

Legend

	Licence Boundary		120m Offset From Licence Boundary
	Limit of Extraction		Existing Licence Existing Line of Extraction (solid line) Existing Line of Extraction (dashed line)
	Contours with Elevation Metres above sea level (MASL)		Parcel Fabric
	Public Road		Diversion or Discharge Pipe Existing - Single Dash
	Fence 1.2m post & wire fence unless otherwise noted		Discharge Location
	Water Feature		Jefferson Salamander Regulatory Boundary
	Irrigation Pond		Fish Habitat Direct - solid Indirect - dash
	Significant Woodlands		Sun-Canadian Pipe Line Pipe line location and assessment
	Woodlands		Entrance / Exit Existing
	Wooded Feature		Direction of Surface Drainage
	Dripline Based December 3, 2021 by Savanta and Region of Halton		Building/Structure
	Wetland Surveyed by Savanta/MNRF in Accordance with OWES - Assumed Significant for Planning Purposes		Cross Sections A1
	Wetland MNRF Evaluated - Provincially Significant		ANSI - Earth Science (Area of Natural and Scientific Interest) Lake Mead Wetland Channel
	Wetland MNRF Evaluated - Other (Non Provincially Significant)		ANSI - Life Science (Area of Natural and Scientific Interest) Medea Valley
	Wetland MNRF - Un-evaluated (Assumed Significant for Planning Purposes)		

Significant Wildlife Habitat

	Amphibian Breeding (Woodland)		Species of Conservation Concern
	Bat Maternity Colony		Unicorn Clubtail
	Turtle Wintering Area		Eastern Wood-pewee
	Rare Vegetation Community		Large Toothwort Community

Species at Risk

	Butternut Category 1		Bobolink
	Butternut Category 2		Barn Swallow Nest Observation
	Bat Habitat (Site Brown Myotis and Tricoloured Bat)		

Site Plan Amendments

No.	Date	Description	By
Site Plan Revisions (Pre-Licensing)			
1.	September 2020	Update date of Archaeological Assessment Report in Section H.	CAP
2.	April 2021	Included MNRF setbacks for South Extension. Added Significant Wildlife Habitat, Species of Conservation Concern and Species at Risk. Update legend.	CAP
3.	January 2022	Updated to address agency comments.	CAP
4.	February 2022	Updated to address agency comments.	CAP
5.	March 2022	Updated limit of extraction in the West Extension. Added dripline and setback dimensions from the dripline to the plan view. Revised note H.1.	CAP

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MNRF Approval Stamp

Applicant

NELSON AGGREGATE CO.
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Project **Burlington Quarry Extension**

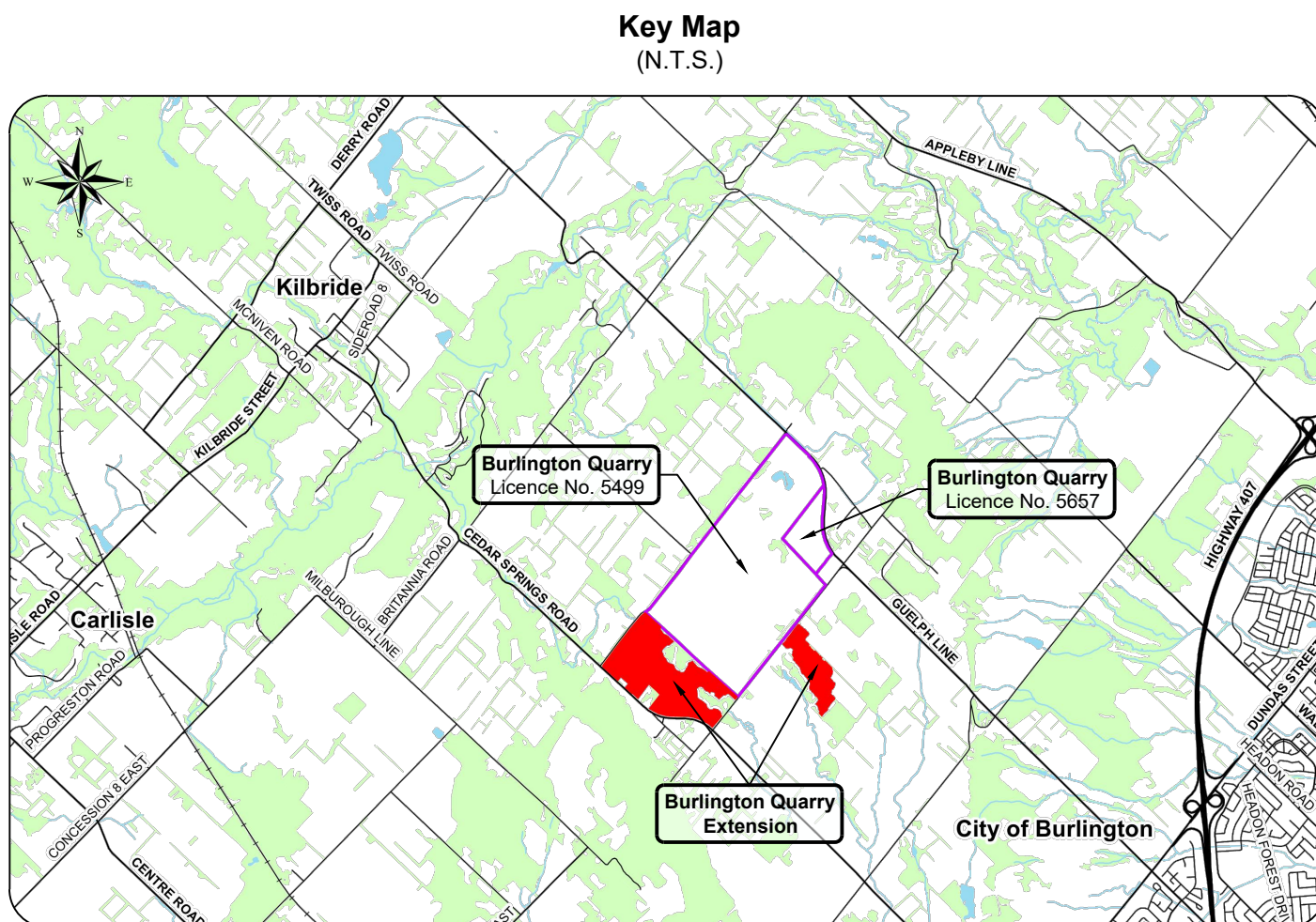
MNRF Licence Reference No. 626477 Pre-approval review:

Plan Scale: 1:3000 (Arch E) Date March 2022
 Drawn By C.P. File No. 9135D
 Checked By B.Z.

