

VISUAL IMPACT ASSESSMENT REPORT

PROPOSED EXTENSION OF
THE BURLINGTON QUARRY

Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2
City of Burlington, Ontario

Date:

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Prepared for:

Nelson Aggregates

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Table of Contents

1.0	Introduction	1
1.1	Description of the Proposed Extension.....	2
1.2	Purpose	2
2.0	Background	3
2.1	Purpose and Objectives of the Niagara Escarpment Plan.....	3
2.2	Land Use Objectives for Escarpment Rural Areas	3
2.3	Land Use Objectives for Mineral Extraction Areas	4
2.4	Amendments for Mineral Resource Extraction	5
2.5	Development Criteria for Mineral Aggregate Resources	6
2.6	Scenic Resources and Landform Conservation	7
3.0	Methodology	9
4.0	Proposed Quarry Operations	11
5.0	Landscape Character	13
5.1	Site Context	13
5.2	Topography	13
5.3	Vegetation	13
5.4	Land Use	14
6.0	Descriptions of Views	15
6.1	Along Cedar Springs Road.....	15
6.2	Along Cedar Springs Court.....	16
6.3	Along Colling Road	16
6.4	Along No. 2 Side Road.....	16
7.0	Findings	18
7.1	Visual Impact on Public Roadways.....	18
7.2	Visual Impact on Nearby Residences	18
7.3	Summary of Visual Impacts.....	18
8.0	Future Rehabilitation	28

9.0 Recommendations 29

10.0 Conclusions..... 31

Figures

Figure 1 – Location Map

Figure 2 – NEP Mapping

Figure 3 – NEC Landscape Evaluation Study

Figure 4 – Assessed Views Photo Location Map

Figures 4A to 4M – Photo Record of Assessed Views

Figure 5 – Proposed Mitigation Plan

Figure 6A – 6K – Sections

Figure 7 – Rehabilitation Plan

Figure 8 – Operations Plan

Appendix A

Curriculum Vitae

1.0 Introduction

MHBC has been retained by Nelson Aggregate Co. (Nelson) to prepare a Visual Impact Report for the lands located at Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2 in the City of Burlington. The proposal contemplates two extensions to the existing Burlington Quarry (Licence No. 5499). The properties are located in the northwestern portion of the City of Burlington, in the Region of Halton, and are adjacent on the north and west sides of the existing Burlington Quarry, as shown in **Figure 1**.

The 2019 NEC Visual Impact Assessment Technical Criteria has been considered in the preparation of this Visual Impact Report. This report aims to satisfy the NEC's process for Visual Impact Assessments through:

- Establishing a baseline for the existing conditions through the following:
 - Establishment of a study area (within a 1.0 km radius of proposed extension sites);
 - Review of aerial photography, topographic mapping and review of existing features within the study area and surrounding context;
 - Initial on-site reconnaissance and photo inventory of existing conditions (conducted during leaf-off condition to depict worst case scenario).
- Identifying the physical changes in an accurate and objective and reproducible manner through the following:
 - Creation of viewshed location mapping based on desktop analysis;
 - On-site review and photography (conducted during leaf-off condition to depict worst case scenario);
 - Listing of all base material used, including sources.
- Assessing the impact of change on the Escarpment visual, landscape and scenic resources through the following:
 - Identification of areas of note and individual receptors / viewsheds where further study was deemed to be warranted;
 - Consideration of physical changes recommended through other reports (e.g. noise study);
 - Further on-site review and study where deemed to be warranted.

1.1 Description of the Proposed Extension

SITE DESCRIPTION

The proposed West Extension is bounded by Cedar Springs Road to the West, Colling Road to the North, the existing Burlington Quarry to the East, and No. 2 Sideroad to the South. The proposed South Extension is bounded by No.2 Sideroad to the North, Camisle Golf Course to the West, and agricultural properties to the East and South. This property is currently designated Escarpment Rural Area under the Niagara Escarpment Plan (2017).

West Extension

The proposed West Extension is approximately 60 hectares (ha), with a proposed extraction area of 35.7 hectares. The lands comprising the West Extension are currently used as the Burlington Springs Golf Club. It contains two structures towards the centre of the property used as a club house and garage, and three structures in the southern portion of the property used for golf course operation and ancillary functions.

South Extension

The proposed South Extension is approximately 18.3 ha, with a proposed extraction area of 14.5 ha. The South Extension is currently used for agricultural purposes. It contains two residential domiciles and four shed/storage buildings. Immediately to the west is a provincially significant woodland. This property is currently designated Escarpment Rural Area under the Niagara Escarpment Plan (2017).

1.2 Purpose

The purpose of this report is to identify and describe the visual resources of the subject lands in the context of the proposed operations and to assess and suggest mitigation measures for any perceived visual impacts on surrounding lands and roads from the publicly accessible domain.

A key component of this report is to determine how to mitigate changes in the landscape views from the public domain toward the proposed quarry extension in order to limit the change to the open landscape character of the area. This includes views from public roads / public spaces (golf courses), and from publicly accessible roads/areas adjacent to residential properties. Recommended mitigation measures were developed to ensure that the integrity of the open landscape character of the area would be maintained, and that there would be no objectionable visual impacts on the surrounding uses and features as a result of the proposed quarry operations.

2.0 Background

The Niagara Escarpment includes a variety of topographic features and land uses extending 725 kilometres from Queenston on the Niagara River to the islands off Tobermory on the Bruce Peninsula. The following outlines the relevant designations and objectives of the Niagara Escarpment Plan that have been considered in this report. **Figure 2** shows the land designations within the study area, as found in the Niagara Escarpment Plan.

2.1 Purpose and Objectives of the Niagara Escarpment Plan

The Purpose of the Niagara Escarpment Planning and Development Act is:

“To provide for the maintenance of the Niagara Escarpment and land in its vicinity substantially as a continuous natural environment and to ensure only such development occurs as is compatible with that natural environment.”

The objectives of the Niagara Escarpment Plan are:

1. To protect unique ecologic and historic areas;
2. To maintain and enhance the quality and character of natural streams and water supplies;
3. To provide adequate opportunities for outdoor recreation;
4. To maintain and enhance the open landscape character of the Niagara Escarpment in so far as possible, by such means as compatible farming or forestry and by preserving the natural scenery;
5. To ensure that all new development is compatible with the purpose of the Plan;
6. To provide for adequate public access to the Niagara Escarpment; and
7. To support municipalities within the Niagara Escarpment Plan Area in their exercise of the planning functions conferred upon them by the Planning Act.

2.2 Land Use Objectives for Escarpment Rural Areas

The following objectives were extracted from Section 1.5 of the Niagara Escarpment Plan:

1. To maintain the scenic resources of lands in the vicinity of the Escarpment and the open landscape character of the Escarpment.

2. To conserve cultural heritage resources, including features of interest to First Nation and Métis communities.
3. To encourage forest management and recreation.
4. To provide for compatible rural land uses.
5. To encourage agriculture and protect agricultural lands and prime agricultural areas.
6. To provide a buffer for ecologically sensitive areas of the Escarpment.
7. To provide for the consideration of new Mineral Resource Extraction Areas which can be accommodated by an amendment to this Plan.

2.3 Land Use Objectives for Mineral Extraction Areas

The following policies were extracted from Section 1.9 of the Niagara Escarpment Plan:

The Mineral Resource Extraction Area designation includes mineral aggregate operations licensed pursuant to the Aggregate Resources Act and areas where mineral aggregate resource extraction may be permitted, subject to the policies of this Plan.

The objectives of Mineral Extraction Areas are as follows:

1. To designate Mineral Resource Extraction Areas where licensed mineral aggregate operations are permitted.
2. To minimize the impact of mineral aggregate operations on the Escarpment environment.
3. To encourage progressive rehabilitation of mineral aggregate operations.
4. To encourage rehabilitated mineral aggregate operations to be restored to a state that is of equal or greater ecological or agricultural value than the original characteristics of the site.
5. To ensure that, after a licence is surrendered, the land is re-designated to a land use designation that is compatible with the rehabilitation of the site, the designation criteria of adjacent lands, the surrounding Escarpment environment and existing land uses in the area.
6. To encourage, where possible, the integration of rehabilitated lands into the Niagara Escarpment Parks and Open Space System.

