

4. The minimum width of the berm crest shall be one metre.

G. Site Dewatering

5. Berms shall be vegetated in accordance with Natural Environment notes C.11 and C.15 on drawing 3 of 3.

7. See Typical Noise Attenuation Berm detail on this drawing for additional information.

6. The noise attenuation / perimeter berms shall remain as part of the final landform as shown on the plan view on drawing 3 of 3.

overland drainage into the wetland along the eastern limit of extraction in the three locations shown on the plan view of this drawing.

2. Refer to the Water Resources notes under Section P.8 of the Technical Recommendations on this drawing for additional information.

8. Existing vegetation within the setbacks shall be maintained except where berms are required or where grade alterations are necessary to establish the habitat

1. Drainage of the extraction area shall occur by passive sloping of the quarry floor towards the sump locations shown on the plan view. These locations shall be

constructed as soon as realistically possible during operation and shall move as required during each phase of extraction. The sumps shall outlet through passive

H. Extraction Sequence 1. Due to varying rock characteristics it is expected that the majority of the site will primarily produce crushed stone. If suitable geology exists within the extraction 2. The site shall be extracted in three phases (Phases 1A, 1B, 2, 3A and 3B) with extraction commencing at the southern limit and progressing north, as shown on 3. Phases may overlap as one phase is prepared for extraction and the previous phase is nearing depletion and undergoing progressive rehabilitation. 4. Progressive rehabilitation shall follow the sequence of extraction with progressive rehabilitation commencing in the west half of Phase 1B during extraction of Phase 2. Phase 1A, and the east half of Phase 1B, shall be the last phases to be rehabilitated as they will be used for processing and stockpiling throughout the Phase 1A 5.1. Prepare Phase 1A for extraction and ensure all the requirements in Sections 'C' through 'G' on this drawing are met. 5.2. Strip Phase 1A and use the overburden to construct Berm A (see Noise note 6.h under Section P Technical Recommendations on this drawing).

5.6. Material from initial extraction may be processed at the existing processing plant in Licence # 625641 until it is practicable to establish a Central Processing Plant on the quarry floor in Phase 1A in the location shown on the plan view of this drawing (see Noise note 6.i under Section P Technical

5.7. Establish a wash pond and sump on the quarry floor. Water from the sump shall be discharged in Phase 1A in the location identified on the plan view of

6.4. A portable plant shall follow the extraction face (see Noise notes 6.j and 6.k under Section P Technical Recommendations on this drawing for noise

rehabilitation of the west half of Phase 1B shall be temporarily stored on-site for progressive rehabilitation of Phase 2. An internal haul road shall be

8.4. A portable plant shall follow the extraction face (see Noise notes 6.j and 6.k under Section P Technical Recommendations on this drawing for noise

The entrance/exit on Concession Road B-C shall be gated in the 1. A gate in the location shown ensures the extraction area is secure

continue without interruption

Wherever there are no distinguishable layers and sufficient thickness to

allow separate handling, topsoil and overburden will not be stored

The limit of extraction shall be demarcated with painted marker posts

(1.8 metres in height) every 30 metres or less in order to maintain

2. Fencing shall be erected at the southern extent of the limit of

will eliminate constraints to the agricultural operations.

visibility from one marker post to the next.

traction in the location identified on the plan view of this drawing. This

location shown on the plan view of this drawing instead of at the licence | while enabling the agricultural operations around the internal haul road to

b. Water or another provincially approved dust suppressant shall be applied to internal haul roads as often as required to mitigate dust.

production rates, the control measures specified in the BMPP can be reduced accordingly, provided dust remains mitigated on site.

c. Processing equipment shall be equipped with dust suppressing or collection devices, where the equipment creates dust and is being operated within 300

d. The site shall operate in accordance with a Best Management Practices Plan (BMPP) for Fugitive Dust, which may be amended from time to time,

considering actual impacts and operational considerations. The recommendations in the BMPP are based on the maximum daily production rates. At lower

Depending on site conditions, topsoil and overburden may not be stored

. Fencing shall not be erected along the licence boundary where it abuts

the wetland to the east.

follows the internal haul road between Licence # 625641 and Concessio

Road B-C.

P. Technical Recommendations

Dust shall be mitigated on site.

Air Quality

2. Fencing shall not be erected along the licence boundary where it

Recommendations on this drawing for noise mitigation requirements for the Central Processing Plant).