File Name **Existing Features**

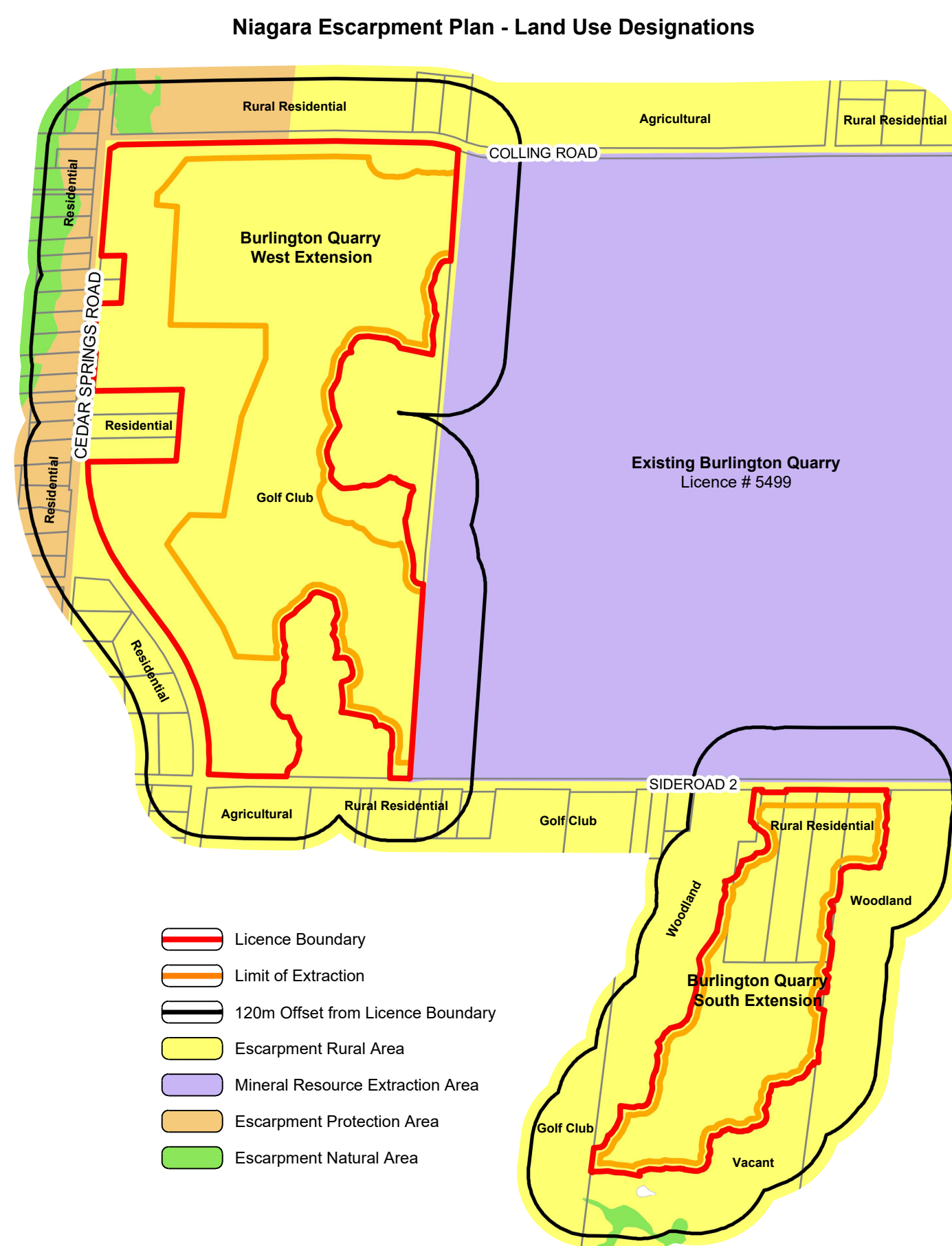
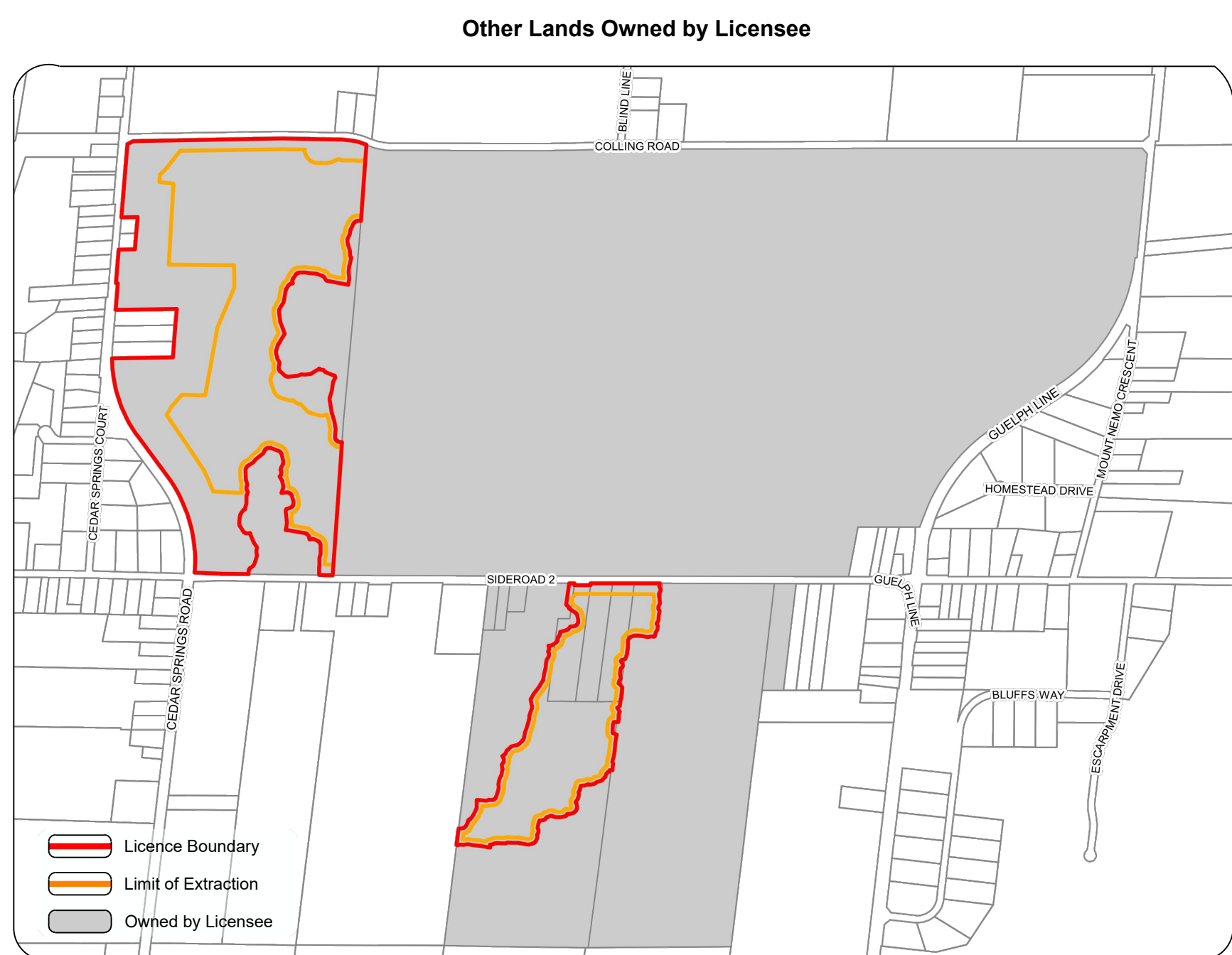
Drawing No. **1 of 4**

