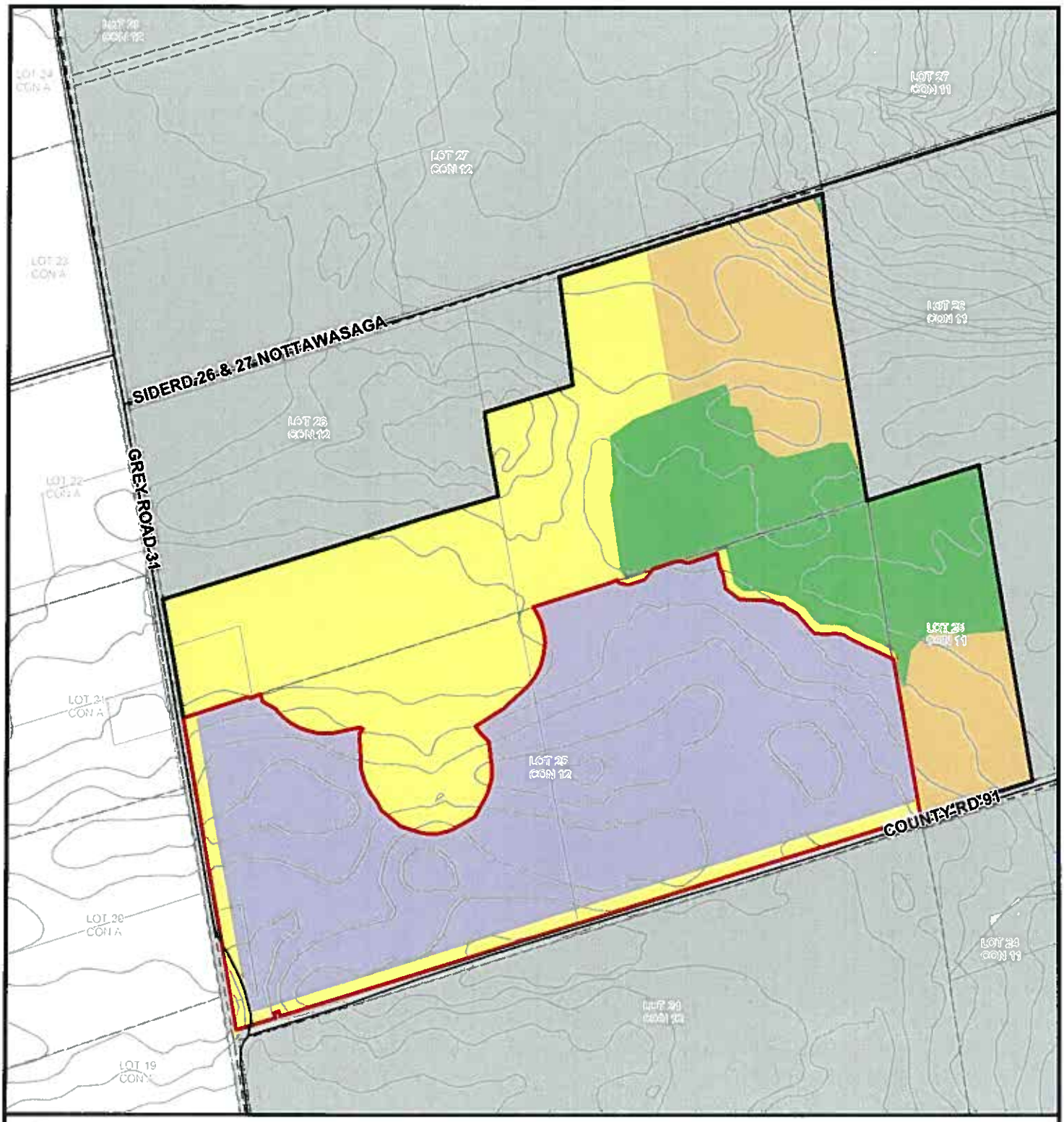
17. Within six months of the issuance of this Development Permit, the Niagara Escarpment Commission shall be notified that the *Aggregate Resources Act* Licence held by Walker Aggregates Inc. for the Osprey Quarry in the Municipality of Grey Highlands has been surrendered, failing which this Development Permit shall become null and void.

18. Within 24 months of the issuance of this Development Permit, the Niagara Escarpment Commission shall be notified by the Ministry of Tourism, Culture and Sport that the former "Millar" barn has been appropriately documented and photographed, as set out on the *Aggregate Resources Act* Site Plans (Operational Plan, Page 2B of 4).

19. No material excavated from lands subject to this permit and Niagara Escarpment Plan Amendment 161 may be processed at the existing licenced quarry immediately to the south (Licence No. 3514) until:

    i. a Development Permit, and any required Niagara Escarpment Plan Amendment, has been obtained to permit the processing of material excavated from these lands using the processing facility at the existing licenced quarry (Licence No. 3514), or

    ii. the licence issued under the *Aggregate Resources Act* for these lands is amalgamated with licence for the existing licenced quarry immediately to the south (Licence No. 3514).



SCHEDULE A
FOR AMENDMENT PS 161 05

(Approved Pursuant to the Decision of the Joint Board Dated June 18, 2012)

Ontario

- Escarpment Natural Area
- Escarpment Protection Area
- Escarpment Rural Area
- Mineral Resource Extraction Area
- Subject Lands
- Licence Area
- Area of Niagara Escarpment Plan Outside of Amendment PS 161 05

The Niagara Escarpment Plan Designations shown on this map are approximate and subject to confirmation through site inspection and the application of the "Interpretation of Boundaries" section of the Niagara Escarpment Plan

This map is not a legal document and may contain errors or ommissions

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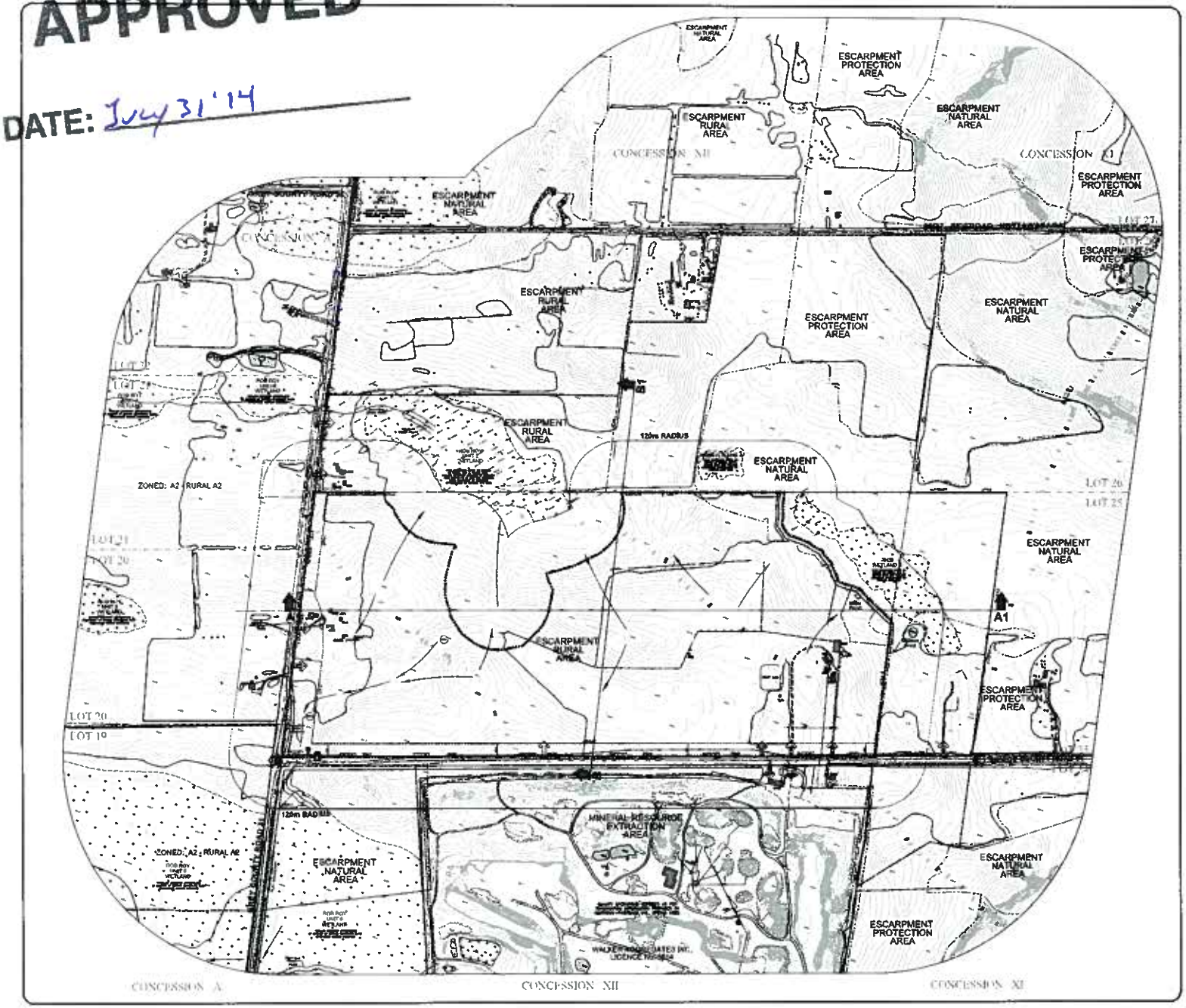
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SOURCE
Base derived from the Ontario Digital Topographic Database. Scale 1:10000

Map Compiled and Produced by the Geographic Information Systems (GIS) Department of the Niagara Escarpment Commission, Ministry of Natural Resources

NEC
APPROVED

DATE: July 31 '14



Existing Features

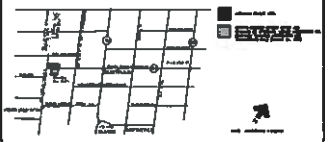
1 of 4

Legend

- Expansion Licence Boundary
- South Quarry Licence Boundary
- Limit of Extraction
- Walker Aggregates Inc. Lands
- Lots and Concessions
- Hydro Pole Line
- Building/Structure
- Niagara Escarpment Designation Boundary
- Existing Driveway
- Existing Stream
- Pedestrian Entrance
- Entrance to Phase 1
- Entrance/Exit
- Existing Vegetation
- Direction of Surface Drainage
- Wetland Boundary
- Existing Fence
- Pond
- Existing Spot Elevation
- Elevation, Contour
- Niagara Escarpment Plan Boundary
- Parcel Fabric
- Cross Sections
- Existing Ditch

NOTES:

Key Map



Scale 1:3000

MacNaughton Hermsen Britton Clarkson Planning Limited

PROJECT NAME:
Duntroon Quarry Expansion

Lot 25 and Part Lot 26,
Concession XII and
Part Lot 25, Concession XI
Clearview Township
Simcoe County

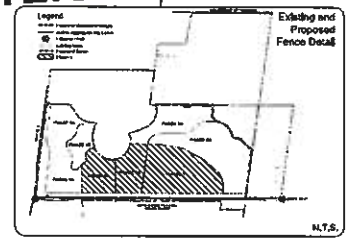
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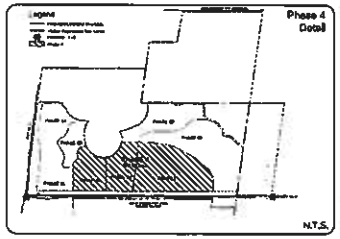
Walker Industries Holdings Limited
Aggregates and Construction Group

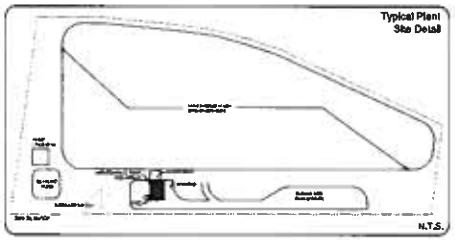
28/05/2014

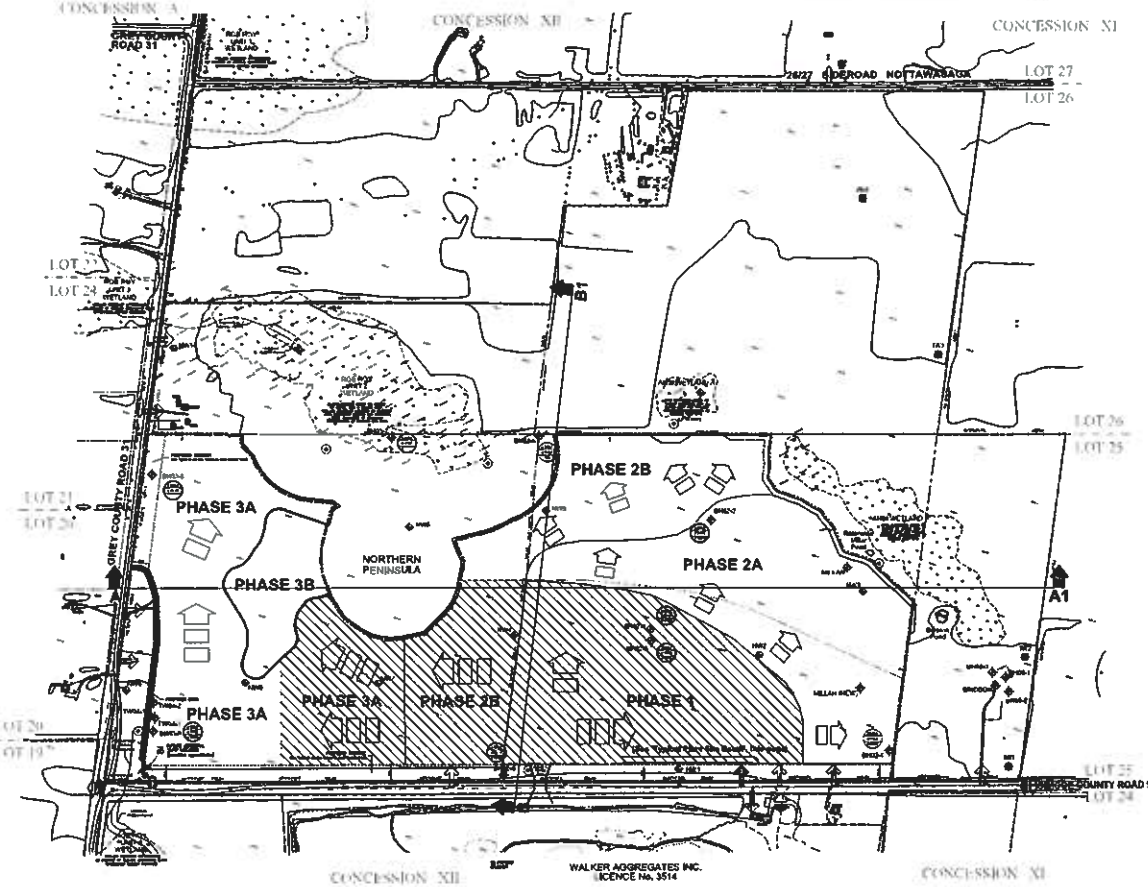
NEC
APPROVED

DATE: July 3, '14









GENERAL NOTES (cont'd):

Operational Plan 2A of 4

Legend

- Expansion Licence Boundary
- Limit of Extraction
- Lots and Concessions
- Field/Service Entrance
- Entrance/Exit
- Entrance to Phase 1
- Direction of Extraction
- Extraction Face
- Existing Well Monitor Location
- Quarry Dewatering Discharge Location
- Proposed Additional Well Monitor Locations
- Dual Purpose Monitor/ Recharge Injection Well Locations
- Existing Driveway
- Cross Sections
- South Quarry Licence Boundary
- Walker Aggregates Inc. Lands
- Existing Spot Elevation
- Wetland Boundary
- Existing Stream
- Pond
- Plant Site
- Building/Structure
- Existing Vegetation
- Existing Fence
- Proposed Berms
- Proposed Elevations
- Niagara Escarpment Plan Boundary
- Phase I

GENERAL NOTES

Scale 1:3000

MacNaughton Hermsen Britton Clarkson Planning Limited

PROJECT NAME:
Dunroon Quarry Expansion

Lot 25 and Part Lot 26, Concession XII and Part Lot 25, Concession XI
Clearview Township
Simcoe County

Walker Industries
Walker Aggregates Inc.

Walker Industries Holdings Limited
Aggregates and Construction Group

NEC
APPROVED

DATE: July 21 '14

Operational 2B of 4 Plan

Legend

Expansion Licence Boundary

Limit of Extraction

Storm Quarry Licence Boundary

Walker Aggregates Inc. Lands

Scale As Noted

Dunlop Quarry Expansion

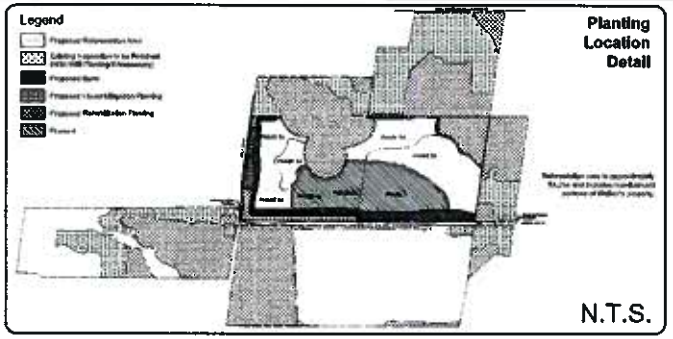
Lot 25 and Part Lot 26, Concession XII and Part Lot 25, Concession XII Glenelg Township Grey County

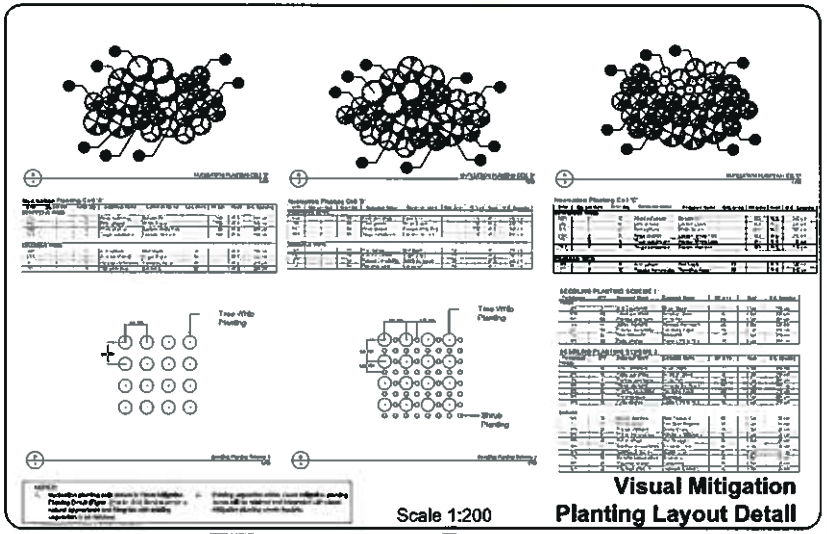
Walker Industries

Walker Aggregates Inc.

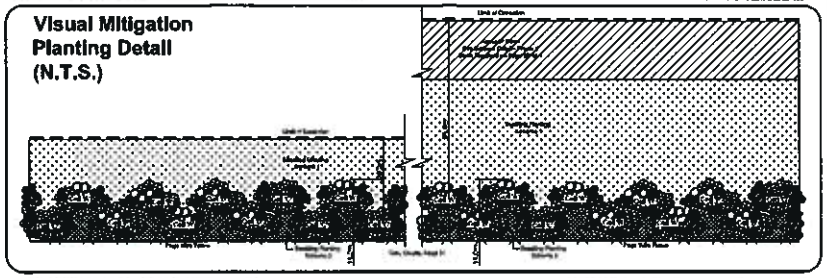
Walker Industries Holdings Limited
Aggregates and Construction Group

Planting Location Detail

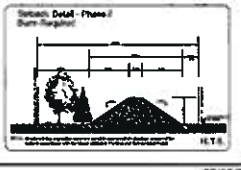




Visual Mitigation Planting Detail (N.T.S.)





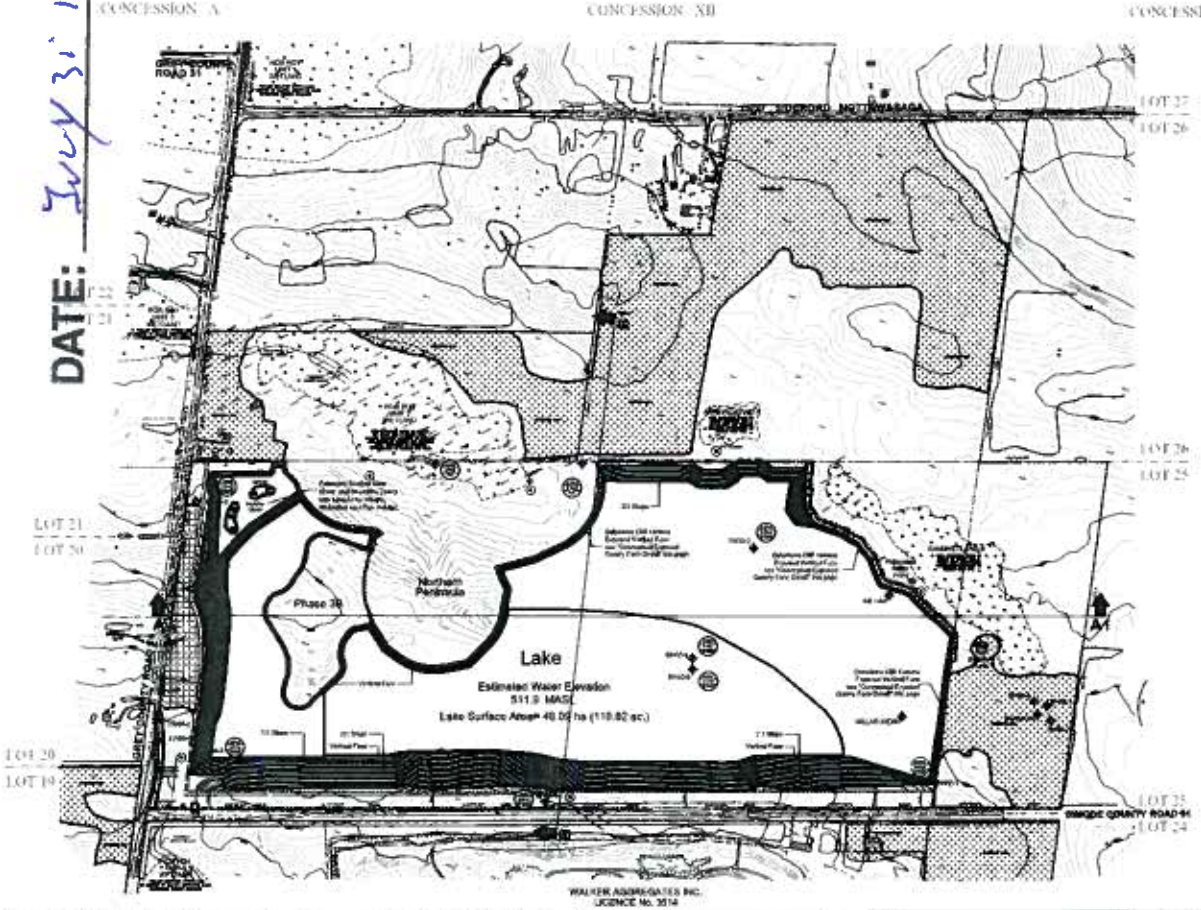


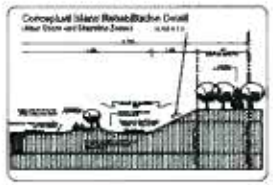
28/05/2014

NEC APPROVED

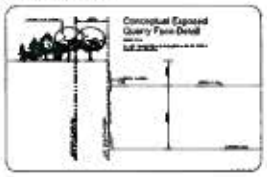
DATE: July 31, 14

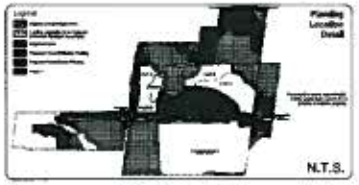












Rehabilitation Plan 3 of 4

Legend

- Expansion Licence Boundary
- South Quarry Licence Boundary
- Limit of Extraction
- Walker Aggregates Inc. Lands
- Lot and Concession
- Existing Elevation and Contour
- Existing Spot Elevation
- Proposed Elevation and Contour
- Proposed Elevations
- Existing Fence
- Existing Vegetation
- Existing Wetland Boundary
- Reforested Area
- Pond
- Existing Well Monitor Location
- Niagara Escarpment Plan Boundary
- Quarry Dewatering Discharge Locations
- Existing Driveway
- Excavation Face
- Proposed Visual Mitigation Planting
- Existing Stream
- Cross Sections

GENERAL NOTES

Scale 1:3000

MacNaughton Hermsen Britton Clarkson Planning Limited

PROJECT NAME:
Dunnroon Quarry Expansion

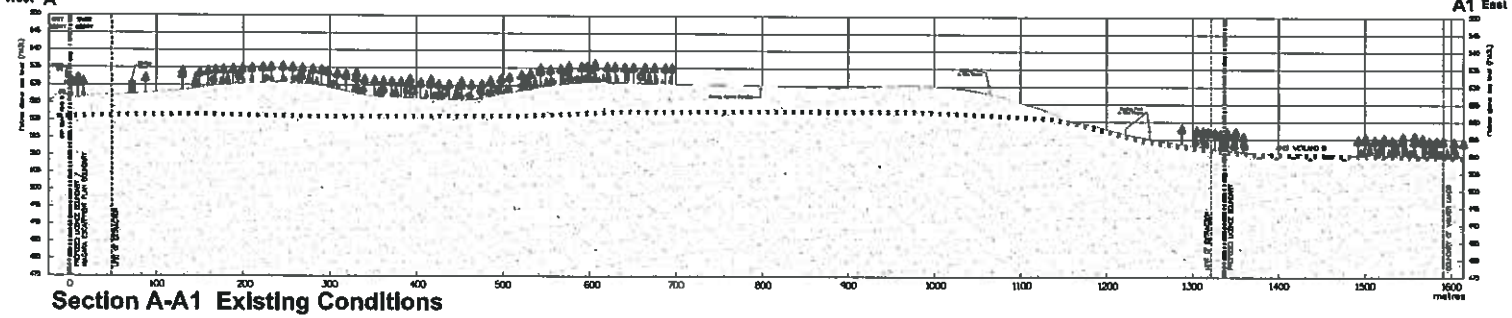
Lot 25 and Part Lot 26, Concession XII and Part Lot 25, Concession XI Clearview Township Simcoe County

Walker Industries Holdings Limited
Aggregates and Construction Group

Walker Aggregates Inc.

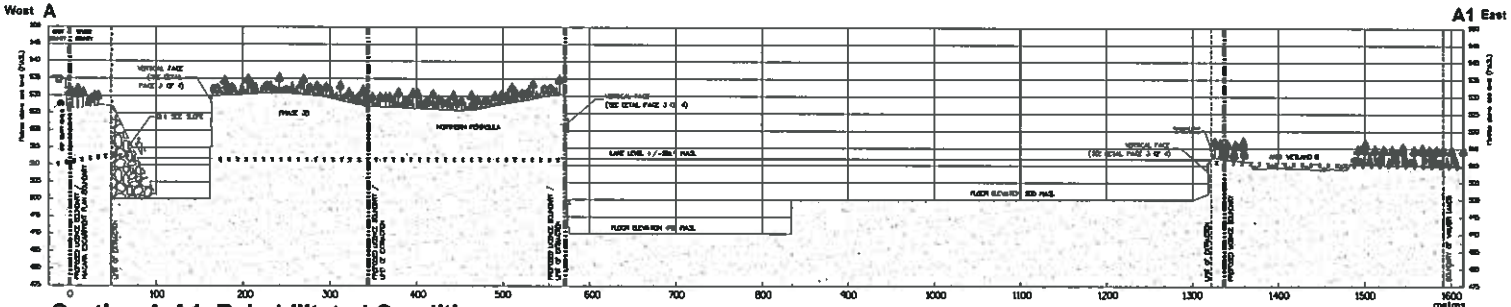
28/05/2014

West A — A1 East



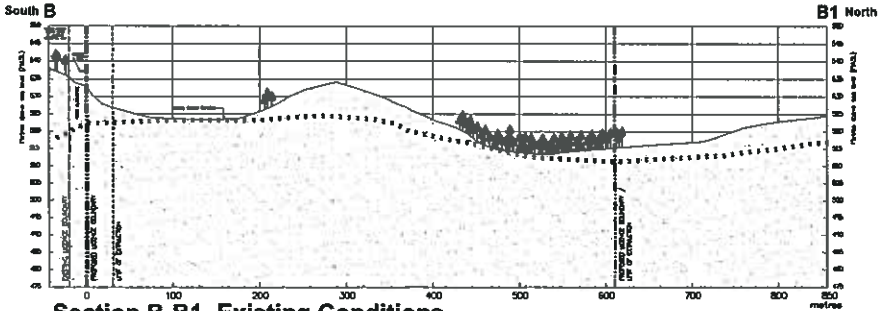
Section A-A1 Existing Conditions

West A — A1 East



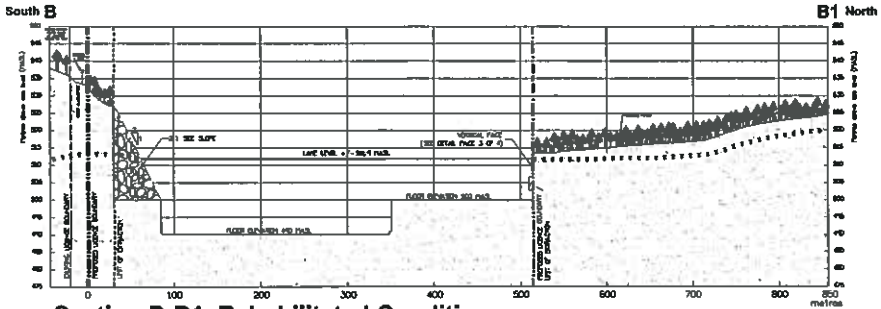
Section A-A1 Rehabilitated Conditions

South B — B1 North



Section B-B1 Existing Conditions

South B — B1 North



Section B-B1 Rehabilitated Conditions

NEC APPROVED

DATE: May 31 '14

Cross Sections

4 of 4

Legend

- Walker Aggregates Inc. Lands
- Limit of Extraction
- Expansion Licence Boundary
- South Quarry Licence Boundary
- Swamp or Wetland
- Ground Water Table
- For Details of Plan View see Pages 1, 2A & 3 of 4

NOTES:

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]

Scales
Horizontal 1:2000
Vertical 1:500
Vertical Exaggeration 4x
Unless Otherwise Noted on Plan

MHBC

MacNaughton Hermsen Britton Clarkson Planning Limited

PROJECT NAME:
Dunrobin Quarry Expansion

Lot 25 and Part Lot 26, Concession XII and Part Lot 25, Concession XI Clearview Township Simcoe County

Walker Industries

Walker Aggregates Inc.

Walker Industries Holdings Limited
Aggregates and Construction Group

28/05/2014

Tab **8**



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PLANNING
URBAN DESIGN
& LANDSCAPE
ARCHITECTURE

From: Rossalyn Workman <rworkman@clearview.ca>
Sent: Thursday, March 28, 2024 3:18 PM
To: Ellen Ferris <eferris@mhbcplan.com>; Brian Zeman <bzeman@mhbcplan.com>
Cc: Amy Cann <acann@clearview.ca>; Dan Perreault <dperreault@clearview.ca>; Patti Kennedy <pkennedy@clearview.ca>; Christine Taggart <ctaggart@clearview.ca>; Jennifer Georgas <Jennifer.Georgas@rjburnside.com>; Danielle Barranger <dbarranger@clearview.ca>
Subject: Pre-Consultation Response Summary - Duntroon Quarry Expansion - I23-058

Hi Ellen and Brian

Thank you for your patience and please see attached the comments in response to the pre-consultation submission that you made October 11, 2023.

Please have a look and let me know if you have any questions or comment.

Have a great weekend.

Thanks Rossalyn

Rossalyn Workman MURP, RPP, **Dipl.M.M.,**

Community Planner, Approvals and Policy

Township of Clearview

705-428-6230 ext. 248

rworkman@clearview.ca

PRE-CONSULTATION RESPONSE

SCHEDULE 'A'

CLEARVIEW

Issue Summary & Completeness Requirements

The following table outlines a high-level summary of the issues identified as part of your Pre-Consultation Review and the studies and plans that are required to accompany a formal Planning Act application as part of a complete submission. Note that the formal review process may reveal the need for additional plans/studies. Refer to the Township of Clearview Official Plan for more information about the studies/plans required herein. Please review the original staff and agency comments included in the Pre-consultation package. This summary only includes a selection of the most notable feedback and does not reiterate all applicable Township, upper-tier, and agency policy/regulations. Note that a formal application will not be accepted by the Township prior to approval/acceptance by the Township and appropriate approval authority of a Terms of Reference for every required submission item (plan, study, etc.).

	Issue	Studies/Plans Required for Completeness
A.	**Township of Clearview Official Plan (2001)**	
1.	Schedule 'A' of the Township of Clearview Official Plan (OP) 2001 designates the subject lands as 'Mineral Resource Extraction Area', the lands are contained within the Niagara Escarpment. The 'Mineral Resource Extraction Area' designation permits a quarry and all related components but does not permit an asphalt plant or a concrete batching plant. The lands are also subject to the site-specific policy 'Duntroon Quarry Expansion Special Policy Area	To move ahead with the proposal the following will be required: a concurrent **Official Plan Amendment, Niagara Escarpment Plan Amendment, and Updated Site Plan.** In addition, the following studies will need to be completed to the satisfaction of the Township of Clearview and the County of Simcoe, Niagara Escarpment prior to the applications being considered: • **Planning Justification Report** is required to support Planning Act applications.

	Issue	Studies/Plans Required for Completeness
	5.1.6.8'. this special policy is comprised of 'Mineral Resource Extraction Area' and 'Buffer Lands'. The 'Buffer Lands' remain designated under the 'Escarpment Natural Area', 'Escarpment Protection Area' and 'Escarpment Rural Area.' The 'Buffer Lands' are permitted to be used for water management and monitoring relating to the quarry operations. The lands known as Lot 24, Concession 12 (9861 Cty Rd 91) are permitted to process aggregate materials from Lot 25, Concession 12 (9828 Cty Rd 91) at the existing processing plant on an interim basis until there is sufficient area to move the processing to the Lot 25, Concession 12. Sections of County Road 91 are classified 'Collector Road' and 'Local Road'. In addition, a section of road located east of Grey Road 31 and a point 100 m west of County Road 124, has been designated to be eliminated. The schedule of approvals, is as follows: 1. the Niagara Escarpment Plan will be amended; 2. the Township of Clearview Official Plan Amendment will be considered for adoption;	• **Draft Official Plan Amendment** • **Draft Niagara Escarpment Plan Amendment** • **Visual Screening Plan** detailing of native tree and shrub plannings, outlining the existing natural screens, and proposed new screens. • **Updated Site Plan**

	Issue	Studies/Plans Required for Completeness
	3. the County of Simcoe is the final approval authority for the approval of the local Official Plan Amendment; and, 4. Aggregate Resources Act approvals to the licencing and site plan.	
2.	Currently the Schedule 'A' would eliminate a section of County Road 91, being a section located east of Grey Road 31 and a point 100 m west of County Road 124. As a result of minutes of settlement reached between the Township and other parties, this section of road is no longer to be eliminated. This section of road will be maintained by the road authority in perpetuity. As this section of road will not be eliminated it will allow the other parts of County Road 91 to continue to be a major road in Clearview Township. The policies will reflect this road use classification. The effects of the minutes of settlements will allow the tunnel that currently bridges the properties of Lot 24, Concession 12 and Lot 25, Concession 12 to permit aggregate materials to be mined and processed, to remain open for the long term. Policies will reflect this long-term use of the tunnel.	The Official Plan Policy/Schedule will outline: • This section of road will no longer be eliminated but should be classified as a 'Arterial Road.' • The other sections of this road should be classified as 'Arterial Road'. • The Tunnel existence should be acknowledged as a long-term land use to run under the road. • **Tunnel Stability Study** – to include the assessment of the tunnel during operations and during lake filling and include plan for the long-term structural integrity following completion of the Duntroon quarry operations.

PRE-CONSULTATION RESPONSE

SCHEDULE 'A'

CLEARVIEW

	Issue	Studies/Plans Required for Completeness
3.	Currently Lot 24, Concession 12 has not been in active aggregate extraction but instead has been used for processing of aggregate materials. Lot 24, Concession 12, is designated 'Mineral Resource Extraction Area' and will be subject to a deepening of the Quarry. The deepening of the Quarry will go from +/- 500 MASL to +/- 490 MASL. This will allow the extraction of high-quality aggregate material. A development permit from the NEC is required for only a portion of the lands to be deepened because some of the lands were licensed prior to June 10, 1975. The portion that was licenced after June 10, 1975 will require a development permit from the NEC. The NEC Plan designation 'Mineral Resource Extraction Area' permits licenced mineral aggregate operations to occur. All lands will need to be designated to permit the extraction deepening. We understand that Lot 25, Concession 12 was approved to the depth of 490 MASL. It is not clear from the policy whether the deepening permission was also afforded to the lands located at the Lot 24, Concession 12. The lands are currently designated 'Mineral Resource Extraction Area' however,	Official Plan Policy/Schedule will outline the change in land use to include extraction of mineral aggregate from +/-500 MASL to +/- 490 MASL for the property Lot 24, Concession 12 and will be supported by the following: • **Planning Justification Report** – should consider the section 4.9.3.1. Amendment Criteria and 4.9.3.2. General Development Principles • **Natural Heritage Assessment Brief** - included in this report any impacts that could be realized to natural heritage features or functions. • **Hydrogeological Report** – potential impacts on water resources in area • **Visual Screening Plan -** detailing of native tree and shrub plannings, outlining the existing natural screens, and proposed new screens. • **Addendum to the existing traffic, noise, dust, and vibration studies** – add to studies already completed for Duntroon Quarry Extension to reflect expansion of the quarry depths on Lot 24, Concession 12

	Issue	Studies/Plans Required for Completeness
	ARA licensing will be required and to ensure clarity on the approvals for extraction on these lands in the future, the Township will require policy be included in the amendment to the Official Plan to permit the extraction to 490 MASL. Policy should also be included for the temporary placement of the processing equipment on Lot 25, Concession 12 while deepening is occurring on the on Lot 24, Concession 12. In addition, it should be clear that the permanent and primary location of the processing equipment will occur on Lot 24, Concession 12.	
B.	**Zoning Conformity**	
1.	The lands are currently zoned 'Niagara Escarpment Commission' (NEC) and a portion of the lands is impacted by the 'Hazard Land Overlay (FP)'. The lands remain within the regulation of the Niagara Escarpment.	No change to the zoning is required.
C.	**Site Plan Approval**	

PRE-CONSULTATION RESPONSE

SCHEDULE 'A'

CLEARVIEW

	Issue	Studies/Plans Required for Completeness
1.	The Township of Clearview Site Plan Control By-law 07-17 (Section 5.12) states that that any new development within the Niagara Escarpment (NEC) Area is subject to site plan control and a site plan agreement shall be required to be registered on title of the lands. The subject lands are also subject to Aggregate Resources Act (ARA), which is a provincial authority that regulates all aggregate resources in the Ontario. The ARA regulates the governing of aggregate management, licencing, permitting, changes to approvals, inspections, enforcement and ensure that rehabilitation occurs on site. In this case the provincial policy of the ARA is the more restrictive policy to regulate the development on the subject lands. The aspects covered under the Township site plan approval are a duplication to the process the ARA undertakes. For this reason, the Township site plan approval is not required. The Township requests that all final approved plans once approved by the Ministry of Natural Resources and Forestry (MNRF), be copied to the Township. The approved plans could include: Existing Features, Operational Plan, Progressive Rehabilitation Plan and Typical Cross Sections.	Please forward to the Township any approvals given under the ARA, including an updated license or any plans such as: • Existing Features • Operational Plan, • Progressive Rehabilitation Plan • Typical Cross Sections.

PRE-CONSULTATION RESPONSE

SCHEDULE 'A'

CLEARVIEW

	Issue	Studies/Plans Required for Completeness
D.	**Public Works & R.J. Burnsides Engineering Comments**	
1.	Provide a covering letter or memo providing details such as current site operations, projected site operations given the changes in the application, phasing and details of buildout as the north and south sides are mined, etc. Confirm current and future locations of processing equipment. Provide projected timelines associated with the phasing over the lifetime of the quarry. Provide details on currently held permits, requirements associated with those permits, and the implications or changes to permits expected as part of this application. Provide a list/summary of historical reports completed to date (i.e. noise, environmental, dust, etc.) and comment on whether these reports will require updating, or supporting information to why they are still valid.	Provide project summary and phasing memo.
2.	The application is to deepen the southern quarry and portions of the northern quarry from 500 masl to 490 masl. Hydrological and groundwater issues as a result of this deepening shall be addressed.	Provide a Hydrogeological Report. Report to address groundwater including pumping volumes, receivers, etc.

PRE-CONSULTATION RESPONSE

SCHEDULE 'A'

CLEARVIEW

	Issue	Studies/Plans Required for Completeness
3.	Provide report on the status of the tunnel, condition assessment, upgrades required (if any), associated timing, decommissioning, long term stability and maintenance requirements, other information as required.	Provide tunnel report.
4.	It is understood that operations and therefore vehicular and truck traffic will not increase. Under these conditions, a TIS is not required. If it is determined that there will be an increase in truck traffic, a TIS will be required.	Confirm status of vehicular and truck traffic volumes.
5.	Provide updated rehabilitation plan. If the quarry is deeper then there will be more water required to fill it. Please address where this water is coming from and how this change will impact the volumes and duration of lake filling.	Provide rehabilitation plan, including proposed duration/timeline.
6.	Grading plans and associated details to be provided to address any changes to the site outside of the deepening of the quarry including berming, additional safety measures, etc.	Provide grading plans.

PRE-CONSULTATION RESPONSE

SCHEDULE 'A'

CLEARVIEW

	Issue	Studies/Plans Required for Completeness
7.	Stormwater quality and quantity controls are required or addressed in the submission to control to pre-development conditions. The SWM design shall include consideration of external areas and convey drainage to an adequate outlet. Blocking external drainage causing ponding on adjacent properties is not permitted. Water balance calculations are to be provided.	A **Stormwater Management (SWB) Brief and Plans** are required in support of the proposed development as part of a complete Site Plan Approval Application. The following studies and plans shall also be provided in support of the **SWM Brief** and **Site Plan** application: • **Geotechnical Investigation** • **Erosion & Sediment Control (ESC) Plan.** • **Standalone Stormwater Operations and Maintenance Manual (if applicable)**
8.	Erosion and Sediment Controls are to be detailed in the SWM report and on drawings to ensure the surrounding properties and ditches/storm sewer are not contaminated by sediment during and after site construction. Controls to include (but not limited to) silt fence, mud mat, rock check dams, erosion protection, etc. Include phasing details and Township's standard notes for ESC. Include any detail drawings as required.	
9.	Geotechnical investigations are required to determine recommendations on seasonal high groundwater levels including recommendations of separation from underside of slab, infiltration, road base and asphalt recommendations, heavy duty and light duty pavement (where required), etc.	

	Issue	Studies/Plans Required for Completeness
10.	Autoturn or equivalent analysis is required to confirm fire route and turning radii for emergency vehicles, , etc. as applicable to the design of the site. Fire route and applicable signage to be shown.	A **Site Plan** is required. Autoturn swept path analysis shall be shown on the Site Plan or Civil drawings. Delineation of the proposed parking lot to be provided on all applicable Plans. Including the proposed driveway entrance/access locations and dimension(s).
11.	It is acknowledged that the Plans provided are to demonstrate the proposed concept. Provide a comprehensive engineering drawing set with the next submission, stamped by a Professional Engineer in good standing and registered in Ontario.	All future submissions in support of a Development Application will be required to include at a minimum the following Plans: • Cover Sheet, complete with the following information: ▪ Development name ▪ Key plan showing site location ▪ Developer & Consultant's information ▪ Drawing index ▪ Submission number • Site Plan • Erosion & Sediment Control (ESC) Plan • Site Servicing Plan • Stormwater Facility Design Plan & Details • Overall Grading Plan • Landscape/Restoration/Rehabilitation Plan • Lighting/illumination Plan (as applicable/determined by Applicant's engineers and specialists). Lighting Design

	Issue	Studies/Plans Required for Completeness
		and photometric analysis demonstrates that all lighting levels are zero at the property line. All lights to be dark sky compliant. • Signage Plan (as applicable/determined by Applicant's engineers and specialists) • Details & Notes Plan Refer to Township Engineering Standards for details required for the applicable Plans/drawings.
12.	It is acknowledged that the Plans provided are to demonstrate the proposed concept. Please provide comprehensive reports with the next submission, stamped by a Professional Engineer in good standing and registered in Ontario.	The following reports are required at detailed design submission: • ~~Functional Servicing Report (FSR)~~ • Stormwater Management Brief (SWB) • ~~Traffic Impact Study (TIS)~~ • ~~Parking Justification Study (PJS)~~ • Geotechnical Report • Hydro-geological Report • ~~Tree Inventory, Assessment & Preservation Report~~ • SWM Facility Operations & Maintenance Manual (as applicable) • ~~Environmental Impact Statement~~

	Issue	Studies/Plans Required for Completeness
		• ~~Environmental Site Assessment (due to past uses) (not required)~~ • ~~Air and Noise Study (not required)~~ • Security Estimate, separated for internal and external works • Project Summary Memo • Tunnel Study • Rehabilitation Plan Update Refer to Township Engineering Standards for details required for the applicable Reports.
13.	Any work in the Township's right-of-way to be restored to equal or better condition.	This shall be reflected on the drawings and stated in the notes. Provide restoration details.
14.	Cost for the Township review of Engineering-related matters will be paid for in full by the applicant.	**Application Deposits** are required to be provided to the Township as part of each application submission. Payment of peer review invoices remitted from the Township shall be paid by the applicant throughout the process.
15.	Design and construction shall be in accordance with the most current version of the Township of Clearview Engineering Standards, MECP Guidelines, OPSS, and all other standards as applicable.	Reference applicable standards for design.

