

A. General

- 1. Area calculation
1.1. Licence Boundary 151.4 ha
1.2. Limit of Excavation 91.3 ha
2. The maximum annual tonnage is 2,200,000 tonnes.
3. The maximum predicted water table on-site varies between 221.5 and 236.0 m. The maximum predicted water table is shown in each cross section on drawing 5 of 5.
4. The maximum predicted water table on-site varies between 221.5 and 236.0 m. The maximum predicted water table is shown in each cross section on drawing 5 of 5.

- B. Hours of Operation
1. Extraction, including drilling and primary crushing, is permitted Monday to Friday between 7:00 am and 6:00 pm and on Saturdays between 7:00 am to 12:00 pm.
2. Processing, loading and shipping is permitted Monday to Friday between 5:30 am to 6:00 pm and on Saturdays from 7:00 am to 12:00 pm.
3. No operations are permitted on Sunday or statutory holidays.
4. Blasting is permitted Monday to Friday between 6:00 am and 6:00 pm during daylight hours, excluding statutory holidays.

- C. Site Access and Fencing
1. The three existing field access points on Concession Road 1 and the existing field access on Highway 12 may remain for maintenance purposes. Should they remain, these access points shall be gated, kept closed during hours of non-operation and maintained throughout the life of the licence.
2. The two new field access points within Lot 13, Concession 1 on Concession Road 1, should they remain, shall be gated at the property boundary (see Section O Variations from Control and Operation Standards on this drawing).
3. An operational entrance is proposed on Concession Road 2, approximately 450 metres west of the Highway 12 / Concession Road 2 intersection (as shown on the plan view) and will require a Township of Ramara Entrance Permit prior to construction.
4. The operational access point shall be gated, kept closed during hours of non-operation and maintained throughout the life of the licence.
5. Except where the licence boundary traverses the property within Lot 13, Concession 1, portions of the licence boundary that are not currently fenced shall be fenced with post and wire fencing at least 1.2 metres in height (see Section O Variations from Control and Operation Standards on this drawing).
6. All fencing along the licence boundary shall be maintained for the life of the licence.

- D. Drainage and Siltation Control
1. Drainage of undisturbed areas will continue in the directions shown on drawing 1 of 5.
2. Silt fencing shall be installed and maintained in accordance with Natural Environment Act 4.1 and 4.2, under Section P Technical Recommendations on this drawing.
3. Erosion control measures shall be installed and maintained in accordance with Natural Environment Act 4.1 and 4.2, under Section P Technical Recommendations on this drawing.

- E. Site Preparation
1. Prior to site preparation, a Spills Contingency Plan shall be prepared and implemented.
2. The shed and barge within Lot 12, Concession 1 shall be removed prior to extraction in Phase 2B. The barn ruins and silo within Lot 12, Concession 1 shall be removed prior to extraction in Phase 2B.
3. Tree removal shall be avoided between March 15th and November 30th of each year.
4. Timber resources shall be salvaged for use as saw logs, fence posts and fuel wood where appropriate. Cleared stumps and brush may be burned (with applicable permits), used for aquatic habitat enhancement or mulched for use in progressive rehabilitation.
5. Topsoil and overburden shall be striped and stored separately whenever feasible (see Section O Variations from Control and Operation Standards on this drawing).
6. Topsoil and overburden shall be placed in noise attenuation berms or used immediately for progressive rehabilitation.
7. Temporary topsoil and overburden stockpiles which remain for more than one year shall have their slopes vegetated to control erosion. Seeding shall not be required if these stockpiles have vegetated material on the site prior to the end of the year.
8. All temporary topsoil and overburden stockpiles shall remain a minimum of 30 metres from the licence boundary and 90 metres from a property with a residential use.
9. Ensure Archaeology notes under technical Section P Technical Recommendations on this drawing have been completed.

- F. Berms and Screening
1. Noise attenuation berms shall be constructed to the height specified in the locations shown on the plan view of this drawing.
2. Berms shall not be located within three metres of the licence boundary.
3. Berms side slopes shall not be steeper than 2:1 (horizontal : vertical).
4. The minimum width of the berm crest shall be one metre.
5. Berms constructed with topsoil and/or overburden shall be vegetated in accordance with the notes under Section E Natural Environment drawing 4 of 5.
6. See Typical Noise Attenuation Berm detail on this drawing for additional information.
7. Existing vegetation within the setbacks shall be maintained except where berms are required or where grade alterations are necessary to establish the habitat corridor.
8. Existing vegetation within the setbacks shall be maintained except where berms are required or where grade alterations are necessary to establish the habitat corridor.

