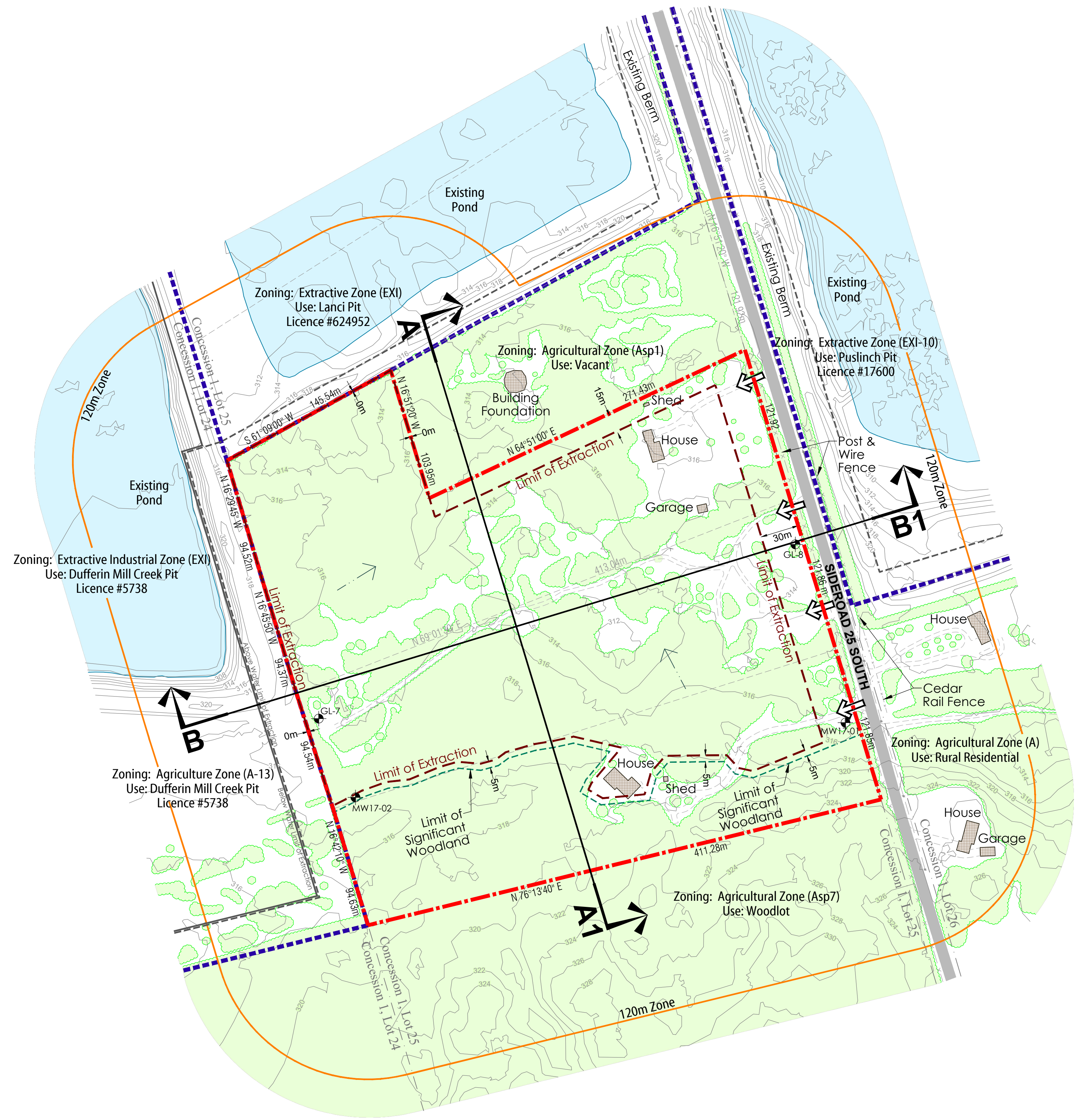


- Notes**
- THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT CLASS A LICENCE, CATEGORY 1.
  - TOPOGRAPHIC INFORMATION BASED ON APRIL 18, 2017 AERIAL IMAGERY AND 2015 SOUTHWESTERN ONTARIO ORTHOIMAGERY PROJECT (SWOOP) DTM. MAPPING IS PRODUCED AT REAL WORLD SCALE AND COORDINATES (UTM ZONE 17,NAD 83 6°). CONTOUR INTERVAL IS 2.0 METRE. ALL ELEVATIONS ARE GEODETIC.
  - PROPERTY BOUNDARY INFORMATION OBTAINED FROM REGISTERED SURVEY PLANS PREPARED BY J.D. BARNES LTD. IN APRIL 2005 AND SEVERANCE PLAN PREPARED BY DELPH & JENKINS NORTH LTD. (REGISTERED REFERENCE PLAN-2019)
  - ZONING INFORMATION OBTAINED FROM SCHEDULE 'A' TOWNSHIP OF PUSLINCH ZONING BY-LAW NO. 23/2018- APRIL, JANUARY 2020
  - THE ELEVATION OF THE EXISTING GROUNDWATER TABLE VARIES FROM 305.8 TO 306.6 masl.
  - LAND USE INFORMATION COMPILED FROM APRIL 18, 2017 ORTHO PHOTO AND SITE VISIT IN 2019.
  - AREA TO BE LICENCED ± 14.8 ha. (± 36.6 ac.)  
AREA TO BE EXTRACTED ± 10.2 ha. (± 25.1 ac.)
  - ALL MEASUREMENTS SHOWN ON THIS PLAN ARE IN METRES.



**Legal Description**  
PART OF LOT 25  
CONCESSION 1  
TOWNSHIP OF PUSLINCH  
COUNTY OF WELLINGTON

**Legend**

- Boundary of Area to be Licenced
- Limit of Extraction (ALL SETBACKS DRAWN TO SCALE AND SHOW LABELED DISTANCES)
- Existing Fence (1.2m POST & WIRE FARM FENCE UNLESS OTHERWISE NOTED)
- Public Road (Unpaved)
- Private Laneway/Roadway
- Field Access
- Hydro Pole/Line
- Building/Structure (LOCATION AND USE FOR BUILDINGS ON-SITE AND WITHIN 120m ARE SHOWN ON THIS PAGE)
- MW1 Monitoring Well (GOLDER ASSOCIATES)
- Existing Licenced Boundary (LICENCES #17600, 5738 and 624952)
- Existing Limit of Extraction (LICENCES #17600, 5738 and 624952)
- Elevation, Contour (METRES ABOVE SEA LEVEL (m A.S.L.))
- Existing Vegetation
- Limit of Significant Woodland
- Direction of Surface Drainage (IF ANY)
- Cross Sections (SEE PAGE 1 OF 3 FOR EXISTING CROSS SECTIONS AND PAGE 3 OF 3 FOR REHABILITATED CROSS SECTIONS)

