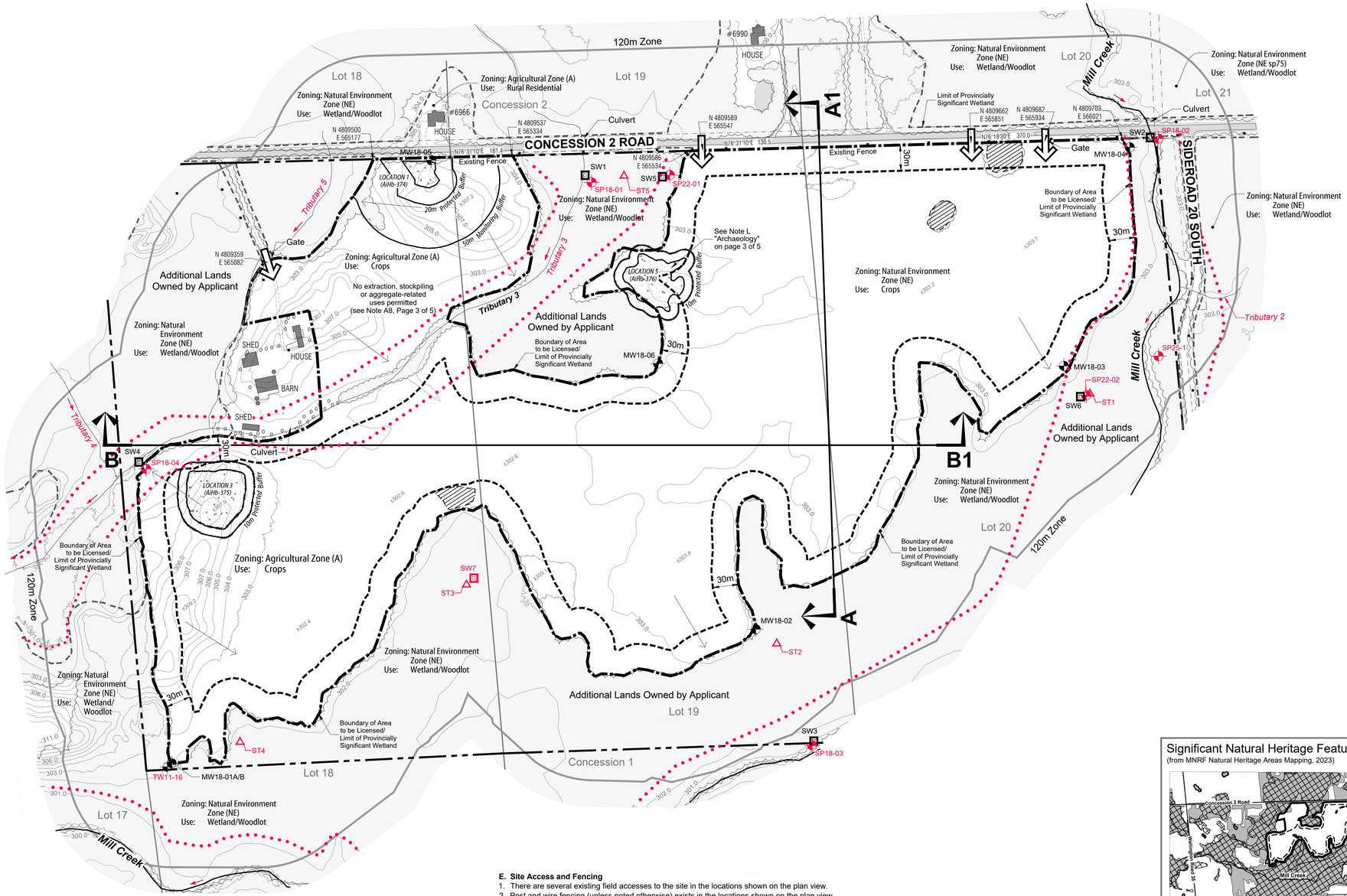


Notes

A. General

1. This site plan is prepared under the Aggregate Resources Act (ARA) for a Class A licence for a pit below the ground water table and follows the Aggregate Resources of Ontario: Site Plan Standards August 2020, specifically Existing Features for all sites (Numbers 1-26 in the standards).
2. Area Calculations:
   Licence Area: 44.8 hectares (110 acres)
   Limit of Extraction: 27.5 hectares (67 acres)
3. All measurements shown are in metres unless specified otherwise.

B. References

1. Topographic information compiled by GeoOptic (a division of Aeon Egmond Ltd.) with supplementary information from the Ontario Digital Terrain Model (contains information licensed under the Open Government Licence - Ontario). Data from GeoOptic was produced from aerial photography that was flown on June 4, 2021. Mapping is produced in real world scale and coordinates (NAD83 UTM Zone 17N). Contour interval is 1m. All elevations are geodetic (CGVD2013 ht2).
2. Plan of Survey prepared by Delph & Jenkins North Ltd. (2018).
2. The subject lands are zoned Agricultural (A) and Natural Environment (NE) and subject to an Environmental Protection Overlay in the Township of Puslinch Comprehensive Zoning By-law 2018-023 [April 2018 and Revised January 2020].
3. Ontario GeoHub © King's Printer for Ontario, 2023.
4. PSW boundary verified by GRCA on Sept. 12, 2023. Adjacent wetland boundaries from GRCA Open Data.
5. Floodline extent provided by WSP.
6. Land use information compiled from 2021 imagery, site visits and client input.

C. Drainage

1. 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.

D. Groundwater

1. Based on the available groundwater elevation data, the maximum predicted water table on the site is 301.91 metres asl in the western edge of the extraction area (as measured at SP18-04) to 304.33 masl in the northern portion of the site (as measured at MW18-04). The water table slopes downward moving from east to west across the site.

E. Site Access and Fencing

1. There are several existing field accesses to the site in the locations shown on the plan view.
2. Post and wire fencing (unless noted otherwise) exists in the locations shown on the plan view.

F. Aggregate Related Site Features

1. 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.

G. Significant Natural Features

1. On-site: fish habitat (Tributary 3), unevaluated wetlands
2. Off-site within 120m: Mill Creek-Puslinch Provincially Significant Wetland, significant woodlands, endangered and threatened species habitat (little brown myotis, northern myotis, eastern small-footed myotis, tri-coloured bat and black ash), fish habitat and significant wildlife habitat.

H. Cross Sections

1. As shown on this page. Detailed sections are shown on page 5 of 5.
2. Cross section locations are identified on the plan view for each drawing.

I. Report References

1. Noise: "Noise Impact Assessment, Aberfoyle Pit Expansion" November 2023 (Source: WSP)
2. Natural Environment: "Natural Environment Report, Proposed Aberfoyle South Pit Expansion" November 2023 (Source: WSP)
3. Hydrogeology: "Water Report Level 1/2 Aberfoyle South Pit Expansion" November 2023 (Source: WSP)
4. Maximum Predicted Water Table Report: "Maximum Predicted Water Table Report" November 2023 (Source: WSP)
5. Archaeology: "Stage 1 and 2 Archaeological Assessment, Revised Report" August 28, 2023 and "Stage 3 Archaeological Assessment (Locations 3 & 5)" June 1, 2023 (Source: WSP)
6. Traffic: "Revised Transportation Impact Study, CBM Aberfoyle South Lake Pit" February 2025 (Source: TYLin)
7. Agricultural Review: "Proposed Aberfoyle South Pit Expansion: Agricultural Considerations" September 2023 (Source: MHBC Planning)
8. Dust: "Best Management Practices Plan for the Control of Fugitive Dust at Aberfoyle South Pit Expansion" October 2023 (Source: WSP)
9. Supplemental Assessment of Potential Impacts to Provincially Significant Wetlands, October 21, 2025 (Source: WSP)
10. Hydrological and Ecological Monitoring Plan, January 2026 (Source: WSP)
11. Supplemental Assessment of Potential Impacts to Baseflow in Mill Creek and Tributary 3, October 21, 2025 (Source: WSP)
12. Supplemental Assessment and Mitigation of Post-Rehabilitation Groundwater Uplift, October 21, 2025 (Source: WSP)

Significant Natural Heritage Features
(from MNRF Natural Heritage Areas Mapping, 2023)

Key Plan

Legal Description

PART OF LOTS 18, 19 and 20
CONCESSION 1
(Geographic Township of Puslinch)
TOWNSHIP OF PUSLINCH
COUNTY OF WELLINGTON

Legend

- Boundary of Area to be Licensed
- Additional Lands Owned by Applicant — POST & WIRE FENCE UNLESS OTHERWISE NOTED
- Existing Fence — POST & WIRE FENCE UNLESS OTHERWISE NOTED
- Public Road - Paved / Public Road - Gravel
- Private Laneway
- Existing Access
- Hydro Pole
- Provincially Significant Wetland — ON-SITE VERIFIED IN FIELD BY ~~WSP 2021~~ GRCA SEPT. 12, 2023, ~~AND~~ OFF-SITE FROM ONTARIO GEOHUB AND GRCA OPEN DATA
- Unevaluated Wetland — GRCA OPEN DATA AND WSP
- MW19-02 / SW1 / ST — Groundwater Monitor / Surface Water Monitor / Ecological Monitoring Survey Transect — WSP 2021 and 2025
- A1 — Cross Sections — SEE PAGE 5 OF 5 FOR EXISTING AND REHABILITATED CROSS SECTIONS
- Limit of Excavation — ALL SETBACKS ARE DRAWN TO SCALE AND SHOW LABELLED DISTANCES
- Contour with Elevation — METRES ABOVE SEA LEVEL
- Existing Spot Height Elevation — METRES ABOVE SEA LEVEL
- Building/Structure — LOCATION AND USE FOR BUILDINGS ON-SITE AND WITHIN 120m ARE SHOWN ON THIS PAGE
- Existing Vegetation
- Direction of Surface Drainage (IF ANY)
- Drainage Feature — AS INDICATED
- Parcel Fabric — LOCATION APPROXIMATE
- LOCATION 5 (AIHb-376) — Archaeological Site — SITE RECOMMENDED FOR FURTHER ARCHAEOLOGICAL FIELD WORK
- Floodplain Extent — WSP 2025

Site Plan Amendments

No.	Date	Description	By

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
200-540 BINGEMANS CENTRE DR. KITCHENER, ON. N2B 3X9 | P: 519,576,3650 | WWW.MHBCPLAN.COM

MNR Approval Stamp

Stamp

REAL DeMUYTER 965 MCIP RPP

north

Applicant

VOTORANTIM cimentos | cbm
55 Industrial St. 4th Floor Toronto, Ontario M4G 3W9
Telephone: (416) 696-4411

Applicant's Signature

Andreanne Simard
Director of Lands, Resources and Environment
Votorantim Cimentos North America (VCNA)

Project

Aberfoyle South Lake Pit

ARA Licence Reference No.

Pre-approval review:

Revs. to address Agency and Public comments - Jan. 2026

For application submission - November 2023

Plan Scale **1:2,500 (Arch D)**

SCALE
0 25 50 100
METRES

Plot Scale 1:2.5 [1mm = 2.5 units] MODEL

Drawn By D.G.S.

Checked By N.D.

File No.