- G. Site Dewatering
1. Once the permanent sump is established, it will discharge water in the location shown on the plan view of this drawing.
2. Water discharged from the permanent sump will pass through the habitat corridor and eventually discharge off-site in the location shown on the plan view of this drawing.
3. Refer to the Water Resources notes under Section P Technical Recommendations on this drawing for additional information.

- H. Extraction Sequence
1. The extraction sequence is outlined on drawing 3 of 5.

- I. Extraction Details
1. All work within five metres of the excavation face inside the limit of extraction shall be removed.
2. Topsoil and overburden shall be striped to a maximum 2:1 slope adjacent to the limit of extraction. A minimum two metre wide safety ledge shall remain at the toe of the 2:1 slope.
3. The existing grade, maximum predicted water table and maximum depth of excavation are indicated by spot elevations at various locations on the plan view of this drawing.
4. The maximum lift height shall be 12 metres.
5. The maximum depth of excavation in Phase 1A is approximately 30 metres and shall be extracted in three lifts.
6. The maximum depth of excavation in Phase 1B is approximately 31 metres and shall be extracted in three lifts.
7. The maximum depth of excavation in Phase 2A is approximately 33 metres and shall be extracted in three lifts.
8. The maximum depth of excavation in Phase 2B is approximately 35 metres and shall be extracted in three lifts.
9. Extraction shall be permitted in two phases simultaneously by lot to transition between phases.
10. Blasting shall be permitted Monday to Friday during daylight hours (excluding statutory holidays) in accordance with the hours specified in note B.4 on this drawing. Blasting will typically occur once per week but may occur more frequently based on operational needs.
11. Aggregate stockpiles (including recyclable materials) shall be located within the limit of extraction and remain a minimum of 30 metres from the licence boundary and 90 metres from a property with a residential use.
12. An off-site truck house and weigh scale shall be established on-site. The off-site truck house and weigh scale shall be a minimum of 100 metres from Concession Road 2 to accommodate queuing highway trucks.
13. All buildings and structures (including portable trailers and sheds) shall remain a minimum of 30 metres from the licence boundary and 90 metres from a property with a residential use.
14. Internal haul road locations will vary on the quarry floor as extraction progresses.
15. An excavation reaches the limit of extraction or maximum depth, progressive rehabilitation shall commence.

- J. Equipment and Processing
1. Equipment used on-site may include portable crushers (both primary and secondary), a portable screening plant, a portable wash plant, rock drills, generators, stackers, conveyors, scrapers, excavators, extraction loaders, shipping loaders, haul trucks, highway trucks, water trucks, fuel trucks, maintenance trucks, responsive trucks, pickup trucks, and the cleaning equipment.
2. Processing shall be located within the limit of extraction and remain a minimum of 30 metres from the licence boundary and 90 metres from a property with a residential use.

- K. Wash Pond and Sump
1. A wash pond and sump will initially move with the quarry face in Phases 1A and 1B until the maximum depth is reached. Afterwards, a permanent wash pond and sump shall be established on the quarry floor. The location of the permanent sump is identified on the plan view of this drawing.
2. Throughout the life of the operation, water from the temporary or permanent sump shall only be discharged in the southwest corner of Phase 1B in the location identified on the plan view of this drawing.
3. Refer to the Water Resources notes under Section P Technical Recommendations on this drawing for additional information.

- L. Dust
1. Dust shall be mitigated on-site.
2. Water or another practically approved dust suppressant shall be applied to internal haul roads and processing areas as often as required to mitigate dust.
3. Processing equipment shall be equipped with dust suppressing or collection devices where the equipment creates dust and is being operated within 300 metres of a sensitive receptor.

- M. Fuel Storage
1. Fuel storage tanks shall be located in close proximity to the processing area.
2. Fuel storage tanks shall be installed and maintained in accordance with the Technical Standards and Safety Act and Liquid Fuels Regulation 21701.
3. All fuel tanks shall be double sided or placed in containment facilities large enough to hold the tanks maximum volume.
4. Fuel trucks may be used to transfer fuel to on-site equipment in accordance with the Liquid Fuels Handling Code.
5. A Spills Contingency Plan shall be prepared and implemented prior to site preparation. The Spills Contingency Plan shall be available on-site and all employees and contractors shall be informed and required to comply with the plan.