**Site Plan Amendments**

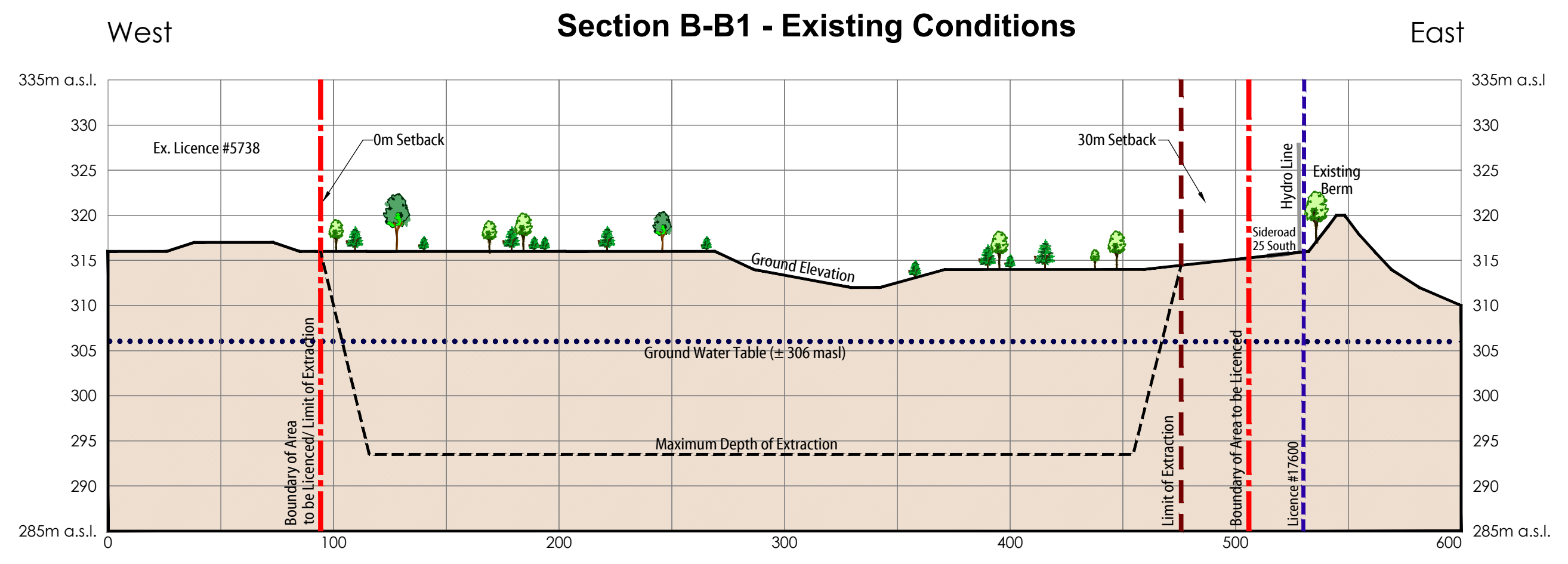
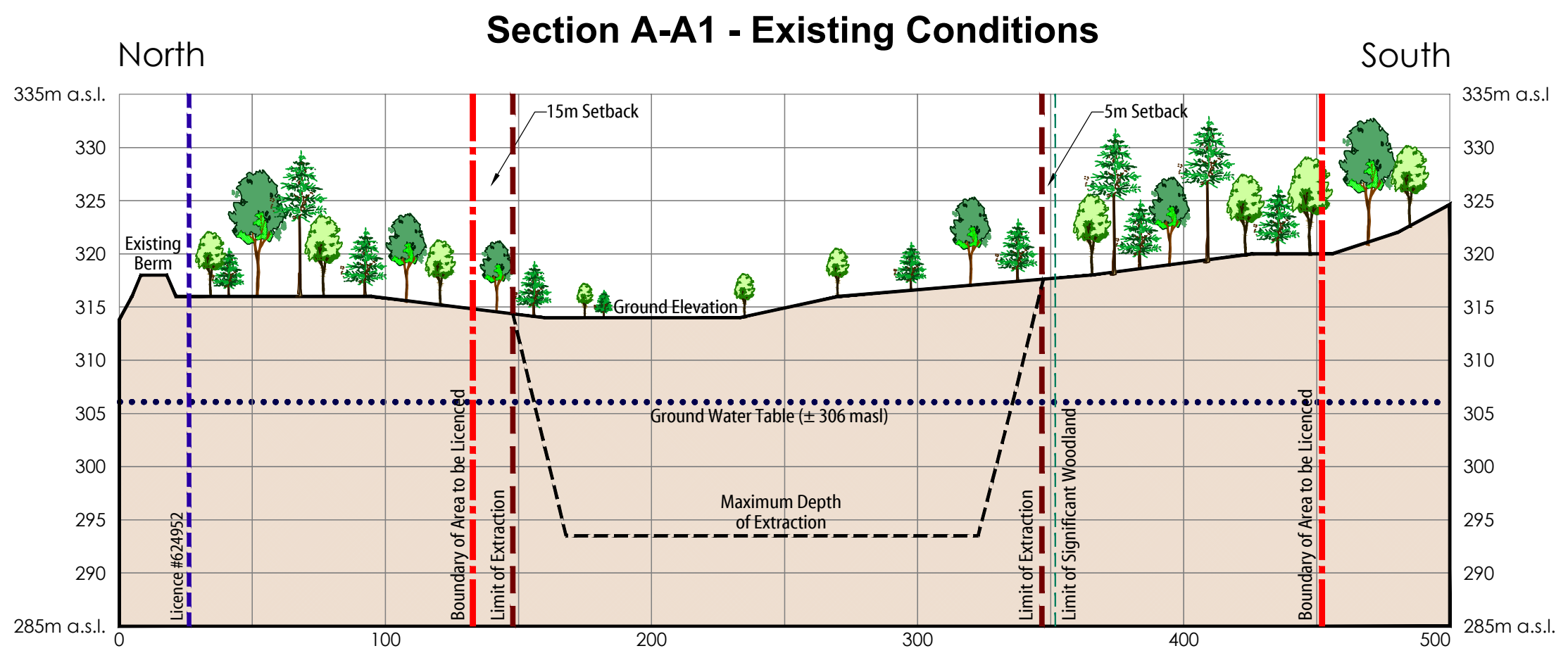
No.	Date	Description	By

**MHBC** PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE  
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Stamp

North Arrow



**ST MARYS CBM**

St. Marys Cement Inc. (Canada)  
55 Industrial St. Toronto, Ontario  
M4G 3W9  
Tel: (416) 423-1300

Applicant's Signature  
David Hanratty - Director of Land & Resources  
St. Marys Cement Inc. (Canada)

**Project: Lanci Pit Expansion**

MNRF Licence Reference No. Pre-approval review: Submission to MNRF- May 2020

Plan Scale 1:2,000 (Arch D) Plot Scale 1:2 [1mm = 2 units] MODEL

Drawn By G.C. File No. Y321V

Checked By N.D.