File Name

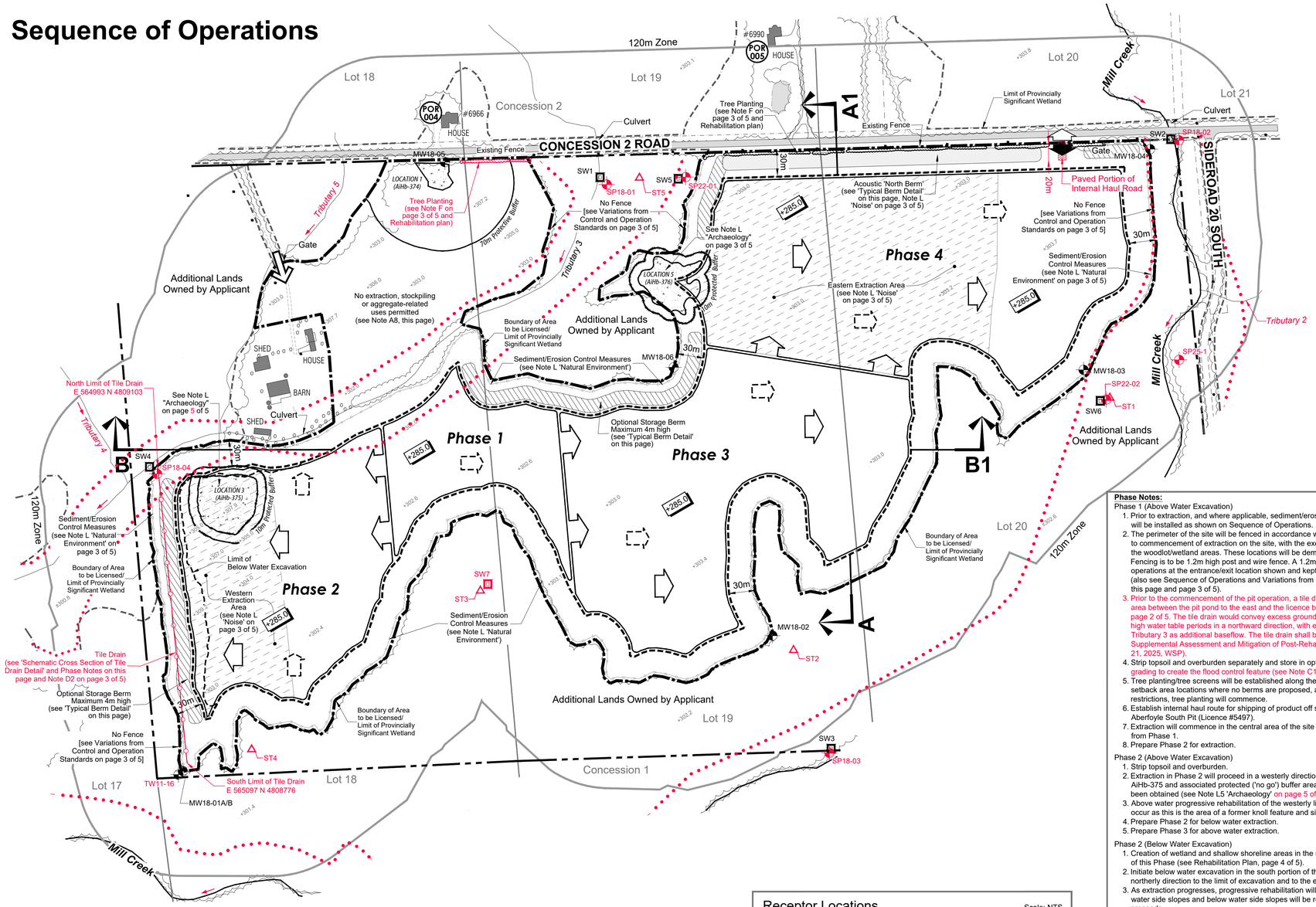
EXISTING FEATURES PLAN

Drawing No.

1 OF 5

K:\Y321AB- CBM Aberfoyle South Pit Expansion\A\CBM Aberfoyle South Lake Pit Exfeplan 1of5 January2026.dwg

Sequence of Operations



Phase Notes:

Phase 1 (Above Water Excavation)

1. Prior to extraction, and where applicable, sediment/erosion control measures (eg. silt fencing) will be installed as shown on Sequence of Operations.
2. The perimeter of the site will be fenced in accordance with the Aggregate Resources Act prior to commencement of extraction on the site, with the exception of the boundaries that are in the woodlot/wetland areas. These locations will be demarcated by 1.2m high marker posts. Fencing is to be 1.2m high post and wire fence. A 1.2m gate will be installed prior to operations at the entrance/exit location shown and kept locked when the pit is not in operation (also see Sequence of Operations and Variations from Control and Operation Standards on this page and page 3 of 5).
3. Prior to the commencement of the pit operation, a tile drain shall be installed in the setback area between the pit pond to the east and the licence boundary to the west as identified on page 2 of 5. The tile drain would convey excess groundwater through the subsurface during high water table periods in a northward direction, with excess groundwater reporting to Tributary 3 as additional baseflow. The tile drain shall be constructed in accordance with the Supplemental Assessment and Mitigation of Post-Rehabilitation Groundwater Uplift (October 21, 2025, WSP).
4. Strip topsoil and overburden separately and store in optional berms and for use in perimeter grading to create the flood control feature (see Note C1 on Rehabilitation Plan, page 4 of 5).
5. Tree planting/tree screens will be established along the frontage of Concession 2 Road. In setback area locations where no berms are proposed, and there are no Archaeological restrictions, tree planting will commence.
6. Establish internal haul route for shipping of product off site for processing in the existing Aberfoyle South Pit (Licence #5497).
7. Extraction will commence in the central area of the site and proceed westerly and easterly from Phase 1.
8. Prepare Phase 2 for extraction.

Phase 2 (Above Water Excavation)

1. Strip topsoil and overburden.
2. Extraction in Phase 2 will proceed in a westerly direction and will exclude Archaeological Site AlHb-375 and associated protected ('no go') buffer area until appropriate clearance(s) have been obtained (see Note L5 'Archaeology' on page 5 of 5).
3. Above water progressive rehabilitation of the westerly limit of above water extraction shall occur as this is the area of a former knoll feature and side sloping is necessary.
4. Prepare Phase 2 for below water extraction.
5. Prepare Phase 3 for above water extraction.

Phase 2 (Below Water Excavation)

1. Creation of wetland and shallow shoreline areas in the southern and western setbacks area of this Phase (see Rehabilitation Plan, page 4 of 5).
2. Initiate below water excavation in the south portion of the excavation area and continue in a northerly direction to the limit of excavation and to the elevations as shown.
3. As extraction progresses, progressive rehabilitation will follow with the completion of above water side slopes and below water side slopes will be rehabilitated as below water excavation proceeds.

Phase 3 (Above Water Excavation)

1. Strip topsoil and overburden.
2. Above water extraction will proceed in an easterly direction.
3. Prepare Phase 1 for below water extraction.

Phase 1 (Below Water Excavation)

1. Creation of wetland and shallow shoreline areas in the northern setback area of this Phase (see Rehabilitation Plan, page 4 of 5).
2. Below water extraction will follow the same direction as above water extraction and proceed in an easterly direction to the depths (pit floor) shown on the Sequence of Operations.
3. Initiate progressive rehabilitation of below water side slopes from a west to east direction as operations progress.
4. Prepare Phase 3 for below water extraction.

Phase 3 (Below Water Excavation)

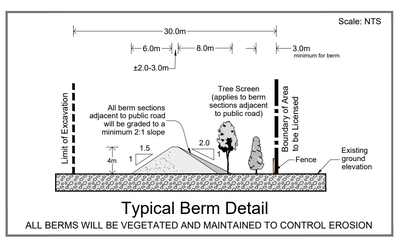
1. Creation of shallow shoreline areas in the southern setback area of this Phase (See Rehabilitation Plan, page 4 of 5).
2. Below water extraction will follow the same direction as above water extraction and proceed in an easterly direction to the depths (pit floor) shown on the Sequence of Operations.
3. Initiate progressive rehabilitation of below water side slopes from a west to east direction as operations progress.
4. Prepare Phase 4 for above water extraction.

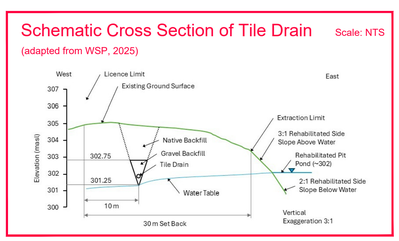
Phase 4 (Above Water Excavation)

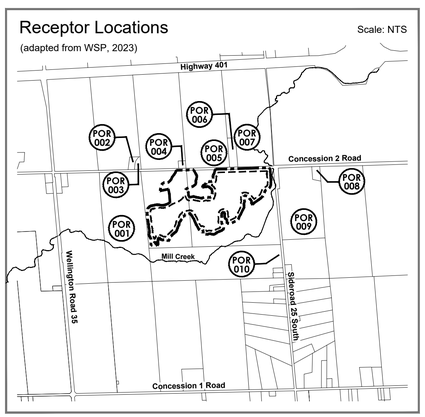
1. Prior to extraction in Phase 4, the acoustic berm ('North Berm') must be completed to the requirements outlined in Note L "Noise" on page 3 of 5.
2. Strip topsoil/overburden.
3. Above water extraction will proceed in an easterly direction.
4. Creation of shallow shoreline areas in the southern setback area of this Phase (see Rehabilitation Plan, page 4 of 5).
5. Prepare Phase 4 for below water extraction.

Phase 5 (Not Shown)

1. Remove any equipment, haul roads and buildings on site.
2. Final rehabilitation to be completed (see Rehabilitation Plan on page 4 of 5).







Legal Description

PART OF LOTS 18, 19 and 20 CONCESSION 1
(Geographic Township of Puslinch)
TOWNSHIP OF PUSLINCH
COUNTY OF WELLINGTON

Legend

- Boundary of Area to be Licensed
- Additional Lands Owned by Applicant — POST & WIRE FENCE UNLESS OTHERWISE NOTED
- Field Access
- Existing Spot Height Elevation — METRES ABOVE SEA LEVEL
- Existing Fence — POST & WIRE FENCE UNLESS OTHERWISE NOTED
- Existing Vegetation
- Drainage Feature — AS INDICATED
- Parcel Fabric — LOCATION APPROXIMATE
- Archaeological Site — SITE RECOMMENDED FOR FURTHER ARCHAEOLOGICAL FIELD WORK
- Provincially Significant Wetland — ON-SITE VERIFIED IN FIELD BY ~~WSP 2021~~ GRCA SEPT. 12, 2023; ~~AND~~ OFF-SITE FROM ONTARIO GEOHUB AND GRCA OPEN DATA
- Groundwater Monitor / Surface Water Monitor — WSP 2021
- Cross Sections — SEE PAGE 5 OF 5 FOR EXISTING AND REHABILITATED CROSS SECTIONS
- Limit of Excavation — ALL SETBACKS ARE DRAWN TO SCALE AND SHOW LABELLED DISTANCES
- Operational Entrance/Exit — MAINTAINED BY A GATE WHICH WILL BE CLOSED WHEN PIT IS NOT IN OPERATION
- General Direction of Above Water Excavation (SEE NOTES ON PAGE 3 OF 5)
- Below Water Excavation Limit (SEE NOTES ON THIS PAGE)
- Direction of Below Water Excavation (SEE NOTES ON PAGE 3 OF 5)
- Acoustic Berm — SEE "TYPICAL BERM DETAIL" AND NOTES ON THIS PAGE AND PAGE 3 OF 5
- Optional Storage Berm — SEE "TYPICAL BERM DETAIL" AND NOTES ON THIS PAGE AND PAGE 3 OF 5
- Proposed Spot Elevation — PIT FLOOR (MAXIMUM DEPTH OF EXCAVATION)
- Receptor Locations — WITHIN 120m OF THE SITE
- Loader and Dragline Restrictions — SEE NOTE L "NOISE" ON PAGE 3 OF 5
- Sediment/Erosion Control Measures
- Tree Screen/Planting — SEE NOTE F ON PAGE 3 OF 5
- Tile Drain — WSP 2025

Site Plan Amendments

No.	Date	Description	By

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
200-540 BINGEMANS CENTRE DR. KITCHENER, ON. N2B 3X9 | P: 519.576.3650 | WWW.MHBCPLAN.COM

MNR Approval Stamp

Stamp

Applicant

VOTORANTIM cimentos | cbm

55 Industrial St. 4th Floor Toronto, Ontario M4G 3W9
Telephone: (416) 696-4411

Applicant's Signature

Andreanne Simard
Director of Lands, Resources and Environment
Votorantim Cimentos North America (VCNA)

Project

Aberfoyle South Lake Pit

ARA Licence Reference No.

Pre-approval review:

Revs. to address Agency and Public comments - Jan. 2026

For application submission - November 2023

Plan Scale **1:2,500 (Arch D)**

SCALE
0 25 50 100
METRES

Plot Scale 1:2.5 [1mm = 2.5 units] MODEL

Drawn By D.G.S.

Checked By N.D.

File No.

File Name

OPERATIONAL PLAN

Drawing No.