Criteria for Designation:

1. Licensed pits and quarries producing more than 20,000 tonnes annually.

2.4 Amendments for Mineral Resource Extraction

The following provisions apply to all amendments for new Mineral Resource Extraction Areas within the Niagara Escarpment Plan Area. These policies were extracted from Section 1.2.2 of the Niagara Escarpment Plan:

1. Mineral aggregate operations within a new Mineral Extraction Area producing more than 20,000 tonnes annually may be considered on lands within the Escarpment Rural Area land use designation through an amendment to the Niagara Escarpment Plan. Such an amendment will be to effect the change from Escarpment Rural Area to Mineral Resource Extraction Area.
2. In considering applications for amendments to the Niagara Escarpment Plan to re-designate Escarpment Rural Area to Mineral Resource Extraction Area designation, the demonstration of need for mineral aggregate resources, including any type of supply/demand analysis, shall not be required, notwithstanding the availability, designation or licensing for extraction of mineral aggregate resources locally or elsewhere.
3. In evaluating applications for amendments to the Niagara Escarpment Plan to re-designate Escarpment Rural Area to Mineral Resource Extraction Area, the following matters, in addition to all other relevant policies of this Plan, will be considered:
 - a) protection of the Escarpment environment;
 - b) opportunities for achieving the objectives of the Niagara Escarpment
 - c) Planning and Development Act through the final rehabilitation of the site;
 - d) the protection of prime agricultural areas, the capability of the land for agricultural uses, and its potential for rehabilitation for agricultural uses; and opportunities to include rehabilitated lands in the Niagara Escarpment Parks and Open Space System.
4. Amendment applications must be accompanied by:
 - a) information on the location of the site in relation to the Escarpment and to the
 - b) Escarpment Rural, Protection and Natural Area designations;
 - c) information to support the requirements of this Plan, along with information submitted to meet the requirements of the Aggregate Resources Act, including site plans and reports submitted under that Act; and
 - d) information on the ultimate use of the site in conformity with the applicable land use designations.

2.5 Development Criteria for Mineral Aggregate Resources

The following development criteria were extracted from Section 2.9 of the Niagara Escarpment Plan:

The objective is to ensure that mineral aggregate operations and their accessory uses are compatible with the Escarpment environment and to support a variety of approaches to rehabilitation of the natural environment and provide for re-designation to land use designations compatible with the adjacent land uses.

3. In addition to all other relevant policies of this Plan, proposals for mineral aggregate operations including wayside pits and quarries, accessory uses, accessory facilities and haul routes shall:
 - c) demonstrate how the Escarpment's scenic resources and open landscape character will be maintained and where possible enhanced during and after the extraction;
 - g) minimize negative impacts of mineral aggregate operations and their accessory uses on surrounding land uses;
5. The mineral aggregate operation shall be screened while it is in progress and, where possible, prior to extraction in a manner compatible with the surrounding visual environment.
6. Screening shall incorporate the following:
 - a. overburden material in the form of a berm with varied heights and widths, supplemented with native tree, shrub and vegetative plantings;
 - b. vegetative screen plantings are to be of compatible species and sizes to permit only very limited visual contact from the surrounding landscape;
 - c. all plantings should be properly maintained to ensure continued survival and good growth rates; and
 - d. where the existing forest is adequate to be considered as an effective screen along the perimeter of the site, no additional artificial berming or stockpiling of overburden materials will be permitted within the forested area being used as a natural screen.
11. Rehabilitation shall incorporate the following:
 - d) All excavated pit and quarry walls are to be sloped and rehabilitated in accordance with best practices. On sites where a higher standard of rehabilitation is justified (e.g., to improve land use compatibility) or on sites

where topsoil and/or land fill material is scarce, alternative approaches to slope standards may be applied. Sections of pit or quarry faces may be left exposed for aesthetic or educational purposes or to create habitat diversity in an approved rehabilitation plan;

- e) vegetation, including seeding, crops, trees and shrubs, shall be planted as soon as possible as part of progressive rehabilitation of the pit or quarry;
- f) rehabilitation of the site shall contribute to the open landscape character and compatible with the surrounding scenic resources;

Both the Aggregate Resources Act site plans and recommendations outlined in this report consider the development criteria policies outlined. Wherever possible, preservation of the existing vegetation, early rehabilitation style planting and enhanced screening of the proposed extension have been incorporated in the recommendations of this visual impact assessment to ensure that the extraction process is visually minimized.

2.6 Scenic Resources and Landform Conservation

The following policies were extracted from Section 2.13 the Niagara Escarpment Plan:

The objective is to ensure that development preserves the natural scenery and maintains Escarpment Related Landforms and the open landscape character of the Escarpment.

Scenic Resources

1. Development shall ensure the protection of the scenic resources of the Escarpment.
2. Where a visual impact on the scenic resources is identified as a concern by the implementing authority, a visual impact assessment shall be required.
3. A visual impact assessment shall:
 - a) establish a baseline for the existing conditions;
 - b) identify the proposed physical changes; and
 - c) assess the impact of the proposed change on the scenic resources of the Escarpment; and
 - d) propose measures to minimize any visual impacts.
4. Appropriate siting and design measures shall be used to minimize the impact of development on the scenic resources of the Escarpment, including:
 - a) establishing appropriate setbacks and maximum building heights;
 - b) changing the orientation and height of built form to reduce visibility and skylining;
 - c) clustering buildings where appropriate;
 - d) minimizing the development footprint and changes to the existing topography and vegetation;

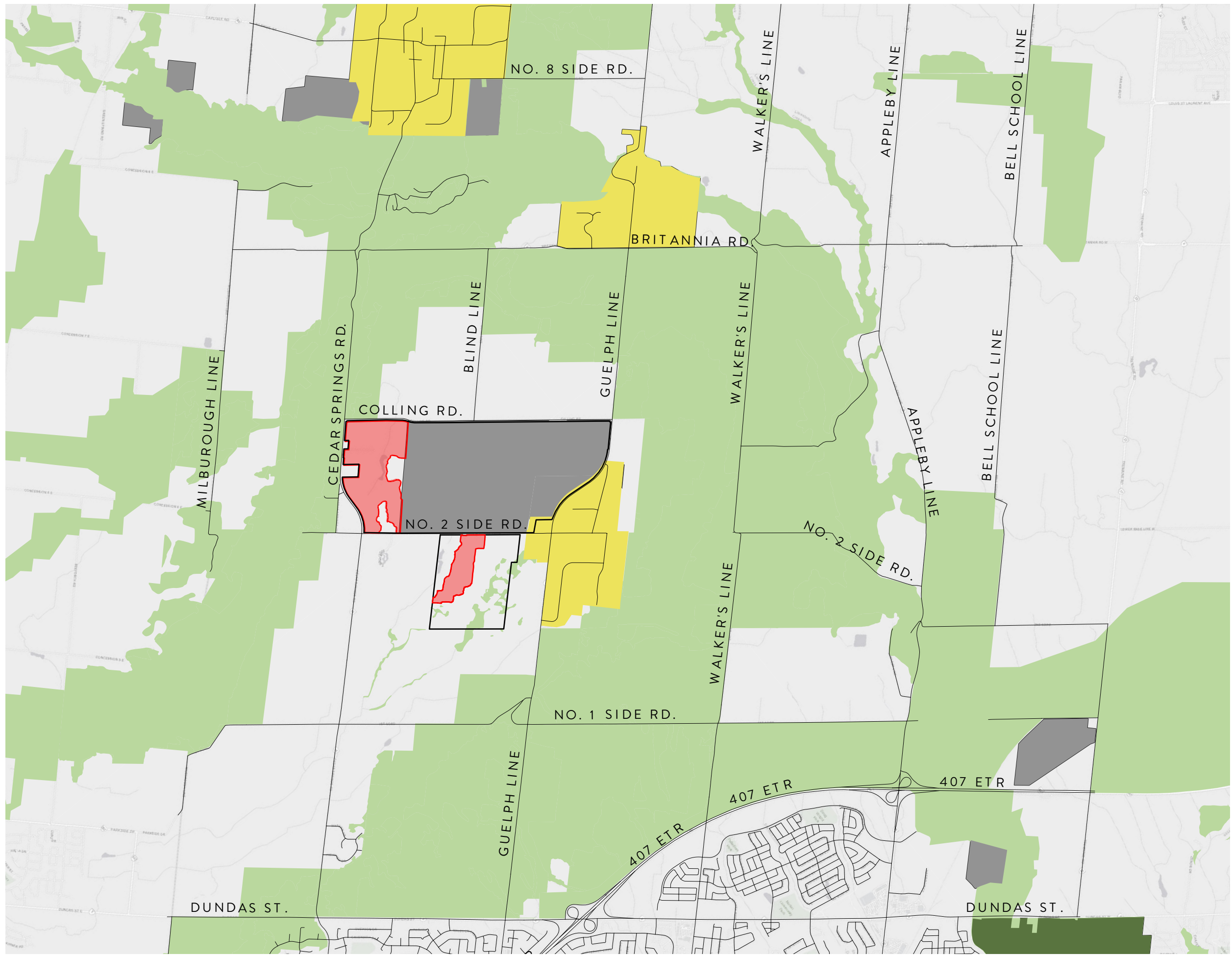


Figure 1
Location Map

Project Sideways - Quarry Expansion
Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
Town of Burlington
Halton Region

