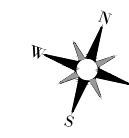
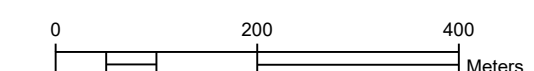


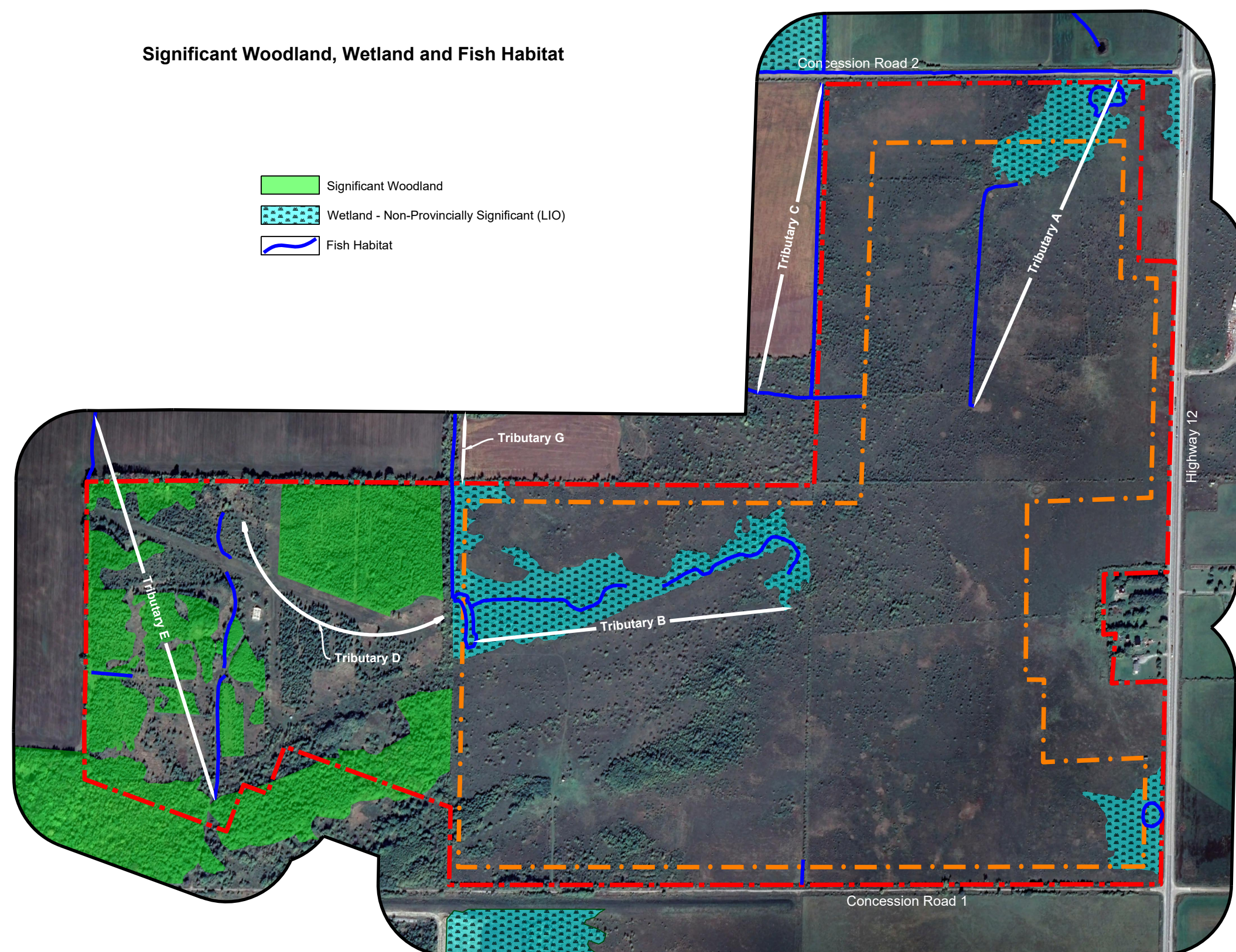
Key Natural Heritage Features

Scale 1:7500



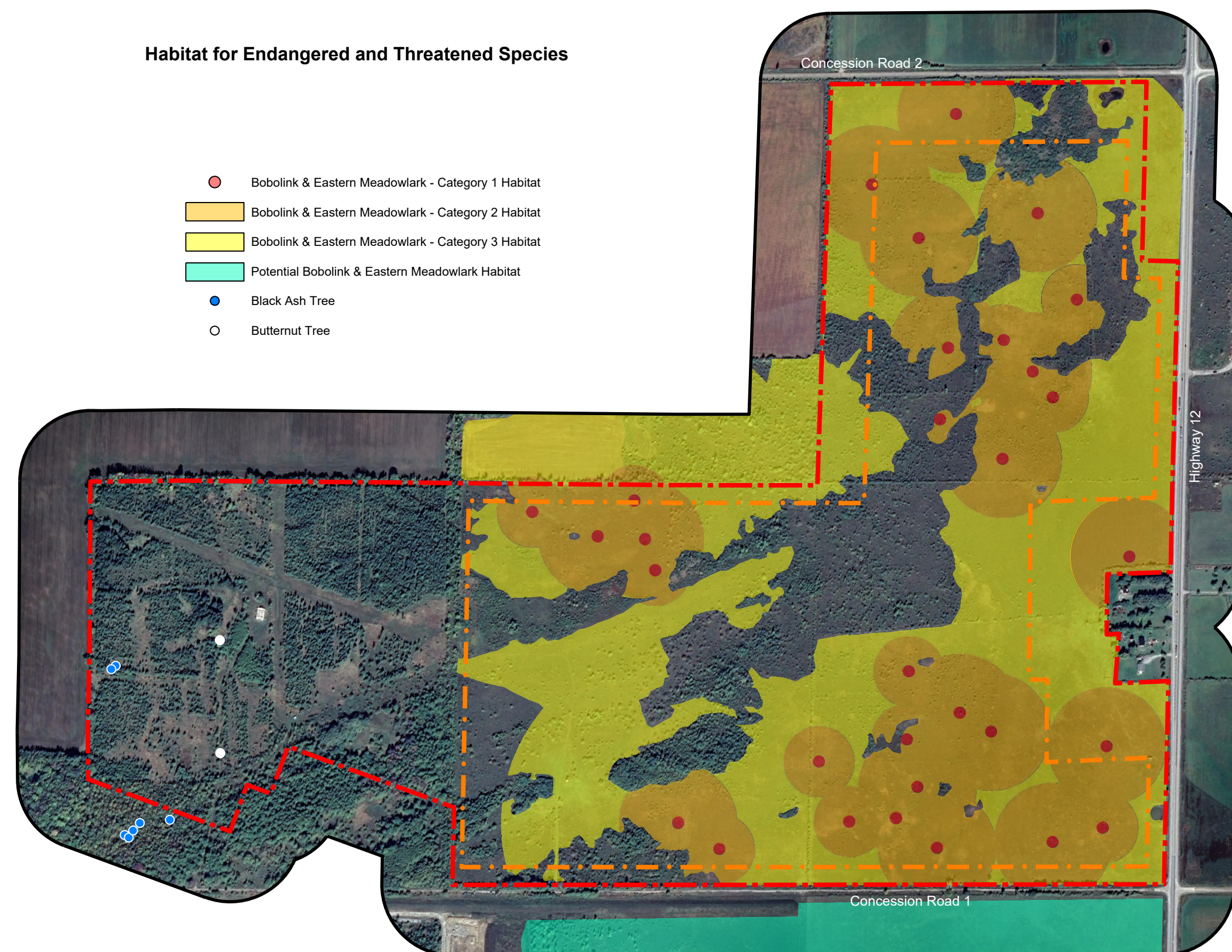
Significant Woodland, Wetland and Fish Habitat

- Significant Woodland
- Wetland - Non-Provincially Significant (L10)
- Fish Habitat



Habitat for Endangered and Threatened Species

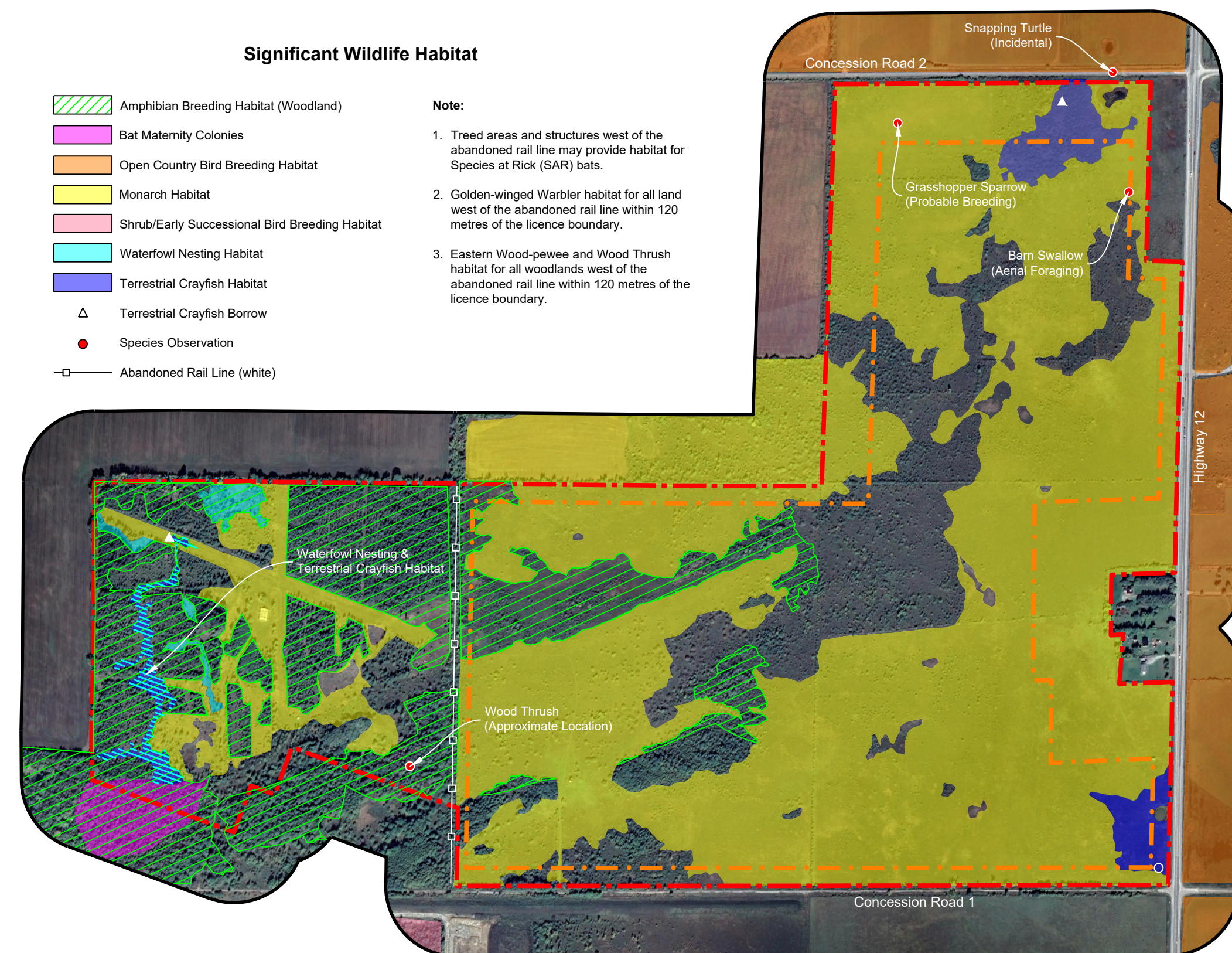
- Bobolink & Eastern Meadowlark - Category 1 Habitat
- Bobolink & Eastern Meadowlark - Category 2 Habitat
- Bobolink & Eastern Meadowlark - Category 3 Habitat
- Potential Bobolink & Eastern Meadowlark Habitat
- Black Ash Tree
- Butternut Tree



Significant Wildlife Habitat

- Amphibian Breeding Habitat (Woodland)
- Bat Masternity Colonies
- Open Country Bird Breeding Habitat
- Moose Habitat
- Shrub/Early Successional Bird Breeding Habitat
- Waterfowl Nesting Habitat
- Tern/Red-Cap Flycatcher Habitat
- Black Ash Tree
- Species Observation
- Abandoned Rail Line (white)

- Note:**
- Treed areas and structures west of the abandoned rail line may provide habitat for Species at Risk (SAR) bats.
 - Golden-winged Warbler habitat for all level west of the abandoned rail line within 120 metres of the licence boundary.
 - Eastern Wood pewee and Wood Thrush habitat for all woodlands west of the abandoned rail line within 120 metres of the licence boundary.