2 OF 5

K:\Y321AB- CBM Aberfoyle South Pit Expansion\A\CBM Aberfoyle South Lake Pit Operplan 2of5 January2026.dwg

A. General

1. This site plan is prepared under the Aggregate Resources Act (ARA) for a Class A licence for a pit below the ground water table and follows the Aggregate Resources of Ontario: Site Plan Standards August 2020, specifically Operations for all sites (Numbers 33-55 in the standards).
2. Area Calculations: Licence Area: 44.8 hectares (110 acres)
   Limit of Excavation: 27.5 hectares (67 acres)
3. The maximum number of tonnes of aggregate to be removed from this property is 1,000,000 tonnes in any calendar year.
4. Based on the available groundwater elevation data, the maximum predicted water table on the site is 301.91 metres asl in the western edge of the extraction area (as measured at SP18-04) to 304.33 masl in the northern portion of the site (as measured at MW18-04). The water table slopes downward moving from east to west across the site. The existing water table elevations are shown on each cross section on page 5 of 5.
5. Setbacks will be as shown and labelled on the Sequence of Operations Diagram (page 2 of 5) and on Existing Features Plan (page 1 of 5).
6. Agricultural use may continue in areas not under extraction.
7. Source Water Protection: The site lies within the Grand River Source Protection Area which is part of the Lake Erie Source Protection Region (LESPR). The Site is not proximal to any Wellhead Protection Area (WHPA) and is located outside the Wellhead Water Quantity Zone. The Site is currently classed as a Significant Groundwater Recharge Area (SGRA). No proposed on-site activities are considered to be significant drinking water threats (See also 'Hydrogeology' notes on this page).
8. Aggregate extraction, stockpiling and aggregate-related uses are not permitted on the licensed lands between Tributary 3 and Concession Road 2. This area shall be retained in its current condition or used for natural restoration / enhancement, if required.
9. On-site PSW boundary verified by GRCA on Sept. 12, 2023.

B. Hours of Operation

1. Extraction will occur during the daytime period (i.e. between 07:00 and 19:00).
2. Shipping hours are restricted to 07:00 to 18:00 on weekdays and 08:00 to 16:00 on Saturdays.
3. Activities used to prepare the site for excavation, such as stripping of topsoil, construction of the berms, or activities related to the rehabilitation of the site after extraction is completed are considered to be construction activities and are only permitted to occur during the daytime (i.e 07:00 to 19:00) Monday to Friday except statutory holidays.

C. Site Access and Fencing

1. The existing field accesses may be utilized for monitoring, setback maintenance and agricultural access. The accesses shall be gated, kept closed during hours of non-operation and shall be maintained throughout the life of the licence. Aggregate trucks shall not be permitted to access the site at these locations.
2. The site shall be accessed through the operational entrance/exit as shown and it will be gated.
3. There is existing fencing along the Concession 2 Road frontage. This fencing will meet ARA requirements.
4. Portions of the licence boundary within the existing wetland/woodlot will not be fenced (see Note M 'Variations from Control and Operation Standards'). Where there is no fencing, 1.2m marker posts will be installed that are visible from one to the other.
5. Heavy duty sediment/erosion control measures (e.g. silt fencing) shall be installed along the portions of the licensed boundary as shown on the Sequence of Operations between the area to be disturbed and the wetlands prior to commencement of work. Adjustments may be made through "field fitting" as directed by an environmental specialist. These measures will be monitored on a quarterly basis and after high rainfall events (see Note L 'Natural Environment').

D. Drainage

1. During above water excavation, surface drainage from active pit areas will be detained within the pit area. For below water excavation, drainage will be directed toward the pond area. Drainage will also percolate naturally through the soil.
2. Prior to the commencement of the pit operation, a tile drain shall be installed in the setback area between the pit pond to the east and the licence boundary to the west as identified on page 2 of 5. The tile drain would convey excess groundwater through the subsurface during high water table periods in a northward direction, with excess groundwater reporting to Tributary 3 as additional baseflow. The tile drain shall be constructed in accordance with the Supplemental Assessment and Mitigation of Post-Rehabilitation Groundwater Uplift.The following mitigation measures shall be implemented for the tile drain construction and monitoring:
   a. Strip topsoil and temporarily store separately from subsoils
   b. Spoils pile should be stored on the east side of the trench away for the woodland and wetland edge
   c. Erosion control setting silt fencing should be installed as required to ensure no erosion or sediment transport for the temporary spoils piles enter the wetland areas.
   d. Work to be completed in the shortest period possible, limiting the period of open trench and spoil piles.
   e. Work to be scheduled during period of forecasted low, or preferably no, precipitation periods.
   f. Backfilling the original grade to be completed immediately after drain installation and subsoil replaced and topsoil used to cap the trench area.
   g. The rehabilitation of the trench area and temporary work area be restored and managed as outlined in the Supplemental Assessment and Mitigation of Post-Rehabilitation Groundwater Uplift (October 21, 2025 WSP).

E. Site Preparation

1. Prior to site preparation, a Spills Contingency Plan shall be developed to address any potential spills from equipment on-site.
2. Timber resources will be salvaged for use as saw logs, fence posts and fuel wood where appropriate. Non-merchantable timber, stumps and brush may be used in for aquatic habitat enhancement or mulched for use in progressive rehabilitation. Excess material not required for uses mentioned above will be burned (with applicable permits).
3. Topsoil and overburden shall be stripped and stored separately in accordance with the Sequence of Operations diagram.
4. Excess topsoil and overburden not required for immediate use in the construction of acoustic berms or rehabilitation, may be temporarily stockpiled inside the licensed area. Topsoil and overburden stockpiles shall be located within the limit of excavation and remain a minimum of 30 metres from the licence boundary and 90 metres from a property with residential use (see Note M 'Variations').
5. 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 naturally in the first year.

F. Berms and Screening

1. Berms shall be constructed as specified in the location shown on the Sequence of Operations. The height shown is the minimum required for acoustic berms.
2. Berm side slopes shall not exceed 1.5:1 on the interior (extraction) side and 2:1 on the exterior side facing Concession 2 Road. See 'Typical Berm Detail' on page 2 of 5.
3. Berms shall not be located within three (3.0) metres of the licence boundary.
4. The proposed berm will be constructed in accordance with the 'Typical Berm Detail' on page 2 of 5 and will be vegetated and maintained to control erosion using a low maintenance grass/legume seed mixture (e.g. MTO Seed Mix) composed of Creeping red Fescue, Perennial Ryegrass, Kentucky Bluegrass and White Clover. Temporary erosion control will be implemented as required.
5. Berms shall be maintained (vegetated to prevent erosion) throughout the operational life of the pit.
6. Optional storage berms may be constructed in the locations as shown.
7. Within 2 years of licence issuance, two rows of trees will be planted along the Concession 2 Road frontage adjacent to Phase 4 and across from 6966 Concession 2 Road (east side of site). Adjacent to Phase 4, the trees shall be planted in front of the berms to provide additional screening to the site. These two rows of trees will be planted in front of the berm required for noise attenuation during operations, to provide additional screening to the site. Native tamarack, white/black spruce, white cedar and white pine shall be planted for the tree screens.
8. Existing vegetation within the setbacks shall be maintained except where noise attenuation berms are required or for the operational entrance/exit.

G. Extraction Sequence

1. The operational plan depicts a schematic operations sequence for this property. Phases do not represent any specific or equal time period. The direction of extraction will be in accordance with the Sequence of Operations diagram shown on page 2 of 5. All extraction, processing and transportation equipment operating within these Phases shall comply with the restrictions identified in Note L 'Noise'.
2. Progressive and final rehabilitation will be completed in direct correlation to the development of the pit as the extraction limits in each Phase are reached and enough area is available to ensure that rehabilitation activities will not interfere with the production and stockpiling of aggregate materials (see also Phase Notes on page 2 of 5). Notwithstanding the operation and rehabilitation notes, demand for certain products or blending of materials may require minor deviations in the extraction and rehabilitation sequence. Any major deviations from the operations sequence shown will require approval from MNRF.
3. The maximum disturbed area of this pit shall not exceed 50% of the site.
4. See Phase Notes on page 2 of 5 for details.

H. Extraction Details

1. The maximum depth of extraction is as shown as spot elevations and extraction will occur in up to 2 lifts through the four phases as shown on the Sequence of Operations Diagram on page 2 of 5 and in accordance with the Ministry of Labour requirements. The proposed pit floor will be located at an elevation of 285 masl or 22 m to 24 m below the existing ground surface.
2. For the majority of the site, the groundwater table is near the ground surface. While some above water excavation may occur across the site, this excavation will take place in one lift of a maximum height of 5m in the western portion of Phase 1. Below water excavation will take place in one lift of a maximum height of 20m, which would be the maximum depth of extraction. See Rehabilitation Plan (page 3 of 5) and Cross Sections Plan (page 5 of 5) for excavation depths and final rehabilitation contours.
3. Aggregate stockpiles will move throughout the life of the operations of the pit. Stockpiles will not be located within 30m of the Licensed boundary.
4. There will be no aggregate processing or recycling at this pit.
5. Internal haul road locations will vary as extraction progresses through the site.

I. Equipment and Processing

1. The equipment used on site for aggregate operations may include: Highway Trucks, Loaders (2), Dragline, Excavator/Backhoe.
2. There will be no aggregate processing on site. Processing will be carried out at other CBM licences.

J. Fuel Storage

1. Mobile fuel trucks will be used for fuelling of equipment. There will be no fuel storage on site (See also 'Hydrogeology' notes on this page).

K. Scrap and Recycling

1. No scrap will be stored on site.
2. No recycling activities will take place on site.

L. Report Recommendations

1. **Noise: "Noise Impact Assessment, Aberfoyle Pit Expansion" November 2023 (Source: WSP)**
   a. Prior to extraction in Phase 4 a 4m high berm shall be installed (North Berm).
   b. Within the area identified on the Sequence of Operations [*western and eastern extraction areas]*, the loader operations will be reduced to 45 minutes per 1-hour period. Once the North Berm is in place, the loaders could operate for the full 60 minutes during any given 1-hour period in Phase 4 *[eastern extraction area]*.
   c. Dragline operating 'under load' for a maximum of 45 minutes per hour and the engine will generally operate in low revolutions conditions (i.e. 'low rev') for the remaining 15 minutes per hour.
   d. During the operations within the area identified on the Sequence of Operations [*western and eastern extraction areas],* the dragline will require noise controls (e.g. equipment mounted noise barrier or acoustically equivalent treatment) to reduce its noise emissions by a minimum of 5dB to target a sound power level as presented in Table 1 of the Noise Impact Assessment.
   e. Extraction will occur during the daytime period (i.e. between 07:00 and 19:00).
   f. For the extraction associated with the operations, the equipment will operate as specified above and in Section 2.0 of the Noise Impact Assessment and is expected to operate continuously except for the dragline or excavator/backhoe and loaders (i.e. within identified areas) expected to operate "under load" up to 45 minutes in a given 1-hour period and under 'low-rev' condition for the remaining 15 minutes in the hour.
   g. When an excavator/backhoe will be used to support extraction operations a dragline shall not be in operation.
   h. An excavator or a backhoe will be permitted to operate as a replacement for a dragline if the sound power level of the excavator/backhoe does not exceed 107 dBA.
   i. Equipment shall be operated as intended by manufacturer specifications.
   j. Equipment shall be maintained and kept in good condition.
   k. Equipment shall be fitted with manufacturer specified and properly functioning noise control devices.
   l. On-site roadways shall be maintained to limit noise resulting from trucks driving over ruts and potholes.
   m. Alternative to narrow band back up alarms shall be investigated and used at the site provided they are found to meet the licensee's safety requirements. Broadband backup warning devices will be implemented on equipment owned and operated by the licensee once it is confirmed it will meet the licensee's safety requirements
   n. Activities used to prepare the site for excavation, such as the stripping of topsoil, construction of the berm, or activities related to the remediation of the site after the extraction is completed as considered to be construction activities and are only permitted to occur during the daytime (i.e. 07:00 to 19:00) Monday to Friday except statutory holidays.
   o. Prior to operations commencing, sound measurements of the equipment used on the site shall be undertaken to confirm maximum emission levels provided in Table 1 of the Noise Impact Assessment are not exceeded.
   p. To confirm that sound levels from the site operations are in compliance with the MECP noise guideline limits, an acoustical audit shall be completed within six months of the start of extraction activities on the site.

