

Site Plan Amendments

No.	Date	Description	By

- Notes**
- A. General**
- This site plan is prepared under the Aggregate Resources Act (ARA) for a Class A licence for a quarry below the ground water table. Also, this site plan follows the Aggregate Resources of Ontario, Site Plan Standards August 2020.
 - Area Calculations:
Licence Area: 72.3 hectares (178.7 acres)
Limit of Extraction: 51.2 hectares (126.5 acres)
 - All measurements shown are in metres unless specified otherwise.
- B. References**
- Topographic information provided by GeoOptic. Base data was digitized using ARCGIS 10.2 and the newly acquired ortho imagery. The drone flight took place on November 15, 2016 and was undertaken with an AeroHawk Hawkeye platform at 800ft agl, cleared with both Transport Canada and NavCan. Ground control was placed in a network of 20 points across the site and surveyed in with a Spectra Epoch50 DK GPS system with sub-centimetre precision. All coordinates are in NAD83 UTM17 / HTV21NE. The contour interval is 1m.
 - Property boundaries compiled from vMap (First Base Solutions) online mapping service, Teranet parcel fabric layer.
 - Subject site is zoned 'A4 (rural)' in the Township of Wainfleet Comprehensive Zoning By-law 034-2014 (September 2014).
 - Land use information and structures identified on or within 120 metres of the site boundary was determined using aerial imagery and 2019/2021 site visits.
- C. Drainage**
- 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**
- The groundwater table elevation on site ranges between ±170 masl in the southeast portion of the site to ±180 masl in the west portion of the site. The existing water table elevations are shown on each cross section on page 5 of 5. Groundwater table elevations provided by WSP (March 2022).
- E. Site Access and Fencing**
- There are several existing field accesses to the site. There is one from Highway #3, a couple from Biederman Road and one at the northwest portion of the site.
 - Post and wire fencing (unless noted otherwise) exists in the locations shown on the plan view.
- F. Aggregate Related Site Features**
- 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. Cross Sections**
- As shown on this page. Detailed sections are shown on page 5 of 5.
 - Cross section locations are identified on the plan view for each drawing.
- H. Technical Reports - References**
- Hydrogeology: "Law Quarry Extension Level 1 and 2 Water Study Report" and "Law Quarry Extension Maximum Predicted Water Table Report", March 2022 (Source: WSP Canada Inc.)
 - Natural Environment: "Natural Environment Report Level 1 and 2 Assessment, Law Crushed Stone Quarry", June 2022 (Source: Riverstone Environmental Solutions Inc.)
 - Noise: "Noise Impact Study - Project 17132.02", May 26, 2022 (Source: Aerocoustics Engineering Ltd.)
 - Slating: "Slating Impact Analysis, Waterford Sand & Gravel Limited Law Quarry Extension", June 2022 (Source: Explotech Engineering Ltd.)
 - Archaeology: "Stage 1 Archaeological Assessment of the Law Crushed Stone Quarry Extension, Part of Lots 6 and 7, Concession 2, Geographic Township of Wainfleet, Welland County, Township of Wainfleet, Regional Municipality of Niagara" - Revised Report and Supplementary Documentation, August 6, 2021 (Source: ASI)
 - "Stage 1 and 2 Archaeological Assessment of the Law Crushed Stone Extension, Part of Lots 6 and 7, Concession 2, Geographic Township of Wainfleet, Welland County, Township of Wainfleet, Regional Municipality of Niagara" - Original Report and Supplementary Documentation, August 6, 2021 (Source: ASI)
 - "Stage 1-2 Archaeological Assessment of Additional Lands at Waterford's Law Quarry Extension, Part of Lot 6 Concession 2, Geographic Township of Wainfleet, Welland County, Township of Wainfleet, Regional Municipality of Niagara" - Original Report and Supplementary Documentation, August 6, 2021 (Source: ASI)
 - "Stage 3 Archaeological Assessment of AIGI-289 and AIGI-290, Law Crushed Stone Extension, Part of Lot 6, Concession 2, Geographic Township of Wainfleet, Welland County, Township of Wainfleet, Regional Municipality of Niagara, Ontario" - Record of Indigenous Engagement, Original Report and Supplementary Documentation, August 24, 2021 (Source: ASI)
- I. Other Reports - References**
- Air Quality Assessment: "Law Quarry Extension - Port Colborne, Ontario, Air Quality Assessment" February 3, 2022 (Source: RWDI Air Inc.)
 - Agricultural Impact Assessment: "Scoped Agricultural Impact Assessment, Waterford Sand and Gravel Law Quarry Crushed Stone Extension" May 2022 (Source: MHBC Planning)
 - Cultural Heritage: "Cultural Heritage Evaluation Report" May 2022 (Source: MHBC Planning)
 - Traffic: "Traffic Impact Study for Waterford Sand & Gravel Limited" April 26, 2022 (Source: JD Northcoote Engineering Inc.)

Legend

- Boundary of Area to be Licensed
- Existing Licensed Boundary
LAW QUARRY - LICENCE #4464
- Contour with Elevation
METRES ABOVE SEA LEVEL
- Lot and Concession
- Existing Field Access
- Monitoring Well
WSP 2021
- Existing Vegetation
APPROXIMATE LOCATION
- Wainfleet Bog Provincially Significant Wetland Complex/
Significant Woodland Boundary
RIVERSTONE 2020
- Setback from Wainfleet Bog Provincially Significant Wetland Complex/
Significant Woodland Boundary
- Onondaga Escarpment Brow
RIVERSTONE 2020
- Setback from Onondaga Escarpment Brow
- Significant Wildlife Habitat
RIVERSTONE 2020
- Identified Archaeological Sites that have further Cultural Heritage Value and Interest
(SEE NOTE M "ARCHAEOLOGY" AND SCHEMATIC B ON PAGE 3 OF 5)
- Archaeological Site Fencing
20m AND 50m SETBACKS AS LABELLED
(SEE NOTE M "ARCHAEOLOGY" PAGE 3 OF 5 AND SCHEMATIC B ON PAGE 2 OF 5)
- Cross Sections
SEE PAGE 5 OF 5 FOR EXISTING AND REHABILITATED CROSS SECTIONS
- Limit of Extraction
ALL SETBACKS ARE DRAWN TO SCALE AND SHOW LABELLED DISTANCES
- Additional Lands Owned by Applicant
- Existing Limit of Extraction
LAW QUARRY - LICENCE #4464
- Private Lanes/Roadway
- Public Road (Paved)
Public Road (Gravel)
- Existing Fence
1.2m POST & WIRE FARM FENCE UNLESS OTHERWISE NOTED
- Building/Structure
LOCATION AND USE FOR BUILDINGS ON-SITE AND WITHIN 120m OF SITE
- Direction of Surface Drainage (IF ANY)
- Hydro Poles
- Spoon-leaved Moss and 50m Buffer
(SEE NOTE M "NATURAL ENVIRONMENT" ON PAGE 3 OF 5)
- Whip-poor-will Category 1 Habitat
(SEE NOTE M "NATURAL ENVIRONMENT" ON PAGE 3 OF 5)
- Whip-poor-will Category 2 Habitat
(SEE NOTE M "NATURAL ENVIRONMENT" ON PAGE 3 OF 5)
- 120m Zone

PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE

MHBC

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MNRF Approval Stamp

MHBC Stamp

CAITLIN A. COOPER
REG. PROFESSIONAL PLANNER
P.Eng. P.L.P.