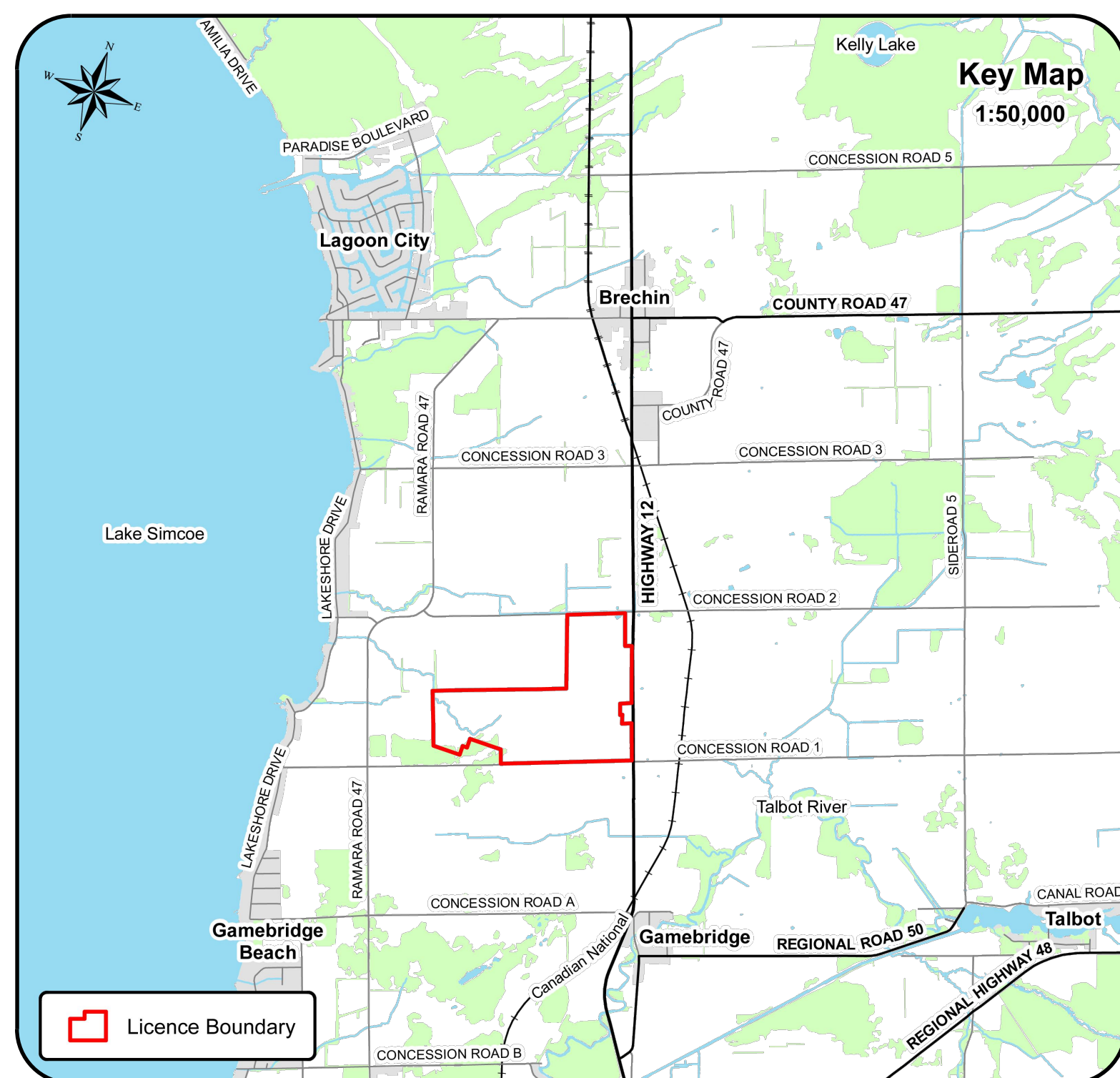


Legal Description

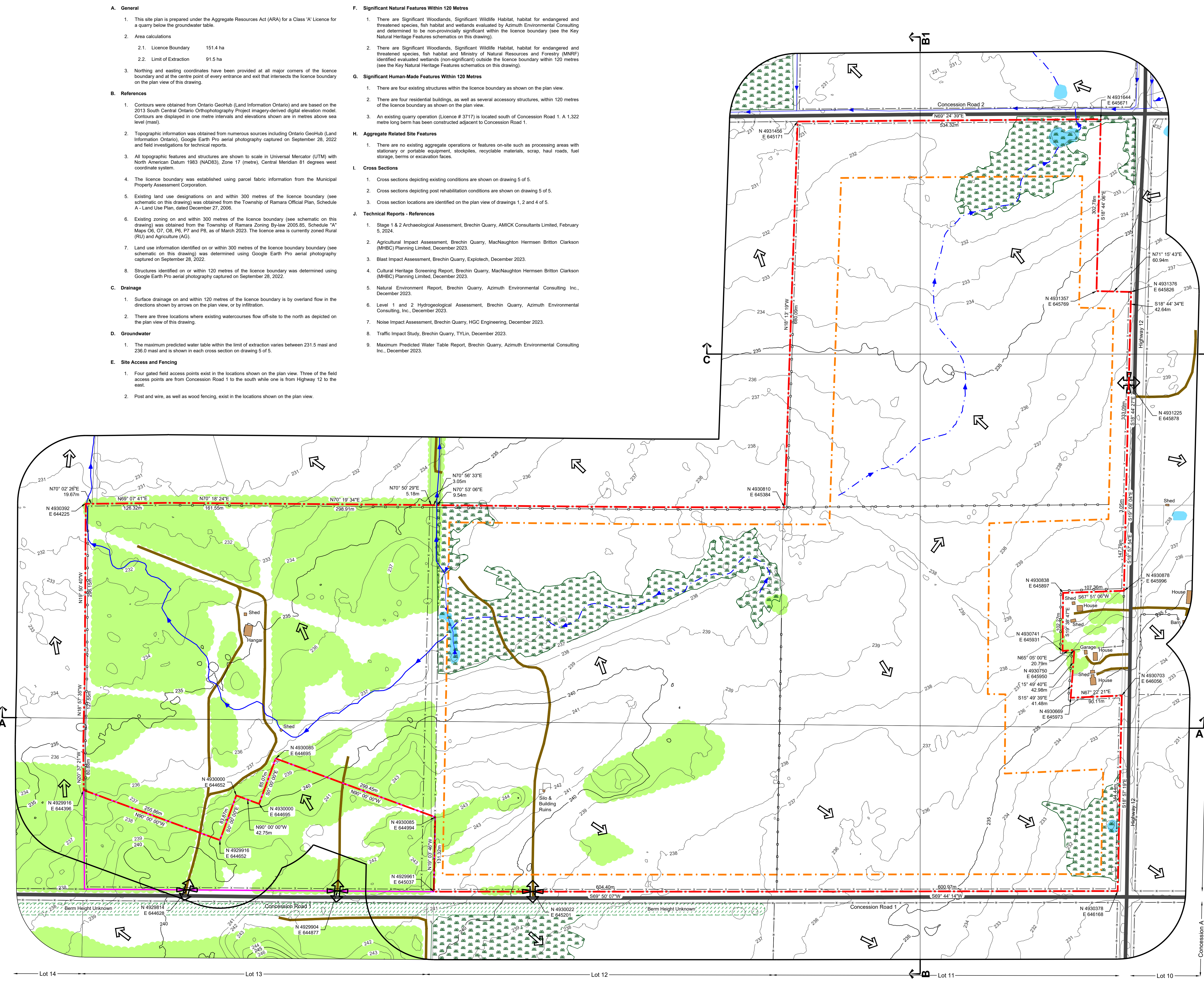
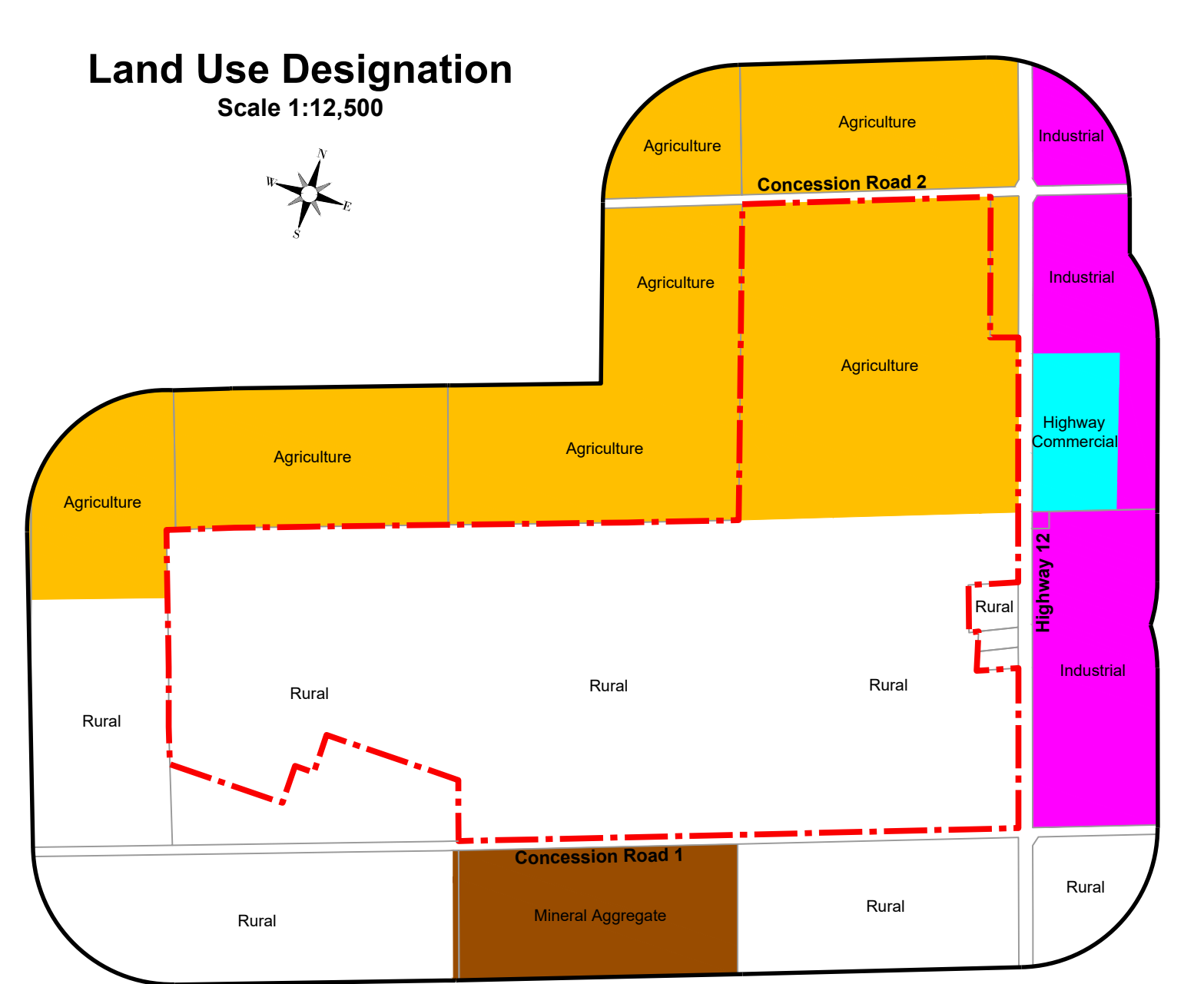
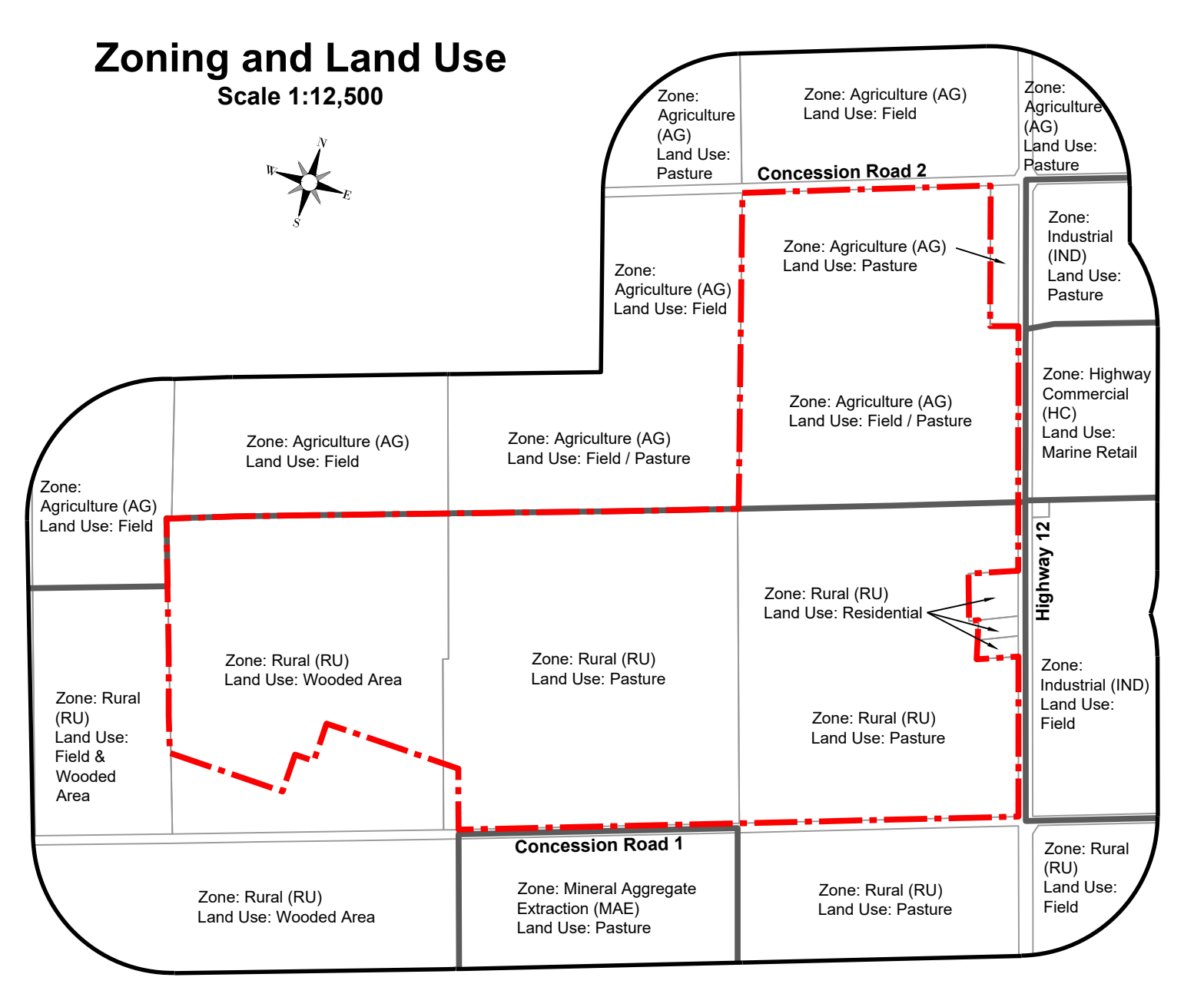
Part of Lots 11, 12 and 13, Concession 1 (former geographic Township of Mara) Township of Ramara County of Simcoe

Legend

	Licence Boundary		120m Offset From Licence Boundary
	Limit of Extraction		Additional Land Owned by Licensee
	Contours with Elevation		Lot Fabric
	Public Road		Fence
	Driveway		Entrance / Exit
	Watercourse		Gate
	Watercourse		Direction of Surface Drainage
	Water Feature		Berm
	Wooded Area		Building/Structure
	Wetland		Cross Sections