   Table 1: Facility Noise Source Summary

Source ID	Source Description	Quantity	Overall Sound Pwer level (dBA)(1)
Truck	Highway Truck	28 (4)	102
Loader 1	Loader	1	107(2)
Loader 2	Loader	1	107(2)
Dragline	Dragline	1	112
Dragline	Dragline Mitigated	1	107(3)
Excavator/Backhoe	Excavator/Backhoe	1	<112

   1) Values presented in Table 1 do not include adjustments that were considered in the modelling (i.e., time, weighting) where applicable.
   2) Average sound power level representing various loader activities
   3) Either a single form of mitigation (e.g. silencer, barrier) or combination of different types of noise mitigation
   4) Number of one-way trips per hour

2. **Natural Environment: "Natural Environment Report, Proposed Aberfoyle South Pit Expansion" November 2023 (Source: WSP) and "Supplemental Assessment of Potential Impacts to Provincially Significant Wetlands" October 21, 2025; "Hydrological and Ecological Monitoring Plan" January 2026 (Source: WSP)**

   a. General Best Management Practices

   Standard Best Management Practices to be followed during site preparation and operations to mitigate damage to the adjacent natural features include the following:
   i. Clearly demarcate and maintain recommended setbacks on the site plan.
   ii. To comply with the Migratory Birds Convention Act (MBCA), avoid removal of vegetation during the active season for breeding birds (April 1 - August 31), unless construction disturbance is preceded by a nesting survey conducted by a qualified biologist. If any active nests are found during the nesting survey, a buffer will be installed around the nest to protect against disturbance. Vegetation within the protection buffer cannot be removed until the young have fledged the nest.

   b. Significant Wetland and Woodland

   The following mitigation measures are recommended to minimize adverse indirect impacts on the adjacent significant wetland and significant woodland (i.e., Mill Creek-Puslinch PSW):
   i. Implement a 30 m setback from Mill Creek-Puslinch PSW / significant woodland
   ii. If gradients indicate there is potential for runoff to enter Mill Creek-Puslinch PSW, implementation of sediment and erosion controls will occur prior to commencement of operations to prevent the runoff of suspended solids into Mill Creek-Puslinch PSW. In particular, in such areas where potential runoff exists, silt fencing (or similar) will be installed along the dripline of Mill Creek-Puslinch PSW in those areas prior to commencement of activities within 30 m of Mill Creek-Puslinch PSW, including site preparation and vegetation clearing. The sediment and erosion control measures will be actively monitored and maintained for the duration of the proposed operations. Following rehabilitation of the areas adjacent to the PSW, the control measures will be removed.
   iii. Where installed, silt fencing will be maintained for the duration of the operations phase adjacent to Mill Creek- Puslinch PSW and will include regular inspections for signs of damage or deterioration.
   iv. Following rehabilitation adjacent to Mill Creek-Puslinch PSW, any silt fencing or other erosion/sediment controls that had been installed, will be removed from the site.
   v. To avoid compacting the soil in the setback area (which can negatively impact tree roots) the use of heavy machinery should be minimized is not permitted within 5 m of the dripline (where potential for root damage is most likely), particularly during wet periods (e.g., spring) when soil may already be saturated.
   vi. Any berms located within the 30 m setback area must be located a minimum of 5 m from the dripline of the woodland to protect the critical root zone for the woodland.
   vii. A minimum 35% (6.7 ha) of the non-aquatic portion of the licensed area will be rehabilitated to forest cover.

   c. Fish Habitat
   i. Limit impacts on riparian vegetation to those approved for the work, undertaking or activity:
      - Limit access to banks or areas adjacent to waterbodies;
      - Prune or top the vegetation instead of grubbing/uprooting;
      - Limit grubbing on watercourse banks to the area required for the footprint of works, undertaking or activity;
      - Construct access points and approaches perpendicular to the watercourse or waterbody;
      - Remove vegetation selectively and in phases; and,
      - Re-vegetate the disturbed area with native species suitable for the site
   ii. Operate machinery in a manner that minimizes disturbance to the watercourse bed and banks
   iii. Develop and implement a Sediment Control Plan to minimize sedimentation of the waterbody during all phases of the work, undertaking or activity:
      - Schedule work to avoid wet, windy and rainy periods (and heed weather advisories);
      - Regularly inspect and maintain the erosion and sediment control measures and structures during all phases of the project;
      - Use biodegradable sediment control materials whenever possible;
      - Remove all exposed non-biodegradable sediment control materials once site has been stabilized;
      - Operate machinery on land, or from barges;
      - Use methods to prevent substrate compaction (e.g., swamp mats, pads);
      - Monitor the waterbody to observe signs of sedimentation during all phases of the work, undertaking or activity and take corrective action;
      - Dispose and stabilize all dredged material above the high water mark of nearby waterbodies to prevent entry in the water; and,
      - Use only clean materials
   iv. Develop and immediately implement a response plan to prevent deleterious substances from entering a water body:
      - Stop works, undertakings and activities in the event of a spill of a deleterious substance;
      - Immediately report any spills (e.g., sewage, oil, fuel or other deleterious material), whether near or directly into a water body;
      - Keep an emergency spill kit on site during the works, undertakings and activities;
      - Contain any water with deleterious substances;
      - Ensure clean-up measures are suitably applied so as not to result in further alteration of the bed and/or banks of the waterbody;
      - Clean-up and appropriately dispose of the sediment-laden water and water contaminated with deleterious substances;
      - Maintain all machinery on site in a clean condition and free of fluid leaks
      - Wash, refuel and service machinery and store fuel and other materials for the machinery in such a way as to prevent any deleterious substances from entering the water;
      - Dispose of all waste materials (e.g., construction, demolition, commercial logging) above the ordinary high water mark to prevent entry into the waterbody; and,
      - Plan activities near water such that materials such as paint, primers, blasting abrasives, rust solvents, degreasers, grout, poured concrete or other chemicals do not enter the waterbody.
   v. Aquatic invasive species are introduced and spread through transporting water, sands, and sediments and using contaminated construction equipment. To prevent the spread of aquatic invasive species during construction in aquatic environments:
      - Ensure all equipment arrives on site clean and free of invasive species;
      - Clean, drain, and dry any equipment used in the water; and,
      - Never move organisms or water from one body of water to another

   d. Non-significant Wetlands
   i. Replace 0.3 ha of wetland habitat as part of progressive rehabilitation. See Rehabilitation Plan on page 4 of 5.

   e. Monitoring

   i. Monitoring as recommended in the Water Report Level 1/2 (WSP 2023) will be implemented for the proposed extraction:

   e. Ecological Monitoring
   i. To observe ecological conditions in the PSW, monitoring of the form and function of the wetland shall be carried out annually (in early summer) along the five Ecological Monitoring Survey Transects and detailed in the Hydrological and Ecological Monitoring Plan (WSP, January 2026). Ecological monitoring shall begin one year prior to the start of aggregate extraction, and continue during the Operational Period, and end one year after the completion of site Rehabilitation. During the one year of monitoring prior to the start of aggregate extraction, monitoring will be carried out biannually (early summer and early fall) to provide baseline data for comparison to enhanced monitoring in the event this is required.
   ii. In order to ensure effective monitoring of the Mill Creek fishery, existing baseline data and monitoring programs will be consolidated prior to the commencement of extraction activities. Any identified gaps will be addressed to establish a comprehensive and robust baseline that serves as an essential reference point for evaluating the fishery during its operational phases. Ongoing monitoring will subsequently be conducted in response to hydrological conditions that may suggest potential ecological impacts.
   iii. To effectively monitor the Mill Creek fishery, baseline monitoring shall be conducted prior to the start of extraction, with a particular focus on key ecological indicators such as Brown Trout spawning activity. This monitoring will serve as a critical reference point for evaluating the fishery during operational phases and will be presented to GRCA to ensure alignment with their current monitoring activities. Subsequent monitoring of the Mill Creek fishery will be conducted in response to hydrological conditions that indicate a potential ecological impact.
   iv. The ecological monitoring involves the establishment of a combination of survey transects and associated fixed sample plots as outlined in the Hydrological and Ecological Monitoring Plan (WSP, January 2026) and the annual review of the outer limit of the wetlands abutting the Site through visual observation.
   v. The following monitoring of the naturalization of the setback along the alignment of the tile drain will be undertaken:
      - Monitor the site for signs of rill and other erosion until the area has stabilized and vegetation within the buffer has become established and self-sustaining;
      - Monitor wetland edge for signs of erosion and sedimentation. Correct any potential issue and restabilize and plant areas; and
      - Monitor the newly planting buffers for invasive species and if needed initiate an invasive species control program.
   vi. Results of the monitoring program shall be reviewed by the licensee quarterly and reported to MNR annually as part of the licence requirements. Trends during Operations and Post-Rehabilitation shall be compared to Pre-Operational conditions. If the results of the monitoring program indicate the potential for adverse impacts to groundwater users (private wells), surface water features (Mill Creek and its tributaries) or to wetlands, then appropriate enhanced monitoring, and corrective actions shall be implemented, as outlined in the Hydrological and Ecological Monitoring Plan (WSP, January 2026).
   vii. Best Management Practices for the Protection, Creation and Maintenance of Bank Swallow Habitat in Ontario.
   viii. A site-specific Best Management Practices with standard practices will be prepared upon licence approval. This will be a Wildlife Encounter Best Management Practices and includes training, signage, encounter procedure, site (exclusionary fencing if applicable) and equipment inspection, etc.