File Name **EXISTING FEATURES PLAN**

Drawing No. **1 OF 3**

K:\Y321V-CBM-Lanci Pit Extension\A\Exteplan\_1of3.dwg

**NUMBERING SCHEME USED FOR OPERATIONAL NOTES REFERS TO AGGREGATE RESOURCES ACT PROVINCIAL STANDARDS FOR A CLASS "A" CATEGORY 1 LICENCE.**

**Sequence and Direction**  
 1.2.1 This plan depicts a schematic operations sequence for this property based on the best information available at the time of preparation. Any major deviations from the operations sequence shown will require approval from MNRF. Extraction shall generally follow the sequence shown. Above water extraction will generally occur in a north to south direction, followed by below water extraction in a south to north direction. Notwithstanding the extraction and rehabilitation process above, demand for certain products or blending of materials may require some deviation in the extraction and rehabilitation areas, and when rehabilitation of an area is possible from an operational perspective, it shall be carried out.

**Topsail and Overburden Stripping and Stockpiling**  
 1.2.2 Topsail and overburden shall be stripped and stored separately in berms or stockpiles. Berms and stockpiles of topsail shall be graded to stable slopes and seeded with a grass/legume mixture to prevent erosion and minimize dust.

**Lifts**  
 1.2.3 Extraction will be completed in a single above water extraction lift with front end loaders and/or excavators, followed by below water extraction with a dragline.

**Main Internal Haul Roads**  
 1.2.4 All traffic for operations will enter and exit the site from Concession Road 2 through the existing Lanci Pit (Licence #624952) as shown on the Sequence of Operations Diagram. Locations of internal haul routes may vary depending on face locations and extent of rehabilitation/backfilling.

**Entrance and Exit**  
 1.2.5 The operational entrance/exit will be accessed through the existing Lanci Pit (Licence #624952) as shown on the Sequence of Operations Diagram and will not be gated (see variations from operational standards Table 5.2, this page).

**Ground Water Table**  
 1.2.6 The elevation of the established water table varies from 305.8 to 306.6 masl (Golder Associates, 2020).

**Surface Water Diversion/Discharge Points**  
 1.2.7 There are no existing surface water features within the proposed extraction area and no discharges to or diversions of surface water features are proposed.

**Fencing**  
 1.2.8 Boundaries of the Licenced area that are presently fenced are shown on drawing 1 of 3, Existing Features Plan. Prior to any stripping or preparation, fencing on the Licenced boundaries will be upgraded with 1.2m high post & wire fence or as otherwise required by the Aggregate Resources Act.

**Proposed Buildings and Structures**  
 1.2.9 None.

**Topsail and Overburden Stockpiles**  
 1.2.10 Overburden and topsail not required for immediate use in berm construction or progressive rehabilitation may be temporarily stockpiled throughout the extraction area. Any stockpile to be stored longer than 1 year will be vegetated to control erosion.

**Aggregate Stockpiles**  
 1.2.11 Aggregate stockpiles will be located close to the pit face and will not exceed 15m in height.

**Temporary Scrap Storage**  
 1.2.12 All scrap, used machinery and stumps generated through the operations within this licence will be stored a minimum of 30m from the boundary of the site and any body of water and be disposed of on an ongoing basis. Trees to be removed within the extraction area will be utilized for firewood or their best use. Stumps, logs and oversize rock may remain on site for future progressive rehabilitation. Upon completion of excavation, all scrap and used machinery shall be removed.

**Fuel Storage**  
 1.2.13 Fuel trucks are used as the primary method for onsite refueling of equipment within the pit in accordance with the "Prescribed Conditions" that apply to all Category 1 licences. All fuel storage and associated products are stored in above ground tanks or containers and in compliance with the Technical Standards and Safety Act, 2000, Liquid Fuels Regulation O.Reg.217/01 and Liquid Fuels Handling Code, 2000.

**Area to be Extracted**  
 1.2.14 The area to be extracted is ±10.2 ha. (±25.1 ac).

**Setbacks**  
 1.2.15 Setbacks will be as shown and labelled on the Sequence of Operations Diagram on this page and page 1 of 3 (see Variations from Operational Standards Table O.S. 5.10.1).

**Extraction Depth**  
 1.2.16 The proposed maximum depth of extraction is indicated by the proposed spot elevations on the Sequence of Operations Diagram, this page. The depth of extraction ranges from approximately 18m in the central portion of the site to 24m in the southeast portion of the site.

**Processing Areas**  
 1.2.17 No processing on site.

**Berms**  
 1.2.18 Refer to Sequence of Operations Diagram or "Typical Berm Detail", this page. Berms may be higher than shown on this plan and may be constructed in advance of when they are required. Overburden may be stored in separate berms throughout the extraction area.

1.2.19 All proposed berms will be constructed in accordance with the "Typical Berm Detail", this page, and will be vegetated and maintained to control erosion. Temporary erosion control will be implemented as required.

**Equipment**  
 1.2.20 The equipment used on site may include: loaders, excavators, dragline, bulldozer and haul trucks.

**Tree Screens**  
 1.2.21 No tree screens are proposed for this site.

**Hours of Operation**  
 1.2.22 The hours of operation will be 7:00 am to 7:00 pm daily.

**Tree and Stump Disposal**  
 1.2.23 Timber resources will be salvaged for use as saw logs, fence posts and fuel wood where appropriate. Stumps and brush cleared during site preparation may remain on site for future progressive rehabilitation.

**Cross Sections**  
 1.2.24 Location of cross sections are as shown. Cross sections are provided on Existing Features Plan page 1 of 3 and Rehabilitation Plan page 3 of 3.

**Variations from Operational Standards**  
 1.2.25 See Table this page for Operational Standards (Section 5.0 of ARA Provincial Standards) that will be varied by this site plan.

**Tonnage Limit**  
 1.2.26 The Total tonnage to be excavated annually from this site will not exceed 1,000,000 tonnes, in combination with Licence #624952.