- A. General**
- This site plan is prepared under the Aggregate Resources Act (ARA) a Class "A" Licence for a quarry below the groundwater table.
 - Area calculations
 - Licence Boundary 151.4 ha
 - Limit of Extraction 81.6 ha
 - Northing and easting coordinates have been provided at all major corners of the licence boundary and at the centre point of every entrance and exit that intersects the licence boundary on the plan view of this drawing.
- B. References**
- Contours were obtained from Ontario Geobase (Land Information Ontario) and are based on the 2013 South Central Ontario Orthophotography Project imagery-derived digital elevation model. Contours are displayed in one metre intervals and elevations shown are in metres above sea level (masl).
 - Topographic information was obtained from numerous sources including Ontario Geobase (Land Information Ontario), Google Earth Pro aerial photography captured on September 28, 2022 and field investigations for technical reports.
 - All topographic features and structures are shown to scale in Universal Transverse Mercator (UTM) with North American Datum 1983 (NAD83), Zone 17 (metres), Central Meridian 81 degrees west coordinate system.
 - The licence boundary was established using parcel fabric information from the Municipal Property Assessment Corporation.
 - Existing land use designations on and within 300 metres of the licence boundary (see schematic on this drawing) was obtained from the Township of Ramara Official Plan, Schedule "A" Land Use Plan, dated December 27, 2006.
 - Existing zoning on and within 300 metres of the licence boundary (see schematic on this drawing) was obtained from the Township of Ramara Zoning Bylaw 2005.85, Schedule "A" Maps O6, O7, O8, O9, P7 and P8, as of March 2023. The licence area is currently zoned Rural (RU) and Agriculture (AG).
 - Land use information identified on or within 300 metres of the licence boundary boundary (see schematic on this drawing) was determined using Google Earth Pro aerial photography captured on September 28, 2022.
 - Structures identified on or within 120 metres of the licence boundary was determined using Google Earth Pro aerial photography captured on September 28, 2022.
- 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.
 - There are three locations where existing watercourses flow off-site to the north as depicted on the plan view of this drawing.
- D. Groundwater**
- The maximum predicted water table within the limit of extraction varies between 231.5 masl and 236.0 masl and is shown in each cross section on drawing 5 of 5.
- E. Site Access and Fencing**
- Four gated road access points exist in the locations shown on the plan view. Three of the field access points are from Concession Road 1 to the south while one is from Highway 12 to the east.
 - Post and rail, as well as wood fencing, exist in the locations shown on the plan view.
- F. Significant Natural Features Within 120 Metres**
- There are Significant Woodlands, Significant Wildlife Habitat, habitat for endangered and threatened species, fish habitat and wetlands evaluated by Acum Environmental Consulting and determined to be non-provincially significant within the licence boundary (see the Key Natural Heritage Features schematic on this drawing).
 - There are Significant Woodlands, Significant Wildlife Habitat, habitat for endangered and threatened species, fish habitat and Ministry of Natural Resources and Forestry (MNR) identified avoided wetlands (non-significant) outside the licence boundary within 120 metres (see the Key Natural Heritage Features schematic on this drawing).
- G. Significant Human-Made Features Within 120 Metres**
- There are four existing structures within the licence boundary as shown on the plan view.
 - There are four residential buildings, as well as several accessory structures, within 120 metres of the licence boundary as shown on the plan view.
 - An existing quarry operation (Licence # 3711) is located south of Concession Road 1. A 1,322 metre long berm has been constructed adjacent to Concession Road 1.
- H. Aggregate Related Site Features**
- There are no existing aggregate operations or features on-site such as processing areas with secondary or portable equipment, scrap, haul roads, tail storage, berms or excavation faces.
- I. Cross Sections**
- Cross sections depicting existing conditions are shown on drawing 5 of 5.
 - Cross sections depicting post rehabilitation conditions are shown on drawing 5 of 5.
 - Cross section locations are identified on the plan view of drawings 1, 2 and 4 of 5.
- J. Technical Reports - References**
- Stage 1 & 2 Archaeological Assessment, Brechin Quarry, AMICK Consultants Limited, February 5, 2024.
 - Cultural Heritage Screening Report, Brechin Quarry, MacNaughton-Hemmen Britton Clarkson (MNBC) Planning Limited, December 2023.
 - Agricultural Impact Assessment, Brechin Quarry, MacNaughton-Hemmen Britton Clarkson (MNBC) Planning Limited, December 2023.
 - Blast Impact Assessment, Brechin Quarry, Earthtech, December 2023.
 - Cultural Heritage Assessment Report, Brechin Quarry, MacNaughton-Hemmen Britton Clarkson (MNBC) Planning Limited, December 2023.
 - Natural Environment Report, Brechin Quarry, Acum Environmental Consulting Inc., December 2023.
 - Level 1 and 2 Hydrogeological Assessment, Brechin Quarry, Acum Environmental Consulting Inc., December 2023.
 - Noise Impact Assessment, Brechin Quarry, HGC Engineering, December 2023.
 - Traffic Impact Study, Brechin Quarry, TYUN, December 2023.
 - Maximum Predicted Water Table Report, Brechin Quarry, Acum Environmental Consulting Inc., December 2023.



Site Plan Acronyms

- ARA - Aggregate Resources Act
- MASL - Metres Above Sea Level
- MNRF - Ministry of Natural Resources and Forestry
- MCM - Ministry of Citizenship and Multiculturalism
- MGCS - Ministry of Government and Consumer Services
- MECP - Ministry of Environment, Conservation and Parks
- MTO - Ministry of Transportation - Ontario
- DFO - Fisheries and Oceans Canada
- PTTW - Permit to Take Water
- ECA - Environmental Compliance Approval
- ESA - Environmental Site Assessment
- SAR - Species at Risk
- LIO - Land Information Ontario

Site Plan Amendments

No.	Date	Description	By

Site Plan Revisions (Pre-Licensing)

No.	Date	Description	By

MNRF Stamp

MHBC Stamp

Christopher Poole
Is authorized by the Ministry of Natural Resources and Forestry pursuant to Subsection 0.2(3)(f) of Ontario Regulation 24/07 to prepare and certify site plans.

Applicant

LCP Quarry Limited
145 Adelaide Street West
Suite 500
Toronto, Ontario
M5H 4E5

Project

Brechin Quarry
1646 & 1506 Highway 12 and 2440 & 2530 Concession Road 1, Brechin, Ontario, L0K 1B0

Plan Scale: 1:3000 (Arch E)

Date: April 2024

Drawn By: C.P. **File No.:** 12135B

Checked By: B.Z.

File Name: Existing Features

Drawing No.: 1 of 5

File Path: N:\Brent\12135B\Talker - Proposed Brechin Quarry\Drawings\Site Plan\CAD\12135B - Site Plan.dwg

A. General

- 1. Area calculations
1.1. Licence Boundary 151.4 ha
1.2. Limit of Extraction 91.5 ha
2. The maximum annual tonnage is 2,000,000 tonnes.
3. The maximum predicted water table within the limit of extraction varies between 231.5 most and 236.0 least.

- B. Hours of Operation
1. Extraction, including drilling and primary crushing, is permitted Monday to Friday between 7:00 am and 6:00 pm and on Saturdays between 7:00 am to 12:00 pm.
2. Processing, loading and shipping is permitted Monday to Friday between 5:30 am to 6:00 pm and on Saturdays from 7:00 am to 12:00 pm.

- C. Site Access and Fencing
1. The three existing field access points on Concession Road 1 and the existing field access on Highway 12 may remain for maintenance purposes.
2. The two field access points within Lot 13, Concession 1, should they remain, shall be gated at the property boundary.

- D. Drainage and Siltation Control
1. Drainage of undisturbed areas will continue in the directions shown on drawing 1 of 5.
2. Silt fencing shall be installed and maintained in accordance with Natural Environment notes 4.1 and 4.2 under Section P Technical Recommendations on this drawing.

- E. Site Preparation
1. Prior to site preparation, a Spills Contingency Plan shall be prepared and implemented.
2. The shed and hangar within Lot 13, Concession 1 shall be removed prior to natural restoration activities.

- F. Berms and Screening
1. Noise attenuation berms shall be constructed to the height specified in the locations shown on the plan view of this drawing.
2. Berms shall not be located within three metres of the licence boundary.
3. Berm side slopes shall not be steeper than 2:1 (horizontal : vertical).

- G. Site Dewatering
1. Once the permanent sump is established, all dewatering water in the location shown on the plan view of this drawing.
2. Water discharged from the permanent sump will pass through the habitat corridor and eventually discharge off-site in the location shown on the plan view of this drawing.

- H. Extraction Sequence
1. The extraction sequence is outlined on drawing 3 of 5.

- I. Extraction Details
1. All areas within five metres of the extraction face inside the limit of extraction shall be removed.

- J. Silt Fencing
1. Topsoil and overburden shall be stripped to a maximum 2:1 slope adjacent to the limit of extraction.
2. The existing grade, maximum predicted water table and maximum depth of extraction are indicated by spot elevations in various locations on the plan view of this drawing.

- K. Wash Pond and Sump
1. A wash pond and sump will initially move with the quarry face in Phase 1A and 1B until the maximum depth is reached.
2. Throughout the life of the operation, water from the temporary or permanent sump shall only be discharged in the southwest corner of Phase 1B in the location identified on the plan view of this drawing.

- L. Dust
1. Dust shall be mitigated on-site.
2. Water or another innocuous approved dust suppressant shall be applied to internal haul roads and processing areas as often as required to mitigate dust.

- M. Fuel Storage
1. Fuel storage tanks shall be located in close proximity to the processing area.
2. Fuel storage tanks shall be installed and maintained in accordance with the Technical Standards and Safety Act and Liquid Fuels Regulation 21701.

- N. Scrap and Recycling
1. Scrap may be stored on-site within the processing area identified on drawing 3 of 5 and shall be removed on an on-going basis.
2. Scrap shall only include material generated directly as a result of the aggregate operation such as refuse, bent, scrap metal, lumber, discarded machinery and equipment.

- O. Variations from Control and Operation Standards
1. The two field access points within Lot 13, Concession 1 on Concession Road 1, should they remain, shall be gated at the property boundary instead of the licence boundary.

- P. Technical Recommendations
1. Agricultural
a. The livestock operation located at 1559 Highway 12 shall be included in the private well monitoring program if the landowner provides access.

- 2. Archaeology
a. The Corbiel (BQ2-23) Site has further Cultural Heritage Value or Interest.
b. A Stage 2 on the Corbiel (BQ2-23) Site has been completed. Stage 3 shall be required prior to any Stage 4 Mitigations.

- 3. Wetlands
a. No alterations or ground disturbing activities shall be carried out within the protected area prior to a report being submitted stating that the Corbiel (BQ2-23) Site has no further Cultural Heritage Value or Interest.

- 4. Noise and Vibration
a. If the aggregate licence is surrendered, a covenant shall be registered on title for the property of block containing the protected site.

- 5. Environmental Protection
a. The maximum predicted water table within the limit of extraction varies between 231.5 most and 236.0 least. The maximum predicted water table is shown in each cross section on drawing 3 of 5.

- 6. Noise and Vibration
a. A 70 metre buffer from the edge of the Corbiel (BQ2-23) Site is required.
b. A post and wire fence shall be erected at the limits of the 70 metre protective area as part of the implementation of the strategy or as part of granting the licence.

- 7. Noise and Vibration
a. A 70 metre buffer from the edge of the Bruce Well (BQ3-24) Site is required.
b. A post and wire fence shall be erected at the limits of the 70 metre protective area as part of the implementation of the strategy or as part of granting the licence.

- 8. Noise and Vibration
a. An atmospheric study shall be undertaken by a competent independent blasting consultant during the first 12 months of operation in order to obtain sufficient quarry data for the development of site specific mitigation activities.

- 9. Noise and Vibration
a. Locations, date and time of the blast
b. Dimensional sketch including photographs, if necessary, of the location of the blasting operation, and the nearest point of reception.

- 10. Noise and Vibration
a. Prior to any site alteration within the area identified as habitat for Bobolink and Eastern Meadowlark, the requirements of Part IV of O.Reg. 630/21 of the Environmental Assessment (ESA) shall be met.

- 11. Noise and Vibration
a. Prior to shipping, the Licensee shall enter into an agreement with the Ministry of Transportation Ontario (MTO) to upgrade the southbound right-turn taper on Highway 12 at Concession Road 2.

- 12. Noise and Vibration
a. Prior to the start of water logging and/or water discharge, a Permit to Take Water (PTTW) and an Environmental Compliance Approval (ECA) shall be obtained and the licensee shall operate in compliance with these approval instruments.

- 13. Noise and Vibration
a. The quarry shall be limited to the following hours of operation:
a.a. Aggregate extraction, including drilling and primary crushing is permitted Monday to Friday between 7:00 am and 6:00 pm, and on Saturdays between 7:00 am and 12:00 pm.

- 14. Noise and Vibration
a. Processing, loading and shipping is permitted Monday to Friday between 5:30 am and 6:00 pm, and on Saturdays between 7:00 am and 12:00 pm.
a.c. No operations are permitted on Sundays or statutory holidays.

- 15. Noise and Vibration
a. When following the active face of the extraction, the primary crusher shall be located as close as possible to the excavated face of each phase, in order to maximize acoustic shielding.
b. Within Phase 1A of the processing plant is permitted to operate at grade. Within all other phases, the primary crusher shall not operate atop LIR 1, but is permitted to operate atop LIR 2 (with the exception of "Noise Attenuation Area 3" identified on the plan view of this drawing), LIR 3, or on the quarry floor.

- 16. Noise and Vibration
a. A request for pre-review shall be submitted to DFO for the removal of Habitat 9 or other Natural Heritage Features schematic on drawing 1 of 5 for location) and DFO requirements shall be complied with.
b. The licensee shall implement the additional Natural Environment notes under Section E on drawing 4 of 5.

- 17. Noise and Vibration
a. Aggregate extraction, including drilling and primary crushing is permitted Monday to Friday between 7:00 am and 6:00 pm, and on Saturdays between 7:00 am and 12:00 pm.
a.c. No operations are permitted on Sundays or statutory holidays.

- 18. Noise and Vibration
a. Processing, loading and shipping is permitted Monday to Friday between 5:30 am and 6:00 pm, and on Saturdays between 7:00 am and 12:00 pm.
a.c. No operations are permitted on Sundays or statutory holidays.

- 19. Noise and Vibration
a. An atmospheric study shall be undertaken by a competent independent blasting consultant during the first 12 months of operation in order to obtain sufficient quarry data for the development of site specific mitigation activities.

- 20. Noise and Vibration
a. Locations, date and time of the blast
b. Dimensional sketch including photographs, if necessary, of the location of the blasting operation, and the nearest point of reception.

- 21. Noise and Vibration
a. Prior to any site alteration within the area identified as habitat for Bobolink and Eastern Meadowlark, the requirements of Part IV of O.Reg. 630/21 of the Environmental Assessment (ESA) shall be met.

- 22. Noise and Vibration
a. Prior to shipping, the Licensee shall enter into an agreement with the Ministry of Transportation Ontario (MTO) to upgrade the southbound right-turn taper on Highway 12 at Concession Road 2.

- 23. Noise and Vibration
a. Prior to the start of water logging and/or water discharge, a Permit to Take Water (PTTW) and an Environmental Compliance Approval (ECA) shall be obtained and the licensee shall operate in compliance with these approval instruments.

- 24. Noise and Vibration
a. The quarry shall be limited to the following hours of operation:
a.a. Aggregate extraction, including drilling and primary crushing is permitted Monday to Friday between 7:00 am and 6:00 pm, and on Saturdays between 7:00 am and 12:00 pm.

- 25. Noise and Vibration
a. Processing, loading and shipping is permitted Monday to Friday between 5:30 am and 6:00 pm, and on Saturdays between 7:00 am and 12:00 pm.
a.c. No operations are permitted on Sundays or statutory holidays.

- 26. Noise and Vibration
a. When following the active face of the extraction, the primary crusher shall be located as close as possible to the excavated face of each phase, in order to maximize acoustic shielding.
b. Within Phase 1A of the processing plant is permitted to operate at grade. Within all other phases, the primary crusher shall not operate atop LIR 1, but is permitted to operate atop LIR 2 (with the exception of "Noise Attenuation Area 3" identified on the plan view of this drawing), LIR 3, or on the quarry floor.

- 27. Noise and Vibration
a. A request for pre-review shall be submitted to DFO for the removal of Habitat 9 or other Natural Heritage Features schematic on drawing 1 of 5 for location) and DFO requirements shall be complied with.
b. The licensee shall implement the additional Natural Environment notes under Section E on drawing 4 of 5.

- 28. Noise and Vibration
a. Aggregate extraction, including drilling and primary crushing is permitted Monday to Friday between 7:00 am and 6:00 pm, and on Saturdays between 7:00 am and 12:00 pm.
a.c. No operations are permitted on Sundays or statutory holidays.

- 29. Noise and Vibration
a. Processing, loading and shipping is permitted Monday to Friday between 5:30 am and 6:00 pm, and on Saturdays between 7:00 am and 12:00 pm.
a.c. No operations are permitted on Sundays or statutory holidays.