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- A. General**
- This site plan is prepared under the Aggregate Resources Act (ARA) for a Class 'A' Licence, Category 2.
 - Area Calculations:

L. Licence Area (total)	76.9 ha
• South Extension	18.1 ha
• West Extension	58.8 ha
- B. References**
- Contours were obtained from the City of Burlington's Open Data Catalogue based on 2017 data and are displayed in one metre intervals. Elevations shown are in metres above sea level (masl).
 - Topographic information was obtained from numerous sources including Ontario Geohub (Land Information Ontario), City of Burlington's Open Data Catalogue, Google Earth Pro aerial photography captured on May 7, 2018 and test 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 boundaries were established using Municipal Property Assessment Corporation (MPAC) parcel fabric data. Distances are approximate and for reference purposes only.
 - Land use designations on and within 120 metres of the licences are from the Niagara Escarpment Plan, Map 3 - Regional Municipality of Halton, approved June 1, 2017. The Burlington Quarry Extension lands are designated Escarpment Rural Area.
 - Land use information and structures identified on or within 120 metres of the licence boundaries were determined using Google Earth Pro aerial photography captured on May 7, 2018.
- C. Drainage**
- Surface drainage on and within 120 metres of the licence boundaries are by overland flow in the directions shown by arrows on the plan view, or by infiltration.
- D. Groundwater**
- The established groundwater table varies between 264 masl to 273 masl in the South Extension and 263 masl to 265 masl in the West Extension (EarthFX 2020).
- E. Site Access and Fencing**
- There are four existing site accesses on Side Road No. 2 and a single existing site access on Cedar Springs Road.
 - 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 either Extension such as internal haul roads, processing stockpiles, scrap, fuel storage, berms or excavation faces.
- G. Cross Sections**
- See drawing 4 of 4.
- H. Technical Reports - References**
- Adaptive Management Plan, Proposed Burlington Quarry Extension, EarthFX Inc., Savanta, and Tatham Engineering, March 2022.
 - Agricultural Impact Assessment, Nelson Aggregate Co., Burlington Quarry Extension, April 2020.
 - Air Quality Study for Nelson Aggregate Co., Burlington Quarry Extension, BCX Environmental Consulting, March 2020.
 - Archaeological Assessment (Stages 1, 2 & 3), Nelson Aggregates Quarry Extension, Archaeologic Inc., August 2003.
 - Archaeological Assessment (Stage 4), Nelson Aggregates Quarry Extension, Archaeologic Inc., August 2004.
 - Stage 1-2 Archaeological Assessment, Proposed West Extension of the Burlington Quarry, Golder Associates, September 2020.
 - Bluff Impact Analysis, Burlington Quarry Extension, Ecliptech Engineering Ltd. June 16, 2021.
 - Cultural Heritage Impact Assessment Report, Burlington Quarry Extension, MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC), June 2021.
 - Financial Impact Study, Proposed Burlington Quarry Extension, Nelson Aggregates Co., September 30, 2021.
 - Level 1 and 2 Hydrogeological and Hydrological Impact Assessment Report, Proposed Burlington Quarry Extension, EarthFX Incorporated, April 2020.
 - Level 1 and 2 Natural Environment Technical Report, Proposed Burlington Quarry Extension, Savanta, April 2020.
 - Noise Impact Assessment, Nelson Aggregate Quarry Extension, Howe Gastmeier Chapnik Limited, November 15, 2021.
 - Nelson Aggregate Company, Burlington Quarry Extension Traffic Report, Paradigm Transportation Solutions Limited, February 2020.
 - Surface Water Assessment, Burlington Quarry Extension, Tatham Engineering, April 2020.
 - Visual Impact Assessment Report, Proposed Extension of the Burlington Quarry, MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC), June 2021.
 - Safety Review of the Proposed Access Plan for a Proposed Quarry Extension, True North Safety Group, June 2021.



Concession 2 North of Dundas Street

A. General

- 1. Area Calculations: Licence Area (total) 76.9 ha, South Extension 18.1 ha, West Extension 58.8 ha. 2. The maximum annual tonnage is 2,000,000. 3. The existing off-gas course in the West Extension may continue to operate until site preparation for that Extension commences.

B. Hours of Operation

- 1. Hours of operation are Monday to Friday from 7:00am to 6:00pm excluding statutory holidays. 2. Blasting is permitted Monday to Friday between 8:00am to 6:00pm excluding statutory holidays. Blasting will typically occur once per week but may occur more often based on operational needs.

C. Site Access and Fencing

- 1. Prior to extraction within the South or West Extension, post and wire fencing (at least 1.2 metres in height) shall be erected and maintained (to the life of that extension) along the licence or property boundary. 2. Access for farm equipment shall be provided from the new operational entrance in the South Extension. During operations, the access road shall be used to transport farm equipment to the site that have not been existing to facilitate ongoing agricultural operations in the South Extension.