Applicant

Waterford Sand & Gravel Limited
70 Ewart Avenue
Brantford, Ontario
N3T 5M1
Tel: (519) 752-1300

Applicant's Signature
Ed Lamb
VP/GM Construction Materials

Project

Law Quarry Extension
Part of Lots 6 & 7, Concession 2
Part of Road Allowance Between Lots 5 & 6, Concession 2
(Geographic Township of Wainfleet) Township of Wainfleet, Regional Municipality of Niagara

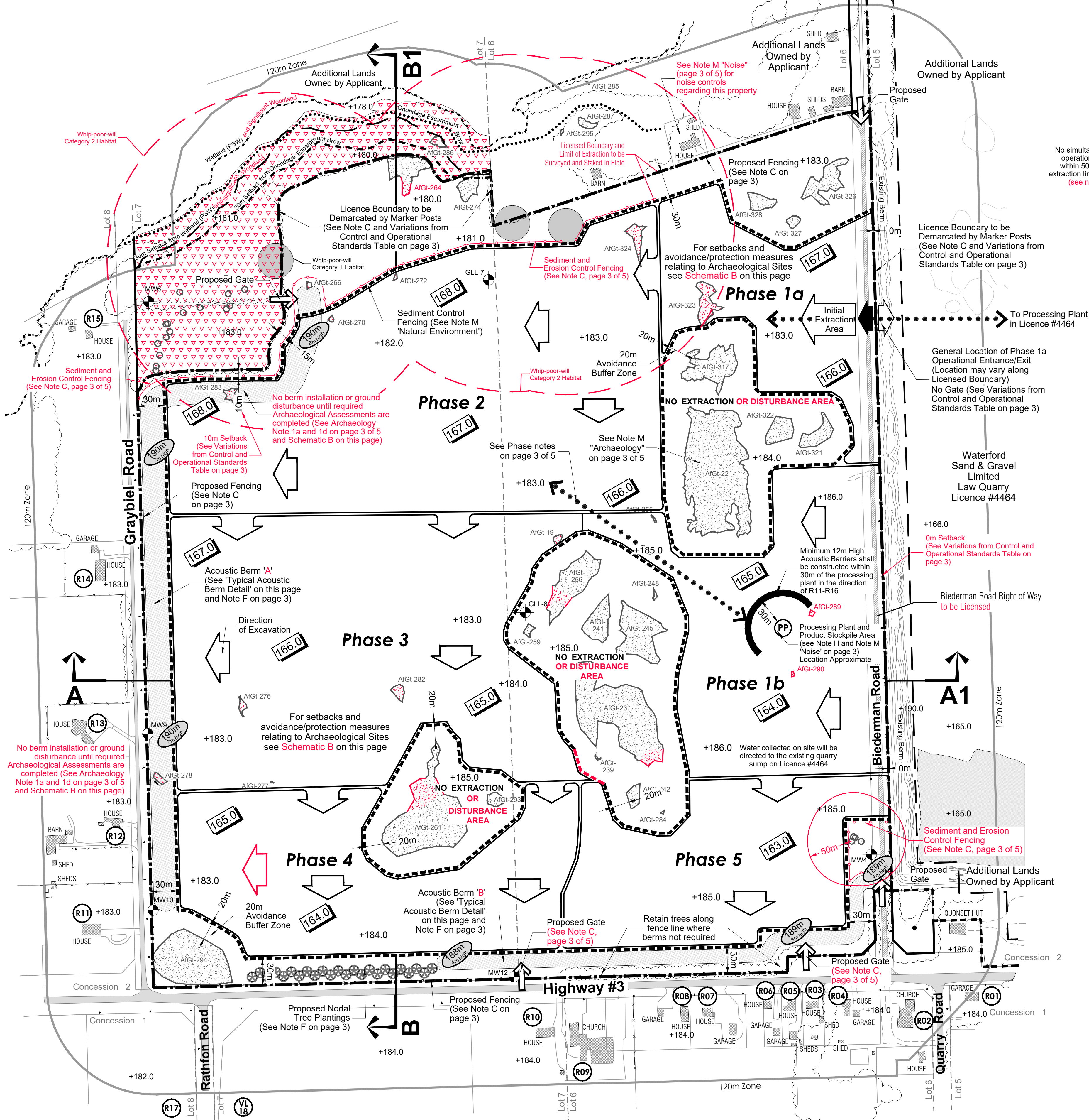
ARA Licence Reference No.	Pre-approval review: Revs. as per MNRF comments - June 2023 Revs. as per MCM comments - April 2023 For Submission to NDMNRF - June 2022
Plan Scale 1:2,500 (Arch D)	Plot Scale 1:2.5 [1mm = 2.5 units] MODEL
SCALE 50 0 50 100 METRES	Drawn By D.G.S. File No. 0956B Checked By C.P.

EXISTING FEATURES PLAN

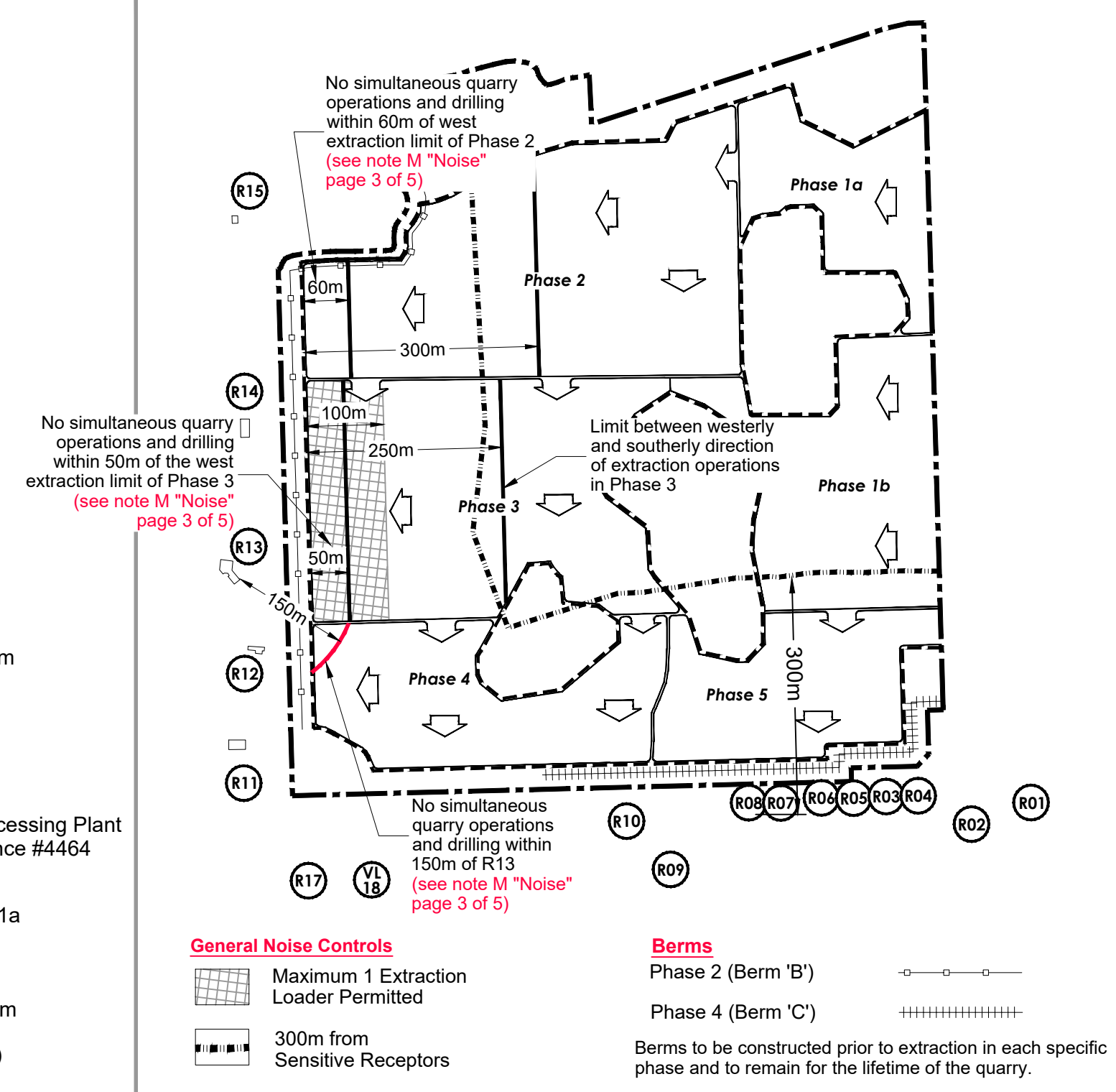
1 OF 5

File Name
Drawing No.