- N. Scrap and Recycling
1. Scrap may be stored on-site and shall be removed on an on-going basis.
2. Scrap shall only include material generated directly as a result of the aggregate operation such as rebar, debris, scrap metal, lumber, discarded machinery and equipment.
3. All fluids shall be drained from any discarded equipment or machinery prior to storage and disposed of in close proximity with the Environmental Protection Act.
4. Scrap shall not be stored within 30 metres of any body of water, or the licence boundary, and shall be kept in close proximity to the main processing plant.

Table with 4 columns: No., Date, Description, By. It is currently empty.

- 4. The Correll (B02-23) Bill may be enacted into the Ministry of Citizenship and Multiculturalism (MCM) has released a report(s) in the Ontario Public Register of Archaeological Reports where the report(s) recommends that the archaeological site is of no further cultural heritage value or interest.
5. Should newly buried archaeology remains be found during the course of site preparation and/or extraction related activities, the MCM shall be notified.
6. In the event human remains are encountered during construction or extraction activities, the licensee shall immediately contact both the MCM and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Government and Consumer Services (MGCS).
7. Blasting
a. An attenuation study shall be undertaken by a competent independent blasting consultant during the first 12 months of operation in order to obtain sufficient quarry data for the development of site specific attenuation activities. This study will be used to confirm the applicability of the initial guideline parameters and assist in developing future blast designs.
b. All blasts shall be monitored for both ground vibration and overpressure at the closest sensitive receptors adjacent the site, or closer, with a minimum of two (2) digital seismographs - one installed in front of the blast and one installed behind the blast. Monitoring shall be performed by an independent third party engineering firm with specialization in blasting and monitoring.
c. The guideline limits for vibration and overpressure shall stand as outlined in the Model Municipal Noise Control By-law publication NPC 119 (1978) or any such document, regulation or guideline which supersedes this standard.
d. In the event that calculations suggest the vibrations at the closest portion of the rail line will exceed 23 of the applicable limit, an additional vibrations monitor shall be installed at the closest portion of the rail line.
e. Vibrations impacted on the rail line shall be maintained below industry best practices for structures of this nature or railway owner corporate policy.
f. When blasting on site is to take place employing blast parameters which suggest vibration in excess of 10mm/s (75% of DFO 35mm/s limit) imposed on an active spawning bed, the contractor shall be continuously reviewed with respect to fragmentation, ground vibration and overpressure. Blast designs shall be required to ensure compliance with applicable guidelines and regulations.
g. Once blasting progress encroaches to within 250m of any off-site sensitive receptor, a formal review of accumulated blast records including vibration data and blast designs shall be undertaken. This review will identify what modifications to blasting protocol and procedures are required to address the reduced separation distance.
h. Clear crushed stone shall be used for stemming.
i. Blasting procedures such as drilling and loading shall be reviewed on a yearly basis and modified as required to ensure compliance with industry standards.
j. Detailed blast records shall be maintained. The Ministry of the Environment, Conservation and Parks (MECP) (1985) recommends that the body of blast records shall include the following information:
- Location, date and time of the blast.
- Dimensional sketch including photographs, if necessary, of the location of the blasting operation, and the nearest point of receptor.
- Physical and topographical description of the ground between the source and the receptor location.
- Subject conditions, if known.
- Type of material being blasted.
- Blasting procedure used.
- Prevailing meteorological conditions including wind speed in m/s, wind direction, air temperature in °C, relative humidity, degree of cloud cover and ground moisture content.
- Number of drill holes.
- Pattern and pitch of drill holes.
- Size of holes.
- Depth of drilling.
- Depth of collar (or stemming).
- Weight of charge per delay.
- Number of delays.
- The result and calculated value of Peak Pressure Level in dB and Peak Particle Velocity in mm/s.
- Applicable limits and any exceedances.
8. Natural Environment
a. Prior to any site alteration within the area identified as habitat for Bobolink and Eastern Meadowlark, the requirements of Part IV of O.Reg. 830/21 of the Environmental Bill of Materials (EBM) shall be met.
b. The licensee shall seek to ensure that on-site personnel are educated to ensure that, if identified, Species at Risk (SAR) are not adversely injured or killed, and to ensure that damage to features which could constitute habitat is avoided. Information shall be conveyed through a SAR expert and include:
- Species habitat and identification.
- Requirements under the ESA including avoidance of harm to the species and damage to relevant habitat.
- Appropriate action to take if the species is encountered.
- How to report sightings and encounters, and.
- That care should be taken when undertaking construction activities in order to avoid harming the species or damaging/destroying habitat.
c. Tree removal shall be avoided between March 15th and November 30th of any given year.
d. Along the north and west licence boundary, wildlife fencing shall be installed according to provincial Raptors and Amphibian Exclusion Fencing (MECP, 2021a) guidelines.
e. Wildlife exclusion fences shall be inspected after spring thaw and throughout the active season for tears or other damage.
f. Prior to the commencement of site works, all fencing shall be applied along the length of directly adjacent natural or naturalized features, and routine inspection/maintenance of the all fencing shall occur.
g. Silt fencing shall be maintained until lands abutting the work area (i.e. noise berms) are consistently stabilized with self-sustaining vegetation such that potential runoff of sediment into adjacent natural areas is effectively controlled.
h. Beeswax to Pond 1 and in accordance with the pond and the McNab Drain Tributary must be maintained.
i. Blast designs should be in accordance with DFO Guidelines for the use of explosives in or near Canadian freshwater waters provided in Appendix 9.
j. A qualified professional should be retained to prepare a blasting plan that is compliant with DFO regulations.
k. Along the portions of the tributary that are located within the extraction area (see Key Natural Heritage Features schematic on drawing 1 of 5) should be a part of a request for review by DFO and DFO requirements shall be completed with.
l. A request for project review be submitted to DFO for the removal of Tributary G (see Key Natural Heritage Features schematic on drawing 1 of 5 for location) and DFO requirements shall be completed with.
m. The licensee shall implement the additional Natural Environment Technical Recommendations noted under Section E on drawing 4 of 5.