- Subject Lands
- Additional Lands Owned by Applicant
- Natural Heritage System (Provincial)
- Minor Urban Centre
- Authorized Aggregate Site
- Provincial Park

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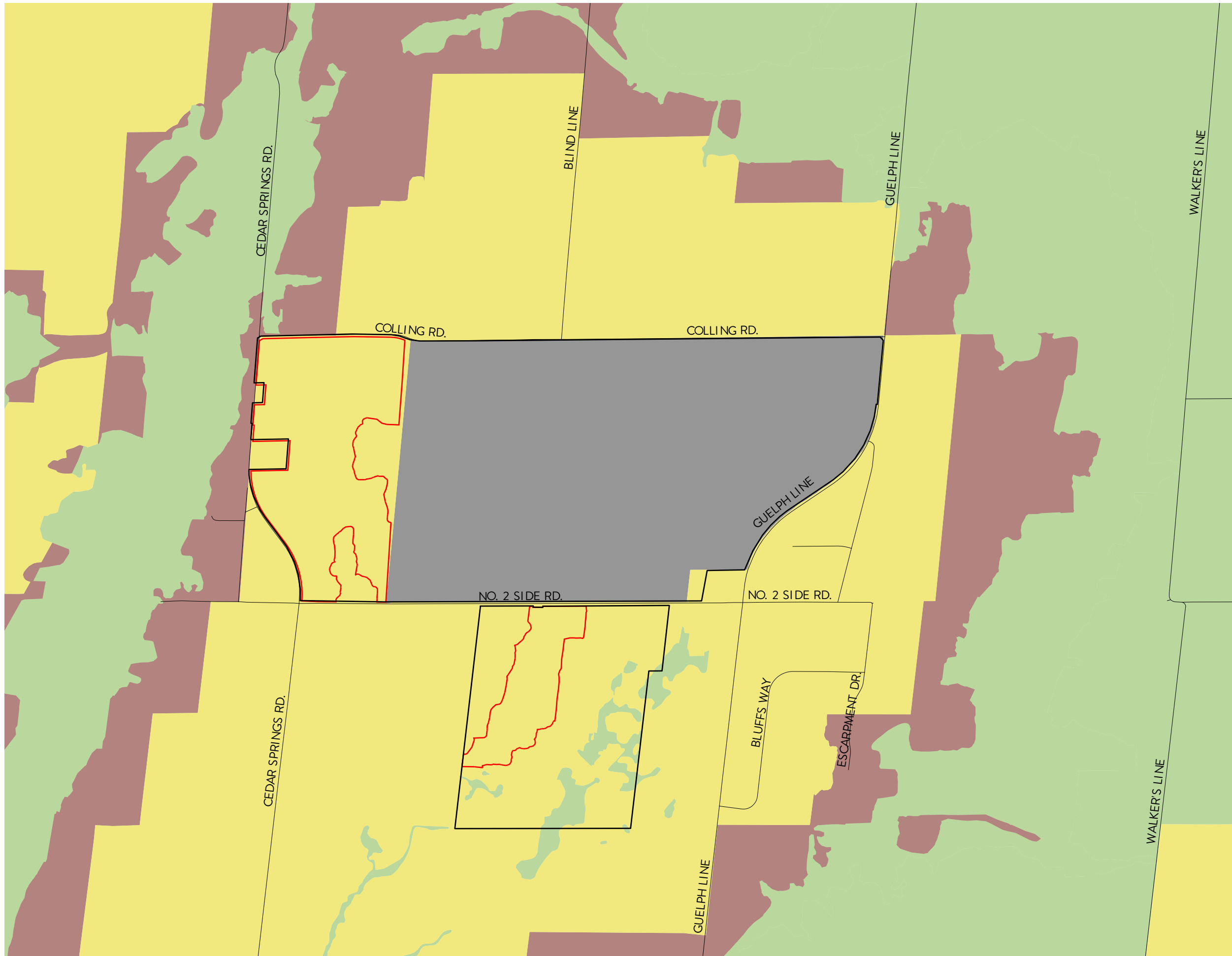


Figure 2
Niagara Escarpment Plan (2017)

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region

- Subject Lands
- Additional Lands Owned by Applicant
- Escarpment Natural Area
- Escarpment Rural Area
- Escarpment Protection Area
- Mineral Resource Extraction Area

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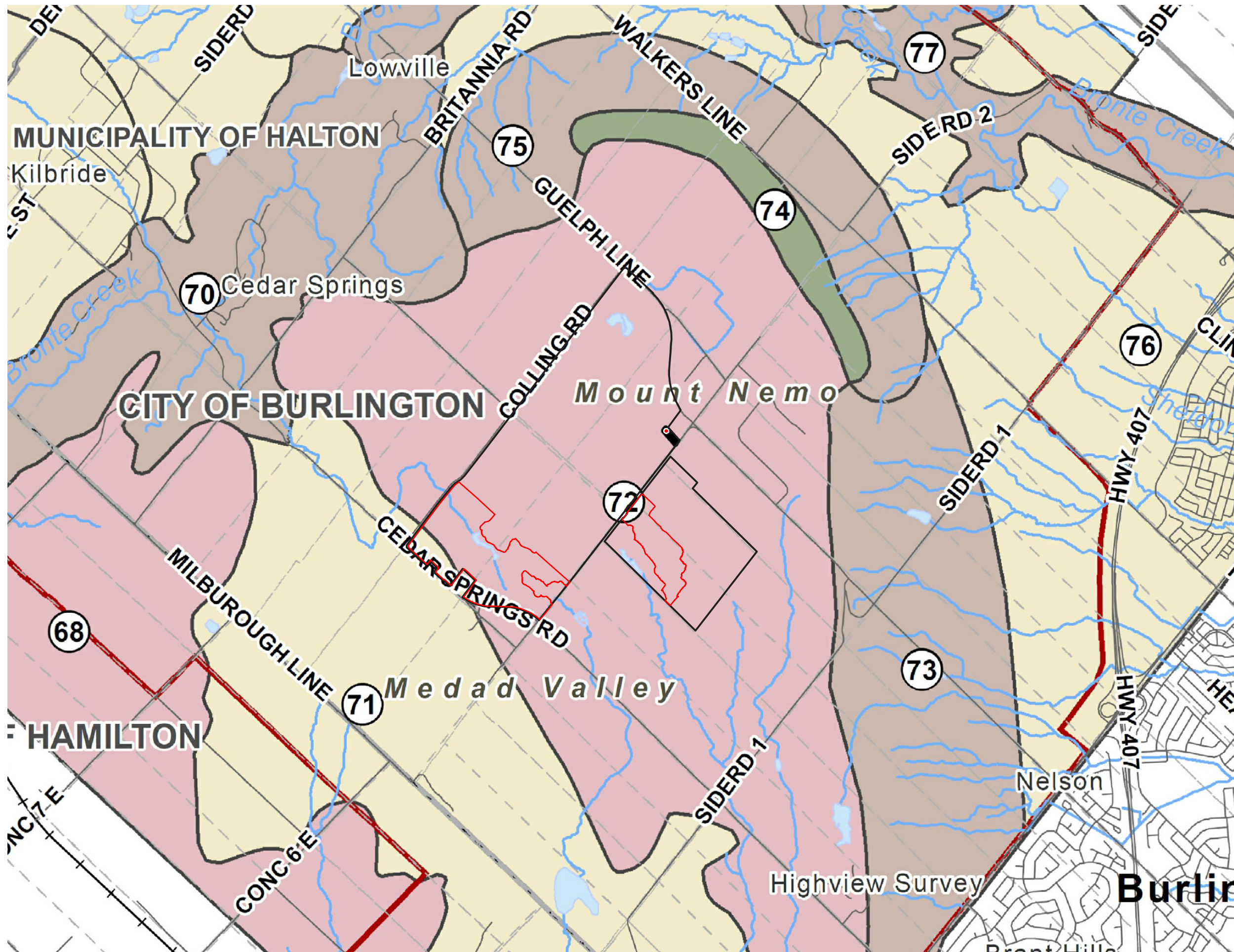


Figure 3
Niagara Escarpment Landscape Evaluation Study

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region

- Subject Lands
- Additional Lands Owned by Applicant
- Low
- Average
- Attractive
- Very Attractive

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- e) using natural topography and vegetation as screening for visual mitigation;
 - f) where there is minimal existing screening or vegetation that cannot be retained, providing new planting of native species to screen development;
 - g) using non-reflective materials on roofs and walls along with measures to reduce reflectivity associated with windows; and
 - h) minimizing the effect from exterior lighting (e.g., lighting directed downward).
- Landform Conservation
5. Planning, design and construction practices shall ensure that Escarpment Related Landforms are maintained and enhanced, and that development is visually compatible with the natural scenery and open landscape character of the Niagara Escarpment.
 6. Except as provided for in Part 2.9 (Mineral Aggregate Resources), the construction of berms will only be permitted in cases where natural vegetation is insufficient to mitigate visually incompatible land uses, or where noise attenuation is required.