**1.2.27 Technical Recommendations**

**Noise:** "Noise Impact Assessment CBM Aggregates, a division of St. Marys Cement Inc. (Canada) Proposed Lanci Pit Expansion, Golder Associates, April 2020"

- Equipment shall be maintained in good condition.
- On-site roadways shall be maintained to limit noise resulting from trucks driving over ruts and pot-holes.
- The barriers shall be installed based on the following requirements and as shown on the Sequence of Operations:
  - Above Water Extraction
    1. If a residence is constructed and occupied on vacant lot POR005 prior to extraction taking place, a 3.5m high acoustic barrier shall be constructed along the southern boundary of POR005.
  - Below Water
    1. If a residence is constructed and occupied on vacant lot POR005 prior to extraction taking place, a 3.5m and a 5.5m high acoustic barrier shall be constructed along the western and southern boundaries of POR005, respectively.
    2. Prior to below water extraction occurring in the area identified on the Sequence of Operations, construct a 5.5m high acoustic barrier adjacent to the southeast corner of the extraction area.

•Acoustic barriers can be constructed as earth berms, or other suitable acoustic barriers such as trailers or containers as long as the height and density requirements are met.

•Acoustic barriers may be substituted through equipment modification, other control measures and/or local barriers if an acoustic audit indicates MECP Performance Limits can be met.

**Hydrogeology:** "Hydrogeological Level 1 and 2 Assessment, Proposed Lanci Pit Expansion, Golder Associates, April 2020"

1. Groundwater monitoring shall continue through Operations to confirm conclusions of the impact assessment. This monitoring shall be incorporated into the existing monitoring program that is on-going for the current Lanci Pit operation.
2. CBM's BMP for fuel handling shall be followed while any refuelling of equipment is occurring on site.

**Natural Environment:** "Natural Environment Level 1/2 Report, Proposed Lanci Pit Expansion, Golder Associates, April 2020"

1. To comply with the MBCA, avoid removal of vegetation during the active season for breeding birds (April 15- August 15), 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 shall be installed around the nest to protect against disturbance. Vegetation within the protection buffer cannot be removed until the young have fledged the nest.

2. Consult with the MECP on permitting requirements for removal of habitat for eastern small-footed myotis. Additional conditions related to mitigation or monitoring may be stipulated as part of a permit under the ESA or MECP approval.

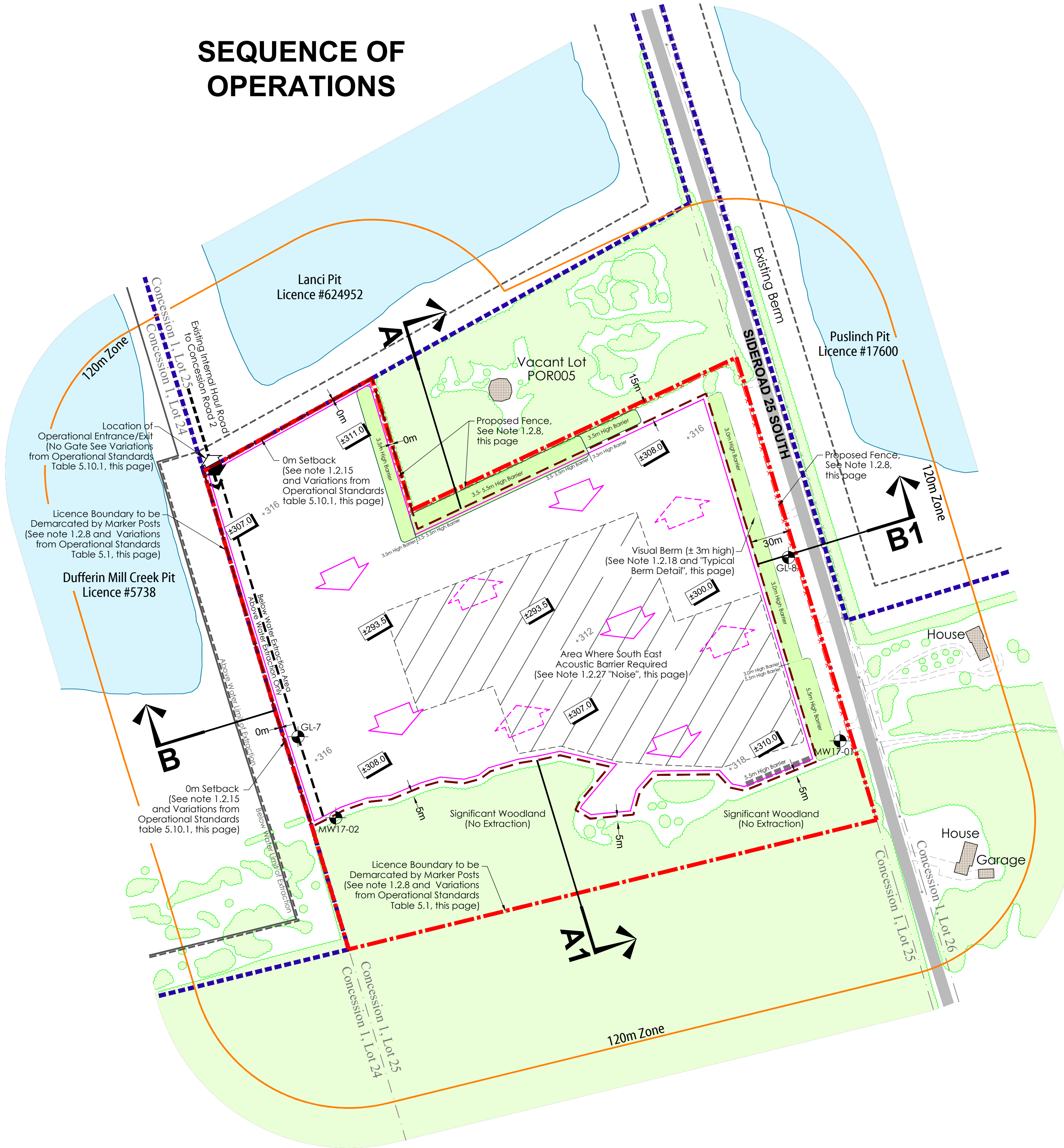
3. A 5m setback from the dripline of the significant woodland shall be established, reflecting the extraction area as presented on the Operations Plan. This setback shall be demarcated clearly in the field prior to commencement of operations. The boundary of the significant woodland and associated dripline may be reviewed in the future in conjunction with additional fieldwork.

4. If gradients indicate there is potential for runoff to enter the significant woodland, implementation of sediment and erosion controls shall occur prior to commencement of operations to prevent the runoff of suspended solids into the woodland, and prevent encroachment into the woodland during vegetation clearing in the setback area. In particular, in areas where potential runoff exists, in addition to the demarcation of the dripline, silt fencing (or similar) shall be installed along the dripline of the significant woodland in those areas prior to commencement of activities on the site, including site preparation and vegetation clearing.

