

# A. General

- 1. This site plan is prepared under the Aggregate Resources Act (ARA) for a Class 'A' Licence, Category 2. 2. Area Calculations:
- i. Licence Area (total) 76.9 ha South Extension 18.1 ha West Extension 58.8 ha

## B. References

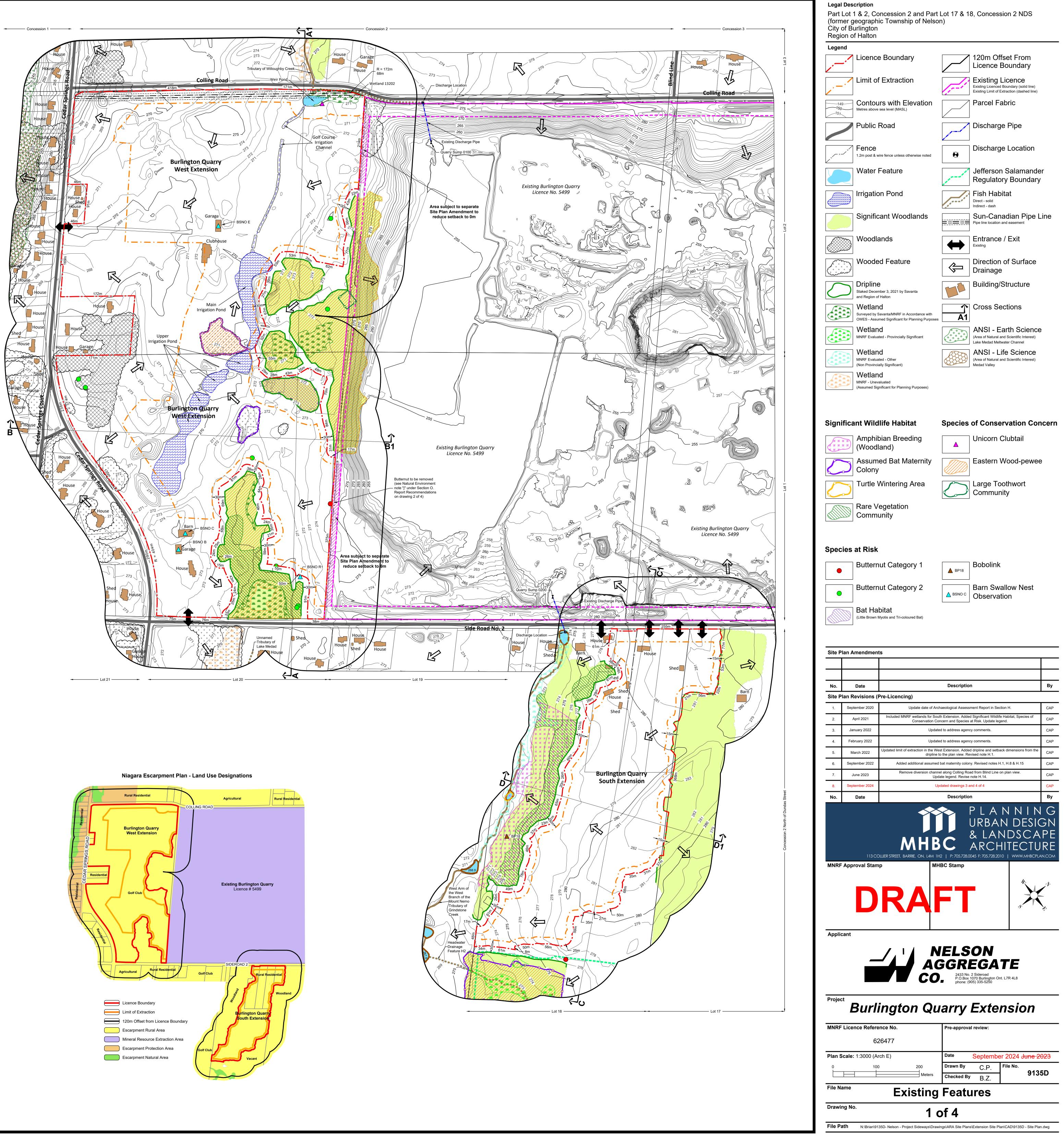
- 1. Contours were obtained from the City of Burlington's Open Data Catalogue based on 2017 data and are displayed in one metre intervals. Elevations shown are in metres above sea level (masl). 2. Topographic information was obtained from numerous sources including Ontario GeoHub (Land Information Ontario), City of Burlington's Open Data Catalogue, Google Earth Pro aerial photography captured on May 7, 2018 and field
- investigations for technical reports. 3. All topographic features and structures are shown to scale in Universal Transverse Mercator (UTM) with North American
- Datum 1983 (NAD83), Zone 17 (metre), Central Meridian 81 degrees west coordinate system. 4. The licence boundaries were established using Municipal Property Assessment Corporation (MPAC) parcel fabric data.
- Distances are approximate and for reference purposes only.
- 5. 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.
- 6. 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

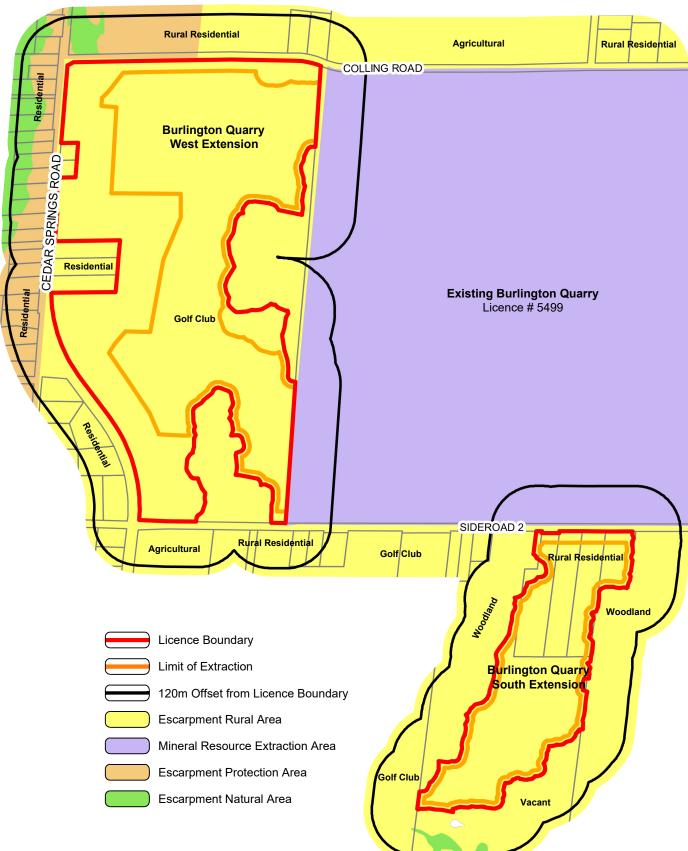
- 1. Surface drainage on and within 120 metres of the licence boundaries are by overland flow in the directions shown by arrows on the plan view, or by infiltration. D. Groundwater
- 1. The established groundwater table varies between 264 masl to 273 masl in the South Extension and 263 masl to 265 masl in the West Extension (EarthFX 2020). E. Site Access and Fencing
- 1. There are four existing site accesses on Side Road No. 2 and a single existing site access on Cedar Springs Road. 2. Post and wire fencing (unless noted otherwise) exists in the locations shown on the plan view.
- F. Aggregate Related Site Features
- 1. There are no existing aggregate operations or features on either Extension such as internal haul roads, processing, stockpiles, scrap, fuel storage, berms or excavation faces.
- G. Cross Sections 1. See drawing 4 of 4.
- H. Technical Reports References
- 1. Adaptive Management Plan, Proposed Burlington Quarry Extension, EarthFX Inc., Savanta, and Tatham Engineering, June 2022.
- 2. Agricultural Impact Assessment, Nelson Aggregate Co. Burlington Quarry Expansion, April 2020.
- 3. Air Quality Study for Nelson Aggregate Co., Burlington Quarry Extension, BCX Environmental Consulting, March 2020.
- 4. Archaeological Assessment (Stages 1, 2 & 3), Nelson Aggregates Quarry Expansion, Archaeologix Inc., August 2003.
- 5. Archaeological Assessment (Stage 4), Nelson Aggregates Quarry Expansion, Archaeologix Inc., August 2004. 6. Stage 1-2 Archaeological Assessment, Proposed West Extension of the Burlington Quarry, Golder Associates, September 2020.
- 7. Blast Impact Analysis, Burlington Quarry Extension, Explotech Engineering Ltd, June 16, 2021.
- 8. Cultural Heritage Impact Assessment Report, Burlington Quarry Extension, MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC), May 2022.
- 9. Financial Impact Study, Proposed Burlington Quarry Extension, Nelson Aggregates Co., September 30, 2021.
- 10. Level 1 and 2 Hydrogeological and Hydrological Impact Assessment Report, Proposed Burlington Quarry Extension, EarthFX Incorporated, April 2020.
- 11. Level 1 and 2 Natural Environment Technical Report, Proposed Burlington Quarry Extension, Savanta, April 2020. 12. 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.
- 14. Surface Water Assessment, Burlington Quarry Extension, Tatham Engineering, June 23, 2023.
- 15. Visual Impact Assessment Report, Proposed Extension of the Burlington Quarry, MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC), May 2022.
- 16. Safety Review of the Proposed Access Plan for a Proposed Quarry Extension, True North Safety Group, June 2021.