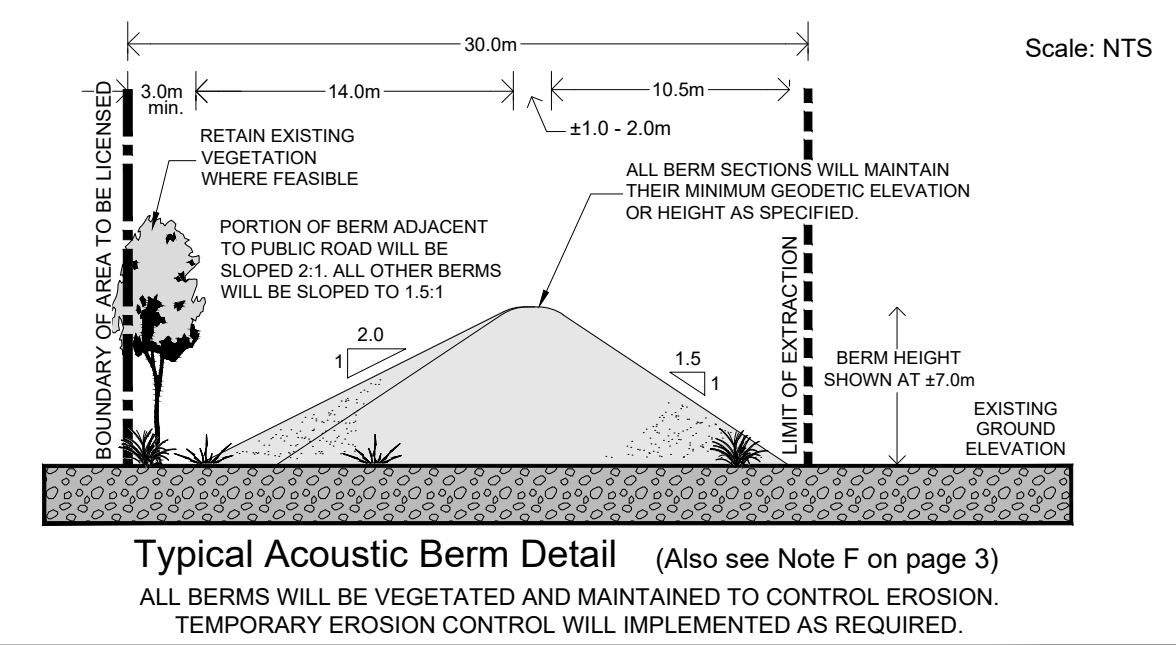
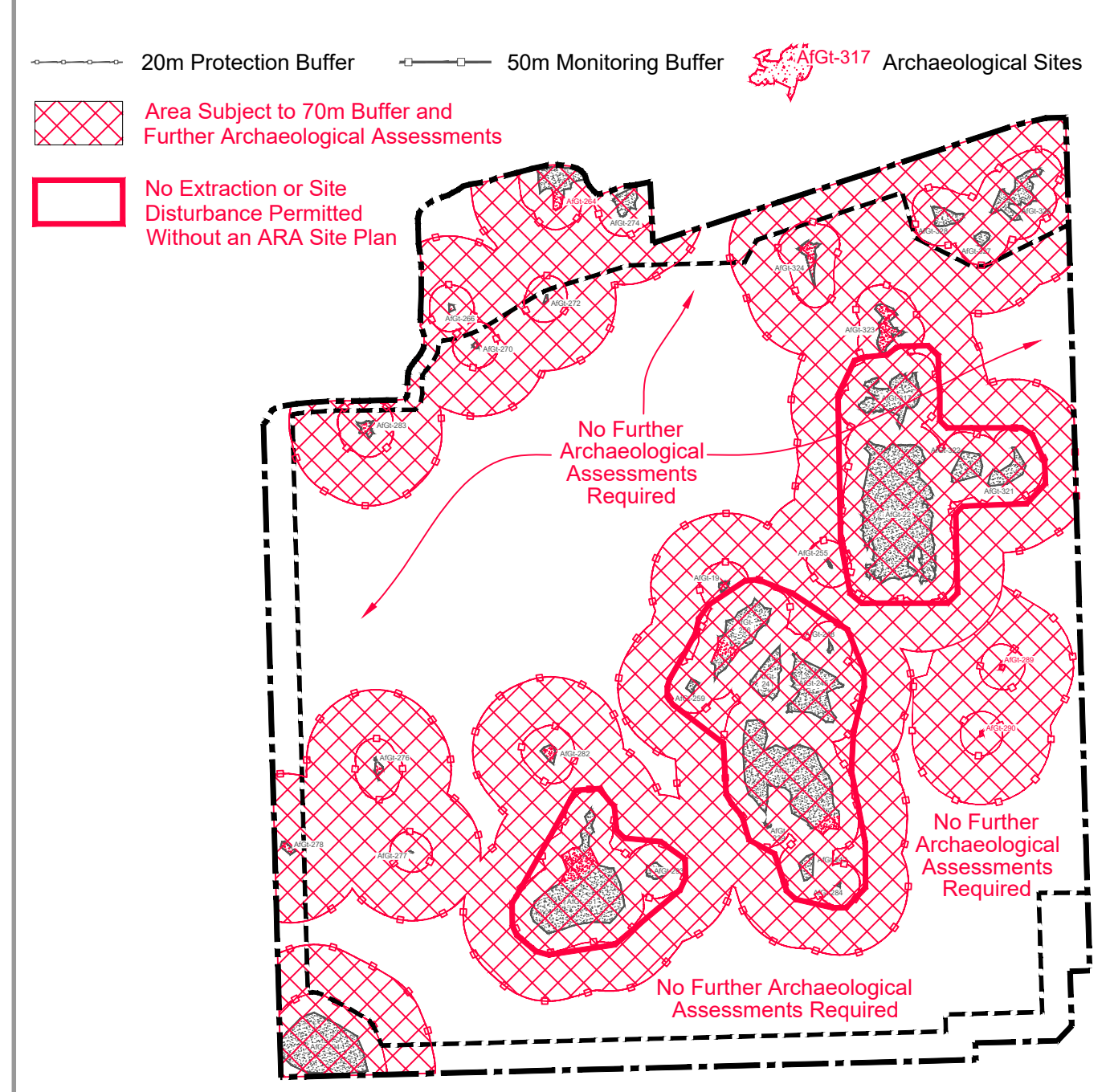
SEQUENCE OF OPERATIONS



Schematic A - Berm and Noise Controls Schematic
(for information on detailed noise mitigation and requirements see Note M "Noise" on page 3 and Sequence of Operations diagram)



Schematic B - Identified Archaeological Sites with Cultural Heritage Value or Interest and Required 70m Buffer
(for information on detailed requirements see Note M "Archaeology" on page 3 of 5)



Site Plan Amendments

No.	Date	Description

Legend

- Boundary of Area to be Licensed
- Existing Licensed Boundary
- Existing Spot Elevation
- Existing Fence
- Building/Structure
- Existing Field Access
- Monitoring Well
- Existing Vegetation
- Wainfleet Bog Provincially Significant Wetland Complex/ Significant Woodland Boundary
- Onondaga Escarpment Brow
- Setback from Onondaga Escarpment Brow
- Significant Wildlife Habitat
- Identified Archaeological Sites that have further Cultural Heritage Value and Interest
- Archaeological Site Fencing
- Limit of Extraction
- Additional Lands Owned by Applicant
- Operational Entrance
- General Direction of Excavation
- Proposed Acoustic Berm
- Proposed Fence
- Proposed Spot Elevation
- Noise Receptor
- Internal Haul Road
- Tree Plantings
- Spoon-leaved Moss and 50m Buffer
- Whip-poor-will Category 1 Habitat
- Whip-poor-will Category 2 Habitat
- Sediment and Erosion Control Fence
- Cross Sections

