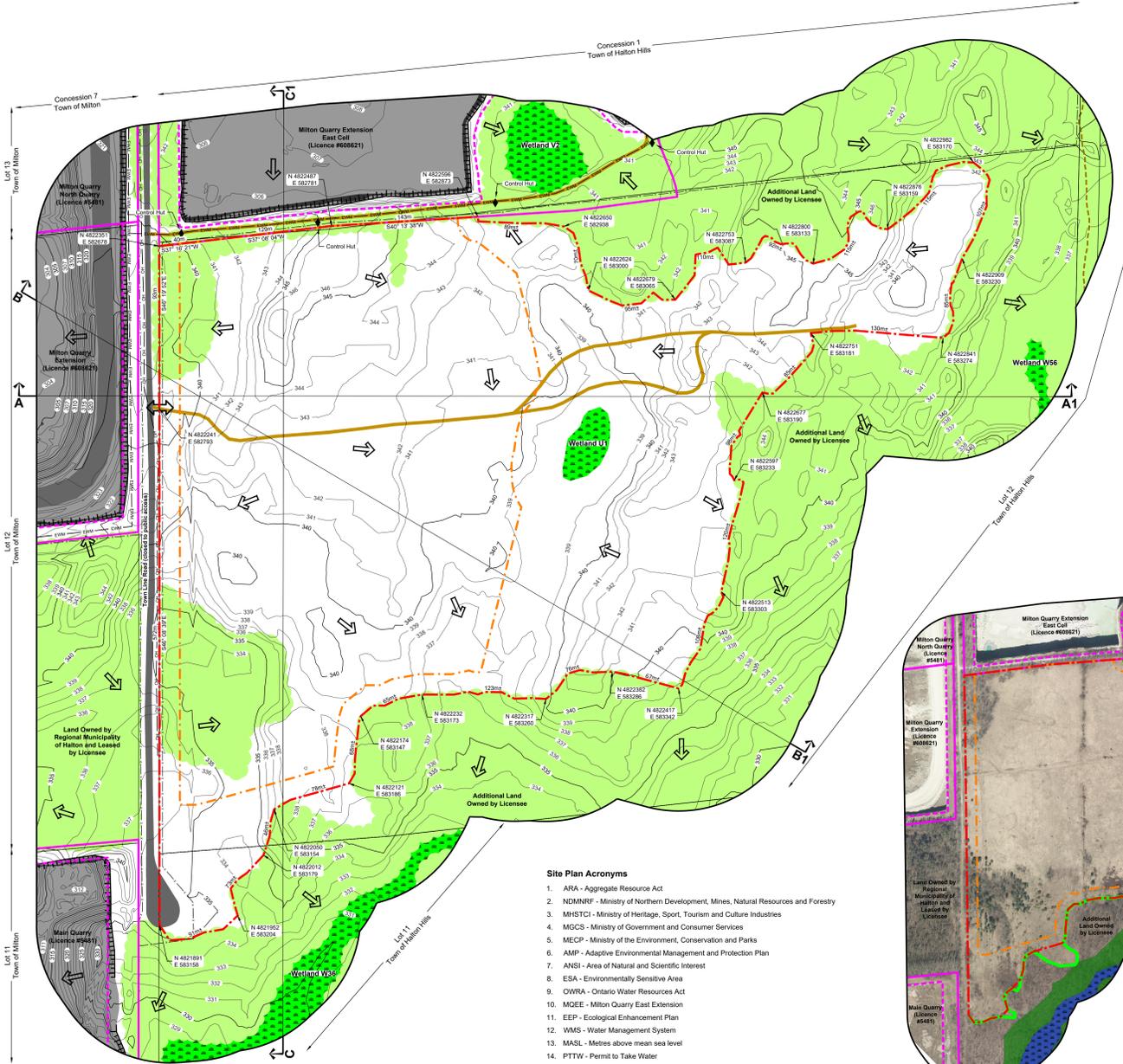
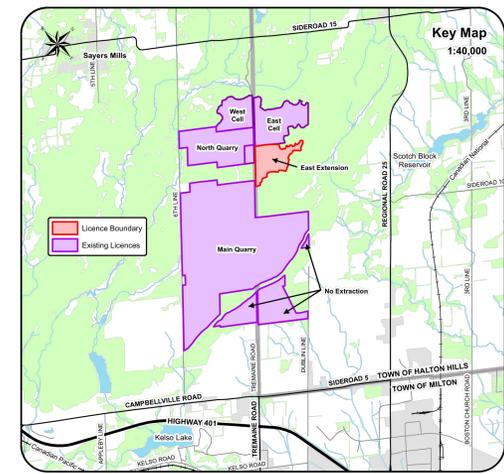
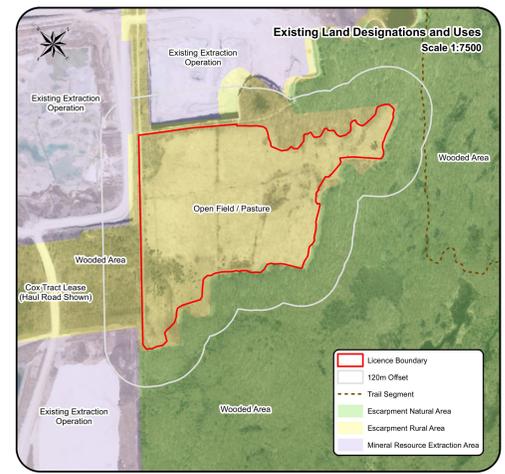


**Section A-A1**  
1:2000 Horizontal  
1:1000 Vertical

**Section B-B1**  
1:2000 Horizontal  
1:1000 Vertical

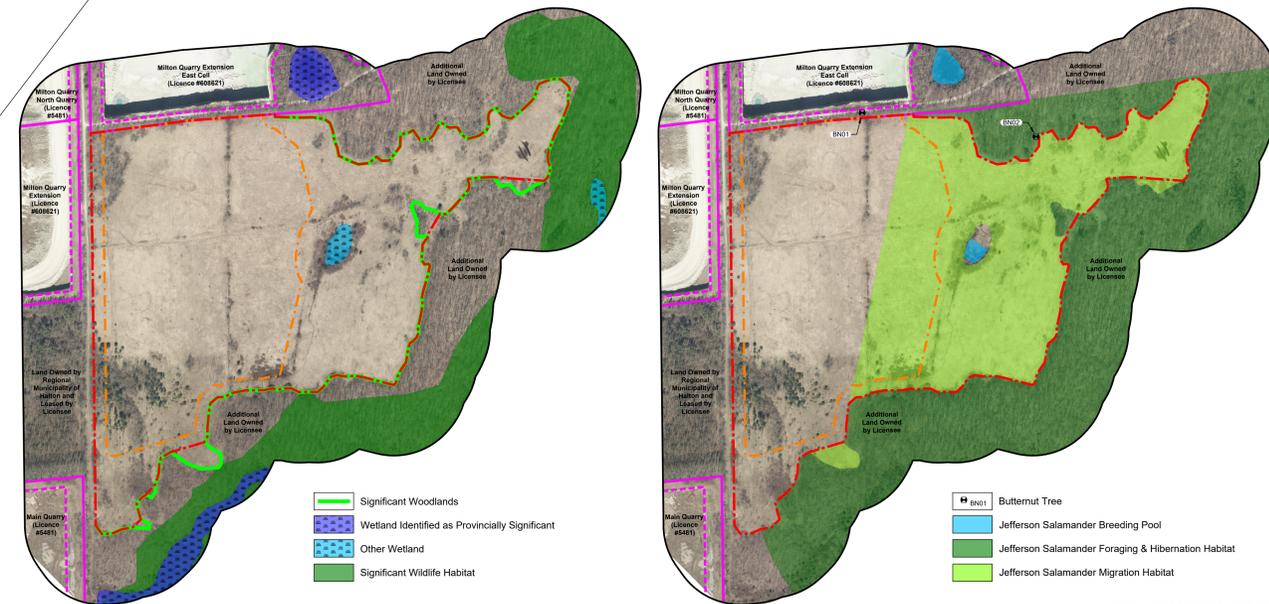
**Section C-C1**  
1:2000 Horizontal  
1:1000 Vertical