3. **Hydrogeology: "Water Report Level 1/2 Aberfoyle South Pit Expansion" November 2023, "Hydrological and Ecological Monitoring Plan" January 2026 "Supplemental Assessment of Potential Impacts to Baseflow in Mill Creek and Tributary 3" October 21, 2025 "Supplemental Assessment and Mitigation of Post-Rehabilitation Groundwater Uplift" October 21, 2025 (Source: WSP)**
   a. A door-to-door survey of private wells for properties within 500 m of the Site shall be carried out upon licence approval and prior to the initiation of aggregate extraction, to supplement and help verify the MECP WWIS information and confirm neighbouring water users, noting that participation by neighbouring property owners would be entirely voluntary. Based on the private well survey, the licensee will give private residents, with >1m of predicted drawdown caused by the proposed development or low available drawdown (<5 m), the opportunity to include their well in the water level monitoring program. Should private well users agree to their well being monitored, the monitoring plan will be revised to include their well.
   b. Site-specific groundwater and surface water monitoring recommendations have been developed to measure and evaluate the actual effects on potential receptors associated with the development of the pit, and to allow for comparison of the actual effects measured during the monitoring program and those predicted as part of the impact assessment. Monitoring shall commence a minimum of one year be carried out upon licence approval and prior to the initiation of aggregate extraction, and continue through the Operational Period and end one year after beyond the completion of Site Rehabilitation. In accordance with the Hydrological and Ecological Monitoring Plan (WSP January 2026), tThe monitoring program shall include the following:
      i. Groundwater Monitoring: The groundwater level monitoring program will include overburden wells MW18-01 to MW18-06 and the bedrock well TW11-16 within the setback area of the Site, as shown on the Operational Plan. Groundwater level monitoring will consist of recording groundwater level data at 15 minute intervals using data loggers, along with quarterly logger downloads and manual water level measurements. Monitoring shall include the current groundwater monitoring network, which consists of six overburden monitoring wells (MW18-01B to MW18-06), one previously existing bedrock well (TW11-16), and six standpipe piezometers (which measure shallow groundwater elevations) (SP18-01 to SP18-04, SP22-01, and SP22-02) at the surface water stations. Groundwater level monitoring shall consist of recording groundwater level and temperature data at 15-minute intervals using data loggers, along with quarterly logger downloads and manual water level measurements. A new groundwater monitoring location shall be established to the east of Mill Creek, labeled SP25-1, to observe groundwater conditions. Once installed, this location shall be included in the groundwater monitoring network described above.
      ii. Surface Water Monitoring: The surface level monitoring program will include the monitoring stations SW-1 to SW-7 and their associated shallow standpipes SP18-01 to SP18-04, SP22-01 and SP-22-02 within the setback area of the Site, as shown on the Operational Plan. Surface water level monitoring will consist of recording water level data at 15 minute intervals using data loggers, along with quarterly logger downloads and manual water level measurements. Surface water conditions shall continue to be monitored at the existing surface water stations SW1 to SW4 located in the channels of Mill Creek and Tributary 3, as well as SW5 and SW6 located within the PSW. Surface water monitoring shall include quarterly manual measurements of water level and flow, as well as continuous hourly monitoring of water levels and temperatures using dataloggers. To identify temperature threshold exceedances and assess potential impacts of extraction, SW3 shall be monitored near (±5 days) the start and middle of November. Eleven reference points for surface water stations shall be resurveyed once every two years. An additional monitoring station SW7 shall be installed to monitor hydrological conditions in the PSW in the southwestern portion of the Site, which includes wetlands similar to those observed at SW5 and SW6, and a low-lying area. SW7 shall include two standpipe piezometers (SW7A and SW7B), one placed at the northern margin of the low-lying feature (interpreted to be the upgradient side of the surface water feature), another placed in wetland south of the low-lying area, and a surface water monitoring point within the low-lying area. Surface water monitoring shall include quarterly manual measurements of water level, as well as continuous hourly monitoring of water levels and temperatures using dataloggers.
      iii. Data Review and Reporting: Groundwater and surface water levels shall be reviewed by CBM quarterly, and reported to the MNRF annually as part of the licence requirements. Water level trends during Operations and Post-Rehabilitation shall be compared to Pre-Operational conditions. If the results of the monitoring program indicate the potential for adverse impact to groundwater users (private wells) or surface water features (Mill Creek and its tributaries), then appropriate enhanced monitoring and/or mitigative actions would be developed and implemented. Results of the monitoring program shall be reviewed by the licensee quarterly and reported to MNR annually as part of the licence requirements as well as MECP. Trends during Operations and Post-Rehabilitation shall be compared to Pre-Operational conditions. If the results of the monitoring program indicate the potential for adverse impacts to groundwater users (private wells), surface water features (Mill Creek and its tributaries) or to wetlands, then appropriate enhanced monitoring, and corrective actions shall be implemented, as outlined in the Hydrological and Ecological Monitoring Plan (WSP, January 2026).
   c. Any water well interference complaint received by CBM will be responded to in light of the collected monitoring data and under the Complaints Response Protocol described in Section 8.5 of the Water Report. CBM shall respond to the complainant within 72 hours.
   d. All fuel handling on site shall be done in accordance with applicable TSSA Standards and CBM's Best Management Practices.
   e. Specific trigger levels shall be established in consultation with the MNR and GRCA prior to the commencement of aggregate extraction using available information to establish baseline conditions.Tiered triggers for each impact receptor shall be designed to identify conditions which precede an impact, enhance monitoring, and identify the potential for impact and engage mitigation measures.

   Preliminary Trigger Level: The levels established to identify conditions that precede those in which there is potential for impacts and proactively enhance monitoring to identify trigger levels and take corrective actions in a timely fashion.

   Trigger Level: The levels at which a potential impact may occur to an impact receptor. In response to the identification of a trigger level, an impact assessment shall be performed with all relevant data and distributed to the regulating agency, and, if operation of the pit is identified as a contributing factor, corrective actions shall be taken to mitigate potential impacts. Details of the approach to setting Preliminary Trigger Levels and Trigger Levels for each potential impact receptor are outlined in the Hydrological and Ecological Monitoring Plan (WSP, January 2026).

(Report Recommendations continued on page 5 of 5)

M. Variations from Control and Operation Standards

Number	O.Reg 244/97 Section 0.13	Variation	Rationale
1	(1)19.i	Below water side slopes may vary from a slope that is at least three horizontal metres for every vertical metre (3:1). These will slope to the natural angle of repose.	Below water slopes will stabilize at the natural angle of repose, which is estimated to range from 2-3:1.
2	(1)13.i	Stockpiles may be placed within 30m of adjacent residential lands.	Adjacent lands are owned by CBM.
3	(3)(a)	Fencing is not required along the boundaries that run through a woodlot and/or a wetland.	These boundaries will be demarcated by 1.2m high marker posts that are visible from one to the other. To limit disturbance to significant wetland and woodland, silt fencing will be installed along the Limit of Extraction so fencing will be in place.
4	(1) 9	Excavation will occur within setback area in a portion of the site.	Site alteration for the construction of the tile drain. This area will be backfilled to original grade once construction complete.

Legal Description

PART OF LOTS 18, 19 and 20
CONCESSION 1
(Geographic Township of Puslinch)
TOWNSHIP OF PUSLINCH
COUNTY OF WELLINGTON

Site Plan Amendments

No.	Date	Description	By

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
200-540 BINGEMANS CENTRE DR, KITCHENER, ON. N2B 3X9 | P: 519.576.3650 | WWW.MHBCPLAN.COM

MNR Approval Stamp

Stamp

REAL DEWITTER

Applicant

VOTORANTIM cimentos cbm

55 Industrial St. 4th Floor Toronto, Ontario M4G 3W9
Telephone: (416) 696-4411

Applicant's Signature

Andreanne Simard
Director of Lands, Resources and Environment
Votorantim Cimentos North America (VCNA)

Project

Aberfoyle South Lake Pit

ARA Licence Reference No.

Pre-approval review:

Revs. to address Agency and Public comments - Jan. 2026

For application submission - November 2023

Plot Scale 1:2.5 [1mm = 2.5 units] MODEL

Drawn By D.G.S.

Checked By N.D.

File No. **Y321AB**

File Name

OPERATIONAL NOTES PLAN

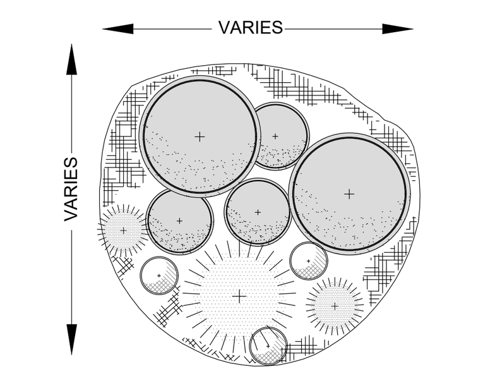
Drawing No.

3 OF 5

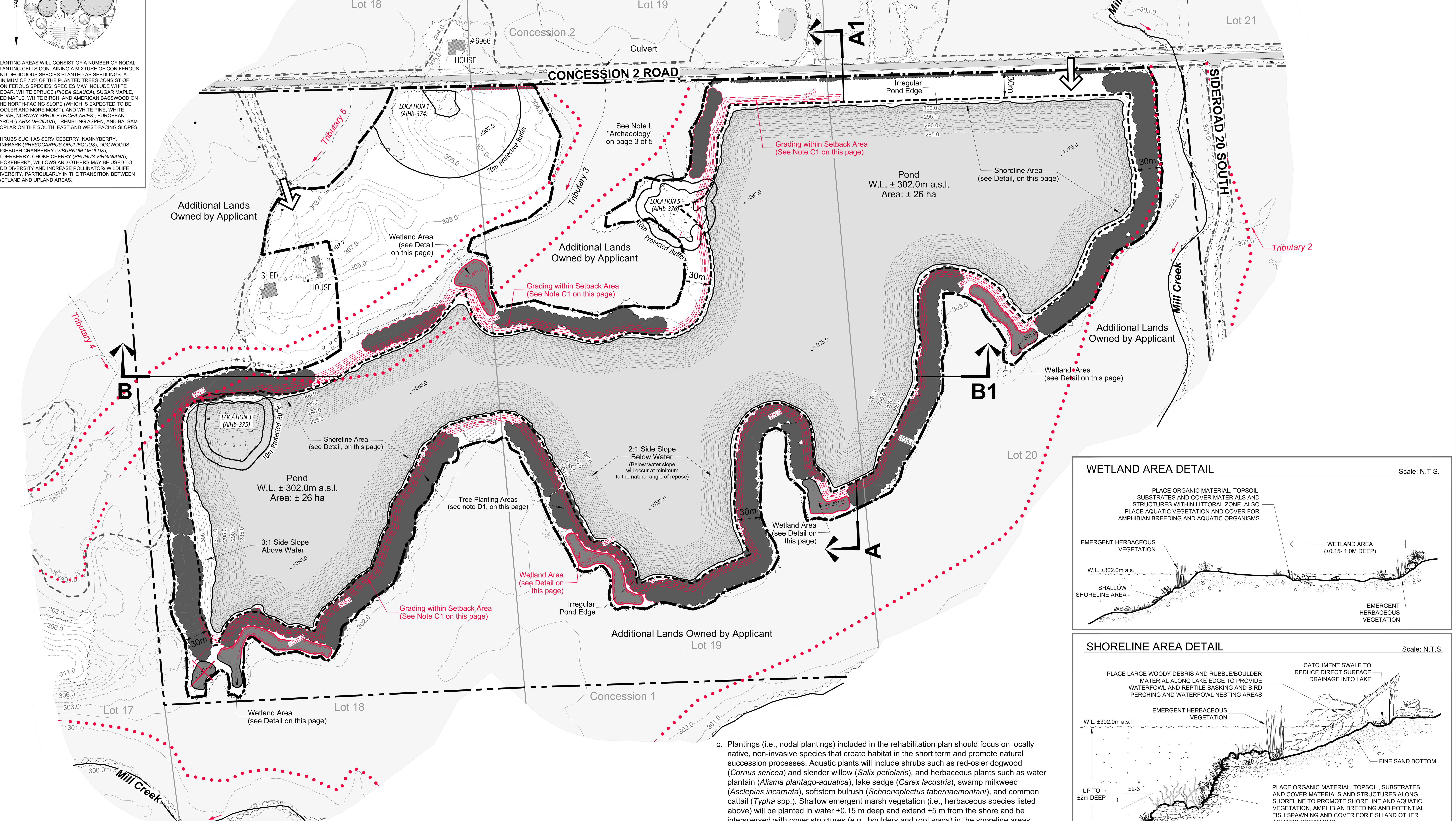
K:\Y321AB- CBM Aberfoyle South Pit Expansion\A\CBM Aberfoyle South Lake Pit Noteslan 3of5 January2026.dwg

Nodal Planting Detail

Scale: NTS



- PLANTING AREAS WILL CONSIST OF A NUMBER OF NODAL PLANTING CELLS CONTAINING A MIXTURE OF CONIFEROUS AND DECIDUOUS SPECIES PLANTED AS SEEDLINGS. A MINIMUM OF 70% OF THE PLANTED TREES CONSIST OF CONIFEROUS SPECIES. SPECIES MAY INCLUDE WHITE CEDAR, WHITE SPRUCE (*PICEA GLAUCA*), SUGAR MAPLE, RED MAPLE, WHITE BIRCH, AND AMERICAN BASSWOOD ON THE NORTH-FACING SLOPE (WHICH IS EXPECTED TO BE COOLER AND MORE MOIST), AND WHITE PINE, WHITE CEDAR, NORWAY SPRUCE (*PICEA ABIES*), EUROPEAN LARCH (*LARIX DECIDUA*), TREMBLING ASPEN, AND BALSAM POPLAR ON THE SOUTH, EAST AND WEST-FACING SLOPES.
- SHRUBS SUCH AS SERVICEBERRY, NANNYBERRY, NINEBARK (*PHYSOCARPUS OPULIFOLIUS*), DOGWOODS, HIGHBUSH CRANBERRY (*VIBURNUM OPULUS*), ELDERBERRY, CHOKE CHERRY (*PRUNUS VIRGINIANA*), CHOKEBERRY, WILLOWS AND OTHERS MAY BE USED TO ADD DIVERSITY AND INCREASE POLLINATOR/ WILDLIFE DIVERSITY, PARTICULARLY IN THE TRANSITION BETWEEN WETLAND AND UPLAND AREAS.