	Issue	Studies/Plans Required for Completeness
16.	Public Works/Engineering Staff reserve the right to provide further comments as the Application proceeds through the Planning Approval process. We note that without a fulsome engineering package to review, there may be additional technical items or information required for a complete design submission in line with all technical standards and requirements.	Provide any additional reports or drawings as recommended by Applicant's engineers and specialists to support a complete submission.
E.	**Township of Clearview Building Division**	
1.	Based on the review of the submission the Building Department has no comments on the proposed development as presented.	
F.	**Ministry of Natural Resources and Forestry (MNRF), Aggregate Resources Act Approvals (ARA)**	
1.	For any general information to apply for an aggregate licence or permit can be found: www.ontario.ca/page/aggregate-resources-policies-and-procedures	

	Issue	Studies/Plans Required for Completeness
	The Aggregate resources standards for Ontario can be found here: www.files.ontario.ca/mnrf-aggregates-combined-standards-en-2020-08-27.pdf	
2.	The comments provide direction on how to prepare a site plan or technical plan for an application for different classes of licenses for different types and sizes of pits. They state the professions that can certify and prepare the license application. They also outline where they can find the resources that can help make the application.	
G.	**Niagara Escarpment Commission**	
1.	The subject lands are within R.R.O. 1990, Regulation 826 Designation of Area of Development Control for the Niagara Escarpment and within the Niagara Escarpment Plan (NEP) Area. Any development on the subject lands requires a development permit application unless determined to be exempt under Ontario Regulation 828 Development within the development Control Area. The application will be reviewed with an approach of	Applicants will be required to submit **Development Permit Applications** to the Niagara Escarpment Commission.

	Issue	Studies/Plans Required for Completeness
	achieving development that is compatible with the escarpment natural environment. The application will also be reviewed against policies contained within the Provincial Policy Statement and the Niagara Escarpment Plan (NEP). The subject lands are designated as follows: • 9861 Township Road 91(Licence 3514) – Escarpment Natural Area, Mineral Resource Extraction Area • 9828 Township Road 91 (Licence 607841) – Escarpment Natural Area, Escarpment Rural Area, Mineral Resource Extraction Area The permitted uses and Mineral Aggregate Resources Mineral Resource Extraction Area designation includes mineral aggregate operations licensed pursuant to the Aggregate Resources Act and areas where mineral aggregate resource extraction may be permitted, subject to policies of the Niagara Escarpment Plan.	
2.	NEC Amendment 161 (Part 1.9.3.18 of the NEP) and associated development permit S/E/2013-2014/9060 established permissions and approval for the processing plant and tunnel associated with operations on Lot 24 and Lot 25, specifically Amendment 161 permitted:	

	Issue	Studies/Plans Required for Completeness
	Notwithstanding any other provision of this Plan, uses accessory to the extraction of aggregate from Lot 25, Concession 12 (associated with Amendment 161 to the Niagara Escarpment Plan) shall be permitted on Lot 24, Concession 12, Township of Clearview, ARA Licence No. 3514, including all processing facilities, but only for such a period of time as is necessary to: (i) create an area of 18 hectares on the quarry floor in Phase 1 of the ARA Licence on Lot 25, Concession 12 (associated with Amendment 161 to the Niagara Escarpment Plan) and (ii) to discontinue or relocate the accessory uses. An asphalt plant, concrete plant, brick manufacturing plant and any other similar manufacturing use shall not be permitted as an accessory use on Lot 24, Concession 12, Township of Clearview, ARA Licence No. 3514.	
3.	An application to amend the NEP will be required where a change to the current permissions is proposed. Subject to approval of an Amendment, the issuances of a development permit(s) would be necessary. A completed application to amend the Plan shall be submitted to the NEC and include a Planning Justification as well as research material, reports, plans and the like to detail how the amendment meets with plan objectives, specifically:	Applicants will be required to make and application to amend the Niagara Escarpment Plan. The submission will include: • **Planning Justification Report** – included in the report will be research material, reports and plans to detail how the amendment meets with the plan objectives set out in Section 8 (a. through g.)

	Issue	Studies/Plans Required for Completeness
	Section 8 (Niagara Escarpment Planning and Development Act): The objectives of the Niagara Escarpment Plan are, and the objectives to be sought in the consideration of amendments to the Plan shall be, in the Niagara Escarpment Planning Area, (a) to protect unique ecologic and historic areas; (b) to maintain and enhance the quality and character of natural streams and water supplies; (c) to provide adequate opportunities for outdoor recreation; (d) to maintain and enhance the open landscape character of the Niagara Escarpment in so far as possible, by such means as compatible farming or forestry and by preserving the natural scenery; (e) to ensure that all new development is compatible with the purpose of this Act as expressed in section 2; (f) to provide for adequate public access to the Niagara Escarpment; and	

	Issue	Studies/Plans Required for Completeness
	(g) to support municipalities within the Niagara Escarpment Planning Area in their exercise of the planning functions conferred upon them by the *Planning Act*. R.S.O. 1990, c. N.2, s. 8; 1999, c. 12, Sched. N, s. 4 (5); 2009, c. 12, Sched. L, ss. 7, 10.	
I.	**County of Simcoe**	
1.	Per Policy 3.10.1 of the County of Simcoe Official Plan, development within the Niagara Escarpment Plan must meet the requirements of the Niagara Escarpment Plan as well as the requirements of this Plan and the Township of Clearview Official Plan that are not in conflict with the Niagara Escarpment Plan.	
2.	We will also note for the applicant that the County is the approval authority for local official plan amendments with an associated fee of $3,000.00 (privately initiated) to be paid when the adoption package is submitted to the County.	Applicant will submit a **fee** of $3000.00 to the County of Simcoe for review of the Official Plan Amendment.

PRE-CONSULTATION RESPONSE

SCHEDULE 'A'

CLEARVIEW

	Issue	Studies/Plans Required for Completeness
J.	**County of Simcoe – Transportation and Engineering**	
1.	The following comments have been provided with the understanding that the Township Road 91 may potentially transferred to the County of Simcoe in the future. The comments below are reflect the County Transportation and Engineering comments regarding this application.	
2.	An Engineering Review Application form and applicable fees will be required for each submission.	Applicant will apply with the appropriate form and pay the appropriate fee for review of the submission.
3.	The County of Simcoe Setback By-law No. 5604 regulates the location of buildings and other structures within 45 metres of lands adjacent to County Roads. Any new buildings and other structures must be located, at minimum, 45.0 metres from the Limit of the County Road 91 road allowance. Structures include, but are not limited to: septic systems and fields, wells, earth berms, storm ponds, etc. If the 45.0 metre setback cannot be met, the Owner shall apply to the County of Simcoe for a setback variance to allow a reduction in the setback from County Road 91.	Applicant may be required to submit a **variance** to the County to allow a reduction in the setback from County Road 91.

PRE-CONSULTATION RESPONSE

SCHEDULE 'A'

CLEARVIEW

	Issue	Studies/Plans Required for Completeness
4.	Fencing must be setback at minimum 0.3 metres adjacent to the County Road 91 property line, if applicable.	
5.	Please provide structural design details, plans, detail design, cross-sections, as-builts regarding existing tunnel between the original Duntroon quarry and extension located under County road 91.	
6.	The site plans submitted in Schedule E & F are from year 2014-15. Please provide any updated additional plans following those years regarding any kind of alteration to site or addition of new structure.	
7.	A Sign Permit, from the County By-Law Department, will be required for any proposed sign adjacent to County Road 91.	
8.	The applicant will be required to provide copies of all transportation related reports or studies done in support of their application and forward them to the County's Transportation and Engineering Department for review and comment.	

	Issue	Studies/Plans Required for Completeness
K.	**Nottawasaga Valley Conservation Authority Conservation Authority (NVCA)**	
1.	No comments have been received at the time of writing this document. We encourage to reach out to the NVCA to ensure their interests have been addressed.	
M.	**Chippewas of Rama First Nation**	
1.	No comments or concerns.	

BURNSIDE
[THE DIFFERENCE IS OUR PEOPLE]

February 7, 2024

Via: Email (pkennedy@clearview.ca)

Patti Kennedy, C.E.T.
Manager of Engineering
Township of Clearview
217 Gideon Street, P.O. Box 200
Stayner ON L0M 1S0

Dear Patti:

Re: Township of Clearview
Duntroon Quarry
Project No.: MCG100440.0000
Township File No.: I23-058

We have reviewed the pre-consultation submission of the development application documents, received for the Duntroon Quarry Expansion, Township of Clearview.

The following documents were included in the submission received October 30th, 2023:

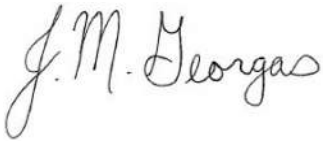
- Pre-Consultation Application
- Schedule A – OrthoPhoto
- Schedule B – Official Plan and Zoning Maps
- Schedule C – Property Details
- Schedule D – Aerial Overview for Quarry Operation
- Schedule E – ARA Site Plan for Quarry
- Schedule F – ARA Site Plan for Expansion
- Cover Letter for Pre-Consultation Request, prepared by MHBC, dated October 10, 2023

Our comments are included in the attached comment form.

We trust the above comments will be of assistance. Should you have any questions, please call our office.

Yours truly,

R.J. Burnside & Associates Limited



Jennifer Georgas, P.Eng
JMG:jmg

Enclosure Schedule 'A' Comment Form

cc: Rossalyn Workman, Township of Clearview, Via: Email (rworkman@clearview.ca)
Christine Taggart, Township of Clearview, Via: Email (ctaggart@clearview.ca)
Dan Perreault, Township of Clearview, Via: Email (dperreault@clearview.ca)

240207_Kennedy_Duntroon Quarry.docx
2024-02-07 4:28 PM

PRE-CONSULTATION RESPONSE

SCHEDULE 'A'

CLEARVIEW

Issue Summary & Completeness Requirements – Duntroon Quarry

The following table outlines a high-level summary of the issues identified as part of your Pre-Consultation Review and the studies and plans that are required to accompany a formal Planning Act application as part of a complete submission. Note that the formal review process may reveal the need for additional plans/studies. Refer to the Township of Clearview Official Plan for more information about the studies/plans required herein. Please review the original staff and agency comments included in the Pre-consultation package. This summary only includes a selection of the most notable feedback and does not reiterate all applicable Township, upper-tier, and agency policy/regulations. Note that a formal application will not be accepted by the Township prior to approval/acceptance by the Township and appropriate approval authority of a Terms of Reference for every required submission item (plan, study, etc.).

	Issue	Studies/Plans Required for Completeness
A.	**Township of Clearview Official Plan (2001)**	
1.		
B.	**Zoning Conformity**	
1.		
C.	**Site Plan Approval**	
1.		

	Issue	Studies/Plans Required for Completeness
2.		
D.	**Public Works and R.J. Burnsides Engineering Comments**	
1.	Provide a covering letter or memo providing details such as current site operations, projected site operations given the changes in the application, phasing and details of buildout as the north and south sides are mined, etc. Confirm current and future locations of processing equipment. Provide projected timelines associated with the phasing over the lifetime of the quarry. Provide details on currently held permits, requirements associated with those permits, and the implications or changes to permits expected as part of this application. Provide a list/summary of historical reports completed to date (i.e. noise, environmental, dust, etc.) and comment on whether these reports will require updating, or supporting information to why they are still valid.	Provide project summary and phasing memo.
2.	The application is to deepen the southern quarry and portions of the northern quarry from 500 masl to 490 masl. Hydrological and groundwater issues as a result of this deepening shall be addressed.	Provide a Hydrogeological Report. Report to address groundwater including pumping volumes, receivers, etc.

PRE-CONSULTATION RESPONSE

SCHEDULE 'A'

CLEARVIEW

	Issue	Studies/Plans Required for Completeness
3.	Provide report on the status of the tunnel, condition assessment, upgrades required (if any), associated timing, decommissioning, long term stability and maintenance requirements, other information as required.	Provide tunnel report.
4.	It is understood that operations and therefore vehicular and truck traffic will not increase. Under these conditions, a TIS is not required. If it is determined that there will be an increase in truck traffic, a TIS will be required.	Confirm status of vehicular and truck traffic volumes.
5.	Provide updated rehabilitation plan. If the quarry is deeper then there will be more water required to fill it. Please address where this water is coming from and how this change will impact the volumes and duration of lake filling.	Provide rehabilitation plan, including proposed duration/timeline.
6.	Grading plans and associated details to be provided to address any changes to the site outside of the deepening of the quarry including berming, additional safety measures, etc.	Provide grading plans.
7.	Stormwater quality and quantity controls are required or addressed in the submission to control to pre-	A **Stormwater Management (SWB) Brief and Plans** are required in support of the proposed development as part of a

	Issue	Studies/Plans Required for Completeness
	development conditions. The SWM design shall include consideration of external areas and convey drainage to an adequate outlet. Blocking external drainage causing ponding on adjacent properties is not permitted. Water balance calculations are to be provided.	complete Site Plan Approval Application. The following studies and plans shall also be provided in support of the **SWM Brief** and **Site Plan** application: • **Geotechnical Investigation** • **Erosion & Sediment Control (ESC) Plan.** • **Standalone Stormwater Operations and Maintenance Manual (if applicable)**
8.	Erosion and Sediment Controls are to be detailed in the SWM report and on drawings to ensure the surrounding properties and ditches/storm sewer are not contaminated by sediment during and after site construction. Controls to include (but not limited to) silt fence, mud mat, rock check dams, erosion protection, etc. Include phasing details and Township's standard notes for ESC. Include any detail drawings as required.	
9.	Geotechnical investigations are required to determine recommendations on seasonal high groundwater levels including recommendations of separation from underside of slab, infiltration, road base and asphalt recommendations, heavy duty and light duty pavement (where required), etc.	
	Autoturn or equivalent analysis is required to confirm fire	

PRE-CONSULTATION RESPONSE

SCHEDULE 'A'

CLEARVIEW

	Issue	Studies/Plans Required for Completeness
10.	route and turning radii for emergency vehicles, , etc. as applicable to the design of the site. Fire route and applicable signage to be shown.	A **Site Plan** is required. Autoturn swept path analysis shall be shown on the Site Plan or Civil drawings. Delineation of the proposed parking lot to be provided on all applicable Plans. Including the proposed driveway entrance/access locations and dimension(s).
11.	It is acknowledged that the Plans provided are to demonstrate the proposed concept. Provide a comprehensive engineering drawing set with the next submission, stamped by a Professional Engineer in good standing and registered in Ontario.	All future submissions in support of a Development Application will be required to include at a minimum the following Plans: • Cover Sheet, complete with the following information: ▪ Development name ▪ Key plan showing site location ▪ Developer & Consultant's information ▪ Drawing index ▪ Submission number • Site Plan • Erosion & Sediment Control (ESC) Plan • Site Servicing Plan • Stormwater Facility Design Plan & Details • Overall Grading Plan • Landscape/Restoration/Rehabilitation Plan

	Issue	Studies/Plans Required for Completeness
		• Lighting/illumination Plan (as applicable/determined by Applicant's engineers and specialists). Lighting Design and photometric analysis demonstrates that all lighting levels are zero at the property line. All lights to be dark sky compliant. • Signage Plan (as applicable/determined by Applicant's engineers and specialists) • Details & Notes Plan Refer to Township Engineering Standards for details required for the applicable Plans/drawings.
12.	It is acknowledged that the Plans provided are to demonstrate the proposed concept. Please provide comprehensive reports with the next submission, stamped by a Professional Engineer in good standing and registered in Ontario.	The following reports are required at detailed design submission: • ~~Functional Servicing Report (FSR)~~ • Stormwater Management Brief (SWB) • ~~Traffic Impact Study (TIS)~~ • ~~Parking Justification Study (PJS)~~ • Geotechnical Report • Hydro-geological Report • ~~Tree Inventory, Assessment & Preservation Report~~ • SWM Facility Operations & Maintenance Manual (as applicable)

	Issue	Studies/Plans Required for Completeness
		• ~~Environmental Impact Statement~~ • ~~Environmental Site Assessment (due to past uses) (not required)~~ • ~~Air and Noise Study (not required)~~ • Security Estimate, separated for internal and external works • Project Summary Memo • Tunnel Study • Rehabilitation Plan Update Refer to Township Engineering Standards for details required for the applicable Reports.
13.	Any work in the Township's right-of-way to be restored to equal or better condition.	This shall be reflected on the drawings and stated in the notes. Provide restoration details.
14.	Cost for the Township review of Engineering-related matters will be paid for in full by the applicant.	**Application Deposits** are required to be provided to the Township as part of each application submission. Payment of peer review invoices remitted from the Township shall be paid by the applicant throughout the process.
15.	Design and construction shall be in accordance with the most current version of the Township of Clearview	Reference applicable standards for design.

PRE-CONSULTATION RESPONSE

SCHEDULE 'A'

	Issue	Studies/Plans Required for Completeness
	Engineering Standards, MECP Guidelines, OPSS, and all other standards as applicable.	
16.	Public Works/Engineering Staff reserve the right to provide further comments as the Application proceeds through the Planning Approval process. We note that without a fulsome engineering package to review, there may be additional technical items or information required for a complete design submission in line with all technical standards and requirements.	Provide any additional reports or drawings as recommended by Applicant's engineers and specialists to support a complete submission.

Rossalyn Workman

From: ARA Approvals (MNRF) <ARAApprovals@ontario.ca>
Sent: October 30, 2023 5:01 PM
To: Christine Taggart
Subject: RE: Pre-Consultation Inquiry - I23-058 Walker Aggregates Quarry Expansion

You don't often get email from araapprovals@ontario.ca. Learn why this is important

CAUTION: This email originated from outside of the Clearview email system. DO NOT open attachments or click links you were not specifically expecting, even from known senders.

Hi Christine,

Thank you for your inquiry. General information related to applying for an aggregate licence or permit can be found on the Aggregate resources policies and procedures page, located here: https://www.ontario.ca/page/aggregate-resources-policies-and-procedures
This site has information pertaining to the process and policies related to applying for an aggregate licence or permit.
In addition, I'll also draw your attention to the Aggregate resources of Ontario standards, located here:
https://files.ontario.ca/mnrf-aggregates-combined-standards-en-2020-08-27.pdf.
When you are ready to submit your application, or if you have further questions, please email this same address to proceed.

Preparing a site plan or technical report
Every site plan accompanying an application for a Class A licence or an aggregate permit that would authorize the excavation or removal of more than 20,000 tonnes of aggregate or topsoil from the site annually shall be prepared under the direction of and where appropriate, certified by,
(a) a professional engineer who is a member of the Association of Professional Engineers of Ontario;
(b) a land surveyor who is a member of the Association of Ontario Land Surveyors;
(c) a landscape architect who is a member of the Ontario Association of Landscape Architects;
(d) a professional geoscientist who is registered with the Association of Professional Geoscientists of Ontario;
(e) a registered professional planner who is a member of the Ontario Professional Planners Institute; or
(f) any other person qualified for the purposes of this section and approved in writing by the Ministry.
O. Reg. 466/20, s. 2 (1).
For a clarity a Class B licence, or permit application proposing less than 20,000 tonnes to be removed annually, the applicant can prepare their own site plan. More resources can be found on our website (https://www.ontario.ca/page/aggregate-resources).

An individual/company or consultant (on behalf of an individual/company) may submit an application for an aggregate licence or permit (private/Crown land) however, please note that the site plans, summary statement and technical reports must be completed by a person with the appropriate training/experience (see Aggregate resources of Ontario standards for more information).

The following resources may be helpful if you are preparing a licence or permit application following the provincial standards. This list is only a guide and should not be considered all-inclusive.

Requirement	Link
For area-specific information on land use policies and applications on Crown land	Crown Land Use Policy Atlas
For geoscience data, including Aggregate Resources of Ontario – 2019, which can be viewed using user-friendly geographic information programs such as Google Earth	OGSEarth
For information on agricultural land classification using the Canada Land Inventory classes	AgMaps
To search a location to see if it's close to a municipal drinking water well or other drinking water intake	Source Water Protection Information Atlas
To search and view well record information from reported wells in Ontario	Map: Well Records
To view some of Ontario's natural heritage information (e.g., wetlands, woodlands, provincial parks and Natural Heritage Information Centre data), and planning areas and designations for provincial plans, such as the Niagara Escarpment Plan	Make-a-map: Natural Heritage Areas
For an authoritative source for Ontario's geospatial data – you can search for relevant datasets by using Find Data or browsing by topic	Ontario GeoHub
For information on land uses, values and potential for resource conflicts – for applications on Crown land	Forest Management Plans
For the evaluation procedures for wetlands	Ontario Wetland Evaluation System northern and southern manuals
To identify natural features and delineate boundaries in the south (except for wetlands which are identified and mapped following the Ontario Wetland Evaluation System)	Ecological Land Classification for Southern Ontario

To identify natural features and delineate boundaries in the Boreal (except for wetlands which are identified and mapped following the Ontario Wetland Evaluation System)	Ecological Land Classification Field Manual – Operational Draft (2009) – Boreal
For information about Ontario's species of conservation concern, plant communities, wildlife concentration areas and natural areas	Get natural heritage information

Every site plan accompanying an application for a Class A licence or an aggregate permit that would authorize the excavation or removal of more than 20,000 tonnes of aggregate or topsoil from the site annually shall be prepared under the direction of and where appropriate, certified by,
(a) a professional engineer who is a member of the Association of Professional Engineers of Ontario;
(b) a land surveyor who is a member of the Association of Ontario Land Surveyors;
(c) a landscape architect who is a member of the Ontario Association of Landscape Architects;
(d) a professional geoscientist who is registered with the Association of Professional Geoscientists of Ontario;
(e) a registered professional planner who is a member of the Ontario Professional Planners Institute; or
(f) any other person qualified for the purposes of this section and approved in writing by the Ministry.
O. Reg. 466/20, s. 2 (1).

For a clarity a Class B licence, or permit application proposing less than 20,000 tonnes to be removed annually, the applicant can prepare their own site plan. More resources can be found on our website (https://www.ontario.ca/page/aggregate-resources).

Thank you, Kate for the Aggregates Section

From: Christine Taggart <ctaggart@clearview.ca>
Sent: October 30, 2023 10:00 AM
To: John Ferguson <jferguson@clearview.ca>; Amy Cann <acann@clearview.ca>; Mike Rawn <mrawn@clearview.ca>; Dan Perreault <dperreault@clearview.ca>; Patti Kennedy <pkennedy@clearview.ca>; Baz Dokainish <bdokainish@clearview.ca>; Todd Patton <tpatton@clearview.ca>; Scott Davison <sdavison@clearview.ca>; Kelly McDonald <kmcdonald@clearview.ca>; Terry Vachon <tvachon@clearview.ca>; Scott McLeod <smcleod@clearview.ca>; Jennifer Georgas <Jennifer.Georgas@rjburnside.com>; County of Simcoe <planning.notices@simcoe.ca>; Calvin Dempster <calvin.dempster@simcoe.ca>; Rogers 1 <simcoecirculations@rci.rogers.com>; Rogers 2 <Newdevelopment@rci.rogers.com>; 'Ontario Power Generation (executivevp.lawanddevelopment@opg.com)' <executivevp.lawanddevelopment@opg.com>; MPAC <LPUConsents@mpac.ca>; Clee, Sandy <sclee@scdsb.on.ca>; Kirton, Katie <kkirton@scdsb.on.ca>; Simcoe Muskoka District School Board <planningdept@smcdsb.on.ca>; NVCA - Chris Hibberd <c.hibberd@nvca.on.ca>; NVCA - Planning <planning@nvca.on.ca>; NEC Owen Sound (MNRF) <necowensound@ontario.ca>; EPCOR - Jody Wilson <jwilson@epcor.com>; EPCOR - Ted Burrell <tburrell@epcor.com>; EPCOR - Mehta <MMehta@epcor.com>; EPCOR - Horne <ohorne@epcor.com>; Enbridge <municipalplanning@enbridge.com>; Bell Canada <circulations@mmm.ca>; CA - Circulations <ca.circulations@wsp.com>; KaitlinH@curvelake.ca; keithk@curvelake.ca; consultation@curvelake.ca; dmowat@alderville.ca; consultation@alderville.ca; bfnchief@chimnissing.ca; consultations@chimnissing.ca; Chief Ted Williams <tedw@ramafirstnation.ca>; consultation@ramafirstnation.ca; Chief Donna Big Canoe <donna.bigcanoe@georginaisland.com>; natasha.charles@georginaisland.com; General Email <environmentoffice@saugeenojibwaynation.ca>; General Email <administration@cnhw.qc.ca>; President Greg Garratt (Georgian Bay Métis Council <greggarratt63@gmail.com>; k.a.sandy-mckenzie@rogers.com
Cc: ARA Approvals (MNRF) <ARAApprovals@ontario.ca>; Rossalyn Workman <rworkman@clearview.ca>; Nick Ainley

<nainley@clearview.ca>
Subject: RE: Pre-Consultation Inquiry - I23-058 Walker Aggregates Quarry Expansion

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good morning, all.

Municipal staff are in receipt of a pre-consultation application for the Duntroon Quarry lands municipally known as 9861 & 9828 County Road 91, Clearview. Municipal staff are requesting comment from internal departments and external commenting agencies on the submitted pre-consultation application and associated submission material (see attached) by **November 13, 2023.**

Please let us know if you have any comments or questions.

Kind regards,
Christine Taggart, ACST
Planning & Development Technician
Secretary-Treasurer, Committee of Adjustment
ctaggart@clearview.ca
705-428-6230 ext. 238
Work Schedule: 8:00 am to 4:00 pm

CLEARVIEW
Official Plan Review

Find out more about Clearview's Official Plan Review

CONFIDENTIALITY NOTICE: This e-mail message (including attachments, if any) is intended for the use of the individual or entity to which it is addressed and may contain information that is privileged, proprietary, confidential and exempt from disclosure. If you are not the intended recipient, you are notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender and permanently delete this email.

MEMORANDUM

DATE:	2 November 2023	**Project No:**	
STATUS:	☐ Draft ☑ Final	☐ Confidential	☐ Internal Use Only
TO:	Rossalyn Workman	**DEPT:**	Planning Department
FROM:	Scott McLeod	**DEPT:**	Building Department
RE:	RE: Pre-Consultation Inquiry 9861 & 9828 County Road 91		

Further to our review of the proposal I would offer the following comments for your consideration.

Based on our review the Building Department has no comments on the proposed development as presented.

Please do not hesitate to contact me should you require additional information regarding this matter.

Yours truly,

A Scott McLeod C.B.C.O., Dipl.M.M.,

Chief Building Official

cc:

County of Simcoe
Planning Department
1110 Highway 26,
Midhurst, Ontario L9X 1N6

Main Line (705) 726-9300
Toll Free (866) 893-9300
Fax (705) 727-4276
simcoe.ca

November 15, 2023

VIA EMAIL

Rossalyn Workman, MCIP, RPP
Community Planner
Township of Clearview
217 Gideon Street
Stayner, ON L0M 1S0

RE: Pre-consultation Application for Official Plan Amendment (Township File No.: I23-058)
Location: 9828 and 9861 Township Road 91
Applicant: MHBC Planning Inc. on behalf of Walker Aggregates Inc.
County File No.: CV-PRE-23027

Thank you for circulating the County on this pre-consultation application for comment. It is understood that the applicant is seeking permissions to maintain existing uses on the subject lands (i.e. processing and shipping at 9861 Township Road 91 and a tunnel under Township Road 91 that connects the two properties), and to deepen the quarry at 9861 Township Road 91. It is also understood that to permit these uses on the subject lands a Township Official Plan Amendment will be required in addition to a Niagara Escarpment Plan Amendment and amendments to the site plans under the Aggregate Resources Act. The County's preliminary comments can be found below and attached.

Planning Comments

The subject lands are designated 'Niagara Escarpment Plan Area' and 'Rural' on Schedule 5.1 of the County of Simcoe Official Plan. The portion of the subject lands designated 'Rural' are generally associated with the quarry at 9861 Township Road 91.

Per Policy 3.10.1 of the County of Simcoe Official Plan, development within the Niagara Escarpment Plan must meet the requirements of the Niagara Escarpment Plan as well as the requirements of this Plan and the Township of Clearview Official Plan that are not in conflict with the Niagara Escarpment Plan.

We will also note for the applicant that the County is the approval authority for local official plan amendments with an associated fee of $3,000.00 (privately initiated) to be paid when the adoption package is submitted to the County.

County Planning staff request that the County be circulated on all future notices related to this proposal, and that these be directed to planning.notices@simcoe.ca

Transportation and Engineering Comments

These comments can be found as an attachment to this correspondence. If the applicant has any questions regarding these comments, please direct them to Supneet Singh, Engineering Technician II at (705) 726-9300 ext. 1345 or supneet.singh@simcoe.ca

If you have any questions or require any further information please feel free to contact the undersigned at (705) 726-9300 ext. 1114 or calvin.dempster@simcoe.ca

Sincerely,

The Corporation of the County of Simcoe



Calvin Dempster
Planner II

Attachment: Transportation and Engineering Pre-consultation Memo

cc: Greg Marek, Manager of Planning, County of Simcoe
Supneet Singh, Engineering Technician II, County of Simcoe
Amy Cann, Director of Planning and Building, Township of Clearview
Niagara Escarpment Commission – Owen Sound
Brian Zeman, MHBC Planning Inc.

County of Simcoe
Transportation and Engineering
1110 Highway 26,
Midhurst, Ontario L9X 1N6

Main Line (705) 726 9300
Toll Free 1 866 893 9300
Fax (705) 727 7984
Web: simcoe.ca

TRANSPORTATION AND ENGINEERING

MEMO

TO: Calvin Dempster, Planner II

C.C.: Julie Scruton, Manager of Transportation Construction

FROM: Supneet Singh, Engineering Technician II

DATE: November 14, 2023

RE: Pre-Consultation application for 9861 & 9828 Township Road 91 Township of Clearview, County of Simcoe.

Calvin,

The Township of Clearview circulated the above-noted Pre-Consultation application for 9861 & 9828 Township Road 91 proposing to maintain the existing shipping and processing operation, to maintain the existing tunnel between the original Duntroon quarry and the extension, and to deepen the Duntroon quarry. With the understanding that Township Road 91 may potentially be transferred to the County of Simcoe at a future date, Transportation & Engineering staff have the following comments:

1. An Engineering Review Application form and applicable fees will be required for each submission.

2. The County of Simcoe Setback By-law No. 5604 regulates the location of buildings and other structures within 45 metres of lands adjacent to County Roads. Any new buildings and other structures must be located, at minimum, 45.0 metres from the Limit of the County Road 91 road allowance. Structures include, but are not limited to: septic systems and fields, wells, earth berms, storm ponds, etc. If the 45.0 metre setback cannot be met, the Owner shall apply to the County of Simcoe for a setback variance to allow a reduction in the setback from County Road 91.

3. Fencing must be setback at minimum 0.3 metres adjacent to the County Road 91 property line, if applicable.

4. Please provide structural design details, plans, detail design, cross-sections, as-builts regarding existing tunnel between the original Duntroon quarry and extension located under County road 91.

5. The site plans submitted in Schedule E & F are from year 2014-15. Please provide any updated additional plans following those years regarding any kind of alteration to site or addition of new structure.

6. A Sign Permit, from the County By-Law Department, will be required for any proposed sign adjacent to County Road 91.

7. The applicant will be required to provide copies of all transportation related reports or studies done in support of their application and forward them to the County's Transportation and Engineering Department for review and comment.

If you require any further information, please do not hesitate to contact me.

Sincerely,
The Corporation of the County of Simcoe

Supneet Singh
Engineering Technician II
(705) 726 9300 Ext. 1345

CC: Julie Scruton, County of Simcoe

https://simcoecounty.sharepoint.com/sites/PLNDepartment/Shared%20Documents/Forms/AllItems.aspx?id=%2Fsites%2FPLNDepartment%2FShared%20Documents%2FGeneral%2FD%20%2D%20Development%20%26%20Planning%20D%2FD07%20to%20D14%20Development%20Correspondence%2FClearview%2FD12%20Subdivision%20Plans%2FProposed%20Duntroon%20Quarry%20Expansion&viewid=97a7408e%2Dabae%2D44e5%2D9726%2Dc988a36ba653

Niagara Escarpment Commission

1450 7th Avenue East
Owen Sound, ON N4K 2Z1
Tel. No. (519) 371-1001
necowensound@ontario.ca
www.escarpment.org

Commission de l'escarpement du Niagara

1450 7e avenue Est
Owen Sound, ON N4K 2Z1
No de tel. (519) 371-1001
necowensound@ontario.ca
www.escarpment.org

Niagara Escarpment Commission
An agency of the Government of Ontario

November 8, 2023

Rossalyn Workman, Community Planner
Clearview Township

Dear Rossalyn,

RE: Pre-consultation application for 9861 and 9828 Township Road 91

Subject properties:
9861 Township Road 91
Nottawasaga CON 12 PT Lot 24
ARN: 432901000827000

9828 Township Road 91
CON 12 E PT Lot 25
ARN: 432901000827100

Proposal:
The applicant is proposing to maintain the existing shipping and processing operation, to maintain the existing tunnel between the original Duntroon quarry and the expansion and to deepen the Duntroon quarry (licence 3514).

Material provided:

- Request for Comment, Clearview Township, October 30, 2023
- Duntroon Quarry & Duntroon Quarry Extension – Pre-consultation Request, MHBC, October 10, 2023 (note Tabs 1-8 referenced on the letter were not included)
- Schedule 'A' OrthoPhoto, Clearview Township
- Schedule 'B' Planning Policy, Clearview Township
- Schedule 'C' Property Details, Clearview Township
- Schedule 'D' Aerial Overview, MHBC
- Duntroon Quarry Site Plans, Final Approved Plans, April 14, 2015
- Duntroon Quarry Expansion, Final Approved Plans, September 4, 2014 (Tab 4)

The Niagara Escarpment Commission (NEC) has reviewed the material provided for the above noted location and offer the following pre-consultation comments:

1. The subject lands are within R.R.O. 1990, Regulation 826 Designation of Area of Development Control for the Niagara Escarpment and within the Niagara Escarpment Plan (NEP) Area. Any development on the subject lands requires a

development permit application unless determined to be exempt under Ontario Regulation 828 Development within the development Control Area. The application will be reviewed with an approach of achieving development that is compatible with the escarpment natural environment. The application will also be reviewed against policies contained within the Provincial Policy Statement and the Niagara Escarpment Plan (NEP).

The subject lands are designated as follows:

- 9861 Township Road 91(Licence 3514) – Escarpment Natural Area, Mineral Resource Extraction Area
- 9828 Township Road 91 (Licence 607841) – Escarpment Natural Area, Escarpment Rural Area, Mineral Resource Extraction Area

The permitted uses and Mineral Aggregate Resources Mineral Resource Extraction Area designation includes mineral aggregate operations licensed pursuant to the Aggregate Resources Act and areas where mineral aggregate resource extraction may be permitted, subject to policies of the Niagara Escarpment Plan.

2. NEC Amendment 161 (Part 1.9.3.18 of the NEP) and associated development permit S/E/2013-2014/9060 established permissions and approval for the processing plant and tunnel associated with operations on Lot 24 and Lot 25, specifically Amendment 161 permitted:

   Notwithstanding any other provision of this Plan, uses accessory to the extraction of aggregate from Lot 25, Concession 12 (associated with Amendment 161 to the Niagara Escarpment Plan) shall be permitted on Lot 24, Concession 12, Township of Clearview, ARA Licence No. 3514, including all processing facilities, but only for such a period of time as is necessary to: (i) create an area of 18 hectares on the quarry floor in Phase 1 of the ARA Licence on Lot 25, Concession 12 (associated with Amendment 161 to the Niagara Escarpment Plan) and (ii) to discontinue or relocate the accessory uses. An asphalt plant, concrete plant, brick manufacturing plant and any other similar manufacturing use shall not be permitted as an accessory use on Lot 24, Concession 12, Township of Clearview, ARA Licence No. 3514.

3. An application to amend the NEP will be required where a change to the current permissions is proposed. Subject to approval of an Amendment, the issuances of a development permit(s) would be necessary.

   A completed application to amend the Plan shall be submitted to the NEC and include a Planning Justification as well as research material, reports, plans and the like to detail how the amendment meets with plan objectives, specifically:

Section 8 (Niagara Escarpment Planning and Development Act): The objectives of the Niagara Escarpment Plan are, and the objectives to be sought in the consideration of amendments to the Plan shall be, in the Niagara Escarpment Planning Area,

(a) to protect unique ecologic and historic areas;

(b) to maintain and enhance the quality and character of natural streams and water supplies;

(c) to provide adequate opportunities for outdoor recreation;

(d) to maintain and enhance the open landscape character of the Niagara Escarpment in so far as possible, by such means as compatible farming or forestry and by preserving the natural scenery;

(e) to ensure that all new development is compatible with the purpose of this Act as expressed in section 2;

(f) to provide for adequate public access to the Niagara Escarpment; and

(g) to support municipalities within the Niagara Escarpment Planning Area in their exercise of the planning functions conferred upon them by the *Planning Act*. R.S.O. 1990, c. N.2, s. 8; 1999, c. 12, Sched. N, s. 4 (5); 2009, c. 12, Sched. L, ss. 7, 10.

We look forward to participating in a future pre-consultation meeting regarding the above proposal. Please don't hesitate to contact me with further questions. I can be reached at 226-668-5247 or Janet.Sperling@ontario.ca.

Sincerely,



Janet Sperling
Senior Planner

Rossalyn Workman

From: Community Consultation <consultation@ramafirstnation.ca>
Sent: November 22, 2023 3:30 PM
To: Rossalyn Workman
Subject: RE: RE: Pre-Consultation Inquiry - I23-058 Walker Aggregates Quarry Expansion

CAUTION: This email originated from outside of the Clearview email system. DO NOT open attachments or click links you were not specifically expecting, even from known senders.

Aaniin,

Thank you for sending this to RFN, we have no comments or concerns.

Miigwech,

-BB

Ben Benson
Community Consultation Worker, Legal
Chippewas of Rama First Nation
(ph) 705-325-3611, 1633
(cell) 705-238-7111
(fax)
(url) www.ramafirstnation.ca

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By submitting your or another individual's personal information to Chippewas of Rama First Nation, its service providers and agents, you agree and confirm your authority from such other individual, to our collection, use and disclosure of such personal information in accordance with our privacy policy.

Please consider the environment before printing this e-mail.

From: Rossalyn Workman <rworkman@clearview.ca>
Sent: November 8, 2023 4:22 PM
To: Christine Taggart <ctaggart@clearview.ca>; John Ferguson <jferguson@clearview.ca>; Amy Cann <acann@clearview.ca>; Mike Rawn <mrawn@clearview.ca>; Dan Perreault <dperreault@clearview.ca>; Patti Kennedy <pkennedy@clearview.ca>; Baz Dokainish <bdokainish@clearview.ca>; Todd Patton <tpatton@clearview.ca>; Scott Davison <sdavison@clearview.ca>; Kelly McDonald <kmcdonald@clearview.ca>; Terry Vachon <tvachon@clearview.ca>; Scott McLeod <smcleod@clearview.ca>; Jennifer Georgas <Jennifer.Georgas@rjburnside.com>; County of Simcoe <planning.notices@simcoe.ca>; Calvin Dempster <calvin.dempster@simcoe.ca>; Rogers 1 <simcoecirculations@rci.rogers.com>; Rogers 2 <Newdevelopment@rci.rogers.com>; 'Ontario Power Generation (executivevp.lawanddevelopment@opg.com)' <executivevp.lawanddevelopment@opg.com>; MPAC <LPUConsents@mpac.ca>; Clee, Sandy <sclee@scdsb.on.ca>; Kirton, Katie <kkirton@scdsb.on.ca>; Simcoe Muskoka District School Board <planningdept@smcdsb.on.ca>; NVCA - Chris Hibberd <c.hibberd@nvca.on.ca>; NVCA - Planning <planning@nvca.on.ca>; NEC <necowensound@ontario.ca>; EPCOR - Jody Wilson <jwilson@epcor.com>; EPCOR - Ted Burrell <tburrell@epcor.com>; EPCOR - Mehta <MMehta@epcor.com>; EPCOR - Horne <ohorne@epcor.com>; Enbridge <municipalplanning@enbridge.com>; Bell Canada <circulations@mmm.ca>; CA - Circulations <ca.circulations@wsp.com>; KaitlinH@curvelake.ca; keithk@curvelake.ca; consultation@curvelake.ca; dmowat@alderville.ca; consultation@alderville.ca; bfnchief@chimnissing.ca; consultations@chimnissing.ca; Chief Ted Williams <tedw@ramafirstnation.ca>; Community Consultation <consultation@ramafirstnation.ca>; Chief Donna Big Canoe <donna.bigcanoe@georginaisland.com>; natasha.charles@georginaisland.com; General Email

<environmentoffice@saugeenojibwaynation.ca>; General Email <administration@cnhw.qc.ca>; President Greg Garratt (Georgian Bay Métis Council <greggarratt63@gmail.com>; k.a.sandy-mckenzie@rogers.com
Cc: ARAapprovals@ontario.ca; Nick Ainley <nainley@clearview.ca>
Subject: RE: RE: Pre-Consultation Inquiry - I23-058 Walker Aggregates Quarry Expansion

Hi All
Please see attached some additional information which should clarify what is being requested as part of the pre-consultation request.
Let me know if you have any other questions?
Thank Rossalyn

Rossalyn Workman MURP, RPP, Dipl.M.M.,
Community Planner, Approvals and Policy
Township of Clearview
705-428-6230 ext. 248
rworkman@clearview.ca

From: Christine Taggart <ctaggart@clearview.ca>
Sent: Monday, October 30, 2023 10:00 AM
To: John Ferguson <jferguson@clearview.ca>; Amy Cann <acann@clearview.ca>; Mike Rawn <mrawn@clearview.ca>; Dan Perreault <dperreault@clearview.ca>; Patti Kennedy <pkennedy@clearview.ca>; Baz Dokainish <bdokainish@clearview.ca>; Todd Patton <tpatton@clearview.ca>; Scott Davison <sdavison@clearview.ca>; Kelly McDonald <kmcdonald@clearview.ca>; Terry Vachon <tvachon@clearview.ca>; Scott McLeod <smcleod@clearview.ca>; Jennifer Georgas <Jennifer.Georgas@rjburnside.com>; County of Simcoe <planning.notices@simcoe.ca>; Calvin Dempster <calvin.dempster@simcoe.ca>; Rogers 1 <simcoecirculations@rci.rogers.com>; Rogers 2 <Newdevelopment@rci.rogers.com>; 'Ontario Power Generation (executivevp.lawanddevelopment@opg.com)' <executivevp.lawanddevelopment@opg.com>; MPAC <LPUConsents@mpac.ca>; Clee, Sandy <sclee@scdsb.on.ca>; Kirton, Katie <kkirton@scdsb.on.ca>; Simcoe Muskoka District School Board <planningdept@smcdsb.on.ca>; NVCA - Chris Hibberd <c.hibberd@nvca.on.ca>; NVCA - Planning <planning@nvca.on.ca>; NEC <necowensound@ontario.ca>; EPCOR - Jody Wilson <jwilson@epcor.com>; EPCOR - Ted Burrell <tburrell@epcor.com>; EPCOR - Mehta <MMehta@epcor.com>; EPCOR - Horne <ohorne@epcor.com>; Enbridge <municipalplanning@enbridge.com>; Bell Canada <circulations@mmm.ca>; CA - Circulations <ca.circulations@wsp.com>; KaitlinH@curvelake.ca; keithk@curvelake.ca; consultation@curvelake.ca; dmowat@alderville.ca; consultation@alderville.ca; bfnchief@chimnissing.ca; consultations@chimnissing.ca; Chief Ted Williams <tedw@ramafirstnation.ca>; consultation@ramafirstnation.ca; Chief Donna Big Canoe <donna.bigcanoe@georginaisland.com>; natasha.charles@georginaisland.com; General Email <environmentoffice@saugeenojibwaynation.ca>; General Email <administration@cnhw.qc.ca>; President Greg Garratt (Georgian Bay Métis Council <greggarratt63@gmail.com>; k.a.sandy-mckenzie@rogers.com
Cc: ARAapprovals@ontario.ca; Rossalyn Workman <rworkman@clearview.ca>; Nick Ainley <nainley@clearview.ca>
Subject: RE: Pre-Consultation Inquiry - I23-058 Walker Aggregates Quarry Expansion

Good morning, all.

Municipal staff are in receipt of a pre-consultation application for the Duntroon Quarry lands municipally known as 9861 & 9828 County Road 91, Clearview. Municipal staff are requesting comment from internal departments and external commenting agencies on the submitted pre-consultation application and associated submission material (see attached) by **November 13, 2023.**

Please let us know if you have any comments or questions.

Kind regards,
Christine Taggart, ACST
Planning & Development Technician
Secretary-Treasurer, Committee of Adjustment
ctaggart@clearview.ca
705-428-6230 ext. 238
Work Schedule: 8:00 am to 4:00 pm



Find out more about Clearview's Official Plan Review

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PRE-CONSULTATION RESPONSE

SCHEDULE 'B'

CLEARVIEW

Fees & Charges Estimate

The following application fee and charges estimate has been provided for your convenience to assist you in assessing the known fees and charges associated with your Planning Act applications. This estimate is subject to change and does not include all costs associated with the development process, including: Development Charges, securities, capital contributions, peer or other review fees, other agency/department review and application fees, legal fees, consulting fees, etc. Any indicated fee/charge waiver, reduction, or exemption is not guaranteed. Any costs incurred as a result of peer review(s) undertaken by the Township of Clearview Consultant Reviews are the sole responsibility of the applicant.

The Township of Clearview and Charges By-law can be found online at www.clearview.ca.

Fee Estimate Information	
Official Plan Amendment	
Township of Clearview Application Fee	$5000.00
Township of Clearview Application Deposit	$2500.00
Nottawasaga Valley Conservation Authority	$530.00
County of Simcoe	
County of Simcoe Official Plan Application Fee	$3000.00

PRE-CONSULTATION RESPONSE

SCHEDULE 'C'

CLEARVIEW

Submission Breakdown & Next Steps

The following is a simple breakdown of the plans/studies that are required to be submitted as part of a complete application for each phase in your application process. The list sets out the ordered sequence of next steps.

The information below is meant to supplement, not replace, Schedule 'A' of your Pre-consultation response. Schedule 'A' contains a great deal of required, important detail that is not included here. Where two or more applications can be submitted concurrently, the chart will indicate this.