- General Notes:**
- Numbering scheme used for general and existing features notes refers to Aggregate Resources of Ontario Site Plan Standards.
  - A key map identifying the location of the licence is provided on the plan view of this drawing.
  - The general description of the geographic location of the site is provided in the titleblock on each drawing.
  - All geographic features are shown to scale in Universal Transverse Mercator (UTM) with North American Datum 1927 (NAD27), Zone 17 (metre), Central Meridian 81 degrees west coordinate system. Northing and easting coordinates for select corners and where an entrance/exit intersects the licence boundary have been identified on the plan view.
  - The plan view on each drawing is at a scale of 1:2000 unless otherwise specified.
  - The applicant's contact information and signature is contained in the titleblock on each drawing.
  - Not applicable since it only applies to wayside permits.
  - The name and signature of the individual who prepared the site plan is located in the titleblock on each drawing.
  - This site plan is prepared under the Aggregate Resources Act (ARA) for a Class 'A' Licence for a quarry below the ground water table.
  - All references to north, south, east and west are based on site north (not true north).
  - The schedule for site plan amendments is contained in the titleblock for each drawing.
  - See titleblock for legend.
  - The licence boundary of the site including bearings (where applicable), dimensions and northing and easting coordinates are identified on the plan view of this drawing.
  - Area Calculations:  
Licence boundary 30.2 ha  
Limit of extraction 15.9 ha
  - Lot and concession lines are displayed and labelled on the plan view for each drawing.
- Existing Features Notes:**
- The following sources were utilized in preparation of this site plan:  
a. General References  
i.a. Topographic information (excluding contours - see Note 23 on this drawing) was obtained from numerous sources including Ontario Geofab (Land Information Ontario), Northway Photomap Inc. aerial photography captured in the spring of 1997, Google Earth Pro aerial photography captured on May 7, 2018 and field investigations for technical reports.  
i.b. The licence boundary was established using a Sketch prepared by Fred G. Cunningham - Ontario Land Surveyor, dated December 2, 1997 and the significant woodland boundary provided by Goodban Ecological Consulting Inc. (GEC) dated March 23, 2021. Distances between northings and eastings are approximate and for reference purposes only.  
i.c. Land use designations on and within 120 metres of the licence boundary are from the Niagara Escarpment Plan, May 3 - Regional Municipality of Halton, approved June 1, 2017. All land within the licence boundary is designated 'Escarpment Rural Area'. Municipal zoning in this area does not apply.  
i.d. Land use information identified on or within 120 metres of the licence boundary was determined using Google Earth Pro aerial photography captured on May 7, 2018.  
b. Technical Report References  
i.a. Agricultural Impact Assessment, Milton Quarry East Extension, DBH Soil Services Inc., November 4, 2021.  
i.b. Milton Quarry East Extension Noise Impact Study, Aerocoustics Engineering Ltd., December 7, 2021.

- Milton Quarry East Extension Agricultural Impact Assessment, DBH Soil Services Inc., November 4, 2021.
  - Dufferin Milton Quarry East Extension Air Quality Assessment, RWDI, November 16, 2021.
  - Stage 1 and 2 Archaeological Assessment Milton Quarry East Extension, Golder Associates Ltd., April 30, 2021.
  - Stage 3 Archaeological Assessment Location 2 (AGX-306), Milton Quarry East Extension, Golder Associates Ltd., April 30, 2021.
  - Blast Impact Analysis Milton Quarry East Extension, Earthquake, November 25, 2021.
  - Cultural Heritage Impact Assessment Report Milton Quarry East Extension, MHBC, December 2021.
  - Milton Quarry East Extension Fiscal Impact Study, Atlas Group Economic Consulting, November 15, 2021.
  - Geology and Water Resources Assessment Report Dufferin Aggregates Milton Quarry East Extension, GHD, December 2021.
  - Addendum to Updated Adaptive Environmental Management and Protection Plan (AMP) Milton Quarry East Extension, GHD and Goodban Ecological Consulting Inc. (GEC), December 2021.
  - Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIA) Dufferin Aggregates Milton Quarry East Extension, Goodban Ecological Consulting Inc. (GEC), December 2021.
  - Ecological Enhancement Plan (EEP) & Rehabilitation Plan Report, Dufferin Aggregates Milton Quarry East Extension, Goodban Ecological Consulting Inc. (GEC), December 2021.
  - Traffic Impact Study/ Haul Route Assessment, Dufferin Aggregates Milton Quarry East Extension, The Municipal Infrastructure Group Ltd. (TMIG), October 2021.
  - Visual Impact Assessment Proposed Extension of the Milton Quarry, MHBC, November 2021.
  - Progressive and Final Rehabilitation and Monitoring Study, Dufferin Aggregates Milton Quarry East Extension, MHBC, December 2021.
  - Municipal zoning on and within 120 metres of the licence boundary does not apply (see Note 15 a.c. on this drawing).
  - Existing land designations and uses are provided on this drawing.
  - The maximum predicted water table (based on existing and interim conditions) within the limit of extraction varies between 315.1 and 335.0 metres above mean sea level (see plan view on drawing 2 of 4 for location).
  - A field access exists in the location shown on the plan view.
  - All significant natural features on and within 120 metres of the licence boundary are shown on the Key Natural Heritage Schematic on this drawing.
  - All significant human-made features on and within 120 metres of the licence boundary are shown on the plan view.
  - There are buildings and structures associated with the water mitigation system (eg. control huts) within 120 metres of the licence boundary.
  - Contours were obtained from the Region of Halton's Open Data Catalogue which were derived from 2019 aerial photography and are displayed in one metre intervals. Elevations shown are in metres above mean sea level (masl).
  - Surface drainage on and within 120 metres of the licence boundary is by overland flow in the directions shown by arrows on the plan view, or by infiltration.
  - The location of existing tree cover on and within 120 metres of the licence boundary is shown on the plan view.
  - Post and wire fencing (unless noted otherwise) exists in the locations shown on the plan view.
- Aggregate Resources of Ontario Site Plan Standards notes 27 to 32:  
There are no existing aggregate operations or features on-site such as processing areas with stationary or portable equipment, stockpiles, recyclable materials, scrap, haul roads, fuel storage, berms or excavation faces.

**Key Natural Heritage Features Schematic**  
Scale 1:4000



- Site Plan Acronyms**
- ARA - Aggregate Resource Act
  - NDMNR - Ministry of Northern Development, Mines, Natural Resources and Forestry
  - MHSTCI - Ministry of Heritage, Sport, Tourism and Culture Industries
  - MGCS - Ministry of Government and Consumer Services
  - MECP - Ministry of the Environment, Conservation and Parks
  - AMP - Adaptive Environmental Management and Protection Plan
  - ANSI - Area of Natural and Scientific Interest
  - ESA - Environmentally Sensitive Area
  - OWRA - Ontario Water Resources Act
  - MQEE - Milton Quarry East Extension
  - EEP - Ecological Enhancement Plan
  - WMS - Water Management System
  - MASL - Metres above mean sea level
  - PTTW - Permit to Take Water

- Legal Description**  
Part of Lots 11 and 12, Concession 1  
(former geographic Township of Esquesing)  
Town of Halton Hills  
Regional Municipality of Halton
- Legend**
- Licence Boundary
  - Limit of Extraction
  - Contours with Elevation  
Metres above sea level (MASL)
  - Road
  - Field Access
  - Excavation Face
  - Disturbed Area
  - Wooded Area
  - Wetland  
Boundaries Determined by GEC
  - Control Hut
  - Existing Licence Boundary
  - Existing Limit of Extraction
  - 120m Offset From Licence Boundary
  - Lots and Concessions
  - Trail Segment
  - Overhead Hydro
  - Existing Watermain
  - Fence  
1.2m post & wire fence unless otherwise noted
  - Entrance / Exit  
Field Entrance
  - Direction of Surface Drainage
  - Cross Sections

- Legend - Cross Sections**
- Licence Boundary
  - Limit of Extraction
  - Existing Licence Boundary
  - Existing Limit of Extraction
  - Existing Grade
  - Maximum Predicted Water Table  
Based on existing and interim conditions
  - Maximum Depth of Excavation
  - Topsoil and/or Overburden
  - Aggregate Available for Extraction

**Site Plan Amendments**

| No. | Date | Description | By |
|-----|------|-------------|----|
|     |      |             |    |

**Site Plan Revisions (Pre-Licensing)**

| No. | Date | Description | By |
|-----|------|-------------|----|
|     |      |             |    |

**MHBC Stamp**  
Is authorized by the Ministry of Northern Development, Mines, Natural Resources and Forestry pursuant to Subsection 0.2(3)(9) of Ontario Regulation 244/97 to prepare and certify site plans.