3.0 Methodology

The methodology used to complete the report included undertaking the following:

1. A detailed review of background documentation information including air photographs and topographic mapping.
2. The collection of field data and on-site photography from key vantage points (viewpoints) along public roadways during winter (leaf-off condition).
3. Identification and review of residences, public roads and golf courses that may be prone to visual impacts as a result of the proposed extraction activities.
4. Analysis and inventory of visual and landscape character.
5. Identification of potential visual impacts.
6. Recommendations of potential mitigation measures to be taken.
7. Preparation of a Visual Impact Report for submission to the relevant approval agencies.

Several areas were selected for the visual impact analysis due to the proximity to the subject lands and potential for views of the site. The viewpoint locations included No. 2 Side Road (public road), Cedar Springs Road, Cedar Springs Court, Colling Road, Blind Line, The Camisle Golf Course, and residential properties (receptors) within the study area. This report includes a photographic inventory documenting existing views during leaf-off conditions, and a description / evaluation of the various views.

The information presented in this assessment is based on a stationary perspective that would be experienced by a person standing at various station points / viewpoints along the selected roads. The photographs used in the report were taken in winter 2020 during 'leaf-off' conditions for the purposes of illustrating worst case scenario. For the residences within the study area, the elevation as well as the location and height of the houses (e.g. one or two-story) were taken into account in determining significant views and potential impacts. Photos from residential properties were taken from the end of the driveway (public property), closest to the road.

The visual impacts were assessed based on extraction occurring to the maximum proposed extent of 252.5 to 255.6 masl at the West Extension, and 270.0 – 271.0 masl at the South

Visual Impact Report

Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2, City of Burlington

Extension. Cross sections at key vantage points were drawn in order to assess the existence of any visual impacts, and to inform mitigation recommendations these where visual impacts could exist (**See Figures 6A to 6K**).

4.0 Proposed Quarry Operations

The license area for both proposed extensions is 78.3 hectares and the proposed extraction area is 50.4 hectares. The South Quarry Extension is 18.3 hectares with a proposed extraction area of 14.5 hectares. The West Quarry Extension is 60.0 hectares with a proposed extraction area of 35.7 hectares.

The Burlington Quarry Extension contains approximately 30 million tonnes of the highest quality aggregate resource in Southern Ontario. Nelson is applying for a maximum tonnage limit of 2 million tonnes per year, however they plan on extracting an average of 1 million tonnes per year. As a result, the South Extension is expected to operate for +/-9 years and the West Extension for +/-21 years.

Access to the West Extension will be through the existing Nelson Quarry to the east, and access to the South Extension will be off of No. 2 Side road. The proposed extraction activities will operate in 6 phases. Phase 1A and 1B will occur in the northern section of the South Extension and will be followed by Phase 2, which will encompass the remainder of the extension.

Phase 3 will begin in the south-east portion of the West Extension and will move up into the south central areas for Phase 4. Phase 5 will occur in northern third of the extension, while the sixth and final phase will connect the areas of Phase 4 and 5 in the centre of the West Extension.

The direction of extraction in the South extension will move from north to south while the in West Extension it will move generally from east to west in each phase. The exception is Phase 6, which will move from north to south. The Operations Plan is shown in **(Figure 8)** of this report.

No processing operations are contemplated within the proposed extensions, and the extracted aggregate will be transported to the existing Burlington Quarry for processing and shipping to market, utilizing the existing entrance/exit and haul route. For the purposes of processing, aggregate extracted from the South Extension (Phases 1 & 2) will be transported by crossing

No. 2 Side Road and aggregate extracted from the West Extension (Phases 3-6) will be transported by internal haul routes on the quarry floor.

Setbacks in each of the extensions vary depending on the surrounding context. Along Cedar Springs Road, the setback from the extraction area of the West Extension varies from 95-100 m. Along Colling Road it is between 30 and 68 m. Along No. 2 Side Road, the setback is 225 m in the south-western portion of the site and 30 m along the south-eastern portion of the site. For the South Extension, there is a setback of 30 m along No. 2 Side Road and a 15 m setback around the rest of the license boundary.

The site will be operated above and below the water table, with rehabilitation proposed to occur with a mix of different landscape ecologies including wetlands, forests, ponds, lakes, and grasslands. While re-grading will occur within the site to create more transitional changes in topography, the rehabilitation plan will utilize the variations in topography to create new landscape topologies such as the lakes and wetlands. Refer to the proposed Rehabilitation Plan (**Figure 7**).

5.0 Landscape Character

5.1 Site Context

The Nelson Aggregate Quarry Extension Lands are located in the north-western part of the City of Burlington, approximately 10 km north of the Burlington Downtown area and 13 km south-west of Central Milton. The surrounding area is primarily characterized by existing aggregate extraction, farm-related and non-farm-related residences, agricultural outbuildings, open space and hedgerows, and golf course recreational uses. The West Extension lands are currently being used as a golf course and are characterized by manicured lawns, small woodlots, and an approximately 600 m long linear irrigation pond in the centre of the property. The western side of Cedar Springs Road is lined with residential properties that face the future West Extension lands.

The South Extension lands are currently being used for agricultural purposes and are characterized by surrounding woodlots, hedgerows, and rural residential domiciles.

5.2 Topography

The West Extension lands consist mainly of relatively gently sloping hills and long flat areas characteristic of a golf course with elevations between 261 and 276 masl. The lowest point of the site is located in the north west corner of the proposed extension, at the corner of Cedar Springs Road and Colling Road.

The South Extension lands consist mainly of relatively gently sloping agricultural lands and small rolling hills with elevations between 273 and 282 masl. The lowest point of the site is located near in the south-west corner of the proposed extension.

5.3 Vegetation

The West Extension is comprised primarily of open manicured lawns of the existing golf course with patches of woodland consisting mostly of deciduous trees and some coniferous trees. The periphery of the property is largely planted with deciduous trees and understory species. There are a few interspersed confers, but they do not comprise a significant percentage of periphery planting. Many of the tree species are mature and there is a dense understory present at many

sections of the periphery. An existing young plantation of predominantly coniferous trees exists at the corner of No. 2 Sideroad and Cedar Springs Road.

The South Extension is comprised primarily of agricultural lands interspersed by mixed deciduous and coniferous hedgerows. The agricultural fields are bordered by swathes of homogenous deciduous and coniferous woodlands to the west, mixed deciduous and coniferous to the south, and long stretches of nursery trees to the east. The northern section of the property surrounding the residences is a lightly wooded area with larger sections of open meadow, and understory plants.

5.4 Land Use

The subject lands for both the West and South Extensions are designated as Escarpment Rural Area under the Burlington Official Plan. Portions of the woodland located adjacent to the South and West Extensions are considered significant woodlands.

Under the Rural Lands Land Use Policies, it is noted under section 2.1.1 h) that “the designation of new Mineral Resource Extraction areas or a new license under The Aggregate Resources Act shall be provided for, where they can be accommodated in accordance with the policies of this Plan and by amendment to the Niagara Escarpment Plan, Regional Official Plan and this Plan.”

The adjacent land uses include Rural Settlement Area, other Escarpment Rural Areas, Escarpment Protection Area, Greenlands, and Mineral Resource Extraction Area, which is the existing Nelson Quarry.

The Niagara Escarpment Commission’s Landscape Evaluation Study rated the West Extension lands as mostly low, with a small portion at the northwest corner being rated as average; and rated the South Extension lands as low. Adjacent lands to the extensions were rated between low and average. Refer to **Figure 3** for the Niagara Escarpment Landscape Evaluation Study for this area.

6.0 Descriptions of Views

Site reviews were undertaken in Winter 2020 during leaf-off condition to illustrate worst case scenario. The analysis and location of the 49 studied viewpoints are included in this chapter and are identified on **Figure 4 (Assessed Views Photo Location Plan)**, and **4A to 4M (Photo Records of Assessed Views)**. The site reviews included evaluation of potential receptors and views within 1 km of the proposed extensions and were chosen specifically in locations where visual impacts could potentially be expected. Refer to **Table 1** for a summary of the locations and associated evaluations of the identified potential receptors along the mentioned public roadways.