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MNRF Approval Stamp
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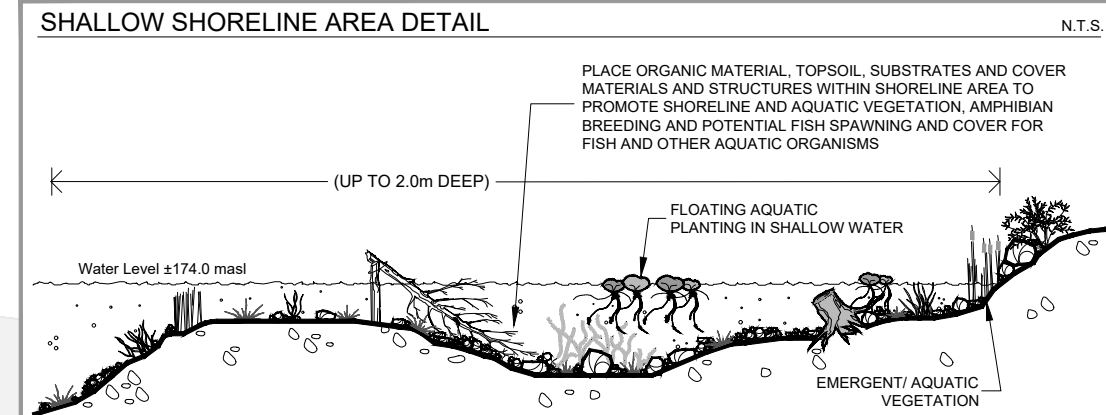
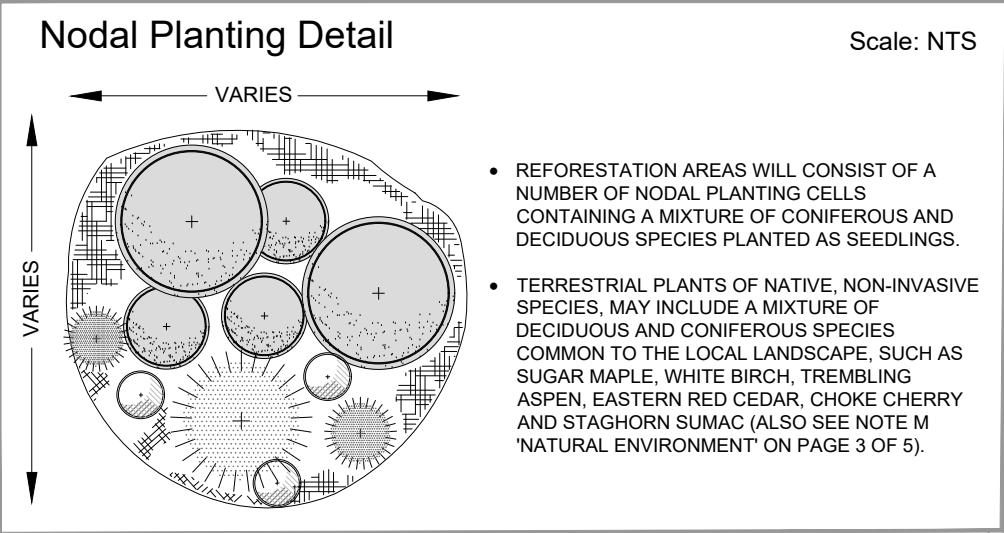
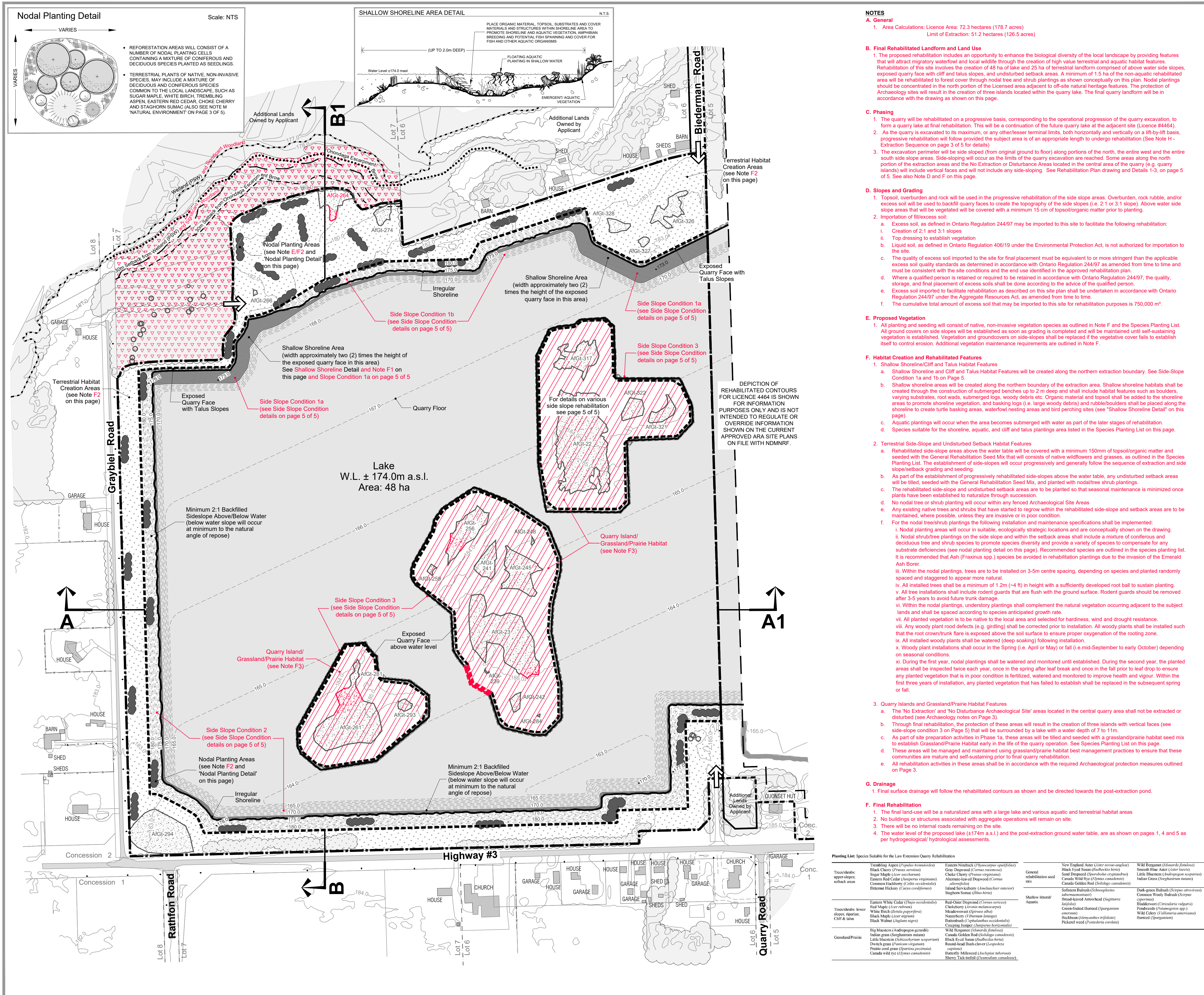
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Plan Scale 1:2,500 (Arch D)
SCALE
50 0 50 100 METRES

Plot Scale 1:2.5 [1mm = 2.5 units] MODEL
Drawn By D.G.S. File No. _____
Checked By C.P. 0956B