**MHBC Stamp**  
Is authorized by the Ministry of Northern Development, Mines, Natural Resources and Forestry pursuant to Subsection 0.2(3)(9) of Ontario Regulation 244/97 to prepare and certify site plans.

**Applicant**  
Dufferin Aggregates  
A Division of CRH Canada Group Inc.  
2300 Steeles Avenue West, 4th Floor  
Concord, Ontario  
L4K 5X6

**Project**  
**Milton Quarry East Extension**  
10305 Nassagaweya Esquesing Townline, Halton Hills, Ontario

**NDMNR Licence Reference No.**

**Applicant's Signature**  
*Christopher Poole*

**Date**  
December 2021

**Drawn By**  
C.P.

**File No.**  
9061DJ

**Checked By**  
B.Z.

**File Name**  
**Existing Features & Cross Sections**

**Drawing No.**  
**1 of 4**

**File Path**  
N:\9061DJ - Dufferin - Milton Quarry East Extension\Drawings - Must be in NAD 27\Site Plan\CAD\9061DJ - Site Plan - December 2021.dwg

Numbering scheme used for operational notes refers to Aggregate Resources of Ontario Site Plan Standards.

- All entrances and exits are shown on the plan view of this drawing. Highway trucks and quarry vehicles will access Phases 1 and 2 anywhere along the common limit of extraction with Licence #008621. Highway trucks and quarry vehicles (excluding road haul trucks) may also use the entrance/exit in the southwest corner of Phase 1 to access the site from Licence #5481 for rehabilitation purposes.
- A gate shall be installed at the entrance/exit in the southwest corner of Phase 1, kept closed during hours of non-operation and maintained. A gate shall not be required where haul roads cross the common boundary with Licence #008621 (see Operational Note 54 - Variations from Control and Operation Standards on this drawing).
- The area to be extracted is 15.9 ha.
- Not applicable since it only applies to aggregate permits.
- Prior to any site clearing, the licence boundary shall be fenced with 1.2 m post and wire fencing in the locations shown on the plan view. Fencing shall not be required along the common boundary with Licence #008621 to eliminate constraints associated with the extraction operation, along the north boundary of the licence since the property boundary is already fenced and in the southwest corner since there is an existing fence to the east (see Operational Note 54 - Variations from Control and Operation Standards on this drawing).

Wherever the licence boundary is not fenced, the licence boundary shall be delineated with marker posts a maximum of 30 metres apart. The marker posts shall be visible from one kilometre to the west.

The entire site will be fenced through a combination of existing and proposed fencing to restrict access to the extraction area and the area consisting of the main watermain. All fencing shall be maintained.

- Throughout the life of the operation there shall:
  - Be no buildings or structures except those associated with the water management system;
  - Be no scrap areas;
  - Be internal haul roads located anywhere on the quarry floor;
  - Be service access roads to access the watermain, feeder lines and associated facilities for the recharge mitigation system, and for drills and blasting trucks;
  - Be stockpiles of aggregate, topsoil and overburden located anywhere within the limit of extraction (see Operational Note 54 - Variations from Control and Operation Standards on this drawing).

- No processing shall occur on-site. Excavated material shall be hauled to Licence #5481 for processing (extraction Scenario 1, see Noise Note F.1) or to portable processing plants in the East Coll of Licence #008621 and Main Quarry of Licence #5481 for processing (extraction Scenario 2, see Noise Note F.2).
- Aggregate recycling shall not occur within this licence.

- The site shall be extracted in two phases. Phase 1 shall be extracted in a southerly direction and Phase 2 shall be extracted in an easterly direction (as depicted on the plan view).
- Prior to the stripping of topsoil and overburden, Natural Environment Notes E.2 and E.4 shall be implemented and notes E.6 to E.9 shall be advised to "topsoil and overburden shall be stripped stored separately wherever there are distinguishable layers and sufficient thickness to allow separate handling".

- Topsoil and overburden materials may be moved between this site and Licence #5481 and #008621 (see Operational Note 54 - Variations from Control and Operation Standards on this drawing). Soil materials on site shall be classified and separated where appropriate as:
  - Organics and topsoils (for final dressing to promote regeneration);
  - Non-structural fill; and
  - Structural material.

Temporary topsoil and overburden stockpiles which remain for more than six months shall be graded and seeded to control erosion. Seeding shall not be required if these stockpiles have vegetated naturally in the six months.

- The maximum number of lifts is three, while the majority of the operation will occur in two lifts. Operations may go to one or three lifts as required based on depth of resource or mitigation requirements. The depth of the first lift will vary from the surface to add to topography and thickness of the resource but shall have a minimum elevation of 325 msl. The third lift includes a shallow extraction lift (replaces formation) across the quarry floor. The maximum height of each lift shall not exceed Ministry of Labour requirements.

- Surface runoff from the site preparation area shall be controlled to contain erosion and sedimentation outside of the extraction area by installing the silt/exclusion fencing in the locations shown on the plan view. The extraction operations shall be conducted in a dry (dewatered) state and dewatering of the extraction areas shall be required. Dewatering and discharge shall be in accordance with a Permit to Take Water (PTTW) under the Ontario Water Resources Act (OWRA) and an Environmental Compliance Approval (ECA) under the Environmental Protection Act. The active quarry area shall be dewatered using a pump constructed in the quarry floor, through the royalties and into the top of the catch head shaft. Water shall be pumped from the sumps and conveyed through a surface and/or buried pipe discharge system. Ground and surface water is collected and conveyed to adjacent Licence #008621 and Licence #5481 for storage and integration into the ground water recharge and mitigation system.

The priority for water use will be for:

- The protection of the environment first (i.e. downstream flow to the Hilton Falls Tributary as per agreement with Conservation Halton and operation of the mitigation system to maintain target water levels & support natural features and functions);
- Operation of the quarry second; and
- Filling of the lakes third.

Any surplus water not required for these purposes and for which no storage is available shall be discharged to Hilton Falls Reservoir Tributary.

The site is not within a wetland protection area and source water protection policies do not apply.

- Prior to site preparation, a Spills Contingency Plan shall be developed and implemented. Fuel trucks shall be utilized for refueling mobile quarry equipment in accordance with the Liquid Fuels Handling Code. All spills on site shall be handled in accordance with the Spills Contingency Plan. No fuel shall be stored on-site.
- See plan view on this drawing for the location and labeling of all extraction limits from the licence boundary.

- See plan view on this drawing for maximum depth of extraction elevations through the use of spot elevations. The site plan allows for the full removal of the amphibole/actinolite limestone units and the proposed spot elevations may vary by 2-3 metres with the depth of the resources encountered.
- No acoustic or visual berms are required. Therefore, the location and minimum height of berms will be provided.
- No acoustic or visual berms are required. Therefore, details regarding how berms will be vegetation and maintained are not provided.

- Prior to extraction below the water table, installation of the hydrogeologic monitoring and mitigation systems shall occur. Extraction of the bedrock will involve drilling blast holes, blasting and loading blasted aggregate into Off-Road trucks where it will be transferred to Licence #008621 and Licence #5481 for processing and shipping to market. See Operational Note 33 for additional information.

On-site equipment (and reference to noise emission levels in dba @ 30m) will include:

- Site preparation and Rehabilitation
- Backhoes
  - Haul trucks
  - Bulldozers
  - Compactors
  - Graders
  - Compactors
  - Water and fuel trucks
  - Tree clearing equipment
  - Maintenance trucks
  - Highway trucks
  - Pickup trucks

- Drilling, extraction and transport
- 3 rock drills
  - 2 extraction loaders
  - 1 excavator
  - 24 Off-Road truck tips per hour (48 passes per hour)
  - Water trucks
  - Maintenance trucks
  - Maintenance trucks
  - Explosive trucks & service vehicles as required
  - Pickup trucks

- No processing shall occur on-site. Excavated material shall be hauled to Licence #5481 for processing (extraction Scenario 1, see Noise Note F.1) or to portable processing plants in the East Coll of Licence #008621 and Main Quarry of Licence #5481 for processing (extraction Scenario 2, see Noise Note F.2).
- Aggregate recycling shall not occur within this licence.