5. Where installed, silt fencing shall be maintained for the duration of the operations phase adjacent to the woodland and shall include regular inspections for signs of damage or deterioration.

6. Following rehabilitation of the southern portion of the site, any silt fencing or other erosion/sediment controls that had been installed, shall be removed from the site.

7. To avoid compacting the soil in the setback area (which can negatively impact tree roots) the use of heavy machinery shall be minimized, particularly during wet periods (e.g., spring) when soil may already be saturated.

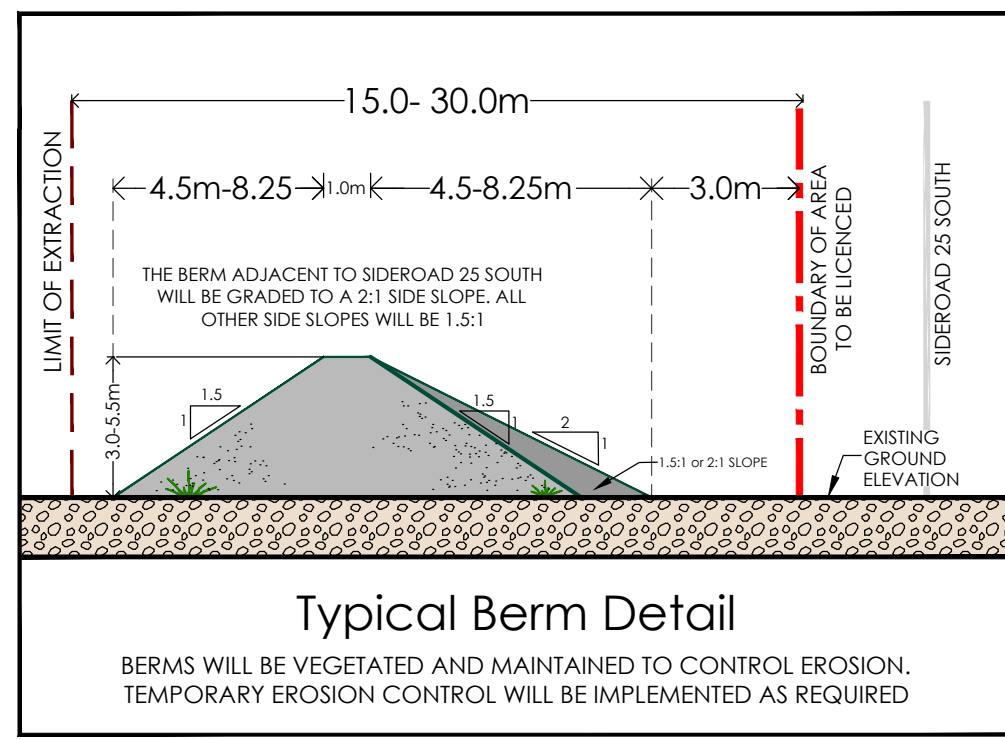


**Archaeology:** "Stage 1/2 Archaeological Assessment, CBM Proposed Lanci Pit Extension, Part of Lot 25, Concession 1, Township of Puslinch, County of Wellington, Ontario, Golder Associates Ltd., November 2, 2018"

1. The Stage 2 assessment resulted in the recovery of zero artifacts. Given the occurrence of some disturbance activity across the study area and the lack of identified artifacts during the test pit survey, the information potential and cultural heritage value of the study area was determined to be low. No further archaeological assessment is recommended for the study area. Should previously undocumented archaeological resources be discovered, they may be representative of a new archaeological site or sites and therefore subject to Section 48(1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a Licenced consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the Ontario Heritage Act.

2. The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ministry of Consumer Services is also immediately notified.

VARIATIONS FROM OPERATIONAL STANDARDS	
VARIATION	
O.S. 5.1	Fencing will not be required along the western and southern limits of the boundary of area to be licenced, or other common boundaries with adjacent pit licences. The boundary will be demarcated by marker posts in sufficient numbers to adequately delineate the location of the top of bank where it does not clearly define itself and/or the boundary of the site with each post visible from the next.
O.S. 5.2	No gate(s) will be required at the internal access point(s) along the common boundary between this site and Licence #624952.
O.S. 5.10.1	0m excavation area setback along common boundary with existing pit #624952 and existing pit #5738, 0m and 15m setbacks along Golder property (POR005) per agreement with landowner.
O.S. 5.19.1	To allow for 2:1 slopes below water to maximize resource extraction.



**Legal Description**  
 PART OF LOT 25  
 CONCESSION 1  
 TOWNSHIP OF PUSLINCH  
 COUNTY OF WELLINGTON

**Legend**

- Boundary of Area to be Licenced
- Limit of Extraction
- General Direction of Above Water Excavation
- General Direction of Below Water Excavation
- Existing Haul Road
- Public Road (Unpaved)
- Private Laneway/Roadway
- Operational Entrance
- Hydro Pole/Line
- Monitoring Well
- Existing Licenced Boundary
- Existing Limit of Extraction
- Existing Spot Elevation
- Proposed Spot Elevation
- Existing Vegetation
- Proposed Barrier
- Building/Structure
- Existing Fence
- Cross Sections

**Site Plan Amendments**

No.	Date	Description	By

**MHBC** PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE  
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**MNRF Approval Stamp**

**Stamp**

**North**

**ST MARYS** **CBM**

St. Marys Cement Inc. (Canada)  
 55 Industrial St. Toronto, Ontario  
 M4G 3W9  
 Tel: (416) 423-1300

Applicant's Signature  
 David Hanratty - Director of Land & Resources  
 St. Marys Cement Inc. (Canada)

**Project**  
**Lanci Pit Expansion**

MNRF Licence Reference No. Pre-approval review:  
 Submission to MNRF- May 2020

Plan Scale 1:2,000 (Arch D) Plot Scale 1:2 [1mm = 2 units] MODEL

SCALE 0 25 50 100 METRES

Drawn By G.C. File No. Y321V  
 Checked By N.D.

File Name **OPERATIONS PLAN**  
 Drawing No. **2 OF 3**

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**NUMBERING SCHEME USED FOR REHABILITATION NOTES REFERS TO AGGREGATE RESOURCES ACT PROVINCIAL STANDARDS FOR A CLASS "A" CATEGORY 1 LICENCE APPLICATION.**

**Sequence and Direction**  
 1.3.1 Rehabilitation will be progressive following the general direction of extraction and proceed to limits of extraction. Generally, rehabilitation will follow the Sequence of Operations diagram located on Page 2 of 3. Minor deviations/variations in operational/rehabilitation sequence will be permitted in order to adjust for any variable resource and market conditions. Sufficient working and travel areas will remain active.