- 5. Noise
a. The quarry shall be limited to the following hours of operation:
a.a. Aggregate extraction, including drilling and primary crushing is permitted Monday to Friday between 7:00 am and 6:00 pm, and on Saturdays between 7:00 am and 12:00 pm.
a.b. Processing, loading and shipping is permitted Monday to Friday between 5:30 am and 6:00 pm, and on Saturdays between 7:00 am and 12:00 pm.
a.c. No operations are permitted on Sundays or statutory holidays.
b. When following the active face of the excavation, the primary crusher shall be located as close as possible to the excavated face of each phase, in order to maximize soundproof shielding.
b.b. Within Phase 1A the processing plant is permitted to operate at grade. Within all other phases, the primary crusher shall not operate atop L.R. 1, but is permitted to operate atop L.R. 2 (with the exception of "Noise Attenuation Area 3" identified on the plan view of this drawing), L.R. 3, or on the quarry floor.
c. The following noise berms, the locations of which are depicted on the plan view of this drawing and drawing 3 of 5, and their relative heights are summarized in Table 1 below:
Table 1: Summary of Noise Berm Dimension (m)
| Berm | Height | Length |
|---|---|---|
| 1 | 8 | 295 |
| 2 | 11 | 60 |
| 3 | 14 | 100 |
| 4 | 12 | 80 |
| 5 | 7 | 70 |
| 6 | 7 | 70 |
| 7 | 8 | 750 |
| 8 | 9 | 480 |
| 9 | 12 | 120 |
| 10 | 9 | 75 |
b.c. Berms 2, 3, 4, 5, 6 and 9 noted in Table 1 may be constructed of any earthen material (i.e. overburden or extracted/processed aggregate materials). Berms 2 and 3, which will shield the processing area while operating at grade, may be constructed of processed aggregate materials provided they are established as sufficient materials become available following initial startup of the processing area at grade.

- 6. Traffic
a. Prior to shipping the licensee shall enter into an agreement with the Ministry of Transportation Ontario (MTO) to upgrade the southbound right-turn taper on Highway 12 at Concession Road 2.
b. Prior to shipping, the licensee shall enter into an agreement with the Township of Ramara to upgrade Concession Road 2 from the entrance to the quarry.
c. The quarry's gate house/kiosk shall be located 100 m from Concession Road 3 to accommodate queuing of trucks on-site.