- The site shall be extracted in two phases. Phase 1 shall be extracted in a southerly direction and Phase 2 shall be extracted in an easterly direction (as depicted on the plan view).
- Prior to the stripping of topsoil and overburden, Natural Environment Notes E.2 and E.4 shall be implemented and notes E.6 to E.9 shall be advised to "topsoil and overburden shall be stripped stored separately wherever there are distinguishable layers and sufficient thickness to allow separate handling".

- Topsoil and overburden materials may be moved between this site and Licence #5481 and #008621 (see Operational Note 54 - Variations from Control and Operation Standards on this drawing). Soil materials on site shall be classified and separated where appropriate as:
  - Organics and topsoils (for final dressing to promote regeneration);
  - Non-structural fill; and
  - Structural material.

Temporary topsoil and overburden stockpiles which remain for more than six months shall be graded and seeded to control erosion. Seeding shall not be required if these stockpiles have vegetated naturally in the six months.

- The maximum number of lifts is three, while the majority of the operation will occur in two lifts. Operations may go to one or three lifts as required based on depth of resource or mitigation requirements. The depth of the first lift will vary from the surface to add to topography and thickness of the resource but shall have a minimum elevation of 325 msl. The third lift includes a shallow extraction lift (replaces formation) across the quarry floor. The maximum height of each lift shall not exceed Ministry of Labour requirements.

- Surface runoff from the site preparation area shall be controlled to contain erosion and sedimentation outside of the extraction area by installing the silt/exclusion fencing in the locations shown on the plan view. The extraction operations shall be conducted in a dry (dewatered) state and dewatering of the extraction areas shall be required. Dewatering and discharge shall be in accordance with a Permit to Take Water (PTTW) under the Ontario Water Resources Act (OWRA) and an Environmental Compliance Approval (ECA) under the Environmental Protection Act. The active quarry area shall be dewatered using a pump constructed in the quarry floor, through the royalties and into the top of the catch head shaft. Water shall be pumped from the sumps and conveyed through a surface and/or buried pipe discharge system. Ground and surface water is collected and conveyed to adjacent Licence #008621 and Licence #5481 for storage and integration into the ground water recharge and mitigation system.

54. Variations from Control and Operation Standards

| Section 6.13 Standard | Variation  | Rationale   |
|-----------------------|--|---|
| (11) & (12)           | Gates shall not be required where haul roads cross the common boundary with Licence #008621.                                     | This will eliminate constraints to the movement of equipment between licences owned by the same licensee.   |
| (11) & 11             | Excavation shall occur in the setback area to install the water mitigation system.   | This will enable material to be extracted along the common boundary and for rehabilitation to transition between licences. A site plan amendment for existing Licence #008621 is required.              |
| (11)(6)               | A 0 metre setback shall be provided where the licence abuts existing Licence #008621.  | This will be consistent with Licence #008621 to the south which has a 20 metre setback along the western boundary adjacent to the road allowance which is closed to public access.                      |
| (11)(10.ii)           | A 20 metre setback shall be provided along the western boundary adjacent to the road allowance which is closed to public access. | This will be consistent with Licence #008621 to the south which has a 20 metre setback along the western boundary adjacent to the road allowance which is closed to public access.                      |
| (11)(3)               | Aggregate, topsoil and overburden stockpiles may be located within 30 metres of the licence boundary.                            | The licence owner shall be demarcated every 30 metres from the north, east and south while Town Line Road to the west is closed to public access.   |
| (11)(7 & 1)(8)        | Topsoil and overburden may be transferred to existing Licence #5481 and/or Licence #008621.                                      | This will allow stripped material from site preparation to be used immediately for progressive rehabilitation or for overburden to be used in ramp construction in other parts of the existing licence. |
| (11) 19               | Portions of the quarry faces shall remain vertical. See drawings 3 of 4 and 4 of 4.  | To allow movement of groundwater from the lakes towards off site features and to create a more diversified habitat and visually interesting rehabilitated landform.                                     |
| (3)(A)                | Portions of the licence boundary shall not be fenced.  | The licence boundary shall be demarcated every 30 metres where required. See Operational Note 33 for additional information.  |

- The maximum annual tonnage for this site is unlimited.
- The site is not located within the Protected Countryside of the Greenbelt Plan.
- Blasting may occur up to three times per day, Monday to Friday between 8:00 a.m. and 6:00 p.m. excluding statutory holidays.
- There are no sensitive receptors within 500 m of the site. The closest sensitive receptor is over 1,200 metres from the site.

**Technical Report Recommendations**

- A. Air Quality**
- The licensee shall apply water or another provisionally approved dust suppressant to internal haul roads and processing areas, as necessary to mitigate dust, if the quarry is located within 1,000 metres of a sensitive receptor.
  - The licensee shall equip any processing equipment that creates dust with dust suppressing or collection devices if it is located within 300 metres of a sensitive receptor.
  - The licensee shall obtain an Environmental Compliance Approval under the Environmental Protection Act where required to carry out operations of the quarry.

- The site will operate in accordance with CRHS Dust Control Work Instruction, which functions as a Best Management Practices Plan for light dust, which may be amended from time to time, considering actual impacts and operational considerations. The recommendations in the Work Instruction are based on the maximum daily production rates. At lower production rates, the control measures specified in the Dust Control Work Instruction can be reduced accordingly, provided dust remains mitigated on site.

- B. Archaeology**
- Should deeply buried archaeology remains be found during the course of site preparation and/or extraction related activities, the Ministry of Heritage, Sport, Tourism and Culture Industries (MHTCI) shall be notified.
  - In the event that human remains are encountered during construction or extraction activities, the licensee shall immediately contact both the MHTCI and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Government and Consumer Services (MGCS).

C. Blasting

- All blasts shall be monitored for both ground vibration and overpressure by an independent Blast Consultant at the closest privately owned sensitive receptors adjacent the site, or at a location that is closer than a sensitive receptor, with a minimum of two (2) instruments - one installed in front of the blast and one installed behind the blast.
- The guideline limits for vibration and overpressure shall adhere to standards as outlined in the MECP Model Municipal Noise Control by-law publication NPC 119 (1978) or any such document, regulation or guideline which supersedes this standard.
- In the event of an exceedance of NPC 119 limits or any such document, regulation or guideline which supersedes this standard, blast design and protocols shall be reviewed prior to any subsequent blasts and revised accordingly in order to return the operations to compliance.
- Orientation of the aggregate extraction operation will be designed and maintained so that the direction of the overpressure propagation will be away from structures as much as possible.
- Blast designs shall be continuously reviewed with respect to fragmentation, ground vibration and overpressure. Blast designs shall be modified as required to ensure compliance with applicable guidelines and regulations.

- Blasting procedures such as drilling and loading shall be reviewed on a yearly basis and modified as required to ensure compliance with industry standards.
- Detailed blast records shall be maintained in accordance with current industry best practices.

- D. Geology and Water Resource**
- Implement and operate the proposed water management system mitigation and rehabilitation measures, including any necessary response actions, in accordance with the Adaptive Environmental Management and Protection Plan (AMP) Addendum.
  - Conduct the water and ecology monitoring program and reporting in accordance with the AMP Addendum.
  - Amend the OWRA approvals as necessary to reflect the aspects of the water management measures relevant to those approvals.
  - Extend the implementation of the Milton Quarry Contingency and Pollution Prevention Plan to include the Milton Quarry East Extension (MQEE).

**E. Natural Environment**

- No development is permitted within the habitat of Jefferson Salamander and Unsexed Ambystomas (Jefferson Salamander dependent population) unless authorized by an Endangered Species Act (ESA) Permit or other authorization from the Ministry of Environment, Conservation and Parks (MECP). A copy of the ESA Permit will be provided by the proponent to the NDNRFP Aggregate Inspector.
- The limit of extraction shall be clearly demarcated with monument markers (e.g., metal flags or equivalent) with maximum spacing of 20 metres between markers. In proximity to the Significant Woodland Boundary and Ecological Enhancement Plan (EEP) areas, the maximum spacing of monument markers shall be 10 metres and signage stating "Ecological Area - No Disturbance" or equivalent wording shall be installed.

- The limits of disturbance for the WMS installation shall be clearly demarcated, especially in the vicinity of the Significant Woodland, wetlands, buffer areas and EEP areas, prior to commencing WMS installation works.
- Silt/exclusion fencing shall be installed in the location shown on the plan view. Salamander Excluder will be installed at the locations shown on the plan view. Silt/exclusion fencing may be heavy-duty silt fencing, Annex Wildlife Fencing or equivalent. The condition of the fencing shall be monitored on a regular basis and it shall be promptly repaired as necessary.