**Topsoil and Overburden**  
 1.3.2 Topsoil will be used in the progressive rehabilitation of the pit side slope areas. Topsoil and subsoil will be stripped, stored, and re-applied separately. Areas of compacted soils will be ripped to alleviate compaction without mixing soil layers. Soils (topsoil and subsoil) will be replaced at variable depths (minimum 150mm-300mm) on backfilled and/or side slope areas. Overburden and/or imported material will be used to backfill pit faces to a 3:1 slope or gentler.

**Proposed Vegetation**  
 1.3.3 & 1.4.3 The proposed rehabilitation includes an opportunity to enhance the biological diversity of the local landscape. Shallow shoreline planting zones will include, but are not limited to non-invasive species such as red-osier dogwood, slender willow and herbaceous plants such as water plantain, lake sedge, swamp milkweed, soft stem bulrush and common cattail; and other native wetland plants that are suited to the site conditions and present in the local area. The shallow shoreline areas will include nodal shrub plantings near the shore, woody debris and boulders, etc. to provide waterfowl and reptile basking, bird perching, and waterfowl nesting locations; and will incorporate a combination of fine sand and coarse stone pond bottom (see Shallow Shoreline Detail of this page). All ground covers on side slopes will be maintained and replaced should it fail to establish itself to control erosion. Trees and shrubs will be maintained in a healthy vigorous growing condition. Nodal planting is also proposed within the setback and in side slope areas. Planting cells will include a variety of deciduous (<30% mix) and coniferous species (>70% mix) common to the local landscape, including but not limited to red pine, white spruce, European larch, balsam poplar, sugar maple, white pine, American basswood, trembling aspen, American beech, white cedar, white elm and black cherry with secondary focus on species such as choke cherry, alternate-leaved dogwood, highbush cranberry, nannyberry and serviceberry.

**Slope Creation & Rehabilitated Landform**  
 1.3.4 & 1.4.2 Final pit landform will generally be in accordance with the drawing as shown on this page. Rough grading to create a stable side slope shall be carried out progressively as extraction proceeds across the site to minimize the final grading work to be undertaken following the completion of resource extraction. Final side slopes will be graded 3:1 or gentler and seeded with a grass/legume mixture consisting of non-invasive species to ensure stability. Side slopes above water table will be established using a combination of backfill and/or cut and fill methods using on-site overburden, aggregate material, and/or imported materials. Side slopes will be irregular with an average top to bottom grade not steeper than 3:1. Below water extraction and shoreline formation by dragline around perimeter edge of pond directly abutting rehabilitated side slopes will be excavated in a manner that will result in the retention of a 5m wide bench along the shoreline above water. This bench allows for equipment maneuvering and helps ensure the above-water slope remains stable. Below water slopes will occur to the natural angle of repose except where site specific grading to establish shallow shoreline areas occurs. The total area of the final lake may be smaller than as shown on the drawing if gentler side slopes are created.

**Progressive Rehabilitation**  
 1.3.5 Progressive rehabilitation shall follow the Sequence of Operations diagram/ notes on page 2 of 3.

**Importation of Fill**  
 1.3.6 & 1.4.1  
 1. Clean inert fill may be imported to facilitate the establishment of minimum 3:1 (horizontal:vertical) slopes or greater slopes on the pit faces. The licensee must ensure that the material is tested at the source, before it is deposited on-site, to ensure that the material meets the Ministry of the Environment, Conservation and Parks (MECP) criteria under Table 1 of MECP's Soils, Ground Water and Sediment Standards for use under Part XV.1 of the Environmental Protection Act. Sampling results will be provided to MNRF upon request.