# BLIN Licence Boundary Limit of Extraction Owned by Licensee

## Other Lands Owned by Licensee







A. General 1. Area Calculations:	<ul> <li>7. Berms that encroach within the limit of extraction shall be removed, and the underlying aggregate may be extracted, as part of final extraction for each Extension.</li> </ul>
i. Licence Area (total) <b>76.9 ha</b> • South Extension 18.1 ha • West Extension 58.8 ha	<ol> <li>Equipment and Processing</li> <li>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. See Section N. Report Recommendations for additional details from the Noise report regarding equipment.</li> </ol>
ii. Limit of Extraction (total) 47.4 ha • South Extension 14.3 ha • West Extension 33.1 ha	<ol> <li>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.</li> </ol>
<ol> <li>The maximum annual tonnage is 2,000,000.</li> <li>The existing golf course use in the West Extension may continue to operate until site preparation for that Extension commences.</li> </ol>	<ul><li>K. Fuel Storage</li><li>1. No fuel shall be stored in the South or West Extension.</li></ul>
<ul> <li>B. Hours of Operation</li> <li>1. Hours of operation are Monday to Friday from 7:00am to 7:00pm excluding statutory holidays.</li> </ul>	<ol> <li>Fuel trucks will be used to transfer fuel to on-site equipment in accordance with the Liquid Fuels Handling Code.</li> <li>A Spills Contingency Program will be developed prior to site preparation.</li> </ol>
week but may occur more often based on operational needs.	<ul> <li>L. Dust</li> <li>1. Dust shall be mitigated on-site.</li> </ul>
<ul> <li>C. Site Access and Fencing</li> <li>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 (for the life of that extension) along the licence or property boundary. Portions of the West Extension licence boundary shall be</li> </ul>	<ol> <li>Water or another provincially approved dust suppressant shall be applied to internal haul roads as often as required to mitigate dust.</li> <li>The licensee shall implement all air quality recommendations outlined in Section N. Report Recommendations.</li> </ol>
2. Where the licence boundary abuts significant woodlands, fencing shall be in accordance with the Tree Protection Zone detail on this	<ul><li>M. Scrap and Recycling</li><li>1. No scrap shall be stored in the South and West Extension.</li></ul>
	<ol> <li>No recycling shall occur in the South and West Extension.</li> <li>Report Recommendations</li> </ol>
<ul> <li>approximate location).</li> <li>4. Prior to extraction in the West Extension, exclusion fencing (as per MNRF 2013 Species at Risk Branch Best Practices Technical Note Reptile and Amphibian Exclusion Fencing Version 1.1) shall be installed along the west limit of extraction and extended a minimum 50</li> </ul>	<ol> <li><u>Air Quality</u></li> <li>a. The Licensee shall implement their Best Management Practices Plan (BMPP) for the Control of Fugitive Dust dated March 2020, as</li> </ol>
<ul> <li>metres beyond the northern extent of the infiltration pond. The exclusion fencing shall also be installed along the southern limit of extraction until it reaches No. 2 Side Road in the southeast corner (see plan view for approximate location).</li> <li>5. A new operational entrance/exit for the South Extension shall be established in the location shown on the plan view (see Section N. Report Recommendations for additional details under Traffic). Material being transferred from the South Extension to existing Licence #</li> </ul>	may be amended from time to time to reflect current best management practices. b. The Licensee shall construct the acoustic berms as shown on the operational plan. See Section F for additional detail. 2. Blasting
<ol> <li>A gate shall be installed at the operational entrance/exit of the South Extension on Side Road No. 2, kept closed during hours of</li> </ol>	<ul> <li>All blasts shall be monitored for both ground vibration and overpressure at the closest privately owned sensitive receptors adjacent the site, or closer, with a minimum of two (2) instruments - one installed in front of the blast and one installed behind the blast.</li> </ul>
<ol> <li>A gate shall be installed at the operational entrance exit of the South Extension on Side Road No. 2, kept closed during hours of non-operation, and maintained throughout the life of that Extension.</li> <li>A gate shall not be required for the field/property access located at 2280 and 2015 Side Road No. 2 (see Section O. Variations from Provincial Standards).</li> </ol>	b. Vibration and overpressure data collected during the first 12 months of extraction in the proposed quarry extension lands will be used to calibrate and update the 2004 Golder Associates attenuation equation. The proponent shall ensure information collected includes all relevant blast and monitoring details to permit and facilitate inclusion of the data in the attenuation data and resultant equation.
<ol> <li>The West Extension shall be accessed through the common licence boundary with existing Licence #5499 in Phases 3 and 5. The locations shown on the plan view are approximate only.</li> </ol>	c. In order to safeguard the structural integrity of the structures located at 2280 No 2 Side Road, ground vibrations shall be maintained below 50mm/s (>40Hz) in accordance with research performed by the United States Bureau of Mines (USBM RI8507). The closest structure located at 2280 No 2 Side Road shall be monitored for ground vibration and overpressure when vibration calculations
<ol> <li>Access for farm equipment shall be provided from the new operational entrance/exit in the South Extension. During operations, the eastern extraction setback may be used to transport farm equipment to the areas that have not been extracted to facilitate ongoing agricultural operations in the South Extension.</li> </ol>	suggest vibrations in excess of 35mm/s. d. All blasts within 60m of the adjacent Sun-Canadian High Pressure Oil Pipeline will be designed and monitored by a registered engineer, licensed in the province of Ontario, or any distance specified in later revisions of the Sun-Canadian guidelines or when
<ul> <li>D. Drainage and Siltation Control</li> <li>1. Drainage of undisturbed areas will continue in the directions shown on drawing 1 of 4.</li> </ul>	vibration calculations suggest vibrations in excess of 35mm/s at the pipeline. e. To protect adjacent fish habitat, the Department of Fisheries and Oceans (DFO) has established limits for water overpressure and ground vibrations. Water overpressures are to be limited to 100kPa (year round), and in the presence of active spawning beds
<ol> <li>Prior to site preparation, an Erosion and Sedimentation Control (ESC) Plan shall be prepared and implemented to prevent erosion or sedimentation impacts to the natural environment from operation and rehabilitation of the quarry (see Section N. Report Recommendations - Natural Environment note "a").</li> </ol>	(March 15 <sup>th</sup> to July 15 <sup>th</sup> ), ground vibrations at the bed are to be limited to 13mm/s. Fish habitat and assumed spawning beds are present in the Unnamed Tributary of Willoughby Creek, the Unnamed Tributary of Lake Medad and the East and West Arms of the West Branch of the Mount Nemo Tributary of Grindstone Creek. The utilization of shallower blast holes, decks, smaller hole diameters and/or changes in blasting patterns may be necessary when blasting adjacent to fish habitat at any time of year. These
3. Prior to extraction in the West Extension, the infiltration pond located in the west setback (including the diversion/discharge pipe and bottom draw outlet) shall be constructed. The pond shall be excavated to an elevation of ±267 masl into bedrock. Non-aggregate material excavated from the infiltration pond will be utilized for the creation of acoustic and visual berms in the West Extension. For the portions of the pond located above bedrock, 3:1 slopes shall be established. The purpose of the diversion pipe is to convey water from the weir pond	mitigation measures would also apply, when adjacent to spawning beds from March 15 <sup>th</sup> to July 15 <sup>th</sup> . f. From March 15 <sup>th</sup> to July 15 <sup>th</sup> of any year, blasts shall be designed to maintain vibrations below 13mm/s at the closest point of any spawning habitat to the blast. One (1) additional seismograph shall be installed on the shoreline adjacent the closest spawning
<ul> <li>to the infiltration pond in the west setback and to provide the diffuse discharge in the northwest corner of the site.</li> <li>Within the West Extension, the diversion and discharge pipes shall be placed in the locations shown on the plan view (see Section N. Report Recommendations - Natural Environment note "j" for timing to install the diversion pipe within the weir pond). The centreline of the</li> </ul>	habitat to any blast performed between March 15 <sup>th</sup> and July 15 <sup>th</sup> when calculations suggest vibrations in excess of 75% of the DFO vibration limit may be reached at the location of a potential active spawning habitat. g. All blasting operations encroaching the Sun Canadian High Pressure Oil Pipeline will follow all requirements in the Sun Canadian
<ul><li>diversion pipe along the north boundary of Phase 5 shall remain a minimum of 7.0 metres from the Sun-Canadian Pipe Line easement and be installed prior to constructing the berm in this vicinity.</li><li>5. Prior to removal of the irrigation ponds and irrigation channel in the West Extension, the downstream end of the golf course channel shall</li></ul>	<ul><li>Guidelines outlined in Section 8.3 to 8.5 under the heading "Vibration and Blasting Control" and any requirements specified in later revisions of the Sun Canadian Guidelines.</li><li>h. The guideline limits for vibration and overpressure shall adhere to standards as outlined in the MECP Model Municipal Noise</li></ul>
be blocked to isolate surface water. If water is to be pumped from the feature to facilitate site preparation, it shall be directed to the existing sump for discharge in accordance with MECP, ECA and PTTW requirements.	<ul> <li>Control By-law publication NPC 119 (1978) or any such document, regulation or guideline which supersedes this standard.</li> <li>i. In the event of an exceedance of NPC 119 limits or any such document, regulation or guideline which supersedes this standard, blast designs and protocol shall be reviewed prior to any subsequent blasts and revised accordingly in order to return the</li> </ul>
<ol> <li>All existing structures within the South Extension (excluding the house and barn located at 2280 Side Road No. 2) and West Extension (excluding the house and barn located at 2015 Side Road No. 2) shall be demolished prior to extraction in each Extension, in accordance with all applicable regulations (see Section N. Report Recommendations - Natural Environment note "c" as well as note "p" regarding</li> </ol>	<ul><li>operations to compliant levels.</li><li>j. Orientation of the aggregate extraction operation will be designed and maintained so that the direction of the overpressure propagation will be away from structures as much as possible.</li></ul>
<ul><li>removal of three structures within the West Extension that contain Barn Swallow habitat).</li><li>2. No new buildings are proposed for either Extension.</li></ul>	<ul> <li>k. The licensee shall take all reasonable measures to prevent flyrock from leaving the site during blasting.</li> <li>I. Blast designs shall be continually reviewed with respect to fragmentation, ground vibration and overpressure. Blast designs shall be</li> </ul>
<ol> <li>Tree removal shall not occur in the West Extension during the active season for Eastern Small-footed Myotis between March 15<sup>th</sup> and November 30<sup>th</sup> (see Section N. Report Recommendations - Natural Environment note "o").</li> <li>Timber resources (if any) will be salvaged for use as saw logs, fence posts and fuel wood where appropriate. Stumps, trees, shrubs and</li> </ol>	modified as required to ensure compliance with current applicable guidelines and regulations. m. Blasting procedures such as drilling and loading shall be reviewed on a yearly basis and modified as required to ensure compliance with industry standards.
<ul> <li>brush cleared will be used for rehabilitation of this site and License #5499 to provide coarse and fine wood debris to enhance soils and create habitats during site rehabilitation.</li> <li>5. Prior to the commencement of stripping in the South Extension, agricultural baseline conditions shall be established by a qualified</li> </ul>	<ul> <li>n. Detailed blast records shall be maintained in accordance with current industry best practices.</li> <li>3. <u>Noise</u></li> </ul>
professional for the entire extraction area, using an accredited lab for any analytical testing. Soil inspections shall be conducted at a density to allow for sufficient coverage of the area. The parameters for the baseline conditions soil testing shall be determined by the qualified professional and shall include items such as: soil macro and micronutrients, soil chemistry (e.g. pH, etc.), organic matter, soil texture and structure and bulk density.	<ul> <li>a. Site preparation, pond construction, rehabilitation, drilling, extraction activities, and transporting material to the existing quarry for processing and shipping may only occur Monday to Friday during daytime hours (7:00 - 19:00).</li> </ul>
6. In the South Extension, topsoil and subsoil for agricultural rehabilitation shall be stripped separately and used for agricultural rehabilitation in Licence #5499 in accordance with the agricultural rehabilitation notes on this page (see Section N.9 Agricultural and Section O. Variations from Provincial Standards). The remaining overburden in the South Extension not required for agricultural rehabilitation will be	<ul><li>b. Prior to extraction in the South Extension, all berms in this Extension shall be constructed to the heights specified in the locations shown on the plan view. Berms shall not be required in the West Extension until prior to extraction in that Extension.</li><li>c. Prior to extraction in the West Extension, all berms in this Extension shall be constructed to the heights specified in the locations</li></ul>
<ul><li>stripped separately and used for the construction of acoustic/visual berms and rehabilitation in the south extension. In the west extension, topsoil and overburden shall be stripped and stored separately wherever feasible (see Section O. Variations from Provincial Standards).</li><li>7. With the exception of topsoil and subsoil from the South Extension that will be used for agricultural rehabilitation in Licence #5499, the</li></ul>	shown on the plan view. d. Equipment used on-site shall operate within the sound power levels specified below: <ul> <li>drills - 110 dBA</li> </ul>
<ul> <li>remaining topsoil and overburden shall be placed in perimeter acoustic/visual berms, pond construction or used immediately for progressive rehabilitation in either Extension or existing Licence #5499 (see Section O. Variations from Provincial Standards).</li> <li>8. With the exception of topsoil and subsoil from the South Extension that will be used for agricultural rehabilitation in Licence #5499, excess</li> </ul>	<ul> <li>Gins - 110 dBA</li> <li>front-end loaders - 101 dBA</li> <li>haul trucks - 114 dBA</li> <li>e. Up to three haul trucks will be used to transport material from this site to the processing area in License #5499, with a posted speed</li> </ul>
topsoil and overburden not required for immediate use in berms or rehabilitation may be temporarily stockpiled on the quarry floor. Topsoil and overburden stockpiles shall be located within the limit of extraction and remain a minimum of 30 metres from the licence boundary (except where the West Extension licence boundary abuts existing Licence #5499) and 90 metres from a property with a residential use (see Section O. Variations from Provincial Standards).	<ul> <li>b) to three had tracks will be used to transport material norm this site to the processing area in Elcense #3435, with a posted speed limit of 35 km/hr along this route.</li> <li>f. Equipment used for site preparation, pond construction and rehabilitation shall satisfy the noise emission levels of MOE - 115, "Noise Construction Equipment".</li> </ul>
<ol> <li>With the exception of topsoil and subsoil from the South Extension that will be used for agricultural rehabilitation in Licence #5499, temporary topsoil and overburden stockpiles which remain for more than one year shall have their slopes vegetated to control erosion.</li> <li>F. Berms and Screening</li> </ol>	g. If a noise complaint is received, the noise complaint will be responded to and investigated in a timely manner by the licensee in a manner commensurate to the specific context of the complaint.
<ol> <li>Acoustic and visual berms shall be constructed to the heights or elevations specified in the locations shown on the plan view. See Section N. Report Recommendations - Visual Impact Assessment notes and the Typical Acoustic &amp; Visual Berm detail on this drawing for additional information.</li> </ol>	<ul> <li>Visual Impact Assessment         <ul> <li>For both Extension areas, existing vegetation located along the site perimeter and within the setback area will be retained where possible. Berms will be laid out in a way that favours the retention of existing vegetation where possible. Any and all areas marked</li> </ul> </li> </ul>
2. Berms adjacent to key natural heritage features shall be constructed in accordance with Section N. Report Recommendations - Natural Environment note "d".	for tree protection shall utilize appropriate tree protection hoarding and ensure that no construction activities, grading or compaction occurs within the tree protection zone (see Tree Protection Zone detail on this drawing for additional information). This includes using these areas for the storage or staging of any materials or aggregate.
<ul> <li>Berm side slopes shall not exceed the following maximums:</li> <li>i. South Extension <ul> <li>Northwest, north and northeast setback = 1.5:1</li> </ul> </li> </ul>	<ul><li>b. Visual and acoustic berms are to be installed in the location shown on the plan view and berm elevation details (on drawing 4 of 4) and to the requirements outlined below.</li><li>c. Where berms are deemed to be required, they are to only be constructed where shown on the plan view. Berms are to be</li></ul>
<ul> <li>Southwest setback = 2:1</li> <li>ii. West Extension <ul> <li>North and west setback = 2:1</li> <li>Southeast setback = 1.5:1</li> </ul> </li> </ul>	constructed in a smooth, rolling manner with varying highpoints (respecting minimum height requirements), and variations along the berm frontage to create a more natural appearance. Berms shall be seeded with a native mix of wildflowers and grasses to stabilize slopes and minimize mowing and maintenance.
<ol> <li>Berms in the South Extension shall be constructed prior to extraction in that extension.</li> <li>Berms in the West Extension shall be constructed prior to extraction in that extension.</li> </ol>	d. Tree protection fencing shall be installed at the locations shown on the "Additional Tree Protection Fencing" detail on drawing 4 of 4. The fencing shall be installed in accordance with notes 3 to 6 of the "Tree Protection Zone Detail" shown on this drawing. No proposed works or grading shall occur within this established tree protection zone. Tree protection fencing shall remain in place until the completion of all proposed works found on the "Mitigation Plan - 2 Side Road Crossing" detail on drawing 4 of 4 or until the completion is protected for protection concerning the protection of all proposed works found on the "Mitigation Plan - 2 Side Road Crossing" detail on drawing 4 of 4 or until the complete to be addition.