- The western access road located between the two Salamander Excluders shall only be used for WMS monitoring and maintenance, ecological enhancement works and ecological monitoring. It shall not be used for operational purposes.
- Tree-clearing shall not occur during the active period for bats and the bird breeding season between April 1st and October 31st. This will avoid potential contraventions of the Migratory Bird Convention Act and the Endangered Species Act.

- Stripping of topsoil and ground vegetation shall not occur during the bird breeding season between April 1st and August 28th. This will avoid potential contraventions of the Migratory Bird Convention Act and the Endangered Species Act. Stripping of overburden may occur during the bird breeding season, provided that the topsoil and ground vegetation has already been removed.

- Books, rocks and cobbles will be salvaged from fence lines and stone piles within the limit of extraction. Weathered rocks will also be salvaged during stripping operations. This material will be stockpiled within the extraction area for use as part of the Ecological Enhancement Plan (EEP), diffuse discharges, and future quarry rehabilitation.

- Logs, stumps, root wads and branches will be salvaged during clearing and grubbing operations. Tree tops may be chipped. The salvaged woody material and wood chips will be stockpiled within the extraction area for use as part of the EEP and future quarry rehabilitation.

- The Water Management System (WMS) shall be installed consistent with the restrictions and design considerations provided in the AMP Addendum (GHD and Goodban Ecological Consulting Inc., December 2021).
- The EEP shall be implemented as per the details outlined on drawings 3 of 4 and 4 of 4.

12. Blasting - Peregrine Falcon

- Each year, between early April and mid-May, a qualified ecologist will check to see if Peregrine Falcons are present and nesting within the area to be extracted.
- In the event the qualified ecologist confirms Peregrine Falcons are nesting within the area to be extracted or within the adjacent Licence No. 008621:
  - Quarry personnel shall not walk within 100 metres of an active falcon nest during the period April 15<sup>th</sup> to July 31<sup>st</sup> to the extent feasible.
  - Quarry equipment (such as trucks and loaders) shall not be operated within 25 metres of a nest between April 15<sup>th</sup> to July 31<sup>st</sup>.
  - When extending the existing south face of the quarry southward into the MQEE extraction area, blasting shall not occur within 225 metres of a nest while it is occupied and overpressure shall not exceed 140 dB. During the egg-laying and incubation period (April 20<sup>th</sup> to June 20<sup>th</sup>), the ground vibration at a nest shall not exceed 35 millimetres per second and overpressure shall not exceed 140 dB.
- A qualified ecologist will confirm when the birds are no longer using the nest and then the restrictions listed in note 12.b above will no longer apply.

F. Noise

- The quarry equipment shall satisfy the noise emission levels listed below.

| Equipment         | Reference Sound Pressure Level at 30m (dBA) |
|-------------------|---|
| Rock Drill        | 85  |
| Extraction Loader | 76  |
| Excavator         | 70  |
| Off-Road Truck    | 74  |

- 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 boom 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.
- Drilling operations shall be limited to daytime hours only (07:00 to 19:00).
- The operation may be carried out in one or more separate lifts. If extraction is carried out in multiple lifts, the first lift shall have a maximum elevation of 325 msl.
- 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".

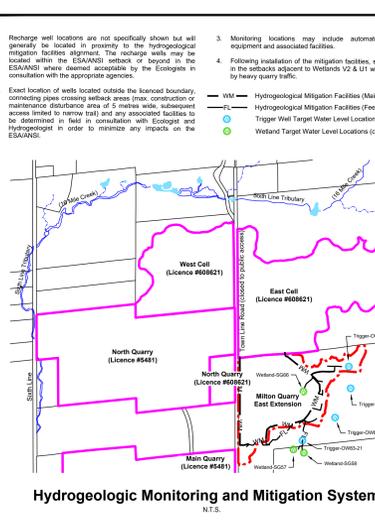
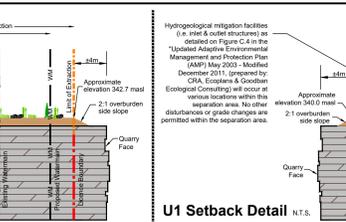
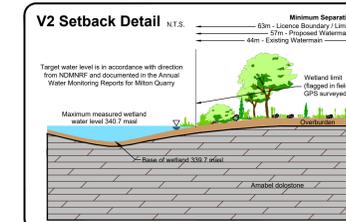
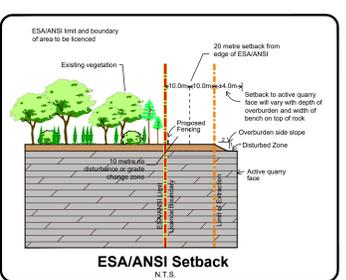
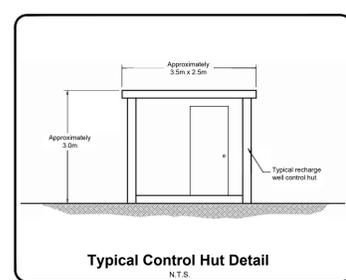
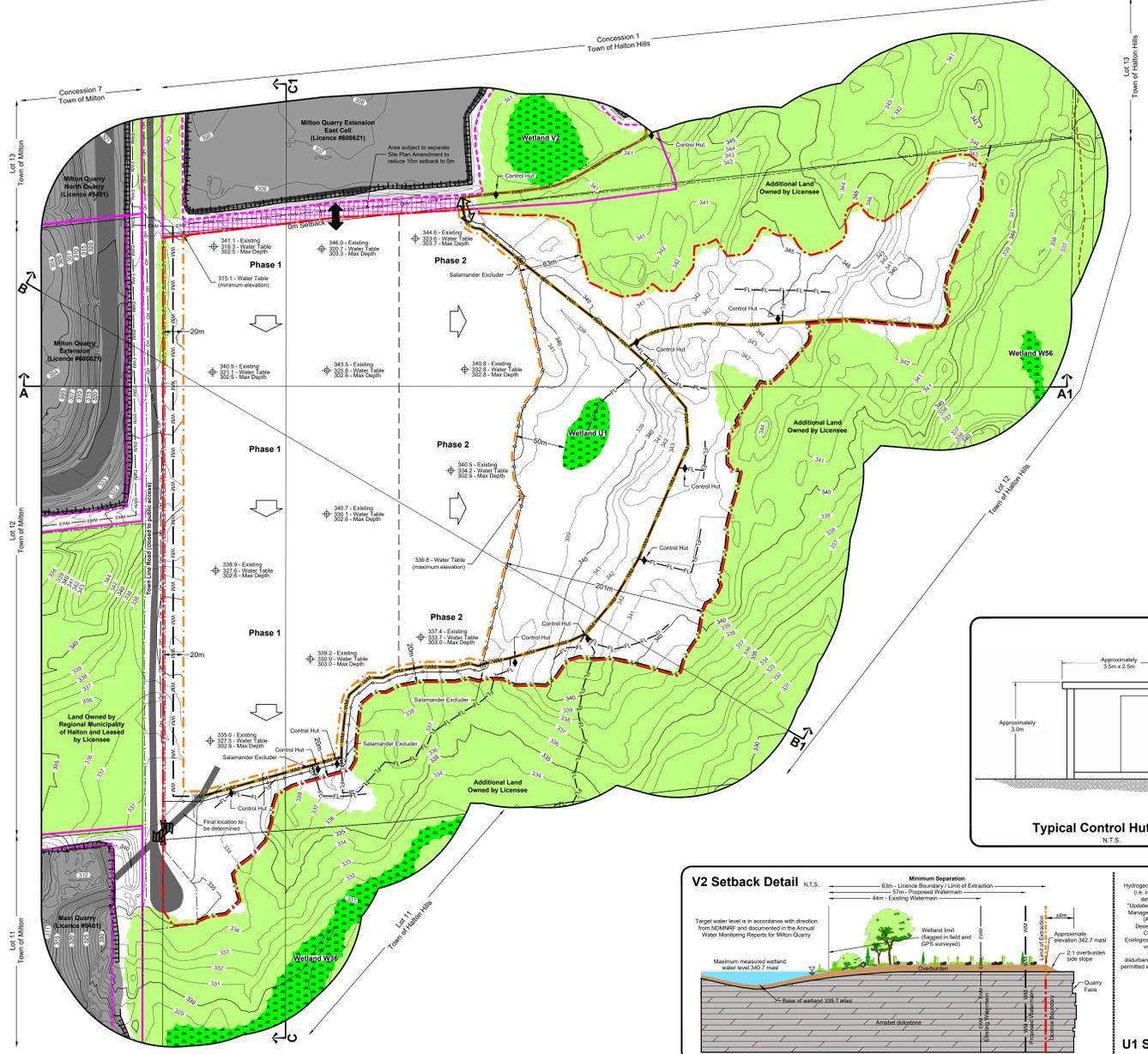
- Noise controls for Scenario 1:
  - The extraction, processing and shipping equipment operating in the quarry is limited to:
    - Three (3) Rock Drills
    - Two (2) Extraction Loaders
    - One (1) Excavator
    - 24 Off-Road truck tips per hour (48 passes per hour)