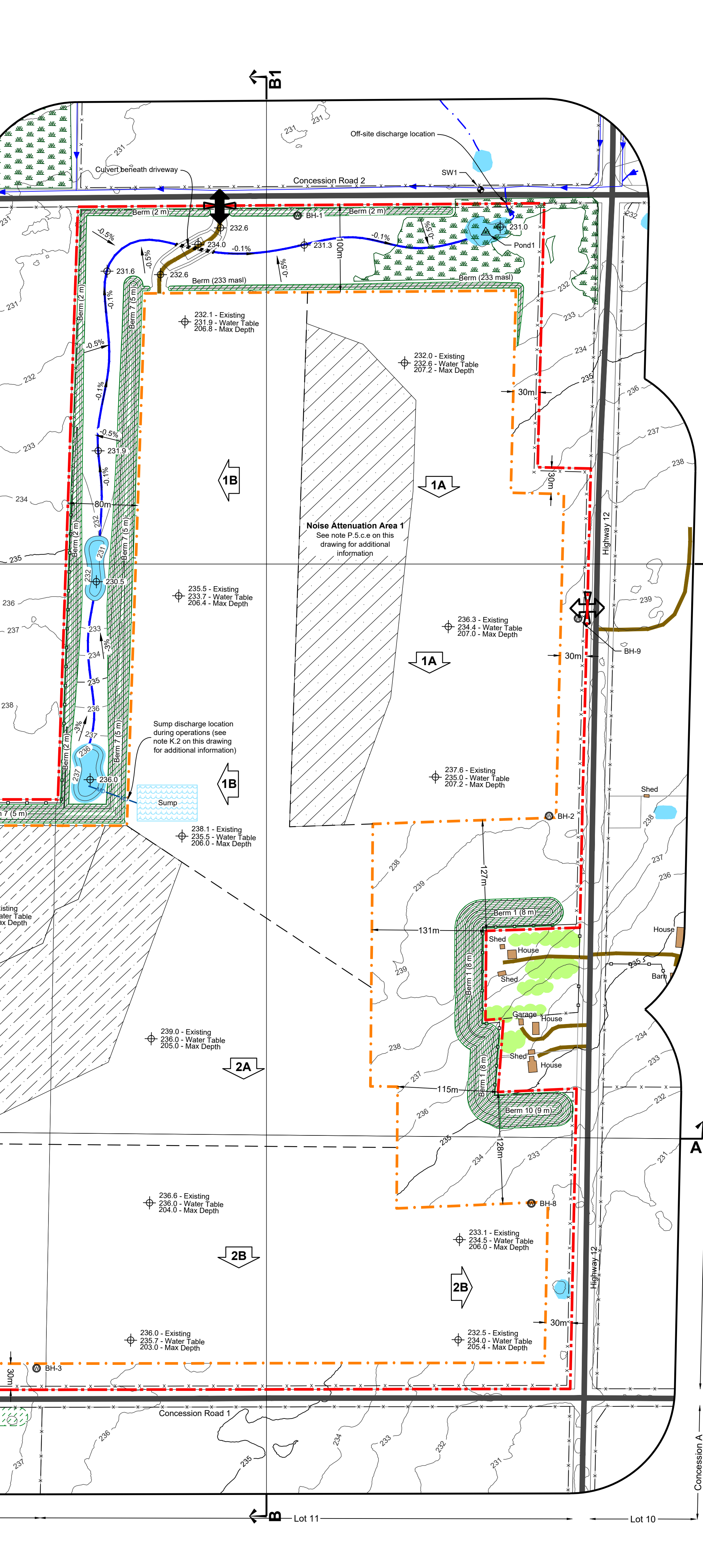
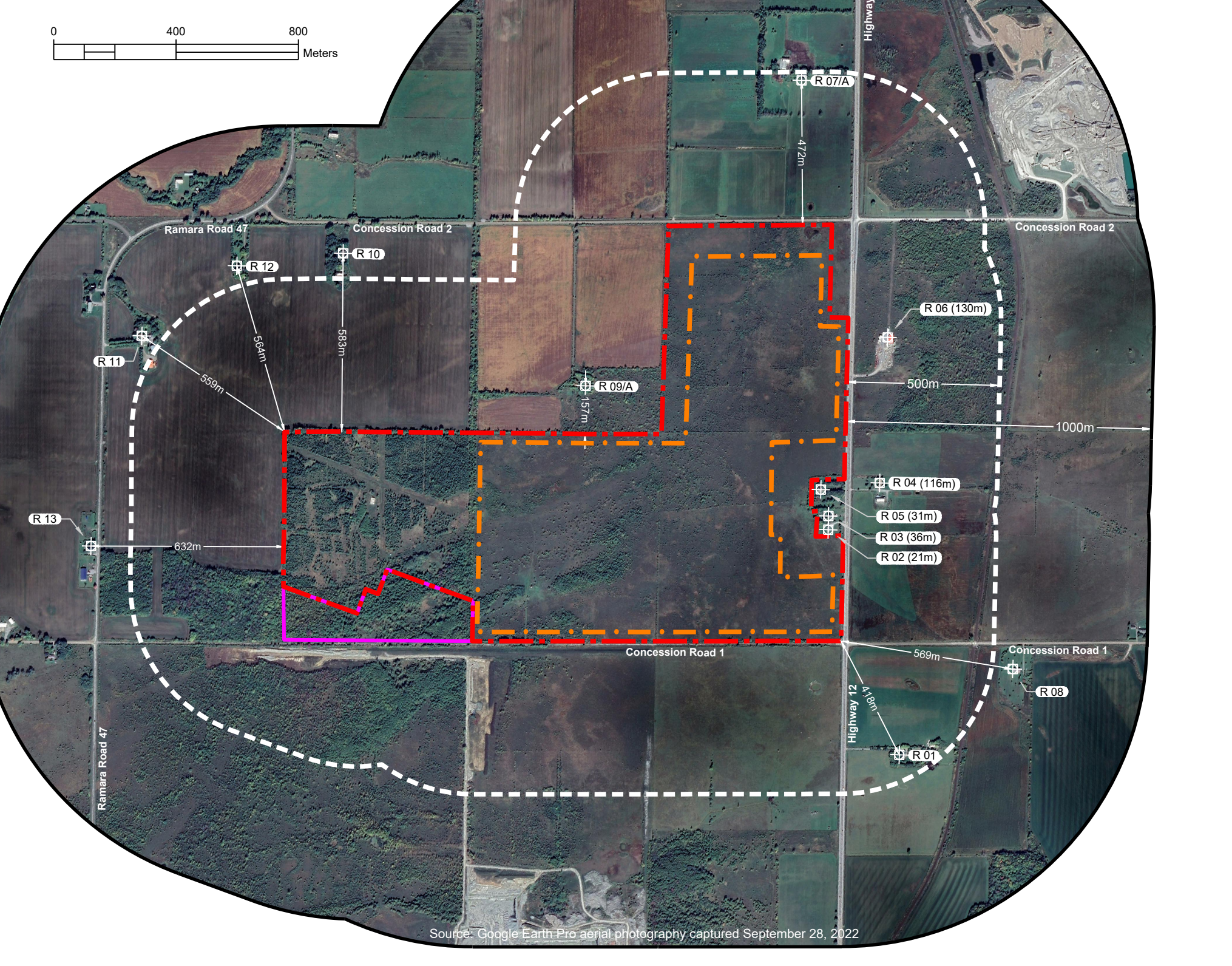
- 30. Noise and Vibration
a. When following the active face of the extraction, the primary crusher shall be located as close as possible to the excavated face of each phase, in order to maximize acoustic shielding.
b. Within Phase 1A of the processing plant is permitted to operate at grade. Within all other phases, the primary crusher shall not operate atop LIR 1, but is permitted to operate atop LIR 2 (with the exception of "Noise Attenuation Area 3" identified on the plan view of this drawing), LIR 3, or on the quarry floor.

- 31. Noise and Vibration
a. A request for pre-review shall be submitted to DFO for the removal of Habitat 9 or other Natural Heritage Features schematic on drawing 1 of 5 for location) and DFO requirements shall be complied with.
b. The licensee shall implement the additional Natural Environment notes under Section E on drawing 4 of 5.

Table 1: Summary of Noise Berm Dimension (m)
Berm Height (m)
Berm Length (m)

Table 2: Source Sound Power Levels (dBA re: 10^11 Watts)
Source Type / Name
Sound Power Level

Receptors - Key Map
Scale 1:15,000



Legal Description
Part of Lots 11, 12 and 13, Concession 1
(former geographic Township of Mara)
Township of Rama
County of Simcoe

- Legend
Licence Boundary
Limit of Extraction
Contours with Elevation
Public Road
Driveway
Watercourse
Water Feature
Wooded Area
Wetland
Noise Attenuation Area 1
Noise Attenuation Area 2
Noise Attenuation Area 3
Main Discharge Pipe
Monitoring Well
Pond Monitoring
Sump
120m Offset From Licence Boundary
Additional Land Owned by Licensee
Lot Fabric
Fence
Entrance / Exit
Gate
Direction of Excavation & Phase Boundary
Berm
Archaeological Buffer Area
Spot Elevation
Proposed Excavation
Proposed Final Slope
Proposed Final Grade
Surface Water Monitoring
Rain Gage
Cross Sections

- Site Plan Acronyms
1. ARA - Aggregate Resources Act
2. MASL - Metres Above Sea Level
3. MNRF - Ministry of Natural Resources and Forestry
4. MCM - Ministry of Citizenship and Multiculturalism
5. MGCS - Ministry of Government and Consumer Services
6. MECP - Ministry of Environment, Conservation and Parks
7. MTO - Ministry of Transportation - Ontario
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9. PTTW - Permit to Take Water
10. ECA - Environmental Compliance Approval
11. ESA - Environmental Site Assessment
12. SAR - Species at Risk
13. LIO - Land Information Ontario

Site Plan Amendments table with columns for No., Date, Description, and By.

Site Plan Revisions (Pre-Licensing) table with columns for No., Date, Description, and By.

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
113 COLLIER STREET, BARRE, ON, LAM 1H2 | P: 705.728.0405 | WWW.MHBCAN.COM
MNRFP Stamp
MHBC Stamp
Christopher Poole
Is authorized by the Ministry of Natural Resources and Forestry pursuant to Subsection 0.2(3)(f) of Ontario Regulation 24/07 to prepare and certify site plans.

Applicant
LCP Quarry Limited
145 Adelaide Street West
Suite 500
Toronto, Ontario
M5H 4E5

Project
Brechin Quarry
1646 & 1506 Highway 12 and 2440 & 2530 Concession Road 1, Brechin, Ontario, L0K 1B0

MNRF Licence Reference No.
Applicant's Signature
Date: April 2024
Drawn By: C.P.
Checked By: B.Z.

Plan Scale: 1:3000 (Arch E)
Date: April 2024
Drawn By: C.P.
Checked By: B.Z.
File No.: 12135B

File Name: Operational Plan
Drawing No.: 2 of 5
File Path: N:\Brechin\12135B\Talker - Proposed Brechin Quarry\Drawings\Site Plan\CAD12135B - Site Plan.dwg

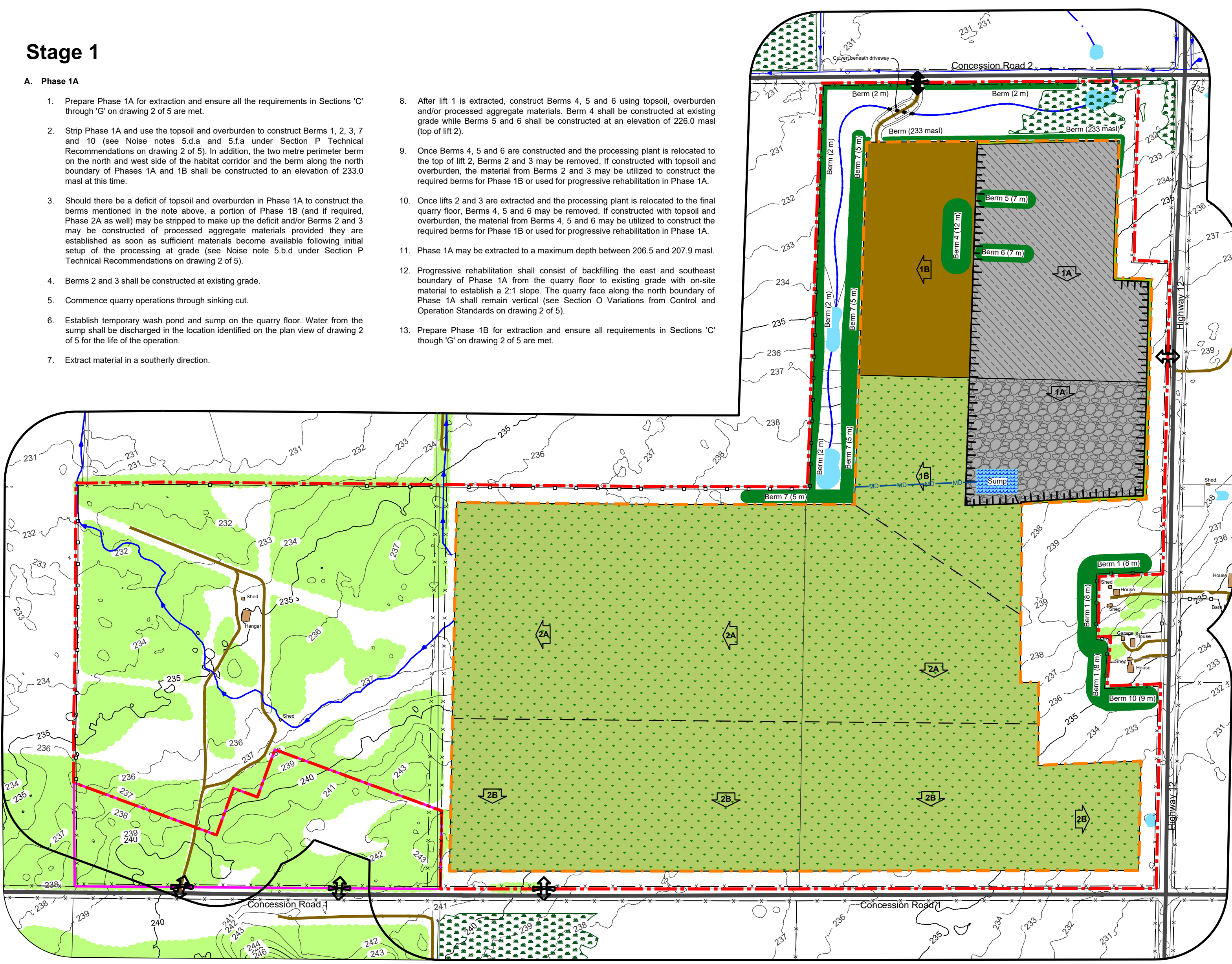
General

1. Extraction shall occur in four phases (Phases 1A, 1B, 2A and 2B) as shown on the plan view.
2. Phases do not represent any specific or equal time period.
3. Progressive and final rehabilitation shall be completed in direct correlation to the development of the quarry as the maximum extraction limits and depths are reached and enough area is available to ensure rehabilitation activities will not interfere with the production, stockpiling and processing of aggregate material.