File Name **OPERATIONAL PLAN**
Drawing No. **2 OF 5**

K:\0534-WATERFORD SAND AND GRAVEL LIMITED-LAW QUARRY EXTENSION\OPERPLAN 2025_AUG2023.DWG



- NOTES**
- A. General**
- Area Calculations: Licence Area: 72.3 hectares (178.7 acres)
Limit of Extraction: 51.2 hectares (126.5 acres)
- B. Final Rehabilitated Landform and Land Use**
- The proposed rehabilitation includes an opportunity to enhance the biological diversity of the local landscape by providing features that will attract migratory waterfowl and local wildlife through the creation of high value terrestrial and aquatic habitat features. Rehabilitation of this site involves the creation of 48 ha of lake and 25 ha of terrestrial landform comprised of above water side slopes, exposed quarry face with cliff and talus slopes, and undisturbed setback areas. A minimum of 1.5 ha of the non-aquatic rehabilitated area will be rehabilitated to forest cover through nodal tree and shrub plantings as shown conceptually on this plan. Nodal plantings should be concentrated in the north portion of the Licensed area adjacent to off-site natural heritage features. The protection of Archaeology sites will result in the creation of three islands located within the quarry lake. The final quarry landform will be in accordance with the drawing as shown on this page.
- C. Phasing**
- The quarry will be rehabilitated on a progressive basis, corresponding to the operational progression of the quarry excavation, to form a quarry lake at final rehabilitation. This will be a continuation of the future quarry lake at the adjacent site (Licence #4464).
 - As the quarry 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 length to undergo rehabilitation (See Note H - Extraction Sequence on page 3 of 5 for details).
 - The excavation perimeter will be side sloped (from original ground to floor) along portions of the north, the entire west and the entire south side slope areas. Side-sloping will occur as the limits of the quarry excavation are reached. Some areas along the north portion of the extraction areas and the No Extraction or Disturbance Areas located in the central area of the quarry (e.g. quarry islands) will include vertical faces and will not include any side-sloping. See Rehabilitation Plan drawing and Details 1-3, on page 5 of 5. See also Note D and F on this page.
- D. Slopes and Grading**
- Topsoil, overburden and rock will be used in the progressive rehabilitation of the side slope areas. Overburden, rock rubble, and/or excess soil will be used to backfill quarry faces to create the topography of the side slopes (i.e. 2:1 or 3:1 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.
 - Importation of fill/excess soil:
 - Excess soil, as defined in Ontario Regulation 244/97 may be imported to this site to facilitate the following rehabilitation:
 - Creation of 2:1 and 3:1 slopes and side-sloping as soon as grading is completed and shall be maintained until self-sustaining vegetation is established. Vegetation and groundcovers on side-slopes shall be replaced if the vegetative cover fails to establish itself to control erosion. Additional vegetation maintenance requirements are outlined in Note F.
 - Liquid soil, as defined in Ontario Regulation 406/19 under the Environmental Protection Act, is not authorized for importation to the site.
 - 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.
 - 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.
 - 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.
 - The cumulative total amount of excess soil that may be imported to this site for rehabilitation purposes is 750,000 m³.
- E. Proposed Vegetation**
- All planting and seeding will consist of native, non-invasive vegetation species as outlined in Note F and the Species Planting List. All ground covers on the site and on slopes and embankments shall be established as soon as possible and shall be maintained until self-sustaining vegetation is established. Vegetation and groundcovers on side-slopes shall be replaced if the vegetative cover fails to establish itself to control erosion. Additional vegetation maintenance requirements are outlined in Note F.
- F. Habitat Creation and Rehabilitated Features**
- Shallow Shoreline/Cliff and Talus Habitat Features
 - Shallow Shoreline and Cliff and Talus Habitat Features will be created along the northern extraction boundary. See Side-Slope Condition 1a and 1b on Page 5.
 - Shallow shoreline areas will be created along the northern boundary of the extraction area. Shallow shoreline habitats shall be created through the construction of submerged benches up to 2 m deep and shall include habitat features such as boulders, varying substrates, root wads, submerged logs, woody debris etc. Organic material and topsoil shall be added to the shoreline areas to promote shoreline vegetation, and basking logs (i.e. large woody debris) and rubble/boulders shall be placed along the shoreline to create turtle basking areas, waterfowl nesting areas and bird perching sites (see "Shallow Shoreline Detail" on this page).
 - Aquatic plantings will occur when the area becomes submerged as part of the later stages of rehabilitation.
 - Species suitable for the shoreline, aquatic, and cliff and talus plantings are listed in the Species Planting List on this page.
 - Terrestrial Side-Slope and Undisturbed Setback Habitat Features
 - Rehabilitated side-slopes above the water table will be covered with a minimum 150mm of topsoil/organic matter and seeded with the General Rehabilitation Seed Mix that will consist of native wildflowers and grasses, as outlined in the Species Planting List. The establishment of side-slopes will occur progressively and generally follow the sequence of extraction and side slope/setback grading and seeding.
 - As part of the establishment of progressively rehabilitated side-slopes above the water table, any undisturbed setback areas will be filled, seeded with the General Rehabilitation Seed Mix, and planted with nodal/tree shrub plantings.
 - The rehabilitated side-slope and undisturbed setback areas are to be planted so that seasonal maintenance is minimized once plants have been established to naturalize through succession.
 - No nodal tree or shrub planting will occur within any fenced Archaeological Site Areas.
 - Any existing native trees and shrubs that have started to regrow within the rehabilitated side-slope and setback areas are to be maintained, where possible, unless they are invasive or in poor condition.
 - For the nodal tree/shrub plantings the following installation and maintenance specifications shall be implemented:
 - Nodal planting areas will occur in suitable, ecologically strategic locations and are conceptually shown on the drawing.
 - Nodal shrub/tree plantings on the side slope and within the setback areas shall include a mixture of coniferous and deciduous tree and shrub species to promote species diversity and provide a variety of species to compensate for any substrate deficiencies (see nodal planting detail on this page). Recommended species are outlined in the species planting list. It is recommended that Ash (*Fraxinus* spp.) species be avoided in rehabilitation plantings due to the invasion of the Emerald Ash Borer.
 - Within the nodal plantings, trees are to be installed on 3-5m centre spacing, depending on species and planted randomly spaced and staggered to appear more natural.
 - All installed trees shall be a minimum of 1.2m (~4 ft) in height with a sufficiently developed root ball to sustain planting.
 - All tree installations shall include rodent guards that are flush with the ground surface. Rodent guards should be removed after 3-5 years to avoid future trunk damage.
 - Within the nodal plantings, understory plantings shall complement the natural vegetation occurring adjacent to the subject lands and shall be spaced according to species anticipated growth rate.
 - All planted vegetation is to be native to the local area and selected for hardiness, wind and drought resistance.
 - Any woody plant root defects (e.g. girdling) shall be corrected prior to installation. All woody plants shall be installed such that the root crown/trunk flare is exposed above the soil surface to ensure proper oxygenation of the rooting zone.
 - All installed woody plants shall be watered (deep soaking) following installation.
 - Woody plant installations shall occur in the Spring (i.e. April or May) or fall (i.e. mid-September to early October) depending on seasonal conditions.
 - During the first year, nodal plantings shall be watered and monitored until established. During the second year, the planted areas shall be inspected twice each year, once in the spring after leaf break and once in the fall prior to leaf drop to ensure any planted vegetation that is in poor condition is fertilized, watered and monitored to improve health and vigour. Within the first three years of installation, any planted vegetation that has failed to establish shall be replaced in the subsequent spring or fall.
- Quarry Islands and Grassland/Prairie Habitat Features
 - The "No Extraction" and "No Disturbance Archaeological Site" areas located in the central quarry area shall not be extracted or disturbed (see Archaeology notes on Page 3).
 - Through final rehabilitation, the protection of these areas will result in the creation of three islands with vertical faces (see side-slope condition 3 on Page 5) that will be surrounded by a lake with a water depth of 7 to 11m.
 - As part of site preparation activities in Phase 1a, these areas will be filled and seeded with a grassland/prairie habitat seed mix to establish Grassland/Prairie Habitat early in the life of the quarry operation. See Species Planting List on this page.
 - These areas will be managed and maintained using grassland/prairie habitat best management practices to ensure that these communities are mature and self-sustaining prior to final quarry rehabilitation.
 - All rehabilitation activities in these areas shall be in accordance with the required Archaeological protection measures outlined on Page 3.
- G. Drainage**
- Final surface drainage will follow the rehabilitated contours as shown and be directed towards the post-extraction pond.
- F. Final Rehabilitation**
- The final land-use will be a naturalized area with a large lake and various aquatic and terrestrial habitat areas
 - No buildings or structures associated with aggregate operations will remain on site.
 - There will be no internal roads remaining on the site.
 - The water level of the proposed lake (±174m a.s.l.) and the post-extraction ground water table, are as shown on pages 1, 4 and 5 as per hydrogeological hydrological assessments.

Legend

- Boundary of Area to be Licensed
- Existing Licensed Boundary
- Contour with Elevation
- Existing Fence
- Building/Structure
- Field Access
- Existing Vegetation
- Wainfleet Bog Provincially Significant Wetland Complex/ Significant Woodland Boundary
- Setback from Wainfleet Bog Provincially Significant Wetland Complex/ Significant Woodland Boundary
- Onondaga Escarpment Brow
- Setback from Onondaga Escarpment Brow
- Significant Wildlife Habitat
- Identified Archaeological Sites that have further Cultural Heritage Value and Interest
- Limit of Extraction
- Additional Lands Owned by Applicant
- Proposed Contour
- Proposed Elevation
- Nodal Planting Areas
- Post Extraction Lake
- Shallow Shoreline Area
- Terrestrial Habitat Creation Areas
- Grassland/Prairie Habitat/ Quarry Islands
- Cross Sections

Site Plan Amendments

No.	Date	Description	By

PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE

MHBC

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70 Ewart Avenue
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Applicant's Signature

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VP/GM Construction Materials

Project

Law Quarry Extension

Part of Lots 6 & 7, Concession 2
Part of Road Alignment Between Lots 5 & 6, Concession 2
(Geographic Township of Wainfleet) Township of Wainfleet, Regional Municipality of Niagara

ARA Licence Reference No.