<ol> <li>The north toe of the perimeter berm in the West Extension shall not be located within 1 metre of the Sun-Canadian Pipe Line easement.</li> <li>Berms shall be vegetated with a native mix of wildflowers and grasses to stabilize slopes and minimize mowing and maintenance. The unmetation and the berme shall be registed with the berme and grasses to stabilize slopes and minimize mowing and maintenance. The unmetation and the berme shall be registed with the berme and grasses to stabilize slopes and minimize mowing and maintenance. The unmetation are the berne shall be registed with the berne are presented for the berne stabilized with the berne sta</li></ol>	<ul><li>applicable Extension is complete. In addition, trees marked for protection shall be monitored for a minimum period of two years after fencing has been removed to ensure that there is not a decline in their health. Should a significant decline in health or death of a tree be observed, it shall be removed and replaced with a species identified in note N.4.g.</li><li>e. The existing deciduous trees and shrubs located within 15 metres of No. 2 Side road and in front of the proposed southern noise</li></ul>
<ul> <li>vegetation on the berms shall be maintained until the berms are removed for rehabilitation.</li> <li>7. Existing vegetation within the setbacks shall be maintained except where acoustic berms, visual berms, ponds or diversion/discharge pipes are required (see Section O. Variations from Provincial Standards). Setbacks disturbed will be vegetated with a native mix of wildflowers and grasses to restore areas and minimize mowing and maintenance. A portion of the setback areas, as shown on the</li> </ul>	<ul> <li>f. Where proposed, trees shall be planted as supplementary visual screening. This applies to the visual berms proposed for the South Extension (see "Planting Cell Detail for Planted Berms" on drawing 4 of 4). Larger species will be planted along the visual berm on</li> </ul>
<ol> <li>Setbacks identified as forested setbacks on the plan view shall be forested (see Section N. Report Recommendations - Natural Environmentations - Natural Environmentations - Natural Environmentations - Natural Environment notes "e" and "h" for additional information).</li> </ol>	No. 2 Side Road while smaller species will be planted on the berm adjacent to the Camisle Golf Course. Plantings are to be randomly spaced and staggered up on the berm up to one third of its maximum height to appear more natural, where possible. The proposed vegetation shall be laid out as prescribed in the "Planting Cell Detail for Planted Berms" in the locations shown on on the "Mitigation Plan - 2 Side Road Crossing" and "Mitigation Plan - Camilse Golf Course" detail on drawing 4 of 4, with attention paid to
<ul> <li>G. Site Dewatering</li> <li>1. During the initial stages of extraction within the South Extension, a temporary settling pond will be constructed within the extraction area</li> </ul>	planting density and diversity of coniferous and deciduous species. All vegetation is to be selected for wind and salt tolerance, hardiness. Where appropriate, native species that complement the existing surroundings are to be utilized wherever possible. Where large species are indicated, this shall mean deciduous trees of minimum 40mm caliper, coniferous trees of minimum 1.5m height, and shrub species of minimum 40cm height. Where small species are indicated, this shall mean deciduous tree whips of
<ul> <li>(eg. Phase 2). Once sufficient extraction has occurred in Phase 2, the sump and settling point will be constructed on the quarry floor. See Adaptive Management Plan for additional details.</li> <li>The discharge location for the South Quarry Extension shall be constructed in accordance with Section N. Report Recommendations -</li> </ul>	minimum 1.2m height, coniferous trees of minimum 0.6m height, and shrub species of minimum 20cm height (or bare root stock when in season). Planting shall be laid out as per the "Planting Cell Detail for Planted Berms" on drawing 4 of 4. g. Plant species for the visual berm planting referenced in note N.4.f. may include, but are not limited to the following trees (White
<ol> <li>Natural Environment note "g".</li> <li>For the West Extension, the water will be diverted to existing Licence #5499 and discharged from the existing sumps and discharge locations.</li> </ol>	Pine, Common Hackberry, Chokecherry, White Spruce, Paper Birch, Pin Oak Sugar / Silver Maple, Trembling Aspen, Basswood, White Pine, White Spruce or White Cedar) and shrubs (Staghorn Sumac, Nannyberry, Common Ninebark, American Elder, Dogwood, or Highbush Cranberry).
<ol> <li>The licensee shall operate in accordance with Environmental Compliance Approval (ECA) and Permit to Take Water (PTTW) requirements.</li> </ol>	h. To ensure survival and positive growth rate, the vegetative screening is to be maintained and managed appropriately so that it remains an effective visual screen over time. Allowance of natural succession to occur is encouraged, in keeping with restoration objectives.
<ul> <li>H. Extraction Sequence</li> <li>1. General         <ul> <li>a. Prior to set preparation in each phase, ensure all requirements contained in Sections C through G are met.</li> </ul> </li> </ul>	i. During the first year of quarry operations, the planted trees will be watered and monitored until established. After the first year, the trees will be inspected twice each year. Once in spring after leaf break, and once in fall prior to leaf drop, to ensure any trees which are in poor condition at the time are fertilized, watered and monitored, as needed, to improve their health and vigor.
<ol> <li>Phase 1         <ul> <li>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.</li> </ul> </li> </ol>	j. If any of the planted trees die, they will be replaced yearly, and will be planted in spring or late summer. With annual maintenance and monitoring, the trees will have the best chance of survival, and overall, it is anticipated that the need for tree replacements during the life of the operation will be reduced.
<ul> <li>b. Strip Phase 1 in accordance with Site Preparation notes (see Section E) and Agricultural Rehabilitation notes (see Section N.9). Any overburden not used for agricultural rehabilitation shall be used to construct perimeter berms. Should there be insufficient overburden in Phase 1 to construct berms, import excess soils to complete the perimeter berms.</li> <li>c. Create sinking cut.</li> </ul>	<ul> <li>5. <u>Traffic</u></li> <li>a. The northbound and southbound approaches to Side Road No. 2 shall be controlled by stop sign control.</li> <li>b. The new readway creating will be leasted on the creat on Side Road No. 2 (in the leastion shown on the plan view) with a clear</li> </ul>
<ul> <li>d. Commence extraction in a southerly direction and complete a noise audit to ensure the site is meeting NPC 300 Noise Guidelines at the nearest sensitive receptors. Noise audit records shall be kept by the licensee and made available to agencies upon request.</li> <li>e. Phase 1A may be extracted to a maximum depth of 271 masl.</li> <li>f. Phase 1B may be extracted to a maximum depth of 270 masl.</li> </ul>	<ul><li>b. The new roadway crossing will be located on the crest on Side Road No. 2 (in the location shown on the plan view) with a clear sight distance of at least 215 metres in each direction along Side Road No. 2 for both the northbound and southbound approaches.</li><li>c. The haul truck crossing approaching on No. 2 Sideroad shall be designed and constructed to provide an approach sight distance</li></ul>
<ul> <li>g. Prepare Phase 2 for extraction.</li> <li>3. Phase 2 <ul> <li>a. Strip Phase 2 in accordance with Site Preparation notes (see Section E) and Agricultural Rehabilitation notes (see Section N.9) in sequence as extraction progresses in a southerly direction. Stripping shall be limited to what is required for the season of operation</li> </ul></li></ul>	<ul><li>(i.e., visibility triangle) extending, at a minimum of 25 m on each crossing approach to a point 50 m east and west on No 2 Side Road. See Mitigation Plan - 2 Side Road Crossing detail on drawing 4 of 4.</li><li>d. The roadway geometry and road bed structure will be designed to accommodate the rock trucks that the licensee plans to operate.</li></ul>
<ul> <li>sequence as extraction progresses in a southerly direction. Stripping shall be limited to what is required for the season of operation to maximize areas remaining in agricultural production.</li> <li>b. Extract Phase 2 in a southerly direction from Phase 1 and complete a noise audit to ensure the site is meeting NPC 300 Noise Guidelines at the nearest sensitive receptors. Noise audit records shall be kept by the licensee and made available to agencies upon request</li> </ul>	e. Prior to extraction commencing in the South Extension, the licensee will be responsible to upgrade the crossing on Side Road No. 2 to municipal standards. During operations in the South Extension, the licensee will be responsible for maintaining this crossing. The licensee is responsible for all costs associated with the crossing, including any signage at the crossing (Financial Report).
<ul> <li>upon request.</li> <li>c. Phase 2 may be extracted to a maximum depth of 252.5 masl.</li> <li>d. As extraction advances, complete progressive rehabilitation of Phase 2.</li> <li>e. Prepare Phase 3 (West Extension) for extraction and ensure all requirements pertaining to this Extension in Sections C through G</li> </ul>	<ul> <li>f. The following notes apply for the crossing at No. 2 Side Road:</li> <li>f.a. The proposed crossing location shall be constructed and maintained to provide the appropriate approach sight triangles</li> </ul>
<ul> <li>and Archaeology note "a", under Section N. Report Recommendations, of this drawing are met.</li> <li>f. Remove wooded features in Phase 3 (see Section N. Report Recommendations - Natural Environment note "o").</li> <li>4. Phase 3 <ul> <li>a. Three (3) years prior to extraction commencing in the West Extension: a) If permission is granted by Conservation Halton, a</li> </ul> </li> </ul>	<ul> <li>and departure sight distances for a 70 km/hr design speed. Vegetation shall be trimmed or removed as necessary during construction to provide the recommended approach sight triangles and departure sight distances in all four quadrants.</li> <li>f.b. "Truck Entrance" warning signs shall be installed on the approaches to the crossing to warn drivers along No. 2 Side Road of the possible presence of slow-moving trucks crossing the intersection.</li> </ul>
qualified ecologist will conduct ecological surveys within Medad Valley to confirm the current ecological features and functions to assist in finalizing the water level targets for monitors MP41 through to MP44, SW40, MW22-13, MW22-14 and BS-01. This data will be collected within 1 year of the ARA license being issued and again 3 years prior to extraction commencing in the West Extension. This information will be incorporated in the Adaptive Management Plan and form part of the Annual report submitted to	<ul> <li>f.c. Regulatory or information signs shall be installed prohibiting the general public from using the crossing.</li> <li>f.d. Vegetation shall be maintained to ensure the approach sight distances at all accesses are provided.</li> </ul>
MNRF. b) The infiltration pond will be designed, constructed, and tested to ensure enhanced groundwater recharge is occurring in accordance with the requirements of the Adaptive Management Plan. Nelson shall provide the results to MNRF that the Infiltration Pond will be effective in protecting the Medad Valley Provincially Significant Wetland (PSW) and Area of Natural and Scientific Interest (ANSI) from negative impacts or present to MNRF alternative mitigation measures 3 years prior to extraction commencing	f.e. Based on the existing conditions, the municipality may wish to revisit the frequency of maintenance for pavement markings, shoulder grading and pavement condition along No. 2 Side Road.
in the West Extension. If access is not provided by Conservation Halton, the Licensee will work with MNRF to provide an alternative monitoring approach to confirm no negative impact to the Medad Valley PSW and ANSI. Site operations within the West Extension extraction area will not commence until this information has been agreed to in writing with MNRF. b. Strip Phase 3 and a portion of Phase 4 (if required) to construct perimeter berms in West Extension.	<ul> <li>6. <u>Water Resources and Natural Environment</u></li> <li>a. The licensee is required to operate in accordance with the Adaptive Management Plan, prepared by EarthFX Inc., Tatham Engineering and Savanta dated March 2022, as may be amended from time to time with approval from MNRF, in consultation with</li> </ul>
c. Extract Phase 3 by commencing at the common boundary with existing Licence #5499 and proceeding westerly before heading in a northwesterly direction. At the commencement of extraction, complete a noise audit to ensure the site is meeting NPC 300 Noise Guidelines at the nearest sensitive receptors. Noise audit records shall be kept by the licensee and made available to agencies upon request.	<ul> <li>NEC, Region of Halton, City of Burlington and Conservation Halton.</li> <li>7. <u>Water Resources</u></li> </ul>
<ul> <li>d. Phase 3 may be extracted to a maximum depth of 252.5 masl.</li> <li>e. Complete progressive and final rehabilitation in Phases 1 and 2.</li> <li>f. Prepare Phase 4 for extraction.</li> </ul>	a. Based on current approvals for the existing quarry, the water discharge pumping at both locations will cease once extraction is complete, which would have a negative impact on flow and associated fish habitat in both watercourses (Savanta, 2020). The proposed revised rehabilitation plan would stipulate that dewatering and pumping will continue at the same locations and in the same manner to ensure there are no negative impacts to any of the hydrological features that rely on this water input. This will result in long-term enhancements to downstream fish habitat compared to the existing approved post-extraction water management
<ol> <li>Phase 4         <ul> <li>Strip Phase 4 and use the material for progressive rehabilitation in Phase 3 and existing Licence #5499.</li> <li>Extract Phase 4 in a westerly and southwesterly direction from Phase 3. At the commencement of extraction, complete a noise audit to ensure the site is meeting NPC 300 Noise Guidelines at the nearest sensitive receptors. Noise audit records shall be kept by the licensee and made available to agencies upon request</li> </ul> </li> </ol>	<ul> <li>result in long-term enhancements to downstream fish habitat compared to the existing approved post-extraction water management plan.</li> <li>b. Post rehabilitation, the West Extension is to be maintained in a dewatered state using the main discharge points to the north and south from Quarry Sump 0100 and 0200 in licence #5499 in accordance with the conditions of the PTTW and ECA to provide public</li> </ul>
by the licensee and made available to agencies upon request. c. Phase 4 may be extracted to a maximum depth of 252.5 masl. d. Prepare Phase 5 for extraction. 6. Phase 5	south from Quarry Sump 0100 and 0200 in licence #5499 in accordance with the conditions of the PTTW and ECA to provide public water management benefits. c. Prior to extraction commencing in each of the South and West Extensions, the licensee shall complete a residential well survey for properties within one kilometre of the extraction area.
<ul> <li>b. Phase 5 <ul> <li>a. Strip Phase 5 and use the material for progressive rehabilitation in Phase 4 and existing Licence #5499.</li> <li>b. Continue progressive rehabilitation in Phases 3 and 4.</li> <li>c. Extract Phase 5 by commencing at the common boundary with existing Licence #5499 and proceeding in a westerly direction. At the commencement of extraction, complete a noise audit to ensure the site is meeting NPC 300 Noise Guidelines at the nearest</li> </ul></li></ul>	<ul> <li>d. If a water well (including agricultural wells) complaint is received by the licensee the following actions will be taken:</li> <li>d.a. The licensee will notify MNRF and MECP of the complaint.</li> </ul>
<ul> <li>d. Refer to Section N. Report Recommendations - Blasting for additional requirements regarding the Sun-Canadian Pipe Line easement.</li> <li>e. Phase 5 may be extracted to a maximum depth of 252.5 masl.</li> </ul>	d.b. The licensee will contact a well contractor in the event of a well malfunction and the property will be provided a temporary water supply within 24 hours, if the issue cannot be easily determined and rectified.
<ul> <li>f. Prepare Phase 6 for extraction.</li> <li>g. Remove wooded feature in Phase 6 (see Section N. Report Recommendations - Natural Environment note "o").</li> <li>7. Phase 6</li> </ul>	d.c. The well contractor will contact the resident/owner with the supply issue and rectify the problem as expediently as possible, provided the landowner gives authorization for the work. If the issue raised by the landowner is related to loss of water supply, the licensee will have a consultant/contractor determine the likely causes of the loss of water supply, which can result from a number of factors, including pump failure (owner's expense), extended overuse of the well (owner's
<ul> <li>a. Strip Phase 6 and use the material for progressive rehabilitation in Phases 4, 5 and existing Licence #5499.</li> <li>b. Prior to extraction commencing in Phase 6, side sloping within Phase 3 shall be completed.</li> <li>c. Extract Phase 6 in a southerly direction from Phase 5. At the commencement of extraction, complete a noise audit to ensure the site is meeting NPC 300 Noise Guidelines at the nearest sensitive receptors. Noise audit records shall be kept by the licensee and</li> </ul>	<ul><li>expense) or lowering of the water level in the well from potential quarry interference (licensee expense). This assessment process would be carried out at the expense of the licensee and the results provided to the landowner.</li><li>d.d. If it has been determined that the quarry caused the water supply interference, the quarry shall continue to supply water at</li></ul>
made available to agencies upon request. d. Phase 6 may be extracted to a maximum depth of 252.5 masl. e. Complete progressive and final rehabilitation of the West Extension.	<ul> <li>the licensee's expense until the problem is rectified. The following mitigation measures shall be considered and the appropriate measure(s) implemented at the expense of the licensee:</li> <li>adjust pump pressure;</li> </ul>
<ol> <li>Extraction Details</li> <li>The maximum height of a lift shall be 25 metres.</li> </ol>	<ul> <li>lowering of the pump to take advantage of existing water storage within the well;</li> <li>deepening of the well to increase the available water column;</li> <li>widening of the well to increase the available storage of water;</li> <li>relocation of the well to another area on the property;</li> </ul>