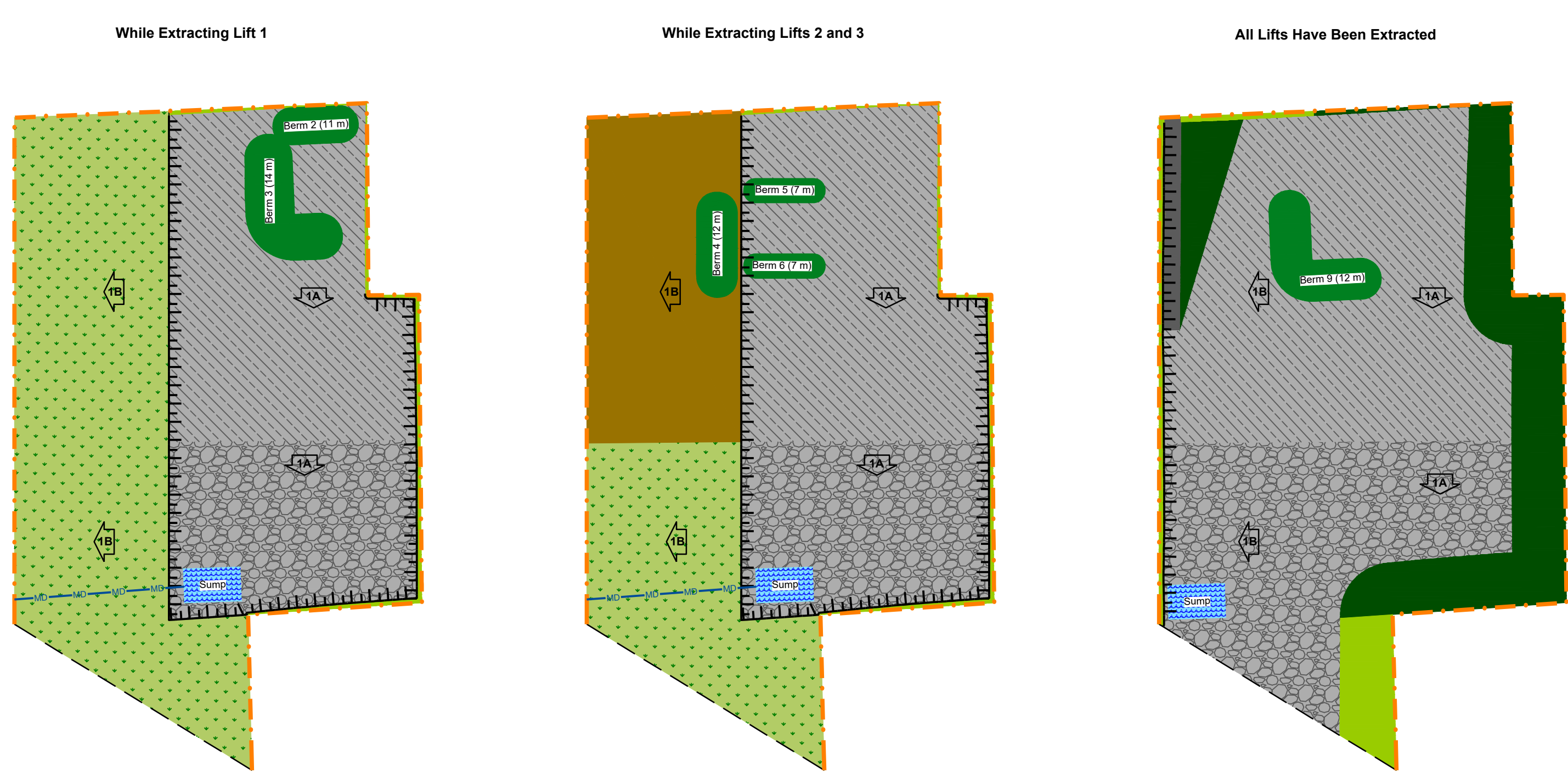
Stage 1

- A. Phase 1A**
1. Prepare Phase 1A for extraction and ensure all requirements in Sections 'C' through 'Q' on drawing 2 of 5 are met.
 2. Strip Phase 1A and use the topsoil and overburden to construct Berms 1, 2, 3, 7 and 10 (see Noise notes 5.0.a and 5.0.a under Section P Technical Recommendations on drawing 2 of 5). In addition, the two metre perimeter berm on the north and west side of the habitat corridor and the berm along the north boundary of Phases 1A and 1B shall be constructed to an elevation of 233.0 mast at this time.
 3. Should there be a deficit of topsoil and overburden in Phase 1A to construct the berms mentioned in the note above, a portion of Phase 1B (and if required, Phase 2A as well) may be stripped to make up the deficit and/or Berms 2 and 3 may be constructed of processed aggregate materials provided they are established as soon as sufficient materials become available following initial setup of the processing at grade (see Noise note 5.0.d under Section P Technical Recommendations on drawing 2 of 5).
 4. Berms 2 and 3 shall be constructed at existing grade.
 5. Commence quarry operations through sinking out.
 6. Establish temporary wash pond and sump on the quarry floor. Water from the sump shall be discharged in the location identified on the plan view of drawing 2 of 5 for the life of the operation.
 7. Extract material in a southerly direction.

8. After lift 1 is extracted, construct Berms 4, 5 and 6 using topsoil, overburden and/or processed aggregate materials. Berm 4 shall be constructed at existing grade while Berms 5 and 6 shall be constructed at an elevation of 236.0 mast (top of lift).
9. Once Berms 4, 5 and 6 are constructed and the processing plant is relocated to the top of lift 2, Berms 2 and 3 may be removed. If constructed with topsoil and overburden, the material from Berms 2 and 3 may be utilized to construct the required berms for Phase 1B or used for progressive rehabilitation in Phase 1A.
10. Once lifts 2 and 3 are extracted and the processing plant is relocated to the final quarry floor, Berms 4, 5 and 6 may be removed. If constructed with topsoil and overburden, the material from Berms 4, 5 and 6 may be utilized to construct the required berms for Phase 1B or used for progressive rehabilitation in Phase 1A.
11. Phase 1A may be extracted to a maximum depth between 206.5 and 207.9 mast.
12. Progressive rehabilitation shall consist of backfilling the east and southeast boundary of Phase 1A from the quarry floor to existing grade with on-site material to establish a 2:1 slope. The quarry face along the north boundary of Phase 1A shall remain vertical (see Section 'O' Variations from Control and Operation Standards on drawing 2 of 5).
13. Prepare Phase 1B for extraction and ensure all requirements in Sections 'C' through 'Q' on drawing 2 of 5 are met.



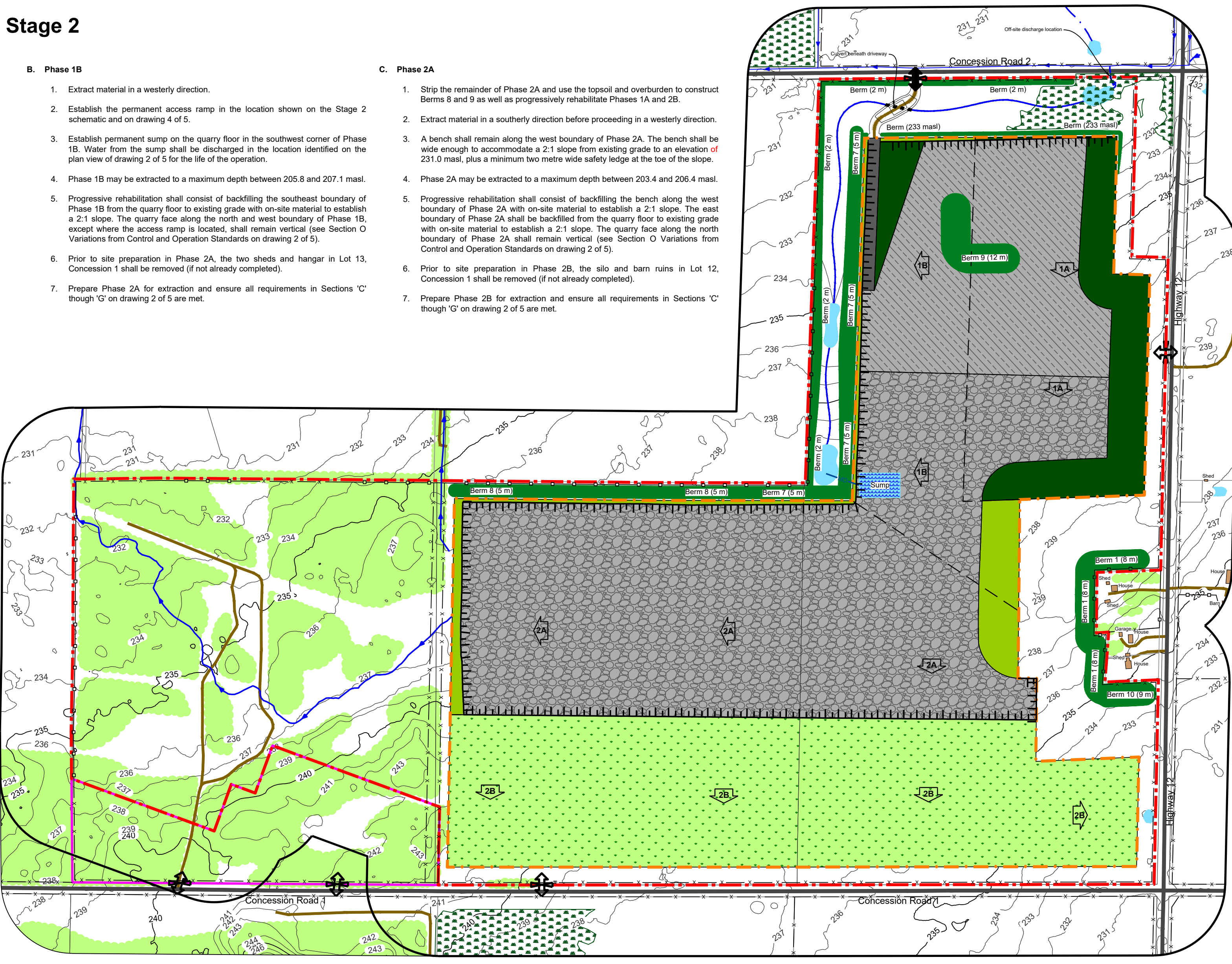
Required Berms in Phase 1



Stage 2

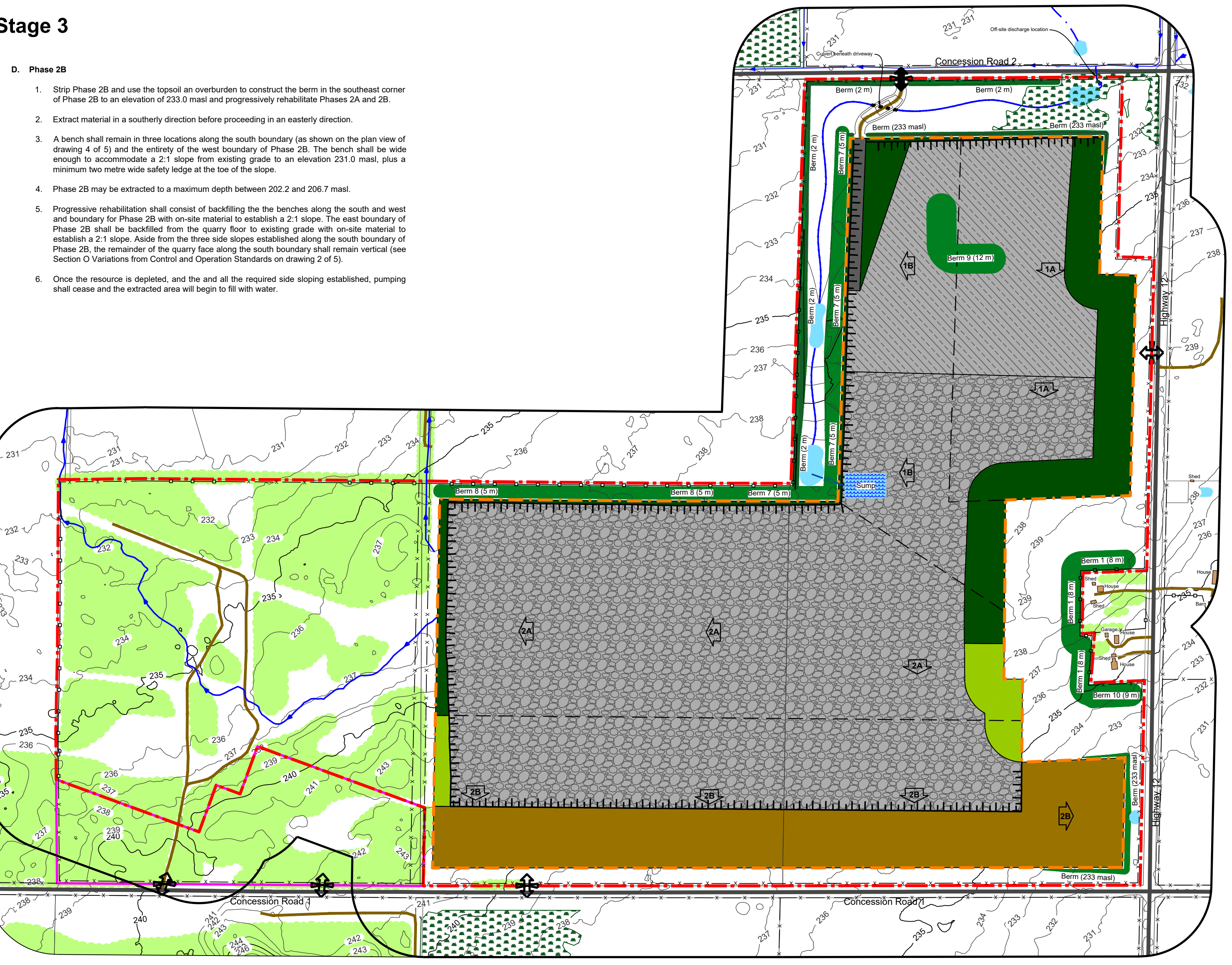
- B. Phase 1B**
1. Extract material in a westerly direction.
 2. Establish the permanent access ramp in the location shown on the Stage 2 schematic and on drawing 4 of 5.
 3. Establish permanent sump on the quarry floor in the southwest corner of Phase 1B. Water from the sump shall be discharged in the location identified on the plan view of drawing 2 of 5 for the life of the operation.
 4. Phase 1B may be extracted to a maximum depth between 205.8 and 207.1 mast.
 5. Progressive rehabilitation shall consist of backfilling the southeast boundary of Phase 1B from the quarry floor to existing grade with on-site material to establish a 2:1 slope. The quarry face along the north and west boundary of Phase 1B, except where the access ramp is located, shall remain vertical (see Section 'O' Variations from Control and Operation Standards on drawing 2 of 5).
 6. Prior to site preparation in Phase 2A, the two sheds and hangar in Lot 13, Concession 1 shall be removed (if not already completed).
 7. Prepare Phase 2A for extraction and ensure all requirements in Sections 'C' through 'Q' on drawing 2 of 5 are met.