- 7. Water Resources
a. Prior to the start of water taking and/or water discharge, a Permit to Take Water (PTTW) and an Environmental Compliance Approval (ECA) shall be obtained and the licensee shall operate in compliance with these approval instruments, including the associated monitoring and reporting. The proposed groundwater and surface water monitoring programs outlined in Section 13 of this report shall be considered for inclusion in these instruments.
b. The licensee shall implement the Complaints Response Program as outlined in Section 12 of the Level 1 and 2 Hydrogeological and Hydrological report prepared by Azumi Environmental Consulting Inc. dated December 2022 in the event of a water well interference complaint.

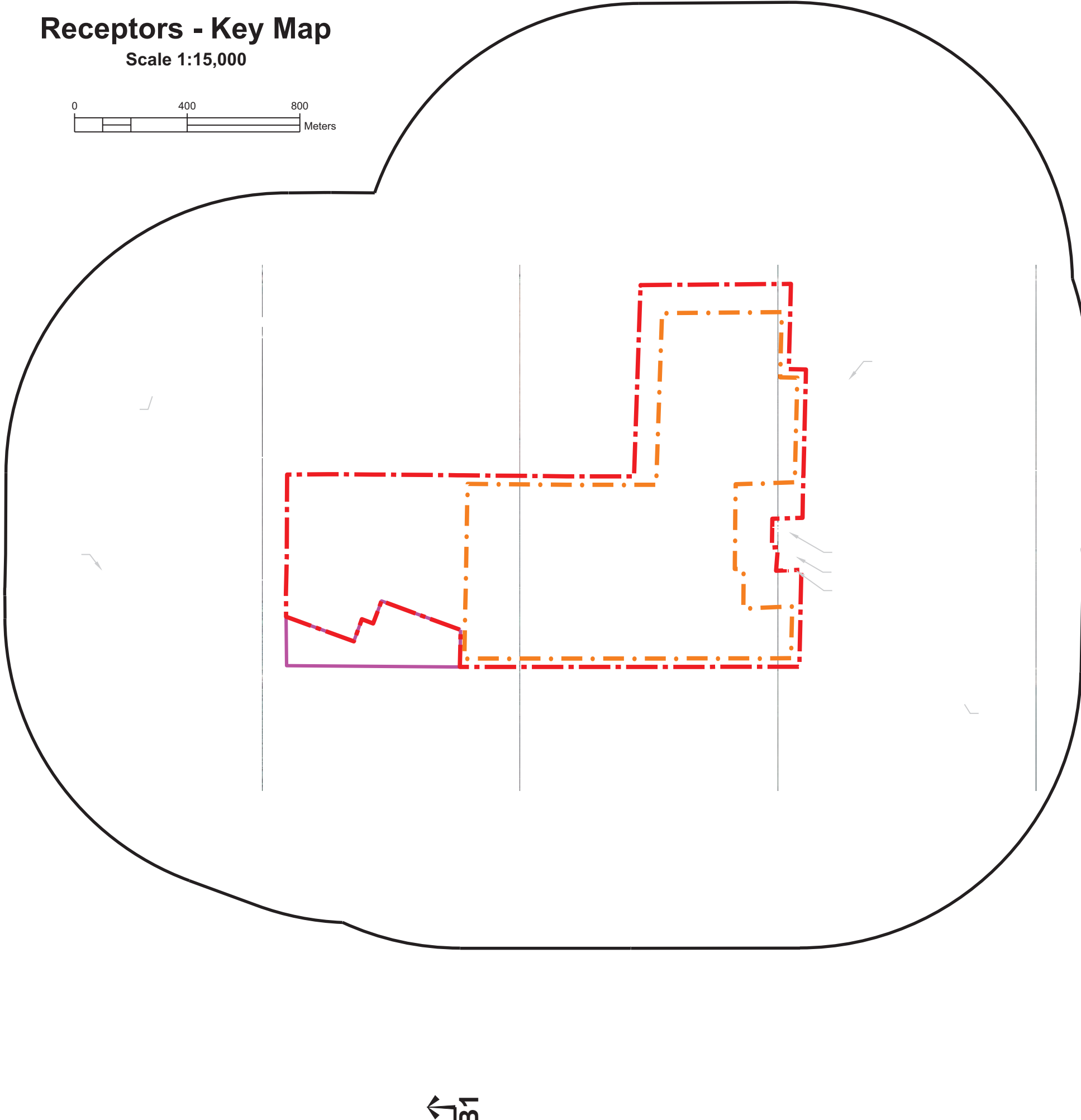
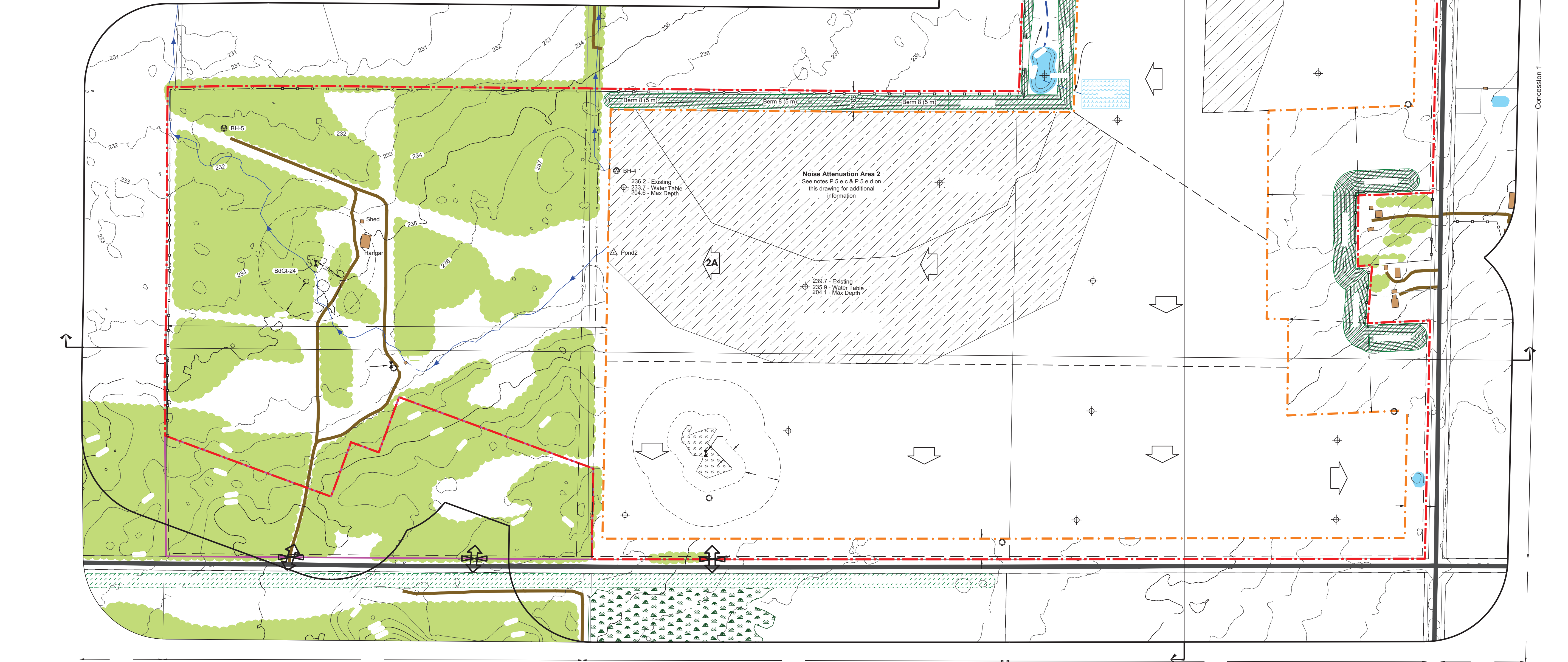
Receptors - Key Map
Scale 1:15,000
Table 2: Source Sound Power Levels (dBa re: 10^-12 W/m^2)
Source Type | Name | Sound Power Level
Rock Drill (quantity 1) | 120
Processing Area (secondary crusher, screens, wash plant, generators, etc.) | 120
Primary Crusher (quantity 1) | 121
On Level Grade | 102
On Decline Ramara (no Jalis Brake) | 99
On Incline Ramara | 109