Be advised that due to the timelines and completeness requirements outlined in the Planning Act, the Township is unable to accept an incomplete application.

Pre-consultation Phase II:

TERMS OF REFERENCE DEVELOPMENT **Plan/Study Required**	
1. Tunnel Stability Study	☐
2. Natural Heritage Assessment Brief	☐

Formal Application Phase I:

OFFICIAL PLAN AMENDMENT **Plan/Study Required**	
1. Official Plan Amendment (OPA) Application	☐
2. OPA Application Fees & Deposits	☐
3. Nottawasaga Valley Conservation Authority Planning Review Fee	☐
4. Updated Site Plan	☐
5. Planning Justification Report	☐
6. Draft Official Plan Amendment/Schedule	☐
7. Draft Niagara Escarpment Plan Amendment	☐
8. Visual Screening Plan	

PRE-CONSULTATION RESPONSE

SCHEDULE 'C'

CLEARVIEW

OFFICIAL PLAN AMENDMENT **Plan/Study Required**	
9. Status of Aggregate License	☐
10. Tunnel Stability Study	☐
11. Natural Heritage Assessment Brief	☐
12. Hydrogeological Report	☐
13. Addendum to existing Traffic, Noise, Dust, and Vibration studies	☐
14. Project Summary and Phasing Memo	☐
15. Landscaping/Restoration/Rehabilitation Plan	☐
16. Grading Plan	☐
17. Lighting/Illumination Plan	☐
18. Signage Plan	☐
19. Details and Notes Plan	☐
20. Stormwater Management Brief (SWB) and Plans	☐
21. Geotechnical Report	☐
22. Erosion and Sediment Control (ESC) Plan	☐
23. Site Servicing Plan	☐
24. Standalone Stormwater Operations and Maintenance Manual (if applicable)	☐
25. Security Estimate, separated for internal and external works	☐

From: Ellen Ferris <eferris@mhbcplan.com>
Sent: Friday, May 3, 2024 4:25 PM
To: Rossalyn Workman <rworkman@clearview.ca>
Cc: Brian Zeman <bzeman@mhbcplan.com>; Kevin Kehl (KKehl@walkerind.com) <KKehl@walkerind.com>; Dave Munro <DMunro@walkerind.com>; Sarah Hanson <SHanson@walkerind.com>; Ryan Wall <RWall@walkerind.com>; Ryan Dosch <RDosch@walkerind.com>; Amy Cann <acann@clearview.ca>; Dan Perreault <dperreault@clearview.ca>; Patti Kennedy <pkennedy@clearview.ca>; Christine Taggart <ctaggart@clearview.ca>; Jennifer Georgas <Jennifer.Georgas@rjburnside.com>; Danielle Barranger <dbarranger@clearview.ca>
Subject: Re: Updated Schedule C - Checklist and Next Steps, and Schedule B- Fees Pre-Consultation Response Summary - Duntroon Quarry Expansion - I23-058

Hi Rossalyn,

Thank you for providing the updated Schedule B and C - We have included a couple of minor suggested revisions within the attached for your consideration.

Please let us know if there are any questions with respect to this.

Thanks,

ELLEN FERRIS, BSc., MSc., MCIP, RPP | Associate

MHBC Planning, Urban Design & Landscape Architecture

113 Collier Street | Barrie | ON | L4M 1H2 | T 705 728 0045 x227 | eferris@mhbcplan.com

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From: Rossalyn Workman <rworkman@clearview.ca>
Sent: Thursday, May 2, 2024 1:22 PM
To: Ellen Ferris <eferris@mhbcplan.com>; Brian Zeman <bzeman@mhbcplan.com>
Cc: Kevin Kehl (KKehl@walkerind.com) <KKehl@walkerind.com>; Dave Munro <DMunro@walkerind.com>; Sarah Hanson <SHanson@walkerind.com>; Ryan Wall <RWall@walkerind.com>; Ryan Dosch <RDosch@walkerind.com>; Amy Cann <acann@clearview.ca>; Dan Perreault <dperreault@clearview.ca>; Patti Kennedy <pkennedy@clearview.ca>; Christine Taggart <ctaggart@clearview.ca>; Jennifer Georgas <Jennifer.Georgas@rjburnside.com>; Danielle Barranger <dbarranger@clearview.ca>
Subject: Updated Schedule C - Checklist and Next Steps, and Schedule B- Fees Pre-Consultation Response Summary - Duntroon Quarry Expansion - I23-058

Hi Ellen and Brian

Thanks for the below email.

I've adjusted the Schedule C – checklist and nest steps as well as the Schedule B- Fees.

I hope that the above changes in Schedule C – have capture what we spoke about at our meeting.

The changes to Schedule B- include the fees to review each of the Terms of Reference listed in Schedule C.

Let me know if you have any additional questions.

Thanks Rossalyn

Rossalyn Workman MURP, RPP, Dipl.M.M.,

Community Planner, Approvals and Policy

Township of Clearview

705-428-6230 ext. 248

rworkman@clearview.ca

From: Ellen Ferris <eferris@mhbcplan.com>
Sent: Friday, April 26, 2024 9:17 AM
To: Rossalyn Workman <rworkman@clearview.ca>
Cc: Brian Zeman <bzeman@mhbcplan.com>; Kevin Kehl (KKehl@walkerind.com) <KKehl@walkerind.com>; Dave Munro <DMunro@walkerind.com>; Sarah Hanson <SHanson@walkerind.com>; Ryan Wall <RWall@walkerind.com>; Ryan Dosch <RDosch@walkerind.com>; Amy Cann <acann@clearview.ca>; Dan Perreault <dperreault@clearview.ca>; Patti Kennedy <pkennedy@clearview.ca>; Christine Taggart <ctaggart@clearview.ca>; Jennifer Georgas <Jennifer.Georgas@rjburnside.com>; Danielle Barranger <dbarranger@clearview.ca>
Subject: Re: Pre-Consultation Response Summary - Duntroon Quarry Expansion - I23-058

Good Morning Rossalyn,

Thank you for the meeting to discuss the below points of clarification to the Township's pre-consultation comments for the proposed Duntroon Quarry Amendments. As discussed, we have provided a summary of the items clarified through the meeting below in red. We understand that the Township will be providing a redline version of Schedule C which reflects the points clarified.

Additionally, we have confirmed that the Duntroon Quarry and Duntroon Quarry Extension are located within both the GSCA and NVCA limits.

Please let us know if you have any questions/comments.

Thanks,

ELLEN FERRIS, BSc., MSc., MCIP, RPP | Associate

MHBC Planning, Urban Design & Landscape Architecture

113 Collier Street | Barrie | ON | L4M 1H2 | T 705 728 0045 x227 | eferris@mhbcplan.com

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From: Brian Zeman <bzeman@mhbcplan.com>
Sent: Friday, April 5, 2024 7:10 AM
To: Rossalyn Workman <rworkman@clearview.ca>
Cc: Amy Cann <acann@clearview.ca>; Dan Perreault <dperreault@clearview.ca>; Patti Kennedy <pkennedy@clearview.ca>; Christine Taggart <ctaggart@clearview.ca>; Jennifer Georgas <Jennifer.Georgas@rjburnside.com>; Danielle Barranger <dbarranger@clearview.ca>; Ellen Ferris <eferris@mhbcplan.com>
Subject: RE: Pre-Consultation Response Summary - Duntroon Quarry Expansion - I23-058

Good morning Rossalyn

Thank you for the pre-consultation comments. This information is very helpful and we would appreciate a follow up meeting with Township staff and RJ Burnside to clarify / confirm a few points. To assist with that meeting the following is a summary of Walker review of the pre-consultation package:

1. Schedule B: Fee Estimate Information: Walker confirms the fees noted will be submitted;

2. Schedule C: Pre-consultation Phase II: Walker confirms it will submit Terms of Reference for the Tunnel Stability Study and Natural Heritage Assessment brief; Township has no preferred format for the Terms of Reference. Walker will submit Terms of Reference that outline scope of proposed review.

3. Schedule A, Issue A.3 Township of Clearview Official Plan Amendment and Niagara Escarpment Plan Amendment: Walker agrees for the need for these applications, however these amendments are not required to deepen the existing quarry or extension. Both of these sites are designated Mineral Resource Extraction Area and the depth of the quarry is not regulated by the designation. Furthermore Policy 2.5.2.4 of the PPS states: ".....Where the Aggregate Resources Act applies, only processes under the Aggregate Resources Act shall address the depth of extraction of new or existing mineral aggregate operations....." Township has confirmed that they are satisfied with the proposed approach. The proposed deepening will not be part of the proposed Township Official Plan Amendment or Niagara Escarpment Plan Amendment. However, the technical studies will address the proposed deepening. The proposed deepening will be subject to an ARA site plan amendment.

4. Schedule C – Plan / Studies Required:

1. # 4 Updated Site Plan: We are writing to confirm the Township is referring to updated Aggregate Resources Act Site Plans and Municipal Site Plan approval is not required. Township has confirmed that Municipal Site Plan Approval is not required. Updated Aggregate Resources Act Site Plans will be required and the submission will clearly outline what elements of the operation are proposed to change and what is remaining the same (i.e. entrance/exit).

2. # 9 Status of Aggregate License: We are unclear what the Township is seeking. Township clarified that they are looking for a summary of current operations at the quarry and existing approvals. MHBC confirmed that this can be addressed in the Planning Report. This item is to be removed as standalone requirement from Schedule C and included within the Planning Report.

3. # 13 Addendum to existing Traffic, Noise, Dust and Vibration studies: Comments in the pre-consultation package confirm that a traffic impact study is not required. As noted in the pre-consultation material there is no change to existing haul route, hours of operation, the permitted tonnage level for the operations or the entrance / exit and therefore a traffic addendum should not be required. Walker is agreeable to provide an Noise, Dust and Vibration addendum letter to confirm if any additional mitigation measures are needed to be included on the site plans for the proposed deepening of the quarry and if any mitigation measures need to be removed since the main processing plant is no longer proposed to be relocated to the Extension. Township confirmed that they are satisfied with proposed approach. TIS Addendum is not required. Will include statement in application that permitted truck traffic, entrance/exit, will not be changing as a result of the application.

4. # 14 Project summary and phasing memo. We are writing to confirm that a stand alone report is not required and this information can be included in Planning Justification Report. Township confirmed that this can be included within the Planning Report.

5. # 15 / 16 Landscaping / Restoration / Rehabilitation / Grading Plans: We are writing to confirm that a stand alone report / plan is not required and this information will be included as part of the updates to the Aggregate Resources Act Site Plans. Township has confirmed that these items are addressed within the Aggregate Resources Act Site Plans and that standalone reports/plans are not required.

6. # 17 / 18 Lighting / Illumination Plan / Signage Plan: There is no change to hours of operations or signage as a result of the application and therefore we are writing to confirm these plans are not required. Township confirmed that these plans are not required. Request that Planning Report speak to hours of operation, etc.

7. # 19 Details and Notes Plans: We are unclear what that the Township is seeking. Walker confirms that the details / notes required to implement the proposal will be included in updated notes / details on the Aggregate Resources Act Site Plans. Township has confirmed that these items are addressed within the Aggregate Resources Act Site Plans and that standalone plans are not required.

8. # 20 and 24 Stormwater Management Brief and Plans – The proposed changes to the operations do not change how stormwater is collected and discharged off-site in accordance with MECP PTTW and ECA approvals. We are writing to confirm that a stand alone report is not required and this will be addressed in the hydrogeological report. Township has confirmed that they are satisfied with the proposed approach and that a standalone report is not required.

9. # 21 Geotechnical Report: Geotechnical reports are not required for aggregate applications. We are writing to confirm that a stand alone report is not required and any geotechnical considerations for the tunnel will be included in the Tunnel Stability Study. Township has confirmed that a geotechnical report is not required and that the tunnel study will address any geotechnical considerations for the tunnel.

10. # 22 Erosion Control and Sediment Control Plan: We are writing to confirm that a stand alone report / plan is not required and this information will be included as part of the updates to the Aggregate Resources Act Site Plans based on the recommendations in the natural heritage assessment and hydrogeological report.

11. # 23 Site Servicing Plan (including the need for an autoturn swept analysis to confirm fire route and turning radii for emergency vehicles): We are writing to confirm that a site servicing plan is not a requirement for aggregate applications. Furthermore there are no changes to the operation that impact how the site is already serviced. Regarding emergency vehicles, the existing entrance / exit and internal roads already accommodate large trucks / equipment on-site and there is no concern with access or movement for emergency vehicles on-site and the plans / studies should not be required. The Township has confirmed that a site servicing plan is not required. Aggregate Resources Act site plans will be provided.

12. # 25 Security Estimate: Security estimates for on-site aggregate operations is not a requirement and no external work is proposed as part of the changes to the operation. Township confirmed that a security estimate is not required for internal works. Should berms be constructed within the right-of-way, a security estimate may be required (Township to review further). Schedule C to be revised to move the "Security Estimate" to the Terms of Reference Development section.

5. The County of Simcoe November 15, 2023 and November 14, 2023
   Comments: Walker met with the County of Simcoe and clarified their comments. Attached is the email to the County of Simcoe which clarifies their comments.

Thank you for consideration of the above and we look forward to meeting with the Township to confirm and clarify the application requirements.

Regards,

BRIAN ZEMAN, BES, MCIP, RPP | President

MHBC Planning, Urban Design & Landscape Architecture

113 Collier Street | Barrie | ON | L4M 1H2 | T 705 728 0045 x 226 | F 705 728 2010 | C 705 627 9004 | bzeman@mhbcplan.com

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PRE-CONSULTATION RESPONSE

SCHEDULE 'B'

CLEARVIEW

Fees & Charges Estimate

The following application fee and charges estimate has been provided for your convenience to assist you in assessing the known fees and charges associated with your Planning Act applications. This estimate is subject to change and does not include all costs associated with the development process, including: Development Charges, securities, capital contributions, peer or other review fees, other agency/department review and application fees, legal fees, consulting fees, etc. Any indicated fee/charge waiver, reduction, or exemption is not guaranteed. Any costs incurred as a result of peer review(s) undertaken by the Township of Clearview Consultant Reviews are the sole responsibility of the applicant.

The Township of Clearview and Charges By-law can be found online at www.clearview.ca.

Fee Estimate Information	
Official Plan Amendment	
Township of Clearview Application Fee	$5000.00
Township of Clearview Application Deposit	$2500.00
Nottawasaga Valley Conservation Authority	$530.00
County of Simcoe	
County of Simcoe Official Plan Application Fee	$3000.00
Terms of Reference	
Tunnel Stability Study – TOR Fee	$500.00
Natural Heritage Assessment Brief -TOR Fee	$500.00
Security Estimate for the berms works along ~~Highway 91~~ -TOR Fee Township Road 91 if located within Township ROW	$500.00

PRE-CONSULTATION RESPONSE

SCHEDULE 'C'

CLEARVIEW

Submission Breakdown & Next Steps

The following is a simple breakdown of the plans/studies that are required to be submitted as part of a complete application for each phase in your application process. The list sets out the ordered sequence of next steps.

The information below is meant to supplement, not replace, Schedule 'A' of your Pre-consultation response. Schedule 'A' contains a great deal of required, important detail that is not included here. Where two or more applications can be submitted concurrently, the chart will indicate this.

Be advised that due to the timelines and completeness requirements outlined in the Planning Act, the Township is unable to accept an incomplete application.

Pre-consultation Phase II:

TERMS OF REFERENCE DEVELOPMENT **Plan/Study Required**	
1. Tunnel Stability Study	☐
2. Natural Heritage Assessment Brief	☐
3. Security Estimate for the berms works along ~~Highway~~ Township Road 91 If located within Township ROW	☐

Formal Application Phase I:

OFFICIAL PLAN AMENDMENT **Plan/Study Required**	
1. Official Plan Amendment (OPA) Application	☐
2. OPA Application Fees & Deposits	☐
3. Nottawasaga Valley Conservation Authority Planning Review Fee	☐
4. Planning Justification Report -Status of Aggregate License*, Summary of existing traffic conditions*, Project Summary and Phasing Memo, Summary of hours of operation/lighting not changing on site	☐
5. Draft Official Plan Amendment/Schedule	☐
6. Draft Niagara Escarpment Plan Amendment	☐

SCHEDULE 'C'

CLEARVIEW

OFFICIAL PLAN AMENDMENT **Plan/Study Required**	
7. Tunnel Stability Study – Geotechnical	☐
8. Natural Heritage Assessment Brief	☐
9. Hydrogeological Report - including stormwater management brief	☐
10. Addendum to existing Noise, Dust, and Vibration studies	☐

* Status of Aggregate License – this will be included in the Planning Justification Report, and the Township is looking for a summary of current operations at the quarry and existing approvals.

-No formal Township Site Plan approval process is required since the Aggregate Resources Act Site Plan will be undertaken and no need to duplicate information, therefore no standalone stormwater operations and maintenance manual

- Aggregate Resources Act Site Plan to include – landscaping/restoration/rehabilitation, grading plan, details and notes plans, stormwater management ~~brief and plans~~ requirements, erosion and sediment control (ESC) Plan; site servicing plan

From: Rossalyn Workman <rworkman@clearview.ca>
Sent: Tuesday, May 7, 2024 12:08 PM
To: Ellen Ferris <eferris@mhbcplan.com>
Cc: Brian Zeman <bzeman@mhbcplan.com>; Kevin Kehl (KKehl@walkerind.com) <KKehl@walkerind.com>; Dave Munro <DMunro@walkerind.com>; Sarah Hanson <SHanson@walkerind.com>; Ryan Wall <RWall@walkerind.com>; Ryan Dosch <RDosch@walkerind.com>; Amy Cann <acann@clearview.ca>; Dan Perreault <dperreault@clearview.ca>; Patti Kennedy <pkennedy@clearview.ca>; Christine Taggart <ctaggart@clearview.ca>; Jennifer Georgas <Jennifer.Georgas@rjburnside.com>; Danielle Barranger <dbarranger@clearview.ca>
Subject: RE: Updated Schedule C - Checklist and Next Steps, and Schedule B- Fees Pre-Consultation Response Summary - Duntroon Quarry Expansion - I23-058

Hi Ellen

Please see the adjusted schedules.

Let me know if you have any questions.

Thanks Rossalyn

Rossalyn Workman MURP, RPP, Dipl.M.M.,

Community Planner, Approvals and Policy

Township of Clearview

705-428-6230 ext. 248

rworkman@clearview.ca

Please note I will be out of the office from May 13th to May 20th and will return on May 21st.

PRE-CONSULTATION RESPONSE

SCHEDULE 'B'

CLEARVIEW

Fees & Charges Estimate

The following application fee and charges estimate has been provided for your convenience to assist you in assessing the known fees and charges associated with your Planning Act applications. This estimate is subject to change and does not include all costs associated with the development process, including: Development Charges, securities, capital contributions, peer or other review fees, other agency/department review and application fees, legal fees, consulting fees, etc. Any indicated fee/charge waiver, reduction, or exemption is not guaranteed. Any costs incurred as a result of peer review(s) undertaken by the Township of Clearview Consultant Reviews are the sole responsibility of the applicant.

The Township of Clearview and Charges By-law can be found online at www.clearview.ca.

Fee Estimate Information	
Official Plan Amendment	
Township of Clearview Application Fee	$5000.00
Township of Clearview Application Deposit	$2500.00
Nottawasaga Valley Conservation Authority	$530.00
County of Simcoe	
County of Simcoe Official Plan Application Fee	$3000.00
Terms of Reference	
Tunnel Stability Study – TOR Fee	$500.00
Natural Heritage Assessment Brief – TOR Fee	$500.00
Security Estimate for 'berms works within the Township ROW along County Rd. 91'	$500.00

PRE-CONSULTATION RESPONSE

SCHEDULE 'C'

CLEARVIEW

Submission Breakdown & Next Steps

The following is a simple breakdown of the plans/studies that are required to be submitted as part of a complete application for each phase in your application process. The list sets out the ordered sequence of next steps.

The information below is meant to supplement, not replace, Schedule 'A' of your Pre-consultation response. Schedule 'A' contains a great deal of required, important detail that is not included here. Where two or more applications can be submitted concurrently, the chart will indicate this.

Be advised that due to the timelines and completeness requirements outlined in the Planning Act, the Township is unable to accept an incomplete application.

Pre-consultation Phase II:

TERMS OF REFERENCE DEVELOPMENT **Plan/Study Required**	
1. Tunnel Stability Study	☐
2. Natural Heritage Assessment Brief	☐
3. Security Estimate for the 'berms works within the Township ROW along County Road 91'	☐

Formal Application Phase I:

OFFICIAL PLAN AMENDMENT **Plan/Study Required**	
1. Official Plan Amendment (OPA) Application	☐
2. OPA Application Fees & Deposits	☐
3. Nottawasaga Valley Conservation Authority Planning Review Fee	☐
4. Planning Justification Report -Status of Aggregate License*, Summary of existing traffic conditions*, Project Summary and Phasing Memo, Summary of hours of operation/lighting not changing on site	☐
5. Draft Official Plan Amendment/Schedule	☐

PRE-CONSULTATION RESPONSE

SCHEDULE 'C'

CLEARVIEW

OFFICIAL PLAN AMENDMENT **Plan/Study Required**	
6. Draft Niagara Escarpment Plan Amendment	☐
7. Tunnel Stability Study – Geotechnical	☐
8. Natural Heritage Assessment Brief	☐
9. Hydrogeological Report – including stormwater management brief	☐
10. Addendum to existing Noise, Dust, and Vibration studies	☐

* Status of Aggregate License – this will be included in the Planning Justification Report, and the Township is looking for a summary of current operations at the quarry and existing approvals.

-No formal Township Site Plan approval process is required since the Aggregate Resources Act Site Plan will be undertaken and no need to duplicate information, therefore no standalone stormwater operations and maintenance manual

- Aggregate Resources Act Site Plan to include – landscaping/restoration/rehabilitation, grading plan, details and notes plans, stormwater management requirements, erosion and sediment control (ESC) Plan; site servicing plan

Terms of Reference

From: Ellen Ferris <eferris@mhbcplan.com>
Sent: Friday, June 14, 2024 11:38 AM
To: Rossalyn Workman <rworkman@clearview.ca>
Cc: Brian Zeman <bzeman@mhbcplan.com>; Kevin Kehl (KKehl@walkerind.com) <KKehl@walkerind.com>; Dave Munro <DMunro@walkerind.com>; Sarah Hanson <SHanson@walkerind.com>; Ryan Wall <RWall@walkerind.com>; Ryan Dosch <RDosch@walkerind.com>; Amy Cann <acann@clearview.ca>; Dan Perreault <dperreault@clearview.ca>; Patti Kennedy <pkennedy@clearview.ca>; Christine Taggart <ctaggart@clearview.ca>; Jennifer Georgas <Jennifer.Georgas@rjburnside.com>; Danielle Barranger <dbarranger@clearview.ca>
Subject: Re: Duntroon Quarry Amendment (I23-058) - Environmental and Water Resource Assessment TOR

Hi Rossalyn,

Suppose that would have been helpful to include…please find the TOR attached.
Thanks,

ELLEN FERRIS, BSc., MSc., MCIP, RPP | Associate

MHBC Planning, Urban Design & Landscape Architecture

113 Collier Street | Barrie | ON | L4M 1H2 | T 705 728 0045 x227 | eferris@mhbcplan.com

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From: Rossalyn Workman <rworkman@clearview.ca>
Sent: Friday, June 14, 2024 11:36 AM
To: Ellen Ferris <eferris@mhbcplan.com>
Cc: Brian Zeman <bzeman@mhbcplan.com>; Kevin Kehl (KKehl@walkerind.com) <KKehl@walkerind.com>; Dave Munro <DMunro@walkerind.com>; Sarah Hanson <SHanson@walkerind.com>; Ryan Wall <RWall@walkerind.com>; Ryan Dosch <RDosch@walkerind.com>; Amy Cann <acann@clearview.ca>; Dan Perreault <dperreault@clearview.ca>; Patti Kennedy <pkennedy@clearview.ca>; Christine Taggart <ctaggart@clearview.ca>; Jennifer Georgas <Jennifer.Georgas@rjburnside.com>; Danielle Barranger <dbarranger@clearview.ca>
Subject: RE: Duntroon Quarry Amendment (I23-058) - Environmental and Water Resource Assessment TOR

Hi Ellen

I didn't see an attachment, would you be able to resend?

Thanks Rossalyn

Rossalyn Workman MURP, RPP, Dipl.M.M.,

Community Planner, Approvals and Policy

Township of Clearview

705-428-6230 ext. 248

rworkman@clearview.ca

From: Ellen Ferris <eferris@mhbcplan.com>
Sent: Friday, June 14, 2024 11:18 AM
To: Rossalyn Workman <rworkman@clearview.ca>
Cc: Brian Zeman <bzeman@mhbcplan.com>; Kevin Kehl (KKehl@walkerind.com) <KKehl@walkerind.com>; Dave Munro <DMunro@walkerind.com>; Sarah Hanson <SHanson@walkerind.com>; Ryan Wall <RWall@walkerind.com>; Ryan Dosch <RDosch@walkerind.com>; Amy Cann <acann@clearview.ca>; Dan Perreault <dperreault@clearview.ca>; Patti Kennedy <pkennedy@clearview.ca>; Christine Taggart <ctaggart@clearview.ca>; Jennifer Georgas <Jennifer.Georgas@rjburnside.com>; Danielle Barranger <dbarranger@clearview.ca>
Subject: Duntroon Quarry Amendment (I23-058) - Environmental and Water Resource Assessment TOR

Rossalyn,

Further to the pre-consultation meeting earlier this year, please find attached the terms of reference for the Environmental and Water Resource Assessment for the Township's review.

The TOR for the tunnel study and information on the berm works will follow.

Please let us know if you have any questions.

Thanks,

ELLEN FERRIS, BSc., MSc., MCIP, RPP | Associate

MHBC Planning, Urban Design & Landscape Architecture

113 Collier Street | Barrie | ON | L4M 1H2 | T 705 728 0045 x227 | eferris@mhbcplan.com

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13 June 2024 Project No. CA0033354.8741

Rossalyn Workman
Town of Clearview
217 Gideon Street
Stayner, ON
L0M 1S0

TERMS OF REFERENCE FOR NATURAL ENVIRONMENTAL AND WATER RESOURCES IMPACT ASSESSMENT – LOWERING A PORTION OF THE QUARRY FLOOR DEPTH AT THE DUNTROON QUARRY AND DUNTROON QUARRY EXPANSION

Dear Ms. Workman,

1.0 INTRODUCTION

WSP was retained by Walker Aggregates Inc. to undertake an Environmental and Water Resource Assessment for an amendment to the Aggregate Resource Act Site Plans for the Duntroon Quarry and Duntroon Quarry Expansion.

A pre-consultation meeting was undertaken with the Town of Clearview on April 17, 2024, regarding a number of items including the proposed lowering of the quarry floor at the original Duntroon Quarry south of Township Road 91 and the Duntroon Quarry Expansion north of Township Road 91 (Approved in 2014 and in operation from 2016 to present). The extraction area footprint of the quarries will remain unchanged, however, the depth of the extraction of the quarries is proposed to be a uniform elevation across the entire Site. Currently a portion of the site is permitted to extract to an elevation of 500 metres above sea level (masl). The proposal is to allow the entire site to be extracted to a depth of 490 masl. The Township of Clearview has requested that Terms of Reference (TOR) be submitted for the assessment of potential impacts to natural heritage features. This Terms of Reference also outlines the associated water resources investigation that will be completed as part of the assessment.

The purpose of this letter is to provide a TOR that outlines the proposed scope of work for the impact assessment to support the application approvals process for the proposed lowering of the quarry floor. The Expansion Quarry studies completed for approval that encompassed the area of the original quarry were completed between 2003 to 2013 and assessed the impacts for the Expansion. As a Condition of Approval, the operations are subject to extensive monitoring of groundwater, surface water and natural heritage features as per the Duntroon Adaptive Management Plan (AMP). The AMP includes a collaborative assessment of both water resources data and complementary natural heritage feature assessment for both wetlands, watercourses and vernal pools (including created amphibian habitat, i.e., Miller pond). Given that the licenced extraction areas are not changing, the

potential impact is associated with the additional radius of influence from dewatering to facilitate the extraction of bedrock at the proposed new depth. As such, this proposed assessment will primarily focus on the potential to affect features that are reliant on groundwater discharge, namely, in this area, wetlands and watercourses.

2.0 PROPOSED IMPACT ASSESSMENT OVERVIEW

The Impact assessment will focus on the existing extensive background data for wetlands and watercourses, AMP annual monitoring reports, the most recent five-year comprehensive AMP report (WSP, September 2021) and the proposed hydrogeological study to be completed by WSP Canada Inc.

3.0 BACKGROUND DATA COLLECTION

A background review of the following sources will be completed to update the extensive suite of information already collected and being collected on an ongoing basis in the area of the quarry to document Existing Conditions, including but not limited to:

- Land Information Ontario (LIO) database (MNRF 2024)
- Natural Heritage Information Centre Data (NHIC; MNRF 2024)
- Fisheries and Oceans Canada online mapping tool of aquatic SAR (DFO 2024)
- Township Of Clearview Official Plan Schedules (2022)
- Current MNRF Wetland Evaluation Files and wetland delineation updates
- Historic and updated Fisheries data records from MNRF and Conservation Authorities.
- Atlas of Breeding Birds of Ontario (Cadman et al., 2007) and ebird
- Atlas of the Mammals of Ontario (Dobbyn 1994)
- Ontario Reptile and Amphibian Atlas (Ontario Nature 2022)
- LIDAR topographical information
- Current high resolution Satellite imagery and recent Site drone survey data.

4.0 PROPOSED WATER RELATED INVESTIGATIONS

Concurrent to WSP's Natural Heritage assessment, WSP will also be completing an assessment that focuses on the additional impact of lowering the quarry floor to determine the potential impacts that may influence groundwater discharge to sensitive features, namely baseflow/temperature in watercourses and hydro period of wetlands.

The hydrogeological study will include an investigation of potential impacts to private water wells, springs/seeps along the Niagara Escarpment, and watercourse/wetland features which are reliant on groundwater discharge. The Site setting is well studied through previous hydrogeological reports completed as part of the licensing of the Expansion quarry and the on-going AMP monitoring program. Nonetheless, a review of the Site setting will be

provided, including the results of additional hydraulic testing completed on the deeper bedrock interval (i.e., 490 masl to 500 masl). If necessary, proposed changes to the AMP monitoring program will be provided.

5.0 EXISTING CONDITIONS AND EVALUATION OF SIGNIFICANCE

Existing Conditions will be updated using the noted data sources in addition to the on-going AMP monitoring data collected for features above the brow of the escarpment.

These general Existing Conditions will be described for adjacent lands in the predicted radius of influence of the quarry where potential impacts are more likely to occur due to the proposed lowering of the quarry floor.

These data will be presented in figure(s) highlighting the location and type of natural heritage features with a focus on those reliant on water and where water regime dynamics are important to their form and function. This Existing Conditions description of features and mapping will be used in evaluating the significance of these features from an ecological and policy perspective.

6.0 IMPACT ASSESSMENT

Natural features will be evaluated for potential impacts from the lowering of the quarry floor to a uniform depth of 490 masl.

The assessment will rely on the evaluation completed by WSP as noted above for the proposed changes, in combination with the known existing conditions of natural heritage features that have been within the historical zone of influence.

These existing conditions are instrumental in understanding the potential impacts. Specifically, the Impact Assessment (IA) will be a collaborate evaluation of groundwater dependent natural heritage features, including baseflow for tributaries with fish habitat and wetlands that may be dependent on groundwater discharge for a portion of their water budget.

7.0 REPORTING AND MONITORING

WSP will prepare a scoped IA which updates and documents the existing conditions, provides an evaluation of relative sensitivities and significance of features, assess potential impacts of quarry extraction depth changes based on the hydrogeological study and natural heritage features understanding.

Figures will be prepared including an overlay of the location of natural features and predicted cone of influence to illustrate the area of potential impact. It is noted that the existing AMP already includes a number of mitigation options to be implemented should unacceptable impacts to features be observed. If required, alternative mitigation strategies will be considered for the proposed quarry deepening that both avoids impact to the natural features and identifies areas for long term protection of natural features and functions through appropriate monitoring and mitigation measures.

Monitoring

Ecological monitoring, including wetland and watercourse monitoring, is a component of the current AMP.

If required, additional monitoring will be added to the AMP to enhance monitoring of natural heritage features that may potentially be impacted.

8.0 SUMMARY

The purpose of this TOR is to provide an outline of the technical studies to address approval requirements for the proposed lowering of the quarry floor at the Duntroon Quarry and the Duntroon Expansion quarry.

If you have any questions, or wish to discuss the content of the above, please feel free to contact the undersigned.

Sincerely

WSP Canada Inc.





Daniel Eusebi BES, MCIP, RPP
Senior Principal Ecologist

Kevin Fitzpatrick, PEng
Senior Project Engineer

DE/KF/ld

CC: Ryan Wall, Walker Aggregates
Sarah Hansen, Walker Aggregates
Ryan Dosh, Walker Aggregates
Kevin Kehl, Walker Aggregates
Dave Munroe, Walker Aggregates
Brian Zeman, MHBC
Ellen Ferris, MHBC

c:\users\cald042350\appdata\local\microsoft\windows\inetcache\content.outlook\3ekhiyh1\project number_l_rev0_tor duntroon quarry_12june2024.docx

From: Ellen Ferris <eferris@mhbcplan.com>
Sent: Tuesday, September 17, 2024 8:52 AM
To: Rossalyn Workman <rworkman@clearview.ca>
Cc: Brian Zeman <bzeman@mhbcplan.com>; Kevin Kehl (KKehl@walkerind.com) <KKehl@walkerind.com>; Dave Munro <DMunro@walkerind.com>; Sarah Hanson <SHanson@walkerind.com>; Ryan Wall <RWall@walkerind.com>; Ryan Dosch <RDosch@walkerind.com>; Amy Cann <acann@clearview.ca>; Dan Perreault <dperreault@clearview.ca>; Patti Kennedy <pkennedy@clearview.ca>; Christine Taggart <ctaggart@clearview.ca>; Jennifer Georgas <Jennifer.Georgas@rjburnside.com>; Danielle Barranger <dbarranger@clearview.ca>
Subject: Re: Duntroon Quarry Amendment (I23-058) - Environmental and Water Resource Assessment TOR

Good Morning Rossalyn,

Further to the pre-consultation minutes circulated for the proposed Duntroon Quarry Amendments, we have now reviewed the locations of the proposed visual/safety berms and attach a figure outlining the berm layout that will be submitted as part of the application.

It is our understanding that a TOR was requested for a security estimate associated with the proposed berms, as it was thought that the berms may need to be accommodated within the Township ROW. As outlined in the attached, all berms will be located on Walker's land within the licence. Based on this, it is our understanding that a TOR review will not be required for this aspect of the proposal since the berms will be located outside of the municipal ROW.

The locations of the proposed berms within the setback will be reflected in the submission materials and Walker is satisfied that it provides safety and visual screening now that Township Road 91 is to remain open.

As the Township had requested, please find attached the TORs for the water/natural heritage report and the tunnel study. Additionally, it is our understanding that three (3) TORs are to be reviewed by the Township (water, natural heritage and tunnel). We will coordinate having $1,500 sent to the Township to cover the review fees.

Should you have any questions, please let us know.

Thanks,

ELLEN FERRIS, MSc., MCIP, RPP | Associate

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE

113 Collier Street, Barrie ON, L4M 1H2

T: 705-728-0045 x 227

F: 705-728-2010

August 13, 2024 Project No. CA0012787.0623

Rossalyn Workman
Town of Clearview
217 Gideon Street
Stayner, ON
L0M 1S0

TERMS OF REFERENCE FOR DUNTROON HAULAGE TUNNEL GEOTECHNICAL INSPECTION WORK DUNTROON QUARRY EXPANSION

Dear Ms. Workman,

INTRODUCTION

WSP was retained by Walker Aggregates Inc. to undertake a Geotechnical Study for the existing tunnel underneath Township Road 91 that connects the Duntroon Quarry and the Duntroon Quarry Expansion.

A pre-consultation meeting was undertaken with the Town of Clearview on April 17, 2024, regarding a number of items including the proposed use of the tunnel during operations, during rehabilitation (e.g. lake filling), and post-licence surrender. Therefore, following completion of quarry activities, any tunnel infrastructure that remains must not impact the future public use of Township Road 91. The Township of Clearview has requested that Terms of Reference (TOR) be submitted for the geotechnical study that will be completed to assess current and future use of the existing haulage tunnel at the Site. The purpose of this letter is to provide the TOR for the geotechnical study related to the tunnel.

The Duntroon Quarry is situated along Township Road 91, west of the village of Duntroon, Ontario with the main quarry located on the south side of Township Road 91. The tunnel was constructed in 2015 as a horseshoe shaped, truck tunnel with a total length of approximately 87 metres and a height of 8.6 metres measured at the tunnel obvert and a width of approximately 10 m. The tunnel excavation was carried out by drilling and blasting methods and the quarry tunnel crown was supported with wire mesh, shotcrete and rock bolts while the sidewalls were unsupported except from the tunnel entrances. At the tunnel entrances, the first 3 metres long wall sections, which are expected to be impacted more heavily be weathering than the remainder of the tunnel walls, were supported with rock bolts and fibre-reinforced shotcrete. Rockfall protection mesh was installed on both portal faces and fibre-reinforced shotcrete was applied to the rock faces immediately around the tunnel opening.

SCOPE OF TUNNEL GEOTECHNICAL STUDY

The geotechnical study will include the following:

- WSP will carry out a visual inspection of the haulage tunnel crown, walls and portal faces in order to assess the existing condition of the shotcrete lining, rock bolts and wire mesh and identify any potential areas of concern including any potential rockfall hazards. The inspection will be carried out on foot from the ground and from a manlift.
- A geotechnical study report will be prepared, which will include the following:
  - A summary of the inspection results;
  - The results of a geotechnical stability assessment of the haulage tunnel during operations, during lake-filling and post-license surrender;
  - Recommendations related to long-term tunnel operations, future inspections and regular maintenance/remediation of the tunnel for its continuous and safe use.

If you have any questions, or wish to discuss the content of the above, please feel free to contact the undersigned.

Sincerely

WSP Canada Inc.





Mark Telesnicki, PEng
Principal Rock Mechanics Engineer

Kevin Fitzpatrick, PEng
Senior Project Engineer

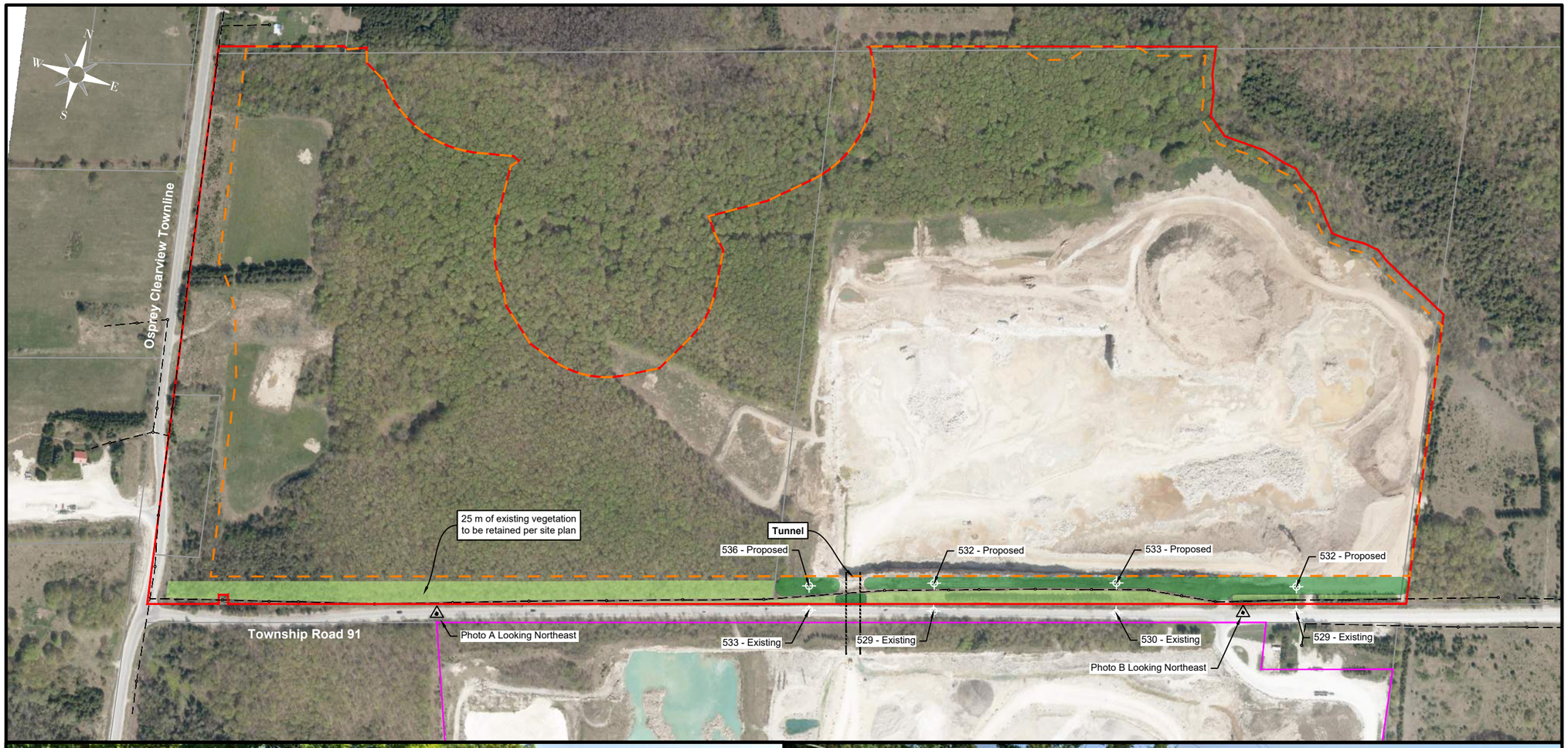
MJT/KF/jl

CC: Ryan Wall, Walker Aggregates
Sarah Hansen, Walker Aggregates
Ryan Dosh, Walker Aggregates
Kevin Kehl, Walker Aggregates
Dave Munroe, Walker Aggregates
Brian Zeman, MHBC
Ellen Ferris, MHBC

Proposed Berm for Township Road 91

Duntroon Quarry Expansion

Lot 25 and Part of Lot 26, Concession 12
Part of Lot 25, Concession 11
Geographic Township of Nottawasaga
Township of Clearview
County of Simcoe







Legend

- Licence Boundary - Duntroon Quarry Expansion
- Limit of Extraction - Duntroon Quarry Expansion
- Licence Boundary - Duntroon Quarry
- Proposed Berm - Height on Plan View
- Existing Vegetation to be Retained
- Parcel Fabric
- 530 Spot Elevation (Existing / Proposed) in MASL
- Hydro Pole Line
- Tunnel

Berm Details

Height	3.0 m above centreline of Township Road 91
Side Slopes	2:1
Crest Width	1.0 m

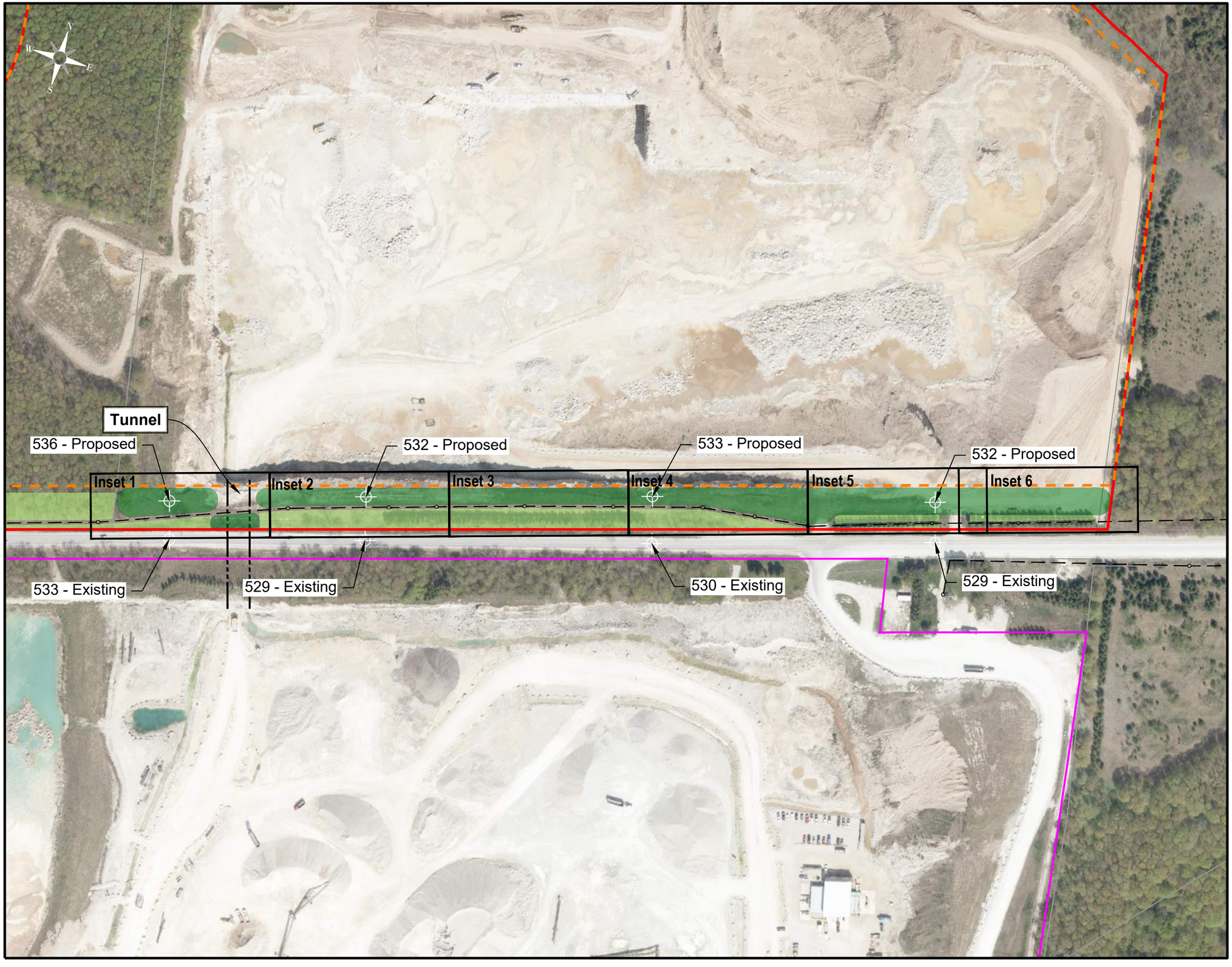
Note:

1. The toe of the berm along the south side will be less than 1.0 m from the licence boundary
2. The toe of the berm along the north side will remain 1.5 m from the limit of extraction
3. The footprint of the berm can be accommodated within the setback

Date	September 2024
Sources	2023 aerial photography from the County of Simcoe GIS Parcel fabric from the Municipal Property Assessment Corporation (MPAC) Licence boundary & limit of extraction from Duntroon Quarry Expansion site plan dated September 4, 2014
Scale - 1:5000	0 75 150 Meters

R:\Brian\9811BN - Walker Duntroon Quarry Amendments\Drawings\Safety and Visual Berm\CAD\9811BN - SPA - Proposed Berm - 2024-09-03.dwg

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
113 COLLIER STREET, BARRIE, ON, L4M 1H2 | P: 705.728.0045 | WWW.MHBCPLAN.COM



Proposed Berm for Township Road 91 Inset Map

Duntroon Quarry Expansion

Lot 25 and Part of Lot 26, Concession 12
Part of Lot 25, Concession 11
Geographic Township of Nottawasaga
Township of Clearview
County of Simcoe

Legend

- Licence Boundary - Duntroon Quarry Expansion
- Limit of Extraction - Duntroon Quarry Expansion
- Licence Boundary - Duntroon Quarry
- Proposed Berm - Height on Plan View
- Existing Vegetation to be Retained
- Parcel Fabric
- 530 Spot Elevation (Existing / Proposed) in MASL
- Hydro Pole Line
- Tunnel

Berm Details

Height	3.0 m above centreline of Township Road 91
Side Slopes	2:1
Crest Width	1.0 m

Note:

1. The toe of the berm along the south side will be less than 1.0 m from the licence boundary
2. The toe of the berm along the north side will remain 1.5 m from the limit of extraction
3. The footprint of the berm can be accommodated within the setback

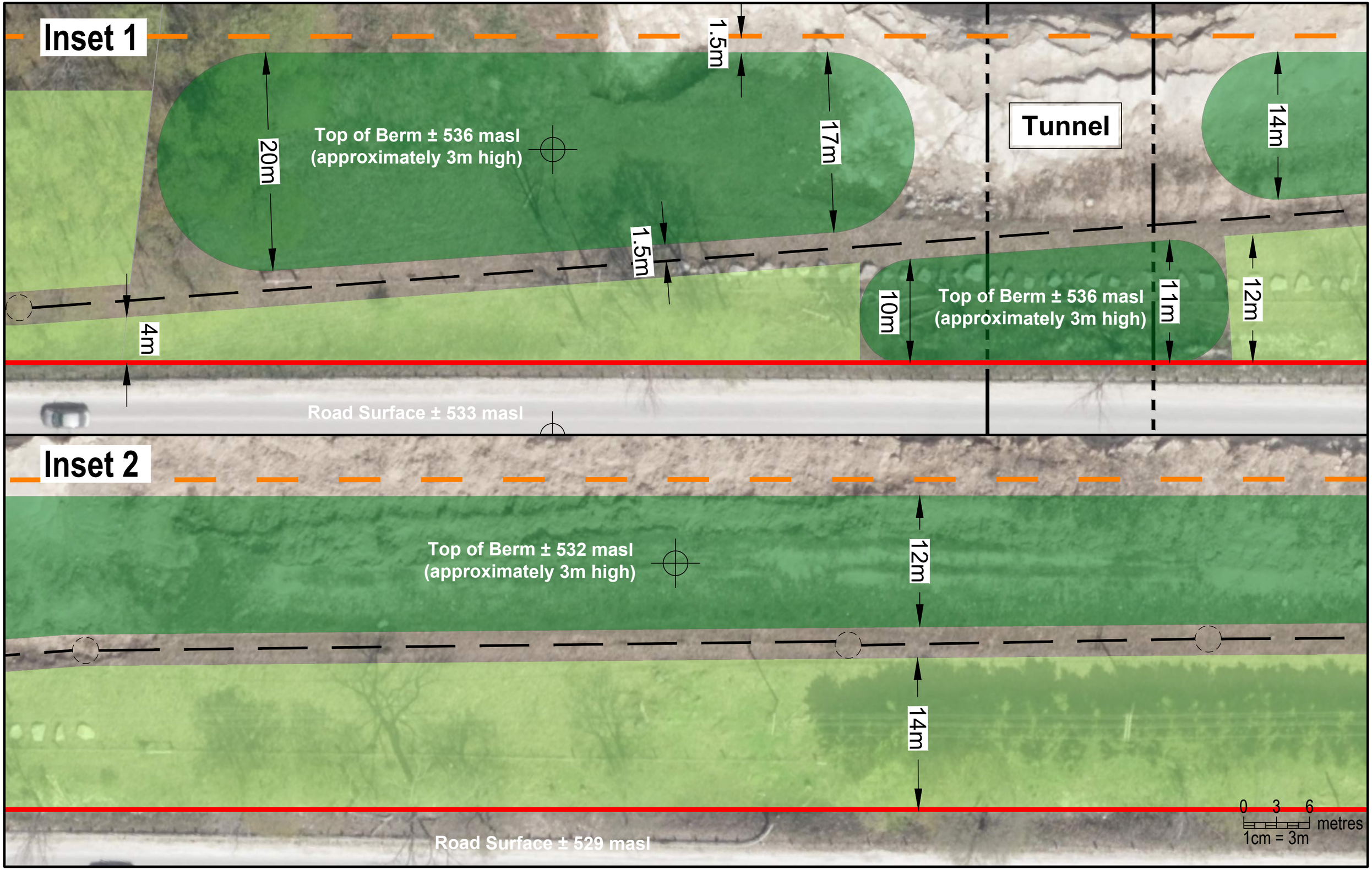
Date	September 2024
Sources	2023 aerial photography from the County of Simcoe GIS Parcel fabric from the Municipal Property Assessment Corporation (MPAC) Licence boundary & limit of extraction from Duntroon Quarry Expansion site plan dated September 4, 2014

Scale - 1:2500

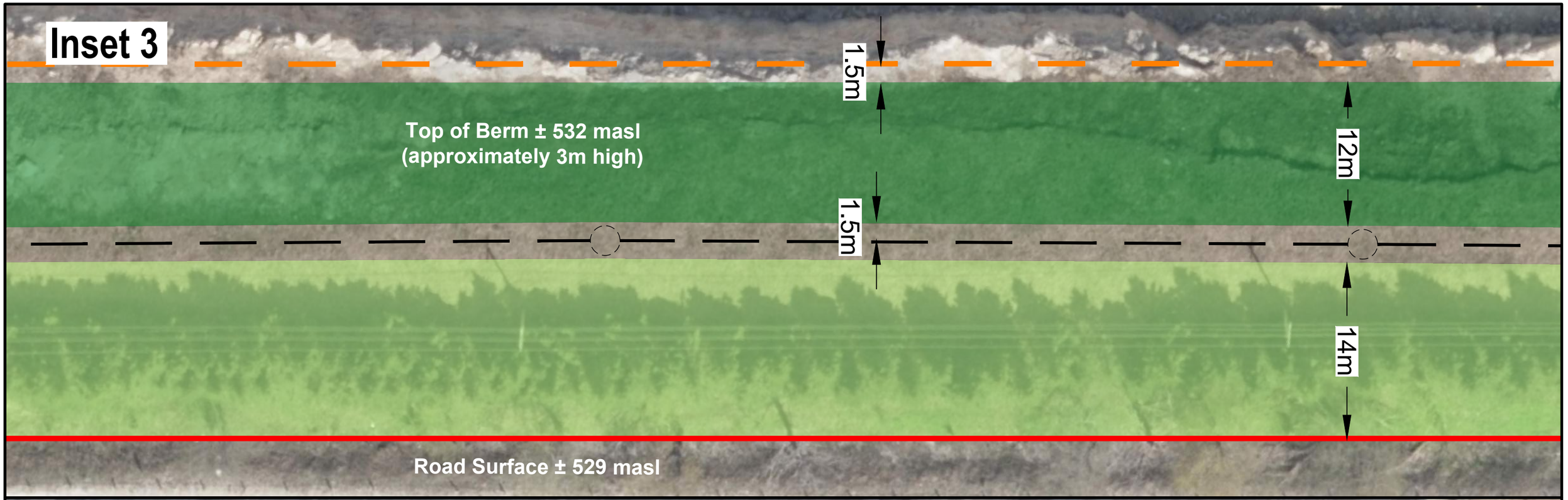
0 40 80 Meters

R:\Brian\9811BN - Walker Duntroon Quarry Amendments\Drawings\Safety and Visual Berm\CAD\9811BN - SPA - Proposed Berm - 2024-09-03.dwg

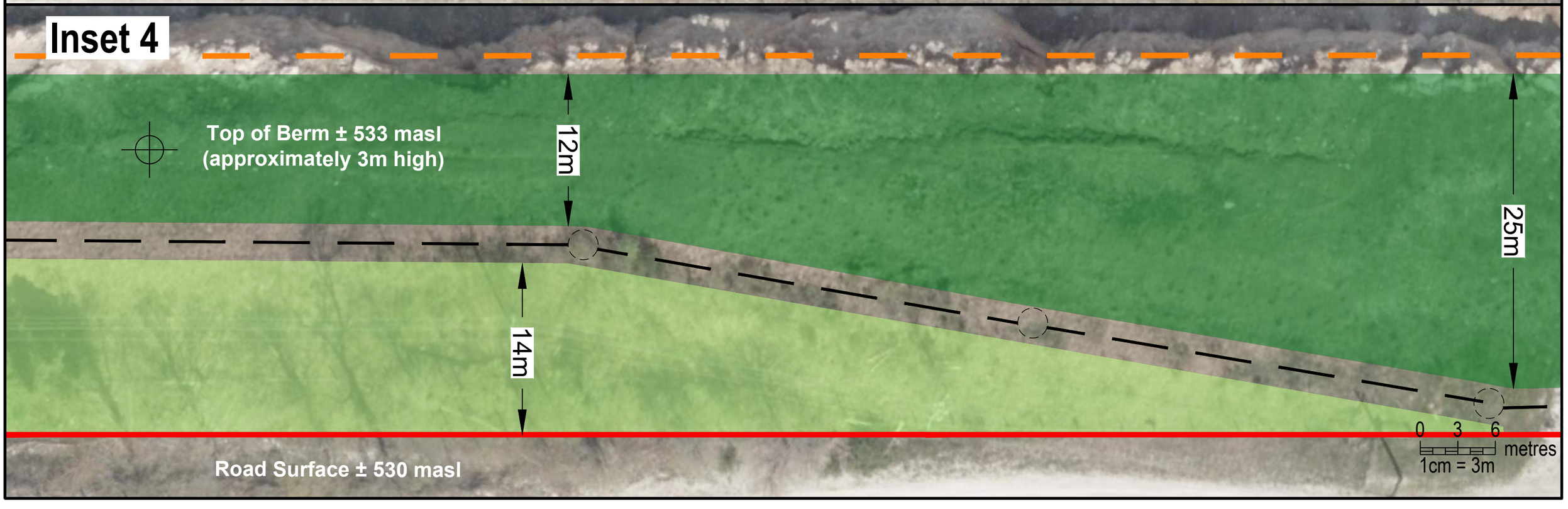
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113 COLLIER STREET, BARRIE, ON, L4M 1H2 | P: 705.728.0045 | WWW.MHBCPLAN.COM


Inset 1
1.5m
20m
Top of Berm ± 536 masl
(approximately 3m high)
17m
Tunnel
14m
1.5m
10m
Top of Berm ± 536 masl
(approximately 3m high)
11m
12m
4m
Road Surface ± 533 masl
Inset 2
Top of Berm ± 532 masl
(approximately 3m high)
12m
14m
Road Surface ± 529 masl
0 3 6
metres
1cm = 3m

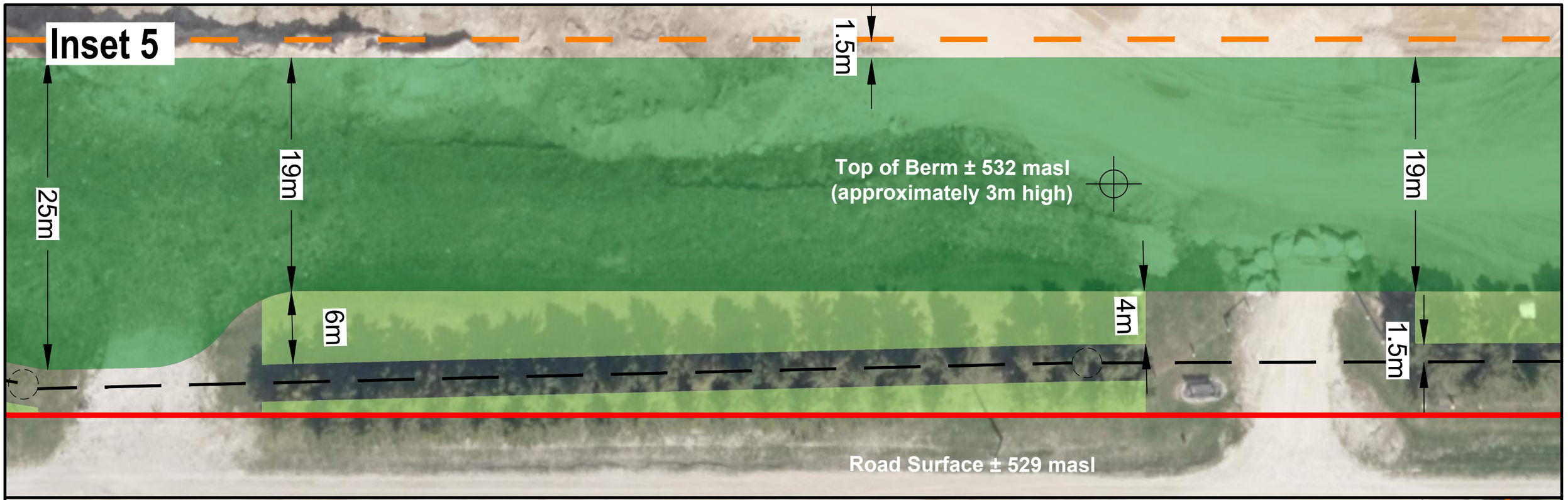
Inset 3



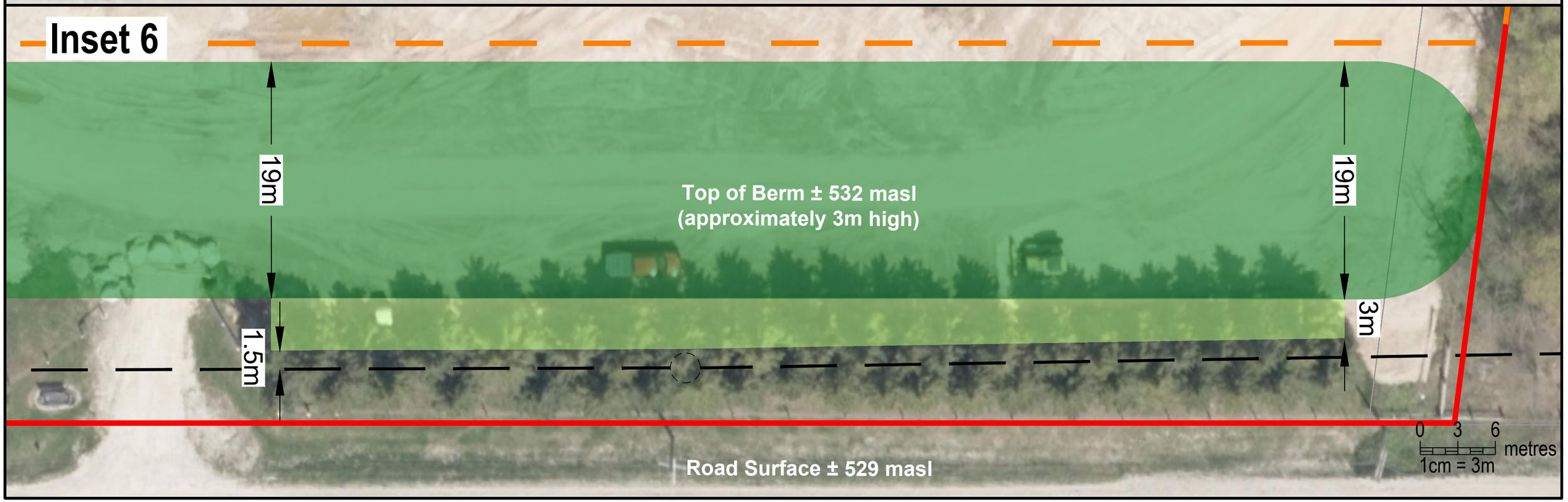
Inset 4



Inset 5



Inset 6



From: Rossalyn Workman <rworkman@clearview.ca>
Sent: Wednesday, October 9, 2024 10:37 AM
To: Ellen Ferris <eferris@mhbcplan.com>; Brian Zeman <bzeman@mhbcplan.com>
Cc: Patti Kennedy <pkennedy@clearview.ca>; Christine Taggart <ctaggart@clearview.ca>; Jennifer Georgas <Jennifer.Georgas@rjburnside.com>
Subject: 9861 County Road 91 - Walker/Duntroon Quarry TOR Peer Review

Hi Ellen and Brian

Please find attached the TOR peer review for the following:

- Terms of Reference for Natural Environmental and Water Resources Impact Assessment, prepared by WSP, dated June 13, 2024.
- Terms of Reference for Duntroon Haulage Tunnel Geotechnical Inspection Work, prepared by WSP, dated August 13, 2024.

Let me know if you have any additional questions.

Thanks Rossalyn

Rossalyn Workman MURP, Dipl.MM, MCIP, RPP

Manager of Planning

Township of Clearview

705-428-6230 ext. 248

rworkman@clearview.ca

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R.J. Burnside & Associates Limited 3 Ronell Crescent Collingwood ON L9Y 4J6 CANADA
telephone (705) 446-0515 **fax** (519) 941-8120 **web** www.rjburnside.com

BURNSIDE
[THE DIFFERENCE IS OUR PEOPLE]

October 8, 2024

Via: Email

Rossalyn Workman MURP, Dipl.MM, MCIP,
RPP
Manager of Planning
Township of Clearview
217 Gideon Street
Stayner ON L0M 1S0

Dear Ms. Workman:

Re: Terms of Reference Peer Review
Duntroon Quarry Expansion
Project No.: MCG100440.2000

We have received the provided documentation for the Terms of Reference for the Duntroon Quarry Expansion application. We have reviewed the following documentation:

- Terms of Reference for Natural Environmental and Water Resources Impact Assessment, prepared by WSP, dated June 13, 2024.
- Terms of Reference for Duntroon Haulage Tunnel Geotechnical Inspection Work, prepared by WSP, dated August 13, 2024.

We provide the following comments.

1.0 Natural Environment and Water Resources Impact Assessment

Comments provided by Kevin Butt, B.Sc. (Env), Eco. Rest. Cert. TRAQ, ISA Certified Arborist and Terrestrial Ecologist

Burnside has reviewed the Terms of Reference (TOR) for the Natural Environment and Water Resources Impact Assessment which is found in a WSP Canada Inc (WSP) letter dated June 13, 2014. WSP indicates that the purpose of the letter is to provide a TOR that" outlines the proposed scope of work for the impact assessment to support the application approvals process for the proposed lowering of the quarry floor." The current license permits extraction of rock in a portion of the site to 500 metres above sea level (masl). Walker Aggregates Inc. is applying to allow extraction across the entire site to a uniform depth of 490 masl.

1. Proposed Water Related Investigations - WSP does not provide any details on the monitoring plan or the types of water related investigations that will take place. As an initial first step, WSP should provide a review of the existing monitoring network and

identify new monitoring wells/monitoring locations that are required to assess the impacts of the 10m of additional extraction. WSP should also confirm that there are sufficient wells completed between 500 and 490 masl to allow for an assessment of impacts to be made in the areas where deeper extraction is proposed. If additional deeper wells are needed, they should be installed as soon as possible. A short memo describing the additions to the monitoring network should be prepared and circulated prior as soon as possible so that the monitoring program can be agreed upon.

2. Existing Conditions and Evaluation of Significance - Presumably the previous hydrogeological assessment included a prediction of the pumping rates required to dewater the pit to the proposed extraction depth. The TOR indicates that WSP plans on updating the Existing Conditions. This update should include an assessment of the predicted vs the actual dewatering rates required to allow extraction of the pit to the current licensed depth. If there are significant variations in predicted water level depths versus actual, WSP should utilize the new data to calibrate the groundwater model.

3. Impact Assessment - WSP does not indicate if any additional on-site investigations such as pumping tests/packer testing etc. will be completed. Since the fracture systems in bedrock are unpredictable, it may be necessary to complete additional testing if the area of deeper extraction is not immediately adjacent to an area where investigations to 490 masl have been completed.

4. Ecological Monitoring - The December 6, 2013 Adaptive Management Plan (AMP) was found on the Walker Aggregates website that was referenced within the TOR. It is agreed that comprehensive ecological monitoring is done within the scope of the AMP to protect the natural features and identified species including the wetlands and watercourses that the TOR identifies as priorities with the proposed downward expansion of the quarry. To date, it is understood that the recipients of the monitoring data have been MOE / MECP and MNR / MNRF. It is assumed that this monitoring data of the proposed expansion would be provided to the Township for their records – especially if additional monitoring, as identified within the TOR (end of Section 7.0), is required.

2.0 Haulage Tunnel Geotechnical Inspection

Comments provided by Stephen Riley, P. Eng, Senior VP, Public Sector

1. Recommendations to include the frequency of inspections at all stages of the tunnel life cycle including, before, during, and after lake filling.
2. Recommendations to including details on both dry and underwater inspections after lake filling.

cc: Patti Kennedy, Township of Clearview (enc.) (Via: Email)

Other than by the addressee, copying or distribution of this document, in whole or in part, is not permitted without the express written consent of R.J. Burnside & Associates Limited.

From: Ellen Ferris
Sent: Tuesday, November 12, 2024 3:39 PM
To: Rossalyn Workman <rworkman@clearview.ca>
Cc: Brian Zeman <bzeman@mhbcplan.com>; Ryan Wall <RWall@walkerind.com>; Kevin Kehl (KKehl@walkerind.com) <KKehl@walkerind.com>; Dave Munro <DMunro@walkerind.com>; Sarah Hanson <SHanson@walkerind.com>; Ryan Dosch <RDosch@walkerind.com>; Fitzpatrick, Kevin <Kevin.Fitzpatrick@wsp.com>; Eusebi, Daniel <Daniel.Eusebi@wsp.com>; Davis, Leigh <Leigh.Davis@wsp.com>; Anthony Vanderheyden <Anthony.Vanderheyden@rwdi.com>; Brian Sulley (brian.sulley@rwdi.com) <brian.sulley@rwdi.com>; Mitch Parent <Michel.Parent@rwdi.com>; Ben Coulson <Ben.Coulson@rwdi.com>; Katie Allen <Katie.Allen@rwdi.com>
Subject: Duntroon Quarry Amendment (I23-058) - Response to Township Peer Review on TOR

Hi Rossalyn,
Thank you for providing the Township's peer review comments on the terms of reference and attached please find a response.

In addition, please note that the ongoing site investigations have confirmed that the aggregate formation is slightly below 490 masl. Please note that the technical reports will be assessing the potential to extract the entire aggregate formation on-site. We have attached a figure showing the current approved extraction depth and the maximum depth of extraction that is being assessed as part the application. This revision will not impact the TOR and all of the reports will consider the revised depths.

Please let us know if you have any questions.

Thanks,

ELLEN FERRIS, MSc., MCIP, RPP | Associate

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE

113 Collier Street, Barrie ON, L4M 1H2

T: 705-728-0045 x 227

F: 705-728-2010

Proposed Extraction Depths

Duntroon Quarry & Duntroon Quarry Expansion

Part of Lots 24 & 25, Concession 12
Geographic Township of Nottawasaga
Township of Clearview
County of Simcoe



Legend

- Licence Boundaries
- Limits of Extraction
- Maximum Depth - Approved - 500 masl
- Maximum Depth - Approved - 490 masl
- 490 Maximum Depth - Proposed (white)

Date	November 2024
Sources	Boundaries from MNR approved site plans 2023 aerial photography from the County of Simcoe GIS
Scale - 1:5000	0 100 200 Meters

N:\Brian\9811BN - Walker Duntroon Quarry Amendments\Drawings\Extraction Depths\CAD\9811BN - Extraction Depths.dwg

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
113 COLLIER STREET, BARRIE, ON, L4M 1H2 | P: 705.728.0045 | WWW.MHBCPLAN.COM

October 29, 2024 Project No. CA0033354.8741

Ms. Rossalyn Workman MURP, Dipl.MM, MCIP, RPP
Manager of Planning, Township of Clearview
217 Gideon Street
Stayner ON L0M 1S0

TERMS OF REFERENCE FOR DUNTROON HAULAGE TUNNEL GEOTECHNICAL INSPECTION WORK DUNTROON QUARRY EXPANSION

Dear Ms. Workman:

WSP Canada Inc. (WSP) developed a Terms of Reference for the Duntroon Haulage Tunnel Geotechnical Inspection Work, dated August 13, 2024, related to the Duntroon Quarry Expansion application. The Terms of Reference (TOR) was submitted to the Township of Clearview for review. The Township of Clearview retained R.J. Burnside & Associates Limited (Burnside) to complete a peer review of the TOR. The peer review comments were provided to the Township in a letter dated October 8, 2024. The purpose of this letter is to provide a response to the geotechnical inspection peer review comments prepared by Burnside.

Peer Review Comments

The peer review comments related to the haulage tunnel geotechnical study are provided below:

1) Recommendations to include the frequency of inspections at all stages of the tunnel life cycle including, before, during, and after lake filling.

2) Recommendations to include details on both dry and underwater inspections after lake filling.

WSP Response

WSP confirms that recommendations for the frequency of regular tunnel inspections at all stages of the tunnel life including before, during and after lake filling (both above water and underwater inspections) will be included in the Geotechnical Study Report.

Sincerely,

WSP Canada Inc.



Mark Telesnicki, P.Eng.
Principal, Senior Engineer

November 6, 2024 Project No. CA0033354.8741

Rossalyn Workman, MURP, Dipl.MM, MCIP
RPP
Manager of Planning
Township of Clearview
217 Gideon Street
Stayner, ON L0M 1S0

Subject: Response to Clearview Township Terms of Reference Peer Review
Proposed Duntroon Quarry Deepening

We are pleased to provide our response to peer review comments on the Terms of Reference (ToR) for the natural environment and hydrogeology studies to be completed in support of the proposed Duntroon Quarry deepening. Walker Aggregates Inc. (WAI) retained WSP Canada Inc. (WSP) to prepare the ToR, a copy of which was provided to the Township of Clearview for their review dated June 13, 2024.

Peer review of the ToR was completed by R.J. Burnside & Associates Limited, and comments were provided in correspondence dated October 8, 2024. The peer review comments and our responses (in blue font) are provided below.

1.0 NATURAL ENVIRONMENT AND WATER RESOURCES IMPACT ASSESSMENT

1. *Proposed Water Related Investigations - WSP does not provide any details on the monitoring plan or the types of water related investigations that will take place. As an initial first step, WSP should provide a review of the existing monitoring network and identify new monitoring wells/monitoring locations that are required to assess the impacts of the 10m of additional extraction. WSP should also confirm that there are sufficient wells completed between 500 and 490 masl to allow for an assessment of impacts to be made in the areas where deeper extraction is proposed. If additional deeper wells are needed, they should be installed as soon as possible. A short memo describing the additions to the monitoring network should be prepared and circulated prior as soon as possible so that the monitoring program can be agreed upon.*

The existing Adaptive Management Plan (AMP) monitoring program will be used to complete the Level 1 and 2 Water Study report to meet the requirements of the ARA licence application for the proposed quarry deepening. Details of the monitoring program are provided in the 2023 Annual Summary and Performance Report (WSP, March 2024). The map (**Figure 2**) detailing the monitoring network locations, and summary tables of the monitoring well construction details, residential wells and surface water stations (**Tables A-1 and A-2**) which were included in the 2023 Annual Summary and Performance Report have been appended to this memorandum.

The AMP monitoring network at the Site currently includes 41 groundwater monitoring wells, 10 drivepoints for monitoring of wetland hydroperiods, 13 residential wells at participating neighbouring properties and 38 surface water monitoring stations within the various tributaries and escarpment springs / seeps which surround the Site. In addition, water level data from the 24 groundwater monitoring wells from the neighbouring Osprey Quarry (operated by St. Mary's Cement) are also considered in the study.

We note that a portion of the Duntroon Quarry extension (i.e., Phase 4) is already approved for extraction to a depth of 490 masl; therefore, the existing AMP monitoring network was designed to monitor deeper impacts. As noted on **Table A-1**, there are 29 monitoring wells which are completed to below the Amabel / Fossil Hill contact depth, which is the proposed maximum depth of the quarry deepening. A total of 24 of the surface water monitoring stations are situated below 490 masl as shown on **Table A-2**.

The existing AMP monitoring program configuration is considered sufficient for prediction and monitoring of any potential impacts from the proposed quarry deepening and therefore due to this comprehensive existing network, no additional permanent monitoring wells or surface water stations are proposed. Seven additional test open boreholes were advanced in the existing floor of the quarry to confirm groundwater conditions / depth of the Amabel / Fossil Hill contact as part of the assessment but are not part of the monitoring network.

2. *Existing Conditions and Evaluation of Significance - Presumably the previous hydrogeological assessment included a prediction of the pumping rates required to dewater the pit to the proposed extraction depth. The TOR indicates that WSP plans on updating the Existing Conditions. This update should include an assessment of the predicted vs the actual dewatering rates required to allow extraction of the pit to the current licensed depth. If there are significant variations in predicted water level depths versus actual, WSP should utilize the new data to calibrate the groundwater model.*

Acknowledged and agreed.

3. *Impact Assessment - WSP does not indicate if any additional on-site investigations such as pumping tests/packer testing etc. will be completed. Since the fracture systems in bedrock are unpredictable, it may be necessary to complete additional testing if the area of deeper extraction is not immediately adjacent to an area where investigations to 490 masl have been completed.*

We note that historical studies completed for the previous Duntroon Quarry extension included packer testing of 9 boreholes surrounding both the original quarry and extension lands, for discreet intervals along the entire Amabel / Fossil Hill Formation bedrock sequence. The estimated hydraulic conductivities for the packer test intervals are provided on the borehole logs included in **Appendix A** of the 2023 Annual Summary and Performance Report.

As part of the updated studies for the proposed quarry deepening, additional test open boreholes were advanced within the quarry footprint to the Fossil Hill Formation contact (i.e., below 490 masl) to confirm and augment the data from the previous hydrogeologic studies. Both the historical and updated hydraulic testing data will be used to assess the representativeness of the hydraulic conductivity values used to simulate this interval in the numerical groundwater model, and for recalibration of the numerical model, as necessary.

4. *Ecological Monitoring - The December 6, 2013 Adaptive Management Plan (AMP) was found on the Walker Aggregates website that was referenced within the TOR. It is agreed that comprehensive ecological monitoring is done within the scope of the AMP to protect the natural features and identified species including the wetlands and watercourses that the TOR identifies as priorities with the proposed downward expansion of the quarry. To date, it is understood that the recipients of the monitoring data have been MOE / MECP and MNR / MNRF. It is assumed that this monitoring data of the proposed expansion would be provided to the Township for their records – especially if additional monitoring, as identified within the TOR (end of Section 7.0), is required.*

As noted previously, the Township of Clearview has been included on the circulation of the Duntroon Quarry Annual Performance Monitoring reports, including the most recent report submitted in March 2024, which includes monitoring data to the end of 2023. This data is also publicly available on the Walker Industries website.

WAI will provide all monitoring data obtained through the course of this study which Township of Clearview requires to complete their review. Future Annual Summary and Performance Reports will continue to be circulated to the Township of Clearview.

Closing

We trust that this response to comments is sufficient for your current needs. Please contact us if you have additional questions or concerns.

Yours truly,

WSP Canada Inc.

Leigh Davis, M.A.Sc., P.Eng.
Project Engineer, Earth & Environment

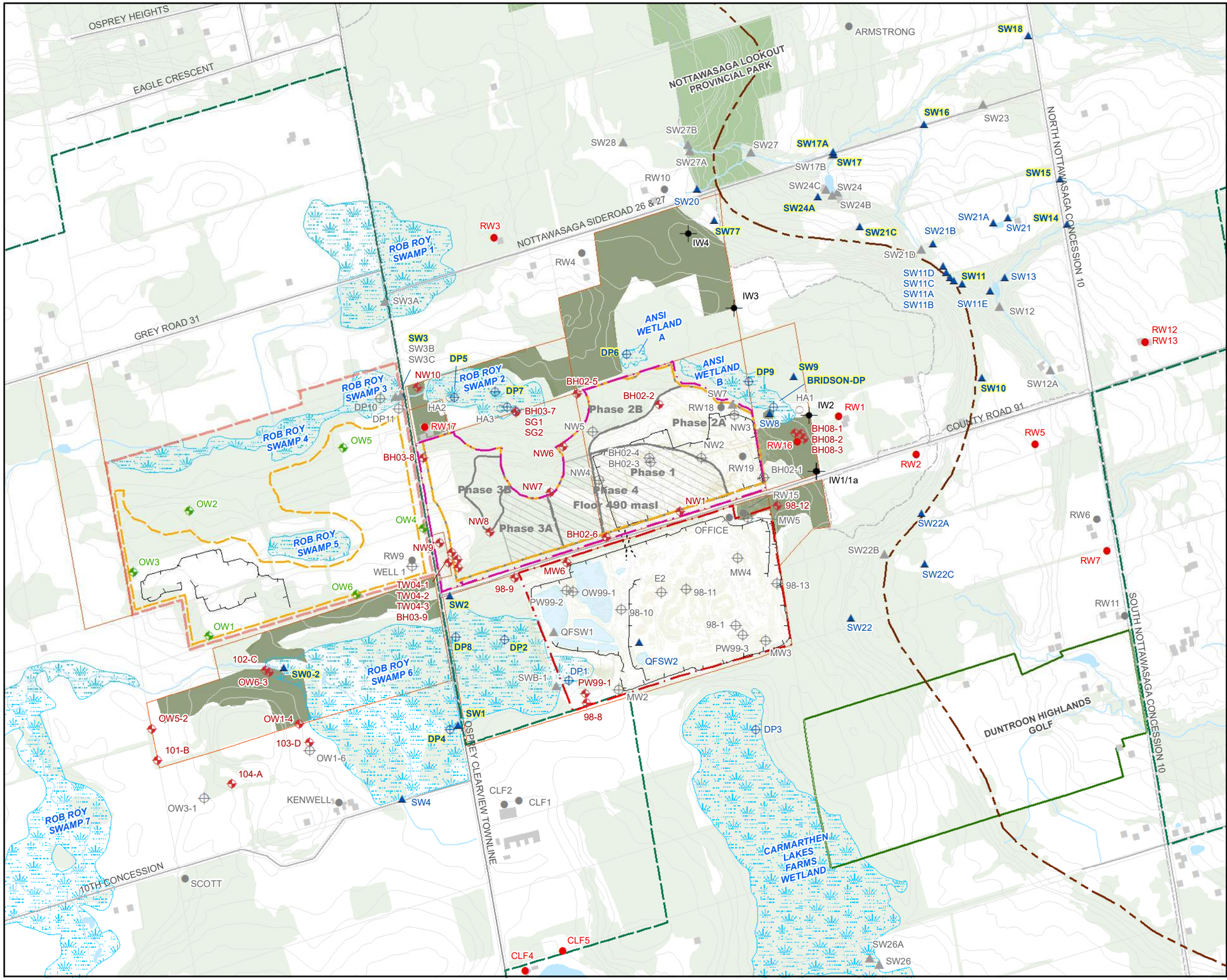
Kevin Fitzpatrick, P.Eng.
Senior Project Engineer, Earth & Environment

Dan Eusebi, BES RPP MCIP
Senior Principal Ecologist, Earth & Environment

JLD/KJF/jld

Attachments: **Figure 2 – Site Plan**
Table A-1 – Monitoring Well Details
Table A-2 – Surface Water Station Details

https://wsponlinecan.sharepoint.com/sites/ca-ca00333548741/shared documents/06. deliverables/response to tor comments/proposed duntroon quarry deepening - response to tor comments - wsp nov 2024.docx



LEGEND

- EXTENSION QUARRY LICENSED AREA
- LIMIT OF EXTRACTION
- OLD QUARRY LICENSED AREA
- OTHER LANDS OWNED BY WAI
- OSPREY QUARRY LICENSED AREA (ST. MARY'S CEMENT)
- APPROX. WORKING FACE
- NIAGARA ESCARPMENT COMMISSION POLICY AREA
- APPROX. NIAGARA ESCARPMENT
- WETLAND
- WOODLOT
- APPROX. REFORESTED AREA
- MONITORING WELL
- HISTORICAL MONITORING WELL
- OSPREY QUARRY MONITORING WELL
- INJECTION WELL
- DRIVEPOINT
- HAND-AUGER
- DOMESTIC WELL
- HISTORIAL DOMESTIC WELL
- SURFACE WATER STATION
- HISTORICAL SURFACE WATER STATION

NOTE:
YELLOW HIGHLIGHT INDICATES SURFACE WATER STATION IS ASSOCIATED WITH FLOW / TEMPERATURE TRIGGER, DRIVEPOINT IS ASSOCIATED WITH WATER LEVEL TRIGGER.

N

0 300 600 m

NAD 1983 UTM Zone 17N

SITE PLAN

2023 ANNUAL SUMMARY AND PERFORMANCE REPORT
DUNTROON QUARRY
For Walker Aggregates Inc.

DATE: MARCH 2024	
PROJECT: CA0020199.6213	
SCALE: 1 : 15,000	
DRAWN BY: JLD	FIGURE No: 2

55 KING STREET, SUITE 600
ST. CATHARINES, ON L7R 3H5
T 905-687-1771 | F 905-687-1773 | www.wsp.com

C:\Users\leigh.davis\WSP O365\CA0020199.6213 CA-Duntroon Quarry - 2024 Monitoring - Project Folders\05. Technical\Graphics\CA0020199.6213-F2-SP.mxd

Table A-1 Monitoring Well Details

Well ID	GPS Coordinates (NAD 83 Zone 17) Easting	Northing	Type	Well Pipe Diameter mm	Measuring Point Elevation mASL	Ground Elevation mASL	Screened Interval mASL or m	Geologic Formation Monitored	Monitoring Program
Old Quarry Monitoring Wells									
1. 98-8	559,631	4,914,368	O	102	517.25	516.50	Open Hole 35.1 m	Amabel/Fossil Hill	LTT
2. 98-9	559,354	4,914,817	O	102	526.35	525.90	Open Hole 48.5 m	Amabel/Fossil Hill	LTT
98-10			O	102	519.55	519.40	Open Hole 37.9 m	Amabel/Fossil Hill	Historical
98-11			O	102	522.58	522.20	Open Hole 41.2 m	Amabel/Fossil Hill	Historical
3. 98-12	560,373	4,915,090	O	102	527.22	526.70	Open Hole 42.4 m	Amabel/Fossil Hill	LTT
98-13			O	102	522.44	522.30	Open Hole 38.0 m	Amabel/Fossil Hill	Historical
OW99-1			O	102	519.38	519.10	Open Hole 29.5 m	Amabel	Historical
OW99-2			O	102	500.78	500.60	Open Hole 19.7 m	Amabel/Fossil Hill	Historical
4. PW99-1	559,630	4,914,385	O	152	513.98	513.90	Open Hole 32.9 m	Amabel/Fossil Hill	LTT
PW99-2			O	152	519.33	519.20	Open Hole 34.4 m	Amabel	Historical
PW99-3			O	152	501.13	500.90	Open Hole 21.4m	Amabel/Fossil Hill	Historical
MW2			O	102	524.86	523.20	Open Hole 20.8 m	Amabel	Historical
MW3 (R)			O	102	514.98	514.40	Open Hole 15.4 m	Amabel	Historical
MW4			O	102	522.45	521.90	Open Hole 39.9 m	Amabel/Fossil Hill	Historical
MW5			O	102	529.43	529.40	Open Hole 46.1 m	Amabel/Fossil Hill	Historical
5. MW6	559,545	4,914,893	O	102	534.87	533.60	Open Hole 36.4 m	Amabel	LTT
E2			O	203	520.97	521.00	Open Hole	Amabel	Historical
QUARRY HOUSE			O	102	529.38	528.72	Open Hole 14.6m	Amabel	Historical
SHOP WELL			O	102	523.50	522.49	Not Measured	Amabel	Historical
OFFICE WELL			O	152	532.52	532.40	Open Hole 24.7m	Amabel/Fossil Hill	Historical
OFFICE WELL (NEW)			O	152	532.04	531.35	Open Hole 37.2m	Amabel	Historical

Notes:
- PITM - Performance Indicator Trigger Monitoring
- LTTWM - Long Term Groundwater and Surface Water Monitoring
- Elevations provided in metres above sea level (mASL)
- Type 'O' indicates Open Hole
- Type 'S' indicates Standpipe
- Shading indicates well is decommissioned / no longer monitored.
- (R) indicates Replacement Monitoring Well
- N/A indicates information not available

Table A-1 Monitoring Well Details

Well ID	GPS Coordinates (NAD 83 Zone 17) Easting	Northing	Type	Well Pipe Diameter mm	Measuring Point Elevation mASL	Ground Elevation mASL	Screened Interval mASL or m	Geologic Formation Monitored	Monitoring Program
Extension Quarry Monitoring Wells									
BH02-1			O	102	523.30	522.64	Open Hole 39.5 m	Amabel/Fossil Hill	LTT
1. BH02-2	559,915	4,915,535	O	102	523.18	522.46	Open Hole 39.5 m	Amabel/Fossil Hill	LTT
BH02-3			O	102	530.58	529.64	Open Hole 9.5 m *	Amabel/Fossil Hill	LTT
BH02-4			O	102	530.70	530.02	Open Hole 50.1 m	Amabel/Fossil Hill	LTT
2. BH02-5	559,587	4,915,585	O	102	513.89	513.24	Open Hole 31.9 m	Amabel/Fossil Hill	LTT
3. BH02-5 (mid)			O	102	514.20	513.24	Open Hole 12.4 m	Amabel	LTT
4. BH02-5 (shallow)			O	102	514.17			Overburden	LTT
5. BH02-6	559,707	4,915,008	O	102	530.25	529.50	Open Hole 48.5 m	Amabel/Fossil Hill	LTT
6. BH03-7-I	559,356	4,915,510	O	102	511.01	510.27	502.9 - 501.1	Amabel	LTT
7. BH03-7-II			O	102	511.03	510.27	508.7 - 504.8	Overburden	LTT
8. BH03-7-III			O	102	511.72	510.56	Open Hole 30.7 m	Amabel/Fossil Hill	LTT
9. BH03-8	558,971	4,915,324	O	102	520.79	520.22	Open Hole 37.9 m	Amabel/Fossil Hill	LTT
10. BH03-9	559,106	4,914,893	O	102	518.93	518.45	Open Hole 39.5 m	Amabel/Fossil Hill	LTT
11. TW04-1	559,080	4,914,912	O	152	517.53	517.05	Open Hole 34.1 m	Amabel/Fossil Hill	LTT
12. TW04-2	559,084	4,914,928	O	152	518.11	517.46	Open Hole 34.1 m	Amabel/Fossil Hill	LTT
13. TW04-3	559,096	4,914,916	O	152	518.63	517.97	Open Hole 37.5 m	Amabel/Fossil Hill	LTT
14. BH08-1	560,485	4,915,410	O	102	512.32	511.51	Open Hole 27.4 m	Amabel/Fossil Hill	LTT
15. BH08-2	560,500	4,915,390	O	102	512.00	511.15	Open Hole 25.8 m	Amabel/Fossil Hill	LTT
16. BH08-3	560,462	4,915,414	O	102	513.41	512.57	Open Hole 28.8 m	Amabel/Fossil Hill	LTT
17. IW1	560,548	4,915,270	O	152	512.12	511.52	Open Hole 27.3 m	Amabel/Fossil Hill	LTT
18. IW1a	560,551	4,915,272	O	152	511.96	511.35	Open Hole 27.3 m	Amabel/Fossil Hill	N/A
19. IW2	560,519	4,915,490	O	152	509.22	508.66	Open Hole 24 m	Amabel/Fossil Hill	LTT
20. IW3	560,210	4,915,929	O	152	519.13	518.53	Open Hole 33.7 m	Amabel/Fossil Hill	LTT
21. IW4	560,026	4,916,230	O	152	511.02	510.36	Open Hole 25.4 m	Amabel/Fossil Hill	LTT
22. NW1	560,056	4,915,117	O	152	526.19	525.67	Open Hole 42.7 m	Amabel/Fossil Hill	LTT
NW2			O	152	531.99	531.35	Open Hole 54.7 m	Amabel/Fossil Hill	LTT

Notes:
- PITM - Performance Indicator Trigger Monitoring
- LTTWM - Long Term Groundwater and Surface Water Monitoring
- Elevations provided in metres above sea level (mASL)
- Type 'O' indicates Open Hole
- Type 'S' indicates Standpipe
- (R) indicates Replacement Monitoring Well
- N/A indicates information not available
- Shading indicates well is decommissioned / no longer monitored.