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.

5. Internal haul road locations will vary as extraction progresses and will be located on the quarry floor with the exception of the at grade roadway crossing between the South Extension and existing Licence #5499. 6. Blasted aggregate will be transported back to existing Licence #5499 for processing and shipping.

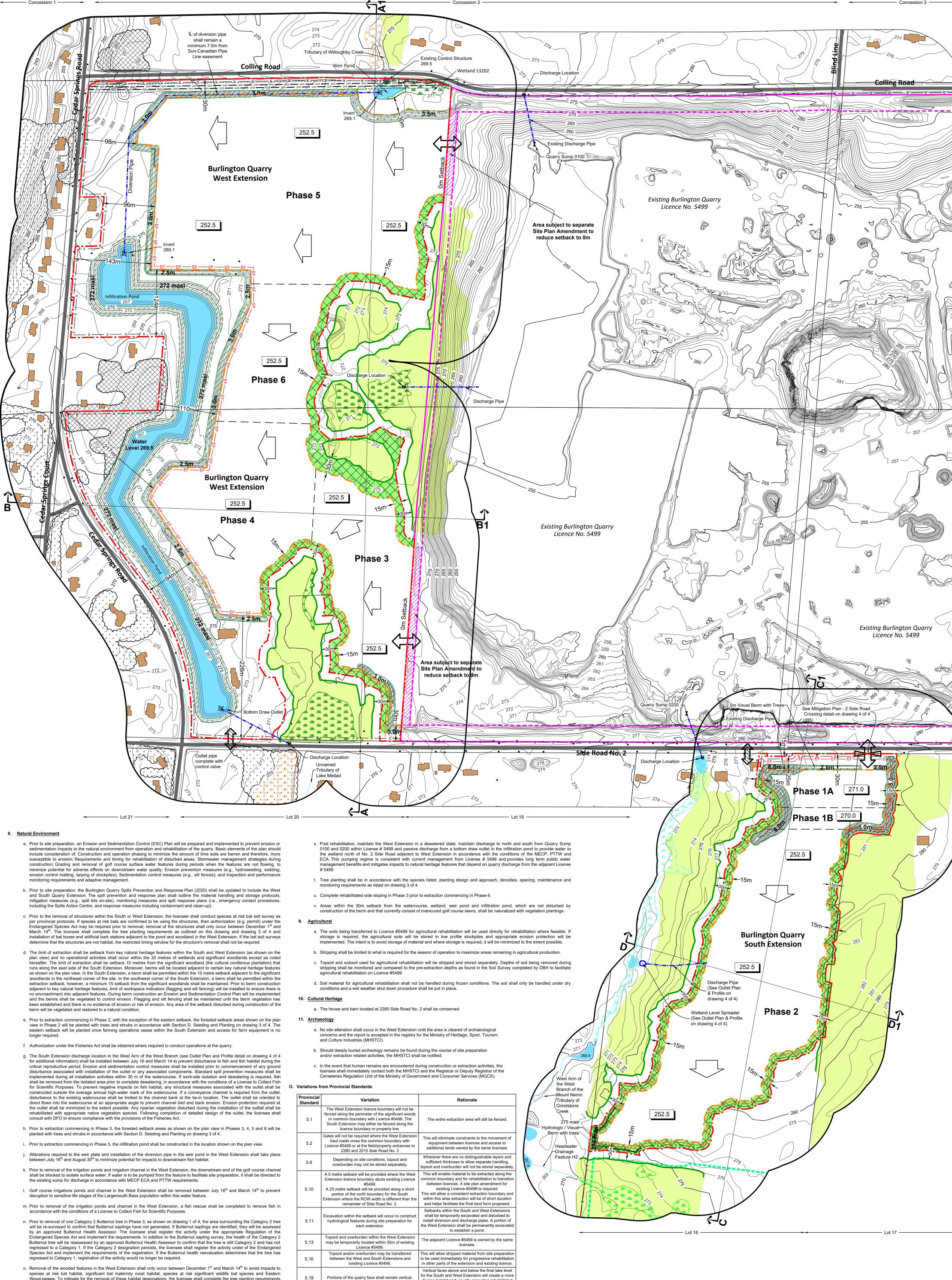
 only at the request of a landowner would a cistern be installed. e. If the issue raised by the land owner is related to water quality, the licensee will have a consultant/contractor determine the likely causes of the change in water quality, and review monitoring results at the quarry and background monitoring results from the baseline well survey to determine if there is any potential correlation with the quarry. If it has been determined that the quarry caused a water quality issue, the quarry shall continue to supply water at the licensee's expense until the problem is rectified. The