Recommendations on this drawing for noise mitigation requirements for the Central Processing Plant).

Recommendations on this drawing for noise mitigation requirements for the Central Processing Plant).

the quarry floor to access the active extraction area from the Central Processing Plant.

Recommendations on this drawing for noise mitigation requirements for the Central Processing Plant).

Recommendations on this drawing for noise mitigation requirements for the Central Processing Plant).

Progressive rehabilitation of the west half of Phase 1B shall be ongoing and the north half of Phase 2 shall have commenced.

Progressive rehabilitation of the west half of Phase 1B shall have commenced.

quarry floor to access the active extraction area from the Central Processing Plant

mitigation requirements for the portable plant).

maintained at any location on the quarry floor to access the active extraction area from the Central Processing Plant.

5.4. Commence quarry operations through a sinking cut.

mitigation requirements for the portable plant).

mitigation requirements for the portable plant).

mitigation requirements for the portable plant).

make up the deficit.

Archaeology

- a. No further archaeological assessment of the project area is required. b. Should deeply buried archaeology remains be found during the course of site preparation and/or extraction related activities, the Ministry of Citizenship and Multiculturalism (MCM) shall be notified.
- c. 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).
- a. An attenuation study shall be undertaken by an independent blasting consultant during the first 4 blasts that are representative of typical production blasts occurring over the life of the guarry in order to obtain sufficient guarry data for the development of site specific attenuation relations. This study shall be
- used to confirm the applicability of the initial guideline parameters and assist in developing future blast designs. b. Blasts shall be designed and loaded adhering to Table 3: Maximum Explosive Load at Set Offset Distances - 12.5 mm/sec as well as Table 4: Maximum Explosive Load at Set Offset Distances to Receptors in Front of the Blast - 128 dB(L) until the attenuation study is completed. Upon completion of the attenuation study, a site-specific attenuation relation shall be developed and shall be utilized to develop a new load chart to be utilized going forward.
- c. 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) instruments - one installed in front of the blast and one installed behind the blast.
- d. The guideline limits for vibration and overpressure shall adhere to standards as outlined in the Ministry of Environment, Conservation and Parks (MECP) Model Municipal Noise Control By-law publication NPC 119 (1978) or any such document, regulation or guideline which supersedes this standard. e. In the event of an exceedance of NPC 119 limits or any such document, regulation or guideline which supersedes this standard, blast designs and protocol shall be reviewed prior to any subsequent blasts and revised accordingly in order to return the operations to compliant levels.
- f. Orientation of the aggregate extraction operation shall be designed and maintained so that the direction of the overpressure propagation will be directed away from structures as much as possible.
- g. Blast designs shall be continually reviewed with respect to fragmentation, ground vibration and overpressure. Blast designs shall be modified as required to ensure compliance with current applicable guidelines and regulations. h. Blasting procedures such as drilling and loading shall be reviewed on a yearly basis and modified as required to ensure compliance with industry standards.
- i. Detailed blast records shall be maintained in accordance with current industry best practices.
- j. The guideline for flyrock shall adhere to the standard as outlined in the Aggregate Resources Act O. Reg 244/97, specifically "A licensee or permittee shall take all reasonable measures to prevent flyrock from leaving the site during blasting if a sensitive receptor is located within 500 metres of the boundary of the site" or any such document, regulation or guideline which supersedes this standard.

Cultural Heritage There are no site plan recommendations.

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
- b. The licensee shall seek to ensure that onsite personnel are educated to ensure that, if identified, SAR are not wantonly 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:
- b.a. Species habitat and identification; b.b. Requirements under the ESA including avoidance of harm to the species and damage to relevant habitat; b.c. Appropriate action to take if the species is encountered;
- b.d. How to record sightings and encounters; and b.e. That care shall be taken when undertaking construction activities in order to avoid harming the species or damaging/destroying habitat
- c. Vegetation removal shall be avoided between March 15 and November 30 of any given year.
- d. Removal of Reptile Hibernaculum 1 within Phase 3A (as shown on the Habitat for Endangered and Threatened Species schematic on drawing 1 of 3) shall
- occur between June 1 and August 31 of any given year. e. Wildlife fencing shall be installed by extraction phase along the length of the Proposed Extraction Limit, as shown on the plan view of this drawing. Wildlife
- of rehabilitation works. Wildlife exclusion fencing may be installed on the same fencing as silt fencing, assuming that both the sediment control and wildlife . Wildlife fencing shall be installed according to provincial Reptile and Amphibian Exclusion Fencing (MECP, 2021d) guidelines along the proposed limit of

extraction proximal to the northern limit of the MASM1-1/SWTM1-1 feature and along the western limit of the SWDM3a feature as shown on the plan view

fencing shall be installed prior to the initiation of each active extraction phase, and can be removed along any given extraction phase following completion

of this drawing, according to specifications as follows: f.a. 1/4 inch or 1/8 inch mesh shall be used for galvanized wire fencing;

f.b. Tears in fencing may be mended with 18-gauge galvanized wire;