Table A-1 Monitoring Well Details

Well ID	GPS Coordinates (NAD 83 Zone 17) Easting	Northing	Type	Well Pipe Diameter mm	Measuring Point Elevation mASL	Ground Elevation mASL	Screened Interval mASL or m	Geologic Formation Monitored	Monitoring Program
Extension Quarry Monitoring Wells (continued)									
NW3			O	152	515.13	514.44	Open Hole 29.6 m	Amabel/Fossil Hill	LTT
NW4			O	152	529.86	529.00	Open Hole 48.9 m	Amabel/Fossil Hill	LTT
NW5			O	152	521.68	520.95	Open Hole 39.7 m	Amabel/Fossil Hill	LTT
23. NW6	559,523	4,915,360	O	102	521.99	520.68	Open Hole 41.2 m	Amabel/Fossil Hill	LTT
24. NW7	559,474	4,915,175	O	152	523.92	523.18	Open Hole 42.1 m	Amabel/Fossil Hill	LTT
25. NW8	559,254	4,915,016	O	152	531.87	531.07	Open Hole 43 m	Amabel/Fossil Hill	LTT
26. NW9	559,032	4,914,979	O	152	521.45	520.86	Open Hole 41.7 m	Amabel/Fossil Hill	LTT
27. NW10-DP	558,939	4,915,604	S	152	511.18	509.69	509.6 - 509.1	Overburden	LTT
28. NW10-Shallow			O	152	510.31	509.69	Open Hole 3.8 m	Amabel	LTT
29. NW10-Deep			O	152	510.45	509.69	Open Hole 29.5 m	Amabel/Fossil Hill	LTT
HA1								Overburden	N/A
HA2								Overburden	N/A
HA3								Overburden	N/A
Drivepoints									
1. DP1	559,561	4,914,433	S	51	513.05	511.80	511.3 - 510.8	Overburden	LTT
2. DP2	559,302	4,914,600	S	51	512.94	512.10	511.3 - 510.8	Overburden	PITM
3. DP3	560,307	4,914,281	S	51	514.65	513.60	511.9 - 511.4	Overburden	LTT
4. DP4	559,084	4,914,245	S	51	512.11	511.40	510.4 - 509.9	Overburden	PITM
5. DP5	559,094	4,915,562	S	51	510.49	509.66	509.6 - 508.7	Overburden	PITM
6. DP6	559,788	4,915,730	S	51	512.20	511.45	511.0 - 510.1	Overburden	PITM
7. DP7	559,282	4,915,583	S	51	509.91	509.18	507.4 - 506.9	Overburden	PITM
8. DP8	559,105	4,914,573	S	51	511.88	511.12	510.9 - 510.5	Overburden	PITM
9. DP9	560,274	4,915,622	S	51	508.88	507.74	507.2 - 506.6	Overburden	PITM
DP10			S	51				Overburden	PITM
DP11			S	51				Overburden	PITM
10. BRIDSON DP	560,371	4,915,534	S	38	511.30	510.40	509.6 - 508.8	Overburden	PITM

Notes:
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- Elevations provided in metres above sea level (mASL)
- Type 'O' indicates Open Hole
- Type 'S' indicates Standpipe
- Type 'DW' indicates Domestic Well
- (R) indicates Replacement Monitoring Well
- N/A indicates information not available
- ND indicates Not Determined
- Shading indicates well is decommissioned / no longer monitored.

Table A-1 Monitoring Well Details

Well ID	GPS Coordinates (NAD 83 Zone 17) Easting	Northing	Type	Well Pipe Diameter mm	Measuring Point Elevation mASL	Ground Elevation mASL	Screened Interval mASL or m	Geologic Formation Monitored	Monitoring Program
Domestic Wells									
1. RW1	560,654	4,915,472	DW	Drilled 152	508.75	508.57	Depth: 16.1 m	Amabel	LTT
2. RW2	560,955	4,915,330	DW	Drilled 152	505.20	504.50	Depth: 29.0 m	Amabel	LTT
3. RW3	559,271	4,916,187	DW	Drilled 152	519.00	518.70	Depth: 16.5 m	Amabel	LTT
RW4			DW	Drilled 152	510.50	509.80	Depth: 55.5 m	Amabel/Fossil Hill/	LTT
4. RW5	561,414	4,915,373	DW	Drilled 152	478.60	478.00	Depth: 35.0 m	Manitoulin/Shale	LTT
RW6			DW	Dug 800	451.00	451.00	Depth: 8.2 m	Overburden	LTT
5. RW7	561,701	4,914,943	DW	Drilled 152	453.00	452.30	Depth: 10.1 m	Overburden/Shale	LTT
6. RW8	560,669	4,917,079	DW	Dug 750	431.00	431.00	Depth: 3.5 m	Overburden	LTT
RW9			DW	Drilled 152	524.00	524.00	Depth: 27.4 m	Amabel	LTT
RW10			DW	Dug 750	494.50	Not surveyed	N/A	N/A	Historical
RW11			DW	Drilled 152	453.10	453.00	Depth: 48.8 m	Overburden/Shale	Historical
RW11 DUG			DW	Dug 750	453.00	453.00	Depth: 6.0 m	Overburden	Historical
7. RW12	561,826	4,915,816	DW	Dug	425.80	Not surveyed	Depth 3.7 m	Overburden	Historical
8. RW13			DW	Dug	425.80	Not surveyed	Depth 3.7 m	Overburden	Historical
RW15			DW	Drilled 152	529.74	529.19	Depth: 24.4 m	Amabel	Historical
9. RW16	560,474	4,915,397	DW	Drilled 152	513.32	512.48	Depth: 16.2 m	Amabel	LTT
10. RW17	558,976	4,915,443	DW	Drilled 127	514.70	Not surveyed	Depth: 8.5 m	N/A	LTT
RW18			DW	Dug 1000	513.80	513.00	Depth: 2.7 m	Overburden/Amabel	LTT
RW19			DW	Drilled 152	523.80	Not Surveyed	Depth: 36.3 m	Amabel	LTT

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Well ID	GPS Coordinates (NAD 83 Zone 17) Easting	Northing	Type	Well Pipe Diameter mm	Measuring Point Elevation mASL	Ground Elevation mASL	Screened Interval mASL or m	Geologic Formation Monitored	Monitoring Program
Carmarthen Lake Farms Monitoring Wells									
CLF1			DW	152	521.05	520.76	Open Hole 36.6 m	Amabel/Fossil Hill	LTT
CLF2			DW	152	519.23	519.57	Open Hole 49.4 m	Amabel/Fossil Hill	LTT
1. CLF3	559,156	4,913,134	DW	152	517.62	517.11	Open Hole ND	Amabel	LTT
2. CLF4	559,380	4,913,266	DW	152	509.96	509.48	Open Hole 15.2 m	Amabel	LTT
3. CLF5	559,526	4,913,347	DW	152	509.16	508.80	Open Hole ND	Amabel	LTT
Offsite Monitoring Wells									
1. 101-B	557,929	4,914,109	O	152	502.98	502.51	Open Hole 6.1 m	Amabel	LTT
2. 102-C	558,319	4,914,489	O	102	511.39	510.53	Open Hole 7.0 m	Amabel	LTT
3. 103-D	558,523	4,914,172	O	152	513.40	513.18	Open Hole 7.9 m	Amabel	LTT
4. 104-A	558,215	4,914,020	O	152	517.67	516.89	Open Hole 9.6 m	Amabel	LTT
5. OW1-4	558,477	4,914,250	O	102	514.40	513.21	Open Hole 28.6 m	Amabel/Fossil Hill	LTT
OW1-6			O	102	514.96	513.92	Open Hole 30.0 m	Amabel/Fossil Hill	N/A
OW3-1			O	102	508.75	508.01	Open Hole 29.3 m	Amabel/Fossil Hill	LTT
6. OW5-2	557,888	4,914,245	O	102	504.21	502.84	Open Hole 27.9 m	Amabel/Fossil Hill	LTT
7. OW6-3	558,317	4,914,465	O	102	511.12	510.63	Open Hole 5.3 m	Amabel	LTT

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Table A-1 Monitoring Well Details

Well ID	GPS Coordinates (NAD 83 Zone 17) Easting	Northing	Type	Well Pipe Diameter mm	Measuring Point Elevation mASL	Ground Elevation mASL	Screened Interval mASL or m	Geologic Formation Monitored	Monitoring Program
St. Mary's Cement Osprey Quarry Monitoring Wells									
1. OW1-I					513.29	512.22	507.7 - 506.2	Amabel	
2. OW1-II					513.29	512.22	503.1 - 501.6	Amabel	
3. OW1-III					513.21	512.18	487.0 - 485.5	Amabel	
4. OW1-IV					513.21	512.18	482.8 - 481.3	Fossil Hill	
5. OW2-I					523.42	522.24	512.2 - 510.7	Amabel	
6. OW2-II					523.42	522.24	503.1 - 501.6	Amabel	
7. OW2-III					523.18	522.14	500.3 - 498.8	Amabel	
8. OW2-IV					523.18	522.14	480.2 - 478.7	Fossil Hill/Cabot Head	
9. OW3-I					516.34	515.57	511.1 - 509.6	Amabel	
10. OW3-II					516.34	515.57	500.2 - 498.7	Amabel	
11. OW3-III					516.58	515.53	494.7 - 493.2	Amabel	
12. OW3-IV					516.58	515.53	486.5 - 485.0	Amabel	
13. OW4-I					519.76	518.87	513.4 - 511.9	Amabel	
14. OW4-II					519.76	518.87	510.8 - 509.3	Amabel	
15. OW4-III					519.72	518.85	498.3 - 496.8	Amabel	
16. OW4-IV					519.72	518.85	492.9 - 491.4	Amabel	
17. OW5-I					510.75	510.01	503.5 - 502.0	Amabel	
18. OW5-II					510.75	510.01	499.3 - 497.8	Amabel	
19. OW5-III					510.85	510.06	493.8 - 492.3	Amabel	
20. OW5-IV					510.85	510.06	481.8 - 480.3	Fossil Hill/Cabot Head	
21. OW6-I					528.51	526.28	514.6 - 513.1	Amabel	
22. OW6-II					528.51	526.28	503.1 - 501.6	Amabel	
23. OW6-III					528.08	526.21	482.4 - 480.9	Amabel	
24. OW6-IV					528.08	526.21	477.3 - 475.8	Fossil Hill/Cabot Head	

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- Type 'S' indicates Standpipe
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- N/A indicates information not available
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Table A-2 Surface Water Station Details

Designation	GPS Coordinates (NAD 83 Zone 17)		Ground Elevation	Description	Culvert Dimensions	Monitoring Program	Measurement Type
	Easting	Northing	mASL				
1. SW1	559,117	4,914,254	513	Twin culverts located at southwest corner of quarry wetland at Grey County Road 31 (Townline Road)	South culvert dia. 0.62m, North culvert dia. 0.60m	PITM	V, M
2. SW2	559,070	4,914,769	515	Single culvert located at northwest corner of quarry wetland	Oblong shaped culvert	PITM	V,M
SWB-1			513	Single culvert located at southwest corner of quarry; outlet into quarry wetland	Oblong shaped culvert	Historical	-
QFSW1			500	Quarry floor influx from west face	Stream Channel Flow	Historical	-
3. QFSW2	559,825	4,914,595	499	Quarry floor surface water flow in channel prior to main sump pond	Stream Channel Flow	LTTWM	V
4. SW0-2	558,329	4,914,495	510	Stream Channel west of SW1 on Osprey Quarry Property	Stream Channel Flow	PITM	V,M
5. SW3	558,890	4,915,581	510	Single culvert located across Grey Rd 31 at north edge of proposed quarry property	Oblong shaped culvert	PITM	V,M,E
SW3A			511	Single culvert located under Grey Rd 31, just south of intersection with 26/27 Sideroad	Oblong shaped culvert	Historical	V,B,E
6. SW4	558,893	4,913,962	515	Single culvert located on Osprey 10th Line, east of Kenwell farm buildings	Culvert Diameter: 0.57 m	PTTW	E,V
SW5			499	Single concrete culvert located on Osprey 10th Line	4.91 m wide square concrete culvert	Historical	V
SW6			500	Single concrete culvert located on Osprey 10th Line	4.78 m wide square concrete culvert	Historical	V
7. SW6A	555,263	4,912,697	495	Double culvert on Osprey Sideroad 30, south of Osprey 10th Line	Stream Channel Flow	PITM	V
SW7			512	Millar pond outlet	Stream Channel Flow	LTTWM	V,E
8. SW8	560,355	4,915,502	510	Bridson pond outlet	Bucket Capture of Flow out of partial culvert	LTTWM	V,E
9. SW9	560,454	4,915,647	508	Channel flow beneath walking path into sinkhole on Bridson property	Stream Channel Flow	PITM	V,M,E
10. SW10	561,200	4,915,641	477	Seep uphill of B. Franks' well tile catchment	Stream Channel Flow	PITM	V,M,E

Notes:
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- PTTW - Permit to Take Water Monitoring
- Elevations provided in metres above sea level (mASL)
- Ground Elevation data approximated from Ontario Base Map elevation contours
- * indicates historical surface water station that is not included in the PITM
- V indicates Valeport Electronic Flow Velocity Meter measurement
- M indicates manual velocity measurement
- - indicates SW location not currently monitored for discharge volumes
- E indicates visual estimate velocity measurement
- B indicates bucket collection velocity measurement
- Shading indicates surface water station is no longer monitored

Table A-2 Surface Water Station Details

Designation	GPS Coordinates (NAD 83 Zone 17)		Ground Elevation	Description	Culvert Dimensions	Monitoring Program	Measurement Type
	Easting	Northing	mASL				
11. SW11	561,151	4,916,011	445	Culmination of B. Franks' seeps into a stream; taken near toe of scarp where stream passes beneath path	Stream Channel Flow	PITM	V,M,E
12. SW11A	561,128	4,916,011	446	B. Franks' seep, located near toe of scarp in rock talus	Stream Channel Flow	PITM	V,M,E
13. SW11B	561,098	4,916,018	446	B. Franks' seep, located near toe of scarp in rock talus	Stream Channel Flow	PITM	V,M,E
14. SW11C	561,079	4,916,034	446	B. Franks' seep, located near toe of scarp in rock talus	Stream Channel Flow	PITM	V,M,E
15. SW11D	561,052	4,916,043	446	B. Franks' seep, located near toe of scarp in rock talus	Stream Channel Flow	PITM	V,M,E
16. SW11E	561,238	4,915,997	435	Stream from B. Franks' seeps into pond; downstream from SW11 and just upstream of pond	Stream Channel Flow	PITM	V,E,B
SW12			435	Single culvert into B. Franks' pond from south	Bucket capture of flow out of culvert	Historical	V,E,B
SW12A			450	Single culvert near B. Franks' barn	Stream Channel Flow	Historical	V,E
17. SW13	561,288	4,916,042	427	B. Franks' pond outlet	Bucket capture of flow out of culvert	LTTWM	V,E,B
18. SW14	561,526	4,916,249	410	Channel flow east of Conc. 10, from culvert crossing Conc. 10 south of H. Franks' driveway	Stream Channel Flow	PITM	V
19. SW15	561,495	4,916,432	420	Channel flow east of Conc. 10, from culvert crossing Conc. 10 north of H. Franks' driveway	Stream Channel Flow	PITM	V
20. SW16	561,198	4,916,724	415	Single culvert under 26/27 Sideroad east of F. Sestito's property	Stream Channel Flow	PITM	E
21. SW17	560,607	4,916,532	431	Sestito pond outlet channel on south side of 26/27 Sideroad, measured just west Sestito property driveway	Stream Channel Flow	PITM	V,M,E
22. SW17A	560,603	4,916,543	430	Stream channel on north side of 26/27 Sideroad, measured across from Sestito property driveway	Stream Channel Flow	PITM	V
SW17B			431	Stream channel on south side of 26/27 Sideroad, measured west of Sistito property driveway, upstream of where 17/17B join.	Stream Channel Flow	Historical	V
23. SW18	561,401	4,917,002	390	Single culvert on Concession 10, north of 26/27 Sideroad	Stream Channel Flow	PITM	V
24. SW19	564,257	4,915,492	335	Single large diameter culvert for Batteaux Creek on County Rd. 124	Stream Channel Flow	LTTWM	V
25. SW20	560,066	4,916,392	495	Concrete crib north of 26/27 sideroad adjacent to Pretty River Provincial Park/Bruce Trail	Stream Channel Flow	LTTWM	V,E

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Table A-2 Surface Water Station Details

Designation	GPS Coordinates (NAD 83 Zone 17)		Ground Elevation	Description	Culvert Dimensions	Monitoring Program	Measurement Type
	Easting	Northing	mASL				
26. SW21	560,308	4,916,284	430	H. Franks' pond outlet	Bucket capture of flow out of culvert	LTTWM	V,E,B
27. SW21A	561,246	4,916,261	433	H. Franks' pond inlet	Stream Channel Flow	LTTWM	V,E,B
28. SW21B	561,039	4,916,193	449	Cistern overflow channel uphill of H. Franks' pond, feeds pond inlet	Stream Channel Flow	LTTWM	V,M,E
29. SW21C	560,708	4,916,241	470	H. Franks' water supply system cistern inlet/overflow culvert	Stream channel Flow	PITM	V,E
SW21D			450	Single culvert under H. Franks field access trail at base of scarp	Bucket capture of flow out of culvert	Historical	V,B,E
30. SW22	560,686	4,914,713	492	Single culvert under ski trail west of Sampson fields	Bucket capture of flow out of culvert	LTTWM	V,B
31. SW22A	560,952	4,915,039	485	Seep feeding small stream in northwest corner of Sampson fields	Stream Channel Flow	LTTWM	B,E
SW22B			477	Swamp/seep area on north side of access trail from Sampson fields to ski trails	Stream Channel Flow	Historical	-
32. SW22C	560,977	4,914,876	477	Culvert on south side of access trail from Sampson fields to ski trails. Culvert is infilled with sediment and channel is relatively flat. Treated as stream flow.	Stream Channel Flow just downstream of culvert	LTTWM	V
SW23			410	Single culvert crossing 26/27 Sideroad west of Concession 10	Bucket capture of flow out of culvert	Historical	-
SW24			445	F. Sestito's pond inlet from H. Franks' property	Stream Channel Flow	Historical	V,M,E
33. SW24A	560,566	4,916,379	460	F. Sestito's water supply: barrel overflow and pipe discharges (below Manitoulin formation outcrop)	Bucket capture of flow out of pipes, Valeport measurement of stream channel	PITM	V,B,E
SW24B			445	Seep channel just up from F. Sestito's garden	Bucket capture of flow out of pipes, Valeport measurement of stream channel	Historical	V,B,E
SW24C			442	Stream just east of where SW24A and SW24B combine and upstream of outlet into Sistito pond.	Stream Channel Flow	Historical	V
SW25			507	Single culvert outlet into swamp southwest of Edward Lake; fed by Edward Lake and open grate in the ditch north of SW25	Culvert Diameter: 0.62 m	Historical	-
SW25A			508	Channel outlet from Edward Lake into a culvert which crosses beneath Grey Road 31. Only monitored when input from open grate/ditch is observed when monitoring SW25.	Stream Channel Flow	Historical	-

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Table A-2 Surface Water Station Details

Designation	GPS Coordinates (NAD 83 Zone 17) Easting	Northing	Ground Elevation mASL	Description	Culvert Dimensions	Monitoring Program	Measurement Type
SW26			507	Channel flow upstream of sinkhole on ski trails near unopened road allowance for 21/22 Sideroad	Stream Channel Flow	Historical	-
SW26A			512	Two culverts upstream of SW26 sinkhole	East Culvert Diameter: 0.38 m West Culvert: Oblong Shaped	Historical	-
SW27			462	Culmination of SW27A and SW27B	Stream Channel Flow	Historical	-
SW27A			492	Groundwater seep, located east of SW28, east of Bruce Trail	Stream Channel Flow	Historical	-
SW27B			497	Groundwater seep, located north-west of SW27A, east of Bruce Trail	Stream Channel Flow	Historical	-
34. SW77	560,150	4,916,292	494	Groundwater seep, located south-east of SW20, west of Bruce Trail	Stream Channel Flow	PITM	V
SW3B (RR3 KARST)			510	RR3 Wetland Karst Sink Point Channel, west of Grey County Road 31, downstream of SW3 and SW3C.	Stream Channel Flow	PITM	V
SW3C (RR3 OUT)			510	RR3 Wetland outflow from pond that is downstream of SW3. West of Grey County Road 31.	Stream Channel Flow	LTTWM	V
35. PR Control	558,059	4,918,224	360	Pretty River Control Station on 30/31 Sideroad. Flow measured on south side of road, upstream of culvert.	Stream Channel Flow	PITM	V
36. BC Control	563,251	4,914,197	405	Batteaux Creek Control Station on 21/22 Sideroad. Flow measured on north side of road, downstream of culvert.	Stream Channel Flow	PITM	V
37. BH03-7 SG1	559,349	4,915,519	510.5	Pretty River Control Station on 30/31 Sideroad. Flow measured on south side of road, upstream of culvert.	Stream Channel Flow	PITM	V
38. BH03-7 SG2	559,323	4,915,530		Batteaux Creek Control Station on 21/22 Sideroad. Flow measured on north side of road, downstream of culvert.	Stream Channel Flow	PITM	V

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B

Appendix B

Proposed Niagara Escarpment Plan Amendment No. XX

Introductory Statement

All of this part constitutes Amendment No. XX to the Niagara Escarpment Plan (2017).

The proposed removal of policy number 1.9.3.18 from the Niagara Escarpment Plan (2017) relates to the lands described as Part of Lot 24, Concession 12, Township of Clearview, County of Simcoe for the previously approved Duntroon Quarry.

DETAILS OF THE AMENDMENT

This Amendment consists of the following item:

Item 1. That Section 1.9.3.18 be revised as follows:

Notwithstanding any other provision of this Plan, uses accessory to the extraction of aggregate from Lot 25, Concession 12 (associated with Amendment 161 to the Niagara Escarpment Plan) shall be permitted on Lot 24, Concession 12, Township of Clearview, ARA Licence No. 3514, including all processing facilities~~, but only for such a period of time as is necessary to: (i) create an area of 18 hectares on the quarry floor in Phase 1 of the ARA Licence on Lot 25, Concession 12 (associated with Amendment 161 to the Niagara Escarpment Plan) and (ii) to discontinue or relocate the accessory uses~~. An asphalt plant, concrete plant, brick manufacturing plant and any other similar manufacturing use shall not be permitted as an accessory use on Lot 24, Concession 12, Township of Clearview, ARA Licence No. 3514.

C

Appendix C

AMENDMENT No. XX

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DRAFT

AMENDMENT NO. XX

TO THE TOWNSHIP OF CLEARVIEW OFFICIAL PLAN

_____, 20XX

DRAFT

INTRODUCTION

PART A – THE PREAMBLE does not constitute part of this amendment

PART B – THE AMENDMENT, consisting of the following text constitutes Amendment No. XX to the Township of Clearview Official Plan.

Also attached is **PART C – THE APPENDIX**, which does not constitute part of this amendment. This appendix contains Public Meeting Minutes, the Staff report, and the Council Resolution associated with this Amendment.

DRAFT

PART A – THE PREAMBLE

Purpose

The purpose of this Amendment is to permit the continued processing and shipping of materials from the Duntroon Quarry Expansion (ARA No. 607841) at the Duntroon Quarry (ARA No. 3514).

In order to implement the modifications, Section 13.3.4.3 of the Township of Clearview Official Plan is to be amended.

Location

The site subject to this amendment is legally described as part of Lot 24, Lot 25, and part of Lot 26, Concession No. 12, and part of Lot 25, Concession No. 11, former Township of Nottawasaga, now in the Township of Clearview, County of Simcoe.

Basis

This amendment is being considered as a result of applications for a Niagara Escarpment Plan Amendment, Township of Clearview Official Plan Amendment, and Aggregate Resources Act Site Plan Amendment.

The subject lands are currently designated “Mineral Resource Extraction Area” on Schedule B and designated as “Specific Policy Area 13.3.4” on Schedule SP-3 in the Township of Clearview Official Plan. An Official Plan Amendment is required to permit the continuation of processing and shipping of materials from the Duntroon Quarry Expansion at the Duntroon Quarry.

Maintaining processing and shipping at the Duntroon Quarry, rather than moving these aspects of the operation to the Expansion will allow for a safer entrance/exit and better visual screening of operations given that Township Road 91 will no longer be closed and transferred to Walker.

DRAFT

PART B – THE AMENDMENT

DETAILS OF THE AMENDMENT

The Official Plan is amended by altering as follows:

1. Section 13.3.4.3 is proposed to be amended as follows:

   Notwithstanding anything to the contrary in this Official Plan, but subject to No. 13.3.4.4 below, uses that are accessory to the extraction of mineral aggregate resources from Lot 25, Concession No. 12 (formerly in the Township of Nottawasaga and now in the Township of Clearview), including all processing facilities, shall be permitted in the Existing Quarry Area~~, but only for such period of time as is necessary:~~

   ~~(a) to create an area of 18 hectares on the quarry floor in Phase I of the ARA licence on Lot 25, Concession No. 12 (formerly in the Township of Nottawasaga and now in the Township of Clearview); and~~
   ~~(b) to discontinue or relocate any such accessory uses.~~

IMPLEMENTATION

Subsequent to the adoption of this Amendment, the Ministry of Natural Resources will consider approval of an Aggregate Resources Act Site Plan Amendment, as it relates to the subject site by removing notes that speak to the relocation of processing facilities from the Duntroon Quarry to the Duntroon Quarry Expansion.

INTERPRETATION

The provisions of the Official Plan, as amendment from time to time, shall apply in regard to this Amendment.

DRAFT

D

Appendix D



Notes

1. BOUNDARY OF PROPERTY TAKEN FROM 1970 LEGAL SURVEY PREPARED BY ZUBEK, EMO AND PATTEN LTD.
2. EXISTING TREE SCREENS TAKEN FROM JUNE 1989 MNR AIRPHOTO, CONFIRMED BY OCTOBER 1989 VEGETATION SURVEY.
3. WATER WELL DATA TAKEN FROM "WATER WELL RECORDS FOR ONTARIO, SIMCOE, 1946-77", MINISTRY OF THE ENVIRONMENT, 1981; NOVEMBER, 1989 SITE SURVEY, AND "HYDROGEOLOGY OF PROPOSED EXPANSION OF THE McKEAN QUARRY", TROW, DAMES & MOORE, MARCH, 1991. THE WATER TABLE, AS SHOWN ON THE TYPICAL SECTIONS, HAS BEEN DETERMINED FROM ANALYSIS OF THIS INFORMATION.
4. TOPOGRAPHIC BASE MAPPING FOR SITE AND 500m SURROUNDING FROM 1:8000 NOVEMBER 1989 AERIAL PHOTOGRAPHY PREPARED DECEMBER 1989, BY INTERA KENTING EARTH SCIENCES. MAPPING WAS THEN UPDATED FROM DECEMBER 1991, ELECTRONIC FIELD SURVEY BY LONG ASSOCIATES CONSULTING LIMITED.
5. EXISTING AND MONITOR WELL TABLE

	NAME	ELEV.	DEPTH.	BOTTOM	STATIC	FOUND	TYPE
E2	SHOP	520.97	N/A	N/A	517.97	N/A	DRILLED
MW2(R)	MONITOR	520.16	20.79	497.94	510.84	N/A	DRILLED
MW3(R)	MONITOR	515.56	N/A	N/A	506.11	N/A	DRILLED
MW4	MONITOR	522.45	39.91	482.00	507.36	N/A	DRILLED
MW5	MONITOR	529.43	46.08	483.28	514.45	N/A	DRILLED
MW6	MONITOR	534.87	36.44	497.17	519.75	N/A	DRILLED
PW1	TEST WELL	518.73	9.40	509.33	511.45	N/A	DRILLED
CLF1	FARM WELL	521.05	N/A	N/A	511.73	N/A	DRILLED
CLF2	FARM WELL	519.23	N/A	N/A	511.69	N/A	DRILLED
F	MILLARS	515.00	2.7		N/A	N/A	DUG
G	STRIBLING	512.50	7.5		N/A	N/A	N/A
H	SACCUCI	509.00	N/A	N/A	N/A	N/A	DRILLED

6. THE OPERATOR INTENDS TO CONVEY TO THE BRUCE TRAIL ASSOCIATION LAND AS IDENTIFIED IN NOTE 9, PAGE 3 OF 5.
7. ALL EXISTING FENCES TO BE IMPROVED OR REPLACED TO PROVIDE HEAVY DUTY FENCE 1.2m MINIMUM HEIGHT.
8. FENCING ALONG THE WESTERLY BOUNDARY MAY NOT BE FEASIBLE, IN SOME AREAS, DUE TO THE PRESENCE OF DENSE BUSH AND SWAMP. IN THESE AREAS, SIGNS TO BE POSTED EVERY 30m (100') WHICH READ "DANGER - OPEN QUARRY". IF NOT ON LICENSED BOUNDARY THEN FENCE WILL BE CONSTRUCTED ON EXTREME WEST BOUNDARY OF PROPERTY.
9. TECHNICAL REPORTS (REPORTS PREPARED IN SUPPORT OF QUARRY DEEPENING AND FOR CONTINUATION OF PROCESSING AT THIS SITE)
   - 9.1. GEOTECHNICAL INSPECTION OF THE HAULAGE TUNNEL AT THE DUNTROON QUARRY, WSP, OCTOBER 15, 2025.
   - 9.2. PROPOSED DUNTROON QUARRY DEEPENING - LEVEL 1 AND 2 WATER STUDY REPORT, WSP, OCTOBER 31, 2025.
   - 9.3. DUNTROON QUARRY AND DUNTROON QUARRY EXTENSION – ENVIRONMENTAL AIR QUALITY REVIEW, RWDI, SEPTEMBER 16, 2025
   - 9.4. DUNTROON QUARRY AND DUNTROON QUARRY EXPANSION – ENVIRONMENTAL NOISE REVIEW, RWDI, SEPTEMBER 16, 2025.
   - 9.5. REVIEW OF THE AGGREGATE RESOURCES ACT SITE PLANS REGARDING BLASTING – WALKER AGGREGATES DUNTROON QUARRY, WSP, SEPTEMBER 24, 2025.
   - 9.6. SCOPED NATURAL HERITAGE IMPACT ASSESSMENT – DUNTROON QUARRY LOWERING, WSP, OCTOBER 17, 2025.

APPLICANT:

Walker Aggregates Inc.

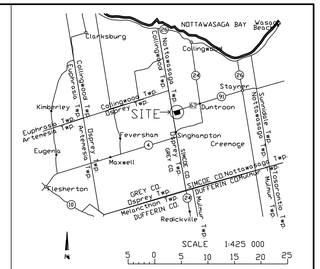
P.O. Box 100,
Thorold, Ontario
L2V 3Y8

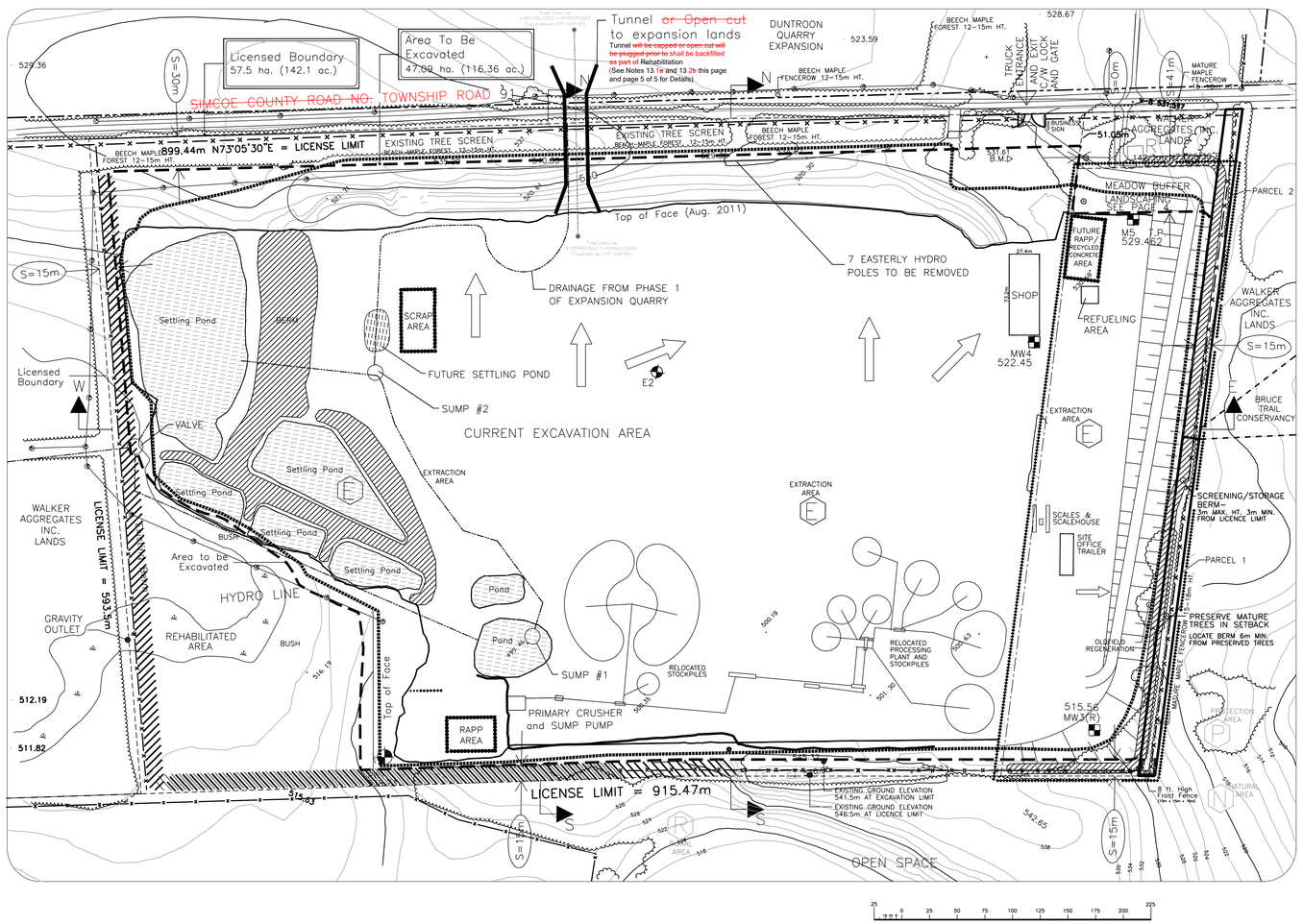
DECLARATION OF PURPOSE:

THIS SITE PLAN HAS BEEN PREPARED TO COMPLY WITH THE PROVISIONS OF SECTION 69 OF THE AGGREGATE RESOURCES ACT AND REPLACES THE SITE PLAN ORIGINALLY SUBMITTED AS PART OF A LICENCE APPLICATION UNDER THE PITS AND QUARRIES CONTROL ACT AND REGULATIONS.

Notes

1. PLAN COMPILED FROM INFORMATION FROM R.G. ROBINSON AND ASSOC. LTD. RECIEVED AUGUST 1996. AND UPDATED BY MHBC PLANNING LTD., JULY 2014.


NOTTAWASAGA BAY
Clarksburg
Collingwood
SITE
Duntroon
Stayner
Creemore
Kimberley
Eugenia
Feversham
Singhampton
Maxwell
Flesherton
Markdale
Meaford
Thornbury
Wasaga Beach
Barrie
Orillia
Alliston
Shelburne
Dundalk
Owen Sound
Walkerton
Hanover
Durham
Mount Forest
Fergus
Elora
Guelph
Cambridge
Kitchener
Waterloo
Stratford
Tavistock
Woodstock
Ingersoll
Tillsonburg
Simcoe
Brantford
Paris
Hamilton
Caledonia
Dunnville
Welland
Port Colborne
Fort Erie
Niagara Falls
St. Catharines
Grimsby
Beamsville
Jordan
Vineland
Grantham
Thorold
Niagara-on-the-Lake
Queenston
Lewiston
Youngstown
Buffalo
Rochester
Toronto
Oakville
Mississauga
Brampton
Georgetown
Milton
Acton
Halton Hills
Orangeville
Caledon
Bolton
Kleinburg
Vaughan
Richmond Hill
Markham
Newmarket
Aurora
Sutton
Keswick
Georgina
Pefferlaw
Beaverton
Uxbridge
Stouffville
Whitchurch-Stouffville
Pickering
Ajax
Whitby
Oshawa
Bowmanville
Newcastle
Port Hope
Cobourg
Colborne
Brighton
Trenton
Belleville
Picton
Wellington
Napanee
Kingston
Gananoque
Brockville
Prescott
Cornwall
Morrisburg
Iroquois
Ogdensburg
Massena
Watertown
Syracuse
Rochester
Buffalo
Niagara Falls
Lake Ontario
Lake Erie
Georgian Bay
Lake Huron
Lake Simcoe
Lake Couchiching
Lake Scugog
Rice Lake
Stony Lake
Sturgeon Lake
Pigeon Lake
Balsam Lake
Cameron Lake
Kawartha Lakes
Bobcaygeon
Fenelon Falls
Lindsay
Omemee
Peterborough
Norwood
Campbellford
Hastings
Madoc
Tweed
Bancroft
Deseronto
Tyendinaga
Shannonville



SCALE 1:2000

NOTES

1. PLAN COMPILED FROM INFORMATION FROM R.G. ROBINSON AND ASSOC. LTD. RECEIVED AUGUST 1996 AND UPDATED BY MHBC PLANNING LTD., SINCE AUGUST 2001 ~~MARCH 2015~~

NOTES

1. TOPSOIL AND OVERBURDEN ARE TO BE STRIPPED,STOCKPILED AND KEPT IN SEPARATE BERMS AS SHOWN ON THE PLAN, GRADED WITH 3:1 SLOPES, SEEDED AND MAINTAINED FOR REHABILITATION.
2. THE EXCAVATION DIRECTION SHALL GENERALLY FOLLOW AS SHOWN ON THE PLAN BUT MAY VARY DUE TO THE LIMESTONE QUALITY AND MARKET DEMAND.
3. WELL DATA IS FROM THE HYDROGEOLOGY REPORT PREPARED BY TROW, DAMES AND MOORE DATED MARCH 1991, AND ADDITIONAL MONITORING WELLS INSTALLED IN 1989 AND 1995. THE LICENSEE SHALL ESTABLISH A PROGRAM FOR THE ON AND OFF SITE WELLS IN ACCORDANCE WITH THE CONDITIONS ATTACHED TO THE PERMIT TO TAKE WATER No. 96-P-5019 WHICH ALSO REQUIRES THAT A REPORT BE SUBMITTED TO THE M.O.E. & M.N.R. ON AN ANNUAL BASIS.
4. DUST SHALL BE MITIGATED ON SITE, INTERNAL HAUL ROUTES USING WATER OR OTHER APPROVED SUPPRESSANTS.
5. THE COMPANY HAS A SPILLS CONTINGENCY PROGRAM IN EFFECT.
6. REFUELING OF EQUIPMENT WILL BE CARRIED OUT IN A DESIGNATED AREA, FUEL STORAGE TANKS SHALL CONFORM TO THE INSTALLATION AND MAINTENANCE REQUIREMENTS OF THE GASOLINE HANDLING ACT.
7. THE LICENSEE SHALL MONITOR ALL BLASTS FOR GROUND VIBRATIONS AND BLAST OVERPRESSURE IN ACCORDANCE WITH THE CURRENT PROVINCIAL GUIDELINES AND REGULATIONS, ALL REPORTS SHALL BE RETAINED ON FILE AND MADE AVAILABLE UPON REQUEST TO THE M.O.E. AND THE M.N.R.
8. SCRAP WILL BE STORED IN THE DESIGNATED AREA AS SHOWN ON THE PLAN.
9. FENCES AS SHOWN ARE 1.2m HIGH POST AND WIRE AND SHALL BE MAINTAINED FOR THE LIFE OF THE QUARRY.
10. EQUIPMENT FOR EXTRACTION AND PROCESSING WILL INCLUDE DRILL RIGS, LOADERS, TRUCKS, BULLDOZERS, CRUSHERS, SCREENING, CONVEYERS, WASH PLANT, ASPHALT PLANT, MAINTENANCE SHOP,TRANSFORMERS AND DIESEL GENERATING PLANTS.
11. THE LICENSEE SHALL ENSURE THAT ANY WATER LEAVING THE LICENSED SITE MEETS THE SURFACE WATER QUALITY GUIDELINES OF THE M.O.E. AND M.N.R.
12. THE HEIGHT OF THE EXTRACTION FACE SHALL AT ALL TIMES BE IN COMPLIANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT.
13. ~~FOR DETAILS ON THE OPEN CUT TO THE EXPANSION LANDS, SEE QUARRY ACCESS SLOT AND PLUG DESIGN, OPEN CUT COUNTY ROAD 91 DESIGN BRIEF, PREPARED BY C.C. TATHAM & ASSOCIATES LTD. DATED APRIL 21, 2014.~~

    FOR DETAILS ON THE TUNNEL ~~SCENARIO~~, SEE WALKER INDUSTRIES / WALKER AGGREGATES INC. DUNTROON QUARRY TUNNEL, TOWNSHIP OF CLEARVIEW, SIMCOE COUNTY, ONTARIO, DESIGN BRIEF, PREPARED BY GOLDER ASSOCIATES DATED MARCH 11, 2015 AS WELL AS THE GEOTECHNICAL INSPECTION OF THE HAULAGE TUNNEL AT THE DUNTROON QUARRY REPORT, PREPARED BY WSP DATED OCTOBER 15, 2025.
14. AS LONG AS THE TOWNSHIP OF CLEARVIEW OWNS ~~COUNTY~~ TOWNSHIP ROAD 91, THE DESIGN, CONSTRUCTION AND OPERATION OF ANY TUNNEL, WHETHER IT BE A SMALL TUNNEL TO ACCOMMODATE A CONVEYOR SYSTEM FOR MOVEMENT OF AGGREGATE MATERIALS, OR A LARGE TUNNEL TO ALLOW MOVEMENT OF QUARRY ROCK TRUCKS, SHALL BE TO THE SATISFACTION OF THE TOWNSHIP OF CLEARVIEW. THIS SHALL REQUIRE THE ENTERING INTO OF AN AGREEMENT AND COMPLIANCE WITH ASSOCIATED APPROPRIATE CONDITIONS AND REQUIREMENTS, ALSO TO THE SATISFACTION OF CLEARVIEW. ~~A FULL OPEN CUT THROUGH COUNTY ROAD 91 SHALL ONLY BE PERMITTED AT SUCH TIME AS THAT PORTION OF COUNTY ROAD 91 IS STOPPED UP, CLOSED AND CONVEYED TO THE QUARRY OPERATOR.~~

    ~~15. UPON CLOSURE OF COUNTY ROAD 91 ABUTTING THE WALKER LANDS, THIS SITE SHALL BE SECURED.~~
15. PRIOR TO THE CONSTRUCTION OF THE TUNNEL, ~~OR ROAD CUT~~ A GEOTECHNICAL ENGINEERING STUDY WILL BE PREPARED TO ENSURE THE SAFE CONSTRUCTION OF THE TUNNEL ~~OR ROAD CUT~~ AND TO DEMONSTRATE THE ABILITY TO PERMANENTLY CLOSE THE TUNNEL ~~OR ROAD CUT~~. THE GEOTECHNICAL ENGINEERING STUDY SHALL BE CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE PROVINCE OF ONTARIO.
16. A PROCESSING PLANT PROCESSING MATERIAL FROM THE QUARRY EXPANSION SITE (LICENCE NO. 607841) IS PERMITTED ON THIS SITE. ~~BUT ONLY FOR SUCH PERIOD OF TIME AS IS NECESSARY TO CREATE SUFFICIENT QUARRY FLOOR ON THE QUARRY EXPANSION SITE TO THE NORTH TO ACCOMMODATE A PROCESSING PLANT FACILITY AND THE STOCKPILES, OFFICE, SCALES SCALE HOUSE AND OTHER RELATED USES, BEING AN AREA OF 18 HA. ONCE THE QUARRY FLOOR OF THE QUARRY EXPANSION SITE TO THE NORTH AT ELEVATION 500 MASL REACHES AN AREA OF 18 HA, THE PROCESSING PLANT SHALL BE RELOCATED TO THE QUARRY EXPANSION SITE, THE TUNNEL OR OPEN CUT SHALL BE PLUGGED IN ACCORDANCE WITH NOTES 13A OR 13B (THIS PLAN) AND THIS QUARRY SHALL BE REHABILITATED.~~

OPERATIONS

1. THE DIRECTION OF EXTRACTION SHALL GENERALLY BE FROM THE SOUTH EAST CORNER OF THE SITE IN A NORTH WESTERLY DIRECTION AS SHOWN ON THE PLAN WITH A MAXIMUM DEPTH OF ~~500~~ 486 MASL.
2. THE DESIGNATED PROCESSING AND STOCKPILE AREA IS AS OUTLINED ON THE PLAN, HOWEVER AS EXTRACTION PROGRESSES TO THE NORTH IT MAY BE NECESSARY TO STOCKPILE SOME OF THE MATERIAL ON THE 514 MASL LEVEL.
3. IT IS INTENDED TO RELOCATE THE PRIMARY CRUSHER TO THE ~~500~~ 488 MASL ELEVATION WHEN THERE IS AN AREA LARGE ENOUGH, THIS AREA MAY ALSO BE USED TO STOCKPILE MATERIAL.
4. THE MAINTENANCE SHOP, PROCESSING PLANT, WASH PLANT, PONDS AND ASPHALT PLANT WILL ALSO BE RELOCATED ELSEWHERE ON THE SITE AS EXTRACTION CONTINUES.
5. AREAS HAVE BEEN DESIGNATED ON THE SITE PLAN TO ALLOW FOR STOCKPILING OF COLD MIX ASPHALT, AND CONCRETE/ASPHALT TO BE RECYCLED INTO GRANULAR PRODUCTS.
6. AREAS HAVE BEEN DESIGNATED ON THE SITE PLAN AS A TEMPORARY STORAGE FOR THE FINES FROM THE WASH POND UNTIL IT CAN BE USED AS BACKFILL FOR REHABILITATION.
7. PROGRESSIVE REHABILITATION PROGRAM SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE ENVIRONMENTAL FEATURES OUTLINED ON PAGES 4-5 AND 5-5 OF THE SITE PLANS AND THE DETAILED RESTORATION MANAGEMENT PLAN PREPARED BY SAAR ENVIRONMENTAL LTD. DATED 1996 AND UPDATED OCTOBER 2000.
8. CLEAN INERT FILL MAY BE IMPORTED TO FACILITATE THE ESTABLISHMENT OF 2:1 (HORIZONTAL: VERTICAL) SLOPES ON THE QUARRY FACES. THE LICENSEE~~/ PERMITEE~~ MUST ENSURE THAT THE MATERIAL IS TESTED AT THE SOURCE, BEFORE IT IS DEPOSITED ON-SITE, TO ENSURE THAT THE MATERIAL MEETS THE MINISTRY OF THE ENVIRONMENT (MOE) CRITERIA UNDER TABLE 1 OF MOE'S SOILS, GROUND WATER AND SEDIMENT STANDARDS FOR USE UNDER PART XV.1 OF THE ENVIRONMENTAL PROTECTION ACT. SAMPLING RESULTS WILL BE PROVIDED TO MNR UPON REQUEST.
9. NOTWITHSTANDING NOTE ~~8a~~, WHERE THE IMPORTED MATERIAL IS NOT BEING PLACED WITHIN 1.5 METRES OF THE SURFACE, THE CRITERIA UNDER TABLE 1 FOR SODIUM ADSORPTION RATIO AND ELECTRICAL CONDUCTIVITY DO NOT HAVE TO BE MET.