6.1 Along Cedar Springs Road

The most potential opportunities for views into the West Extension lands are located along Cedar Springs Road with a total of 34 residences along this stretch of road. Cedar Springs Road is also used by motorists, pedestrians, and cyclists. These views vary from fully screened by vegetation and topography, filtered views due to vegetation, to full potential visibility of the subject lands, but these potential views are mostly at a distance as the proposed extraction limits are well set back from the road.

Although Cedar Springs Road presents many potential opportunities for visual impacts due to a longer perimeter, it is expected that the setback of the operations from Cedar Springs Road will help minimize potential visual disruption, and allow for more space to implement mitigation measures such as berming to augment existing vegetation. Cedar Springs Road appears to experience more traffic than the other adjacent roads, and is a direct route to the downtown area. Though not a publically accessible, the residences backing onto the existing golf course are the closest receptors, and as such, consideration is given to this special condition.

North of the existing Burlington Springs Golf Course entrance, a berm begins to form up to Colling Road, which serves to eventually fully screen the view from residences on the opposite side of the road. Furthermore, several of these residences are located on a significantly lower grade, further reducing their potential for visual impact.



Figure 4
Assessed Views Photo Location Map

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region

- Subject Lands
- Extraction Limit
- Additional Lands Owned by Applicant
- ◆ Location of Viewshed and Barrier Photos (see Figures 4A to 4M)

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Photo 1: 4486 Guelph Line, Mount Nemo Christian Nursing Home. Taken on 2 Side Road.



Photo 2: 2470 2 Side Road.



Photo 3: 2462 2 Side Road.

Figure 4A

Photo Record of Assessed Views

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region

NOTE: Refer to Figure 4 Assessed Views Photo Map for view locations

Photos taken on January 20, 2020

DATE: March 2020

FILE: 91355

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Photo 4: 2450 2 Side Road.



Photo 5: 2196 2 Side Road. Facing Towards Proposed Southern Extension.



Photo 6: 2196 2 Side Road. Facing Towards Proposed Western Extension.

Figure 4B

Photo Record of Assessed Views

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region

NOTE: Refer to Figure 4 Assessed Views Photo Map for
 view locations

Photos taken on January 20, 2020

DATE: March 2020

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Photo 7: 2102 2 Side Road, Camisle Golf Course. Facing Toward Proposed Southern Extension.



Photo 8: 2102 2 Side Road, Camisle Golf Course. Facing Toward Proposed Western Extension.



Photo 9: 2136 2 Side Road. Facing Towards Proposed Southern Extension.



Photo 10: 2136 2 Side Road. Facing Towards Proposed Western Extension.

Figure 4C

Photo Record of Assessed Views

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region

NOTE Refer to Figure 4 Assessed Views Photo Map for
 view locations

Photos taken on January 20, 2020

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Photo 11: 2126 2 Side Road. Facing Towards Proposed Southern Extension.



Photo 12: 2126 2 Side Road. Facing Towards Proposed Western Extension.



Photo 13: 2116 2 Side Road. Facing Towards Proposed Western Extension.



Photo 14: 2102 2 Side Road, Camisle Golf Course Facing Towards Proposed Southern Extension.

Figure 4D

Photo Record of Assessed Views

Project Sideways - Quarry Expansion
Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
Town of Burlington
Halton Region

NOTE: Refer to Figure 4 Assessed Views Photo Map for
view locations

Photos taken on January 20, 2020

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Photo 15: 2090 2 Side Road, Camisle Golf Course. Facing Towards Proposed Western Extension.



Photo 16: 2080 2 Side Road. Facing Towards Proposed Western Extension.



Photo 17: 2015 2 Side Road. Facing Towards Proposed Western Extension.



Photo 18: 4455 Cedar Springs Road. Facing Towards Proposed Western Extension.



Photo 19: 4480 -4500 Cedar Springs Road. Taken at 4800 Cedar Springs Road, Facing Towards Proposed Western Extension.

Figure 4E

Photo Record of Assessed Views

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region

NOTE: Refer to Figure 4 Assessed Views Photo Map for
 view locations

Photos taken on January 20, 2020

DATE: March 2020

FILE: 91355

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Photo 20: 4516 Cedar Springs Road. Facing Towards Proposed Western Extension.



Photo 21: 1420 2 Side Road. Facing towards Proposed Western Extension.



Photo 22: 5050 Cedar Springs Road. Facing Towards Proposed Western Extension.



Photo 23: 5070 Cedar Springs Road. Facing Towards Proposed Western Extension.



Photo 24: 5079 Cedar Springs Court. Facing Towards Proposed Western Extension.

Figure 4F

Photo Record of Assessed Views

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region

NOTE Refer to Figure 4 Assessed Views Photo Map for
 view locations

Photos taken on January 20, 2020

DATE: March 2020

FILE: 9135S

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Photo 25: 5089 Cedar Springs Court. Facing Towards Proposed Western Extension.



Photo 26: Taken Between 5106 and 5116 Cedar Springs Court. Facing Towards Proposed Western Extension.



Photo 27: Taken Between 5132 and 5140 Cedar Springs Court. Facing Towards Proposed Western Extension.



Photo 28: 5165, 5164, 5158 Cedar Springs Road. Taken Between 5164 and 5158, Facing Towards Proposed Western Extension.



Photo 29: 5179, 5172, 5169 Cedar Springs Road. Taken Between 5172 and 5168, Facing Towards Proposed Western Extension.

Figure 4G

Photo Record of Assessed Views

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region

NOTE: Refer to Figure 4 Assessed Views Photo Map for
 view locations

Photos taken on January 20, 2020

DATE: March 2020

FILE: 9135S

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Photo 30: 5186, 5206, 5191 Cedar Springs Road. Taken Between 5186 and 5206, Facing Towards Proposed Western Extension.



Photo 31: 5124, 5224 Cedar Springs Road. Taken Between 5124 and 5224, Facing Towards Proposed Western Extension.



Photo 32: 5234 Cedar Springs Road. Facing Towards Proposed Western Extension.



Photo 33: 5248, 5244, 5245 Cedar Springs Road. Taken Between 5248 and 5244, Facing Towards Proposed Western Extension.



Photo 34: 5258, 5254, 5255 Cedar Springs Road. Taken Between 5258 and 5254, Facing Towards Proposed Western Extension.

Figure 4H
Photo Record of Assessed Views

Project Sideways - Quarry Expansion
Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
Town of Burlington
Halton Region

NOTE: Refer to Figure 4 Assessed Views Photo Map for
view locations

Photos taken on January 20, 2020

DATE: March 2020

FILE: 9135S

DRAWN: CC



Photo 35: 5264 Cedar Springs Road. Facing Towards Proposed Western Extension.



Photo 36: 5268 Cedar Springs Road. Facing Towards Proposed Western Extension.



Photo 37: 5300 Cedar Springs Road. Facing Towards Proposed Western Extension.



Photo 38: 5318, 5328 Cedar Springs Road. Taken Between 5318 and 5328, Facing Towards Proposed Western Extension.

Figure 41
Photo Record of Assessed Views

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region

NOTE: Refer to Figure 4 Assessed Views Photo Map for
 view locations

Photos taken on January 20, 2020

DATE: March 2020

FILE: 9135S

DRAWN: CC



Photo 39: 5336 Cedar Springs Road. Facing Towards Proposed Western Extension.



Photo 40: 5352 Cedar Springs Road. Facing Towards Proposed Western Extension.

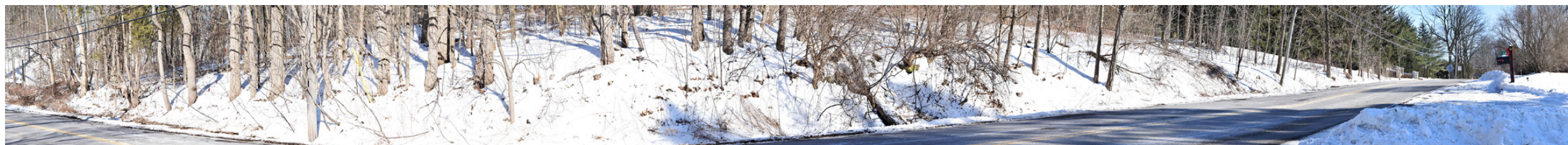


Photo 41: 5360, 5370, 5380 Cedar Springs Road. Taken Between 5360 and 5370, Facing Towards Proposed Western Extension.

Figure 4J
Photo Record of Assessed Views

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region

NOTE: Refer to Figure 4 Assessed Views Photo Map for
 view locations
 Photos taken on January 20, 2020

DATE: March 2020

FILE: 9135S

DRAWN: CC



Photo 42: 5390 Cedar Springs Road. Facing Towards Proposed Western Extension.



Photo 43: 2129, 2139 Colling Road. Facing Towards Proposed Western Extension.