Pre-approval review:

Revs. as per MNRF comments - June 2023
Revs. as per MCM comments - April 2023
For Submission to NDNRFP - June 2022

Plan Scale 1:2,500 (Arch D)

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

Drawn By D.G.S. File No. 0956B
Checked By C.P.

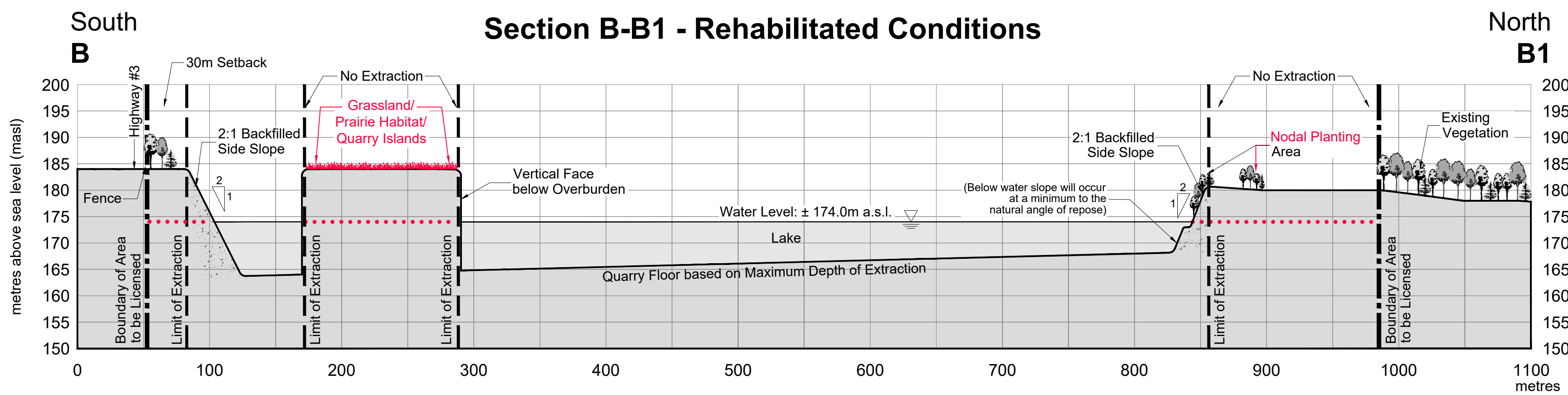
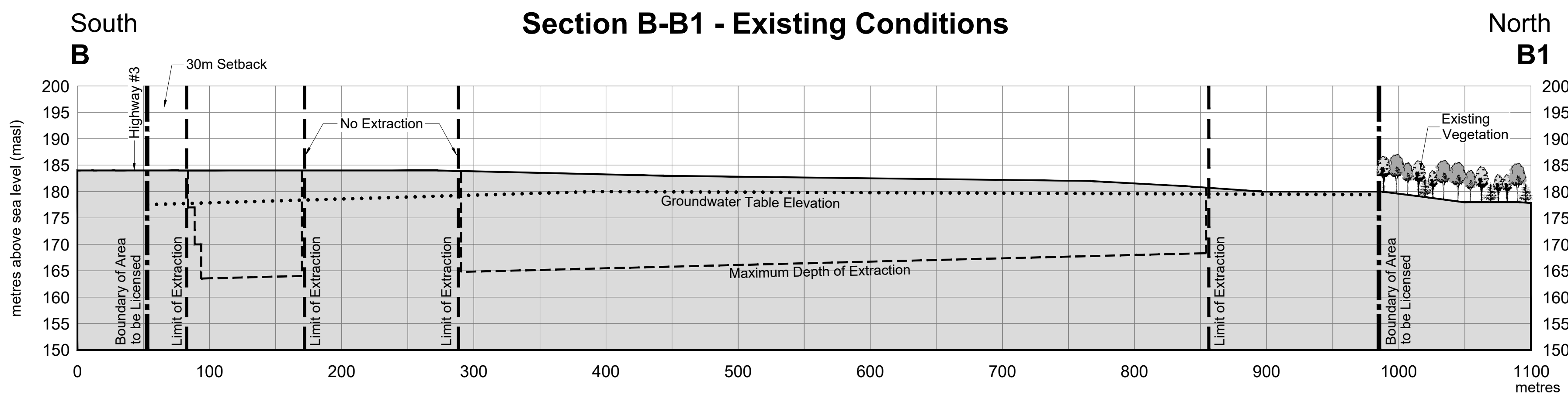
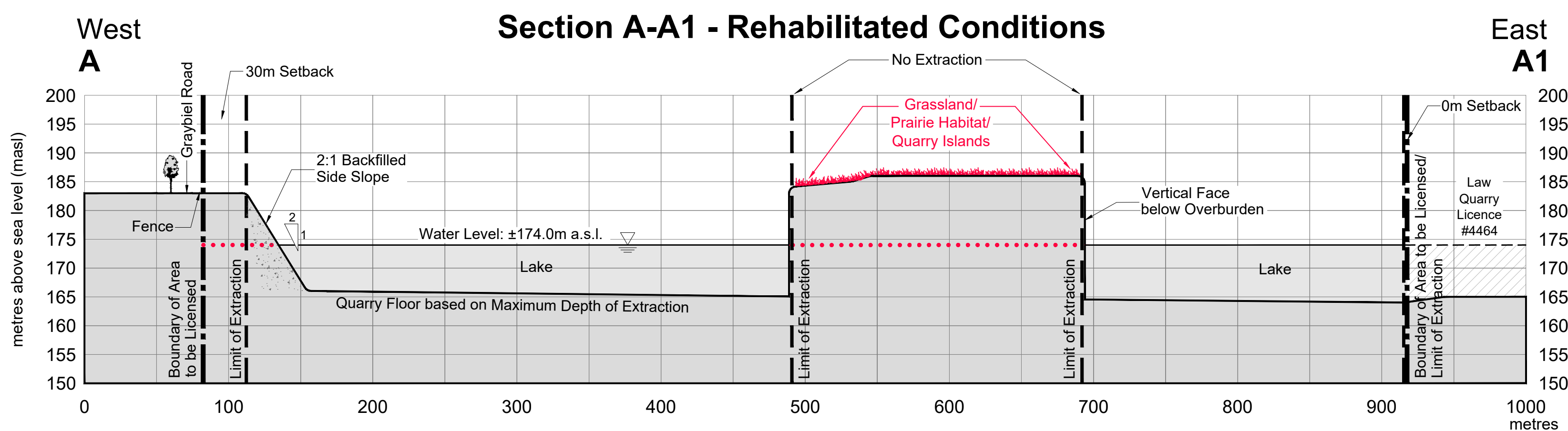
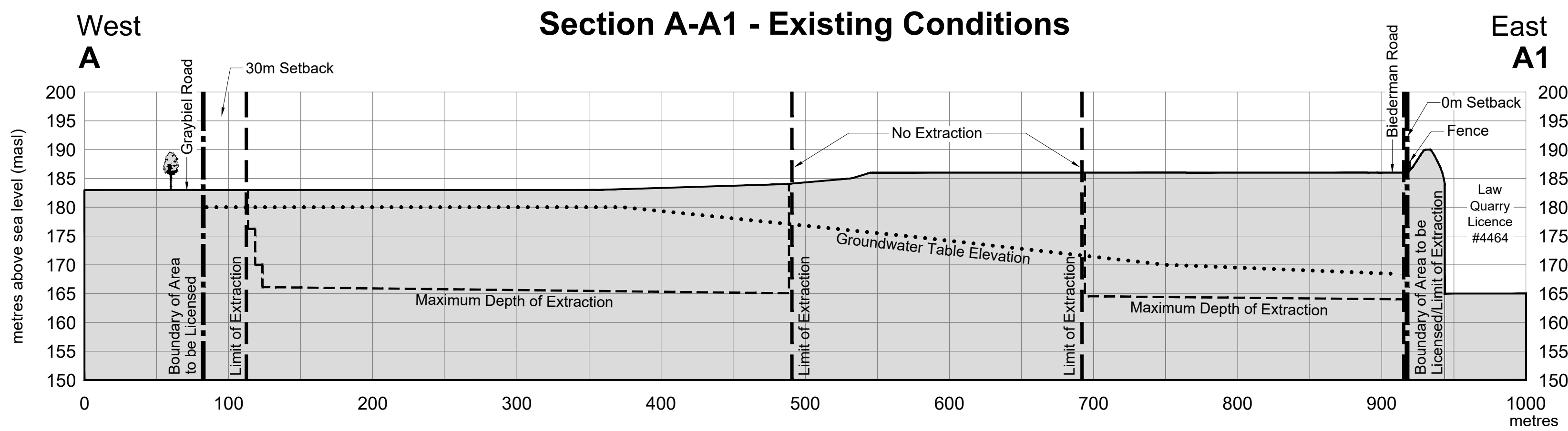
REHABILITATION PLAN