D. Drainage and Erosion Control

- 1. Drainage of undisturbed areas will continue in the directions shown on drawing 1 of 4. 2. Prior to site preparation, an Erosion and Sedimentation Control (ESC) Plan shall be prepared and implemented to prevent erosion and sedimentation impacts. 3. Prior to extraction in the West Extension, the infiltration pond located in the west setback (including the downwash/diversion pipe and storm drain outlet) shall be constructed to an elevation of +20.0 m above sea level.

E. Site Preparation

- 1. All existing structures within the South Extension (including the house and barn located at 2280 Side Road No. 2) and West Extension (including the house and barn located at 2015 Side Road No. 2) shall be demolished. 2. The removal shall not occur in the West Extension during the active season from Eastern Small-Block Myrtle between March 15th and November 30th.

F. Berms and Screening

- 1. Acoustic and visual berms shall be constructed to the heights or elevations specified in the locations shown on the plan view. 2. Berms adjacent to any natural heritage features shall be constructed in accordance with Section N. Report Recommendations - Natural Environment note "7". 3. Berms in the West Extension shall be constructed prior to extraction in that extension.

G. Site Demolition

- 1. During the initial stages of extraction within the South Extension, a temporary setting pond will be constructed within the extraction area (Fig. Phase 2). 2. The discharge location for the Quarry Extension shall be constructed in accordance with Section N. Report Recommendations - Natural Environment note "7".

H. Extraction Sequence

- 1. General: Prior to site preparation in each phase, ensure all requirements contained in Sections C through G are met. 2. Phase 1: Prepare Phase 1 (South Extension) for extraction and ensure all requirements pertaining to this Extension in Sections C through G of this drawing are met. 3. Phase 2: Prepare Phase 2 in accordance with the Site Preparation notes (see Section E) and Agricultural Rehabilitation notes (see Section N). 4. Phase 3: Prepare Phase 3 in accordance with the Site Preparation notes (see Section E) and Agricultural Rehabilitation notes (see Section N).

I. Extraction Details

- 1. The maximum height of a lift shall be 25 metres. 2. The maximum depth of extraction for the South Extension is 29.5 metres. Phase 1 shall be extracted in one lift and Phase 2 shall be extracted in a maximum of two lifts. 3. The maximum depth of extraction for the West Extension is 23.5 metres and the maximum number of lifts is two. 4. Extraction shall be permitted in two Phases simultaneously to allow for transition between Phases.

J. Equipment and Processing

- 1. Equipment used for site preparation, extraction, pond construction, and site rehabilitation includes drills, front-end loaders, graders, bulldozers, backhoes, conveyors, water trucks, fuel trucks and haul trucks. 2. No processing shall occur in the South or West Extension. Aggregate extracted in the South and West Extension shall be hauled to existing Licence #5499 for processing.

K. Fuel Storage

- 1. Fuel shall be stored in the South or West Extension. 2. Fuel trucks will be used to transfer fuel to on-site equipment in accordance with the Liquid Fuels Handling Code.

L. Dust

- 1. Dust shall be mitigated on-site. 2. Water or another provisionally approved dust suppressant shall be applied to haul roads as often as required to mitigate dust.

M. Scrap and Recycling

- 1. No scrap shall be stored in the South or West Extension. 2. No recycling shall occur in the South and West Extension.

N. Report Recommendations

- 1. Air Quality: The licensee shall implement their Best Management Practices Plan (BMPP) for the Control of Fugitive Dust dated March 2020. 2. Blasting: All blasts shall be monitored for both ground vibration and overpressure at the closest privately owned sensitive receptors adjacent to the site.

- 3. Noise: Site preparation, pond construction, rehabilitation, drilling activities, and transporting material to the existing quarry for processing and shipping may only occur between 7:00am to 6:00pm. 4. Equipment used on-site shall operate within the sound power levels specified below: - 90dB - 110 dBA - 115 dBA - 120 dBA - 125 dBA - 130 dBA - 135 dBA - 140 dBA - 145 dBA

- 5. Visual Impact Assessment: For both Extension areas, existing vegetation along the site perimeter and within the setback area will be retained where possible. 6. Traffic: The licensee shall ensure that all vehicles are properly maintained and that all vehicles are properly licensed.

- 7. Water Resources and Natural Environment: The licensee shall ensure that all water resources are protected and that all natural environment features are maintained. 8. Cultural Heritage: The licensee shall ensure that all cultural heritage resources are protected and that all cultural heritage resources are maintained.

- 9. Archaeology: The licensee shall ensure that all archaeological resources are protected and that all archaeological resources are maintained. 10. Wetlands: The licensee shall ensure that all wetlands are protected and that all wetlands are maintained.

- 11. Forested Setbacks: The licensee shall ensure that all forested setbacks are protected and that all forested setbacks are maintained. 12. Tree Protection: The licensee shall ensure that all trees are protected and that all trees are maintained.

- 13. Tree Protection Zone Detail: The licensee shall ensure that all trees are protected and that all trees are maintained. 14. Site Plan Amendments: The licensee shall ensure that all site plan amendments are protected and that all site plan amendments are maintained.

- 15. Site Plan Revisions (Pre-Licensing): The licensee shall ensure that all site plan revisions are protected and that all site plan revisions are maintained. 16. MNR Approval Stamp: The licensee shall ensure that all MNR approval stamps are protected and that all MNR approval stamps are maintained.

- 17. MNR Licence Reference No.: The licensee shall ensure that all MNR licence reference numbers are protected and that all MNR licence reference numbers are maintained. 18. Plan Scale: The licensee shall ensure that all plan scales are protected and that all plan scales are maintained.

- 19. Date: The licensee shall ensure that all dates are protected and that all dates are maintained. 20. Drawn By: The licensee shall ensure that all drawn by names are protected and that all drawn by names are maintained.