Photo 44: 5374 Blind Line. Taken at the Property Frontage Facing Towards Proposed Western Extension.

Figure 4K
Photo Record of Assessed Views

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region

NOTE: Refer to Figure 4 Assessed Views Photo Map for
 view locations

Photos taken on January 20, 2020

DATE: March 2020

FILE: 9135S

DRAWN: CC



Photo 45: Taken at Colling Road and Blind Line Where the 5374 Blind Line Property Fronts onto Colling Road.



Photo 46: 2519 2 Side Road. Facing Towards Proposed Southern Extension.



Photo 47: 2509, 2495 2 Side Road. Taken Between 2509 and 2495 Facing Towards Proposed Southern Extension.

Figure 4L
Photo Record of Assessed Views

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region

NOTE: Refer to Figure 4 Assessed Views Photo Map for
 view locations

Photos taken on January 20, 2020

DATE: March 2020

FILE: 9135S

DRAWN: CC



Photo 48: 2585, 2479 2 Side Road. Taken Between 2585 and 2479 Facing Towards Proposed Southern Extension.



Photo 49: 2473 2 Side Road. Facing Towards Proposed Southern Extension.

Figure 4M
Photo Record of Assessed Views

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region

NOTE: Refer to Figure 4 Assessed Views Photo Map for
 view locations

Photos taken on January 20, 2020

DATE: March 2020

FILE: 9135S

DRAWN: CC

6.2 Along Cedar Springs Court

Generally, Cedar Springs Court does not offer direct views to the West Extension, however, there are a number of residences that back on to Cedar Springs Road, which opens the opportunity for some potential filtered views from backyards (which are predominantly vegetated to some extent). Given the nature of the Court, through traffic and pedestrian traffic is minimal, and views are mostly blocked or filtered by existing vegetation and homes.

6.3 Along Colling Road

There are two residences that have direct views into the north-eastern corner of the West Extension along Colling Road. There is limited vegetation and smooth topography at these locations, allowing for generally uninterrupted views into the existing golf course. Though the posted speed of 70 km/h would create conditions that would minimize the time motorists could experience these views, cyclists, pedestrians, and local residents occupying their homes would experience visual impacts from the proposed West Extension without mitigation measures in place.

In addition, there is a property located on Blind Line that has frontage along Colling Road. Given existing vegetation, topography, and the existing quarry, there is no potential for views to the proposed West Extension.

6.4 Along No. 2 Side Road

There are a total of 16 residences along No. 2 Side Road, as well as the Camisle Golf Course. Of these, three of the residences as well as the Camisle Golf Course have the potential for visual impacts.

Much of the West Extension's frontage along No. 2 Side Road is partially to fully screened by existing vegetation and topography. However, closer to Cedar Spring Road topographic conditions begin to flatten and openings in the vegetation are evident. This creates conditions of better visibility into the future West Extension and opens up the potential for visual impacts, particularly into the south portion of the West Extension where a short section of the extraction limits will be closest to the road.

The main public views into the South Extension will be along No. 2 Side Road, immediately adjacent to the north frontage of the extension. Occupants of vehicles along No. 2 Side Road would experience relatively short glimpses of the subject lands due to the speed of travel (60 km/hr posted speed limit), existing berms, varied topography and adjacent wooded areas. No.

Visual Impact Report

Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2, City of Burlington

2 Side Road has relatively limited through traffic, aside from current haul traffic. Light traffic volumes aside, visual mitigation measures will be required for the open stretches where clear views can be had. The frontage of the South Extension along No. 2 Side Road is partially screened by vegetation, which will aid in reducing the potential visual impact if retained.

7.0 Findings

7.1 Visual Impact on Public Roadways

The West Extension is somewhat well screened from the south and west sides, and very well screened on the north side. There are, however, several locations with partial to open views of the site. The eastern edge presents no additional visual impact as it is adjacent to the existing quarry. Existing topography, vegetation, and berms provide sections of appropriate screening, but the close proximity of residential domiciles and openings in visual barriers will necessitate the implementation of some visual mitigation measures.

The South Extension is generally well screened from views to the south, east, and west with views into the site along No. 2 Side Road. The lack of visual impact to the south east and west is primarily due to existing vegetation, topography, and surrounding agricultural uses which serve to buffer against potential viewpoints.

7.2 Visual Impact on Nearby Residences

Based on the assessment outlined in Section 6, the following residences have views of the subject lands where potential visual impacts may exist:

- 1420, 2102, 2090 2 Side Road – Partially screened or filtered views.
- 2080, 2015, No. 2 Side Road – Significant views.
- 4516, 5050, 5070, 5214, 5224, 5258, 5254, 5255 Cedar Springs Road – Partially screened or filtered views.
- 5165, 5164, 5158, 5172, 5168, 5179, 5186, 5206, 5191, 5234, 5248, 5244, 5245, Cedar Springs Road – Significant views.
- 5089 Cedar Springs Court – Partially screened or filtered views.
- 2129, 2139, Colling Road – Significant views.

Other residences in the area are screened and do not have views to the West and South Extensions.

7.3 Summary of Visual Impacts

The following table summarizes potential visual impacts. Visual impact has been defined as any potential change made to the existing landscape character or views of the subject lands

and surrounding area by the proposed use of the subject lands for aggregate extraction. High impact suggests very noticeable change, therefore requiring mitigation measures to minimize the perceived visual impacts. Moderate impact suggests noticeable change, and may require mitigation measures to minimize perceived visual impacts. Low impact suggests that insignificant or filtered views may be had from very specific angles, but the perceived visual impact is so slight that it would not likely require mitigation.

Table 1. Summary of Visual Impacts

Viewshed/ Photo	Description of View	Notes	Potential Impact (without mitigation)	Recommended Mitigation (Figure 5)
<i>Figures 4A & 4M: Viewsheds</i>				
Photo 1	Mt. Nemo Christian Nursing Home	Topography and vegetation creates minimal opportunity for views.	None	Mitigation measures not required.
Photo 2	2470 No. 2 Sideroad	Topography and vegetation creates minimal opportunity for views.	None	Mitigation measures not required.
Photo 3	2462 No. 2 Sideroad	Topography and vegetation creates minimal opportunity for views.	None	Mitigation measures not required.
Photo 4	2450 No. 2 Sideroad	Topography and vegetation creates minimal opportunity for views.	None	Mitigation measures not required.
Photo 5	2196 No. 2 Sideroad (South Facing)	Potential for minimal filtered views.	Low	Mitigation measures not required.
Photo 6	2196 No. 2 Sideroad (North Facing)	Existing cedar hedge, mixed deciduous vegetation, and berms result in no views being anticipated.	None	Mitigation measures not required.

Visual Impact Report

Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2, City of Burlington

Photo 7	Camilse Golf Course (South Facing)	Potential for minimal filtered views.	Low	Mitigation measures not required.
Photo 8	Camilse Golf Course (North Facing)	Existing cedar hedge, mixed deciduous vegetation, and berms result in no views being anticipated.	None	Mitigation measures not required.
Photo 9	2136 No. 2 Sideroad (South Facing)	Existing coniferous trees, mixed deciduous vegetation, and topography result in no views being anticipated.	None	Mitigation measures not required.
Photo 10	2136 No. 2 Sideroad (North Facing)	Existing coniferous trees, mixed deciduous vegetation, and topography result in no views being anticipated.	None	Mitigation measures not required.
Photo 11	2126 No. 2 Sideroad (South Facing)	Existing coniferous trees, mixed deciduous vegetation, and topography result in no views being anticipated.	None	Mitigation measures not required.
Photo 12	2126 No. 2 Sideroad (North Facing)	Existing coniferous trees, mixed deciduous vegetation, and topography result in no views being anticipated.	None	Mitigation measures not required.
Photo 13	2116 No. 2 Sideroad	Existing coniferous trees, mixed deciduous vegetation, and flattening topography result in filtered to open views of southern tip of West Extension being anticipated.	Moderate	Proposed noise berm will provide adequate screening. Retain existing vegetation along No. 2 Side Road where possible.