Legal Description

PART OF LOTS 18, 19 AND 20
CONCESSION 1
(Geographic Township of Puslinch)
TOWNSHIP OF PUSLINCH
COUNTY OF WELLINGTON

Legend

- Boundary of Area to be Licensed
- Limit of Excavation — ALL SETBACKS ARE DRAWN TO SCALE AND SHOW LABELLED DISTANCES
- Additional Lands Owned by Applicant — POST & WIRE FENCE UNLESS OTHERWISE NOTED
- Proposed Contour — METRES ABOVE SEA LEVEL (m A.S.L.)
- Contour with Elevation — METRES ABOVE SEA LEVEL
- Proposed Elevation — REHABILITATED ELEVATION
- Existing Fence — POST & WIRE FENCE UNLESS OTHERWISE NOTED
- Proposed Tree Planting Areas — LOCATION APPROXIMATE
- Existing Vegetation
- Post Extraction Pond
- Private Laneway
- Proposed Shoreline Area — (SEE DETAIL ON THIS PAGE)
- Access
- Proposed Wetland Area — (SEE DETAIL ON THIS PAGE)
- Provincially Significant Wetland — ON-SITE VERIFIED IN FIELD BY ~~WSP 2021~~ GRCA SEPT. 12, 2023; ~~AND~~ OFF-SITE FROM ONTARIO GEOHUB AND GRCA OPEN DATA
- Floodplain Extent — WSP 2025
- Unevaluated Wetland — GRCA OPEN DATA
- Archaeological Site — SITE RECOMMENDED FOR FURTHER ARCHAEOLOGICAL FIELD WORK
- Cross Sections — SEE PAGE 5 OF 5 FOR EXISTING AND REHABILITATED CROSS SECTIONS

WETLAND AREA DETAIL

Scale: N.T.S.

PLACE ORGANIC MATERIAL, TOPSOIL, SUBSTRATES AND COVER MATERIALS AND STRUCTURES WITHIN LITTORAL ZONE. ALSO PLACE AQUATIC VEGETATION AND COVER FOR AMPHIBIAN BREEDING AND AQUATIC ORGANISMS
EMERGENT HERBACEOUS VEGETATION
WETLAND AREA (±0.15- 1.0M DEEP)
W.L. ±302.0m a.s.l
SHALLOW SHORELINE AREA
EMERGENT HERBACEOUS VEGETATION

SHORELINE AREA DETAIL

Scale: N.T.S.

PLACE LARGE WOODY DEBRIS AND RUBBLE/BOULDER MATERIAL ALONG LAKE EDGE TO PROVIDE WATERFOWL AND REPTILE BASKING AND BIRD PERCHING AND WATERFOWL NESTING AREAS
CATCHMENT SWALE TO REDUCE DIRECT SURFACE DRAINAGE INTO LAKE
EMERGENT HERBACEOUS VEGETATION
W.L. ±302.0m a.s.l
FINE SAND BOTTOM
UP TO ±2m DEEP
PLACE ORGANIC MATERIAL, TOPSOIL, SUBSTRATES AND COVER MATERIALS AND STRUCTURES ALONG SHORELINE TO PROMOTE SHORELINE AND AQUATIC VEGETATION, AMPHIBIAN BREEDING AND POTENTIAL FISH SPAWNING AND COVER FOR FISH AND OTHER AQUATIC ORGANISMS
COARSE STONE BOTTOM
MINIMUM AVERAGE ±2-3:1 SIDE SLOPE TO BOTTOM OF LAKE

This site plan is prepared under the Aggregate Resources Act (ARA) for a Class A licence for a pit below the ground water table and follows the Aggregate Resources of Ontario: Site Plan Standards August 2020, specifically Rehabilitation for all sites (Numbers 59-67 in the standards).

A. General

1. The rehabilitated landform of this site will include: pond, shallow shoreline and wetland areas, reforestation and various side slope treatments.
2. The existing wetland within the southern setback area is located outside of the Limit of Extraction and is not expected to be directly impacted.
3. No buildings/structures or internal haul roads will remain on site upon completion of rehabilitation.

B. Phasing

1. The proposed Aberfoyle South Lake Pit ~~Expansion~~ will be rehabilitated on a progressive basis, corresponding to the operational progression of the pit excavation, to form a pond at final rehabilitation.
2. As the pit is excavated to its maximum, or any other/lesser terminal limits, both horizontally and vertically on a lift-by-lift basis, progressive rehabilitation will follow provided the subject area is of an appropriate area to undergo rehabilitation (See Note G on page 3 of 5 for details).
3. The excavation perimeter will be fully side sloped at a maximum 2:1 below water (from original ground to floor) and a maximum of 3:1 for the above water portion on the west side of the excavation area. Sloping will occur as the limits of the pit excavation are reached. See Rehabilitation Plan drawing and Note D on this page.
4. Side slopes will be vegetated where located above the final water level of the pit pond and will include reforestation in setback areas in order to enhance a diversity of native vegetation types and species that are anticipated to spread around the rehabilitated side slopes (see Note D and 'Nodal Planting Detail' on this page).
5. The maximum disturbed area on this pit shall not exceed 50% of the site.

C. Slopes and Grading

1. Topsoil and overburden will be used in the progressive rehabilitation of the side slope areas. Overburden and/or unmarketable material will be used to backfill pit faces to create the topography of the side slopes (i.e. 3/2:1 slope). Above water side slope areas that will be vegetated will be covered with a minimum 15 cm of topsoil/organic matter prior to planting. Areas along the shoreline lower than 302 m a.s.l. will be sculpted to an elevation of 304.6 m a.s.l. as a form of flood control within the setback area.
2. Importation of fill/excess soil:
   a. Excess soil, as defined in Ontario Regulation 244/97 may be imported to this site to facilitate the following rehabilitation:
      i. Creation of 3:1 slopes (or sloping ratio otherwise described on the final rehabilitation page)
      ii. Top dressing to establish vegetation
   b. Liquid soil, as defined in Ontario Regulation 406/19 under the Environmental Protection Act, is not authorized for importation to the site.
   c. The quality of excess soil imported to the site for final placement must be equivalent to or more stringent than the applicable excess soil quality standards as determined in accordance with Ontario Regulation 244/97 as amended from time to time and must be consistent with the site conditions and the end use identified in the approved rehabilitation plan.
   d. Where a qualified person is retained or required to be retained in accordance with Ontario Regulation 244/97, the quality, storage, and final placement of excess soils shall be done according to the advice of the qualified person.
   e. Excess soil imported to facilitate rehabilitation as described on this site plan shall be undertaken in accordance with Ontario Regulation 244/97 under the Aggregate Resources Act, as amended from time to time.
   f. The cumulative total amount of excess soil that may be imported to this site for rehabilitation purposes is 50,000 m³

D. Proposed Vegetation and Rehabilitated Features

1. Final Rehabilitation
   a. The proposed final rehabilitation plan includes the creation of a pond, and terrestrial habitats comprised of backfilled areas, overburden slopes, and terrestrial nodal plantings. Shoreline widths and depths will be varied to promote maximum diversity within the habitat for fish and wildlife. The natural influx of external organic matter (i.e., leaf litter) will be promoted along shoreline areas through management of forest edges and minimization of cleared areas between the extraction area and Mill Creek-Puslinch PSW to the south.
   b. ~~In accordance with the Growth Plan, 35%~~ Approximately (6.7 ha) of the non-aquatic area of the licence will be rehabilitated to forest cover at time of final rehabilitation. The tree planting areas will be planted in accordance with the applicable details on this plan and where indicated on the Rehabilitation Plan.
   c. Plantings (i.e., nodal plantings) included in the rehabilitation plan should focus on locally native, non-invasive species that create habitat in the short term and promote natural succession processes. Aquatic plants will include shrubs such as red-osier dogwood (*Cornus sericea*) and slender willow (*Salix petiolaris*), and herbaceous plants such as water plantain (*Alisma plantago-aquatica*), lake sedge (*Carex lacustris*), swamp milkweed (*Asclepias incarnata*), softstem bulrush (*Schoenoplectus tabernaemontani*), and common cattail (*Typha* spp.). Shallow emergent marsh vegetation (i.e., herbaceous species listed above) will be planted in water ±0.15 m deep and extend ±5 m from the shore and be interspersed with cover structures (e.g., boulders and root wads) in the shoreline areas. Basking logs, nesting platforms and boxes will be created for turtle, waterfowl, and swallows respectively.
   d. Above-water side slopes will be rough graded to a 3:1 aspect to ensure stability. The slopes will be seeded with a mix of grasses and legumes consisting of native, non-invasive species. The setback area and slope of the above-ground extraction area will be planted with a higher density of trees (1,600 trees / ha based on 2.5 m spacing with a target density of 1,200 trees / ha after two years of planting) to ~~achieve the 35% minimum forest cover in accordance with the Growth Plan and~~ create a transitional zone between the adjacent Mill Creek-Puslinch PSW and the rehabilitated pit. This transitional zone will also increase overall woodland cover, improve the buffer to Mill Creek-Puslinch PSW and Mill Creek and enhance the existing wildlife movement corridor. To facilitate a natural connection with the existing wetland, plantings should include species characteristic of the Mill Creek-Puslinch PSW as well as a transitional upland / wetland interface, and that are suited to the planting conditions (i.e., soil texture and moisture). It is further recommended that a minimum of 70% of the planted trees consist of coniferous species. Species may include white cedar, white spruce (*Picea glauca*), sugar maple, red maple, white birch, and American basswood on the north-facing slope (which is expected to be cooler and more moist), and white pine, white cedar, Norway spruce (*Picea abies*), European larch (*Larix decidua*), trembling aspen, and balsam poplar on the south, east and west-facing slopes (see also 'Nodal Planting Detail' on this page).
   e. Shrubs such as serviceberry, nannyberry, ninebark (*Physocarpus opulifolius*), dogwoods, highbush cranberry (*Viburnum opulus*), elderberry, choke cherry (*Prunus virginiana*), chokeberry, willows and others may be used to add diversity and increase pollinator/wildlife diversity, particularly in the transition between wetland and upland areas.

2. Progressive Rehabilitation
   a. Rehabilitation will be progressive following the general direction of extraction and proceed as limits of extraction (area and depth) are reached. The sequence of rehabilitation will follow the "Sequence of Operations" diagram located on page 2 of 5. Minor deviations/variations in operational/rehabilitation sequence will be permitted in order to adjust for any variable resource and market conditions.
   b. Topsoil will be used in the progressive rehabilitation of the above water side slope areas. Side slope areas will be covered with a minimum 150mm of topsoil/organic matter. Overburden will be used to backfill pit faces to desired finished grades (i.e. 3:1 slope) and to enhance areas within the setback along the southern portion of the shoreline as a form of flood control. This will be carried out prior to planting of trees/shrubs in this area.
   c. Setback areas will be planted with nodal planting cells (see the site plan and 'Nodal Planting Detail' on this page). Also, two rows of trees will be planted along the Concession 2 Road frontage, in front of the berm required for noise attenuation during operations, to provide additional screening to the site.
   d. The new wetland areas shall be created in accordance with the Wetland Area Detail. Wetlands shall be created prior to the removal of the non-PSW in Phase 4 associated with extraction and berm construction.

3. Vegetation
   Ground covers on side slopes will be established as part of the phased stripping operations that proceed extraction and will be maintained and replaced should it fail to establish itself to control erosion.

4. Establishment of Slopes/Rehabilitated Areas
   Rehabilitation of this site involves the creation of 26 ha of pond including shallow shoreline areas, ~~0.3~~ 0.8 ha of wetland areas, 6.7 ha of tree planting areas (35% of non-aquatic areas) and 11 ha of terrestrial landform comprised of above water overburden side slopes, a flood control berm and an agricultural area in the northwest part of the site where extraction did not occur. The final pit landform will be in accordance with the drawing as shown on this page. Shallow shoreline widths and depths will be varied to promote maximum diversity within this habitat for fish and wildlife.

E. Drainage

1. Final surface drainage will follow the rehabilitated contours as shown.

F. Final Rehabilitation

1. No buildings or structures associated with aggregate operations will remain on site.
2. The water level of the proposed pond (±302.0m a.s.l.) and the post-extraction ground water table, are as shown on pages 1, 4 and 5 of 5 as per hydrogeological/ hydrological assessment.