VARIATIONS FROM THE CONTROL AND OPERATIONAL ~~L~~ STANDARDS

AS PROVIDED BY SECTION 0.13, THE FOLLOWING STANDARDS HAVE BEEN VARIED:

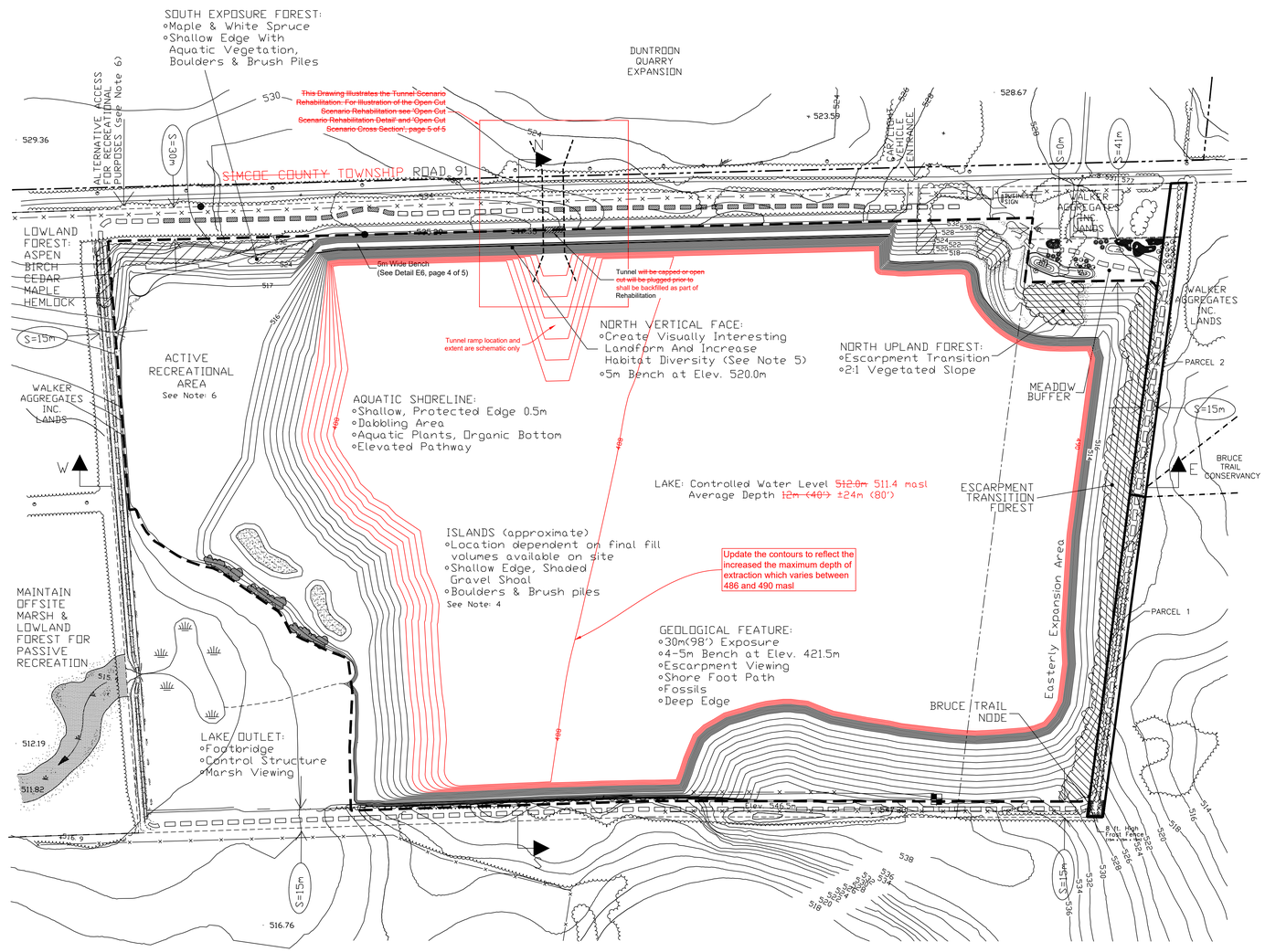
(1) 1 & 2 – A GATE SHALL NOT BE REQUIRED FOR THE TUNNEL CROSSING.

(1) 3 – A CLEAR VIEW OF THE ROAD ABOVE IN BOTH DIRECTIONS SHALL NOT BE PROVIDED AT THE TUNNEL CROSSING.

~~5.1~~ (1) 9 & 10.ii – EXCAVATION WILL BE ALLOWED WITHIN THE 30 METRE SETBACK ALONG TOWNSHIP ~~COUNTY~~ ROAD 91 FOR PURPOSES OF THE TUNNEL ~~OR OPEN CUT~~.

(1) 11 – AGGREGATE / OVERBURDEN SHALL BE REMOVED FROM THE SETBACK TO FACILITATE CONSTRUCTION ASSOCIATED WITH THE TUNNEL.


NOTTAWASAGA BAY
Wasaga Beach
Collingwood
Clearview
Stayner
Creemore
Nottawa
Duntroon Quarry
Duntroon
Glen Huron
Singhampton
Avening
Meaford
Thornbury
Clarksburg
Kimberley
Eugenia
Flesherton
Rockford
Osprey
Markdale
Dundalk
Proton Station
Durham
Hanover
Owen Sound
Chatsworth
Williamsford
Arthur
Mount Forest
Fergus
Elora
Guelph
Cambridge
Kitchener
Waterloo
Stratford
Woodstock
Brantford
Hamilton
Oakville
Mississauga
Toronto
Barrie
Orillia
Midland
Penetanguishene
Tiny
Wyebridge
Port McNicoll
Victoria Harbour
Port Severn
Waubaushene
Honey Harbour
Muskoka
Gravenhurst
Bracebridge
Huntsville
Parry Sound
Sudbury



Notes

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
2. FOR GENERAL NOTES SEE PAGE 2.
3. FOR ALL CROSS SECTIONS SEE PAGE 4.
4. THE CONTOUR MAPPING WAS PREPARED BY LONG ASSOCIATES CONSULTING LIMITED IN MAY 31, 1993
5. PROPERTY BOUNDARY AND CORRESPONDING INFORMATION WAS DERIVED FROM AN EXISTING SITE PLAN PREPARED BY ZUBEK, EMO AND PATTEN LTD.
6. TOPOGRAPHIC INFORMATION IS RELATED TO THE BENCH MARK REFERRED TO.
7. PLAN COMPILED FROM INFORMATION FROM R.G. ROBINSON AND ASSOC. LTD. RECEIVED AUGUST 1996
8. PLAN UPDATED BY MHBC PLANNING LTD., AUGUST 2001, AND MARCH 2015

Notes

1. THE DUNTROON QUARRY COMPRISING OF A LICENSED AREA OF 49.81 ha. (123.08 ac.) WAS LICENSED AS P710197 DURING THE EARLY 1970'S. AN ADDITIONAL 7.5 ha. WAS LICENSED IN JUNE 1992 AS P716459, SUBJECT TO A NIAGARA ESCARPMENT DEVELOPMENT PERMIT. THE TOTAL LICENSED AREA IS +/-57.5 ha (142.1 ac.) THE FINAL REHABILITATION PLAN PROVIDES FOR A 36.0 HA LAKE. THE LAKE SECTION OF THE QUARRY WILL BE EXCAVATED TO AN AVERAGE ELEVATION OF ~~500.0m~~ BETWEEN 486 AND 490 MASL. PERIMETER ELEVATIONS VARY SUBSTANTIALLY FROM 512.0 MASL, NEAR THE SOUTHWEST CORNER TO 546.5 MASL, AT THE PEAK OF THE GEOLOGICAL FEATURE IN THE SOUTHEAST SECTOR.

2. A VARIETY OF LAKE EDGE TREATMENTS ARE PROPOSED, TO SUPPORT A RANGE OF COMPLIMENTARY AFTER USES. ACTIVITIES IN THE EASTERLY SECTOR WILL INCLUDE AN ACTIVE TRAIL SYSTEM AREA AND REFORESTED SLOPES. THE 546.5m HEIGHT OF LAND WILL BE RETAINED, AS A GEOLOGICAL FEATURE, PROVIDING A SUBSTANTIAL EXPOSURE OF THE AMABEL DOLOSTONE AND FOSSILS, INCLUDING CRINOIDS, STROMATOPOROIDS, CORALS, NAUTILOIDS AND BRACHIOPODS. A FENCE SHALL BE ERECTED AT THE TOP OF THE FEATURE TO THE SATISFACTION OF THE MINISTRY OF NATURAL RESOURCES.

3. THE WESTERLY EDGE ABUTS AN UNLICENSED AREA, DESIGNATED ESCARPMENT NATURAL AREA, SUPPORTING A MIXED LOWLAND WOODLOT. THIS SHORELINE WILL SUPPORT A SHALLOW, PROTECTED EDGE, WITH AQUATIC PLANTS AND ORGANIC BOTTOM, TO PROVIDE A DEGREE OF WATERFOWL HABITAT. AQUATIC PLANT SPECIES WILL BE SELECTED AND ESTABLISHED DURING THE FINAL STAGES OF LAKE AND SHORELINE DEVELOPMENT.

4. THE EXISTING BERM LOCATED ALONG THE WESTERLY LIMIT OF THE SITE, TO BE USED FOR BACKFILL ALONG ENTIRE ELEVATION TO CREATE ISLANDS LOCATED IN LAKE PORTION OF THE QUARRY.

5. PORTIONS OF THE NORTHERLY SHORELINE WILL BE DEVELOPED WITH ACCESS ROAD AND UPLAND FOREST, WITH SOUTH EXPOSURE, TO EXTEND THE EXISTING IMMATURE FOREST BUFFER. THE REMAINING PORTION OF THE NORTHERLY SHORELINE MAY BE LEFT EXPOSED AS VERTICAL FACE, WITH A 5.0 M WIDE BENCH AT ELEVATION 520.0 MASL. THIS WILL CREATE A VISUALLY INTERESTING LANDFORM AND INCREASE HABITAT DIVERSITY.

6. THE FINAL REHABILITATION PLAN INCLUDES 5 SPECIFIC FEATURES, AS SHOWN, TO PROVIDE FOR RECREATIONAL AND NATURAL RESOURCE ACTIVITIES AND CONNECTION TO THE BRUCE TRAIL SYSTEM. AN AREA TO ACCOMMODATE RECREATIONAL ACTIVITIES MAY BE PROVIDED IN THE NORTHWEST CORNER. THE AREA SHALL BE GRADED AND SEEDED ACCORDINGLY. AN ALTERNATIVE ACCESS TO THE RECREATIONAL AREA AT LOCATION SHOWN IS SUBJECT TO APPROVAL OF THE COUNTY OF SIMCOE.

7. THE OPERATOR WILL GRADE, TOPSOIL AND SEED THE ACTIVE RECREATION AREA, DURING FINAL REHABILITATION. THIS AREA WILL THEN BE REDEVELOPED FOR PRIVATE RECREATIONAL AFTER USES.

8. THE CONTROL STRUCTURE WILL BE ASSUMED AND MAINTAINED BY THE LICENSEE AND UPGRADED IF AND WHEN NECESSARY TO THE SATISFACTION OF THE MINISTRY OF NATURAL RESOURCES.

9. WHEN FINAL REHABILITATION OF EASTERLY SIDE SLOPE IS COMPLETE, PARCEL 1 & 2 WILL BE CONVEYED TO THE BRUCE TRAIL CONSERVANCY.

10. REHABILITATION AREAS

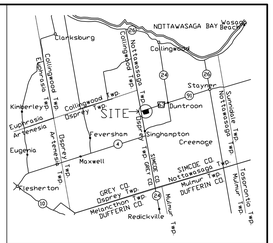
	HA	AC	%
TOTAL LICENSED AREA	57.5	142.1	100
LESS SETBACKS	6.4	15.8	11.1
LESS EXISTING REHABILITATION	2.4	6.0	4.2
NET AREA TO BE REHABILITATED (INCLUDES PROPOSED LAKE)	48.7	120.3	84.7

11. THE FINAL PASSIVE OUTLET ELEVATION FROM THE LAKE SHALL BE BASED ON ONGOING AMP MONITORING, WITH A PREDICTED APPROXIMATE ELEVATION OF 511.4 MASL.

12. FOR THE LONG-TERM STABILITY OF THE TUNNEL, THE TUNNEL SHALL BE BACKFILLED PRIOR TO THE START OF LAKE FILLING. BACKFILLING SHALL BE DONE BY CREATING A BULKHEAD AT ONE END OF THE TUNNEL AND PUSHING GRANULAR MATERIAL INTO THE TUNNEL TO FILL THE TUNNEL AS CLOSE AS POSSIBLE TO THE CROWN (WITHIN APPROXIMATELY 0.5 M OF THE CROWN OR LESS). AFTER BACKFILLING, THE TWO ENDS SHALL BE COVERED WITH ROCKFILL. DURING LAKE FILLING, REGULAR VISUAL INSPECTIONS OF THE TUNNEL ENDS AND THE ROAD ABOVE SHALL BE COMPLETED UNTIL THE TUNNEL IS FLOODED TO ABOVE THE TUNNEL OBVERT LEVEL OR UNTIL THE LICENCE IS SURRENDERED AND ACCEPTED BY THE MINISTRY OF NATURAL RESOURCES. AS A MINIMUM, THE TUNNEL ENDS AND ROAD ABOVE SHALL BE INSPECTED AT THE START OF LAKE FILLING, WHEN THE LAKE LEVEL IS HALFWAY UP THE TUNNEL HEIGHT AND AGAIN JUST BEFORE THE LAKE LEVEL REACHES THE TUNNEL CROWN. THE NEED FOR FURTHER INSPECTIONS AND THE FREQUENCY OF THE ANY SUCH INSPECTIONS CAN BE RE-ASSESSED AT THAT TIME DEPENDING ON THE INSPECTION RESULTS.

Rehabilitation Components

- **Meadow Buffer**
  - See Page 4
- **Escarpment Transition Forest**
  - Beech, Maple, White Spruce
  - Choke Cherry, Hawthorn, Sumac
  - Legume and Wildflower Ground Cover
- **Shoreline**
  - See Page 4 Edge Standards
- **Aquatic Vegetation**
  - See Page 4
- **South Exposure Forest**
  - Maple, White Spruce
  - Sumac, Choke Cherry,
  - Crab Apple, Hawthorn
  - Legume and Wildflower Ground Cover
  - See this Page



PART OF LOT 24
CONCESSION 12
(FORMERLY TOWNSHIP OF NOTTAWASAGA)
TOWNSHIP OF CLEARVIEW
COUNTY OF SIMCOE

LEGEND

- LICENSED BOUNDARY
- AREA TO BE EXCAVATED
- WALKER AGGREGATES INC. LANDS
- DUNTROON QUARRY EXPANSION LANDS
- 540 EXISTING CONTOURS
- 525 SPOT ELEVATIONS
- FENCES
- S=15m WIDTH OF EXCAVATION SETBACK AREA, METRES
- 520 PROPOSED CONTOURS
- EXISTING TRAIL SYSTEM
- PROPOSED TRAIL SYSTEM
- BRUCE TRAIL ASSOCIATION

NO.	REVISIONS	DATE	INITIAL
12	INCREASE THE MAXIMUM DEPTH OF EXTRACTION & UPDATE THE NOTES REGARDING TUNNEL AND FINAL LAKE LEVEL	NOVEMBER 2025	C.A.P.
11	REVISE NORTH FACE TO SHOW 5m WIDE BENCH AND TUNNEL/OPEN CUT INFORMATION	MAR.16/15	D.G.S.
10	TO FACILITATE DUNTROON QUARRY EXPANSION	JLY.11/14	A.J.M.
9	GENERAL REVISIONS	JLY.16/12	A.J.M.
8	REVISE NORTH FACE & NOTES 5 AND 9	NOV.03/11	A.J.M.
7	REVISE ENTRANCE/EXCAVATION FACE	SEP.19/02	D.G.S.
6	ADD FROST FENCE/SHIFT CONVEYANCE LINE	AUG.14/02	D.G.S.
5	REVISIONS AS PER TOWNSHIP COMMENTS	FEB.13/02	D.G.S.
4	GENERAL REVISIONS	SEP.17/01	D.G.S.
3	GENERAL REVISIONS	AUG.30/01	D.G.S.
2	GENERAL REVISIONS	AUG.27/01	D.G.S.
1	GENERAL REVISIONS	AUG.13/01	D.G.S.

MHBC Stamp
Christopher ...
Is authorized by the Province of Ontario to Practice Professional Engineering. Registered professional engineer prepares the site plans.
DRAFT

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
113 COLLIER STREET, BARRIE, ON, L4M 1H2 | P. 705.728.0045 | WWW.MHBCPLAN.COM

DUNTROON QUARRY

PART OF LOT 24 CONCESSION 12
TOWNSHIP OF CLEARVIEW, COUNTY OF SIMCOE
LICENCE NO 3514

WALKER AGGREGATES INC.
P.O. Box 100,
Thorold, Ontario
L2V 3Y8

PROGRESSIVE REHABILITAION PLAN

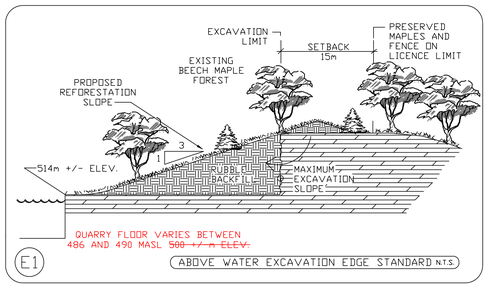
ZUBEK, EMO AND PATTEN LTD.
ONTARIO LAND SURVEYORS

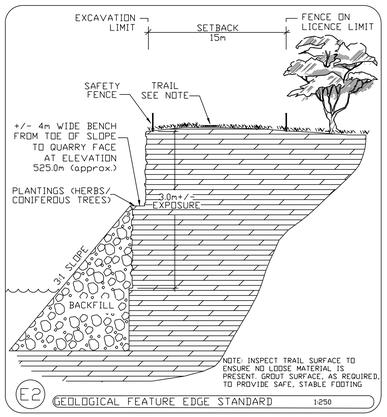
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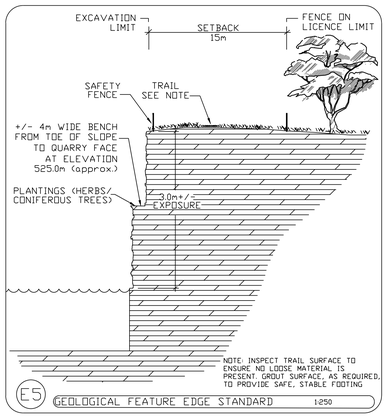
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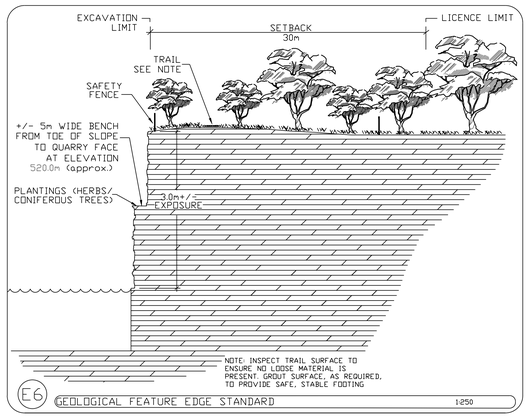
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JOB # 78-84-8, REHAB.DGN

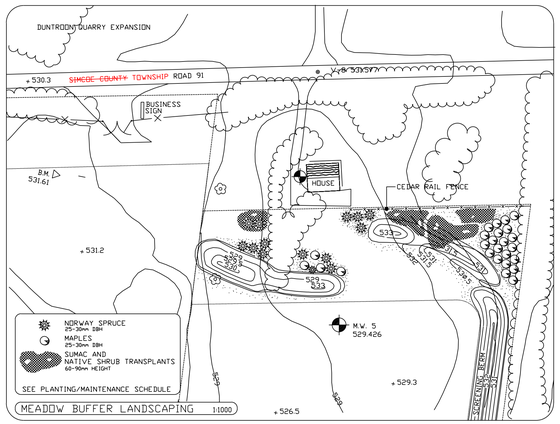
PAGE 3 OF 5

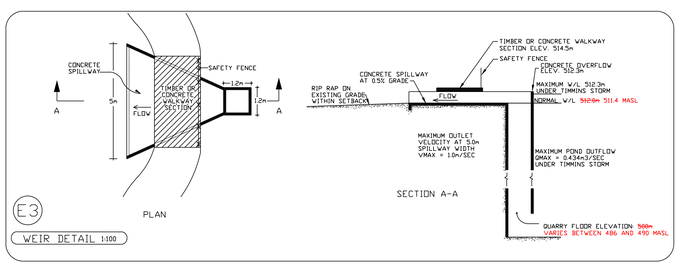


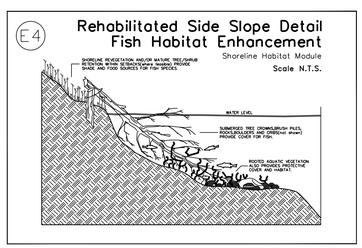


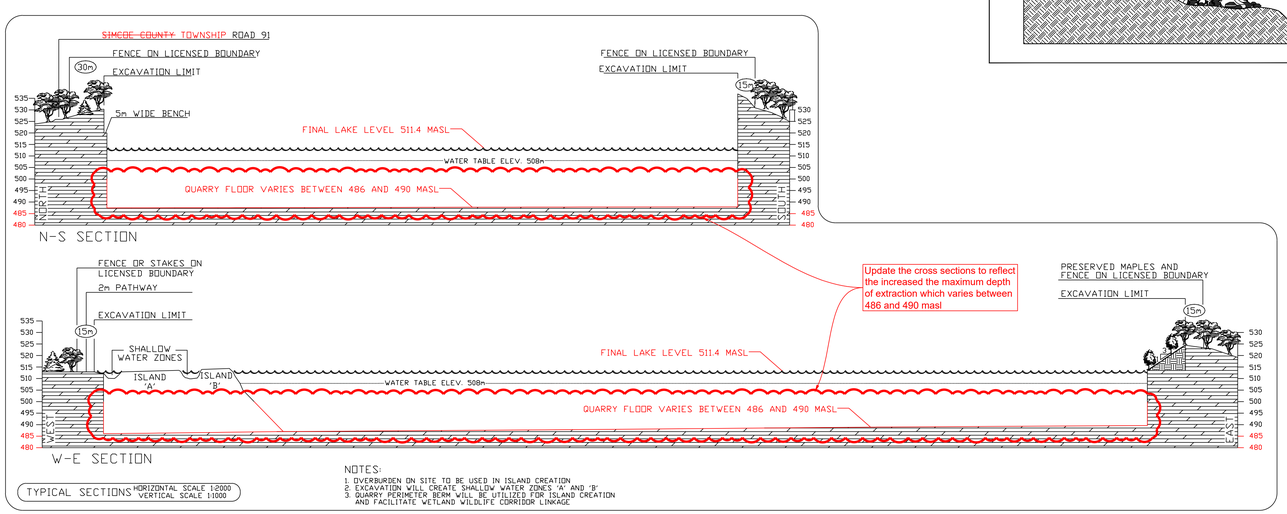




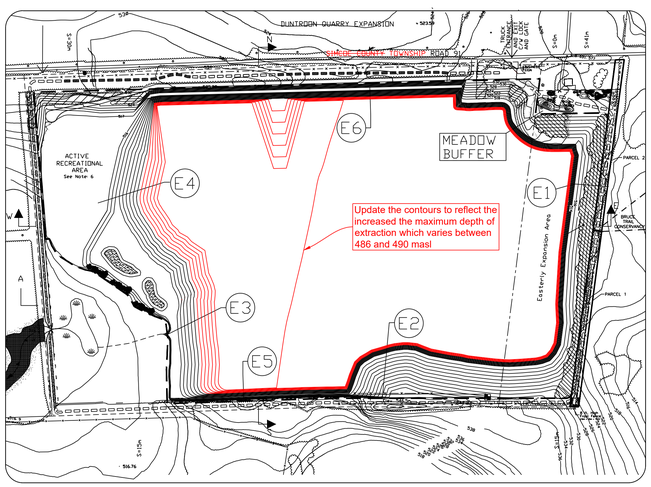








NOTES:
1. OVERBURDEN ON SITE TO BE USED IN ISLAND CREATION
2. EXCAVATION WILL CREATE SHALLOW WATER ZONES 'A' AND 'B'
3. QUARRY PERIMETER BERM WILL BE UTILIZED FOR ISLAND CREATION AND FACILITATE WETLAND WILDLIFE CORRIDOR LINKAGE



NOTES

1. PLAN COMPILED FROM INFORMATION FROM DRAWINGS BY R.G. ROBINSON AND ASSOC. LTD. RECEIVED AUGUST 1996 AND UPDATED BY MHBC PLANNING LTD., SINCE AUGUST 2001 ~~MARCH 2015~~

PART OF LOT 24
CONCESSION 12
(FORMERLY TOWNSHIP OF NOTTAWASAGA)
TOWNSHIP OF CLEARVIEW
COUNTY OF SIMCOE

NO.	REVISIONS	DATE	INITIAL
13	INCREASE THE MAXIMUM DEPTH OF EXTRACTION & UPDATE THE CROSS SECTIONS	NOVEMBER 2025	C.A.P.
12	REVISE NORTH FACE TO SHOW 5m WIDE BENCH	MAR.16/15	D.G.S.
11	TO FACILITATE DUNTROON QUARRY EXPANSION	JLY.11/14	A.M.
10	ADD 'E6' DETAIL AS PER MNR COMMENTS	FEB.6/13	A.M.
9	GENERAL REVISIONS	JLY.16/12	A.M.
8	REVISE NORTH SOUTH CROSS SECTION	NOV.03/11	A.M.
7	REVISE ENTRANCE/EXCAVATION FACE	SEP.19/02	D.G.S.
6	ADD FROST FENCE/SHIFT CONVEYANCE LINE	AUG.14/02	D.G.S.
5	REVISIONS AS PER TOWNSHIP COMMENTS	FEB.13/02	D.G.S.
4	GENERAL REVISIONS	SEP.17/01	D.G.S.
3	GENERAL REVISIONS	AUG.30/01	D.G.S.
2	GENERAL REVISIONS	AUG.27/01	D.G.S.
1	GENERAL REVISIONS	AUG.13/01	D.G.S.

MHBC Stamp
Christopher Vernon
Is authorized by the Province of Ontario to practice Professional Engineering in the Province of Ontario
DRAFT
PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
7050 WESTON ROAD, SUITE 230, WOODBRIDGE, ON L4L 8G7 T 905 761 5588 F 905 761 5589 WWW.MHBCPLAN.COM

DUNTROON QUARRY

PART OF LOT 24 CONCESSION 12
TOWNSHIP OF CLEARVIEW, COUNTY OF SIMCOE
LICENCE NO 3514

WALKER AGGREGATES INC
P.O. BOX 100,
THOROLD, ONTARIO
L2V 3Y8

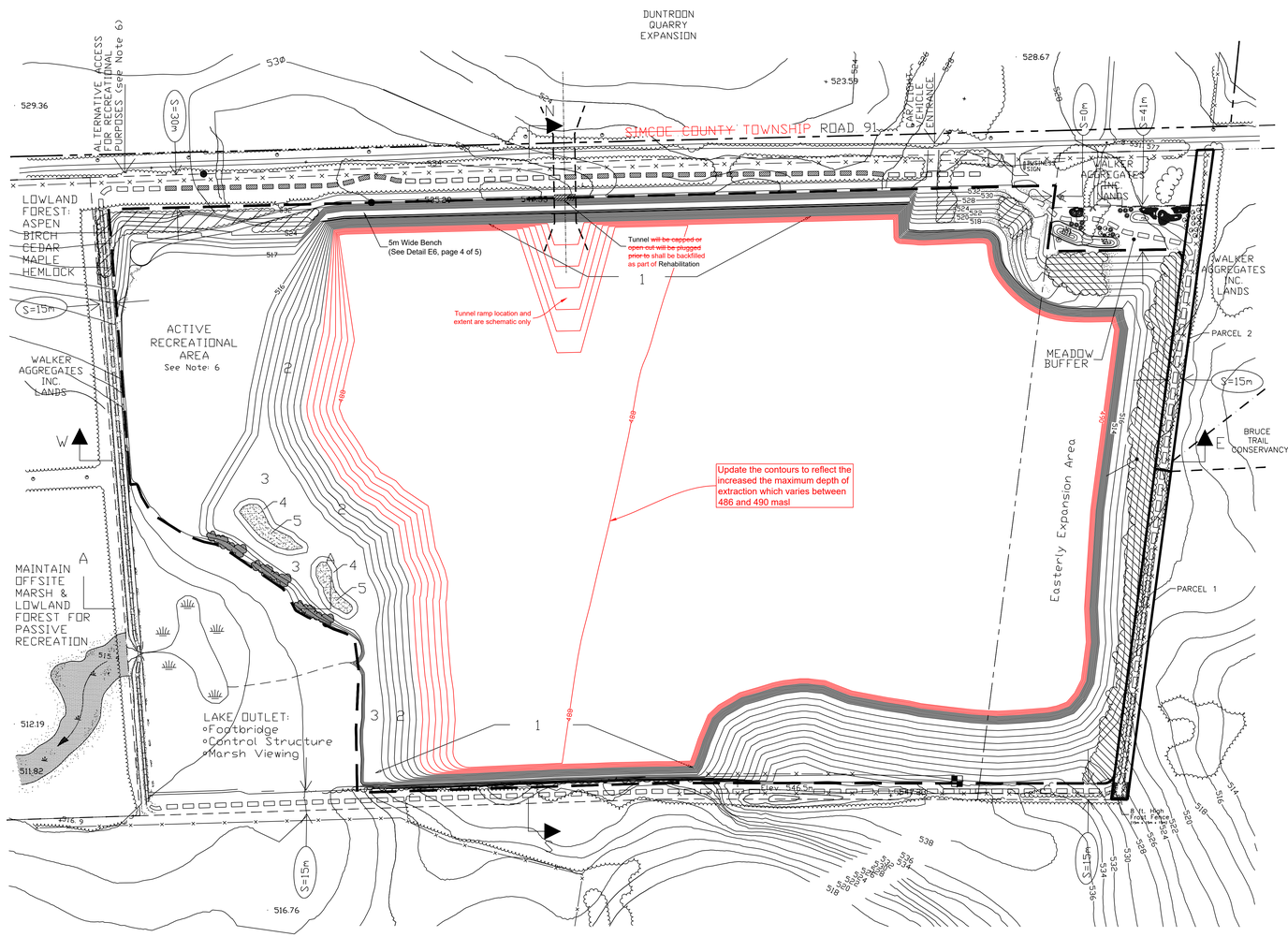
TYPICAL CROSS SECTIONS

ZUBEK, EMO AND PATTEN LTD.
ONTARIO LAND SURVEYORS

39 Stewart Road, Collingwood Ontario (705) 445-4900

SCALE - 1 : AS SHOWN

DATE - OCT.9, 1997
JOB # 78-84-8, REHAB.DGN

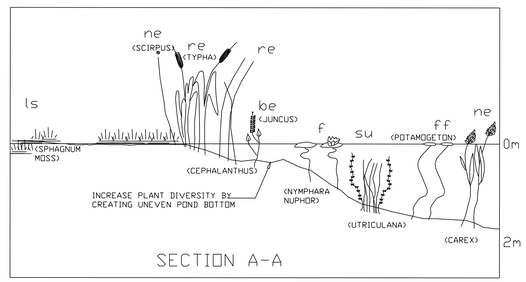


Notes

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
2. FOR GENERAL NOTES SEE PAGE 2.
3. FOR ALL CROSS SECTIONS SEE PAGE 4.
4. THE CONTOUR MAPPING WAS PREPARED BY LONG ASSOCIATES CONSULTING LIMITED IN MAY 31, 1993.
5. PROPERTY BOUNDARY AND CORRESPONDING INFORMATION WAS DERIVED FROM AN EXISTING SITE PLAN PREPARED BY ZUBEK, EMO AND PATTEN LTD.
6. TOPOGRAPHIC INFORMATION IS RELATED TO THE BENCH MARK REFERRED TO.
7. PLAN COMPILED FROM INFORMATION FROM R.G. ROBINSON AND ASSOC. LTD. RECEIVED AUGUST 1996.
8. PLAN UPDATED BY MHBC PLANNING LTD., ~~AUGUST 2001 AND MARCH 2015~~ SINCE AUGUST 2001.

Notes

1. ORIGINAL REHABILITATION PLANS PREPARED BY LONG AND ASSOCIATES CONSULTING LIMITED, APPROVED BY THE MINISTRY OF NATURAL RESOURCES ON MAY 30, 1993.
2. PLAN COMPILED FROM INFORMATION FROM PLANS PREPARED BY R.G. ROBINSON AND ASSOCIATES LTD.
3. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
4. FOR GENERAL NOTES SEE DWG. No. 2.
5. FOR ALL CROSS SECTIONS SEE DWG. No. 4.
6. THE CONTOUR MAPPING WAS PREPARED BY M.N.R. AIR PHOTO IN OCTOBER 1989.
7. PROPERTY BOUNDARY AND CORRESPONDING INFORMATION WAS DERIVED FROM AN EXISTING SITE PLAN PREPARED BY ZUBEK, EMO AND PATTEN LTD.
8. TOPOGRAPHIC INFORMATION IS RELATED TO THE BENCH MARK REFERRED TO.



SECTION A-A

AQUATIC VEGETATION TYPE SYMBOLS

re	ROBUST EMERGENTS	ff	FREE FLOATING VEGETATION
ne	NARROW LEAFED EMERGENTS	ls	LOW SHRUBS
be	BROAD LEAFED EMERGENTS	ts	TALL SHRUBS
f	FLOATING PLANTS	gc	GROUND COVER (MOSS, HERBS)
su	SUBMERGED VEGETATION	dh,dc	DEAD HARDWOODS, DEAD CONIFERS
u	UNVEGETATED		

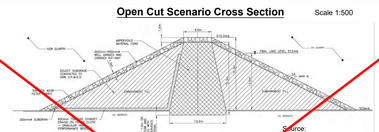
VEGETATION COMMUNITY TYPES

1. CLIFF FACE (FERN ASSEMBLAGE AND CONIFERS)
2. AQUATIC MARSH COMMUNITY (>0.25m TO 2.0m LIMIT)
3. SEMI-AQUATIC MARSH COMMUNITY (AS ABOVE BUT UPSLOPE IN LESS WATER: <0.25m TO HIGH AND DRY)
4. THICKET SWAMP (AS ABOVE BUT ONLY A FEW CENTIMETRES OF WATER)

5 MAN MADE ISLAND

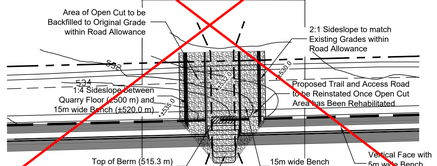
FUTURE WOODLANDS

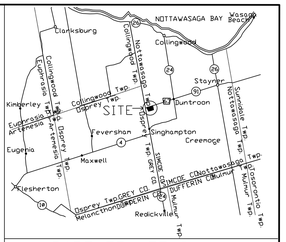
Open Cut Scenario Cross Section Scale 1:500



Source:
Proposed Entrance Road Backfill Detail (Dwg. SSK-1)
C.C. Tatham & Associates Ltd. (April 21, 2014)

Open Cut Scenario Rehabilitation Scale 1:500





PART OF LOT 24 CONCESSION 12
(FORMERLY TOWNSHIP OF NOTTAWASAGA)
TOWNSHIP OF CLEARVIEW
COUNTY OF SIMCOE

LEGEND

- LICENSED BOUNDARY
- N.E.P. DESIGNATION BOUNDARY
- AREA TO BE EXCAVATED
- WALKER AGGREGATES INC. LANDS
- DUNTROON QUARRY EXPANSION LANDS
- 540 EXISTING CONTOURS
- 522.5 SPOT ELEVATIONS
- FENCES
- S=15m WIDTH OF EXCAVATION SETBACK
- 540 PROPOSED CONTOURS
- EXISTING TRAIL SYSTEM
- PROPOSED TRAIL SYSTEM
- BENCH
- BRUCE TRAIL ASSOCIATION

NO.	REVISIONS	DATE	INITIAL
12	INCREASE THE MAXIMUM DEPTH OF EXTRACTION & REMOVE THE OPEN CUT SCENARIO	NOVEMBER 2025	C.A.P.
11	REVISE NORTH FACE TO SHOW 5m WIDE BENCH AND TUNNEL/OPEN CUT INFORMATION	MAR.16/15	D.G.S.
10	TO FACILITATE DUNTROON QUARRY EXPANSION	JLY.11/14	A.M.
9	GENERAL REVISIONS	JLY.16/12	A.M.
8	REVISE NORTH FACE	NOV.03/11	A.M.
7	REVISE ENTRANCE/EXCAVATION FACE	SEP.19/02	D.G.S.
6	ADD FROST FENCE/SHIFT CONVEYANCE LINE	AUG.14/02	D.G.S.
5	REVISIONS AS PER TOWNSHIP COMMENTS	FEB.13/02	D.G.S.
4	GENERAL REVISIONS	SEP.17/01	D.G.S.
3	GENERAL REVISIONS	AUG.30/01	D.G.S.
2	GENERAL REVISIONS	AUG.27/01	D.G.S.
1	GENERAL REVISIONS	AUG.14/01	D.G.S.

MHBC Stamp
Christopher Ambrose
Is authorized by the Ministry of Natural Resources and Forestry to Subsection 8(1) of the Crown Forest Sustainability Act to prepare forest plans.

DRAFT

PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
MHBC
113 COLLIER STREET, BARRIE, ON, L4M 1H2 T: 705.728.0045 | WWW.MHBCPLAN.COM

DUNTROON QUARRY

PART OF LOT 24 CONCESSION 12
TOWNSHIP OF CLEARVIEW, COUNTY OF SIMCOE
LICENCE NO 3514

WALKER AGGREGATES INC.
P.O. Box 100,
Thorold, Ontario
L2V 3Y8

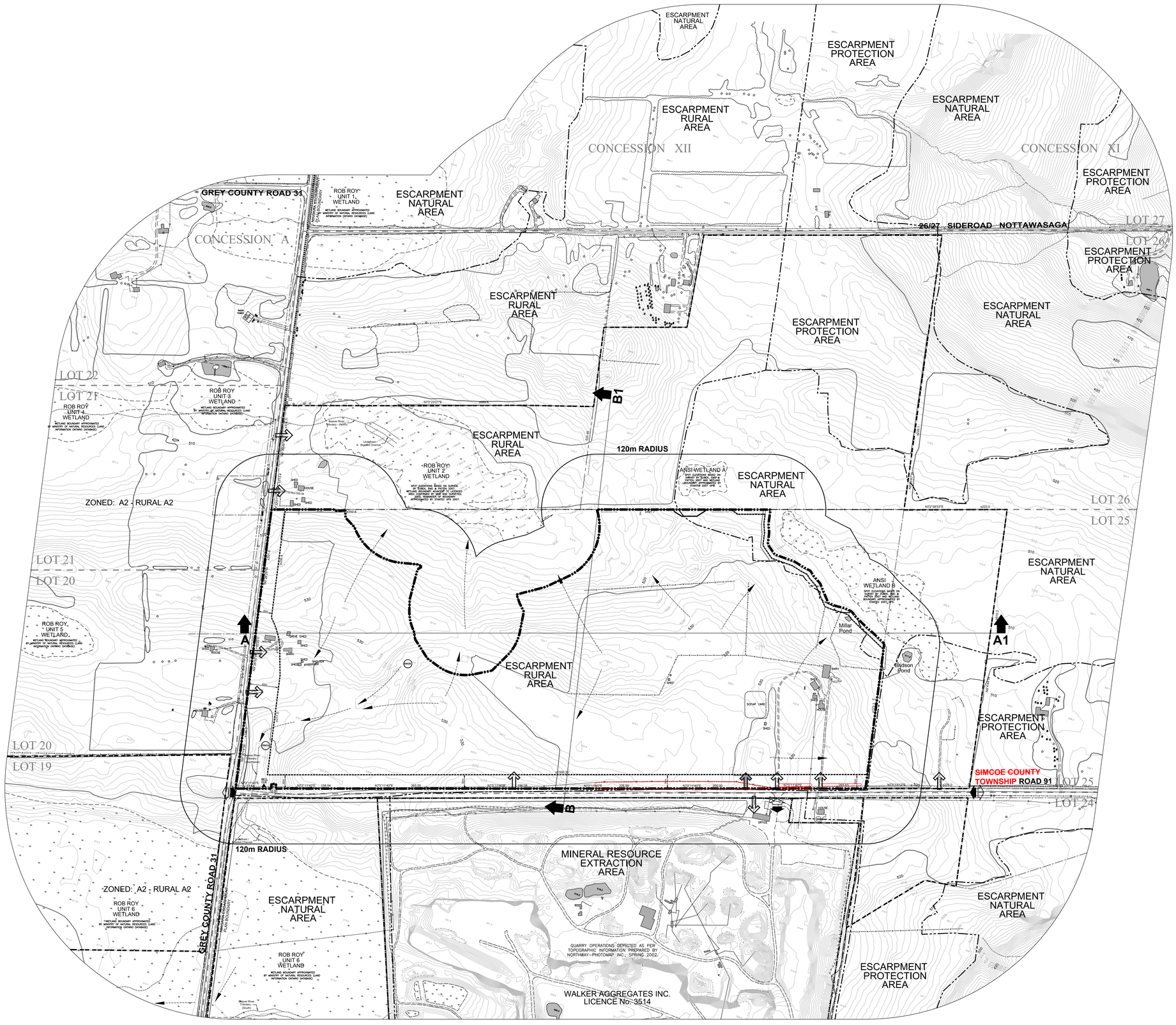
VEGETATION COMMUNITY AND FINAL REHABILITATION PLAN

ZUBEK, EMO AND PATTEN LTD.
ONTARIO LAND SURVEYORS
39 Stewart Road, Collingwood Ontario (705) 445-4910

SCALE - 1:2000
DATE - OCT.9, 1997
JOB # 78-84-8, REHAB.DGN

E

Appendix E



Existing Features

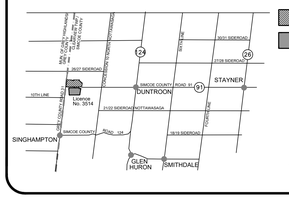
Legend

- Expansion Licence Boundary
- Limit of Extraction (ALL SETBACKS DRAWN TO SCALE, EXCEPT 0m SETBACKS AND SHOWN LABELLED DISTANCES)
- Lots and Concessions
- Building/Structure (LOCATION AND USE FOR BUILDINGS ON SITE AND WITHIN 120m ARE SHOWN ON THIS PLAN)
- Existing Driveway
- Field/Service Entrance (MAINTAINED AND REGULATED BY A GATE WHICH WILL BE CLOSED AT ALL TIMES THE QUARRY IS NOT IN OPERATION UNLESS OTHERWISE NOTED ON THIS PLAN)
- Entrance/Exit (OPERATIONAL) (MAINTAINED AND REGULATED BY A GATE WHICH WILL BE CLOSED AT ALL TIMES THE QUARRY IS NOT IN OPERATION UNLESS OTHERWISE NOTED ON THIS PLAN)
- Direction of Surface Drainage (IF ANY)
- Existing Fence (POST AND WIRE FARM FENCE UNLESS OTHERWISE NOTED)
- Existing Spot Elevation (MASL)
- Niagara Escarpment Plan Boundary
- Cross Sections (FOR DETAILS SEE PAGE 4 OF 4)
- South Quarry Licence Boundary (EXISTING DUNTROON QUARRY LICENCE No. 3514)
- Walker Aggregates Inc. Lands
- Hydro Pole Line
- Niagara Escarpment Designation Boundary (BOUNDARIES ARE INTERPRETED BASED ON 1:50,000 N.E.P. MAPS AND DETAILED ON SITE INSPECTIONS)
- Existing Stream
- Entrance to Phase 1
- Existing Vegetation
- Wetland Boundary (Surveyed & Estimated)
- Pond
- Elevation, Contour (MASL)
- Parcel Fabric
- Existing Ditch

NOTES:

1. TOPOGRAPHIC INFORMATION PREPARED BY NORTHWAY-PHOTOMAP INC. AND GENERATED FROM AERIAL PHOTOGRAPHY FLOWN IN SPRING OF 2002. CONTOUR INTERVAL IS 2.0m, WITH FULL 1.0m INTERPOLATED CONTOURS. ALL ELEVATIONS ARE INDICATED IN METRES ABOVE SEA LEVEL (MASL). SPOT ELEVATIONS IN ROB ROY UNIT 2 WETLAND BASED ON SURVEY BY ZUBEK, EMO, PATTEN & THOMSON, SEPTEMBER 2007.
2. LICENCE BOUNDARY COMPILED FROM EXISTING ARA SITE PLANS ORIGINALLY PREPARED BY ZUBEK, EMO AND PATTEN LTD.; DAVE T. HULME ENTERPRISES INC. BOUNDARY OF AREA TO BE LICENCED TAKEN FROM PRELIMINARY PLAN OF SURVEY PREPARED BY ZUBEK, EMO, PATTEN AND THOMSEN LTD., JANUARY 2003; AND PLAN 51R-4729 PREPARED BY ZUBEK AND EMO, JUNE 13, 1975.
3. ZONING INFORMATION OBTAINED FROM MUNICIPALITY OF GREY HIGHLANDS ZONING BY-LAW 10-1978. NIAGARA ESCARPMENT PLAN DESIGNATIONS TAKEN FROM MAP 5 NIAGARA ESCARPMENT PLAN, MINISTRY OF NATURAL RESOURCES, JUNE 1, 2005.
4. ALL MEASUREMENTS SHOWN ON THIS PLAN ARE IN METRES.
5. BOUNDARY OF AREA TO BE LICENCED 65.93 ha. 162.93 (ac.)
   AREA TO BE EXTRACTED 58.49 ha. 144.52 (ac.)
6. HYDROGEOLOGICAL INFORMATION OBTAINED FROM "GEOLOGICAL REPORT AND LEVEL 2 HYDROGEOLOGICAL ASSESSMENT" DATED SEPTEMBER 2005, AND "LEVEL 2 HYDROGEOLOGICAL ASSESSMENT ADDENDUM" DATED OCTOBER 2007 PREPARED BY JAGGER HIMS LIMITED.
7. THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT FOR A CLASS A LICENCE, CATEGORY 2.
8. HIGH MEASURED GROUNDWATER LEVELS VARY FROM 509 MASL TO 526 MASL ACROSS THE SITE.