4 OF 5

K:\0956C-WATERFORD SAND AND GRAVEL LIMITED-LAW QUARRY EXTENSION\REHPLAN 4 OF 5.JUNE2023.DWG

Planting List: Species Suitable for the Law Extension Quarry Rehabilitation

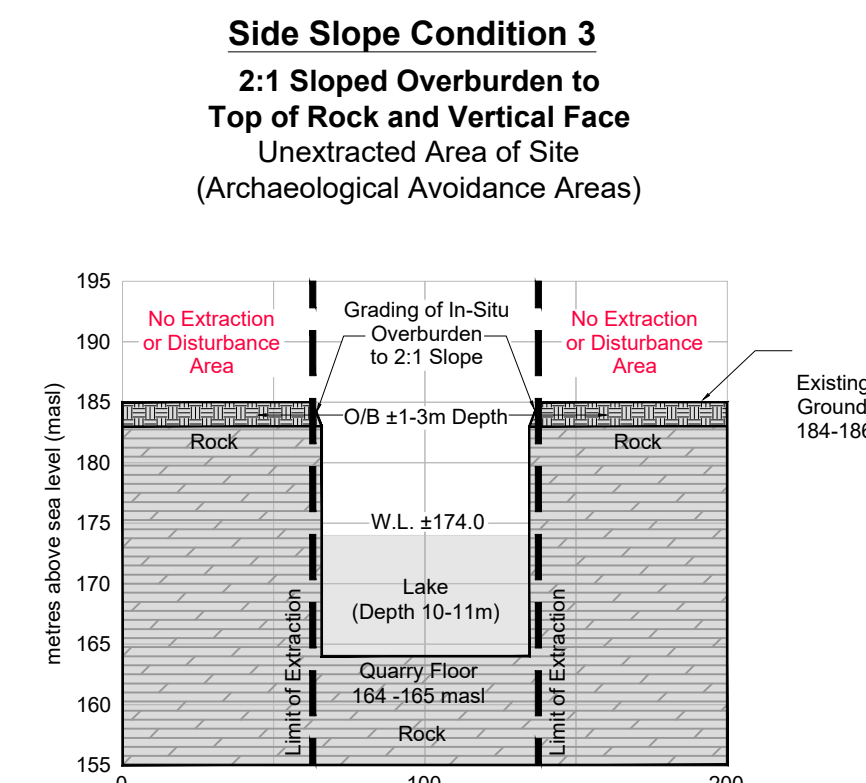
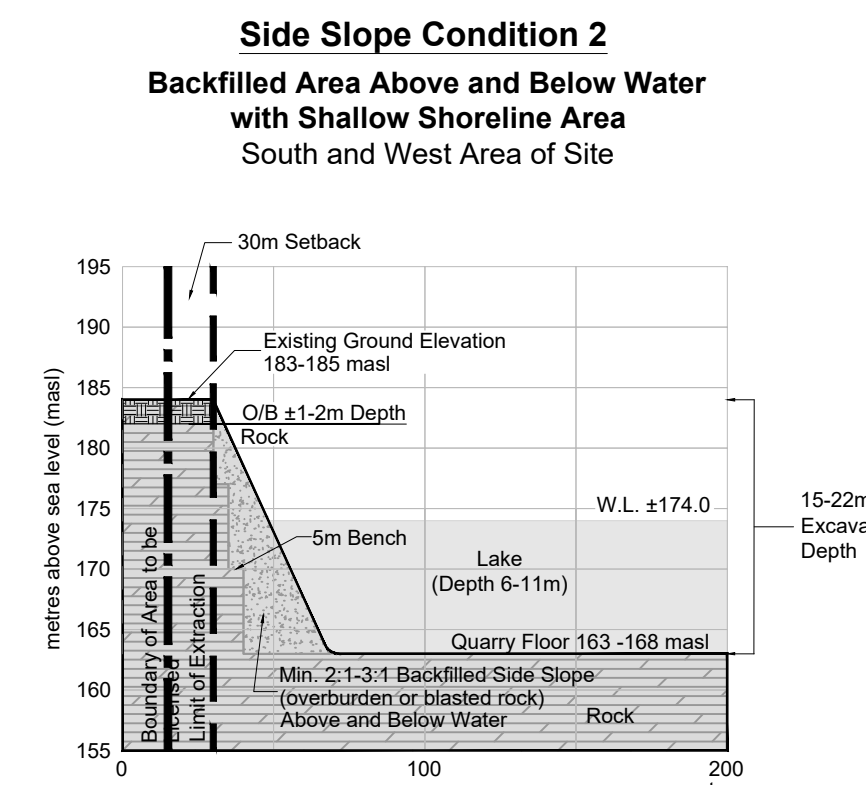
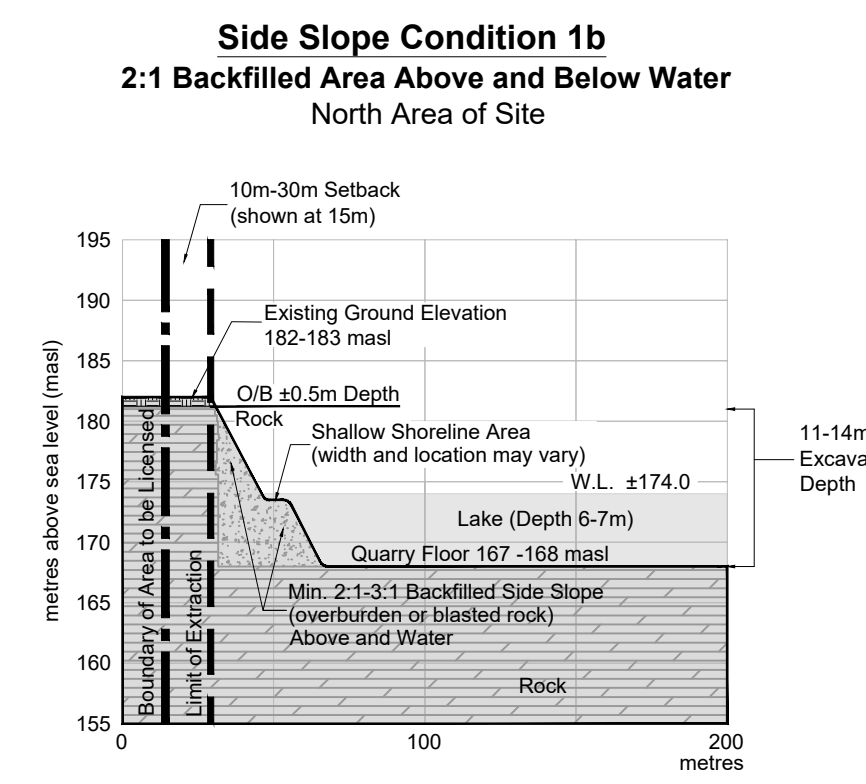
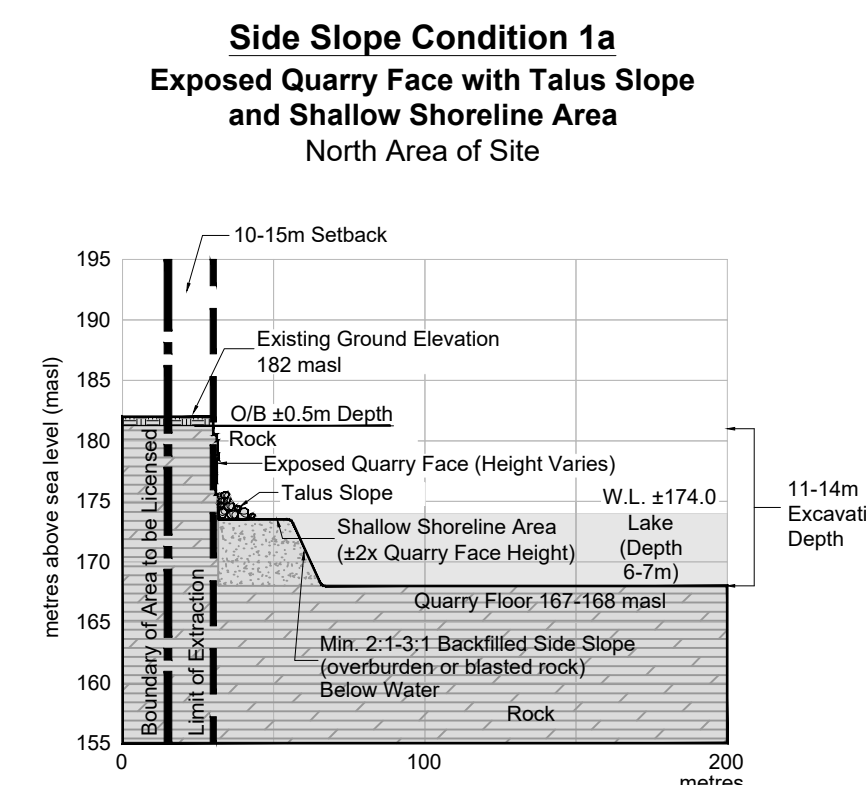
Tree/shrub: upper-slopes, setback areas	Tree/shrub: lower slopes, riparian, cliff & talus	Grassland/Prairie	General rehabilitation seed mix	Shallow Inland/ Aquatic
Trembling Aspen (<i>Populus tremuloides</i>) Black Cherry (<i>Prunus serotina</i>) Sugar Maple (<i>Acer saccharum</i>) Eastern Red Cedar (<i>Juniperus virginiana</i>) Common Hackberry (<i>Celtis occidentalis</i>) Bittersweet (<i>Sarcocodendron</i>)	Eastern White Cedar (<i>Thuja occidentalis</i>) Red Maple (<i>Acer rubrum</i>) White Birch (<i>Betula papyrifera</i>) Black Maple (<i>Acer nigricum</i>) Black Walnut (<i>Juglans nigra</i>)	Big Bluestem (<i>Andropogon gerardii</i>) Indian grass (<i>Chloris trichostema</i>) Little Bluestem (<i>Setchellium virginicum</i>) Dutch grass (<i>Passiflora virginiana</i>) Prairie cord grass (<i>Sporobolus virginicus</i>) Canada wild rice (<i>Zizania canadensis</i>)	New England Aster (<i>Aster novae-angliae</i>) Black-eyed Susan (<i>Rudbeckia hirta</i>) Sudbury Aster (<i>Aster laevis</i>) Sudbury Black-eyed Susan (<i>Rudbeckia hirta</i>) Canada Wild Rice (<i>Zizania canadensis</i>) Canada Golden Rod (<i>Solidago canadensis</i>)	Red-Osier Dogwood (<i>Cornus americana</i>) Chickadee (<i>Linnaea borealis</i>) Meadowweet (<i>Spiraea alba</i>) Narrow-leafed Yellow (<i>Thalictrum flavum</i>) Butterbush (<i>Syrphocaulis occidentalis</i>) Clinging Ivy (<i>Hedera helix</i>)