- f.c. Pull the mesh taut and staple or secure with screws and a metal stripping to prevent the mesh from being ripped when pressure is applied: f.d. An outward facing lip installed on the species side ensures that other wildlife (e.g. snakes and amphibians) are unable to climb or jump over the f.e. Meshing shall be buried a minimum 10cm (or as deep as substrates allow) and backfilled along the length of the fencing; and f.f. Fences shall be inspected after spring thaw and throughout the active season for tears or other damage
- Temporary Erosion and Sediment Control Measures). Silt fencing shall be maintained until lands abutting the work area are considered stabilized with h. A double row of heavy-duty silt fence shall be installed adjacent to natural heritage features in the area shown on the plan view of this drawing. This silt
- fencing may be installed by operational phase on the same fencing as the wildlife exclusion fencing, assuming that both the sediment control and wildlife exclusion function of the fencing are maintained

g. Prior to the commencement of site works/ground disturbance, all ESC measures shall be installed as per OPSS.MUNI 805 (Construction Specification for

- Implement the water management strategy as per the Level 1 and 2 Water Report (Azimuth, 2025) to maintain run-off inputs via drainage channels in the
- Should in-water works be proposed, all in-water construction shall occur in the dry and in isolation of flow. Cofferdam installation and bypass flow management, if required, should follow DFO's Interim standard: in-water site isolation (DFO, 2023).
- k. If in-water work is required in direct fish habitat (e.g., to establish the drainage outlets), a fish salvage shall be completed by a qualified Fisheries Ecologist prior to dewatering. All fish salvages require a License to Collect Fish for Scientific Purposes from MNR.
- . In-water work in both direct and indirect features shall only be permitted from July 15 to March 15 of any given year unless granted otherwise by MNR and/or DFO.
- m. All dewatering in direct or indirect fish habitat features within isolated work areas is to discharge water into a filter bag (i.e., envirobag or equivalent). Filter bags shall be placed a minimum of 30m from fish habitat or wetlands on stable, vegetated ground to allow fines to settle out of the water. Monitoring of these dewatering operations shall occur throughout the construction process to ensure water is free of fines before entering the watercourses.
- n. All machinery maintenance/refueling shall maintain a minimum distance of 30m from natural heritage features to prevent accidental spillage of deleterious substances. The contractor shall have a Contaminant and Spill Management Plan in place prior to initiation of works. This should include keeping an emergency spill kit on site at all times. In the event of a spill, the contractor shall report it immediately to the provincial Spills Action Centre (SAC).
- o. Blast designs shall be in accordance with DFO Guidelines for the use of explosives in or near Canadian fisheries waters.
- p. A qualified professional shall be retained to prepare a blasting plan that is compliant with DFO regulations.
- a. The proposed hours of full operation including extraction, processing and shipping are from 7:00 am to 7:00 pm, Monday to Saturday excluding statutory holidays. Early morning shipping operations hours are from 6:30 am to 7:00 am. Monday to Saturday. At no time shall extraction, processing or shipping take place on a statutory holiday. Equipment maintenance may take place outside of these normal operating hours. See Table 1 below for additional

Time of Day	Day of Week	Operations
7:00 am to 7:00 pm	Monday to Saturday	Full Operation - Extraction, Processing Loading & Shipping
6:30 am to 7:00 am	Monday to Saturday	Loading and Shipping Only

b. The extraction, processing, and shipping equipment operating in the quarry extension shall be limited to:

b.a. One Rock Drill b.b. One Portable Plant

b.c. One Central Processing Plant b.d. Two Extraction Loaders or Excavators

b.e. One Shipping Loader b.f. 40 Highway Truck Trips/hr (80 Passes/hr) b.g. 30 Off-Road Truck Trips/hr (60 Passes/hr)

c. The aggregate quarry equipment shall satisfy the noise emissions levels listed in Table 2 below:

Equipment	Reference Sound Pressure Level at 30 m (dBA)
Central Processing Plant	85
Rock Drill	81
Quiet Rock Drill	74
Portable Plant	80
Extraction Loader or Excavator	70
Off-Road Truck - 25 km/h	66
Highway Truck - 25 km/h	66
Shipping Loader	67*

- d. Extraction shall proceed generally from south to north and shall be carried out in a single lift, as shown on the plan view.
- e. The sound emissions of all construction equipment involved in site preparation and rehabilitation activities shall comply with the sound level limits specified in the MECP publication NPC-115 "Construction Equipment". . New equipment technology or different configurations may allow proposed changes to any portion of the extraction and processing operations including additional equipment to operate on the site, equipment to be substituted, and/or different berm heights, while still meeting the applicable sound level limits. Changes may be permitted to the site operations and noise controls provided that the changes still meet the sound level limits, as confirmed through
- documentation prepared by a Professional Engineer specializing in noise control. Prior to any modification, the licensee shall confirm with MNR whether a site plan amendment is required to permit those proposed changes. g. An acoustic barrier is required to be solid, with no gaps or opening, and shall satisfy a minimum area density of 20 kg/m2. It could take the form of a pit or
- quarry face, stockpile, acoustic fence, ISO containers, a combination of these, or any construction satisfying the requirements of an acoustic barrier. h. Acoustical berms shall be established with the listed top-of-berm absolute height in masl according to Table 3 below and shall be maintained for the

duration of extraction and processing within the proposed quarry extension. Table 3 - Berm Heights and Locations

Implementation Timing West Extension Boundary Prior to Phase 1A Extraction The Central Processing Plant shall be established on the quarry floor of approximately 230.5 masl at a central location within Phase 1A as soon as

practicable and shall be prohibited from operating more than 900 m from Concession Road B-C. An acoustical barrier with a minimum height of 10 m shall be established between the Plant and Receptors R09, and R10 at a maximum setback distance of 30 m. . The Portable Plant shall operate on the quarry floor at a maximum elevation of approximately 230.5 masl. An acoustical barrier shall be established between the Portable Plant and receptors based on its operating location as detailed in Table 4 below:

Shielded Receptors

Phase 1B, Phase 2	7 m @ 30 m	R10
Phase 3A	9 m @ 30 m	R09
	7 m @ 30 m	R10
Phase 3B	5.2 m @ 7 m	R09
	7m @ 30 m	R10

Table 4 - Portable Plant Barrier Requirements

Minimum Height and Setback

- k. The Portable Plant shall be prohibited from operating within 575 m of Receptor R10, or within Phase 3B. I. Extraction within Phase 3B shall be limited to a single Extraction Loader or Excavator.
- m. Drilling operations in Phase 2, 3a and 3b shall be mitigated using either a Quiet Rock Drill or by implementing a barrier between the Rock Drill and key receptors as detailed in Table 5 below. The listed barrier may be achieved by using a tractor trailer with plywood covering the bottom opening.

Table 5 - Drill Mitigation Table			
Drill Location	Barrier Requirement	Shielded Receptors	
Phase 2	4 m Height @ 7 m Distance	R10	
Phase 3A, 3B	4 m Height @ 7 m Distance	R9	

- n. Noise Controls Required to Address Potential Dwelling at VL12: n.a. If a building permit for a sensitive use is granted for the property represented by VL12, the following additional noise controls shall be required:
- n.a.a. Prior to extraction operations, an acoustic barrier with a minimum height of 240 MASL shall be installed along the south boundary of the site as shown in the Operation Plan (Barrier C). It shall extend east from the south extension boundary by approximately 330 m. This barrier shall
- n.a.b. Processing operations within 850 m of VL12 shall require an acoustic barrier between the Central Plant and VL12 with a minimum height of 9 m and a maximum setback distance of 30 m.