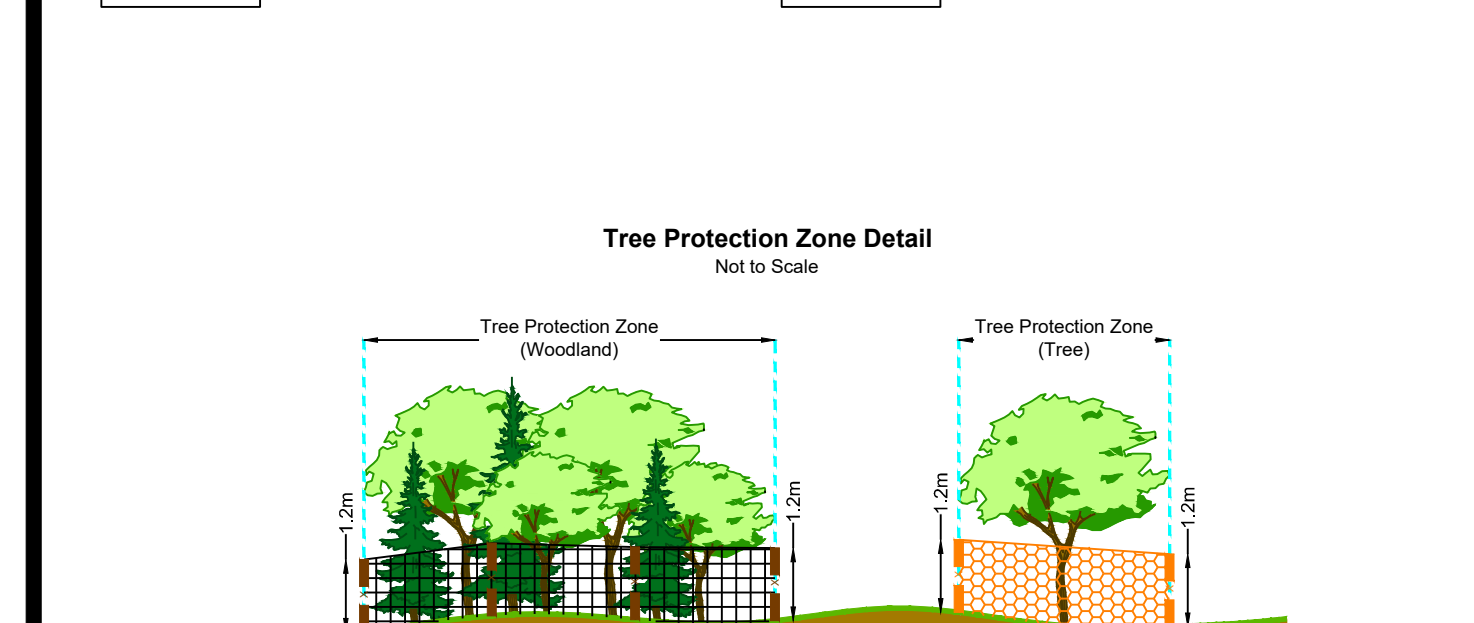
- 21. Checked By: The licensee shall ensure that all checked by names are protected and that all checked by names are maintained. 22. File Name: The licensee shall ensure that all file names are protected and that all file names are maintained.

- 23. Drawing No.: The licensee shall ensure that all drawing numbers are protected and that all drawing numbers are maintained. 24. File Path: The licensee shall ensure that all file paths are protected and that all file paths are maintained.



Legal Description: Part Lot 1 & 2, Concession 2 and Part Lot 17 & 18, Concession 2 NDS (former geographic Township of Nelson) City of Burlington Region of Halton

Legend: Licence Boundary, Limit of Extraction, Contours with Elevation, Public Road, Fence, Exclusion Fence, Water Feature, Significant Woodlands, Woodlands, Wooded Feature, Dripline, Wetland, Wetland, Wetland, Forested Setbacks, 120m Offset From Licence Boundary, Existing Licence Boundary, Parcel Fabric, Diversion or Discharge Pipe, Jefferson Salamander Regulatory Boundary, Sun-Canadian Pipe Line, Entrance / Exit, Gate, General Direction of Excavation & Boundary, Berm - Acoustic, Berm - Hydrologic, Berm - Visual, Building/Structure, Quarry Floor, Cross Sections.



- 1. The Tree Protection Zone (TPZ) for woodlands extends the length of the woodland edge. 2. Prior to site preparation in the South and West Extension, their fencing shall be erected along the licence boundary. 3. Fencing material shall consist of orange plastic with snow fencing and/or page wire fencing with reflective tape. 4. Fencing material shall be installed to a minimum of 1.2 metres in height above grade. 5. Spacing shall be provided in visible locations along the perimeter of each TPZ. 6. The TPZ shall not be used for storage of any materials or equipment. 7. Where encroachment into the TPZ is necessary to facilitate construction of the discharge pipe, the removal shall be kept to a minimum and the structure shall be removed with wood chips.

Table with 4 columns: No., Date, Description, By. It lists site plan amendments and revisions.

Table with 4 columns: No., Date, Description, By. It lists site plan revisions (pre-licensing) with dates from September 2020 to March 2022.

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE. 113 COLEBURN STREET, BARRE, ON, CAN. M1H 1H2. TEL: 705.720.0455. WWW.MHBCAN.COM. Includes MNR Approval Stamp and MHBC Stamp.

NELSON AGGREGATE CO. 2425 No. 2 Street, P.O. Box 1007, Burlington, ON, L7R 4L8. Includes Nelson Aggregate logo and contact information.

Operational Plan Drawing No. 2 of 4. Plan Scale: 1:3000 (Arch E). Date: March 2022. Drawn By: C.P., Checked By: B.Z. File Name: Operational Plan. File Path: N:\Burl\9135D-Nelson - Project Sideway\Drawings\A Site Plan\Amendment Site Plan\CAD\9135D - Site Plan.dwg.

Progressive Rehabilitation

A. General

- 1. Area Calculations:
i. To be extracted (total) 47.4 ha
ii. To be rehabilitated (total) 47.4 ha

B. Phasing

- 1. As excavation reaches the limit of extraction or maximum depth, progressive rehabilitation shall commence.
2. Progressive rehabilitation shall follow the direction and sequence of extraction identified on the plan view and described in the notes on drawing 2 of 4.

C. Slopes and Grading

- 1. Progressive rehabilitation will utilize a variety of rehabilitation techniques including:
- Backfilling extraction faces and quarry faces
- Partially backfilling extraction faces to create a cliff with talus slope
- Leaving extraction faces vertical
2. Excavated soil, as defined in Ontario Regulation 400/10 under the Environmental Protection Act, may be imported to this site for the following rehabilitation purposes:

D. Seeding and Planting

- 1. The side slopes and backfilled portions of the quarry floor will be seeded with the Ministry of Transportation's (MTO) Ontario Roadside Seed Mix (Creeping Red Fescue, Kentucky Bluegrass, Perennial Ryegrass and White Clover) or equivalent.
2. Ponds, wetlands, and tree planting areas identified in the plan view shall be planted in accordance with Table 1: Rehabilitation Plant List Recommendations on the drawing.