Key Map



MHBC | PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
113 COLLIER STREET, BARRIE, ON, L4M 1H2 | P: 705.728.0045 | WWW.MHBCPLAN.COM

MHBC Stamp
Christopher Vernon
Is authorized to practice as a Member of Natural Resource Planning pursuant to Subsection 3(1) of the Ontario Regulated Act to prepare these plans.

DRAFT

Scale 1:3,000
0 25 50 100 150m

NORTH

DRAFT REVISIONS

SEPT 18 2009	SUB. TO MNR	
NOV 17 2009	SUB. TO MNR	
FEB 11 2010	SUB. TO MNR	
APR 15 2010	SUB. TO MNR	
JUNE 11 2010	SUB. TO MNR	
JUNE 15 2010	SUB. TO MNR	
JUNE 16 2010	SUB. TO MNR	

APPROVED LICENCE SITE PLAN AMENDMENT
DOCUMENT ONE

I ACKNOWLEDGE AND SHALL CARRY ON MY OPERATION IN ACCORDANCE WITH THIS SITE PLAN UPON WHICH MY LICENCE IS BASED.

LICENSEE / SIGNATURE

DATE

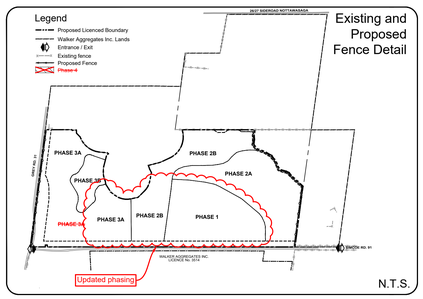
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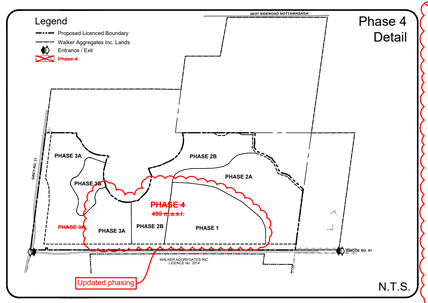
Duntroon Quarry Expansion

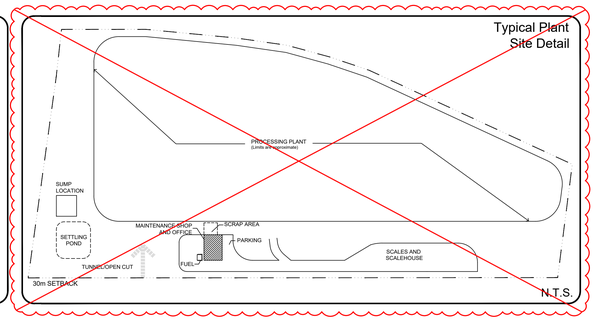
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Dwn. By: A.M.,D.S.,J.D.,C.P. Chkd. By: C.P.

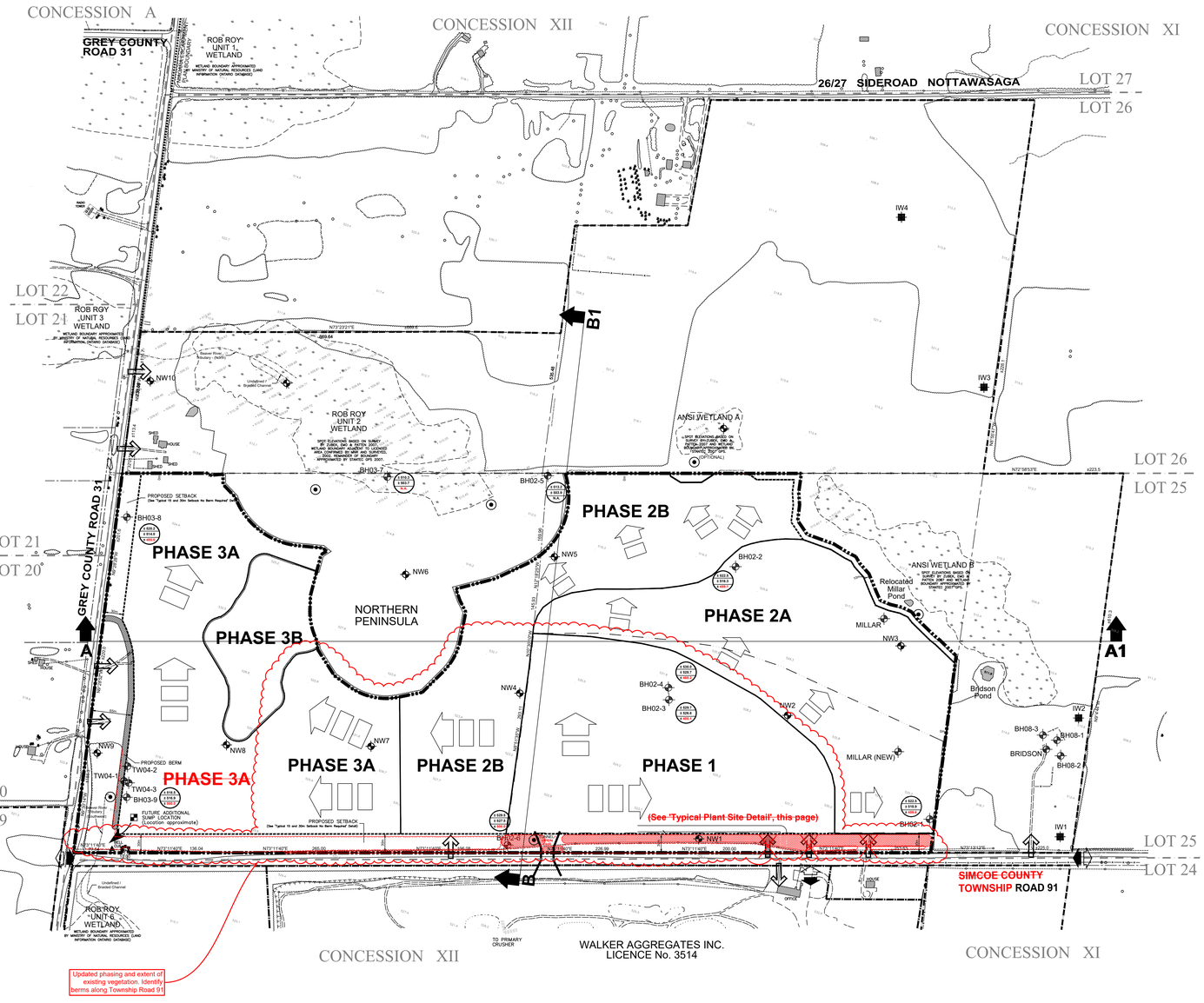
Lot 25 and Part Lot 26,
Concession XII and
Part Lot 25, Concession XI
Clearview Township
Simcoe County

Walker Industries Holdings Limited
Aggregates and Construction Group
P.O. Box 100 Thorold Ontario
L2V 3Y8









13. DURING THE INITIAL STAGE OF DEVELOPING PHASE 1, A TUNNEL OR OPEN CUT FOR TRUCKS AND/OR CONVEYORS WILL BE CREATED UNDERNEATH OR THROUGH THAT PORTION OF COUNTY TOWNSHIP ROAD 91 WHICH IS CLOSED. THIS PASSAGE WILL PERMIT TRANSPORT OF EXTRACTED MATERIAL FROM THE PHASE 1 AREA TO THE EXISTING PROCESSING PLANT WITHIN LICENCE No. 3514. AND WILL PERMIT THE TRANSPORT OF EXTRACTED MATERIAL FROM LOT 24 TO THE RELOCATED PROCESSING PLANT. SEE "PLANT SITE" AND "TYPICAL PLANT SITE DETAIL" THIS PAGE.

14. A PROCESSING PLANT PROCESSING MATERIAL FROM THIS SITE (LOT 25, CONCESSION 12, TOWNSHIP OF CLEARVIEW) IS PERMITTED ON LANDS TO THE SOUTH (LOT 24, CONCESSION 12, TOWNSHIP OF CLEARVIEW, ARA LICENCE No. 3514) BUT ONLY FOR SUCH PERIOD OF TIME AS IS NECESSARY TO CREATE SUFFICIENT QUARRY FLOOR ON THIS SITE TO ACCOMMODATE THIS PLANT. IT IS ANTICIPATED THAT THE PROCESSING PLANT WILL BE RELOCATED TO THIS SITE WHEN THE QUARRY FLOOR AT ELEVATION 500 MASL REACHES AN AREA OF 10 HA. THE PROCESSING PLANT SHALL BE RELOCATED TO THIS SITE AND THE QUARRY UNDER LICENCE No. 3514 SHALL BE REHABILITATED IN ACCORDANCE WITH THE ARA LICENCE AND SITE PLANS. THIS PERMISSION INCLUDES ALL RELATED PRODUCTION FACILITIES. SEE "TYPICAL PLANT SITE DETAIL" THIS PAGE.

15. UPON RELOCATION OF THE PROCESSING PLANT AND SCALES/SCALE HOUSE FROM LOT 24 TO THE "PLANT SITE" SHOWN ON THIS PAGE, THE TUNNEL/OPEN CUT WILL BE FILLED AND SEALED.

15. IN ADDITION, A PORTABLE CRUSHING/SCREEN PLANT MAY BE LOCATED ADJACENT TO THE ACTIVE FACE WITHIN PHASES 1, 2A, 2B, 3A, AND 3B INCLUSIVE (SUBJECT TO GENERAL NOTES 21 20 AND 22 21). AND 4 INCLUSIVE. THE PLANT SHALL BE LOCATED ON THE QUARRY FLOOR. IN ADDITION, STOCKPILES OF RECYCLABLE CONCRETE AND ASPHALT FOR PROCESSING WILL BE LOCATED ON SITE. THE MAXIMUM HEIGHT OF STOCKPILES AND ALL PROCESSING EQUIPMENT IS 20 METRES FROM THE QUARRY FLOOR.

16. ONCE THE OVERBURDEN IS STRIPPED AND STORED IN THE BERMS SHOWN, OR STOCKPILED FOR FUTURE USE, EXTRACTION WILL TAKE PLACE IN PHASE 1, IN A NORTHERLY, EASTERLY AND WESTERLY DIRECTION. DEWATERING WILL TAKE PLACE TO CREATE A DRY, WORKING FLOOR. ANY WATER WILL BE PUMPED FROM THE QUARRY FLOOR AND DISCHARGED IN ACCORDANCE WITH THE ARA LICENCE AND THE ENVIRONMENTAL COMPLIANCE APPROVAL (ECA) NUMBER 7322-7DDKZ3 ISSUED ON JULY 16, 2009. PRIOR TO COMMENCEMENT OF EXTRACTION, THE RELOCATED MILLAR POND SHALL BE CONSTRUCTED AS SHOWN ON THIS PAGE, AS FURTHER DESCRIBED IN THE MILLAR COW POND RELOCATION DESIGN CONCEPTS (CONSOLIDATED REPORT, STANTEC 2010, APPENDIX "C"). THERE SHALL BE NO STRIPPING OF TOPSOIL OR OVERBURDEN, AND NO EXTRACTION, WITHIN 50 METRES OF THE EXISTING MILLAR POND UNTIL SUCH TIME AS SELF SUSTAINING VEGETATION AND ACTIVE FROG BREEDING HAVE BEEN ESTABLISHED AT THE RELOCATED MILLAR POND AS DETERMINED THROUGH THE ADAPTIVE MANAGEMENT PLAN.

17. PRIOR TO EXTRACTION WITHIN PHASE 2A, THE BOUNDARY OF THE WETLANDS TO THE NORTH AND NORTH EAST (ROB ROY UNIT 2 WETLAND AND ANSI WETLAND A AND ANSI WETLAND B) SHALL BE SURVEYED AND STAKED, TO THE SATISFACTION OF MNR. NO EXTRACTION SHALL TAKE PLACE WITHIN 120 METRES OF THE STAKED BOUNDARY OF ROB ROY UNIT 2 WETLAND OR WITHIN 30 METRES OF THE STAKED BOUNDARY OF ANSI WETLAND A AND ANSI WETLAND B.

18. AS EXTRACTION WITHIN PHASE 1 APPROACHES A DEPTH OF 500 MASL, STRIPPING OF PHASE 2A MAY COMMENCE. EXTRACTION WITHIN PHASE 2A SHALL EXTEND EASTERLY AND NORTHERLY FROM THE QUARRY FACE IN PHASE 1, PRIOR TO STRIPPING OF LANDS IN PHASE 2B, THE LICENCEE LICENSEE SHALL PREPARE A REFORESTATION ASSESSMENT TO DEMONSTRATE TO THE TOWNSHIP OF CLEARVIEW THAT THE PLANTED WOODLAND IN THE PROPOSED REFORESTATION AREA (SEE PLANTING LOCATION DETAIL, PAGE 2B OF 4) IS ECOLOGICALLY SUCCESSFUL. STRIPPING OF LANDS IN PHASE 2B CAN ONLY PROCEED IN THE EVENT THE REFORESTATION IS ECOLOGICALLY SUCCESSFUL. EXTRACTION WITHIN PHASE 2B WILL NOT PROCEED UNTIL THE REFORESTATION ASSESSMENT DEMONSTRATES THAT THE PLANTED WOODLAND IS ECOLOGICALLY SUCCESSFUL.

19. EXTRACTION IN PHASE 2B WILL BE UNDERTAKEN FROM EAST TO WEST AND SOUTH TO NORTH FROM PHASES 1 AND 2A RESPECTIVELY.

20. PHASES 3A AND 3B WILL PROGRESS SIMULTANEOUSLY OR MERGE AS ONE PHASE IN A WESTERLY AND NORTHERLY DIRECTION IF THE REQUIREMENTS OF GENERAL NOTE 20 21 ARE FULFILLED. IF GENERAL NOTE 20 21 HAS NOT BEEN FULFILLED AND PHASE 3A PROCEEDS INDEPENDENT OF PHASE 3B, PHASE 3B WILL PROGRESS IN A NORTHERLY DIRECTION ONCE GENERAL NOTE 20 21 HAS BEEN FULFILLED. IN THE EVENT PHASE 3B IS NOT EXTRACTED, IN PART OR IN ITS ENTIRETY, A 100 METRE WIDE BEDROCK CONNECTION BETWEEN THAT PORTION OF PHASE 3B RETAINED AND THE NORTHERN PENINSULA SHALL BE RETAINED AND NOT BE EXTRACTED.

21. NOTWITHSTANDING THAT PHASE 3B IS LOCATED WITHIN THE EXTRACTION AREA, QUARRY RELATED ACTIVITIES, INCLUDING SITE ALTERATION AND/OR EXTRACTION, ARE ONLY PERMITTED WITHIN PHASE 3B AT SUCH TIME AS:

i) A PERMIT UNDER SECTION 17(2) C" OF THE ENDANGERED SPECIES ACT, 2007 FOR THE REMOVAL OF THE RETAINABLE BUTTERNUT TREES WITHIN PHASE 3B HAS BEEN GRANTED BY THE MINISTRY OF NATURAL RESOURCES; OR
ii) THE RETAINABLE BUTTERNUT TREES DOCUMENTED ON SITE IN JUNE 2009 DECLINE AS A RESULT OF BUTTERNUT CANKER TO A DEGREE WHERE THEY ARE NO LONGER CONSIDERED RETAINABLE; AND NO OTHER RETAINABLE BUTTERNUT TREES ARE FOUND ON SITE; OR
iii) THE STATUS OF BUTTERNUT (AS LISTED ON THE SPECIES AT RISK IN ONTARIO LIST) IS CHANGED AND THE RESULT IS SUCH THAT BUTTERNUT IS NO LONGER SUBJECT TO SECTION 9 OR 10 OF THE ENDANGERED SPECIES ACT 2007; AND
iv)EXTRACTION IN PHASE 3B IS IN KEEPING WITH OTHER RELEVANT POLICIES AND LEGISLATION APPLICABLE TO BUTTERNUT AT THAT TIME. FOR GREATER CLARITY REGARDING SCENARIO (V) ABOVE, IN THE EVENT THAT ONLY A PORTION OF PHASE 3B NO LONGER HAS RETAINABLE BUTTERNUT TREES, EXTRACTION IS ONLY PERMITTED PROVIDED THAT THE PORTION OF PHASE 3B WHICH CONTINUES TO HAVE RETAINABLE BUTTERNUT TREES, INCLUDING THE 25 METRE SETBACK, IS CLEARLY DEMARCATED AND FENCED AND IS NOT SUBJECT TO EXTRACTION.

22. PRIOR TO COMPLETION OF PHASE 2B, STRIPPING OF TOPSOIL AND OVERBURDEN WITHIN PHASE 3A WILL COMMENCE. THESE MATERIALS WILL BE STOCKPILED OR USED FOR PROGRESSIVE REHABILITATION.

23. WHEN THE QUARRY FLOOR REACHES THE WESTERLY LIMIT OF PHASE 3A, A SUMP WILL BE CREATED IN THE AREA SHOWN ON THE PLAN. WATER WILL BE DISCHARGED AT THE LOCATIONS IDENTIFIED AS QUARRY DEWATERING DISCHARGE LOCATIONS AS IDENTIFIED ON THE SITE PLANS, OR AS REFINED OR AUGMENTED THROUGH AN ADAPTIVE MANAGEMENT PLAN (AMP) APPROVED BY THE MINISTRY OF NATURAL RESOURCES (MNR).

24. PHASE 4. AS PHASE 3A IS NEARING COMPLETION A FURTHER LIFT WILL BE INITIATED TO AN ELEVATION OF 490 MASL (SEE PHASE 4 DETAIL THIS PAGE). WHEN NECESSARY, THE PERMANENT PLANT WILL BE DISASSEMBLED AND MOVED OFF SITE. PROCESSING WILL CONTINUE WITH USE OF A PORTABLE PROCESSING PLANT. PROGRESSIVE REHABILITATION OF PHASE 3A (OR COMBINED PHASES 3A AND 3B) WILL CONTINUE.

24. UPON COMPLETION OF EXTRACTION TO AN ELEVATION OF 490 485 MASL IN PHASE 4 3A, PROGRESSIVE REHABILITATION OF 3A (OR COMBINED PHASES 3A AND 3B) SHALL COMMENCE ONCE REHABILITATION OF THE SITE IS TO BE COMPLETED, AND DEWATERING WILL CEASE. OVERFLOW SILLS AND CHANNELS AND, IF NECESSARY, OUTLET CONTROL STRUCTURES WILL BE CREATED TO ALLOW POSITIVE DRAINAGE FROM THE LAKE TO ROB ROY UNIT 2 WETLAND, ANSI WETLAND A AND ANSI WETLAND B. UNTIL THE LAKE IS FULL, IT MAY BE NECESSARY TO CONTINUE TO DISCHARGE WATER TOWARDS THE WETLANDS UNTIL SUCH TIME AS IT HAS BEEN DEMONSTRATED TO THE SATISFACTION OF THE MINISTRY OF NATURAL RESOURCES THAT THE WETLANDS ARE SELF-SUSTAINING AS DEMONSTRATED THROUGH MONITORING IN THE AMP.

25. ON SITE MOBILE EQUIPMENT TO BE USED WITHIN THE LICENCE AREA WILL INCLUDE, BUT IS NOT LIMITED TO, LOADERS, HAUL TRUCKS, SCRAPERS, BULLDOZERS, BACKHOES, DRILLS, AND A PORTABLE AND PERMANENT PROCESSING PLANT.

26. THE HOURS OF OPERATION ARE:

Activity	Monday to Friday	Saturday
Stripping	7:00 am to 5:00 pm	8:00 am to 3:00 pm
Drilling	7:00 am to 5:00 pm	8:00 am to 3:00 pm
Blasting	8:00 am to 5:00 pm	8:00 am to 3:00 pm
Operations (including processing)	6:00 am to midnight	7:00 am to 3:00 pm
Shipping	6:00 am to 5:00 pm	None
Maintenance	24 hours a day	24 hours a day

NOTE: SUNDAYS CLOSED EXCEPT FOR MAINTENANCE. OUTSIDE THESE HOURS, ANY ACTIVITY CAN ONLY TAKE PLACE ON AN EMERGENCY BASIS AT THE REQUEST OF THE MINISTRY OF TRANSPORTATION, THE COUNTY OF SIMCOE, THE TOWNSHIP OF CLEARVIEW, OR OTHER PUBLIC ROAD AUTHORITY.

27. NO OPERATIONS MAY OCCUR ON STATUTORY HOLIDAYS AS DEFINED IN ACCORDANCE WITH THE EMPLOYMENT STANDARDS ACT EXCEPT THAT CANADA DAY CAN BE TAKEN AS AN ALTERNATIVE DAY. MAINTENANCE MAY OCCUR ON HOLIDAYS.

28. BLASTING COULD OCCUR DAILY IN ACCORDANCE WITH PROVINCIAL STANDARDS.

29. THE MAXIMUM TONNAGE TO BE REMOVED ANNUALLY FROM THIS SITE IS 2.5 MILLION TONNES, IN COMBINATION WITH LICENCE No. 3514.

30. REHABILITATION WILL BE PROGRESSIVE DURING QUARRY OPERATIONS AS SUFFICIENT AREAS BECOME AVAILABLE. OVERBURDEN FROM PHASE 1 MAY ALSO BE USED FOR THE CONSTRUCTION OF THE BERM AT THE WEST SIDE OF PHASE 3A. THE BERM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "SETBACK DETAIL – PHASE 2 – BERM REQUIRED" DETAIL ON PAGE 2B OF 4.

31. THE BERMS ALONG TOWNSHIP ROAD 91 (AS SHOWN) SHALL BE CONSTRUCTED TO AN ELEVATION BETWEEN 532 AND 536 MASL IN ORDER TO ATTAIN A THREE METRES ABOVE THE CENTRELINE ELEVATION OF THE ROAD. THE BERMS SHALL HAVE 2:1 SIDE SLOPES. A ONE METRE WIDE CREST AT THE TOP AND THE TOE OF THE BERMS SHALL REMAIN 1.5 METRES FROM THE LIMIT OF EXTRACTION. THE BERM CONSTRUCTED SOUTH OF THE HYDRO EASEMENT MAY BE LOCATED WITHIN THREE METRES OF THE LICENCE BOUNDARY. THE "SETBACK DETAIL – PHASE 2 – BERM REQUIRED" DETAIL ON PAGE 2B OF 4 DOES NOT APPLY TO THE BERM ALONG TOWNSHIP ROAD 91 AS THE BERM IS CONSTRUCTED ACCORDING TO THIS NOTE.

32. OFF-SITE AGGREGATE MATERIAL REQUIRED FOR BLENDING PURPOSES MAY BE IMPORTED AND STOCKPILED IN THE PERMANENT PROCESSING PLANT AREA. STOCKPILES OF IMPORTED MATERIAL WILL NOT EXCEED 20 METRES. ANY INERT FILL BROUGHT ONTO THE SITE IS REQUIRED TO BE TESTED AND CERTIFIED IN ACCORDANCE WITH MALRO'S "PROTOCOL FOR SAMPLING AND ANALYSIS OF EARTH FOR ENVIRONMENTAL MANUAL "INERT FILL" ACCEPTANCE PROCEDURE".

32. FOR DETAILS ON PROGRESSIVE AND FINAL REHABILITATION REFER TO PLAN 3 OF 4 ENTITLED "REHABILITATION PLAN".

TECHNICAL REPORTS (REPORTS PREPARED IN SUPPORT OF THE CLASS A LICENCE APPLICATION CATEGORY 3)

1. GEOLOGICAL REPORT AND LEVEL 2 HYDROGEOLOGICAL ASSESSMENT, DUNTROON QUARRY EXPANSION, SEPTEMBER 2005, JAGGER HIMS LIMITED
2. LEVEL 2 HYDROGEOLOGICAL ASSESSMENT ADDENDUM AND CUMULATIVE IMPACT ASSESSMENT, OCTOBER 2007, JAGGER HIMS LIMITED
3. GROUNDWATER AND SURFACE WATER MONITORING PROGRAM ADDENDUM, OCTOBER 2007, JAGGER HIMS LIMITED
4. ESCARPMENT BROW INTERPRETATION, MAY 2007, JAGGER HIMS LIMITED
5. WATER RESOURCES MONITORING PROGRAM SUMMARY REPORT (2005–2009), MARCH 2010, GENIVAR CONSULTANTS LP
6. 2008/2009 HYDROGEOLOGICAL TESTING SUMMARY REPORT, MARCH 2010, GENIVAR CONSULTANTS LP
7. NATURAL ENVIRONMENT REPORT, DUNTROON QUARRY EXPANSION, SEPTEMBER 2005, STANTEC CONSULTING LIMITED
8. LEVEL 2 NATURAL ENVIRONMENT REPORT (ECOLOGY), REPORT ADDENDUM, RESPONSE TO AGENCY COMMENTS
9. CUMULATIVE EFFECTS ASSESSMENT OCTOBER 2010, STANTEC CONSULTING LIMITED
9. CONSOLIDATED NATURAL ENVIRONMENT REPORT, MARCH 2010, STANTEC CONSULTING LIMITED
10. AGRICULTURAL IMPACT ANALYSIS, SEPTEMBER 27, 2007, STANTEC CONSULTING LIMITED
11. VISUAL IMPACT ASSESSMENT FOR DUNTROON QUARRY EXPANSION, SEPTEMBER 2005, STANTEC CONSULTING LIMITED
12. VISUAL IMPACT ASSESSMENT REPORT ADDENDUM, SEPTEMBER 2007, STANTEC CONSULTING LIMITED
13. DUNTROON QUARRY VISUAL SIMULATIONS, OCTOBER 2009, STANTEC CONSULTING LIMITED
14. SOUND IMPACT ANALYSIS, DUNTROON QUARRY EXPANSION, OCTOBER 4, 2007, VALCOUSTICS CANADA LIMITED
15. BLASTING IMPACT ASSESSMENT, DUNTROON QUARRY EXPANSION, SEPTEMBER 2005, GOLDER ASSOCIATES
16. ADDENDUM TO BLASTING IMPACT ASSESSMENT, DATED 23, 2007, GOLDER ASSOCIATES
17. ARCHAEOLOGICAL RESOURCE ASSESSMENT, DUNTROON QUARRY EXPANSION, SEPTEMBER 2005, ARCHAEOLOGICAL ASSESSMENTS LTD.
18. STAGE 1 ARCHAEOLOGICAL ASSESSMENT, APRIL 10, 2007, AND STAGE 2 ARCHAEOLOGICAL ASSESSMENT OF OUTSTANDING SECTION, MAY 2007, ARCHAEOLOGICAL ASSESSMENTS LTD.
19. CULTURAL HERITAGE CUMULATIVE IMPACT ASSESSMENT FOR DUNTROON, APRIL 10, 2007, UNTERMAN MCPHAIL ASSOCIATES
20. TRAFFIC IMPACT ASSESSMENT, DUNTROON QUARRY EXPANSION, OCTOBER 2007, ITRANS CONSULTING

TECHNICAL REPORTS (REPORTS PREPARED IN SUPPORT OF QUARRY DEEPENING AND REMOVAL OF PROCESSING PLANT)

21. GEOTECHNICAL INSPECTION OF THE HAULAGE TUNNEL AT THE DUNTROON QUARRY, WSP, OCTOBER 15, 2025.
22. PROPOSED DUNTROON QUARRY EXTENSION – LEVEL 1 AND 2 WATER STUDY REPORT, WSP, OCTOBER 31, 2025.
23. DUNTROON QUARRY AND DUNTROON QUARRY EXTENSION – ENVIRONMENTAL AIR QUALITY REVIEW, RWDI, SEPTEMBER 16, 2025
24. DUNTROON QUARRY EXPANSION – ENVIRONMENTAL NOISE IMPACT REVIEW, RWDI, SEPTEMBER 16, 2025.
25. NOISE AND DUST RESOURCES ACT SITE PLANS REGARDING BLASTING – WALKER AGGREGATES DUNTROON QUARRY, WSP, SEPTEMBER 30, 2025.
26. SCOPED NATURAL HERITAGE IMPACT ASSESSMENT – DUNTROON QUARRY LOWERING, WSP, OCTOBER 17, 2025.

CONSULTANTS RECOMMENDATIONS (NOT INCLUDED IN PREVIOUS NOTES OR SITE PLAN)

SEE PAGE 2B OF 4

VARIATIONS TO FROM THE CONTROL AND OPERATIONAL STANDARDS

AS PROVIDED BY SECTION 1.0.25 0.13, THE FOLLOWING STANDARDS HAVE BEEN VARIED:

5.1 (3)(a) NO FENCE WILL BE REQUIRED ALONG THE NORTH LIMIT OF THE LICENCED BOUNDARY, AS SHOWN ON THE EXISTING AND PROPOSED FENCE DETAIL ON THIS PAGE. NO FENCE WILL BE REQUIRED ALONG THE SOUTH LIMIT OF THE LICENCED BOUNDARY, PROVIDED FENCES AND GATES ARE INSTALLED AND OR MAINTAINED AT THE EAST AND WEST SITE ENTRANCE IN ACCORDANCE WITH THE EXISTING AND PROPOSED FENCE DETAIL (THIS PAGE).

5.10 (1) 10.01 EXCAVATION WILL BE ALLOWED WITHIN 30 METRES OF A WATERBODY AS FOLLOWS AND AS SHOWN ON THIS PLAN: THE SURFACE WATER FEATURE ADJACENT TO PHASE 3A.

5.1 (1) 9 & 11 EXCAVATION WILL BE ALLOWED WITHIN THE 30 METRE SETBACK ALONG FORMER SIMCOE ROAD 91 FOR PURPOSES OF THE TUNNEL OR OPEN CUT TO THE EXISTING OPERATION. LIMITED AMOUNTS OF AGGREGATE AND OVERBURDEN MAY BE REMOVED ALONG THE NORTHERN, WESTERN AND EASTERN LIMITS IN ASSOCIATION WITH THE INSTALLATION OF THE RECHARGE MITIGATION SYSTEM IF REQUIRED.

(1) 10.1 & 10.II IN ADDITION, THERE SHALL BE A 0.0 M SETBACK FROM THE EASTERN LICENCE LIMIT AND THE NORTHERN LICENCE LIMIT IN THE LOCATIONS WHERE A SETBACK IS NOT REQUIRED FROM THE ANSI AND THE ANSI WETLAND A AND ANSI WETLAND B. FINALLY, THERE SHALL BE A 0.0 M SETBACK WHERE THE LICENCE BOUNDARY ABUTS THE NORTHERN PENINSULA. THIS IS IN RECOGNITION OF WALKER AGGREGATE INC.'S OWNERSHIP OF THE LANDS TO THE EAST AND THE NORTH ACQUIRED FOR BUFFER PURPOSES AND IN RECOGNITION THAT THE LICENCE BOUNDARY IS SETBACK 120 M FROM ROB ROY UNIT 2 WETLAND AND 100 M FROM COLONY 1 OF THE AMERICAN HART'S TONGUE FERN.

5.10 (1) 17 & 18 EXCESS TOPSOIL AND OVERBURDEN MAY BE REMOVED FROM THIS SITE AND TRANSPORTED TO THE ADJACENT LICENCE No. 3514.

5.19 (1) 19.II A VERTICAL FACE IS PERMITTED FOR AESTHETIC PURPOSES AS SHOWN ON PAGE 3 OF 4 OF THESE PLANS.

5.20 (1) 11 LIMITED AMOUNTS OF AGGREGATE AND/OR OVERBURDEN MAY BE REMOVED FROM THE SETBACKS TO FACILITATE THE CONSTRUCTION OF THE RECHARGE MITIGATION SYSTEM. THE ONLY REMOVAL OF AGGREGATE WITHIN THE SETBACK IS THAT WHICH IS REQUIRED FOR THE RECHARGE MITIGATION AND NOTHING FURTHER.

(1) 1 & 2 A GATE SHALL NOT BE REQUIRED FOR THE TUNNEL CROSSING.

(1) 3 A CLEAR VIEW OF THE ROAD ABOVE IN BOTH DIRECTIONS SHALL NOT BE PROVIDED AT THE TUNNEL CROSSING.

(1) 9 & 10.II.A EXCAVATION SHALL OCCUR WITHIN THE SETBACK IN ORDER TO FACILITATE CONSTRUCTION ASSOCIATED WITH THE TUNNEL.

(1) 11 AGGREGATE / OVERBURDEN SHALL BE REMOVED FROM THE SETBACK TO FACILITATE CONSTRUCTION ASSOCIATED WITH THE TUNNEL.

(1) 16 THE BERM CONSTRUCTED SOUTH OF THE HYDRO EASEMENT ALONG TOWNSHIP ROAD 91 MAY BE LOCATED WITHIN THREE METRES OF THE LICENCE BOUNDARY

PRESCRIBED CONDITIONS

3.1 DUST WILL BE MITIGATED ON SITE.

3.2 WATER OR ANOTHER PROVINCIALLY APPROVED DUST SUPPRESSANT WILL BE APPLIED TO INTERNAL HAUL ROADS AND PROCESSING AREAS AS OFTEN AS REQUIRED TO MITIGATE DUST.

3.3 PROCESSING EQUIPMENT WILL BE EQUIPPED WITH DUST SUPPRESSANT OR COLLECTION DEVICES, WHERE THE EQUIPMENT CREATES DUST AND IS BEING OPERATED WITHIN 300 METRES OF THE RECEPTOR.

3.4 ANY RECOMMENDATIONS AND/OR RECOMMENDED MONITORING PROGRAM IDENTIFIED IN THE TECHNICAL REPORT WILL BE DESCRIBED ON THE SITE PLAN AND ALL RECORDS WILL BE RETAINED BY THE LICENCEE LICENSEE AND MADE AVAILABLE UPON REQUEST BY THE MINISTRY OF NATURAL RESOURCES FOR AUDIT PURPOSES.

3.5 A SPILLS CONTINGENCY PROGRAM WILL BE DEVELOPED PRIOR TO SITE PREPARATION.

PRESCRIBED CONDITIONS CONTINUED ON PAGE 2B of 4

Operational Plan 2A of 4

Legend

- Expansion Licence Boundary
- Limit of Extraction — ALL SETBACKS SHOWN TO SCALE, EXCEPT 0m SETBACKS AND SHOWN LABELLED DISTANCES
- Lots and Concessions
- Field/Service Entrance — MAINTAINED AND PADLOCKED BY A GATE WHICH WILL BE CLOSED AT ALL TIMES THE QUARRY IS NOT IN OPERATION UNLESS OTHERWISE NOTED ON THIS PLAN
- Entrance/Exit (OPERATIONAL) — MAINTAINED AND PADLOCKED BY A GATE WHICH WILL BE CLOSED AT ALL TIMES THE QUARRY IS NOT IN OPERATION UNLESS OTHERWISE NOTED ON THIS PLAN
- Entrance to Phase 1
- Direction of Excavation
- Excavation Face — SEE NOTES ON THIS PAGE FOR DETAILED DESCRIPTION
- BH02-6 Existing Well Monitor Location — GROUNDWATER MONITORING AS PER REPORT AND LEVEL 2 HYDROGEOLOGICAL ASSESSMENT BY JAGGER HIMS, SEPT. 2005)
- Quarry Dewatering Discharge Locations — WITHIN LICENCE BUT NO EXTRACTION PERMITTED (LOCATIONS SHOWN ARE APPROXIMATE)
- Proposed Additional Well Monitor Locations
- Dual Purpose Monitor/ Recharge Injection Well Locations — (LOCATIONS SHOWN ARE APPROXIMATE)
- Existing Driveway
- Cross Sections — (FOR DETAILS SEE PAGE 4 OF 4)
- South Quarry Licence Boundary — EXISTING QUARRY/ LICENCE No. 3514
- Walker Aggregates Inc. Lands
- 520.6 Existing Spot Elevation (MASL)
- Wetland Boundary (Surveyed & Estimated)
- Existing Stream
- Pond
- Plant Site — SEE TYPICAL PLANT SITE DETAIL THIS PAGE.
- Building/Structure — LOCATION AND USE FOR BUILDINGS ON SITE AND WITHIN 120m ARE SHOWN ON THIS PLAN
- Existing Vegetation
- Existing Fence — POST AND WIRE FARM FENCE UNLESS OTHERWISE NOTED
- Proposed Berms
- 490 EXIST 488.7 2.0m Proposed Elevations (MASL) / EXISTING ELEVATION / TOP OF ROCK — MAXIMUM DEPTH OF EXTRACTION
- Niagara Escarpment Plan Boundary
- Phase 4

GENERAL NOTES:

1. EXTRACTION WITHIN LOT 25, CON. 12 WILL COMMENCE PRIOR TO COMPLETION OF QUARRYING AND FINAL REHABILITATION WITHIN EXISTING QUARRY IN LOT 24, CON. 12 (LICENCE No. 3514). OPERATIONS WILL PROCEED SIMULTANEOUSLY IN BOTH THE EXISTING AND EXPANSION AREAS.
2. THE LICENCE AREA IS 65.93 HA AND THE EXTRACTION AREA IS 58.49 HA. THE LICENCE BOUNDARY AND THE EXTRACTION LIMIT AROUND THE NORTHERN PENINSULA IS SETBACK A COMBINATION OF 120 METRES FROM THE ROB ROY UNIT 2 WETLAND AS SURVEYED AND CONFIRMED BY MNR IN 2002, TOGETHER WITH 100 METRES FROM COLONY 1 OF THE AMERICAN HART'S TONGUE FERN AS MAPPED BY STANTEC IN FIGURE NO. 1.0 DATED REVISED JULY 16, 2009 (MNR LETTER TO NEC JULY 17, 2009 [EX 37, VOLUME 13, PAGE 9630]).
3. THE SITE PLANS DEPICT A SCHEMATIC SEQUENCE FOR DEVELOPMENT OF THE SITE BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION. EXTRACTION ELEVATIONS ARE APPROXIMATE. LIMITED VARIATIONS DURING OPERATIONS AND REHABILITATION OF THE SITE WILL BE PERMITTED IN ORDER TO ADJUST TO ANY VARIABLE RESOURCE AND MARKET CONDITIONS OR HYDROLOGIC REQUIREMENTS. ANY MAJOR VARIATION OR DEVIATION FROM THE SITE PLANS WILL ONLY BE PERMITTED BY AMENDMENT.
4. SETBACK LIMIT FROM ALL MUNICIPAL ROAD ALLOWANCES IS A MINIMUM OF 30 METRES. AREAS ALONG SETBACKS WILL BE BACKFILLED WITH OVERBURDEN AND REHABILITATED NO STEEPER THAN 2:1, EXCEPT FOR AREAS OF EXPOSED VERTICAL FACES AS SHOWN ON PAGE 3 OF 4. SLOPES WILL BE SEEDED AS SOON AS POSSIBLE AFTER FINAL GRADING TO CONTROL WIND BLOWN DUST AND EROSION.
5. NO ROADS SHALL BE CONSTRUCTED WITHIN THE SETBACK AREAS EXCEPT AS A FARM ACCESS AND/OR A TEMPORARY ACCESS FOR STRIPPING OF EXTRACTION AREAS, REHABILITATION OF BERMING PURPOSES. A MINOR GRASSED LANEWAY WILL ALSO BE PERMITTED IN THE SETBACK AREA IMMEDIATELY TO THE NORTH AND NORTHEAST EXTRACTION AREAS TO ACCESS MITIGATION AND MONITORING STATIONS.
6. TOPSOIL, SUBSOIL AND OVERBURDEN AND AGGREGATE STOCKPILES SHALL NOT BE LOCATED WITHIN THE EXTRACTION AREA AND NOT WITHIN 30 METRES OF THE LICENCE BOUNDARY. THE HEIGHT OF STOCKPILES SHALL NOT EXCEED 20 METRES IN HEIGHT FROM THE QUARRY FLOOR.
7. TOPSOIL, SUBSOIL AND OVERBURDEN WILL BE STRIPPED, STORED AND REPLACED SEPARATELY WHEREVER THERE ARE DISTINGUISHABLE LAYERS AND SUFFICIENT THICKNESS TO ALLOW HANDLING IN THIS MANNER. IF REQUIRED, TOPSOIL, SUBSOIL AND OVERBURDEN MAY BE TRANSPORTED TO THE LICENCE No. 3514 AND USED IMMEDIATELY FOR REHABILITATION. EXCESS TOPSOIL AND OVERBURDEN ARE TO BE RETAINED AND STABILIZED FOR FUTURE REHABILITATION.
8. QUARRYING OF THE AMABEL FORMATION WILL BE UNDERTAKEN IN UP TO THREE FOUR LIFTS TO A MAXIMUM DEPTH OF 39 40 METRES.
9. FENCING WILL BE COMPLETED PRIOR TO ANY DISTURBANCE ASSOCIATED WITH THE SITE PREPARATION. FENCING WILL BE COMPLETED IN ACCORDANCE WITH THE EXISTING AND PROPOSED FENCE DETAIL AS SHOWN ON THIS PAGE. EXISTING RESIDENCES AND BUILDINGS WILL BE DEMOLISHED PRIOR TO EXTRACTION WITHIN THE PHASE WHERE THEY ARE LOCATED.
10. NO LATER THAN THREE YEARS AFTER THIS LICENCE IS ISSUED, TREE PLANTING AND TRANSPLANTING WILL BE UNDERTAKEN FOR PURPOSES OF: 1) REFORESTATION AS SHOWN ON THE PLANTING LOCATION DETAIL (PAGE 2B OF 4) THE TYPICAL PLANTING BLOCK DETAIL (PAGE 3 OF 4) AND FIGURE 2.0, ALTERNATE BLOCK REFORESTATION, OF CHARLTON BERLY WITNESS STATEMENT MARCH 31, 2010 AND AS FURTHER DESCRIBED IN THE REFORESTATION PLANTING PLAN DUNTROON QUARRY EXPANSION (CONSOLIDATED REPORT STANTEC 2010, APPENDIX "D"); AND 2) FOR PURPOSES OF VISUAL MITIGATION AS SHOWN ON THE PLANTING LOCATION DETA

Operational 2B of 4 Plan

Legend

- Expansion Licence Boundary
- South Quarry Licence Boundary (EXISTING EXTRACTION QUARRY LICENCE No. 5514)
- Limit of Extraction (ALL BETNACKS DRAWN TO SCALE, EXCEPT for SETBACKS AND SHOW LABELLED DISTANCES)
- Walker Aggregates Inc. Lands

PRESCRIBED CONDITIONS (cont'd)

3.6 REFUELING AND MAINTENANCE OF MOBILE ON-SITE EQUIPMENT (NOT OFF SITE HAULAGE TRUCKS) WILL TAKE PLACE ON AN IMPERVIOUS PAD DESIGNED TO CONTROL FUEL SPILLS (IF ANY). ABOVE GROUND FUEL TANKS SHALL BE DOUBLE WALLED IN ACCORDANCE WITH THE TECHNICAL STANDARDS AND SAFETY ACT AND THE ONTARIO LIQUID FUELS HANDLING CODE AND THE FUEL OIL CODE. ALL FUEL STORAGE AND REFUELING OPERATIONS WILL BE CARRIED OUT IN THE AREA SHOWN AS "FUEL" ON THE TYPICAL PLANT SITE DETAIL. MOBILE FUEL DISPENSERS WILL BE USED TO TRANSPORT FUEL TO THE SITE AND TO REFUEL THE PORTABLE PROCESSING PLANT AND MOBILE EQUIPMENT. FUEL STORAGE AND SPILLS CONTINGENCY PLANS AS SET OUT IN WALKER'S EARTH 1ST PROTOCOL AND EMERGENCY RESPONSE HANDBOOK SHALL BE IMPLEMENTED AS REQUIRED.

3.7 IF REQUIRED, AN ENVIRONMENTAL COMPLIANCE APPROVAL WILL BE OBTAINED FOR THE DISCHARGE SYSTEM SHOULD WATER BE DISCHARGED OFF SITE.

3.8 IF REQUIRED, AN ENVIRONMENTAL COMPLIANCE APPROVAL WILL BE OBTAINED FOR PROCESSING EQUIPMENT TO BE USED ON SITE.

3.9 IF REQUIRED, A PERMIT TO TAKE WATER WILL BE OBTAINED FOR UTILIZING GROUND AND/OR SURFACE WATER.

3.10 THE LICENSEE LICENSEE WILL MONITOR ALL BLASTS, GROUND VIBRATIONS AND BLASTS OVERPRESSURE AND WILL OPERATE TO ENSURE COMPLIANCE WITH CURRENT PROVINCIAL GUIDELINES.

3.11 BLASTING WILL NOT OCCUR ON A HOLIDAY OR BETWEEN THE HOURS OF 6:00 PM ON ANY DAY AND 8:00 AM ON THE FOLLOWING DAY.

3.12 ALL BLAST MONITORING REPORTS MUST BE RETAINED BY THE LICENSEE LICENSEE AND MADE AVAILABLE UPON REQUEST BY THE MINISTRY OF NATURAL RESOURCES FOR AUDIT PURPOSES.