drilling multiple wells: and

### abilitation includes drills, front-end loaders, graders, on N. Report Recommendations for additional details n the South and West Extension shall be hauled to

# iquid Fuels Handling Code.

licensee shall be responsible for restoring the water supply by replacing the well or providing a water treatment system. Only at the request of a landowner would a cistern be supplied. The licensee is responsible for the expense to restore the water quality.

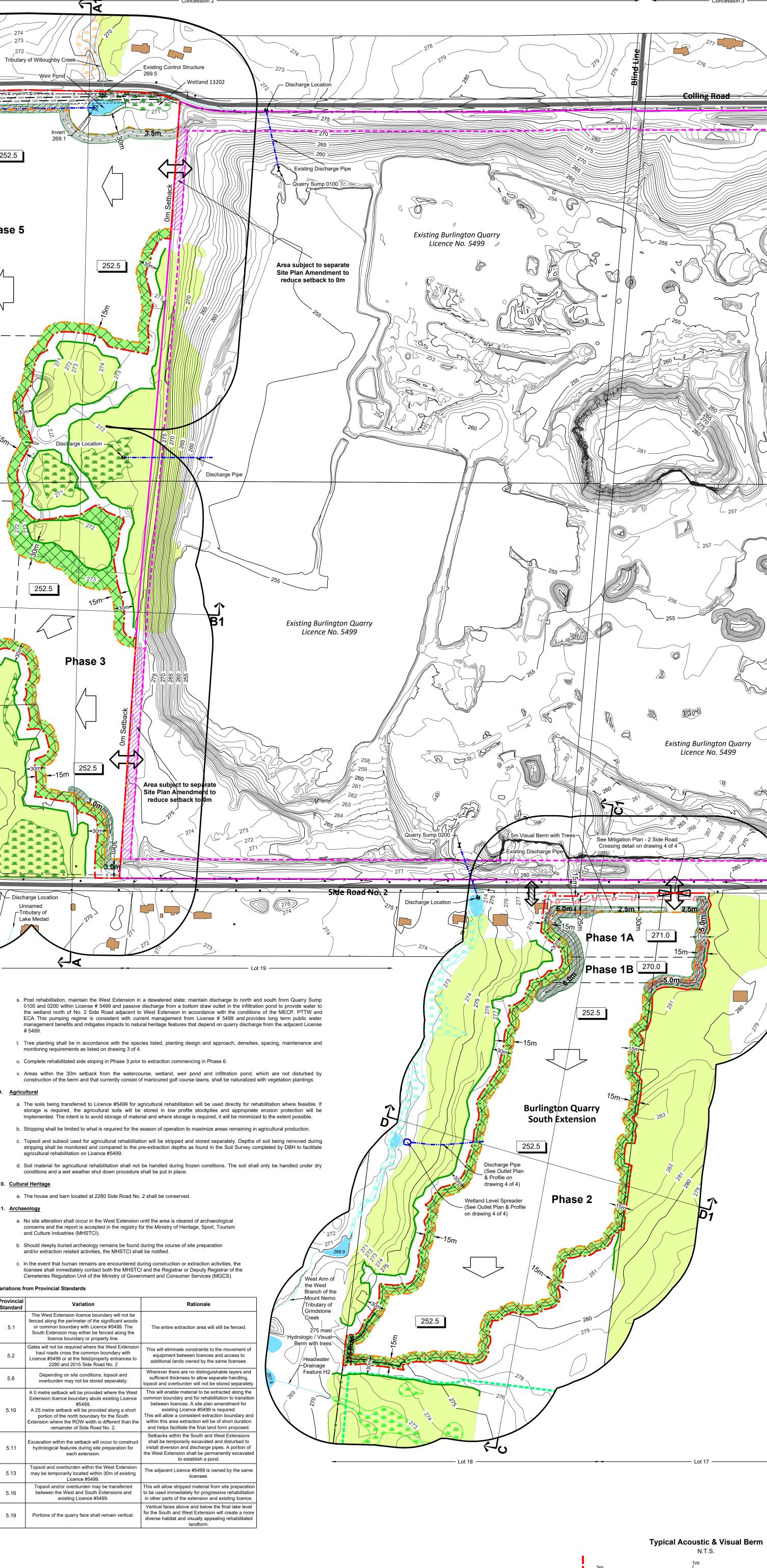


Wood-pewee. To mitigate for the removal of these habitat designations, the licensee shall complete the tree planting requirements as outlined on this drawing and drawing 3 of 4; install bat boxes and artificial bark stations adjacent to the pond and woodland in the West Extension.

p. Prior to the removal of the three structures in the West Extension (Phase 3 - BSNO R1, Phase 5 - BSNO E and in the setback where the pond is to be constructed - BSNO B) as shown on drawing 1 of 4, the licensee shall register the activity under section 23.5, O.Reg. 242/08 of the Endangered Species Act and implement the requirements of the registration. BSNO C shall not be

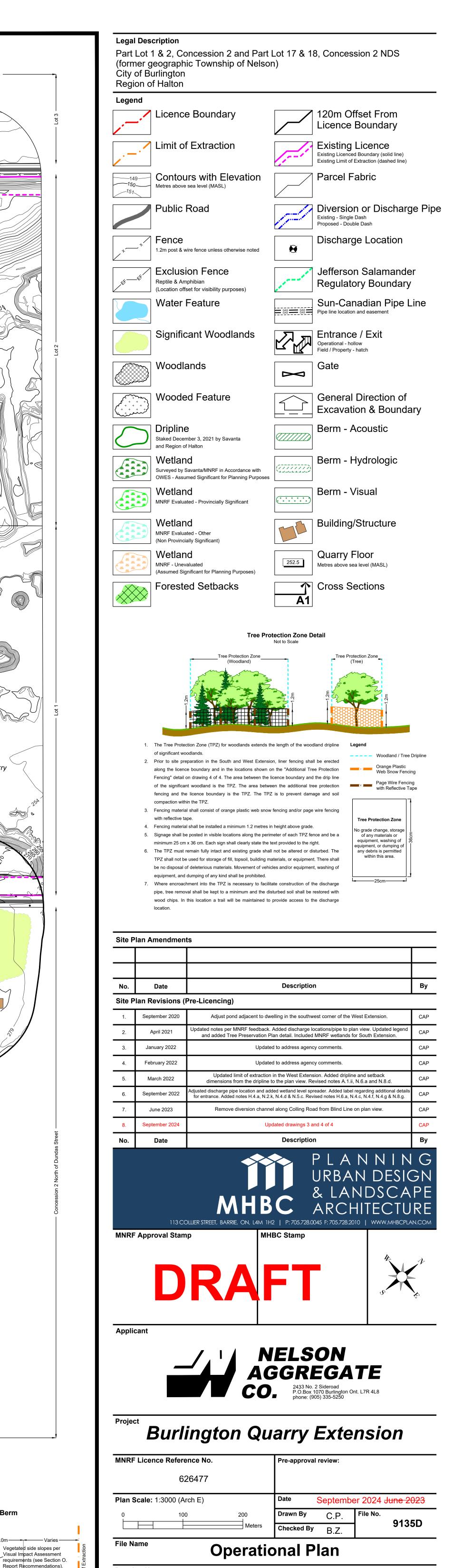
q. Complete rehabilitation of the site in accordance with the requirements outlined on drawing 3 of 4 to create key natural heritage and key hydrologic features, including wetlands, lakes and forested areas.

r. As part of rehabilitation of the site, regrade the area along the north boundary of Phase 3, as shown on drawing 3 of 4 to provide surface water flow to the adjacent wetland to reinstate its catchment area.



Topsoil & Overburder

Existing Grade



Drawing No.	2 of 4
File Path	N:\Brian\9135D- Nelson - Project Sideways\Drawings\ARA Site Plan

File Pa ans\Extension Site Plan\CAD\9135D - Site Plan.dwq

#### **Progressive Rehabilitation** A. General

1.	Area Calculations:	
	<ul><li>i. To be extracted (total)</li><li>South Extension</li><li>West Extension</li></ul>	<b>47.4 ha</b> 14.3 ha 33.1 ha
	<ul><li>ii. To be rehabilitated (total)</li><li>South Extension</li><li>West Extension</li></ul>	<b>47.4 ha</b> 14.3 ha 33.1 ha

2. The final rehabilitated land form will include the creation of 6.4 hectares of woodland located in the setback area not proposed to be extracted and 22.3 hectares of woodland located within the rehabilitated extraction area.

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.