E. Drainage

- 1. Final surface drainage will follow the rehabilitated contours and directional arrows shown on the plan view.
2. Once the South Extension is depleted, pumping will cease and portions of the site below the ground water table will fill with water.

F. Adaptive Management Plan

- 1. During progressive rehabilitation, until surrendering the licence, the licensee is required to operate in accordance with the Adaptive Management Plan, prepared by Earth-FX Inc. (Earth-FX Inc., Savaria and Tatham Engineering, dated March 2022), as may be amended from time to time with approval from MNRFP, in consultation with NCS, Region of Halton, City of Burlington and Conservation Halton.

Final Rehabilitation

- A. General
1. All equipment shall be removed from the South and West Extension.
2. No internal haul roads shall remain in either Extension.
3. The residence and barn at 2290 Side Road No. 2 in the South Extension shall remain.

Table 1: Rehabilitation Plant List

Food/Wildlife (FW)
Grassland and Existing Trees (GL)
Grassland/Graze/Side Slope with Trees (GS)
Forested Setback During Operation (FSO)
Forested Setback Post-Berm (FSP)
Restored to Existing Grass and Forested (REG)

Table with 8 columns: Location, Latin Name, Common Name, Coefficient of Concentration, Wetness Index, OWES Wetland Species, Provincial Status, Local Status. Lists various plant species like Solidago nemoralis, Carex lasiocarpa, etc.

Legend for site features: Beach, Pond, Swim Area, Lake, Wetland / Shoreline Wetland, Vertical Face, Slopes (3:1, 2:1), Setback, Restored catchment area, Gradual grade.

Herbaceous seed mixes will be applied where appropriate... A nurse crop will be applied to support soil.



Legend for site boundaries and features: Licence Boundary, Limit of Extraction, Contours with Elevation, Public Road, Fence, Water Feature, Lake / Pond Licence # 5499, Significant Woodlands, Woodlands, Wooded Feature, Wetland, Cross Sections.

Table with 4 columns: No., Date, Description, By. Lists site plan amendments.

Table with 4 columns: No., Date, Description, By. Lists site plan revisions (pre-licensing).

MHBC logo and contact information: PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE.

MNRFP Approval Stamp and MHBC Stamp.

Applicant: NELSON AGGREGATE CO. logo and address.

Project: Burlington Quarry Extension

MNRFP Licence Reference No. 626477, Pre-approval review: March 2022.

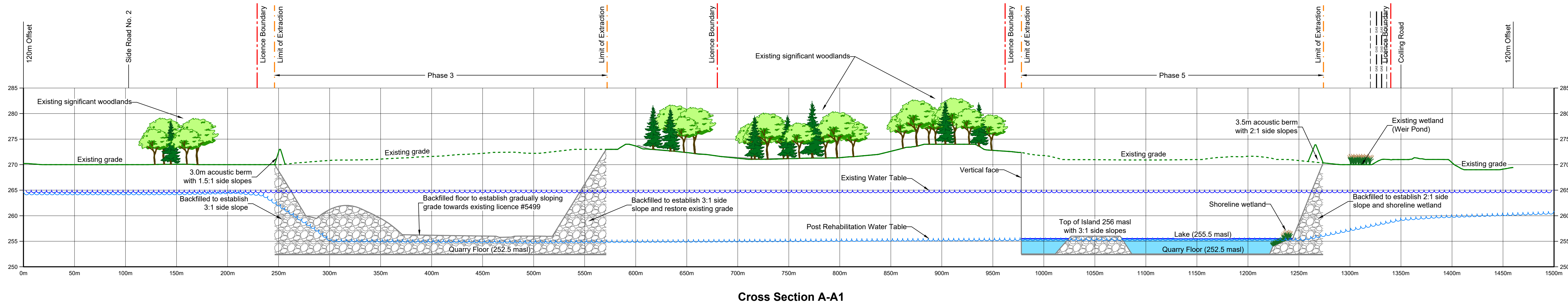
Plan Scale: 1:3000 (Arch E), Date: March 2022, Drawn By: C.P., File No.: 9135D.

File Name: Rehabilitation Plan

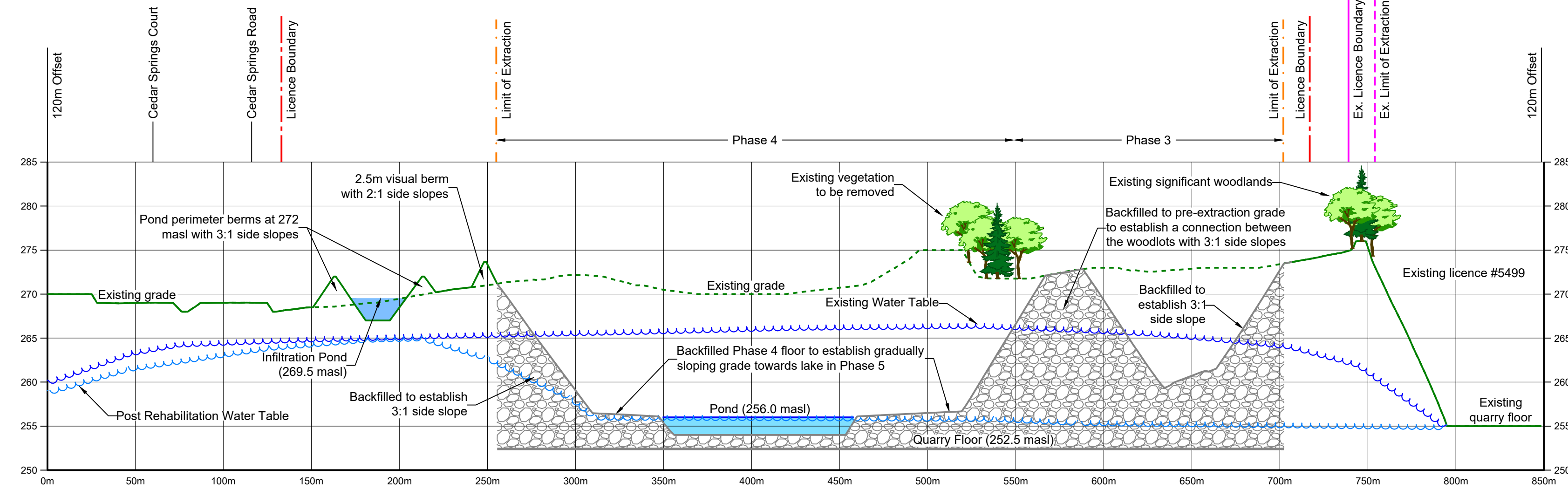
Drawing No.: 3 of 4

Typical Quarry Face Detail, Typical Cliff and Talus Slope Detail, Typical Backfilled Side Slope Detail, Typical Shoreline Wetland Detail.