CONSULTANTS RECOMMENDATIONS (NOT INCLUDED IN PREVIOUS NOTES OR SITE PLAN)

HYDROGEOLOGY

1. PUMPING OF WATER THAT ACCUMULATES IN THE EXCAVATION AS A RESULT OF *DIRECT PRECIPITATION*, SURFACE WATER RUNOFF, AS WELL AS SOME GROUNDWATER INFLOW, WILL BE REQUIRED IN ORDER TO MAINTAIN DRY WORKING CONDITIONS ACROSS THE QUARRY FLOOR.
2. WATER THAT ACCUMULATES ON THE QUARRY FLOOR WILL BE CHANNELLED INTO THE MAIN SUMP FOR RE-USE. EXCESS WATER WILL BE REMOVED BY PUMPING. PRIOR TO PUMPING OFF-SITE THE OWNER SHALL OBTAIN AN ENVIRONMENTAL COMPLIANCE APPROVAL PURSUANT TO THE OWRA WHICH SHALL ENSURE APPROPRIATE WATER QUALITY DISCHARGE STANDARDS.
3. WATER ACCUMULATED IN THE AREAS NOTED ABOVE WILL BE USED IN THE FOLLOWING ORDER OF PRIORITY FOR (1) MITIGATION OF OFF SITE IMPACTS IN ACCORDANCE WITH THESE SITE PLANS, OR AS REFINED OR AUGMENTED BY AN ADAPTIVE MANAGEMENT PLAN APPROVED BY THE MINISTRY OF NATURAL RESOURCES, (2) DUST CONTROL AND ROAD CLEANING, (3) FOR PORTABLE AGGREGATE PROCESSING OPERATIONS, AND (4) FOR IRRIGATION OF LANDSCAPED AREAS.
4. AGGREGATE PROCESS WATER WILL BE DIRECTED TO A SETTLING POND SYSTEM FOR REMOVAL OF FINES AND CLEAN WATER WILL BE RETURNED TO THE SUMP OR OTHER SOURCE WATER PONDS FOR REUSE.
5. A SUMP, EXTENDING BELOW THE QUARRY FLOOR, IS TO BE LOCATED WITHIN THE PHASE 1 EXTRACTION AREA FOR PORTABLE QUARRY PROCESSING PURPOSES (SEE-TYPICAL-PLANT-SITE-DETAIL-PHASE-2A-OF-4) ONCE THE QUARRY FLOOR HAS REACHED 500 MASL AND WILL REMAIN IN THAT GENERAL LOCATION THROUGH THE LIFE OF THE QUARRY. THE SUMP IS TO BE SIZED TO PROVIDE SUFFICIENT STORAGE OF WATER PRODUCED IN WASHING OPERATIONS FOR THE LIFE OF THE QUARRY (I.E. APPROXIMATELY 50 METRES BY 50 METRES AT THE MINIMUM DEPTH OF 5 METRES). THE SUMP WILL BE DEEPENED AND ENLARGED AS NECESSARY TO ACCOMMODATE THE FINAL EXTRACTION (DOWN TO AN ELEVATION OF 460 ±457 MASL) NEAR THE PHASE 1 AREA. IN ADDITION, A SECOND SUMP MAY BE CREATED AND WILL FOLLOW THE EXTRACTION FACE FOR ONGOING QUARRY DEWATERING.
6. IMPLEMENT GROUNDWATER AND SURFACE WATER MONITORING PROGRAMS AS DESCRIBED BELOW, OR AS REFINED OR AUGMENTED IN AN ADAPTIVE MANAGEMENT PLAN APPROVED BY THE MINISTRY OF NATURAL RESOURCES.

GENERAL

MONITORING SHALL BE UNDERTAKEN BY A QUALIFIED PERSON AS DEFINED BY THE MINISTRY OF THE ENVIRONMENT FOLLOWING CONTEMPORARY INDUSTRY STANDARDS.

MONITORING LOCATIONS EXISTING AS OF JUNE 2010 ARE SHOWN IN FIGURE 2–1 OF THE WATER RESOURCES MONITORING PROGRAM SUMMARY REPORT (2008–2009), MARCH 2010, GENIVAR CONSULTANT LP.

MONITORING IS SUBJECT TO LANDOWNER PERMISSION FOR LOCATIONS ON PRIVATE PROPERTY.

PERFORMANCE INDICATOR TRIGGER MONITORING PROGRAM

(A) SURFACE WATER CHANNEL FLOW AND TEMPERATURE SHALL BE MONITORED AT THE FOLLOWING LOCATIONS:

i) PRETTY RIVER TRIBUTARY SYSTEM: SW16, SW17, SW17A, SW18, AND CONTROL STATION;
ii) BATTEAUX CREEK TRIBUTARY SYSTEM: SW9, SW14, SW15, AND CONTROL STATION;
iii) BEAVER RIVER TRIBUTARY SYSTEM: SW, SW2, SW3, SW3–2, SW4, AND CONTROL STATION IN ROB ROY PSW UNIT 3 AT THE KARST SINK POINT CHANNEL (TO BE INSTALLED PRIOR TO EXTRACTION).

STAGE–DISCHARGE RELATIONSHIPS SHALL BE DEVELOPED FOR EACH LOCATION. CONTROL STATIONS WILL BE IDENTIFIED IN CONSULTATION WITH THE NOTTAWASAGA VALLEY CONSERVATION AUTHORITY.

MONITORING SHALL BE CONDUCTED AS FOLLOWS:

i) HOURLY: WATER LEVEL AND TEMPERATURE WILL BE RECORDED BY A DATALOGGER AT ALL STATIONS. STATIONS SW16, SW17, SW17A, SW18 AND THE CONTROL STATIONS SHALL BE EQUIPPED WITH LOGGER–TO–WEB REAL TIME DATA TRANSFER SYSTEMS.
ii) MONTHLY: DOWNLOAD DATA FROM THE DATALOGGER AT ALL STATIONS. MEASUREMENT OF FIELD pH, TEMPERATURE, CONDUCTIVITY AND DISSOLVED OXYGEN.
iii) QUARTERLY: MEASUREMENT OF STREAMFLOW AS CHECK ON STAGE–DISCHARGE RELATIONSHIPS;
iv) ANNUALLY: SAMPLE FOR WATER QUALITY PARAMETERS INCLUDING pH, TEMPERATURE, DISSOLVED OXYGEN, SPECIFIC CONDUCTANCE ALKALINITY, HARDNESS, COLOUR, TOTAL SUSPENDED SOLIDS MAJOR AND MINOR ION CONSTITUENTS, NUTRIENTS, AMMONIA, TOTAL PETROLEUM HYDROCARBONS AND BTEX (BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE).

(B) SURFACE WATER ESCARPMENT SPRINGS SHALL BE MONITORED AT THE FOLLOWING LOCATIONS:

i) PRETTY RIVER TRIBUTARY SYSTEM: SW2IC, SW24A, SW77
ii) BATTEAUX CREEK TRIBUTARY SYSTEM: SW10, SW11 SERIES OF SPRINGS

MONITORING SHALL BE CONDUCTED AS FOLLOWS:

i) BI–WEEKLY DURING JULY AND AUGUST AND MONTHLY DURING ALL OTHER TIMES OF THE YEAR: TEMPERATURE AND, AS A MINIMUM, A VISUAL ASSESSMENT OF FLOW CONDITIONS (PRESENCE/ABSENCE). MANUAL MEASUREMENT OF FLOW WHEN PRACTICAL.

ii) ANNUALLY: SAMPLE FOR WATER QUALITY FOR PARAMETERS INCLUDING: pH, TEMPERATURE, DISSOLVED OXYGEN, SPECIFIC CONDUCTANCE ALKALINITY, HARDNESS, COLOUR, TOTAL SUSPENDED SOLIDS MAJOR AND MINOR ION CONSTITUENTS, NUTRIENTS, AMMONIA, TOTAL PETROLEUM HYDROCARBONS AND BTEX (BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE) AND BACTERIOLOGICAL CONTENT (E. COLI, TOTAL COLIFORM AND HETEROTROPHIC PLATE COUNT) AT SW10 AND SW2IC (SOURCES USED AS RECHARGE WATER SUPPLIES).

(C) WETLAND WATER LEVELS SHALL BE MONITORED AT THE FOLLOWING LOCATIONS:

i) ROB ROY SWAMP PSW UNIT #2: DRIVEPOINT MONITORS DP5 AND DP7;
ii) ROB ROY SWAMP PSW UNIT #6: DRIVEPOINT MONITORS DP2, DP4 AND DP8;
iii) ROB ROY SWAMP PSW UNIT #3: THICKET SWAMP DRIVEPOINT MONITOR
iv) ANSI WETLAND A: DRIVEPOINT MONITOR DP6;
v) ANSI WETLAND B: DRIVEPOINT MONITORS BRIDSON DP AND DP9;
vi) REFERENCE WETLANDS SHALL BE IDENTIFIED IN CONSULTATION WITH THE NOTTAWASAGA VALLEY CONSERVATION AUTHORITY.

DP7, DP8, DP9 AND ROB ROY SWAMP UNIT #3 THICKET SWAMP DRIVEPOINT MONITOR SHALL BE INSTALLED PRIOR TO EXTRACTION.

MONITORING SHALL BE CONDUCTED AS FOLLOWS:

i) BI–WEEKLY DURING MAY, JUNE AND JULY AND MONTHLY DURING ALL OTHER TIMES OF THE YEAR: MANUAL GROUNDWATER LEVEL (INSIDE MONITOR) AND PONDED SURFACE WATER LEVEL AND TEMPERATURE (OUTSIDE MONITOR). THIS MONITORING SHALL BE INTEGRATED WITH THE LONG–TERM DATALOGGER MONITORING IN WETLANDS.

CONSULTANTS RECOMMENDATIONS (cont'd):

(D) QUARRY DISCHARGE WATER SHALL BE MONITORED AS FOLLOWS:

SAMPLE QUARRY SUMP(S) QUARTERLY FOR WATER QUALITY PARAMETERS INCLUDING: pH, TEMPERATURE, DISSOLVED OXYGEN, SPECIFIC CONDUCTANCE ALKALINITY, HARDNESS, COLOUR, TOTAL SUSPENDED SOLIDS MAJOR AND MINOR ION CONSTITUENTS, NUTRIENTS, AMMONIA, TOTAL PETROLEUM HYDROCARBONS AND BTEX (BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE) AND BACTERIOLOGICAL CONTENT (E. COLI, TOTAL COLIFORM AND HETEROTROPHIC PLATE COUNT).

QUARRY DISCHARGE WATER QUALITY SHALL BE AS SPECIFIED BY THE MINISTRY OF THE ENVIRONMENT IN THE CERTIFICATE OF APPROVAL FOR DISCHARGE. TREATMENT OF DISCHARGE WATER FOR CONTROL OF BACTERIOLOGICAL CONTENT AND/OR PROVISION OF POINT–OF–USE TREATMENT SYSTEMS FOR RESIDENTIAL WATER SUPPLIES SHALL BE AS REQUIRED BY THE MINISTRY OF ENVIRONMENT.

LONG-TERM TREND GROUNDWATER AND SURFACE WATER MONITORING PROGRAM

(A) CLIMATE DATA SHALL BE COMPILED TO PROVIDE MONTHLY AND ANNUAL WATER BUDGETS AS FOLLOWS:

i) REGIONAL CLIMATE DATA USING SHANTY BAY CLIMATE STATION OR EQUIVALENT.
ii) LOCAL CLIMATE DATA USING THE WEATHER STATION ESTABLISHED AT THE EXISTING QUARRY OFFICE OR EQUIVALENT.

(B) GROUNDWATER SHALL BE MONITORED AT THE FOLLOWING LOCATIONS:

i) DUNTROON EXISTING QUARRY:

a) THE MONITORING PROGRAM FOR THE DUNTROON EXISTING QUARRY SHALL CONTINUE AS REQUIRED UNDER THAT QUARRY'S PERMIT TO TAKE WATER No. 1168–665NHB, OR AS MAY BE AMENDED BY THE MINISTRY OF THE ENVIRONMENT FROM TIME TO TIME.
b) ON–SITE AT PW99–1, BH98–8, BH98–9, BH98–12, DP1, DP2, DP3, DP4, AND NEW OFFICE WELL;
c) AT CAMARTHEN LAKE FARMS WELLS CLF1, CLF2, CLF3, CLF4, AND CLF5;
d) AT OSPREY QUARRY PROPERTY MONITORS 101–B, 102–C, 103–D, 104–A, OW1–4, OW3–1, OW5–2 AND OW6–3;
e) AT PRIVATE RESIDENTIAL WATER SUPPLY WELLS: ARMSTRONG, DEMPSEY, FABRIZIO, KEKANOVICH, SAMPSON, SKIPPEN, SWINTON, URBANIAK, AND YOUNG;
f) FORMER BRIDSON AND MILLAR FARM WELLS (NOW OWNED BY WALKER AGGREGATES).

ii) DUNTROON EXPANSION QUARRY:

a) EXISTING MONITORS BH02–1, BH02–2, BH02–3, BH02–4, BH02–5, BH02–6, BH03–7–I, BH03–7–II, BH03–8 AND BH03–9, DRIVEPOINT MONITORS BRIDSON DP, DP5, DP6, TW04–1, TW04–2, TW04–3, BH08–1, BH08–2 AND BH08–3;
b) NEW MONITORS TO BE INSTALLED PRIOR TO EXTRACTION AS IDENTIFIED ON OPERATIONAL PLAN PAGE 2A OF 4;
c) NEW DRIVEPOINT MONITORS TO BE INSTALLED PRIOR TO EXTRACTION DESIGNATED AS DP7 IN ROB ROY PSW UNIT #2, DP8 IN ROB ROY PSW UNIT #6 AND DP9 IN ANSI WETLAND B AND DUG POND DRIVEPOINT #1 IN ZONE 3 UNIT #3.
d) FOUR NEW DUAL–PURPOSE MONITOR/RECHARGE INJECTION WELLS TO BE INSTALLED WITHIN TWO (2) YEARS OF THE COMMENCEMENT OF OPERATIONS AS SHOWN ON OPERATIONAL PLAN (PAGE 2A OF 4).
e) NEW GROUNDWATER MONITORING NEST, TO PROVIDE SOIL WATER TABLE, SHALLOW BEDROCK AND DEEP BEDROCK MONITORS TO BE INSTALLED WITHIN TWO (2) YEARS OF COMMENCEMENT OF OPERATIONS AT A LOCATION ON WALKER AGGREGATES PROPERTY WEST OF ROB ROY PSW UNIT #2 AND EAST OF GREY ROAD 31 AS SHOWN ON OPERATIONAL PLAN 2A OF 4.
f) EXISTING GROUNDWATER MONITORING WELLS BH02–5 AND BH02–6 TO BE DECOMMISSIONED WITHIN TWO (2) YEARS OF COMMENCEMENT OF OPERATIONS TO INCLUDE SOIL WATER TABLE, SHALLOW BEDROCK AND DEEP BEDROCK MONITOR.

MONITORING SHALL BE CONDUCTED AS FOLLOWS:

i) HOURLY: GROUNDWATER LEVEL RECORDED BY AN AUTOMATED SAMPLING DEVICE AT NEW MONITORS AS SHOWN ON OPERATIONAL PLAN PAGE 2A OF 4 AND AT EXISTING MONITORS BH02–1, BH02–4, BH03–7–II, BH03–8, BH08–1, AND DRIVEPOINT MONITORS BRIDSON DP, DP5, DP6, TW04–1, TW04–2, TW04–3, BH08–1, BH08–2 AND BH08–3;
ii) TWICE PER DAY: GROUNDWATER LEVEL RECORDED BY A DATALOGGER AT RESIDENTIAL WELLS DEMPSEY AND FABRIZIO, AND WETLAND DRIVEPOINT MONITORS DP2, DP5, DP6 AND BRIDSON DP. WETLAND DRIVEPOINT MONITOR IN ROB ROY #3 DUG POND, THE FOUR NEW DUAL–PURPOSE MONITOR/RECHARGE INJECTION WELLS, AND THE GROUNDWATER MONITORING NEST ON WALKER AGGREGATES PROPERTY WEST OF ROB ROY PSW UNIT #2 AND EAST OF GREY ROAD 31.
iii) MONTHLY: DOWNLOAD ALL DATALOGGERS AND MANUAL WATER LEVEL READINGS AT ALL GROUNDWATER MONITORS;
iv) QUARTERLY: WATER QUALITY AT QUARRY SUMP IN EXISTING QUARRY AND IN PHASE 1 WHEN DEVELOPED FOR WATER QUALITY PARAMETERS INCLUDING pH, TEMPERATURE, DISSOLVED OXYGEN, SPECIFIC CONDUCTANCE ALKALINITY, HARDNESS, COLOUR, TOTAL SUSPENDED SOLIDS MAJOR AND MINOR ION CONSTITUENTS, NUTRIENTS, AMMONIA, TOTAL PETROLEUM HYDROCARBONS AND BTEX (BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE), BACTERIOLOGICAL CONTENT (E. COLI, TOTAL COLIFORM AND HETEROTROPHIC PLATE COUNT);
v) ANNUALLY: WATER QUALITY AT PRIVATE RESIDENTIAL/ FARM WATER SUPPLIES AT DEMPSEY WELL, FABRIZIO WELL, SW10 (W. FRANKS SPRING SOURCE) AND SW2IC (H/E. FRANKS SPRING SOURCE). WATER QUALITY PARAMETERS SHALL INCLUDE pH, TEMPERATURE, DISSOLVED OXYGEN, SPECIFIC CONDUCTANCE ALKALINITY, HARDNESS, COLOUR, TOTAL SUSPENDED SOLIDS MAJOR AND MINOR ION CONSTITUENTS, NUTRIENTS, AMMONIA, TOTAL PETROLEUM HYDROCARBONS AND BTEX (BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE), BACTERIOLOGICAL CONTENT (E. COLI, TOTAL COLIFORM AND HETEROTROPHIC PLATE COUNT).

WATER QUALITY SHALL BE COMPARED TO ONTARIO DRINKING WATER STANDARDS FOR GROUNDWATER AND PROVINCIAL WATER QUALITY OBJECTIVES FOR SURFACE WATER, AS APPROPRIATE.

(C) SURFACE WATER SHALL BE MONITORED AT THE FOLLOWING LOCATIONS:

i) SURFACE WATER MONITORING STATIONS IDENTIFIED ABOVE IN THE PERFORMANCE INDICATOR TRIGGER PROGRAM SHALL BE INCORPORATED INTO THE LONG–TERM TREND SURFACE WATER MONITORING PROGRAM.
ii) BEAVER RIVER TRIBUTARY BASIN: BH03–7 SG1 AND BH03–7 SG2 IN ROB ROY PSW UNIT #2, DUNTROON EXISTING QUARRY FLOOR SUMP @ SW2, AND AT DUG POND OUTLET CHANNEL IN ROB ROY SWAMP PSW UNIT #3 (TO BE INSTALLED PRIOR TO EXTRACTION);
iii) BATTEAUX CREEK BASIN: SW7, SWB, SW10, SW11E, SW13, SW19, SW21, SW21A, SW21B, SW22, SW22A, AND SW22C; AND
iv) PRETTY RIVER BASIN:SW20, AND SW2IC.

MONITORING SHALL BE CONDUCTED AS FOLLOWS:

i) HOURLY: WATER LEVEL (STAGE) AND TEMPERATURE RECORDED BY AN AUTOMATED SAMPLING DEVICE. STATIONS SW10, SW11E AND SW2IC (SUBJECT TO LANDOWNER PERMISSION);
ii) MONTHLY: TEMPERATURE AND MANUAL MEASUREMENT OF FLOW WHEN PRACTICAL OTHERWISE VISUAL ESTIMATE (PRESENCE/ABSENCE) AT SW7, SWB, SW13, SW19, SW21, SW21A, SW21B, SW22, SW22A, SW22C, AND SW20. WATER LEVEL AND TEMPERATURE AT BH03–7–SG1 AND BH03–7–SG2.
iii) WEEKLY: TEMPERATURES AND MANUAL MEASUREMENTS OF FLOW AT DUG POND OUTLET CHANNEL IN ROB ROY SWAMP PSW UNIT # 3 (TO BE INSTALLED PRIOR TO EXTRACTION). FREQUENCY SHALL BE WEEKLY UNTIL SUCH TIME THAT A STAGE–DISCHARGE RELATIONSHIP IS ESTABLISHED. MANUAL FLOW AND TEMPERATURE MONITORING TO BE MONTHLY THEREAFTER.

7. IMPLEMENT MITIGATION MEASURES TO PROTECT OFF SITE FEATURES IN ACCORDANCE WITH THESE SITE PLANS OR AS REFINED OR AUGMENTED BY AN ADAPTIVE MANAGEMENT PLAN APPROVED BY THE MINISTRY OF NATURAL RESOURCES, INCLUDING:

(A) DISCHARGE OF EXCESS WATER FROM THE QUARRY INTO THE SURFACE WATER SYSTEM AT THE FOLLOWING LOCATIONS AS GENERALLY SHOWN ON PAGE 2A OF 4 AS REQUIRED TO MAINTAIN SEASONAL CONDITIONS:

i) THE SURFACE WATER COURSE IN THE SOUTHWEST CORNER OF THE EXPANSION AREA. A SECONDARY SUMP OR STORAGE POND MAY BE DEVELOPED ON THE QUARRY FLOOR IN THE SOUTHWEST CORNER TO FACILITATE DISCHARGE AT THIS LOCATION;
ii) THE WETLAND AND AREA IN THE EXTRACTION AREA IN PHASE 3A AND NORTHEAST CORNER OF PHASE 3B AREA IN PHASE 2A;
iii) THE WETLAND AND ASSOCIATED SURFACE WATER SYSTEM ADJACENT TO THE NORTHEAST CORNER OF THE EXTRACTION AREA IN PHASE 2A IN ORDER TO PROMOTE INFILTRATION RECHARGE INTO THE ROCK.

THE QUARRY DEWATERING DISCHARGE LOCATIONS ARE SHOWN CONCEPTUALLY ON PAGE 2A OF 4 AND ARE CONSIDERED TO BE WITHIN THE LICENCE. NO EXTRACTION IS PERMITTED BEYOND THE LIMITS OF THE LICENCE BOUNDARY ILLUSTRATED ON PAGE 2A OF 4.

(A) IF REQUIRED, GROUNDWATER RECHARGE WELLS SHALL BE INCORPORATED IN THE SETBACK ALONG THE WESTERN PERIMETER, AND IN THE BUFFER LANDS ADJACENT TO THE NORTHERN AND EASTERN LIMITS OF EXTRACTION. THE RECHARGE WELLS WILL MAINTAIN SEASONAL FLOWS AT THE ESCARPMENT SPRINGS AND WATER LEVELS/FLOW CONDITIONS IN THE WETLANDS. THE ACTUAL NUMBER AND LOCATION OF THE RECHARGE WELLS AND THE RECHARGE PUMPING RATE, WILL BE DETERMINED AT THE TIME OF INSTALLATION AND WILL DEPEND ON LOCAL CONDITIONS, BASED ON GROUNDWATER MONITORING.

GROUNDWATER RECHARGE WELLS ARE ALSO CONSIDERED TO BE WITHIN THE LICENCE BEYOND THE LIMITS SHOWN ON THIS PLAN. NO EXTRACTION SHALL BE PERMITTED WITHIN THE LICENCE AREA BEYOND THE LIMITS SHOWN ON THIS PLAN.

(B) THE NEED FOR AND TIMING OF IMPLEMENTATION OF ONE OR MORE OF THE ABOVE NOTED MITIGATION MEASURES WILL BE DETERMINED IN THE PERFORMANCE INDICATOR TRIGGER PROGRAM AS DESCRIBED IN CONSULTANTS RECOMMENDATIONS NOTES 5 AND 6.

INTERIM TRIGGER VALUES WILL BE SET BASED ON HISTORIC MONITORING INFORMATION AS IDENTIFIED IN THE 2008–2009 WATER RESOURCES MONITORING REPORT AND SHALL BE USED DURING THE FIRST FIVE (5) YEARS OF OPERATION.

PRIOR TO EXTRACTION, LOCATION–SPECIFIC GREEN, YELLOW AND RED INTERIM TRIGGERS SHALL BE SET USING THE FOLLOWING METHODOLOGY AS REFINED OR AUGMENTED IN AN ADAPTIVE MANAGEMENT PLAN APPROVED BY THE MINISTRY OF NATURAL RESOURCES:

i) RED ZONE TRIGGER:

FLOW: LOWEST MONTHLY VALUE RECORDED DURING THE PERIOD OF RECORD. TRIGGER PERIOD IS YEAR ROUND EXCEPT WHEN FROZEN.

TEMPERATURE: HIGHEST MONTHLY VALUE RECORDED DURING THE PERIOD OF RECORD. TRIGGER PERIOD IS JUNE THROUGH SEPTEMBER

WETLAND VEGETATION TOO DRY: MORE THAN ONE MONTH WHERE THE WATER LEVEL IS BELOW A DRY YEAR HYDROGRAPH FOR THAT MONTH OR ANY TIME THAT THE WATER LEVEL IS BELOW THE LOWEST HISTORIC WATER LEVEL RECORDED FOR THAT MONTH MINUS 10%. TRIGGER PERIOD IS SPRING TO FALL (GROWING SEASON).

WETLAND VEGETATION TOO WET: MORE THAN ONE MONTH WHERE THE WATER LEVEL IS ABOVE A WET YEAR HYDROGRAPH FOR THAT MONTH OR ANY TIME THAT THE WATER LEVEL RISES ABOVE THE HIGHEST HISTORIC WATER LEVEL RECORDED FOR THAT MONTH PLUS 10%. TRIGGER PERIOD IS SPRING TO FALL (GROWING SEASON).

AMPHIBIAN HABITAT: BREEDING PONDS HAVE NO STANDING WATER DURING THE SHORT BREEDING PERIOD (MARCH TO 2ND WEEK OF JULY).

ii) YELLOW ZONE TRIGGER:

FLOW: 15% ABOVE RED ZONE TRIGGER OR THIRD LOWEST MONTHLY FLOW VALUE RECORDED DURING THE PERIOD OF RECORD, WHICHEVER IS THE HIGHER VALUE. TRIGGER PERIOD IS SAME AS FOR RED ZONE.

TEMPERATURE: 10% BELOW THE RED ZONE TRIGGER. TRIGGER PERIOD IS SAME AS FOR RED ZONE.

WETLAND VEGETATION TOO DRY: WETLAND LEVELS ARE 1% TO 20% HIGHER THAN THE WATER LEVELS IN THE RED ZONE. TRIGGER PERIOD IS SAME AS FOR RED ZONE.

WETLAND VEGETATION TOO WET: WATER LEVELS ARE 1% TO 20% LOWER THAN THE WATER LEVELS IN THE RED ZONE. TRIGGER PERIOD IS SAME AS FOR RED ZONE.

AMPHIBIAN HABITAT: DEPTH OF CRITICAL PONDS IS BELOW 80% OF HISTORICAL MINIMUM WATER LEVEL DEPTH DURING EXTENDED BREEDING PERIOD (MARCH TO 2ND WEEK OF AUGUST).

iii) GREEN ZONE:

FLOW: ANY VALUE ABOVE YELLOW ZONE TRIGGER

TEMPERATURE: ANY VALUE BELOW YELLOW ZONE TRIGGER

WETLAND VEGETATION: ANY VALUE NOT IN THE RED ZONE OR YELLOW ZONE.

AMPHIBIAN HABITAT: ANY VALUE NOT IN THE RED ZONE OR YELLOW ZONE.

AFTER FIVE (5) YEARS OF OPERATION LONG–TERM TRIGGER VALUES WILL BE SET BY REFERENCE TO WATER FLOW, WATER LEVEL AND WATER TEMPERATURE CORRELATION RELATIONSHIPS TO BE ESTABLISHED BETWEEN CONTROL LOCATIONS THAT WILL NOT BE IMPACTED BY QUARRY OPERATIONS AND MONITORING STATIONS USING A METHODOLOGY APPROVED BY THE MINISTRY OF NATURAL RESOURCES OR AS REFINED OR AUGMENTED IN AN ADAPTIVE MANAGEMENT PLAN APPROVED BY THE MINISTRY OF NATURAL RESOURCES.

(D) THE BUFFER LANDS LOCATED TO THE NORTH AND EAST OF THE EXTRACTION AREA DESIGNATED ESCARPMENT RURAL, ESCARPMENT PROTECTION OR ESCARPMENT NATURAL MAY BE USED FOR INSTALLATION OF ACCESS TO, FACILITIES AND SERVICING FOR, AND RELATED TO, THE WATER MANAGEMENT AND MONITORING SYSTEM. ANY SUCH WORKS SHALL BE SUBJECT TO THE NEC DEVELOPMENT PERMIT AND ANY DISTURBANCE OF BUFFER LANDS SHALL BE MINIMIZED. EXTRACTION SHALL NOT BE PERMITTED ON THE BUFFER LANDS.

(E) PRIOR TO THE CONSTRUCTION OF ANY MITIGATION MEASURE OR CONTINGENCY MITIGATION MEASURE OUTSIDE THE LIMITS OF EXTRACTION, DETAILS SHALL BE PREPARED BY A QUALIFIED PERSON AND THE MNR, AND INCLUDED IN THE AMP UNLESS THE DESIGN OF THE MEASURE HAS BEEN APPROVED PURSUANT TO A PERMIT ISSUED UNDER ANOTHER STATUTE SUCH AS THE ONTARIO WATER RESOURCES ACT (E.G. PERMIT TO TAKE WATER, ENVIRONMENTAL COMPLIANCE APPROVAL).

8. PRIOR TO EXTRACTION OF PHASE 1, THE ADAPTIVE MANAGEMENT PLAN (AMP) WILL BE FINALIZED (INCLUDING A MECHANISM FOR FINANCIAL SECURITY TO GUARANTEE THE POST EXTRACTION LAKE FILLING) MITIGATION AND MONITORING) IN CONSULTATION WITH REVIEW AGENCIES AND BE APPROVED BY THE MINISTRY OF NATURAL RESOURCES. THE SITE SHALL BE OPERATED IN COMPLIANCE WITH THE AMP. THE ADAPTIVE MANAGEMENT PLAN SHALL REMAIN OPERATIONAL UNTIL THE LAKE HAS BEEN FILLED AND THE LICENCE IS SURRENDERED. THE ADAPTIVE MANAGEMENT PLAN SHALL INCORPORATE THE REQUIREMENTS OF GENERAL NOTES 23 AND 26; HYDROGEOLOGY NOTES 3, 5, 6, 7, 9 AND 10; NATURAL ENVIRONMENT NOTES 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, REHABILITATION PLAN NOTES 4, 5, AND 9, AND THE FOLLOWING:

(A) EVERY 5 YEARS, OR AS REQUIRED, THE ADAPTIVE MANAGEMENT PLAN SHALL BE REVIEWED AND UPDATED IN CONSULTATION WITH REVIEW AGENCIES, INCLUDING THE MNRSWSP. IN ORDER THAT THE UPDATED ADAPTIVE MANAGEMENT PLAN REQUIREMENTS WILL BE BASED ON CURRENT DATA AND OPERATING EXPERIENCE. ANY FURTHER REFINEMENT OR AUGMENTATION OF MATTERS ARISING FROM FINAL APPROVAL OF THE ADAPTIVE MANAGEMENT PLAN BY THE MINISTRY OF NATURAL RESOURCES SHALL NOT REQUIRE AN AMENDMENT TO THIS SITE PLAN.

ANY FURTHER REFINEMENT OR AUGMENTATION OF MATTERS ARISING FROM FINAL APPROVAL OF THE ADAPTIVE MANAGEMENT PLAN BY THE MINISTRY OF NATURAL RESOURCES SHALL NOT REQUIRE AN AMENDMENT TO THIS SITE PLAN.

9. IN THE EVENT EXTRACTION TAKES PLACE ABSENT EXTRACTION IN THE MAQ QUARRY TO THE WEST, IT MAY BE NECESSARY TO INSTALL GROUNDWATER RECHARGE WELLS ALONG THE WEST SIDE OF PHASE 3A IF IT IS DETERMINED THAT IT IS REQUIRED AS A RESULT OF ONGOING MONITORING. FURTHER, IN THE EVENT THAT IT IS NECESSARY TO RESTRICT RECIRCULATION INTO THE QUARRY, IT MAY BE NECESSARY TO CONSTRUCT A HYDRAULIC BARRIER AGAINST THE WEST WALL OF PHASE 3A, AND/OR IN COMBINATION WITH GROUTING OF THE WEST WALL OF PHASE 3A.

10. IN THE EVENT A POTENTIALLY PROBLEMATIC WATER BEARING KARST FEATURE IS ENCOUNTERED DURING QUARRY OPERATIONS, THE OPERATOR SHALL DEVELOP A POND OR OTHER HYDRAULIC BARRIER AGAINST THE WALL, GROUT OFF THE FEATURE, BUILD A SOIL BUTTRESS AGAINST THE WALL OR ANY COMBINATION OF ONE OR MORE OF THESE METHODS.

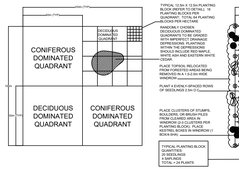
NATURAL ENVIRONMENT

1. PRIOR TO CESSATION OF PUMPING FROM THE SUMP IN PHASE 3A TO THE SURFACE WATER FEATURE, A BEAVER RIVER FISH HABITAT ENHANCEMENT PROGRAM WILL BE DEVELOPED AND IMPLEMENTED.
2. NO LATER THAN THREE YEARS AFTER THIS LICENCE IS ISSUED, UNDERTAKE PROPOSED REFORESTATION AT LOCATIONS SHOWN ON THE PLANTING LOCATION DETAIL (THIS PAGE), IN ACCORDANCE WITH THE TYPICAL PLANTING BLOCK DETAIL (PAGE 3 OF 4), AND FIGURE 2.0, ALTERNATE BLOCK REFORESTATION, OF CHARLTON REPLY WITNESS STATEMENT MARCH 31, 2010 AND AS FURTHER DESCRIBED IN THE REFORESTATION PLANTING PLAN DUNTROON QUARRY EXPANSION (CONSOLIDATED REPORT STANTEC 2010, APPENDIX "D"). THE ECOLOGICALLY–BASED REFORESTATION PROGRAM SHALL INCORPORATE THE MOST EFFECTIVE METHODS OF QUICKLY RE–ESTABLISHING FUNCTIONAL FOREST ATTRIBUTES SUCH AS CANOPY COVER AND HORIZONTAL AND VERTICAL DIVERSITY AS FURTHER DESCRIBED IN THE REFORESTATION PLANTING PLAN DUNTROON QUARRY EXPANSION (CONSOLIDATED REPORT STANTEC 2010, APPENDIX "D").
3. PRIOR TO EXTRACTION OF PHASE 1, THE ADAPTIVE MANAGEMENT PLAN (AMP) WILL BE FINALIZED IN CONSULTATION WITH REVIEW AGENCIES AND FINAL APPROVAL BY THE MINISTRY OF NATURAL RESOURCES, AND THE SITE SHALL BE OPERATED IN COMPLIANCE WITH THE AMP. THE ADAPTIVE MANAGEMENT PLAN WILL INCLUDE SPECIFICS ON WATER QUALITY, QUANTITY, TEMPERATURE AND MONITORING TO ENSURE THE ECOLOGICAL FUNCTIONS OF WETLANDS, SPRINGS AND STREAMS ARE MAINTAINED. THE AMP SHALL ALS

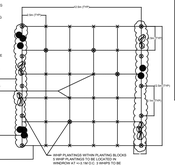
Typical Planting Block Detail

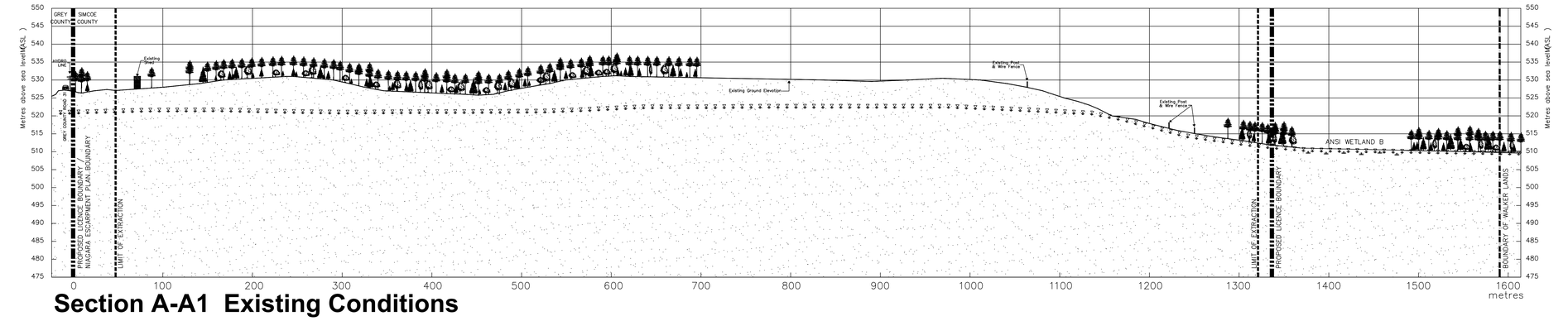
SCALE N.T.S.

TYPICAL ONE HECTARE PLANTING UNIT
10000 sq.m.
Not to Scale

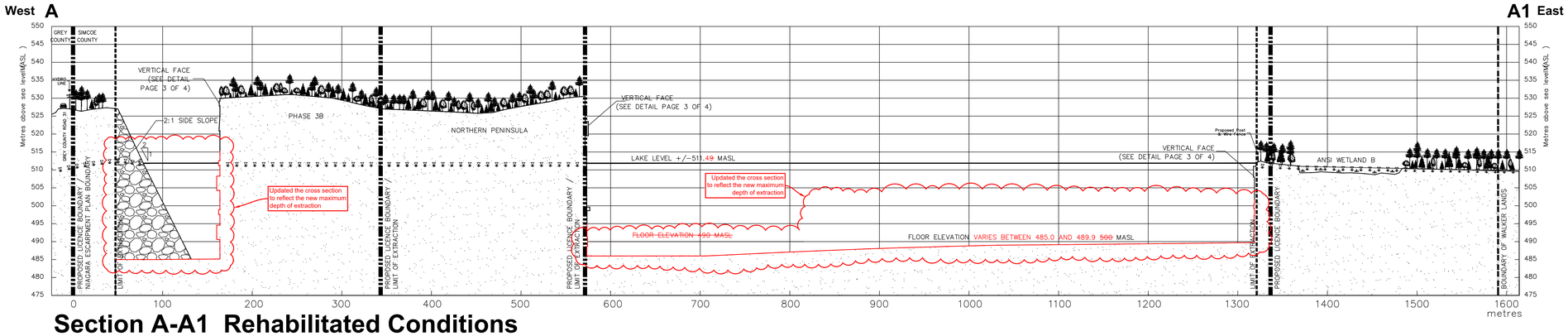


TYPICAL PLANTING BLOCK LAYOUT
156.25 sq.m.
Scale 1:100

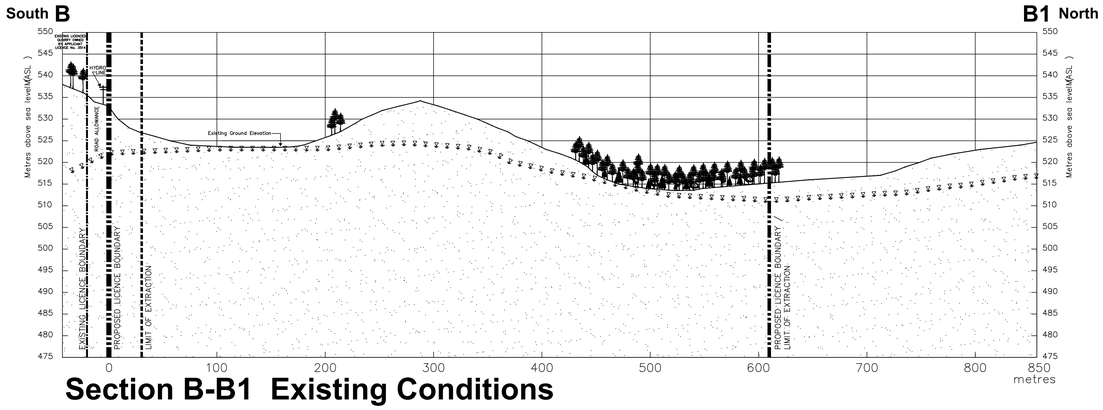

12.5m
10.5m
1.5m
2.5m
2.5m
2.5m
2.5m
2.5m
2.5m
1.5m
1.5m
1



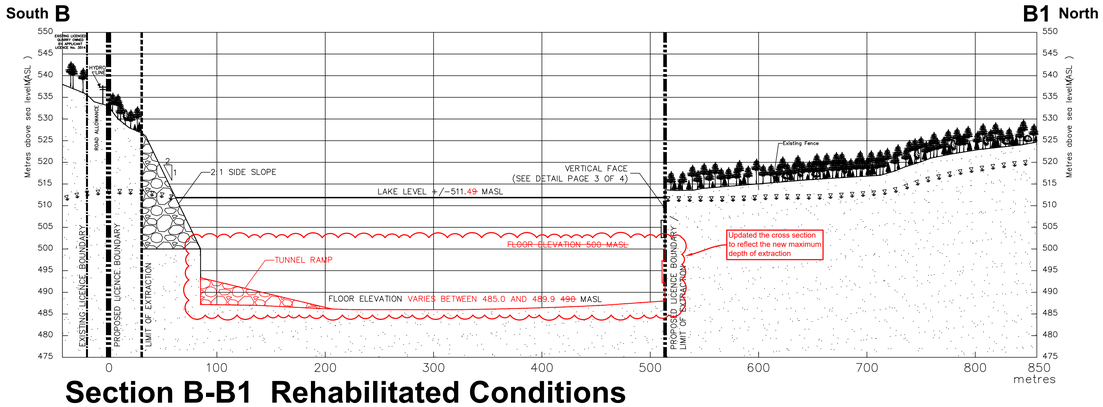
Section A-A1 Existing Conditions



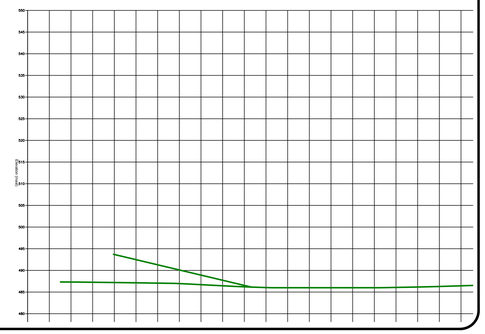
Section A-A1 Rehabilitated Conditions



Section B-B1 Existing Conditions



Section B-B1 Rehabilitated Conditions



Cross Sections

Legend

- Walker Aggregates Inc. Lands
- Limit of Extraction — ALL SETBACKS DRAWN TO SCALE. EXCEPT for SETBACKS SEE PAGES 1, 2A AND 3 FOR LABELLED DISTANCES
- Expansion Licence Boundary
- South Quarry Licence Boundary — EXISTING QUATHIOSKI QUARRY LICENCE No. 3014
- Swamp or Wetland
- Ground Water Table — DOLOSTONE AQUIFER, SEE NOTE 2 THIS PAGE
- For Details of Plan View see Pages 1, 2A & 3 of 4

NOTES:

1. TOPOGRAPHIC INFORMATION PROVIDED BY NORTHWAY-PHOTOMAP INC. AND GENERATED FROM AERIAL PHOTOGRAPHY FLOWN IN SPRING OF 2002. CONTOUR INTERVAL IS 2.0m, WITH 1.0m INTERPOLATED CONTOURS. ALL ELEVATIONS ARE INDICATED IN (MASL).
2. HYDROGEOLOGICAL INFORMATION OBTAINED FROM "GEOLOGICAL REPORT AND LEVEL 2 HYDROGEOLOGICAL ASSESSMENT" DATED SEPTEMBER 2005 AND "LEVEL 2 HYDROGEOLOGICAL ASSESSMENT ADDENDUM" DATED OCTOBER 2007 PREPARED BY JAGGER HIMS LIMITED INDICATES THE GROUND WATER TABLE ACROSS THE LICENCED AREA VARIES SEASONALLY FROM ±509 MASL TO ±511 MASL IN THE TOPOGRAPHICALLY LOW AREAS, TO ±518 MASL TO ±526 MASL IN THE TOPOGRAPHICALLY HIGH AREAS.
3. CROSS SECTIONS PLOTTED FROM ABOVE REFERENCED TOPOGRAPHIC INFORMATION.
4. FOR PLAN VIEW OF CROSS SECTIONS, SEE "EXISTING FEATURES" PLAN, PAGE 1 OF 4 AND "REHABILITATION" PLAN, PAGE 3 OF 4.
5. SEE TYPICAL PLANTING BLOCK DETAIL (PAGE 3 OF 4) AND GENERAL NOTE 4 (PAGE 3 OF 4) FOR ADDITIONAL INFORMATION ON SLOPE TREATMENTS.
6. GROUNDWATER ELEVATIONS SHOWN ARE BASED ON ASSUMPTION THAT THE MAQ QUARRY (WEST OF GREY COUNTY ROAD 31) IS OPERATING AT THE SAME TIME AND IS REHABILITATED AT THE SAME TIME AS THIS LICENCE.

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
113 COLLIER STREET, BARRIE, ON, L4M 1H2 | P: 705.728.0045 | WWW.MHBCPLAN.COM

MHBC Stamp
Christopher Vanderley
Is authorized by the Ministry of Natural Resources and Forestry to Subsection 8.1 of the Aggregate Resources Act of Ontario Regulation 244/97 to prepare site plans.
DRAFT

Scales
Horizontal 1:2,000
Vertical 1:500
Vertical Exaggeration 4x
Unless Otherwise Noted on Plan

DRAFT REVISIONS		APPROVED LICENCE or PLAN AMENDMENTS
	FEB 28, 2012	
	AUGUST 28, 2012	
	SEPT 28, 2012	
	OCT 26, 2012	
	NOV 23, 2012	
	DEC 21, 2012	
SEPT. 28, 2012	JAN 18, 2013	

I ACKNOWLEDGE AND SHALL CARRY ON MY OPERATION IN ACCORDANCE WITH THIS SITE PLAN UPON WHICH MY LICENCE IS BASED.

LICENSEE / SIGNATURE — DATE

PROJECT NAME:
Duntroon Quarry Expansion

Job No. 9811BN | Dwn. By: A.M.,D.S.,J.D.,C.P. | Chkd. By: C.P.

Lot 25 and Part Lot 26,
Concession XII and
Part Lot 25, Concession XI
Clearview Township
Simcoe County

walker industries
Walker Aggregates Inc.

Walker Industries Holdings Limited
Aggregates and Construction Group
P.O. Box 100 Thorold Ontario
L2V 3Y8