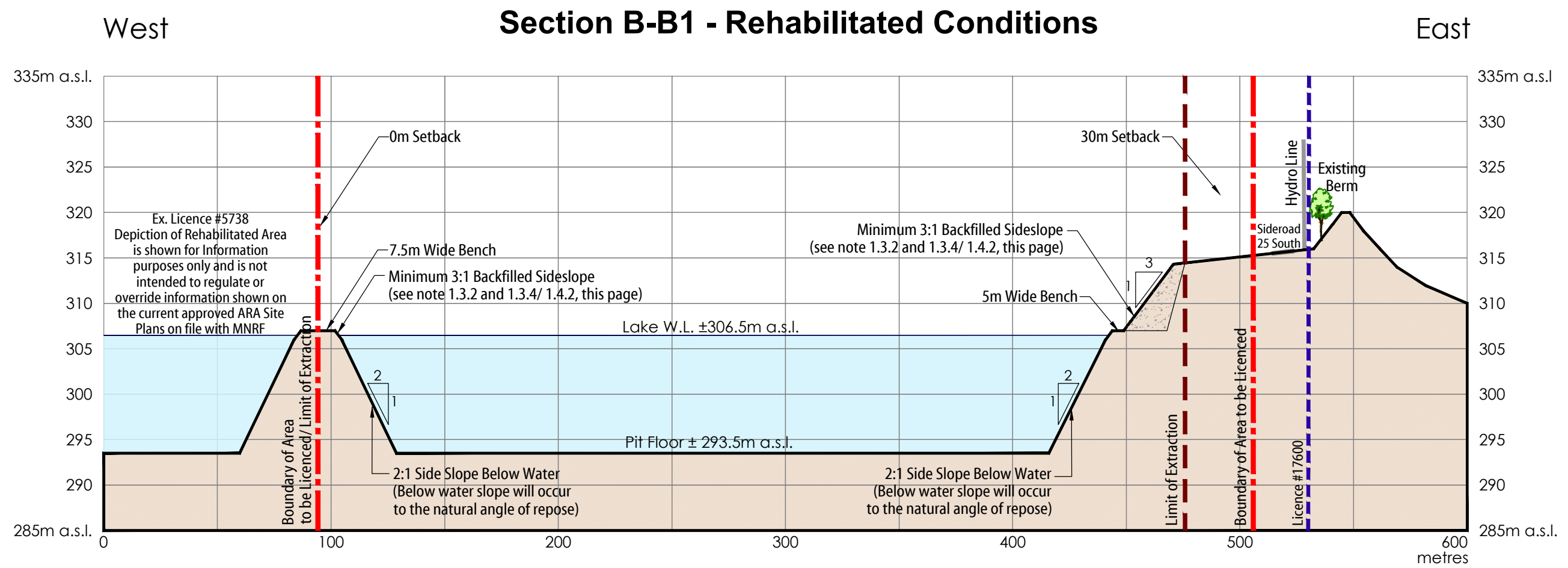
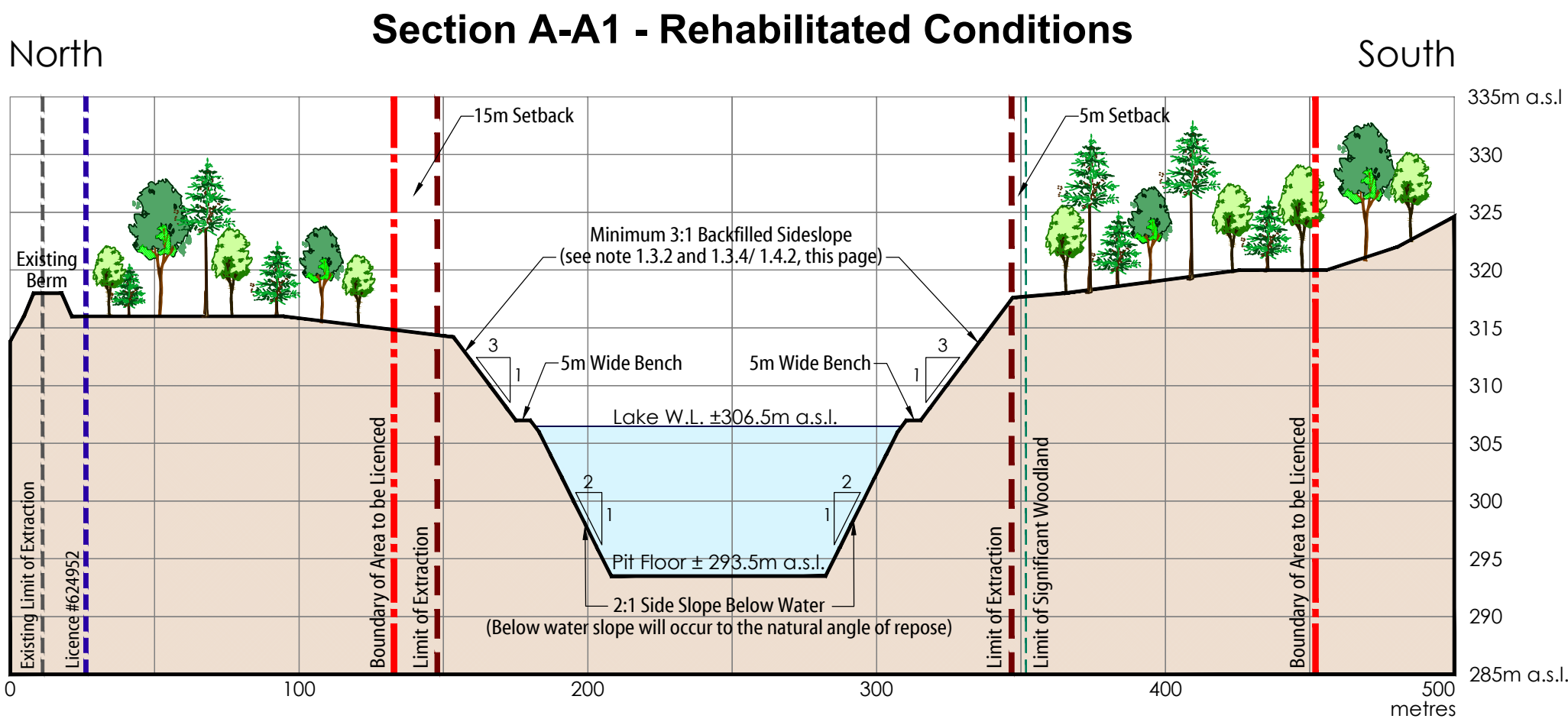
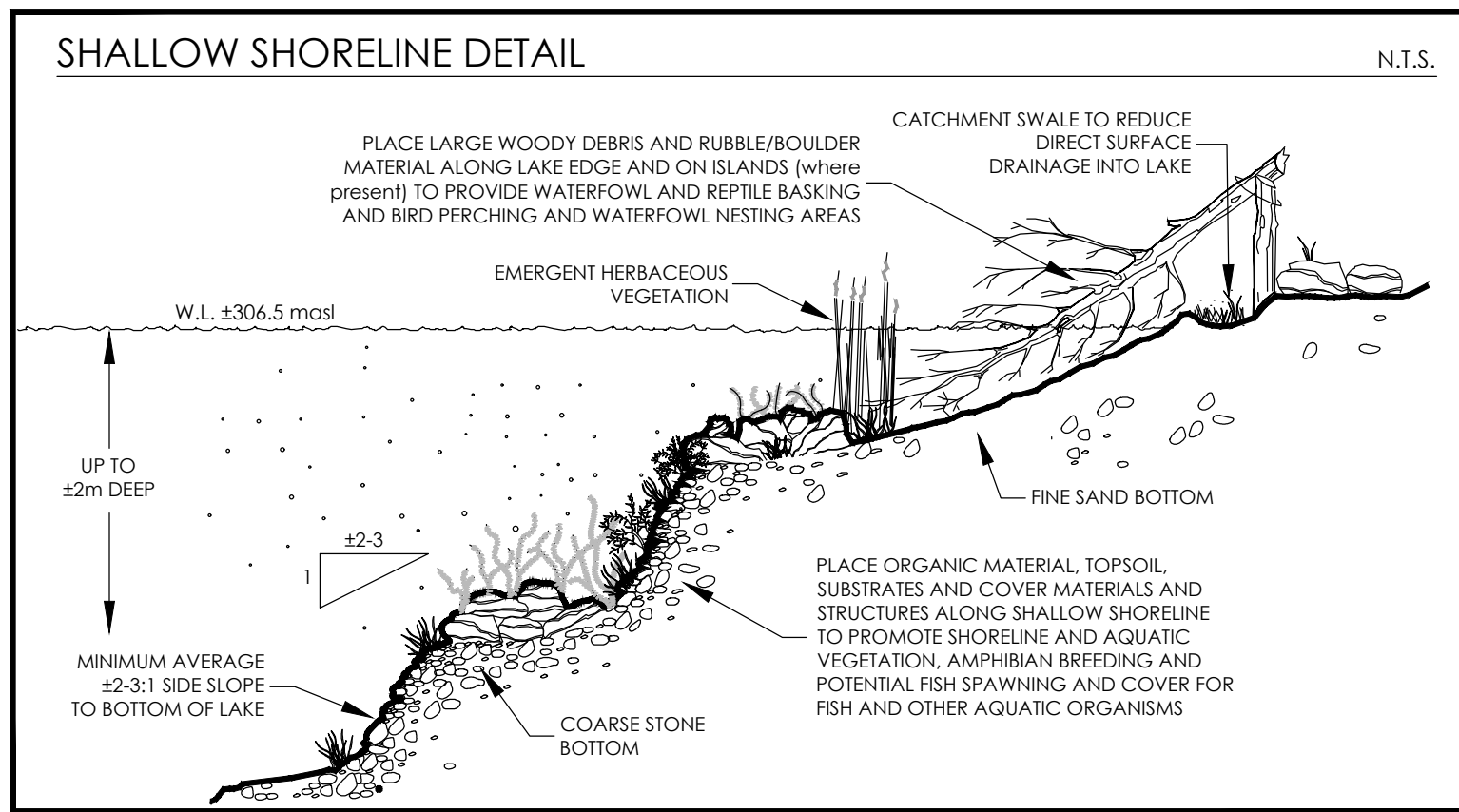
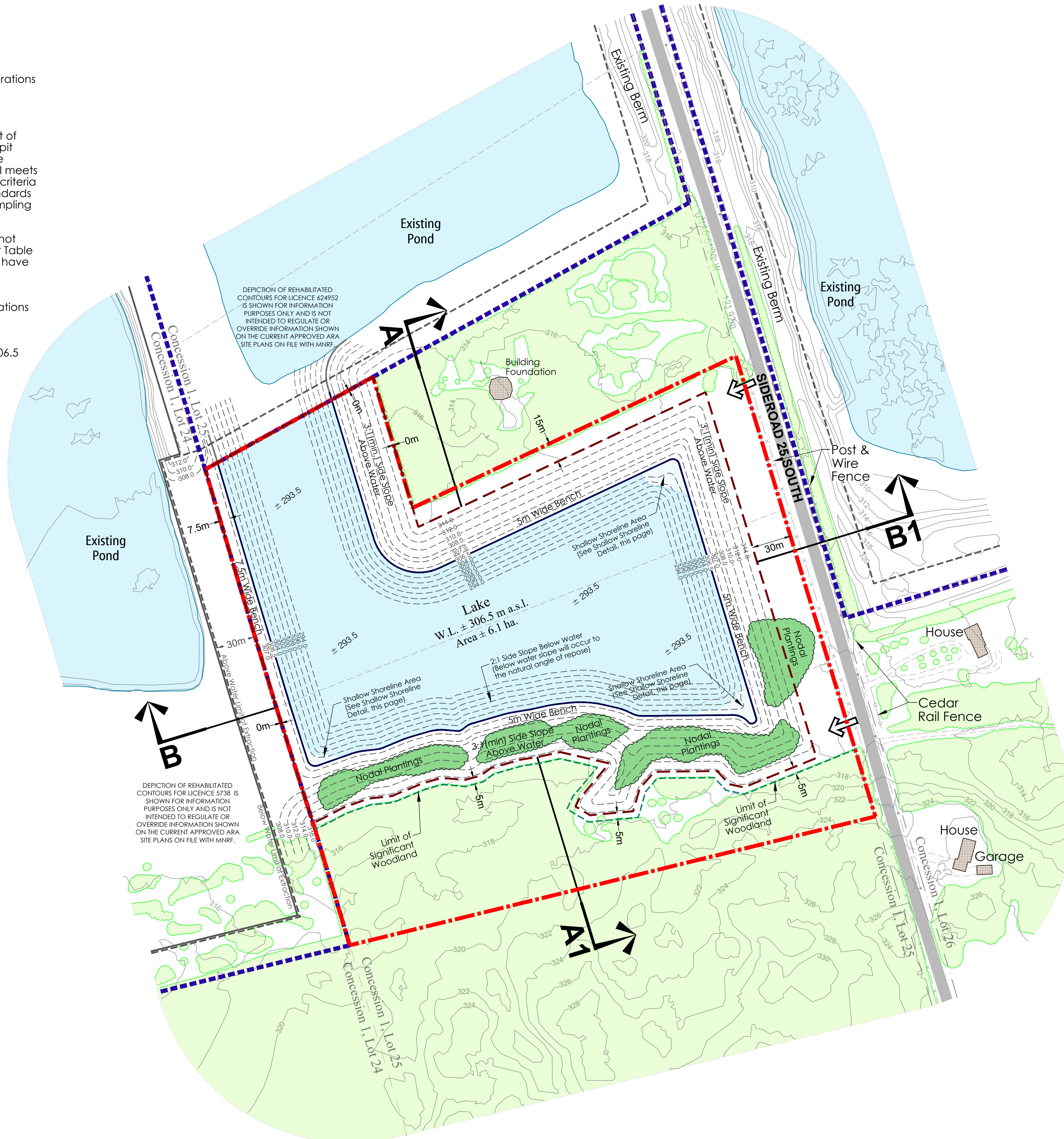
2. Notwithstanding Condition 1, where the imported material is not being placed within 1.5 metres of the surface, the criteria under Table 1 for sodium adsorption ratio and electrical conductivity do not have to be met.