- 8. Variations
h.a. It is recognized that advancements of equipment or different configurations may allow additional equipment or equipment to be substituted for certain activities while still meeting MECP guidelines.
h.b. Variations to the noise control measures may be permitted, provided that the sound level revisions can demonstrably meet the applicable MECP limits as confirmed through documentation by a professional engineer. Prior to modification, notification shall be given to the MNRF.
9. Vicinity Lots
i.a. An updated Noise Impact Assessment, prepared by a professional engineer, will be submitted to the MNRF within 12 months following the quarry operation receiving notification of a building permit issued for a noise-sensitive use on the properties designated as VL 1 through VL 4 and/or VL 5 in the Noise Impact Assessment completed by HCC Engineering dated October 2022. If the updated study concludes that the sound levels of the quarry may not comply with the applicable limits, the report must include the following:
i.a.a. Details regarding the noise control measures required to reduce the sound levels of the quarry to comply with the applicable limits;
i.a.b. A timetable for implementation of the noise control measures, including dates for achieving compliance with specific milestones;
i.a.c. A timetable for submitting further assessments to demonstrate compliance with the applicable sound level limits at the properties designated as VL 1 through VL 4 and/or VL 5.

- 9. Water Resources
a. Prior to the start of water taking and/or water discharge, a Permit to Take Water (PTTW) and an Environmental Compliance Approval (ECA) shall be obtained and the licensee shall operate in compliance with these approval instruments, including the associated monitoring and reporting. The proposed groundwater and surface water monitoring programs outlined in Section 13 of this report shall be considered for inclusion in these instruments.
b. The licensee shall implement the Complaints Response Program as outlined in Section 12 of the Level 1 and 2 Hydrogeological and Hydrological report prepared by Azumi Environmental Consulting Inc. dated December 2022 in the event of a water well interference complaint.

Typical Noise Attenuation Berm
N.T.S.
Table 1: Summary of Noise Berm Dimension (m)
Berm	Height	Length
1	8	295
2	11	60
3	14	100
4	12	80
5	7	70
6	7	70
7	8	750
8	9	480
9	12	120
10	9	75

- 6. Berms 2, 3, 4, 5, 6 and 9 noted in Table 1 may be constructed of any earthen material (i.e. overburden or extracted/processed aggregate materials). Berms 2 and 3, which will shield the processing area while operating at grade, may be constructed of processed aggregate materials provided they are established as sufficient materials become available following initial startup of the processing area at grade.



Legal Description
Part of Lots 11, 12 and 13, Concession 1
(former geographic Township of Mara)
Township of Ramara
County of Simcoe

Legend
Licence Boundary
Limit of Extraction
Contours with Elevation
Public Road
Driveway
Watercourse
Water Feature
Wooded Area
Wetland
Noise Attenuation Area 1
Noise Attenuation Area 2
Noise Attenuation Area 3
Main Discharge Pipe
Monitoring Well
Pond Monitoring
120m Offset From Licence Boundary
Additional Land Owned by Licensee
Lot Fabric
Fence
Entrance / Exit
Gate
Direction of Excavation & Phase Boundary
Berm
Archaeological Buffer Area
Spot Elevation
Proposed Elevation
Proposed Final Slope
Proposed Final Grade
Surface Water Monitoring
Rain Gauge
Cross Sections

Site Plan Acronyms
1. ARA - Aggregate Resources Act
2. MASL - Metres Above Sea Level
3. MNRF - Ministry of Natural Resources and Forestry
4. MCM - Ministry of Citizenship and Multiculturalism
5. MGCS - Ministry of Government and Consumer Services
6. MECP - Ministry of Environment, Conservation and Parks
7. MTO - Ministry of Transportation - Ontario
8. DFO - Fisheries and Oceans Canada
9. PTTW - Permit to Take Water
10. ECA - Environmental Compliance Approval
11. ESA - Environmental Site Assessment
12. SAR - Species at Risk
13. LIO - Land Information Ontario

Site Plan Amendments table with columns: No., Date, Description, By.

Site Plan Revisions (Pre-Licensing) table with columns: No., Date, Description, By.

MHBC logo and contact information: PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE. 113 COLLIER STREET, BARRE, ON, L4M 1H2 | P: 705.728.0405 F: 705.728.2010 | WWW.MHBC.PLAN.CAN

MNRF Stamp MHBC Stamp
Signature: Christopher Poole

Brechin Quarry
Scale bar and north arrow.