- C. Phase 2A**
1. Strip the remainder of Phase 2A and use the topsoil and overburden to construct Berms 8 and 9 as well as progressively rehabilitate Phases 1A and 2B.
 2. Extract material in a southerly direction before proceeding in a westerly direction.
 3. A berm shall remain along the west boundary of Phase 2A. The berm shall be wide enough to accommodate a 2:1 slope from existing grade to an elevation of 231.0 mast, plus a minimum two metre wide safety ledge at the toe of the slope.
 4. Phase 2A may be extracted to a maximum depth between 203.4 and 206.4 mast.
 5. Progressive rehabilitation shall consist of backfilling the bench along the west boundary of Phase 2A with on-site material to establish a 2:1 slope. The east boundary of Phase 2A shall be backfilled from the quarry floor to existing grade with on-site material to establish a 2:1 slope. The quarry face along the north boundary of Phase 2A shall remain vertical (see Section 'O' Variations from Control and Operation Standards on drawing 2 of 5).
 6. Prior to site preparation in Phase 2B, the site and berm runs in Lot 12, Concession 1 shall be removed (if not already completed).
 7. Prepare Phase 2B for extraction and ensure all requirements in Sections 'C' through 'Q' on drawing 2 of 5 are met.



Stage 3

- D. Phase 2B**
1. Strip Phase 2B and use the topsoil and overburden to construct the berm in the southeast corner of Phase 2B to an elevation of 233.0 mast and progressively rehabilitate Phases 2A and 2B.
 2. Extract material in a southerly direction before proceeding in a westerly direction.
 3. A berm shall remain in three locations along the south boundary (as shown on the plan view of drawing 4 of 5) and the entirety of the west boundary of Phase 2B. The berm shall be wide enough to accommodate a 2:1 slope from existing grade to an elevation of 231.0 mast, plus a minimum two metre wide safety ledge at the toe of the slope.
 4. Phase 2B may be extracted to a maximum depth between 202.3 and 206.7 mast.
 5. Progressive rehabilitation shall consist of backfilling the two benches along the south and west boundary for Phase 2B with on-site material to establish a 2:1 slope. The east boundary of Phase 2B shall be backfilled from the quarry floor to existing grade with on-site material to establish a 2:1 slope. Aside from the three side slopes established along the south boundary of Phase 2B, the remainder of the quarry face along the south boundary shall remain vertical (see Section 'O' Variations from Control and Operation Standards on drawing 2 of 5).
 6. Once the resource is depleted, and the end of all the required side sloping established, pumping shall cease and the extracted area will begin to fill with water.



Legal Description
Part of Lots 11, 12 and 13, Concession 1
(former geographic Township of Mara)
Township of Ramara
County of Simcoe

Legend

- Licence Boundary
- Limit of Extraction
- Contours with Elevation (Metres above sea level (MASL))
- Public Road
- Driveway
- Watercourse (Direction of flow indicated by arrows)
- Water Feature
- Wooded Area
- Wetland (Non-Proboscis Significant Wetland) (From Land Information Ontario (LIO))
- Main Discharge Pipe
- 120m Offset From Licence Boundary
- Additional Land Owned by Licensee
- Lot Fabric (Lot and Concessions - dark grey; Pasture Fabric - light grey)
- Fence (Cross - 1.2m post & 1.2m wire fence; Square - 1.2m wood fence)
- Entrance / Exit (Field Entrance - Hollow; Operational Entrance - Solid)
- Gate
- Direction of Excavation & Phase Boundary
- Berm (Proposed - Solid; Existing - Dashed)
- Building/Structure
- Cross Sections (A1)

Legend - Phasing Sequence

- Agriculture
- Stripping
- Processing Area
- Extraction
- Progressive Rehabilitation
- Fully Rehabilitated - Above Water
- Berm
- Extraction Face

- Site Plan Acronyms**
1. ARA - Aggregate Resources Act
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Site Plan Amendments

No.	Date	Description	By

Site Plan Revisions (Pre-Licensing)

No.	Date	Description	By

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MNR Stamp **MHBC Stamp**

Christopher Poole
Is authorized by the Ministry of Natural Resources and Forestry pursuant to Subsection 0.2(3)(f) of Ontario Regulation 24/07 to prepare and certify site plans.

Christopher Poole

Applicant

LCP Quarry Limited
145 Adelaide Street West
Suite 500
Toronto, Ontario
M5H 4E5

Project

Brechin Quarry
1646 & 1506 Highway 12 and 2440 & 2530 Concession Road 1, Brechin, Ontario, L0K 1B0

MNR Licence Reference No. **Applicant's Signature**

Plan Scale: 1:5000 (Arch E) **Date:** April 2024

Drawn By: C.P. **File No.:** 12135B

Checked By: B.Z.

File Name: Extraction Sequence

Drawing No.: 3 of 5

File Path: N:\bwin\12135B\Tallaker - Proposed Brechin Quarry\Drawings\Site Plan\CAD\12135B - Site Plan.dwg

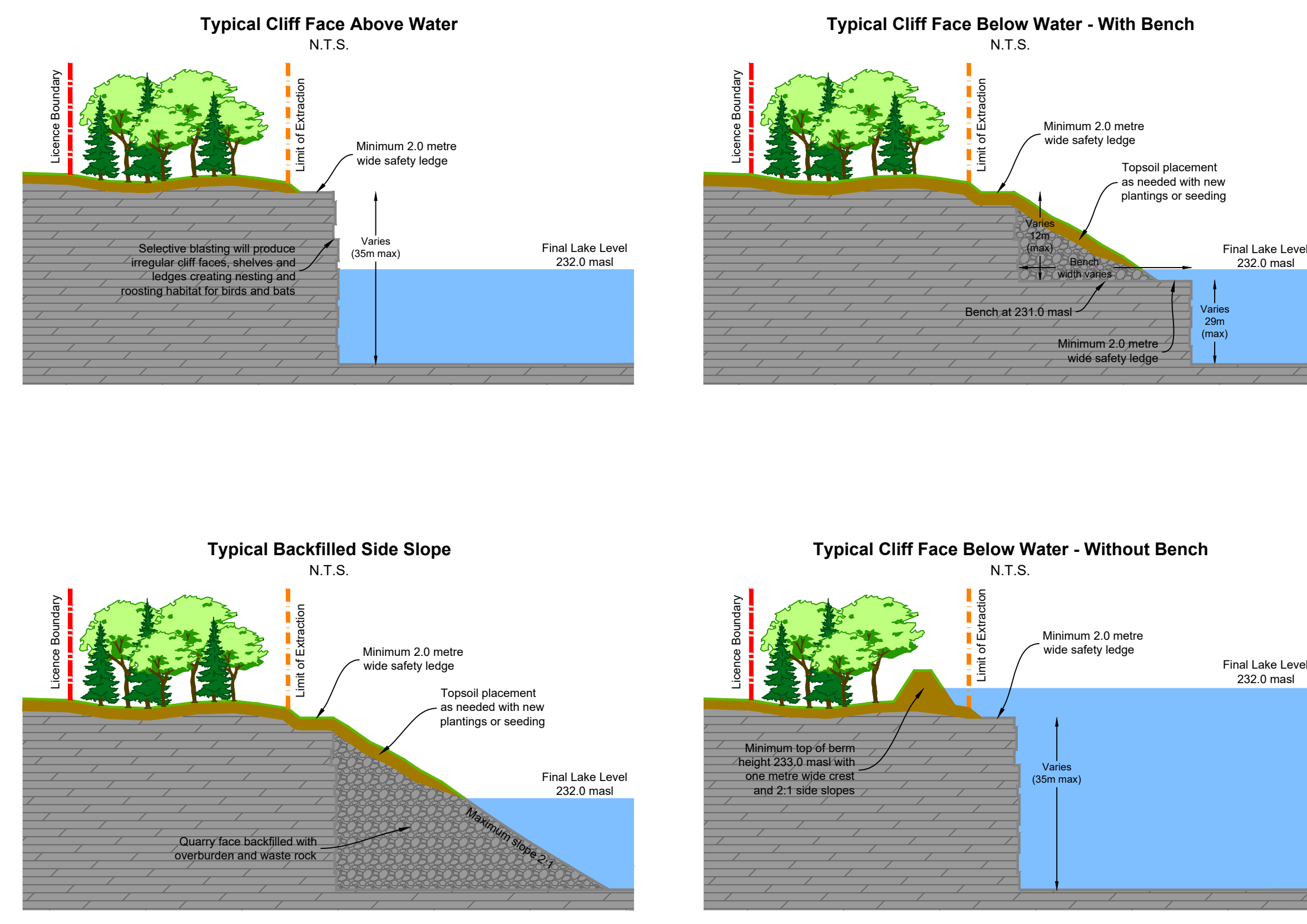
PROGRESSIVE REHABILITATION

- A. General**
- Area calculations
 - Licence Boundary 151.4 ha
 - Limit of Extraction 91.5 ha
 - The maximum annual tonnage is 2,000,000 tonnes.
 - The maximum predicted water table within the limit of extraction varies between 231.5 masl and 236.0 masl. The maximum predicted water table is shown in each cross section on drawing 5 of 5.
- B. Phasing**
- An excavation reaches the limit of extraction or maximum depth, progressive rehabilitation shall commence.
 - Progressive rehabilitation shall follow the general direction and sequence of extraction identified on the plan view and described in the notes on drawings 2 and 3 of 5.
 - Each phase of extraction shall undergo progressive rehabilitation, prior to proceeding to the next phase of extraction.
- C. Slopes and Grading**
- Progressive rehabilitation shall consist of backfilling the eastern excavation face, the western and southern excavation faces where benching is to remain as well as sloping and grading the habitat corridor within the setback. Quarry faces shall remain vertical below the final lake level and in select locations above the final lake level as depicted on the plan view on this drawing (see Section D. Wetland Edge Planting Zones and Wetland Edge Planting Zones on drawing 2 of 5).
 - The access ramp in Phase 1B shall remain as part of the final rehabilitated landform.
 - Benching shall be backfilled with on-site material to establish a 2:1 slope, dressed with topsoil / overburden and seeded.
 - The excavation face along the eastern limit of extraction (in the location shown on the plan view of this drawing) shall be backfilled from the quarry floor to existing grade with on-site material to establish a 2:1 slope, dressed with topsoil / overburden and seeded.
 - No access road shall be imported on site for rehabilitation purposes.
- D. Drainage**
- Final surface drainage will follow the rehabilitated contours and directional arrows shown on the plan view of this drawing.
 - Once operations have been completed and the rehabilitated landform has been established, pumping shall occur and the excavated area will be allowed to flood to form the final lake. The final lake level is predicted to be 232.0 masl.
 - Passive overflow discharge for the final lake shall occur in the location identified on the plan view of this drawing. A 1.0 metre wide section of the berm shall be removed until an elevation of 232.0 masl is achieved.
 - Once overflow from the final lake passes through the habitat corridor, it is discharge off-site in the location shown on the plan view of this drawing.

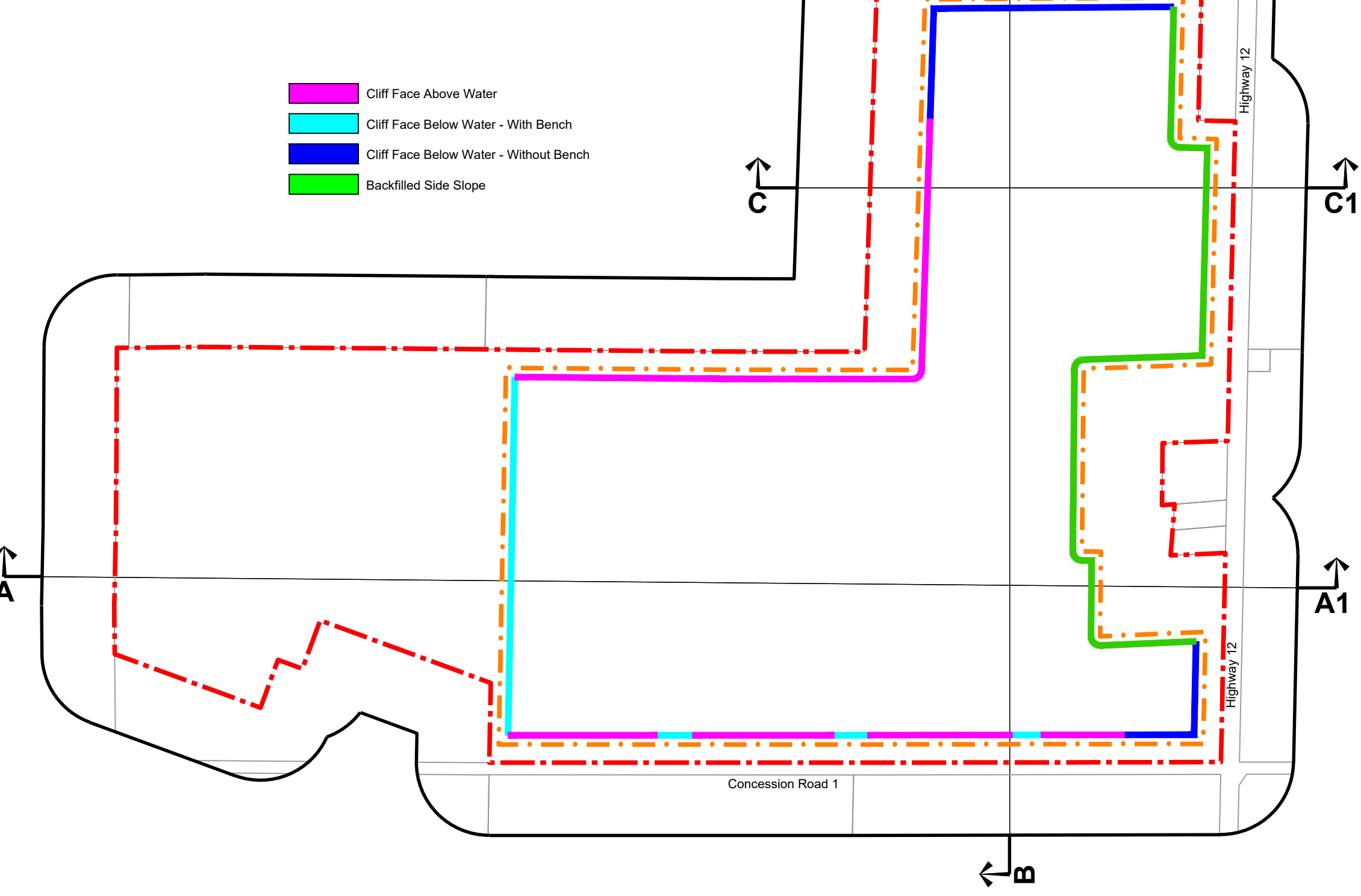
- In Area E, the existing culvert crossing under the former airport runway shall be removed or blocked prior to the commencement of restoration works. To facilitate an appropriate moisture regime conducive to the establishment of a wetland vegetation community.
- Upland Planting Zones (Areas A-C) shall include the following trees species (or approved equivalents):
 - Trembling Aspen (*Populus tremuloides*)
 - Largemouth Aspen (*Populus grandidentata*)
 - Balsam Poplar (*Populus balsamifera*)
 - Paper Birch (*Betula papyrifera*)
 - Fraser Fir (*Abies balsamea*)
 - Eastern White Pine (*Pinus strobus*)
 - Eastern Red Spruce (*Picea canadensis*)
 - Eastern Redcedar (*Juniperus virginiana*)
 - Bittern Honey Locust (*Gleditsia triacanthos*)
 - Black Cherry (*Prunus serotina*)
 - Northern Red Oak (*Quercus rubra*)
- Upland Planting Zones (Areas A-C) shall include the following shrub species (or approved equivalents):
 - Chokeberry (*Physalis virginiana*)
 - Common Juniper (*Juniperus communis*)
 - Sagehen Sumac (*Rhus typhina*)
 - Red Dogwood (*Cornus rostrata*)
 - Alternate-leaved Dogwood (*Cornus alternifolia*)
 - Wild Black Currant (*Ribes americanum*)
- Upland Planting Zones (Areas A-C) and berms identified on the plan view of this drawing shall include a suitable upland native seed mix such as TRCA-D3-4 Ontario Butterfly Meadow Mix or TRCA-D3-5 Farm Field Edge Pollinator Mix (or approved equivalent), installed at a minimum density of 25 kilograms/hectare.
- Wetland Edge Planting Zones (Areas D1-D2 and E) shall include the following shrub species (or approved equivalents):
 - Nannyberry (*Viburnum lentago*)
 - Red-osier Dogwood (*Cornus sericea*)
 - Soldier Willow (*Salix bethula*)
 - Purple Willow (*Salix discolor*)
 - Heart-leaved Willow (*Salix elaeagnifolia*)
 - Meadow Willow (*Salix patens*)
- Wetland Edge Planting Zones (Areas D1-D2 and E) shall include a suitable native meadow/wetland seed mix such as TRCA-DW-2 Wet Slope Mix (or approved equivalent), installed at a minimum density of 25 kilograms/hectare.
- The seed and shrub materials shall be stored as bare root stock or potted stock (minimum 1-gallon) at a minimum density of 2.5m on-centre.
- Restoration areas and berms shall include initial application of a nurse crop of Annual Oats (*Avena sativa*) for spring/summer seed mix application) and/or winter wheat (*Triticum aestivum*) for fall seed mix application(s), installed at a minimum density of 30 kilograms/hectare.
- In Upland Planting Zones, shrubs shall not represent more than 10% of woody materials planted.
- Natural restoration zones shall be monitored at least once annually for at least the first two (2) years after woody plant and seed mix materials are installed.
- A survival rate of 80% of the original number of planted stems is the target after two years for each planting Area.
- If after two (2) years, dead tree/shrub material exceeds 20% in any planting Area, woody materials shall be replaced during the spring planting season of the following year to meet or exceed the 80% survival threshold.
- The final anticipated lake level is 232.0 masl.