**Buildings & Structures**  
 1.4.4 No buildings or structures associated with aggregate operations will remain on site.

**Groundwater Table**  
 1.4.5 The post extraction water level of the proposed Lake is ± 306.5 masl as shown on the Rehabilitation plan and Cross-Sections.

**Internal Haul Roads**  
 1.4.6 There will be no roads remaining on site.

**Surface Water Drainage & Discharge**  
 1.4.7 Final surface drainage will follow the rehabilitated contours as shown and generally be directed towards the post-extraction pond.



**Legal Description**  
 PART OF LOT 25  
 CONCESSION 1  
 TOWNSHIP OF PUSLINCH  
 COUNTY OF WELLINGTON

**Legend**

- Boundary of Area to be Licenced
- Limit of Extraction
- Existing Fence
- Public Road (Unpaved)
- Private Laneway/Roadway
- Field Access
- Hydro Pole/Line
- Building/Structure
- Elevation, Contour
- Existing Licenced Boundary
- Existing Limit of Extraction
- Existing Vegetation
- Proposed Vegetation
- Proposed Lake
- Proposed Shoreline Wetland Area
- Limit of Significant Woodland
- Cross Sections

**Site Plan Amendments**

No.	Date	Description	By

**MHBC** PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE  
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**ST MARYS** **CBM**

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 Tel: (416) 423-1300

Applicant's Signature

David Hanratty - Director of Land & Resources  
 St. Marys Cement Inc. (Canada)

**Project**  
**Lanci Pit Expansion**

MNRF Licence Reference No. Pre-approval review: Submission to MNRF - May 2020

Plan Scale 1:2,000 (Arch D) Plot Scale 1:2 [1mm = 2 units] MODEL

SCALE 0 25 50 100 METRES

Drawn By G.C. File No. Y321V

Checked By N.D.

**REHABILITATION PLAN**

Drawing No. **3 OF 3**

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