Depiction of rehabilitation for Licence #4464 is shown for information purposes only and is not intended to regulate or override information shown on the current approved area site plans on file with NDMNRF.

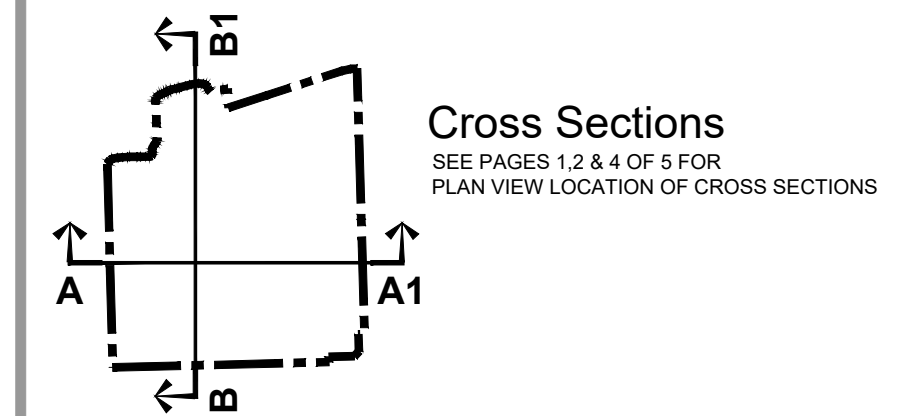
Rehabilitation Options

(see Rehabilitation Plan page 4 of 5)



Legal Description
Part of Lots 6 & 7, Concession 2 and Part of Road Allowance Between Lots 5 & 6, Concession 2 (geographic Township of Wainfleet) Township of Wainfleet Region of Niagara

- Legend**
- Boundary of Area to be Licensed
 - Limit of Extraction
 - Groundwater Table
 - Maximum Depth of Extraction
 - Existing Vegetation/Trees



- General Notes**
- THIS SITE PLAN IS PREPARED UNDER THE AGGREGATE RESOURCES ACT (ARA) FOR A CLASS A LICENCE FOR A QUARRY BELOW THE GROUND WATER TABLE. ALSO, THIS SITE PLAN FOLLOWS THE AGGREGATE RESOURCES OF ONTARIO, SITE PLAN STANDARDS AUGUST 2020. THE POST-EXTRACTION GROUNDWATER TABLE ELEVATION IS EXPECTED TO BE ±174 MASL.
 - THE ELEVATION OF THE EXISTING GROUNDWATER TABLE VARIES FROM ±170 MASL IN THE SOUTHEAST PORTION OF THE SITE TO ±180 MASL IN THE WEST PORTION OF THE SITE. GROUNDWATER ELEVATIONS PROVIDED BY WSP (MARCH 2022).
 - AREA TO BE LICENSED 72.3 HA (178.7 AC)
AREA TO BE EXTRACTED 51.2 HA (126.5 AC)
 - ALL MEASUREMENTS SHOWN ON THIS PLAN ARE IN METRES.

Site Plan Amendments

No.	Date	Description	By

MNBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
200 - 540 BINGEMANS CENTRE DR. KITCHENER, ON. N2B 3X9 | P: 519.574.3450 F: 519.574.0121 | WWW.MNBCPLAN.COM

MNRF Approval Stamp **MNBC Stamp**

Applicant **Waterford Sand & Gravel Limited**
70 Ewart Avenue
Brantford, Ontario
N3T 5M1
Tel: (519) 752-1300

Applicant's Signature
Ed Lamb
VP/GM Construction Materials

Project **Law Quarry Extension**
Part of Lots 6 & 7, Concession 2
Part of Road Allowance Between Lots 5 & 6, Concession 2
(Geographic Township of Wainfleet) Township of Wainfleet, Regional Municipality of Niagara

ARA Licence Reference No. Pre-approval review:
Revs. as per MNRF comments - June 2023
For Submission to NDMNRF - June 2022

Plan Scale 1:2,500 (Horizontal)
4x Exaggeration (Vertical)

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

Drawn By D.G.S. File No. 0956B
Checked By C.P.

File Name **CROSS SECTION PLAN**
Drawing No. **5 OF 5**