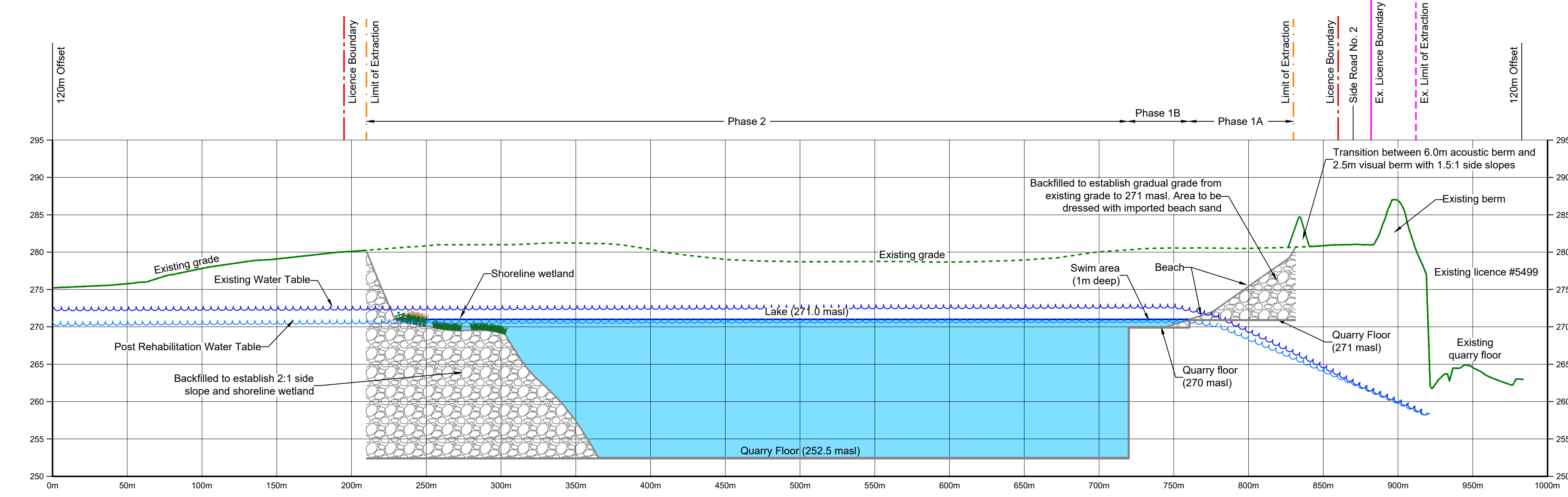
- Legend**
- Licence Boundary
 - Limit of Extraction
 - Existing Licence
 - Existing Limit of Extraction
 - 120m Offset From Licence Boundary
 - Existing Grade - Removed / Altered
 - Existing Grade - Undisturbed
 - Quarry Floor / Face
 - Berm
 - Existing Water Table
 - Post Rehabilitation Water Table
 - Backfilled
 - Lake or Pond