Visual Impact Report
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2, City of Burlington

Photo 14	Camilse Golf Course 2102 No. 2 Sideroad	Existing coniferous trees, mixed deciduous vegetation, and topography result in no views being anticipated.	None	Mitigation measures not required.
Photo 15	Camilse Golf Course 2090 No. 2 Sideroad	Filtered views anticipated.	Low	Proposed noise berm will provide adequate screening. Retain existing vegetation along No. 2 Side Road where possible.
Photo 16	2080 No. 2 Sideroad	Filtered views anticipated through existing mixed deciduous vegetation.	Low	Mitigation measures not required.
Photo 17	2015 No. 2 Sideroad (Affecting 4455 Cedar Springs Rd. Property)	Filtered views anticipated.	Moderate	Construction of a 2.5 m visual berm. Retain existing vegetation where possible, including young coniferous plantation trees.
Photo 18	4455 Cedar Springs Road	Possible filtered views, but not likely. Existing vegetation provides some screening. Distance to extraction activities and proposed berms will greatly reduce or eliminate potential visual impact.	Low to none	Mitigation measures not required.
Photo 19	4480 – 4500 Cedar Springs Road	Possible filtered views but not likely. Existing vegetation provides some screening. Distance to extraction activities and proposed berms will	Low to none	Mitigation measures not required.

		greatly reduce or eliminate potential visual impact.		
Photo 20	4516 Cedar Springs Road	Possible filtered views. Existing vegetation provides some screening. Distance to extraction activities will reduce potential visual impact.	Low	Mitigation measures not required.
Photo 21	1420 2 Side Road	Existing vegetation provides some screening. Distance to extraction activities will reduce potential visual impact.	Low	Mitigation measures not required.
Photo 22	5050 Cedar Springs Road	Views anticipated. Vegetation is more sparse and topography relatively gentle.	Moderate	Construction of a 2.5 m visual berm. Retain existing vegetation where possible, including young coniferous plantation trees.
Photo 23	5070 Cedar Springs Road	Views anticipated. Vegetation is more sparse and topography relatively gentle.	Moderate	Construction of a 2.5 m visual berm. Retain existing vegetation where possible, including young coniferous plantation trees.
Photo 24	5079 Cedar Springs Court.	Filtered views possible. Existing vegetation provides significant screening. Distance to extraction activities likely to	Low	Mitigation measures not required.

Visual Impact Report
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2, City of Burlington

		reduce potential visual impact.		
Photo 25	5089 Cedar Springs Court.	Filtered views probable. Existing vegetation provides some screening. Distance to extraction activities likely to reduce potential visual impact.	Moderate	Construction of a 2.5 m visual berm. Retain existing vegetation where possible, including young coniferous plantation trees.
Photo 26	5116 & 5106 Cedar Springs Court	Photo taken between property driveways. Filtered views probable. Existing vegetation provides some screening. Distance to extraction activities likely to reduce potential visual impact.	Moderate	Construction of a 2.5 m visual berm. Retain existing vegetation where possible, including young coniferous plantation trees.
Photo 27	5132 & 5140 Cedar Springs Court	Photo taken between property driveways. Dense existing hedge in front of properties. 5140 Property is on a higher elevation. Views from second storey may be possible, but not likely due to proposed noise and visual berms.	None/Low	Mitigation measures not required.
Photo 28	5165, 5164, 5158 Cedar Springs Road	Photo taken between 5164 & 5158. 5165 Backs on to West Extension. Partial filtered views expected through existing vegetation	Moderate	Proposed noise berm will provide adequate screening.

Visual Impact Report
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2, City of Burlington

Photo 29	5172, 5168, 5179 Cedar Springs Road	Photo taken between 5172 & 5168. 5179 Backs on to West Extension. Views are anticipated given sparser vegetation and flat topography.	High	Proposed noise berm will provide adequate screening.
Photo 30	5186, 5206, 5191 Cedar Springs Road	Photo taken between 5186 & 5206. 5191 Backs on to West Extension. Views are anticipated given lack of vegetation and flat topography.	High	Proposed noise berm will provide adequate screening.
Photo 31	5214 & 5224 Cedar Springs Road	Photo taken between 5224 & 5214. 5214 is a little more set back, existing vegetation helps screen views. Views are anticipated given lack of vegetation and flat topography.	High	Proposed noise berm will provide adequate screening.
Photo 32	5234 Cedar Springs Road	Views are anticipated given lack of vegetation and flat topography.	High	Proposed noise berm will provide adequate screening.
Photo 33	5248, 5244, 5245 Cedar Springs Road	Photo taken between 5248 & 5244. 5245 Backs on to West Extension. Views are anticipated given lack of vegetation and flat topography.	High	Proposed noise berm will provide adequate screening.

Visual Impact Report

Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2, City of Burlington

Photo 34	5258, 5254, 5255 Cedar Springs Road	Photo taken between 5258 & 5254. 5255 Backs on to Western Extension. Existing Berm provides partial screening. Berm does not affect 5255. Filtered views anticipated for 5255 property.	Moderate	Proposed noise berm will provide adequate screening.
Photo 35	5264 Cedar Springs Road	Existing topography provides significant/full screening.	None	Mitigation measures not required.
Photo 36	5268 Cedar Springs Road	Existing topography provides significant/full screening. House at significantly lower grade than the road.	None	Mitigation measures not required.
Photo 37	5300 Cedar Springs Road	Existing topography provides significant/full screening. House at significantly lower grade than the road.	None	Mitigation measures not required.
Photo 38	5318 & 5328 Cedar Springs Road	Photo taken between 5318 & 5328. Existing berm provides significant/full screening. 5318 at significantly lower grade than other side of the road. 5328 is set back from the road by several hundred metres.	None	Mitigation measures not required.
Photo 39	5336 Cedar Springs Road	Existing topography and vegetation provides full	None	Mitigation measures not required.

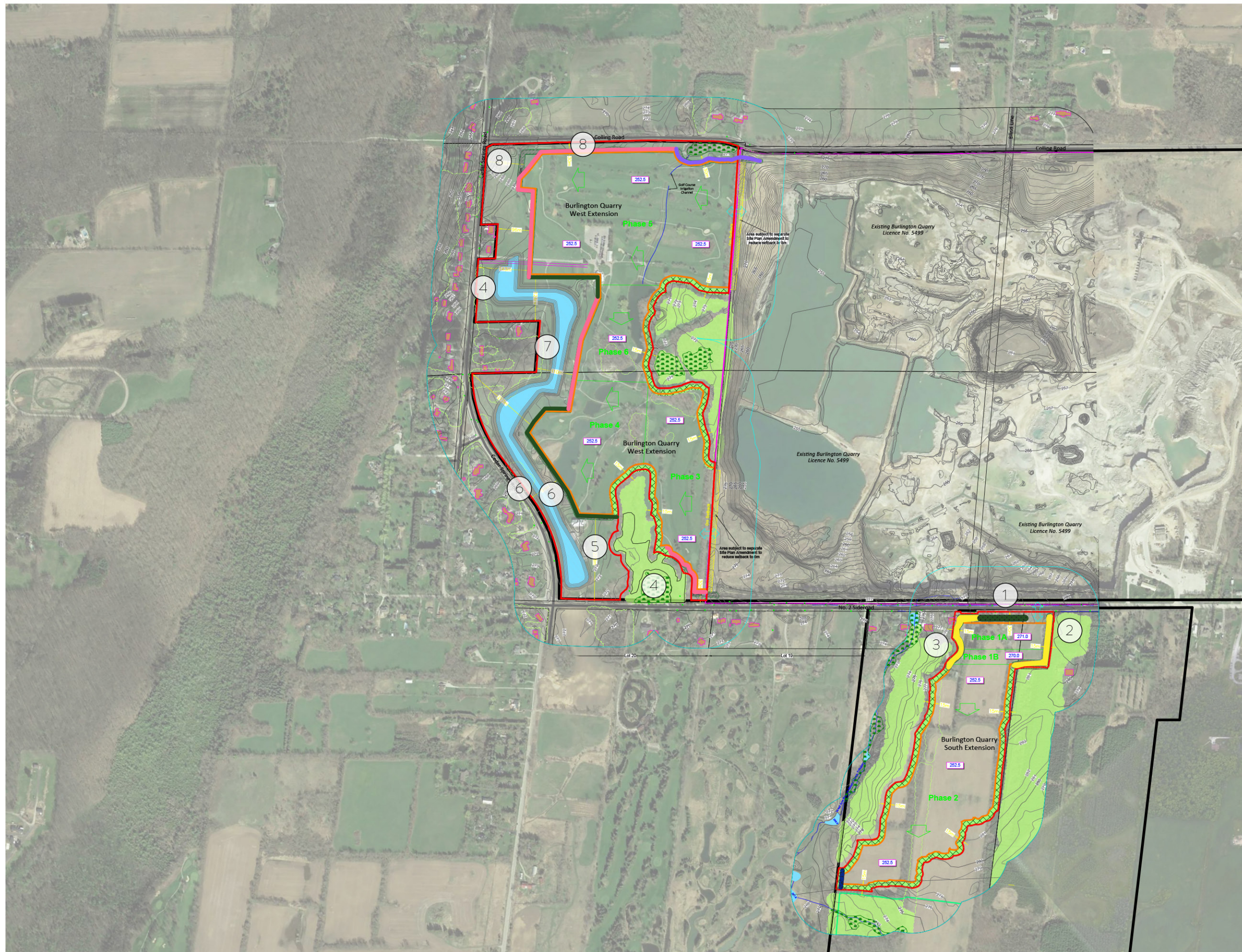
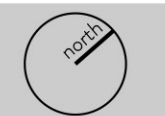