Site Plan Amendments

No.	Date	Description	By

PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE — MHBC
200-540 BINGEMANS CENTRE DR. KITCHENER, ON. N2B 3X9 | P: 519.576.3650 | WWW.MHBCPLAN.COM

MNR Approval Stamp

Stamp

NEAL DeRUYTER BES MCIP RPP

north

Applicant

VOTORANTIM cimentos cbm
55 Industrial St. 4th Floor Toronto, Ontario M4G 3W9
Telephone: (416) 696-4411

Applicant's Signature

Andreanne Simard
Director of Lands, Resources and Environment
Votorantim Cimentos North America (VCNA)

Project

Aberfoyle South Lake Pit

ARA Licence Reference No.	Pre-approval review:
	Revs. to address Agency and Public comments - Jan. 2026
	For application submission - November 2023
Plan Scale 1:2,500 (Arch D) — SCALE 0 25 50 100 METRES	Plot Scale 1:2.5 [1mm = 2.5 units] MODEL
	Drawn By D.G.S. / Checked By N.D. / File No. Y321AB

File Name

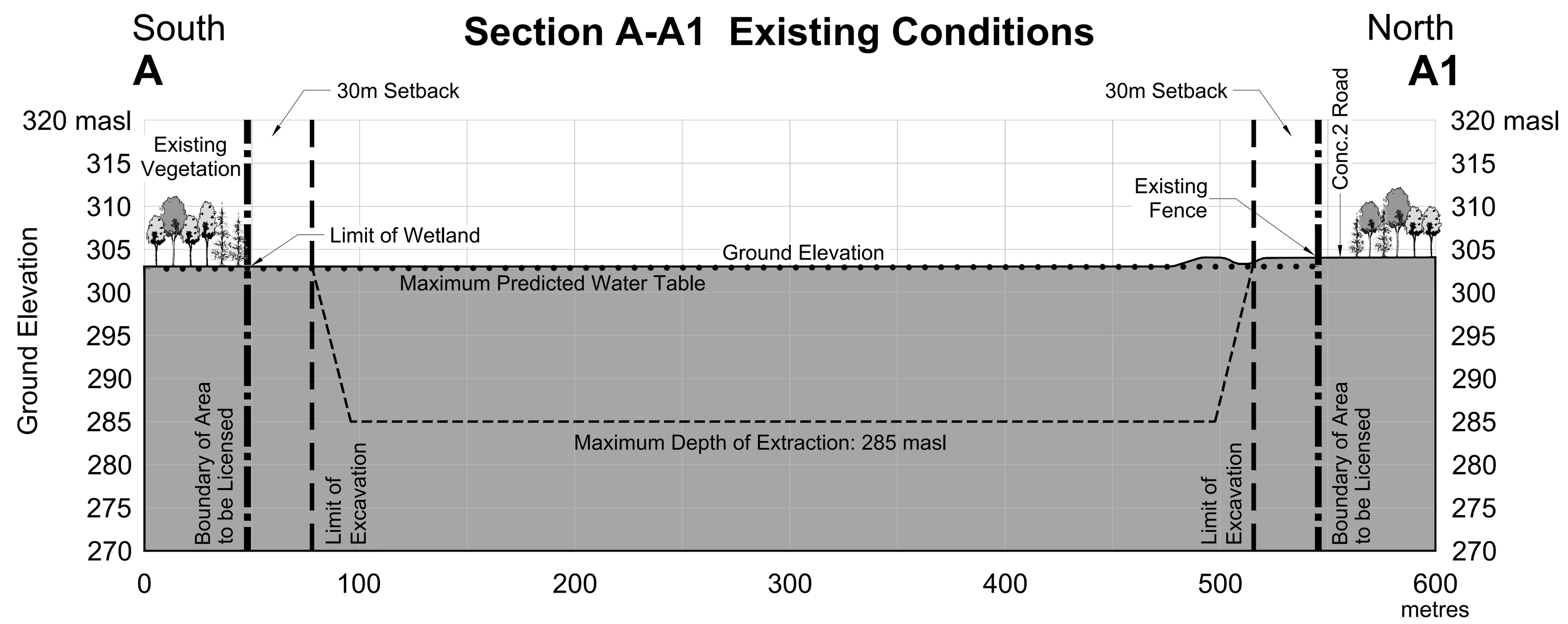
REHABILITATION PLAN

Drawing No.

4 OF 5

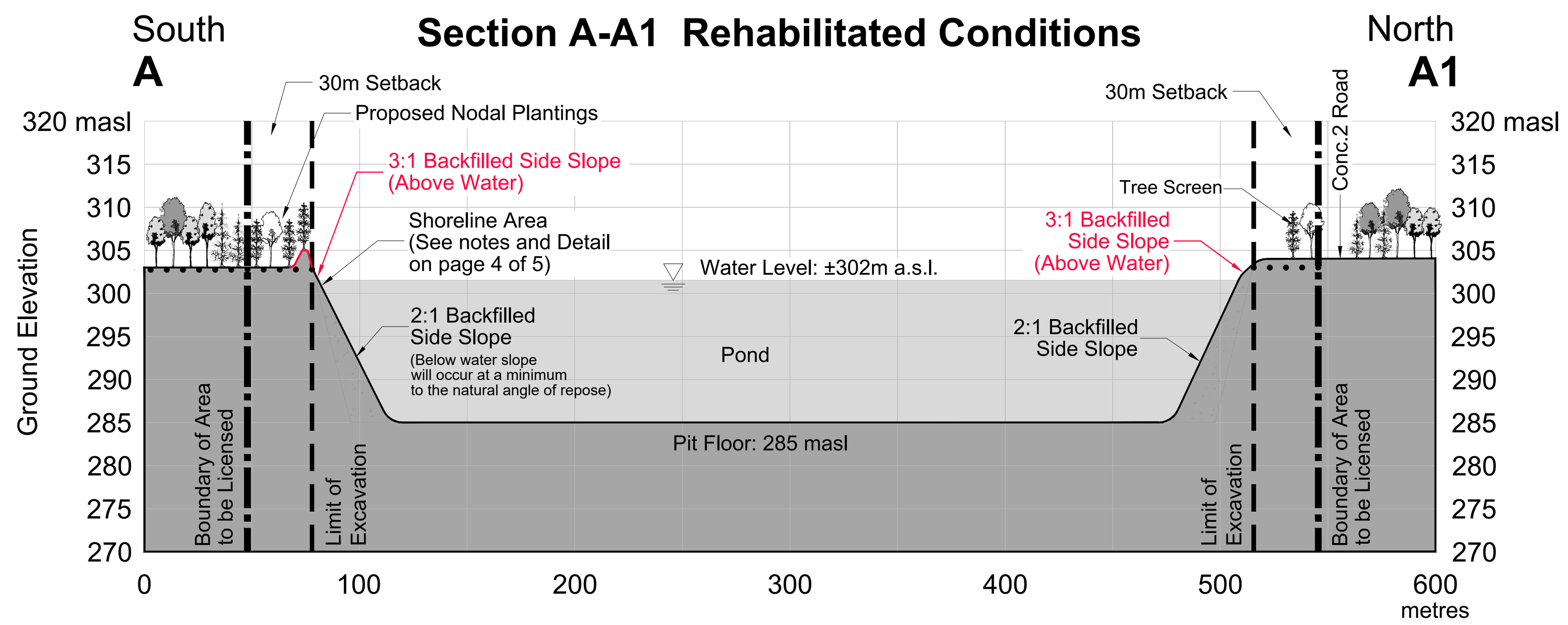
K:\Y321AB- CBM Aberfoyle South Pit Expansion\A\CBM Aberfoyle South Lake Pit Rehaplan 4of5 January2026.dwg

Section A-A1 Existing Conditions

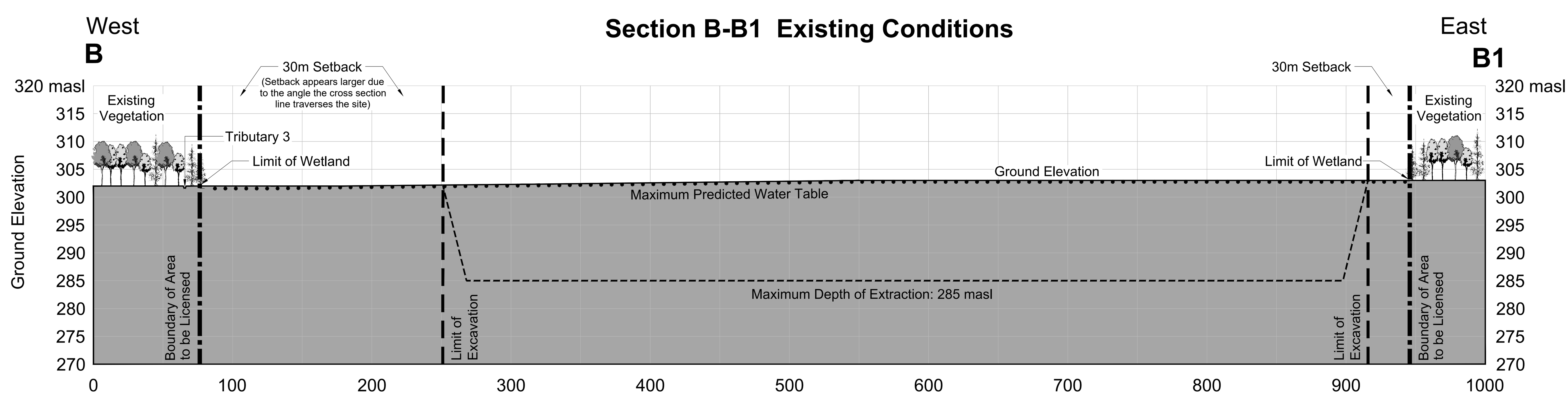


For all Cross Sections
Horizontal Scale - 1:2,500
Vertical Scale - 4x Exaggeration (1:625)

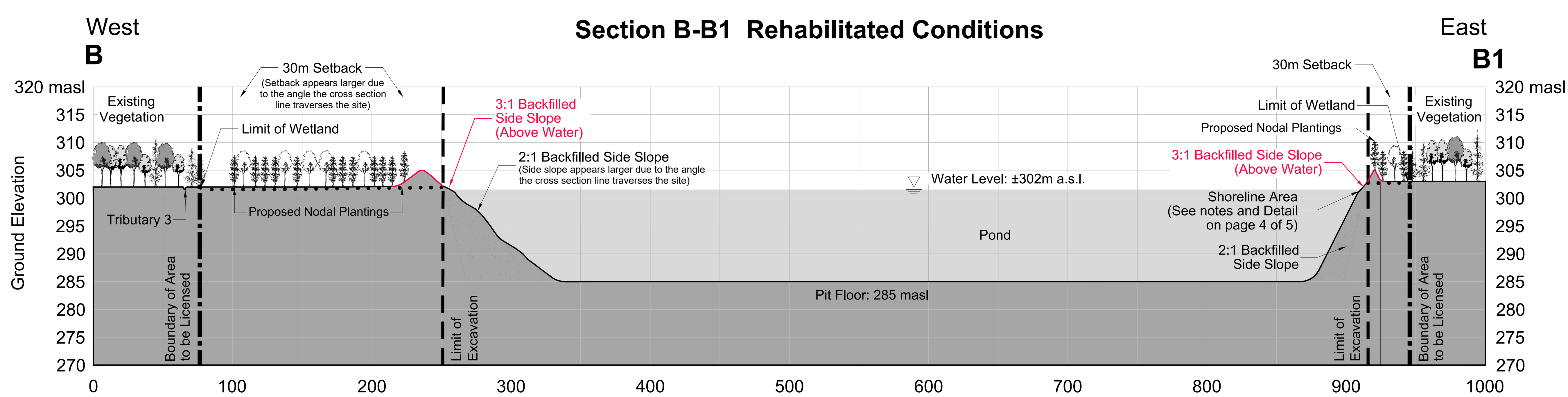
Section A-A1 Rehabilitated Conditions



Section B-B1 Existing Conditions



Section B-B1 Rehabilitated Conditions



L. Report Recommendations **(cont'd from Page 3)**

4. Archaeology: "Stage 1 and 2 Archaeological Assessment, Revised Report" August 28, 2023 and "Stage 3 Archaeological Assessment (Locations 3 & 5)" June 1, 2023 (Source: WSP)

a. Location 1 has been registered with the MCM under Borden AiHb-374. The AiHb-374 site is recommended for long term protection and avoidance under Stage 3 PIF P468-0087-2022 using the following measures:

i. The protected site area corresponds to Figure B-2 of the supplemental documentation.