3. Prior to extraction commencing in Phase 6, side sloping within Phase 3 shall be completed. C. Slopes and Grading

B. Phasing

1. Progressive rehabilitation will utilize a variety of rehabilitation techniques including:

- Backfilling extraction faces and quarry floors; • Partially backfilling extraction faces to create a cliff with talus slope; or Leaving extraction faces vertical
- 2. Excess soil, as defined in Ontario Regulation 406/19 under the Environmental Protection Act, may be imported to this site for the following rehabilitation purposes: Creation of 3:1 and 2:1 slopes
  - Creation of 4:1 slopes with sculpted stepped edges Top dressing to establish vegetation • To establish the final elevations and grades depicted on the plan view
- 3. Excess soil imported for the rehabilitation purposes described above shall meet the soil quality standards set out in Table 1: "Full Depth Background Site Condition Standards", of the Rules for Soil Management and Excess Soil Quality Standards
- published by the Ministry of Environment, Conservation and Parks, as amended from time to time. 4. The South and West Extension contains approximately 1,190,000 m<sup>3</sup> of topsoil and overburden that can be used for
- rehabilitation. It is assumed that 350,000 m<sup>3</sup> will be transferred to the existing quarry for agricultural rehabilitation and some rehabilitation directly adjacent to the West Extension. As a result, 840,000 m<sup>3</sup> of on-site materials will be utilized and the maximum total amount of excess soil that may be imported to this site for rehabilitation purposes is 2,160,000 2,585,000 m<sup>3</sup>.
- 5. The licensee shall ensure that the acceptance and reuse of excess soil imported for rehabilitation purposes is compliant with Part I: Rules for Soil Management of the "Rules for Soil Management and Excess Soil Quality Standards" published by the Ministry of Environment, Conservation and Park and as amended from time to time.
- 6. The final rehabilitated landforms established in the South and/or West Extension using the rehabilitation techniques will consist of lakes, islands, shoreline wetlands, vernal pools, beach, pond, woodlands, gradually sloping grades, 2:1 and 3:1 side slopes, 4:1 side slopes with sculpted stepped edges, cliff with talus slopes, and vertical faces as shown on the plan view.
- 7.—Beach sand may be imported to establish the beach area in the South Extension. 8. — As part of rehabilitation of the site, regrade the area along the north boundary of Phase 3, as shown on this drawing to
- D. Seeding and Planting
- 1. The side slopes and backfilled portions of the guarry 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 this drawing. Open areas (such as gradually sloping grades) can provide
- as part of the rehabilitation plan. 3. The planting design and approach will be guided by the Conservation Halton Landscaping and Tree Preservation Guidelines

important habitat for pollinator insect species. Therefore, pollinator plant species will be incorporated into appropriate areas

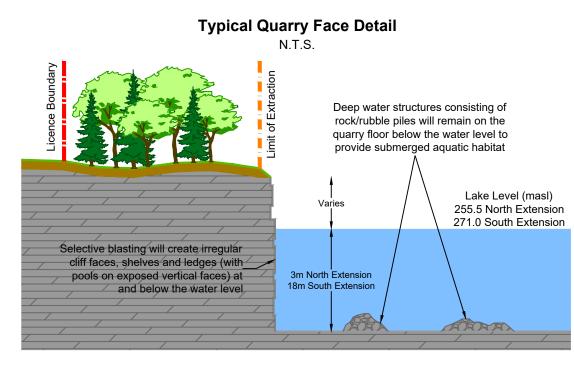
- 4. Planting densities shall be determined based on the restoration objectives and presence/absence of existing natural features. For example, planting densities will be highest where the objective is to restore/establish a woodland, and meet the definition of woodland under the Forestry Act, but may be reduced if/when objective is to establish a buffer adjacent to a naturalized area. The type of species planted will also be dependent on adjacent habitat (e.g., greater reliance on shrub plantings when restoration occurs adjacent to a meadow, and tree plantings when planting next to woodland).
- 5. Where the restoration objective is the establishment of a woodland, trees will be planted at a minimum density of 10 trees per 100 m<sup>2</sup>, in order to account for competition, stress or wildlife damage and to meet the definition of woodland under the Forestry Act. Within this area, the shrub to tree ratio will be 5:1, with trees planted no closer than 2.5 m on centre and shrubs planted between 0.75 m and 1.5 m apart.
- 6. Where the restoration objective is the establishment of a setback adjacent to a natural feature, planting densities will be dependent on the features they abut (e.g., densities will be higher when planting next to an existing forest relative to the densities when planting next to an anthropogenic or cultural feature). The planting design of a proposed setback adjacent to a natural feature will follow a 3-band approach, where woody planting densities will be highest within Band 1 (closest to the existing adjacent feature) and reduced in Band 2. No woody species will be planted in Band 3, which will be seeded with a soil and moisture-appropriate native seed mix. Where trees will be planted, the following planting densities will be applied: Band 1 - five trees per 100 m<sup>2</sup>. Where shrubs are also being proposed, these will be planted at a shrub to tree ratio of 5:1; Band 2 - three trees per 100 m<sup>2</sup>. Where shrubs are also being proposed, these will be planted at a shrub to tree ratio of 5:1.
- 7. Competing herbaceous vegetation will be controlled by placing mulch around each planted tree or shrub (50 cm radius of mulch around each planting). Rodent protection will be installed as necessary. Where access permits, planting will be watered during periods of drought (defined as a 30 day period between May and September with less than 25mm of precipitation) until establishment has occurred. 8. For planting in areas not extracted, plantings shall be monitored and evaluated by a qualified professional annually until
- "free-to-grow" conditions have been achieved. "Free-to-grow" is considered established based on a minimum stocking standard, a minimum height and freedom from competition that could impede growth. Monitoring, tending and additional planting shall occur until 1000 trees per hectare have reached "free-to-grow" condition. 9. For plantings in areas extracted, plantings shall be monitored and evaluated by a qualified professional annually until
- "free-to-grow" conditions have been achieved. "Free-to-grow" is considered established based on a minimum stocking standard, a minimum height and freedom from competition that could impede growth. Monitoring, tending and additional planting shall occur until 1000 trees per hectare have reached "free-to-grow" condition. E. Drainage

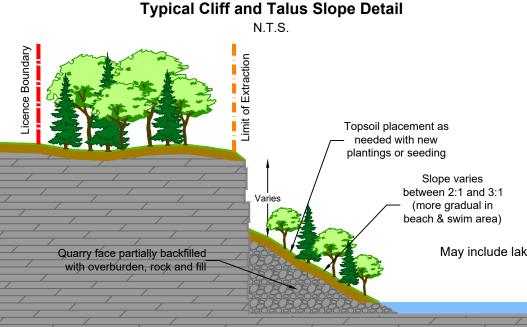
2. Once the South Extension is depleted, pumping will cease and portions of the site below the ground water table will fill with

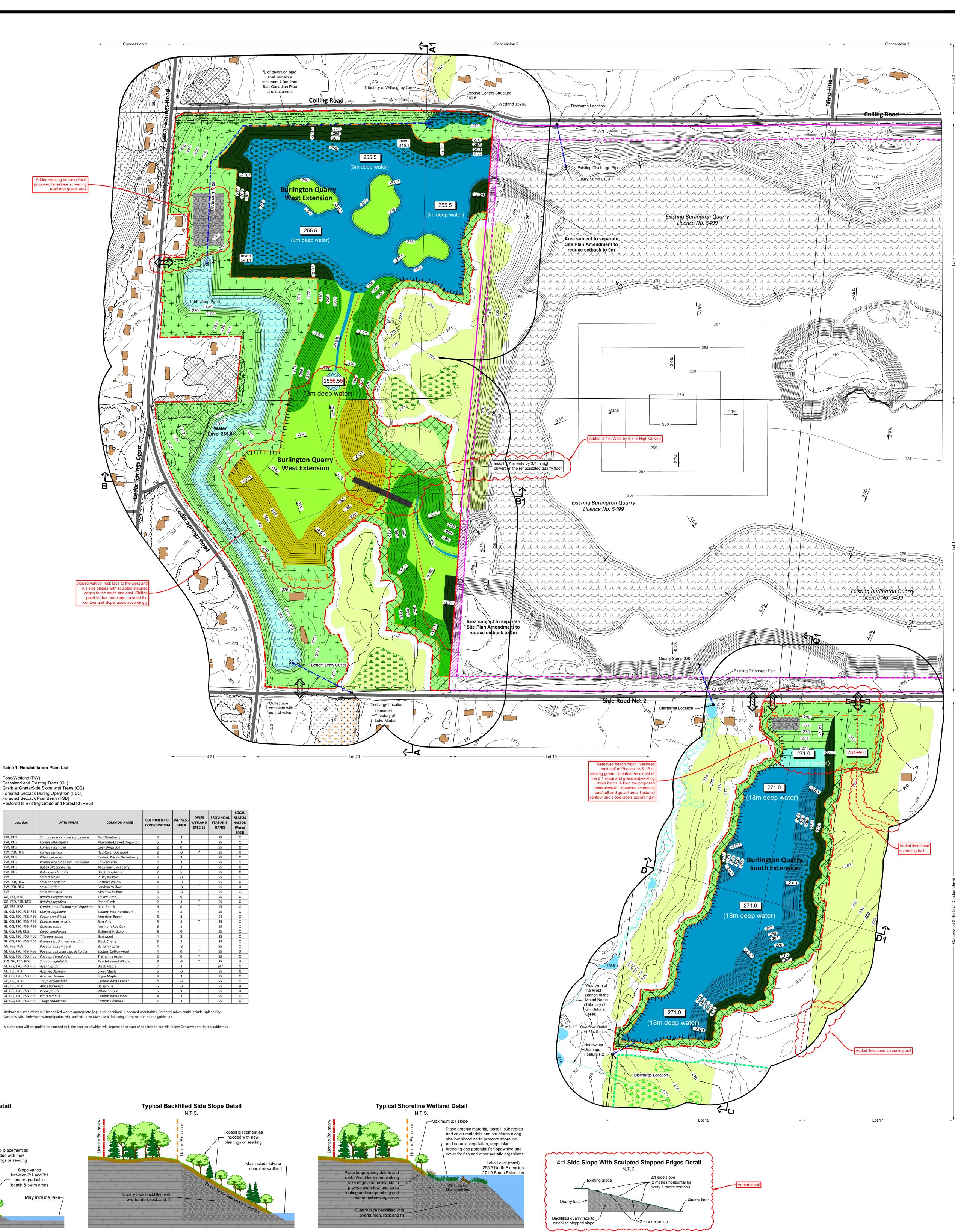
- 1. Final surface drainage will follow the rehabilitated contours and directional arrows shown on the plan view.
- 3. Runoff within the South Extension will drain into the lake.
- 4. Construct overflow outlet in the southwest corner of the South Extension.
- 5. Once the West Extension is depleted, the West Extension will remain in a dewatered state. Runoff within the West Extension will either drain north towards the lake or southeast into existing Licence #5499.
- 6. During rehabilitation the licensee shall maintain discharge to fish habitat to the north and south from Quarry Sump 0100 and 0200 within License #5499 and passive discharge from a bottom draw outlet in the infiltration pond to provide water to the
- wetland north of No. 2 Side Road adjacent to West Extension. 7. During rehabilitation the licensee shall operate in accordance with the conditions of the MECP, PTTW and ECA for the ongoing dewatering of the site. This pumping regime is consistent with current management from License #5499 and
- provides long term public water management benefits and mitigates impacts to natural heritage features that depend on quarry discharge from the adjacent License #5499. 8. The licensee has committed to: conveying entered into an agreement with Conservation Halton to convey the site into public
- ownership and to maintain the West Extension in a dewatered state by maintaining the pumping regime from License #5499 to provide long-term public water management benefits and mitigate impacts on natural heritage features which depend on quarry discharge from the adjacent License #5499. 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 EarthFX Inc., Savanta and Tatham Engineering, dated March 2022, as may be amended from the time to time with approval from MNRF, in consultation with NEC, Region of Halton, City of Burlington and Conservation Halton.