- Phase 1:
  - Drilling in the Phase 1 "restricted drilling area" indicated on the operational plan is limited to two (2) rock drills operating simultaneously for the first lift only.
  - Drilling in the Phase 1 "single drill area" indicated the operational plan is limited to one (1) rock drill for the first lift only. Two drills can be used simultaneously in this area on the first lift if a 3 m acoustic barrier is constructed to block line of sight between any drills and R17.

- Phase 2:
  - No additional Noise Controls.

- Noise controls for Scenario 2:
  - The extraction, processing and shipping equipment operating in the quarry is limited to:
    - Three (3) Rock Drills
    - Two (2) Extraction Loaders
    - One (1) Excavator
    - 24 Off-Road truck tips per hour (48 passes per hour)

- Phases 1 and 2:
  - No additional Noise Controls.



**Legend**

- Licence Boundary
- Limit of Extraction
- Contours with Elevation
- Road
- Service Access Road
- Extraction Face
- Disturbed Area
- Wooded Area
- Wetland
- Operational Access Unrestricted
- Operational Access Limited - No Off-Road Haul Trucks
- Field Entrance / Exit
- Gate
- Salamander Excluder Location
- Control Hut
- Existing Licence Boundary
- Existing Limit of Extraction
- 120m Offset From Licence Boundary
- Lots and Concessions
- Trail Segment
- Overhead Hydro
- Silt / Exclusion Fencing
- Existing Watermain
- Main Watermain
- Feeder Line
- Fence
- General Direction of Excavation & Boundary
- Spot Elevation
- Cross Sections

**Site Plan Acronyms**

- ARA - Aggregate Resource Act
- NDMRRF - Ministry of Northern Development, Mines, Natural Resources and Forestry
- MHTCI - Ministry of Heritage, Sport, Tourism and Culture Industries
- MGCS - Ministry of Government and Consumer Services
- MECP - Ministry of the Environment, Conservation and Parks
- AMP - Adaptive Environmental Management and Protection Plan
- ANSI - Area of Natural and Scientific Interest
- ESA - Environmentally Sensitive Area
- OWRA - Ontario Water Resources Act
- MQEE - Milton Quarry East Extension
- EEP - Ecological Enhancement Plan
- WMS - Water Management System
- MASL - Metres above mean sea level
- PTTW - Permit to Take Water

**Site Plan Amendments**

| No. | Date | Description | By |
|-----|------|-------------|----|
|     |      |             |    |

**Site Plan Revisions (Pre-Licensing)**

| No. | Date | Description | By |
|-----|------|-------------|----|
|     |      |             |    |

**MHBC Stamp**

**Brian Zeman**  
Is authorized by the Ministry of Northern Development, Mines, Natural Resources and Forestry pursuant to Subsection 2(3)(9) of Ontario Regulation 244/97 to prepare and certify site plans.

**Christopher Poole**  
Is authorized by the Ministry of Northern Development, Mines, Natural Resources and Forestry pursuant to Subsection 2(3)(9) of Ontario Regulation 244/97 to prepare and certify site plans.

**Applicant:** Dufferin Aggregates

**Project:** Milton Quarry East Extension  
10305 Nassagaweya Equising Townline, Halton Hills, Ontario

**NDMRRF Licence Reference No.:** [Blank]

**Applicant's Signature:** [Signature]

**Date:** December 2021

**Plan Scale:** 1:2000 (Arch E)

**Drawn By:** C.P. **File No.:** 9061DJ

**Checked By:** B.Z.

**File Name:** Operational Plan

**Drawing No.:** 2 of 4

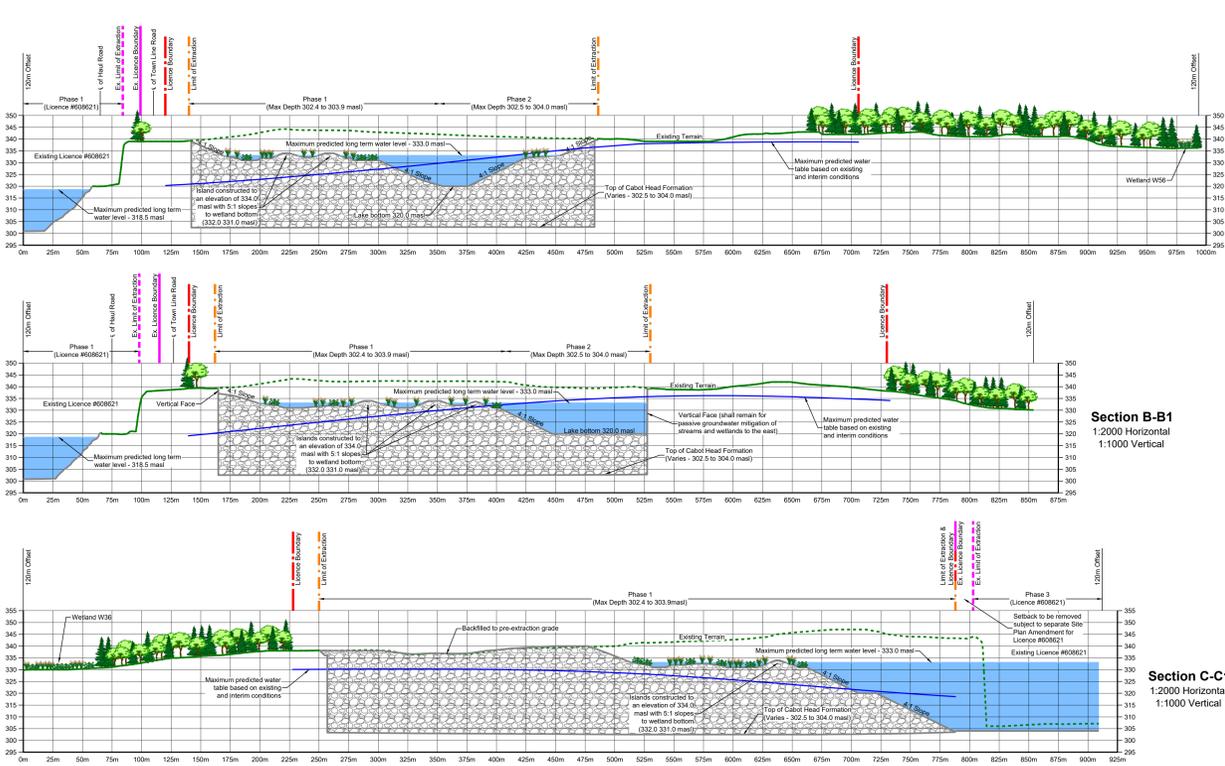
**File Path:** N:\9061DJ - Dufferin - Milton Quarry East Extension\Drawings - Must be in NAD 27\Site Plans\CAD\9061DJ - Site Plan - December 2021.dwg

**PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE**

**MHBC**

113 COLLIER STREET, BARRE, ON, L4M 1H2 | P: 705.728.0405 | F: 705.728.0100 | WWW.MHBCA.CA

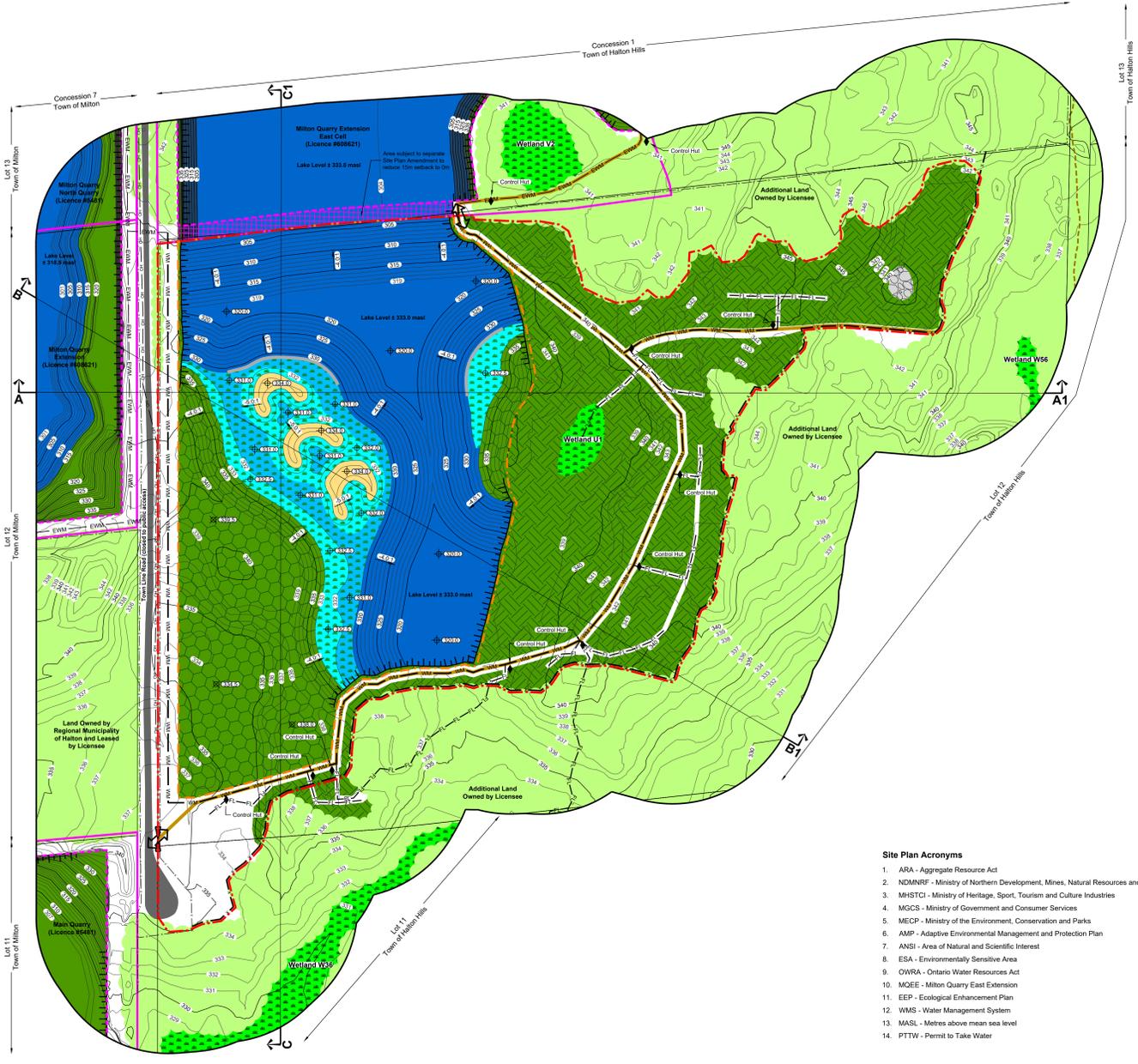




**Section A-A1**  
1:2000 Horizontal  
1:1000 Vertical

**Section B-B1**  
1:2000 Horizontal  
1:1000 Vertical

**Section C-C1**  
1:2000 Horizontal  
1:1000 Vertical



- Site Plan Acronyms**
- ARA - Aggregate Resources Act
  - NDMNR - Ministry of Northern Development, Mines, Natural Resources and Forestry
  - MHTCI - Ministry of Heritage, Sport, Tourism and Culture Industries
  - MCCS - Ministry of Government and Consumer Services
  - MECP - Ministry of the Environment, Conservation and Parks
  - AMP - Adaptive Environmental Management and Protection Plan
  - ANSI - Area of Natural and Scientific Interest
  - ESA - Environmentally Sensitive Area
  - OWRA - Ontario Water Resources Act
  - MOEE - Milton Quarry East Extension
  - EEP - Ecological Enhancement Plan
  - WMS - Water Management System
  - MASL - Metres above mean sea level
  - PTTW - Permit to Take Water

**General Notes**

- Area Calculations:
  - Licence boundary 30.2 ha
  - Limit of Extraction 15.9 ha
- Possible after uses may include:
  - Conservation
  - Passive recreation
  - Low intensity recreation
- The licence will apply for surrender of the licence 1 year after the rehabilitation (with the exception of lake filling) and two post extraction 5 year reviews. Have been successfully completed.

**Rehabilitation Notes**

- Numbering scheme used for operational notes refers to Aggregate Resources of Ontario Site Plan Standards.
- The final rehabilitated landform of the site will consist of a lake, wetlands, islands, above/below water vertical extraction faces and terrestrial habitat (see drawing 3 of 4 for additional details regarding landform creation).
  - Progressive rehabilitation shall commence as limits of extraction are reached within each Phase. Progressive rehabilitation will generally follow the direction and sequence of extraction identified on the plan view and described in the notes on drawing 2 of 4. Slight variations in the operational and rehabilitation sequence shall be permitted in order to adjust for any variable resource, variable market conditions, or for environmental mitigation requirements such as retaining contingency extraction areas. Any major variation from the operational and rehabilitation sequence shall require approval from the NDMNR.
  - Topsoil and overburden shall be stripped, stored and/or placed separately wherever there are distinguishable layers and sufficient thickness to allow separate handling.
  - Topsoil and overburden materials may be transferred between this licence and Licence #5481 and #60261 (see Operational Note 64). Variations from Control and Operation Standards on drawing 2 of 4. Topsoil and organic material shall be transported to areas being prepared for final rehabilitation and overburden material shall be used as structural material or general backfill to bring areas up to required finished grade.
  - Temporary stockpiling of topsoil or overburden may occur during transfer and replacement operations. Any stockpiles which remain for more than six months shall be graded and seeded to control erosion. Seeding shall not be required if these stockpiles have vegetated naturally in the six months.
  - Excess soil, as defined by Ontario Regulation 406/19 under the Environmental Protection Act and/or peat may be imported to the site for the following rehabilitation purpose:
    - To establish the slopes, grades and elevations depicted on the plan view

Excess soil will be accepted in accordance with the "Milton Quarry Off-site Excess Soil Acceptance Protocol". This protocol shall be filed with NDMNR prior to acceptance of any off-site soil.

The maximum amount of excess soil that may be imported to this licence for rehabilitation purposes is 3,850,000 m<sup>3</sup>.

- Vegetation shall be re-established within the limit of extraction during progressive and final rehabilitation in accordance with the planting details provided on drawing 3 of 4.

64. In order to establish the final rehabilitated landform proposed on the plan view, a variety of rehabilitation techniques will be utilized including:

- Backfilling extraction faces and the quarry floor;
- Partially backfilling extraction faces to create cliffs; or
- Leaving extraction faces vertical

Figures 1 to 4 below provide additional information for the rehabilitation techniques.

The wetlands, islands, and terrestrial habitat areas shall be backfilled using on-site overburden and non-market materials from this site or adjacent Licence #60821 (see Operational Note 64 - Variations from Control and Operation Standards on drawing 2 of 4) as well as excess soils in accordance with note 62 on this drawing.

The objective is to integrate wetlands, islands, terrestrial habitat and irregular vertical faces (with steep areas and habitat niches) around the perimeter of the lake (as depicted on the plan view). This will establish a more diverse landscape with a range of flora and fauna habitats.

Additional planting details are provided on drawing 3 of 4.

65. No buildings shall remain on site except for those associated with the recharge mitigation system (e.g. control hubs) which will be maintained in accordance with applicable OVRAs permits to manage the proposed lake level.

No internal haul roads shall remain on-site. Service access roads shall remain to access the watermain and associated facilities.

66. Final surface drainage will follow the rehabilitated contours and directional arrows shown on the plan view. Drainage shall be directed towards the lake and wetlands.