- F. General**
- All equipment shall be removed from the site.
 - No buildings, structures or haul roads shall remain.
 - The access ramp may remain.
 - The maximum predicted water table within the limit of extraction varies between 231.5 masl and 236.0 masl and is shown in each cross section on drawing 5 of 5.
 - The final anticipated lake level is 232.0 masl.
 - The final anticipated end-use will be naturalized open spaces, woodlands, wetlands and lake.

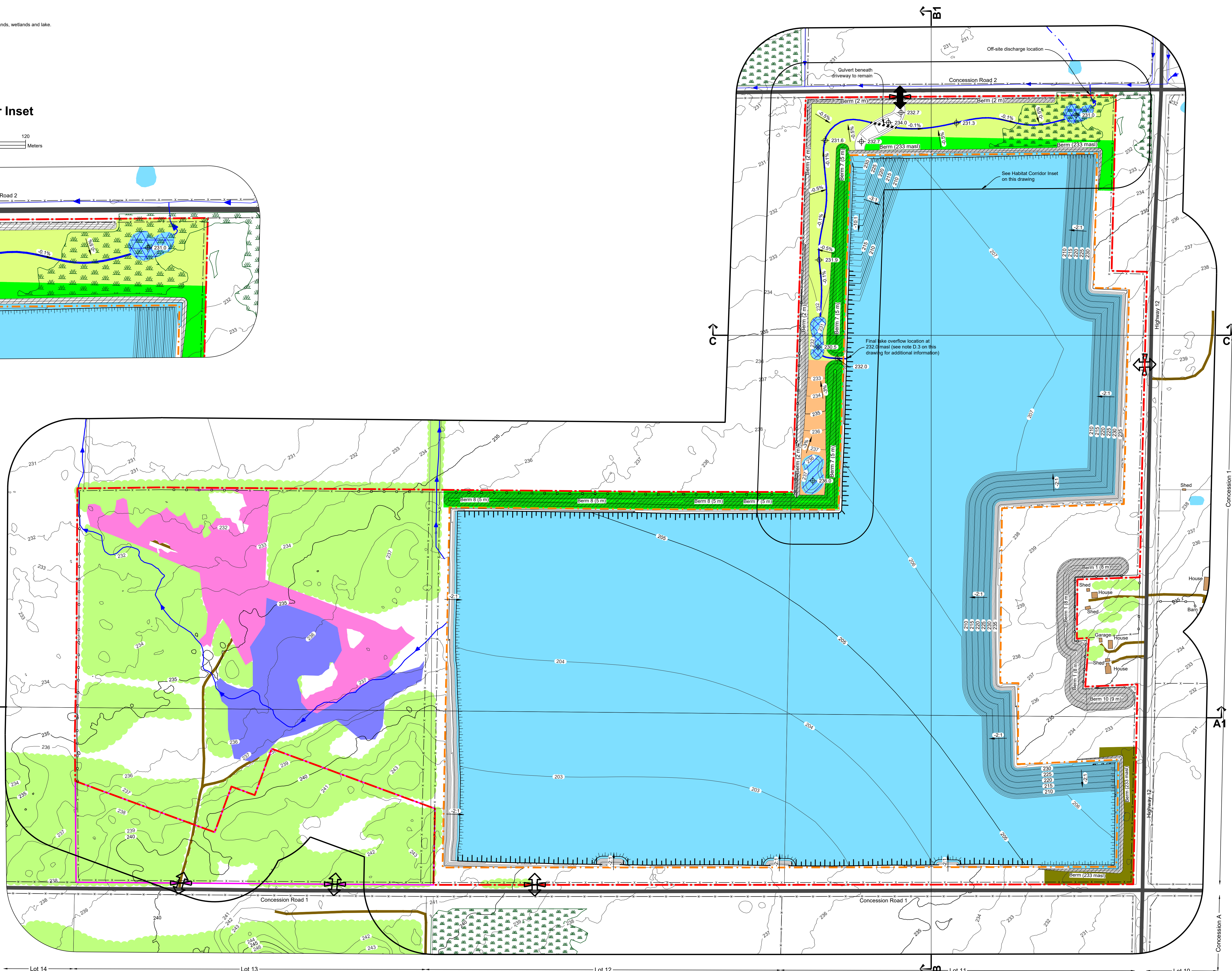
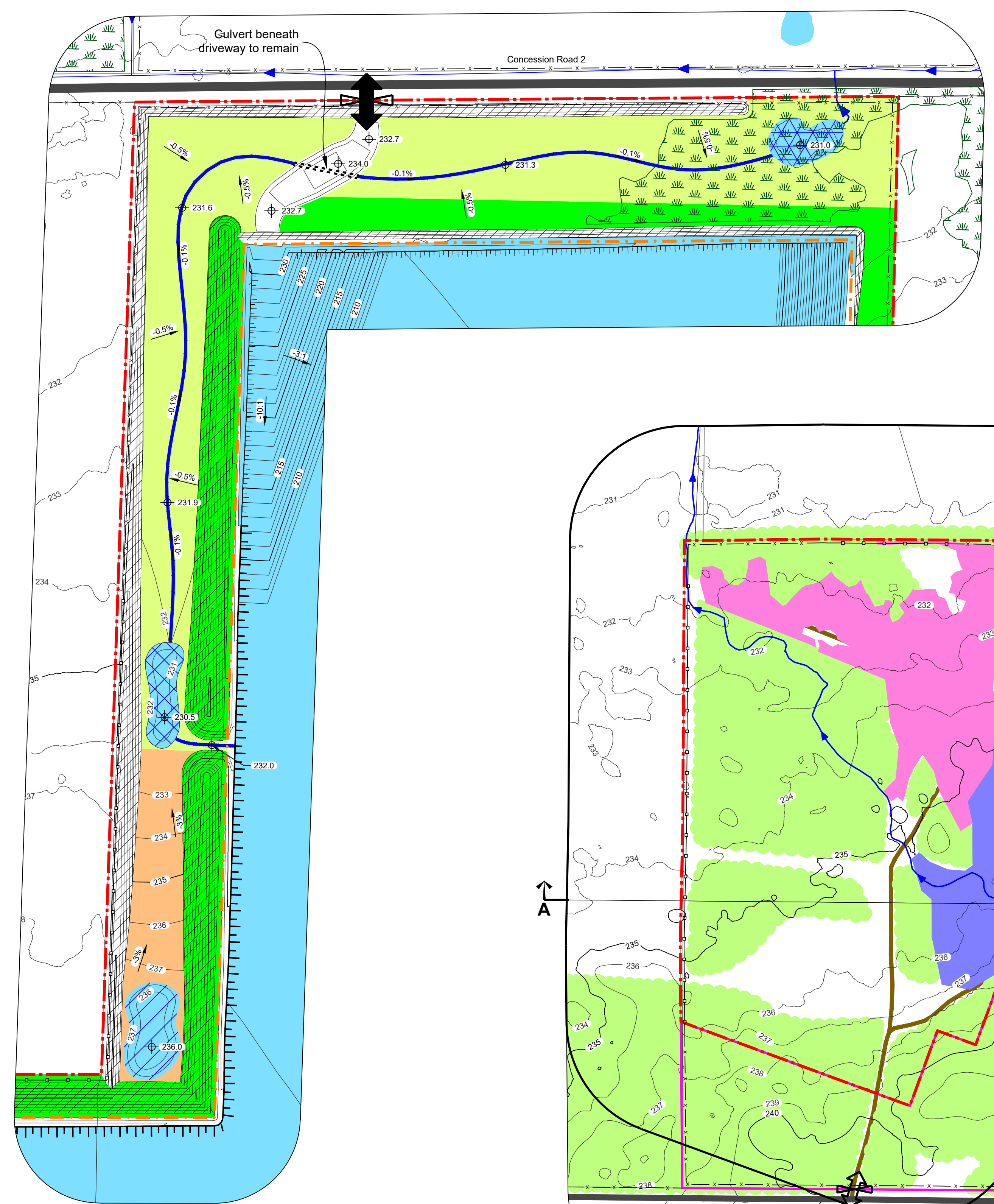
Rehabilitation Techniques
Not to Scale



Rehabilitation Techniques Key Map
Scale 1:7500



Habitat Corridor Inset
Scale 1:2000



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- Legend**
- Licence Boundary
 - Limit of Extraction
 - Contours with Elevation
 - Public Road
 - Driveway
 - Watercourse
 - Water Feature
 - Wooded Area
 - Wetland
 - Extraction Face
 - Extraction Face
 - 120m Offset From Licence Boundary
 - Additional Land Owned by Licensee
 - Lot Fabric
 - Fence
 - Entrance / Exit
 - Gate
 - Berm
 - Building/Structure
 - Proposed Elevation
 - Proposed Final Slope
 - Proposed Final Grade
 - Cross Sections

- Restoration Areas**
- Area A: Upland Planting Zone
 - Area B: Upland Planting Zone
 - Area C: Upland Planting Zone
 - Area D1: Wetland Edge Planting Zone
 - Area D2: Wetland Edge Planting Zone
 - Area E: Wetland Edge Planting Zone
 - Area F: Permanently Flooded Zone
 - Area G: Permanently Flooded Zone
 - Area H: Permanently Flooded Zone

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Site Plan Amendments

No.	Date	Description	By

Site Plan Revisions (Pre-Licensing)

No.	Date	Description	By

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MHBC Stamp
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Project
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MNRF Licence Reference No.

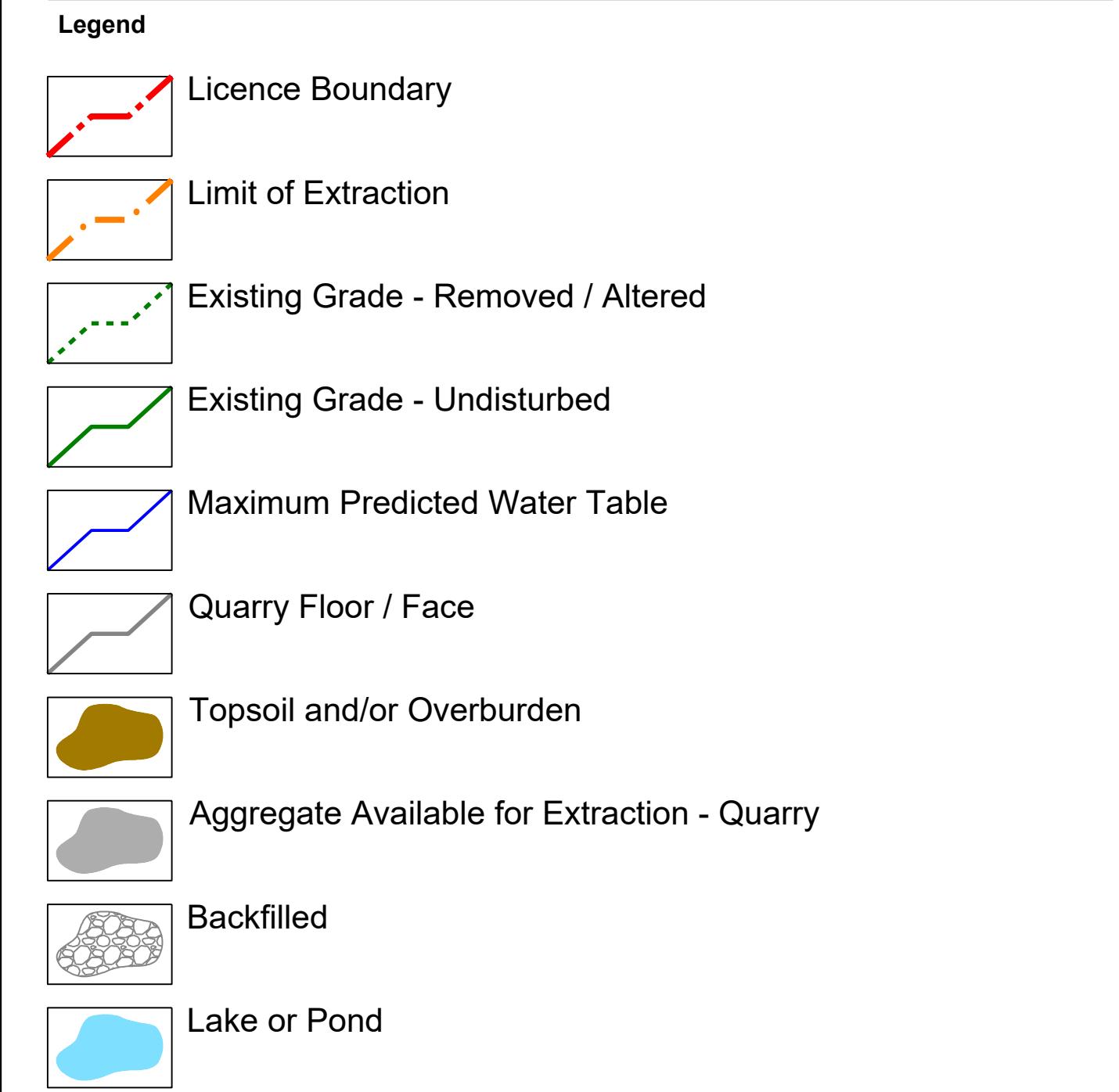
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Applicant's Signature

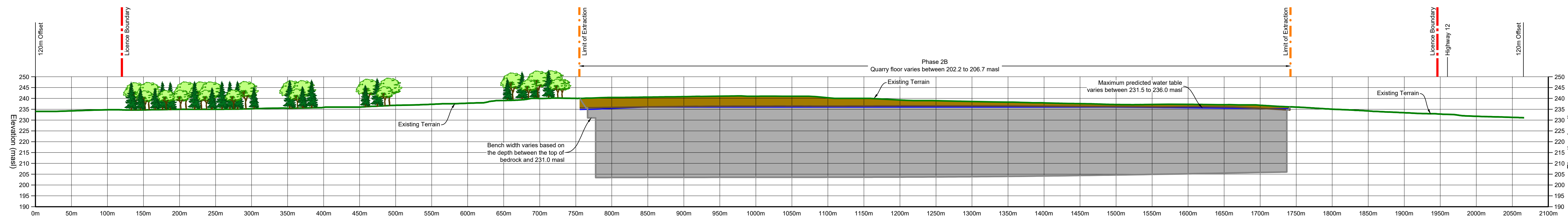
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Plan Scale: 1:3000 (Arch E)
Date: April 2024
Drawn By: C.P. **File No.:** 12135B
Checked By: B.Z.