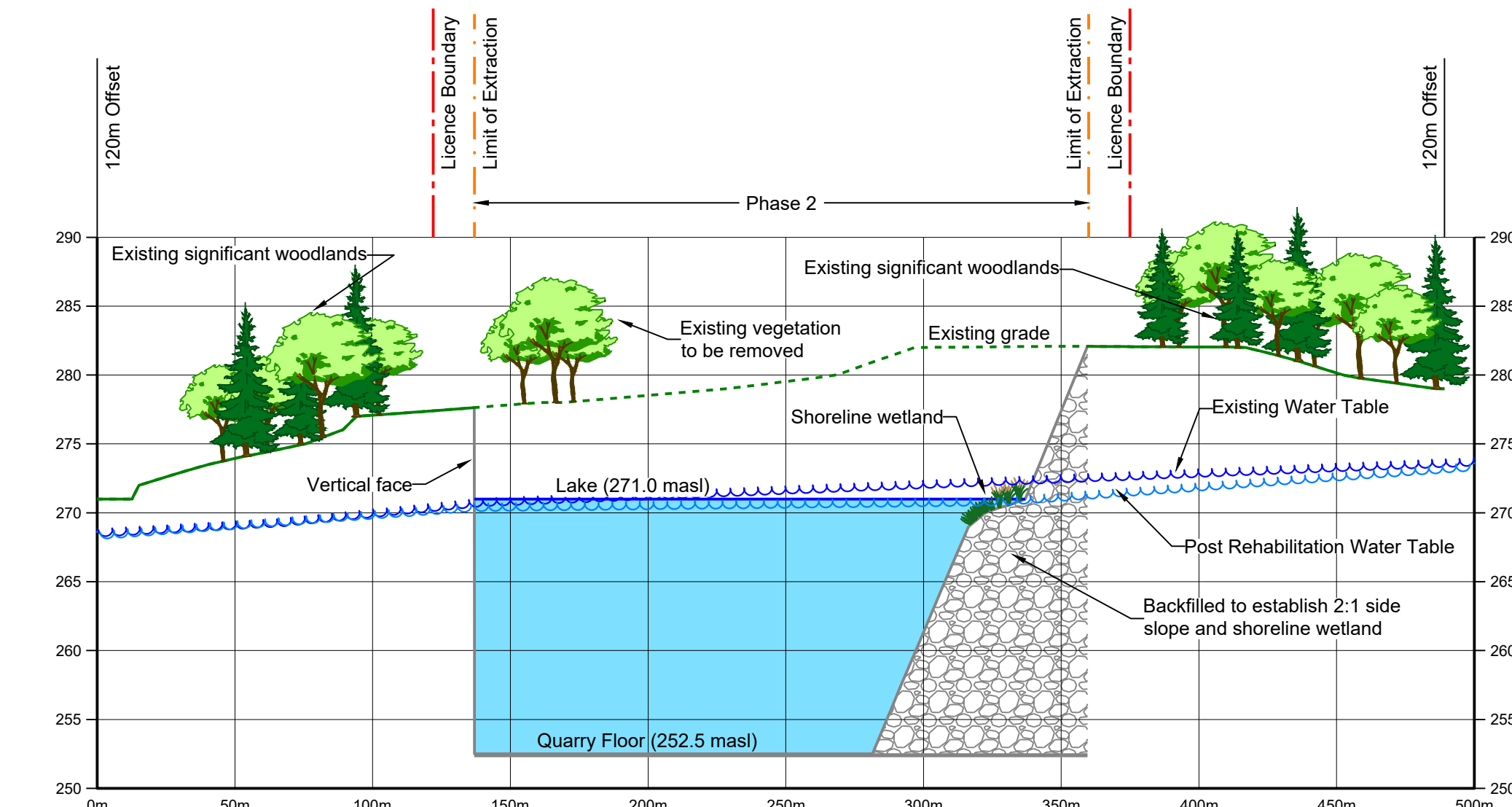
Cross Section A-A1



Cross Section B-B1

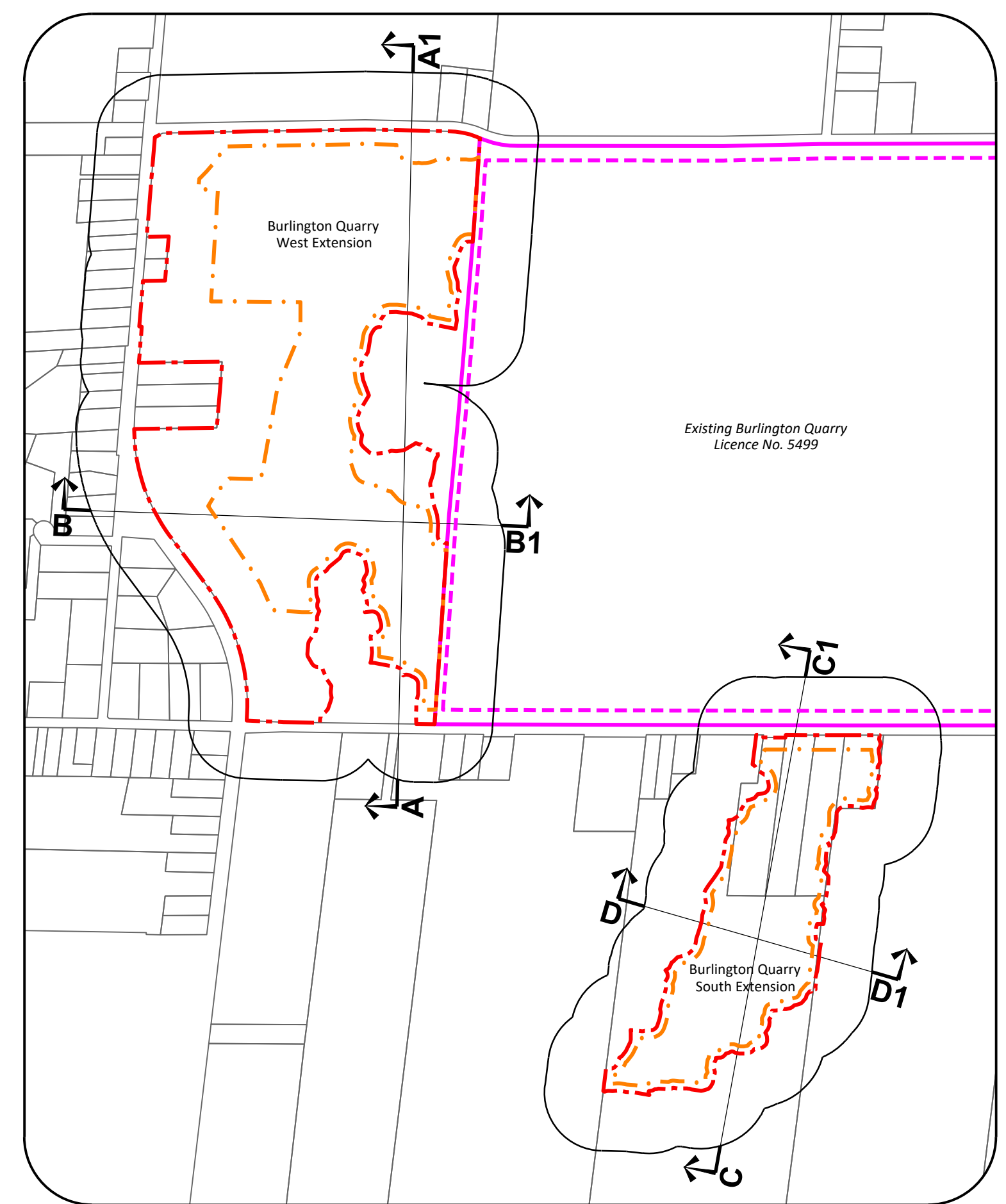


Cross Section C-C1



Cross Section D-D1

Key Map
Cross Sections



Site Plan Amendments

No.	Date	Description	By

Site Plan Revisions (Pre-Licensing)

No.	Date	Description	By
1.	April 2021	Added additional cross section labels for clarity.	CAP
2.	January 2022	Updated to address agency comments.	CAP
3.	February 2022	Updated drawings 1, 2 and 3 of 4 to address agency comments.	CAP
4.	March 2022	Updated limit of extraction in the West Extension. Added outline to the Existing Features and Operational Plan.	CAP

No.	Date	Description	By

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MNRF Approval Stamp: MHBC Stamp:

Applicant: **NELSON AGGREGATE CO.**
 2433 No. 2 St. Road
 P.O. Box 1070 Burlington Ont. L7R 4L8
 phone: (905) 335-5250

Project
Burlington Quarry Extension

MNRF Licence Reference No. 626477	Pre-approval review: Date: March 2022
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Plan Scale: Horizontal 1:2000 Vertical 1:400	Drawn By: C.P. Checked By: B.Z.	File No.: 9135D
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File Name
Cross Sections

Drawing No.
4 of 4