ii. The AiHb-374 site is present as shown on the site plan.

iii. No extraction, alterations or soil disturbance may be carried out within the limits of the protected area of the AiHb-374 site.

iv. Post and wire fencing will be erected along the limits of the AiHb-374 site under the direction of the licensed consultant archaeologist

v. If the AiHb-374 site is still present when the ARA license is surrendered a restrictive covenant will be placed on title to continue the protection of the archaeological site.

vi. A letter is provided by the licensee stating that they are aware of the presence of the archaeological site within the limits of the licence and that they are aware of the restrictions on alteration of an archaeological site of further cultural heritage value or interest as per the condition on their licence and as per Section 48 of the Ontario Heritage Act.

b. Location 3 has been registered with the MCM under Borden (AiHb-375). The Stage 3 Archaeological Assessment recommends the following:

i. Based on the CHVI documented within the artifact assemblage and the Euro-Canadian historical context for Location 3 (AiHb-375), the site will be subjected to Stage 4 mitigation by excavation be conducted as per Section 4.2 of the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011). As the artifact assemblage postdates 1830, Section 4.2.7 Standard 2 applies, which requires all midden areas to be hand excavated, followed by mechanical topsoil removal of the remainder of the site. As the site is located within plough zone which has resulted in the artifacts being disturbed and redistributed and therefore are not in situ, as well as the high counts of artifacts in multiple units no potential midden areas were identified during the Stage 3 Archaeological Assessment. Based on these conditions, mechanical topsoil removal of the site can proceed immediately. Mechanical topsoil removal ~~should~~ shall be undertaken with a backhoe or gradall-type excavator with a flat-edged bucket and ~~should~~ shall stop at subsoil interface, at which time the subsoil ~~should~~ shall be assessed for cultural features as per Section 4.2.3., Standard 2 and 3, and must be completed 10 m beyond any identified archaeologically significant features, up to the limits of the proposed area of impact.

ii. Excavation will only be conducted when weather and lighting conditions meet the requirements of the *Standards and Guidelines for Consultant Archaeologists*. Following mechanical topsoil removal, all identified cultural features will be documented with photographs and drawings, and subsequently hand excavated. If larger cellar features are encountered, a minimum of two opposing quadrants must be hand excavated. All architectural remains must be documented with scale drawing and photographs, and all structural features must be excavated according to the requirements for complex stratified sites. All excavated feature soil will be screened through 6 mm wire mesh to facilitate artifact recovery. A thorough photographic record of the Stage 4 mitigation must be maintained.

iii. A report documenting the methods and results of the Stage 4 mitigation and laboratory analysis of the artifacts, together with an artifact inventory, and all necessary cartographic and photographic documentation must be produced in accordance with the *Standards and Guidelines for Consultant Archaeologists*.

iv. Until such time that Location 3 (AiHb-375) can undergo the recommended Stage 4 excavation, the site ~~should~~ shall be avoided and protected by establishing a "no-go" zone consisting of the site and a 10 m protective buffer. The proposed protected area must be shown on all contract drawings, when applicable, and be labelled as a "no-go" zone. Instructions ~~should~~ shall be provided to all construction staff to stay outside of this area. Any ground alterations to Location 3 (AiHb-375) and its protective buffer area ~~should~~ shall be avoided. This includes but is not necessarily limited to impacts from aggregate extraction, aggregate processing, vegetation clearance, and the construction of access roads or berms over the site. It also includes minor forms of soil disturbance, such as tree removal, minor landscaping, and utilities installation. If grading or other soil disturbing activities are anticipated to extend to the edge of the area to be avoided, then a temporary barrier must be erected around Location 3 (AiHb-375) and its 10 m protective buffer. No-go instructions must be given to all on site extraction crew and others involved in the day-to-day decisions on site, and a licensed archaeologist ~~should~~ shall be contracted to inspect and monitor the effectiveness of the avoidance strategy. After completion of these activities, a report will be prepared on the effectiveness of the strategy.

c. Location 5 has been registered with the MCM under Borden (AiHb-376). The Stage 3 Archaeological Assessment recommends following:

i. Based on the CHVI documented within the artifact assemblage and the Euro-Canadian historical context for Location 5 (AiHb-376), the site will be subjected to Stage 4 mitigation by excavation be conducted as per Section 4.2 of the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011). As the artifact assemblage postdates 1830, Section 4.2.7 Standard 2 applies, which requires all midden areas to be hand excavated, followed by mechanical topsoil removal of the remainder of the site. Based on the location of Location 5 (AiHb-376) within ploughzone, and the relatively low counts of artifacts in each unit, no potential midden areas were identified during the Stage 3 Archaeological Assessment, therefore, topsoil removal of the site can proceed immediately. Mechanical topsoil removal ~~should~~ shall be undertaken with a backhoe or gradall-type excavator with a flat-edged bucket and should stop at subsoil interface, at which time the subsoil ~~should~~ shall be assessed for cultural features as per Section 4.2.3., Standard 2 and 3, and must be completed 10 m beyond any identified features, up to the limits of the proposed area of impact.

ii. Excavation will only be conducted when weather and lighting conditions meet the conditions of the *Standards and Guidelines for Consultant Archaeologists*. Following mechanical topsoil removal, all identified cultural features will be documented with photographs and drawings, and subsequently hand excavated. If larger cellar features are encountered, a minimum of two opposing quadrants must be hand excavated. All architectural remains must be documented with scale drawing and photographs, and all structural features must be excavated according to the requirements for complex stratified sites. All excavated feature soil will be screened through 6 mm wire mesh to facilitate artifact recovery. A thorough photographic record of the Stage 4 mitigation must be maintained.

iii. A report documenting the methods and results of the Stage 4 mitigation and laboratory analysis of the artifacts, together with an artifact inventory, and all necessary cartographic and photographic documentation must be produced in accordance with the *Standards and Guidelines for Consultant Archaeologists*.

iv. Until such time that Location 5 (AiHb-376) can undergo the recommended Stage 4 excavation the site ~~should~~ shall be avoided and protected by establishing a "no-go" zone consisting of the site and a 10 m protective buffer. The proposed protected area must be shown on all contract drawings, when applicable, and be labelled as a "no-go" zone. Instructions ~~should~~ shall be provided to all construction staff to stay outside of this area. Any ground alterations to Location 5 (AiHb-376) and its protective buffer area ~~should~~ shall be avoided. This includes but is not necessarily limited to impacts from aggregate extraction, aggregate processing, vegetation clearance, and the construction of access roads or berms over the site. It also includes minor forms of soil disturbance, such as tree removal, minor landscaping, and utilities installation. If grading or other soil disturbing activities are anticipated to extend to the edge of the area to be avoided, then a temporary barrier must be erected around Location 3 (AiHb-376) and its 10 m protective buffer. No-go instructions must be given to all on site extraction crew and others involved in the day-to-day decisions on site, and a licensed archaeologist ~~should~~ shall be contracted to inspect and monitor the effectiveness of the avoidance strategy. After completion of these activities, a report will be prepared on the effectiveness of the strategy.

d. Should deeply buried archaeological resources be identified during ground disturbance activity associated with future development of the study area, ground disturbance activities ~~should~~ shall be immediately halted and the Archaeology Division of the Culture Programs Unit of the MCM notified.

5. Traffic: "Revised Transportation Impact Study, CBM Aberfoyle South Lake Pit" February 2025 (Source: TYLin)

a. Prior to pit operations, geotechnical investigations of Concession 2 and the Mill Creek culvert shall be undertaken as part of detailed design and in conjunction with the Township's planned improvements to Concession 2.

b. To discourage pit trucks exiting the pit access from making a left-turn on to Concession 2, a custom "NO LEFT-TURN FOR TRUCKS" sign shall be installed when the pit becomes operational. Additionally, a NO HEAVY TRUCKS (Rb-62) sign shall also be installed on Concession 2 just west of the pit truck access for westbound traffic (subject to Township consent).

c. To mitigate dust and debris, rumble bars on the pit truck access shall be installed.

6. Agriculture: "Agriculture Considerations, Aberfoyle South Expansion" September 2023 (Source: MHBC Planning)

Implement all recommended mitigation measures pertaining to water quality and quantity, noise, dust, and traffic in the ARA site plans.

7. Dust: "Best Management Practices Plan for the Control of Fugitive Dust at Aberfoyle South Pit Expansion" October 2023 (Source: WSP)

The purpose of this plan is to document the Best Management Practices for the control of fugitive dust emissions from activities taking place at the pit. The licensee shall follow these Best Management Practices including preventative procedures and reactive control measures e.g. sweeping and/or watering to reduce vehicle track-out at paved pit entrance, limiting on-site vehicle speeds, reduce material handling during high wind conditions, etc. An inspection of the conformity with the BMPs will be documented monthly and a watering log must be maintained to record dust control activity. The BMPP shall be reviewed periodically and updated if required.

8. Visual: "Visual Impact Assessment Report, Proposed CBM Aberfoyle South Pit Expansion" March 2024 (Source: MHBC)

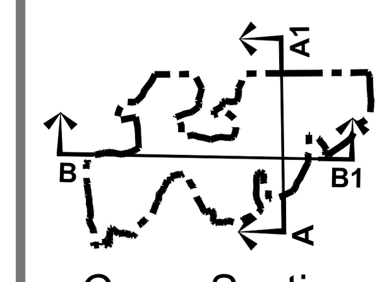
Enhanced plantings shall be implemented along the Concession Road 2 frontage in the vicinity of 6966 Concession Road 2 and/or an extended visual berm shall be constructed at the northern extraction limit, in order to provide for enhanced screening during leaf-off conditions.

Legal Description

PART OF LOTS 18, 19 and 20
CONCESSION 1
(Geographic Township of Puslinch)
TOWNSHIP OF PUSLINCH
COUNTY OF WELLINGTON

Legend

- Licensed Boundary
- Limit of Excavation
- Maximum Depth of Extraction
- Existing Vegetation/Trees
- Proposed Nodal Plantings
- Maximum Predicted Water Table (SEE NOTE D ON PAGE 1 OF 5)



Cross Sections
SEE PAGES 1, 2 & 4 OF 5 FOR PLAN VIEW LOCATION OF CROSS SECTIONS

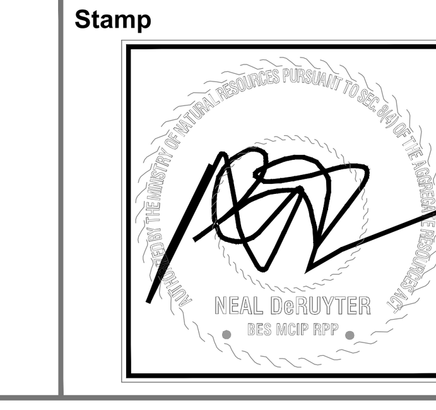
Site Plan Amendments

No.	Date	Description	By

PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
MHBC
200-540 BINGEMANS CENTRE DR. KITCHENER, ON. N2B 3X9 | P: 519.576.3650 | WWW.MHBCPLAN.COM

MNR Approval Stamp

Stamp



Applicant

VOTORANTIM cimentos cbm
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Telephone: (416) 696-4411

Applicant's Signature

Andreanne Simard
Director of Lands, Resources and Environment
Votorantim Cimentos North America (VCNA)

Project

Aberfoyle South Lake Pit

ARA Licence Reference No.

Pre-approval review:

Revs. to address Agency and Public comments - Jan. 2026
For application submission - November 2023

Plan Scale: 1:2,500 (Horizontal) / 4x Exaggeration (Vertical)
Horizontal Scale
50 0 50 100 METRES

Plot Scale 1:2.5 [1mm = 2.5 units] MODEL
Drawn By D.G.S.
Checked By N.D.
File No. Y321AB

File Name
CROSS SECTIONS PLAN

Drawing No.
5 OF 5

K:\Y321AB- CBM Aberfoyle South Pit Expansion\A\CBM Aberfoyle South Lake Pit Xsecplan 5of5 January2026.dwg