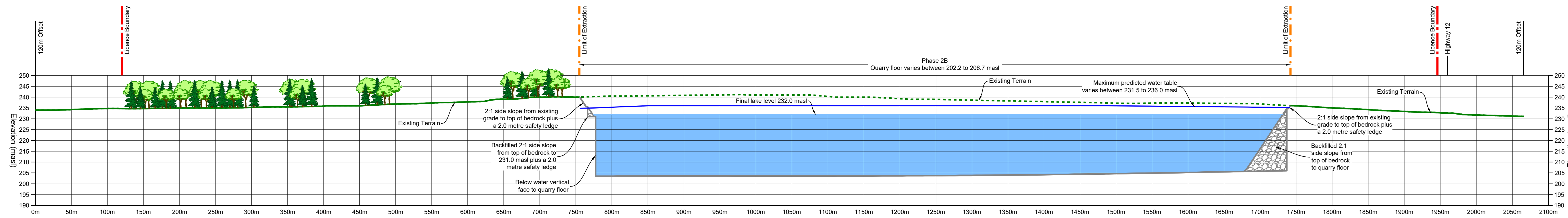
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Drawing No.: 4 of 5
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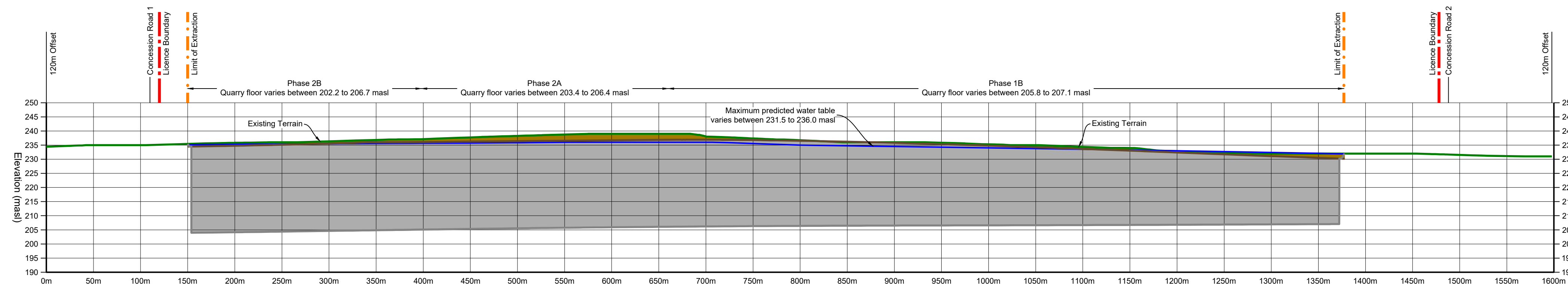
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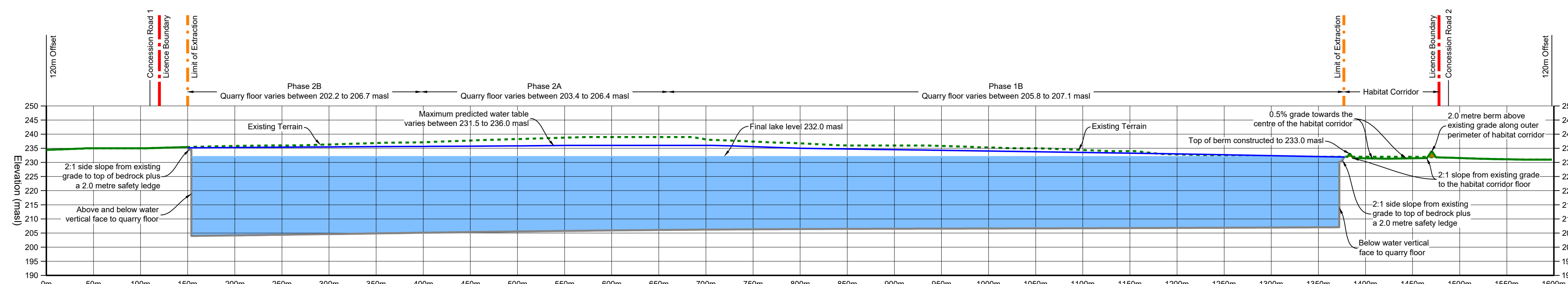
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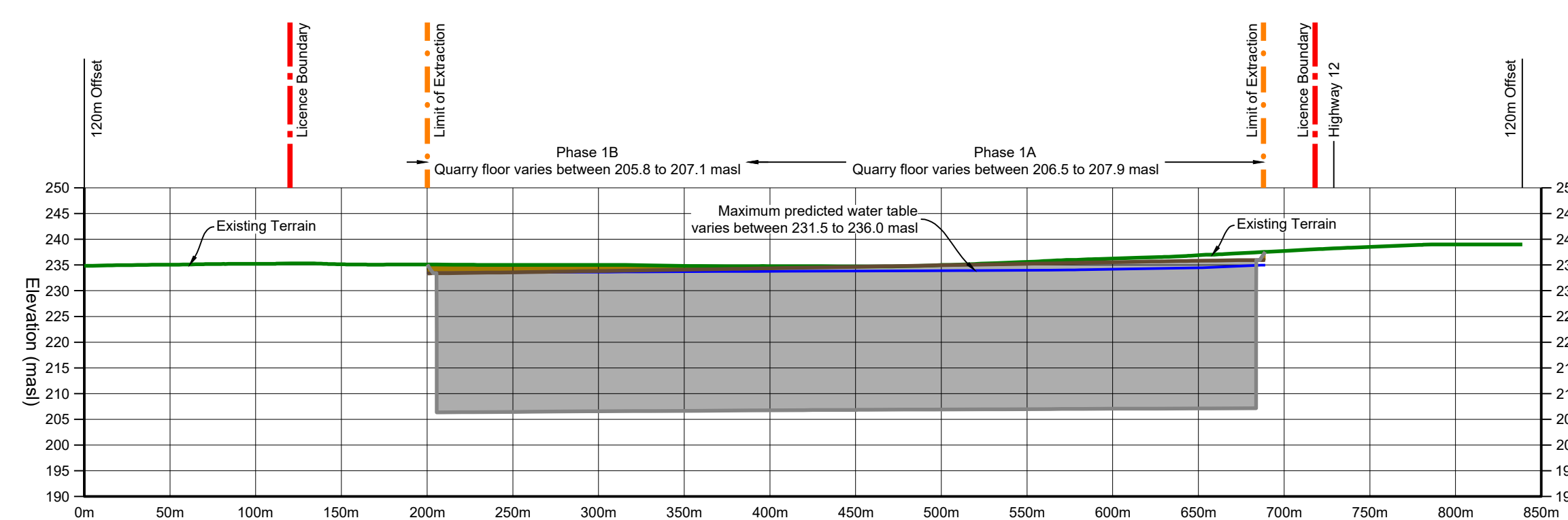
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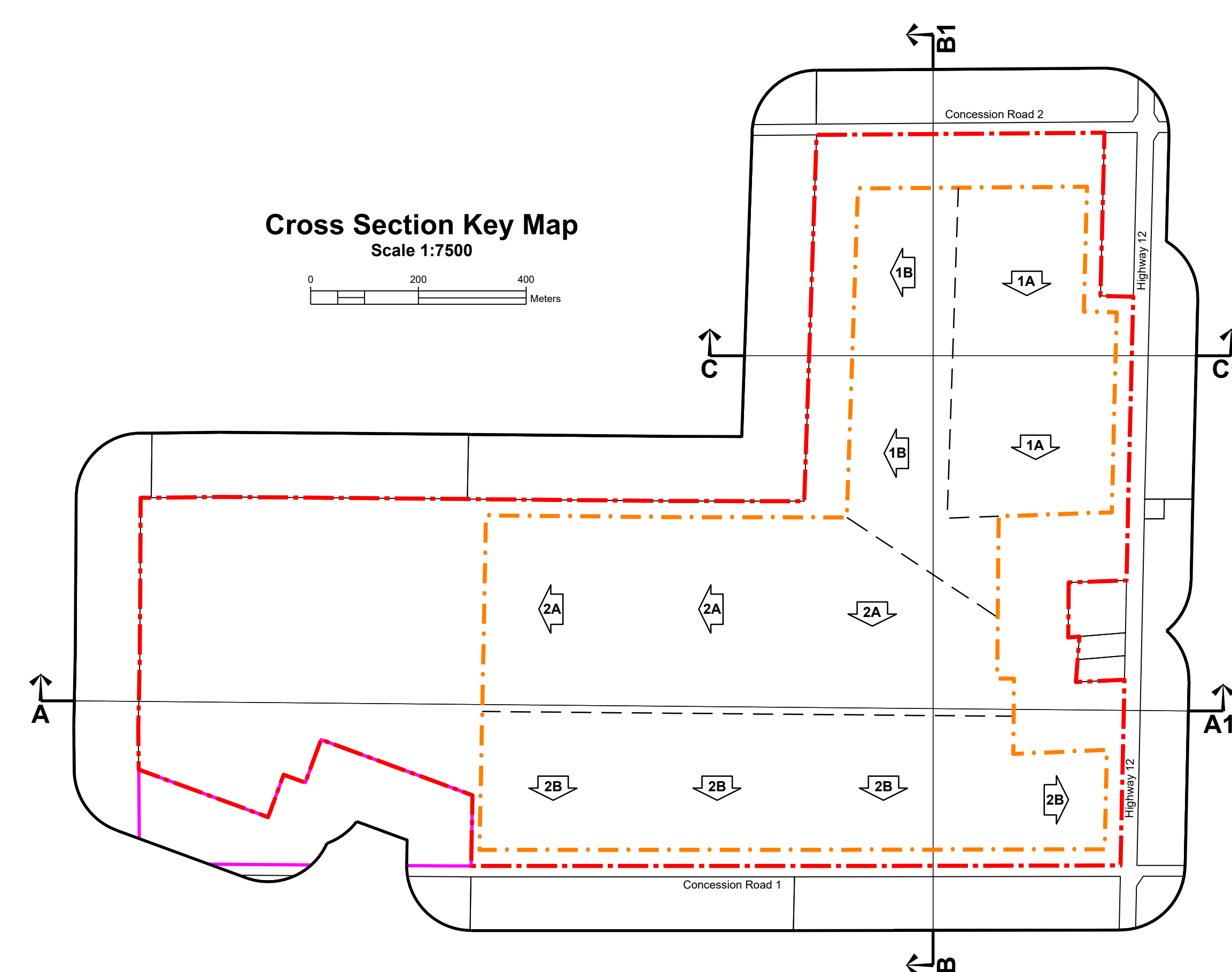
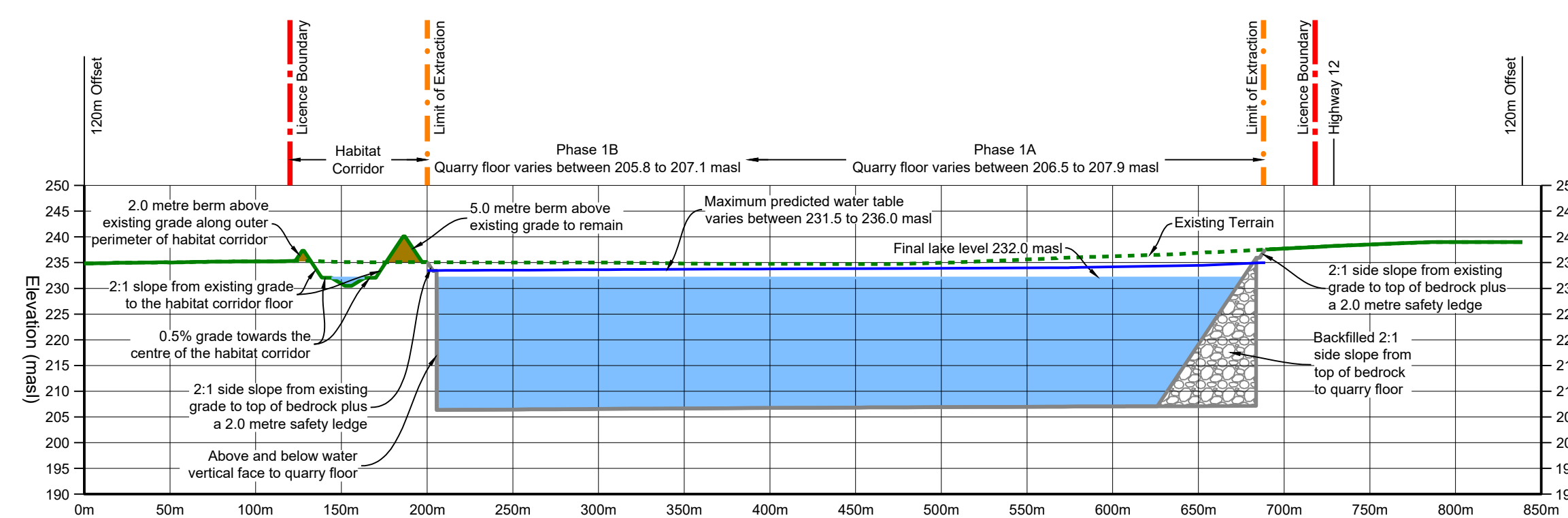
Section B-B1 Rehabilitation
 Horizontal 1:3000
 Vertical 1:1000



Section C-C1 Existing
 Horizontal 1:3000
 Vertical 1:1000



Section C-C1 Rehabilitation
 Horizontal 1:3000
 Vertical 1:1000



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Applicant's Signature

Plan Scale: 1:3000 (Arch E) **Date:** April 2024

Drawn By: C.P. **File No.:** 12135B

Checked By: B.Z.

File Name: **Cross Sections**

Drawing No.: **5 of 5**

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