The final predicted water table on-site post extraction is at an elevation of 333.0 msl. The maximum predicted water table elevation is based on existing and interim conditions and is shown in each cross section on this drawing and drawing 1 of 4.

Operation of the mitigation system and associated monitoring as outlined in the AMP shall be continued during the rehabilitation period. The water levels of the proposed lake and rate of lake filling shall be evaluated five years after extraction is complete to refine the appropriate final elevations for the development of the shoreline and associated wetland features. These features shall be finalized and appropriate shoreline vegetation shall be completed during the subsequent five year evaluation period. These two five year reviews shall be completed prior to the surrender of the licence and include an overall evaluation of the performance of the mitigation measures to confirm the objectives are being achieved and the operation is sustainable over the long-term as described in the AMP.

67. The final rehabilitated landform is illustrated by one metre contours on the plan view.

68. Not applicable since this is not a Class B licence.

**Cross Section Notes**

- Cross section locations are identified on the plan view for each drawing.
- The horizontal scale is 1:2000 while the vertical scale is 1:1000 for cross sections on this drawing and drawing 1 of 4.
- Cross sections on drawing 1 of 4 depict the existing conditions while the cross sections on this drawing depict the final rehabilitation landform.
- The maximum predicted water table based on existing and interim conditions is illustrated as a solid blue line on each cross section.

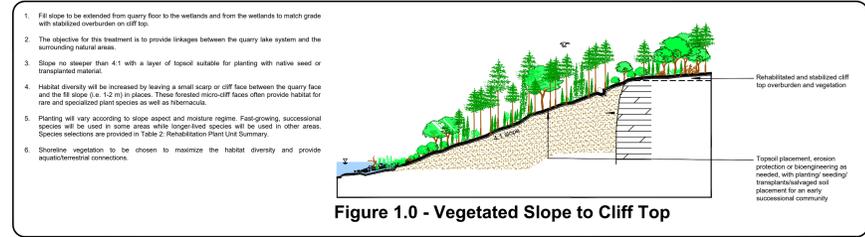
**Legal Description**  
Part of Lots 11 and 12, Concession 1 (former geographic Township of Esquering) Town of Halton Hills Regional Municipality of Halton

**Legend**

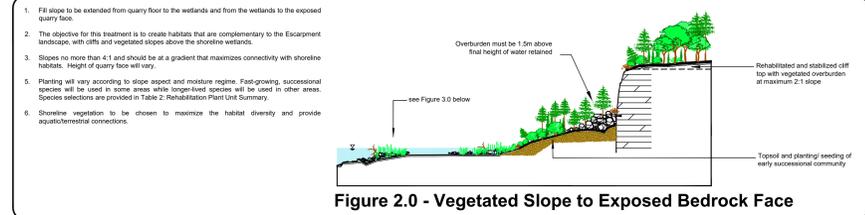
|  |   |  |   |
|--|---|--|---|
|  | Licence Boundary  |  | Existing Licence Boundary   |
|  | Limit of Extraction   |  | Existing Limit of Extraction  |
|  | Contours with Elevation<br>Metres above sea level (MASL)            |  | 120m Offset From Licence Boundary   |
|  | Wooded Area   |  | Lots and Concessions  |
|  | Wetland<br>Boundaries Delineated by GEC                             |  | Trail Segment   |
|  | Shallow Wetland<br>Post Rehabilitation                              |  | Road  |
|  | Deep Wetland<br>Post Rehabilitation                                 |  | Service Access Road   |
|  | Deep Lake<br>Post Rehabilitation                                    |  | Overhead Hydro  |
|  | Islands<br>Post Rehabilitation                                      |  | Existing Watermain  |
|  | Forested Areas<br>Post Rehabilitation - Within Limit of Extraction  |  | Main Watermain  |
|  | Forested Areas<br>Post Rehabilitation - Outside Limit of Extraction |  | Feeder Line   |
|  | Snake Hibernaculum<br>Post Rehabilitation                           |  | Fence<br>1.2m post & wire fence unless otherwise noted<br>Existing - Thin   Proposed - Bold |
|  | Cliff Face<br>Post Rehabilitation                                   |  | Entrance / Exit<br>Post Rehabilitation  |
|  | Rocky Shoal<br>Post Rehabilitation                                  |  | Gate  |
|  | Control Hut   |  | Proposed Floor Elevation<br>Metres above mean sea level (MASL)                              |
|  |   |  | Proposed Final Grade<br>(Horizontal - Vertical)   |
|  |   |  | Cross Sections  |

**Legend - Cross Sections**

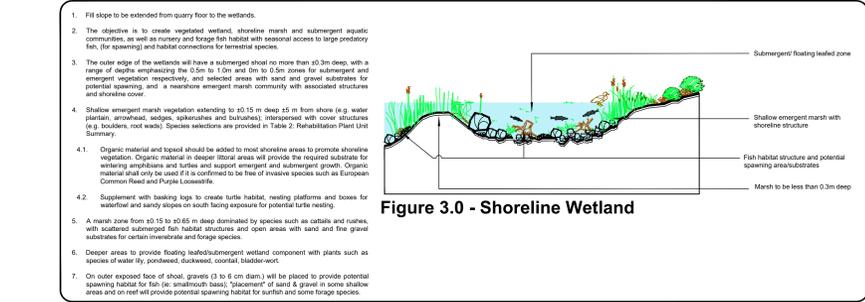
|  |                                    |  |  |
|--|------------------------------------|--|--|
|  | Licence Boundary                   |  | Maximum Predicted Water Table - based on existing and interim conditions |
|  | Limit of Extraction                |  | Quarry Floor / Face  |
|  | Existing Licence Boundary          |  | Backfilled   |
|  | Existing Limit of Extraction       |  | Lake or Pond   |
|  | Existing Grade (Removed / Altered) |  |  |
|  | Existing Grade (Undisturbed)       |  |  |



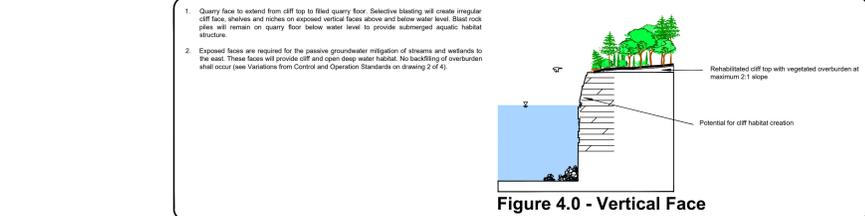
**Figure 1.0 - Vegetated Slope to Cliff Top**



**Figure 2.0 - Vegetated Slope to Exposed Bedrock Face**



**Figure 3.0 - Shoreline Wetland**



**Figure 4.0 - Vertical Face**

**Site Plan Amendments**

| No. | Date | Description | By |
|-----|------|-------------|----|
|     |      |             |    |
|     |      |             |    |

**Site Plan Revisions (Pre-Licensing)**

| No. | Date | Description | By |
|-----|------|-------------|----|
|     |      |             |    |
|     |      |             |    |

**MHBC Stamp**

**Brian Zeman**  
Is authorized by the Ministry of Northern Development, Mines, Natural Resources and Forestry pursuant to Subsection 0.2(3)(9) of Ontario Regulation 244/97 to prepare and certify site plans.

**Christopher Poole**  
Is authorized by the Ministry of Northern Development, Mines, Natural Resources and Forestry pursuant to Subsection 0.2(3)(9) of Ontario Regulation 244/97 to prepare and certify site plans.

**Site North**  
True North

**Applicant**  
Dufferin Aggregates  
A Division of CRH Canada Group Inc.  
2300 Steeles Avenue West, 4th Floor  
Concord, Ontario  
L4K 5X6

**Project**  
**Milton Quarry East Extension**  
10305 Nassagaweya Esquering Townline, Halton Hills, Ontario

**NDMNR Licence Reference No.**  
9061DJ

**Applicant's Signature**  
*[Signature]*

**Date**  
December 2021

**Plan Scale:** 1:2000 (Arch E)

**Drawn By:** C.P. **File No.:** 9061DJ

**Checked By:** B.Z.

**File Name**  
**Rehabilitation Plan**

**Drawing No.**  
**4 of 4**

**File Path**  
N:\9061DJ - Dufferin - Milton Quarry East Extension\Drawings - Must be in NAD 27/56 Plan\CAD\9061DJ - Site Plan - December 2021.dwg