Final Rehabilitation A. General

- 1. The final rehabilitation of the site is to create a landform for ecological conservation, water management, aquaculture and recreation
- 2. All equipment shall be removed from the South and West Extension.
- 3. No internal aggregate haul roads shall remain in either Extension. Two internal access roads shall remain as part of the final landform.
- 4. The residence and barn at 2280 Side Road No. 2 in the South Extension shall remain.
- 5. The residence and barn located at 2015 Side Road No. 2 in the southwest corner of the West Extension shall remain. 6. A The field/property access entrances/exits identified on the plan view of this drawing shall remain to access the residence
- and barn located at 2280 and 2015 Side Road No. 2 as well as the gravel areas and limestone screening trails.
- 7. The groundwater table post rehabilitation varies between 263.5 masl to 271 masl in the South Extension and 255.5 masl to 265 masl in the West Extension (EarthFX 2020) or ±269 masl if the West Extension is not maintained in a dewatered state.
- 8. The licensee, prior to the surrender of the licence, shall complete a Record of Site Condition for the Extensions in accordance with the Environmental Protection Act.
- 9. In the event that a third-party agreement is not arranged prior to site surrender, the licensee will be responsible to maintain the site in the condition consistent with this approved rehabilitation plan
- 9. The licensee has entered into an agreement with Conservation Halton for the conveyance of this site following surrender of the licence. Prior to surrender of the Aggregate Resources Act licence the licensee shall define the transition of the site to Conservation Halton and the prerequisite for licence surrender to the satisfaction of the MNR.



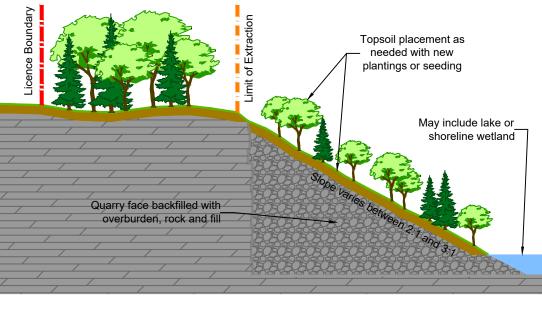




#### Pond/Wetland (PW) Grassland and Existing Trees (GL) Gradual Grade/Side Slope with Trees (GG) Forested Setback During Operation (FSO)

s area is now outs mit of extraction

Location	LATIN NAME	COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	OWES WETLAND SPECIES	PROVINCIAL STATUS (S- RANK)	LOCAL STATUS HALTON (Varga 2005)
FSB, REG	Sambucus racemosa ssp. pubens	Red Elderberry	5	3		S5	Х
FSB, REG	Cornus alternifolia	Alternate-Leaved Dogwood	6	3		S5	Х
FSB, REG	Cornus racemosa	Grey Dogwood	2	0	Т	S5	Х
PW, FSB, REG	Cornus sericea	Red-Osier Dogwood	2	-3	*	S5	Х
FSB, REG	Ribes cynosbati	Eastern Prickly Gooseberry	4	3		S5	Х
FSB, REG	Prunus virginiana var. virginiana	Chokecherry	2	3		S5	Х
FSB, REG	Rubus allegheniensis	Alleghany Blackberry	2	3		S5	Х
FSB, REG	Rubus occidentalis	Black Raspberry	2	5		S5	Х
PW	Salix discolor	Pussy Willow	3	-3	I	S5	Х
PW, FSB, REG	Salix eriocephala	Cottony Willow	4	-3	Т	S5	Х
PW, FSB, REG	Salix interior	Sandbar Willow	1	-3	Т	S5	U
PW	Salix petiolaris	Meadow Willow	3	-3	I	S5	Х
GG, FSB, REG	Betula alleghaniensis	Yellow Birch	6	0	Т	S5	Х
GG, FSO, FSB, REG	Betula papyrifera	Paper Birch	2	3	Т	S5	Х
GG, FSB, REG	Carpinus caroliniana ssp. virginiana	Blue-Beech	6	0	Т	S5	Х
GL, GG, FSO, FSB, REG	Ostrya virginiana	Eastern Hop-Hornbeam	4	3		S5	Х
GL, GG, FSO, FSB, REG	Fagus grandifolia	American Beech	6	3		S4	Х
GL, GG, FSO, FSB, REG	Quercus macrocarpa	Burr Oak	5	3	Т	S5	Х
GL, GG, FSO, FSB, REG	Quercus rubra	Northern Red Oak	6	3		S5	Х
GL, GG, FSB, REG	Carya cordiformis	Bitternut Hickory	6	0		S5	Х
GL, GG, FSO, FSB, REG	Tilia americana	Basswood	4	3		S5	Х
GL, GG, FSO, FSB, REG	Prunus serotina var. serotina	Black Cherry	3	3		S5	Х
GG, FSB, REG	Populus balsamifera	Balsam Poplar	4	-3	Т	S5	Х
GL, GG, FSO, FSB, REG	Populus deltoides ssp. deltoides	Eastern Cottonwood	4	0	Т	S5	U
GL, GG, FSO, FSB, REG	Populus tremuloides	Trembling Aspen	2	0	Т	S5	Х
PW, GG, FSB, REG	Salix amygdaloides	Peach-Leaved Willow	6	-3	Т	S5	U
GL, GG, FSO, FSB, REG	Acer nigrum	Black Maple	7	3		S4?	Х
GG, FSB, REG	Acer saccharinum	Silver Maple	5	-3	Í	S5	Х
GL, GG, FSO, FSB, REG	Acer saccharum	Sugar Maple	4	3		S5	Х
GG, FSB, REG	Thuja occidentalis	Eastern White Cedar	4	-3	Т	S5	х
GG, FSB, REG	Abies balsamea	Balsam Fir	5	-3	Т	S5	U
	Picea glauca	White Spruce	6	3	Т	S5	U
GL, GG, FSO, FSB, REG	Pinus strobus	Eastern White Pine	4	3	Т	S5	х
	Tsuga canadensis	Eastern Hemlock	7	3	Т	S5	X





	•		8, Concession 2 NDS
Legend			
,. <u> </u>	Licence Boundary		120m Offset From Licence Boundary
. — .	Limit of Extraction	<u></u>	Existing Licence Existing Licenced Boundary (solid line) Existing Limit of Extraction (dashed line
149 150 151	Contours with Elevation		Parcel Fabric
	Public Road		Diversion or Discha Existing - Single Dash Proposed - Double Dash
×_+	Fence 1.2m post & wire fence unless otherwise noted		Discharge Location
	Water Feature	GAS GAS GAS GAS	Sun-Canadian Pipe Pipe line location and easement
	Lake / Pond Licence # 5499	er	Jefferson Salamano Regulatory Bounda
	Significant Woodlands		Entrance / Exit
	Woodlands		Gate
$ \begin{pmatrix} & + & + & + \\ + & + & + & + \\ + & + & +$	Wooded Feature		Building/Structure
	Wetland Surveyed by Savanta/MNRF in Accordance with OWES - Assumed Significant for Planning Purposes	3.0.1	Proposed Final Gra and Slope
	Wetland MNRF Evaluated - Provincially Significant	270.5	Final Elevation of Land and Lake (MA
	Wetland MNRF Evaluated - Other		Cross Sections

Legal Description

	120m Offset From
	Licence Boundary
	Existing Licence Existing Licenced Boundary (solid line) Existing Limit of Extraction (dashed line)
	Parcel Fabric
	Diversion or Discharge Pipe Existing - Single Dash Proposed - Double Dash
Ð	Discharge Location
S GAS GAS	Sun-Canadian Pipe Line
	Jefferson Salamander Regulatory Boundary
	Entrance / Exit
$\checkmark$	Gate
	Building/Structure
-1%	Proposed Final Grade and Slope

Rehabilitated Landform

(Non Provincially Significant)

Wetland

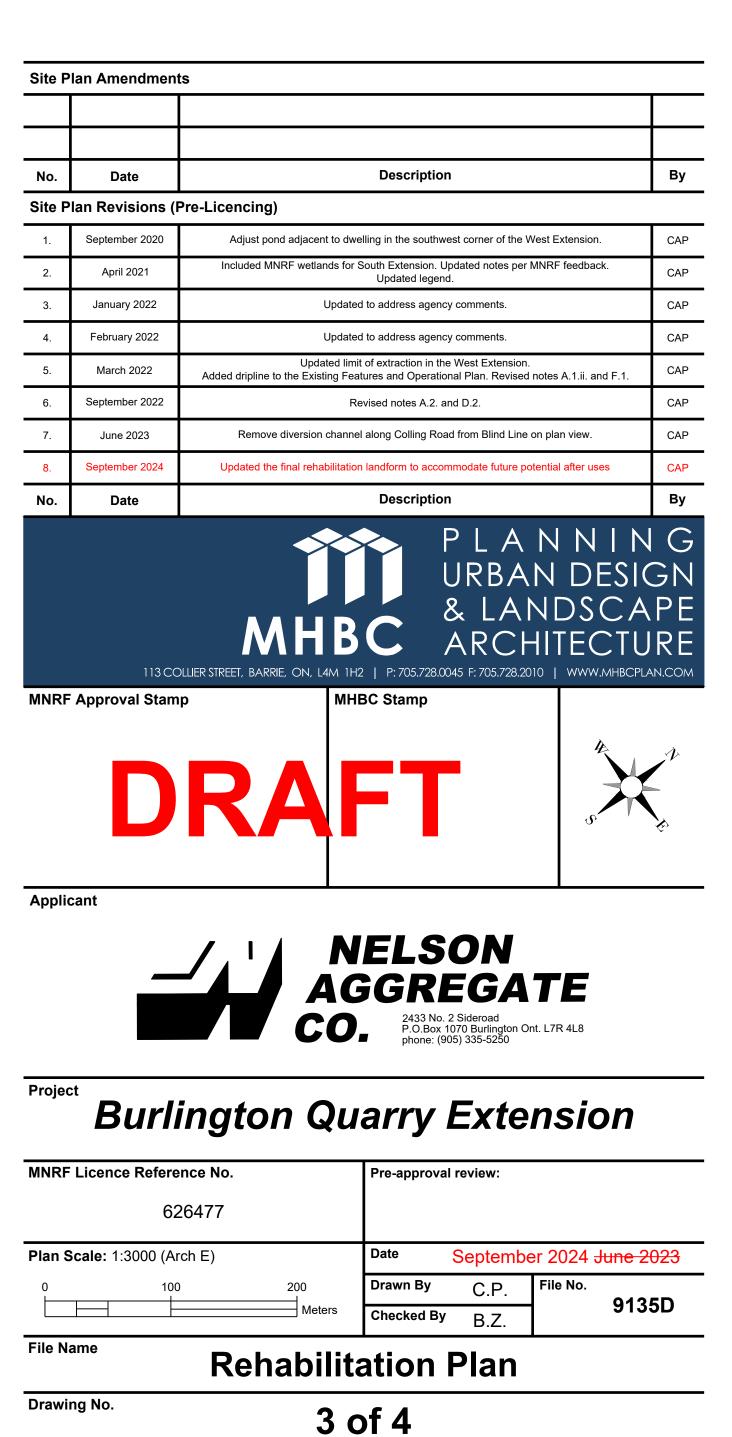
MNRF - Unevaluated

(Assumed Significant for Planning Purposes)