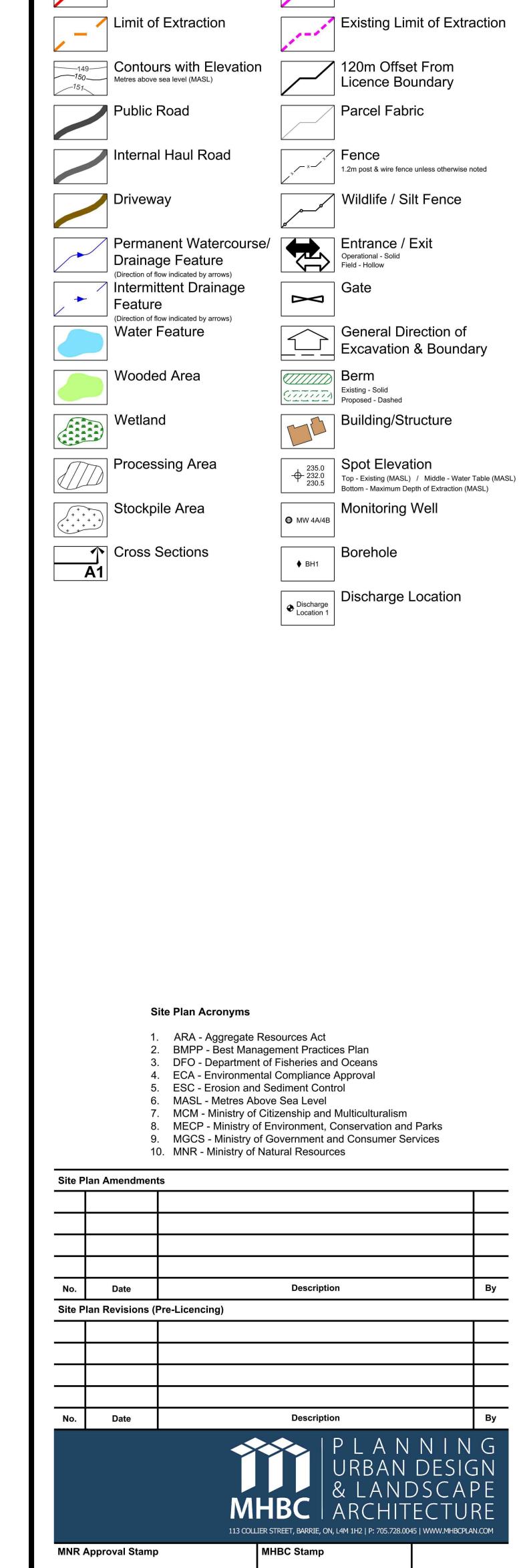
a. There are no site plan recommendations.

8. Water Resources

a. Prior to the start of water taking and/or water discharge, a Ministry of Environment, Conservation and Parks (MECP) Environmental Compliance Approval (ECA) shall be obtained and the licensee shall operate in compliance with these approval instruments, including the associated monitoring and reporting. b. The proposed ground and surface water monitoring program outlined in Section 10.0 of the Level 1 and 2 Water Report shall be included in these

intakes. The proposed change in land use (from agriculture to aggregate extraction) will reduce the number of prescribed drinking water threats. Thus, no

- c. The licensee shall implement the Complaints Response Program as outlined in Section 9.0 of the Level 1 and 2 Water Report in the event of a water well
- d. The proposed quarry extension lands are located greater than 5 km from the nearest protection zones for any communal water supply wells and lake
- source water protection concerns are noted.
- e. The constructed sumps, drainage channels and/or settling ponds shall be created to promote the safe discharge of snow melt, surface water runoff and/or ground water seepage during quarry operations (Phases 1 to 3). The sumps and/or drainage channels will orient flows to the proposed outlet locations to maintain the receivers (seep) form, function and hydraulic connection to the centralized wetland.



Legal Description

Township of Ramara

County of Simcoe

(former geographic Township of Rama)

Licence Boundary

Part of Lots 2, 3 and 4, Concession C and Part Lots 3, 4 and 5, Concession D

Existing Licence Boundary

Kingfisher North Quarry Extension 7556 Concession Road B-C, Ramara, Ontario, L3V 0K7 MNR Licence Reference No. Applicant's Signature

Christopher Poole

Is authorized by the Ministry of

Natural Resources pursuant to

Subsection 0.2(3)(f) of Ontario

Regulation 244/97 to prepare and certify site plans.

411 Four Valley Drive, Unit # 35

Vaughan, Ontario

Plan Scale: 1:3000 (Arch E) October 2025 Drawing Name **Operational Plan**

Applicant

Drawing No. N:\Brian\2411A NRK - Quarry Expansion\Drawings\Site Plan\CAD\2411A - Site Plan.dwg