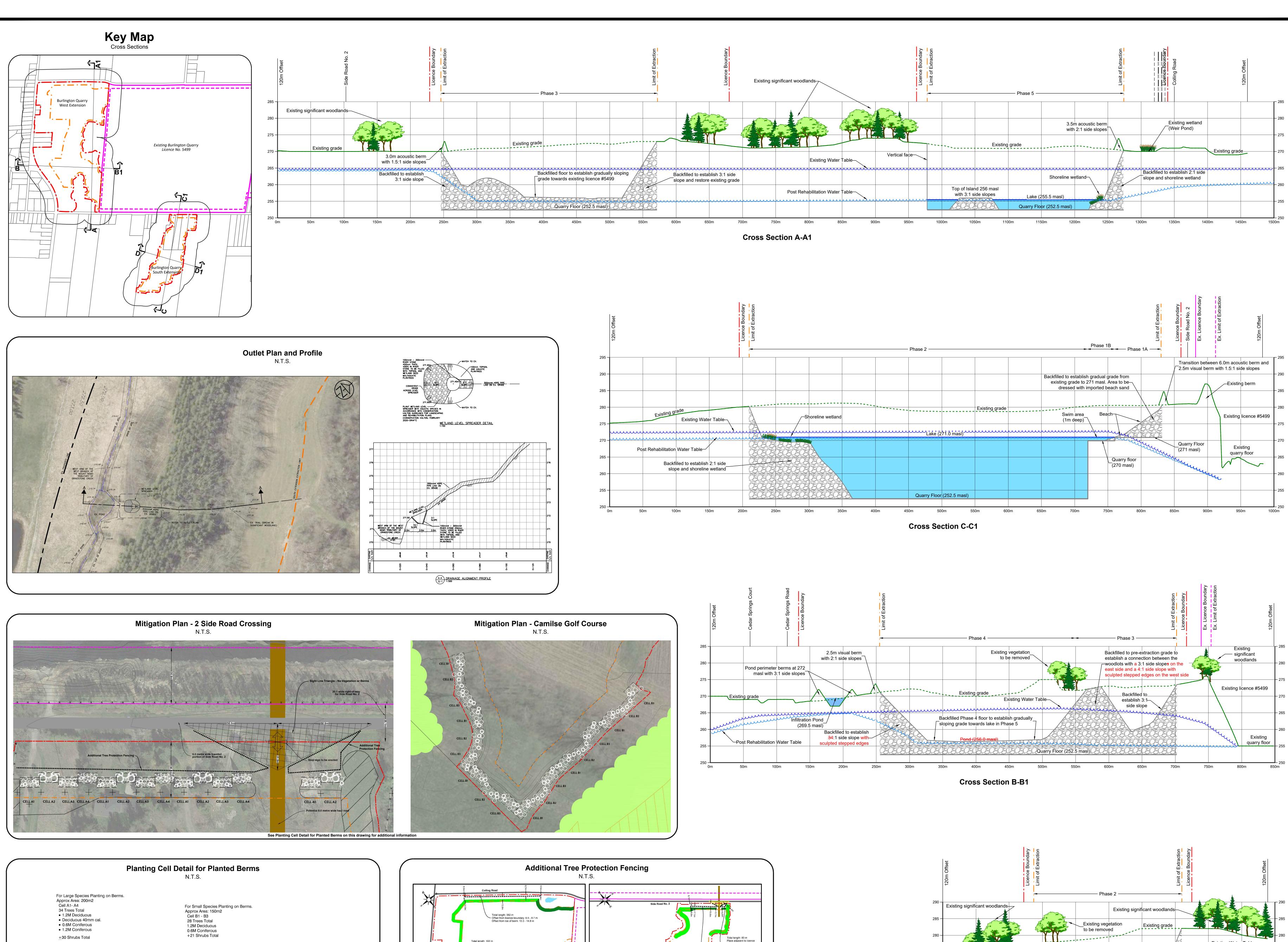
	$\searrow$	Beach
		Pond
		<del>Swim area</del> Shallow lake
		Lake
		Wetland / shoreline wetland
	<u>(Lun</u>	Vertical face
{		4:1 slope - sculpted stepped edges (see detail on this drawing)
		3:1 slope (tree planting)
		2:1 slope (tree planting)
	+ + + + +	Setback - grassland & existing trees
		Setback - forested - planted during operations
		Setback - forested - planted when berms removed
		Restored catchment area and ecological linkage (tree planting)
		Gradual grade (tree planting & vernal pools) or islands
{	605050	Gravel area
2		Internal road - 6 m wide

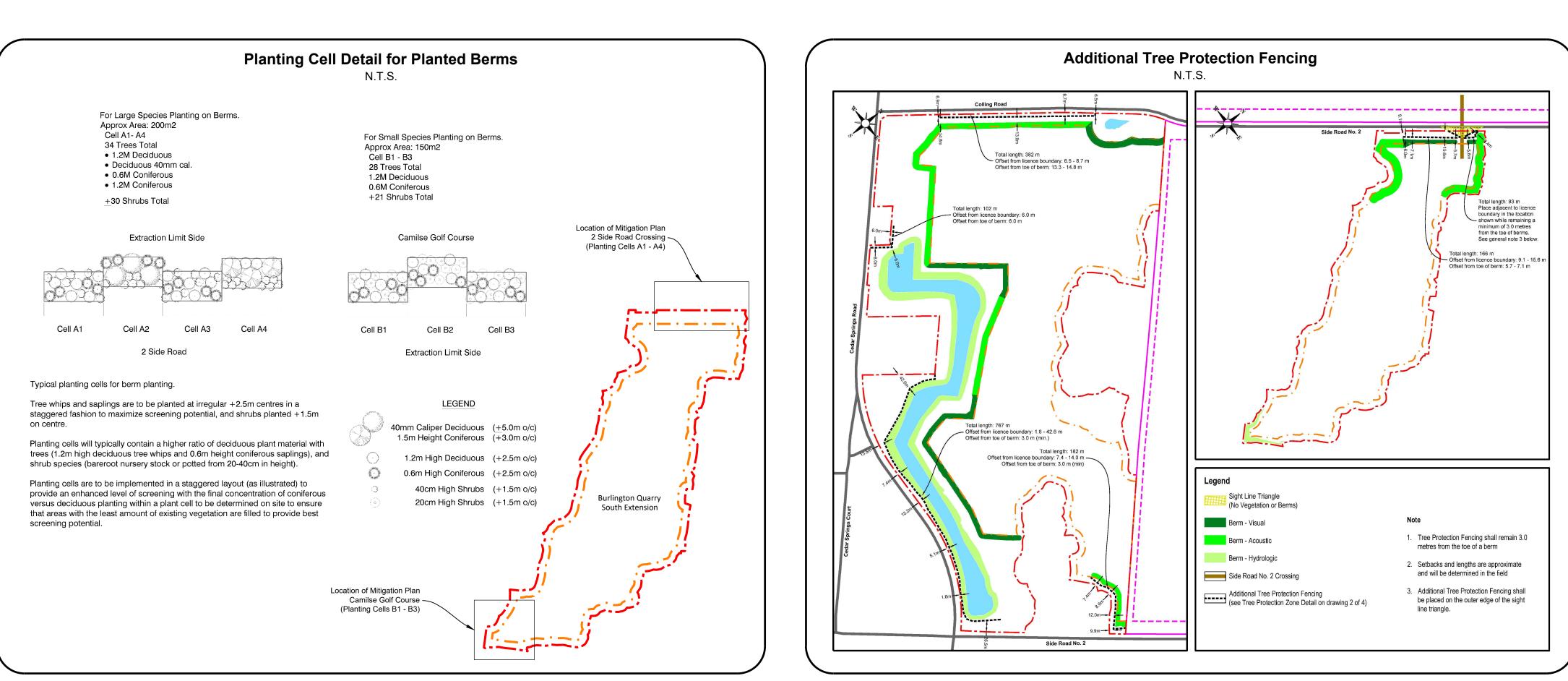
Limestone screening trail - 3 m wide

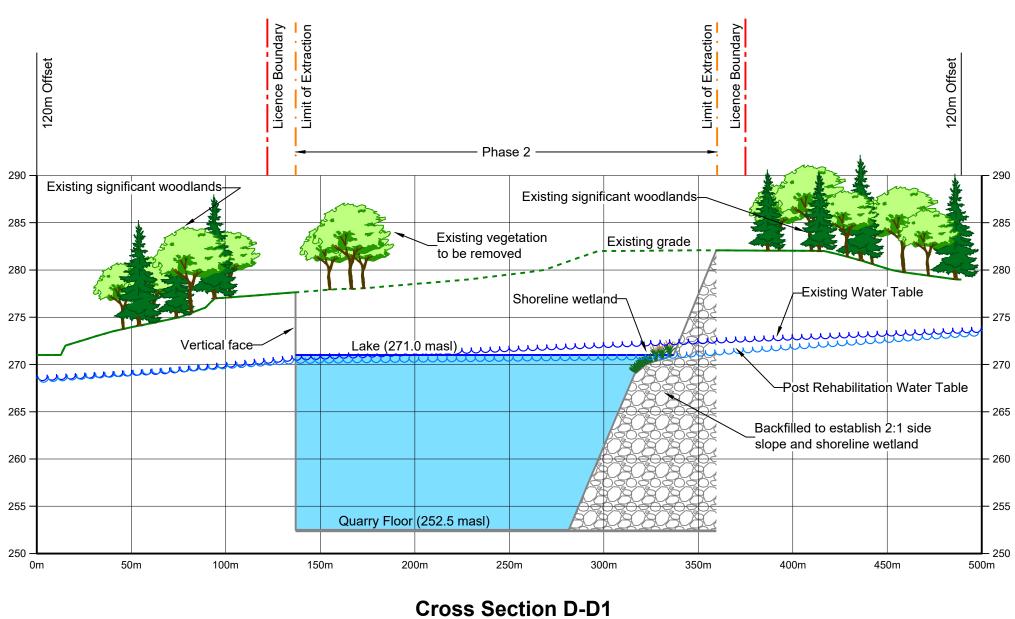
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Legal Description			
-	ncession 2 and Part c Township of Nelso	Lot 17 & 18, Conces n)	ssion 2 NDS
Legend			
Licence	Boundary		
Limit of	Extraction		
Existing	Licence		
Existing	Limit of Extractior	1	
120m C	ffset From Licence	e Boundary	
Existing	Grade - Removed	d / Altered	
Existing	Grade - Undisturt	bed	
Quarry	Floor / Face		
Berm			
Existing	Water Table		
Post Re	habilitation Water	Table	

Backfilled

Lake or Pond

Site P	lan Amendmen	ts		
No.	Date		Description	Ву
Site P	lan Revisions (	Pre-Licencing)		
1.	April 2021	Added a	additional cross section labels for clarity.	CAP
2.	January 2022	Upo	dated to address agency comments.	CAP
3.	February 2022	· · · · · · · · · · · · · · · · · · ·	gs 1, 2 and 3 of 4 to address agency comments.	CAP
4.	March 2022	Added dripline	limit of extraction in the West Extension. to the Existing Features and Operational Plan.	CAP
5.	September 2022		igation Plan - 2 Side Road Crossing, Mitigation Plan - Camilse Golf Planted Berms, and Additional Tree Protection Fencing details.	CAP
6.	June 2023	Remove diversion channel along	Colling Road from Blind Line on plan view for drawings 1, 2 and 3.	CAP
7.	September 2024	· · · · · · · · · · · · · · · · · · ·	-B1 to reflect the final rehabilitation landform which mmodates future potential after uses	CAP
No.	Date		Description	Ву
MNRF	F Approval Stan		1H2       P: 705.728.0045       F: 705.728.2010       WWW.MHBCPLA         MHBC Stamp       Image: Comparison of the second sec	N.CON
Applic	cant 		<b>NELSON</b> <b>GGREGATE</b> <b>D.</b> 2433 No. 2 Sideroad P.O.Box 1070 Burlington Ont. L7R 4L8 phone: (905) 335-5250	
Projec	ct		uarry Extension	
MNRF	Licence Refer	ence No.	Pre-approval review:	
	6	26477		
Plan S	Scale:		Date September 2024 June 20	<del>)23</del>
	Horiz Verti		Drawn By C.P. Checked By B.Z.	
	veru		D.2.	5D
File Na		Cross	Sections	5D
File Na				5D

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