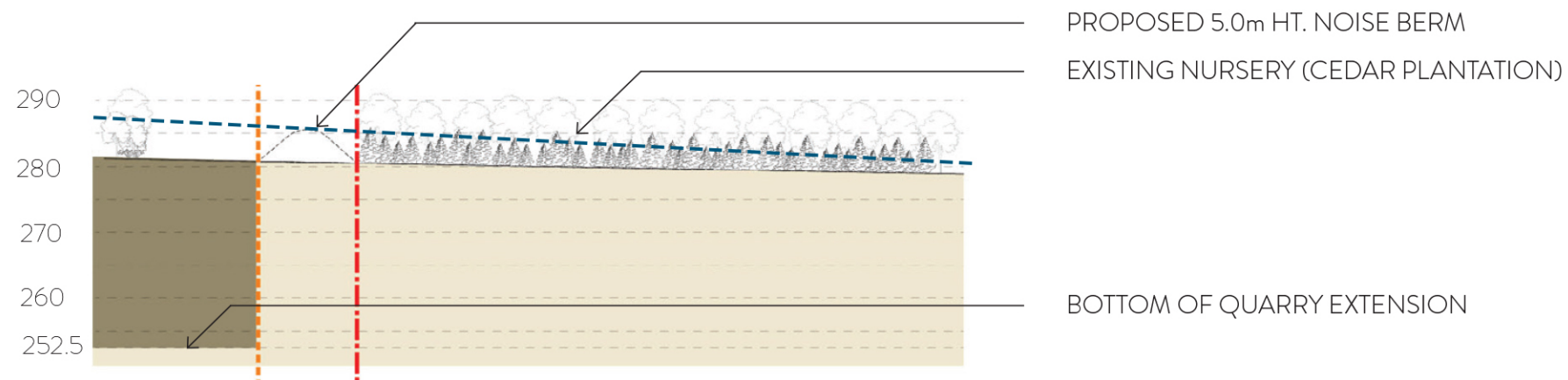
Figure 5
Mitigation Plan
 Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region

- Subject Lands
- Extraction Limit
- Additional Lands Owned by Applicant
- Visual Berm 2.0 m
- Visual Berm 2.5 m
- Noise Berm 3 m
- Noise Berm 3.5 m
- Noise Berm 5 m
- Berm Planting (Large Species)
- Berm Planting (Small Species)
- Significant Woodland
- Woodland
- Forested Setback - During Operation
- Wetland

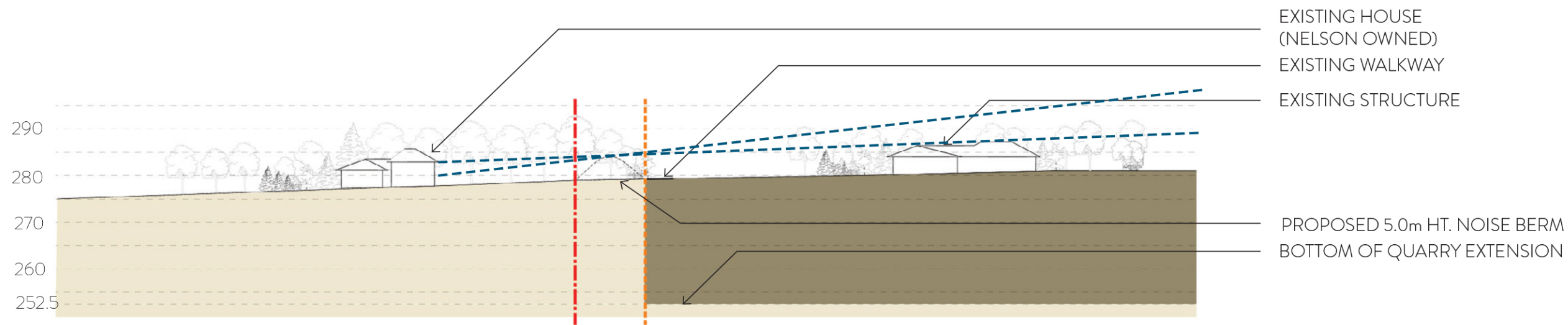
- ① Existing large trees along 2 Side Rd. to be retained if possible.
- ② Existing dense coniferous wooded area to remain.
- ③ Existing coniferous plantation to remain.
- ④ Deciduous treed area to remain.
- ⑤ Coniferous tree plantation, retain as much as possible.
- ⑥ Retain existing vegetation along Cedar Springs and small plantation trees as much as possible.
- ⑦ Retain existing trees behind residences.
- ⑧ Retain existing vegetation.

DATE: March 2020
 SCALE: 1:10,000
 FILE: 91355

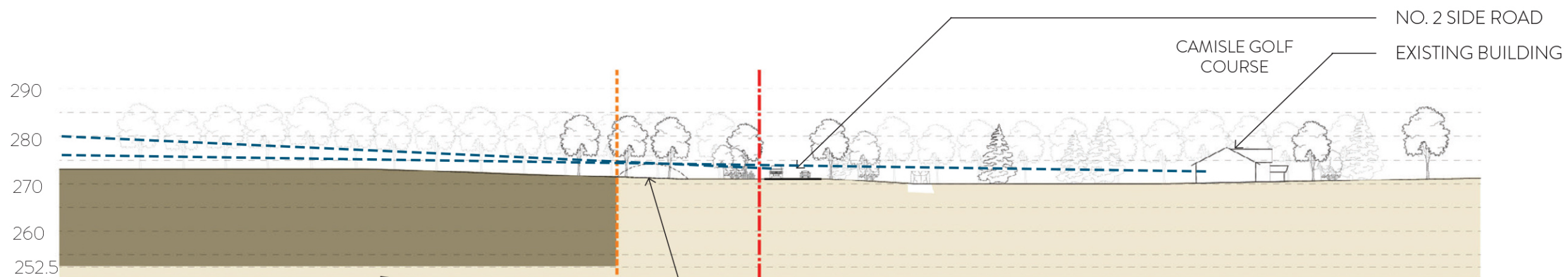




SECTION - A
SOUTHWEST - NORTHEAST



SECTION - B
SOUTHWEST - NORTHEAST



SECTION - C
NORTHWEST - SOUTHEAST

Figure 6 A, B, C

Cross Sections A, B & C

Project Sideways - Quarry Expansion
Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
Town of Burlington
Halton Region



Legend

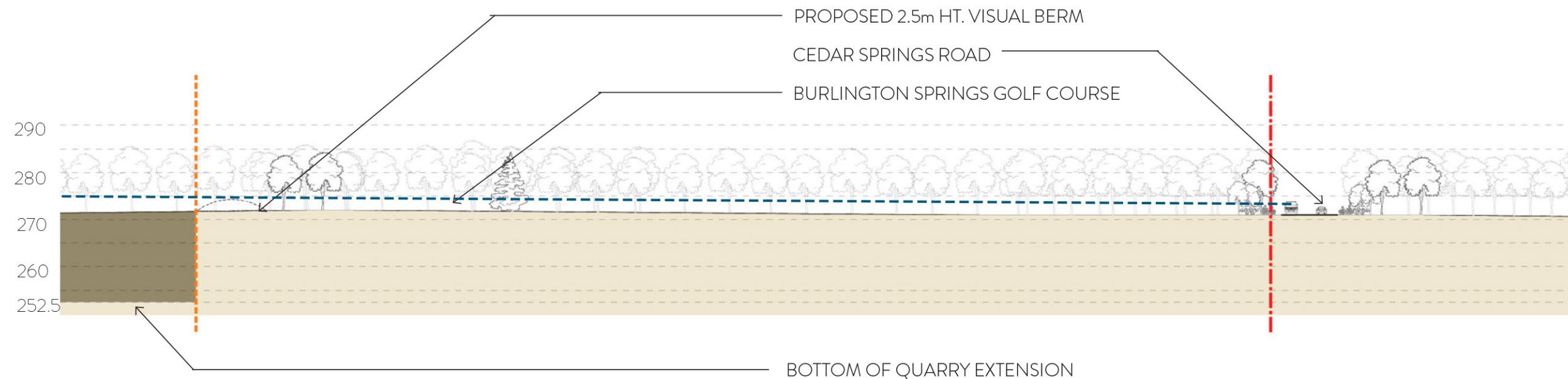
- Limit of Extraction
- Licence Boundary
- Existing Vegetation
- Line of Sight
- Area to be Excavated

DATE: March 2020
SCALE: 1:1000
FILE: 9135S
DRAWN: PB

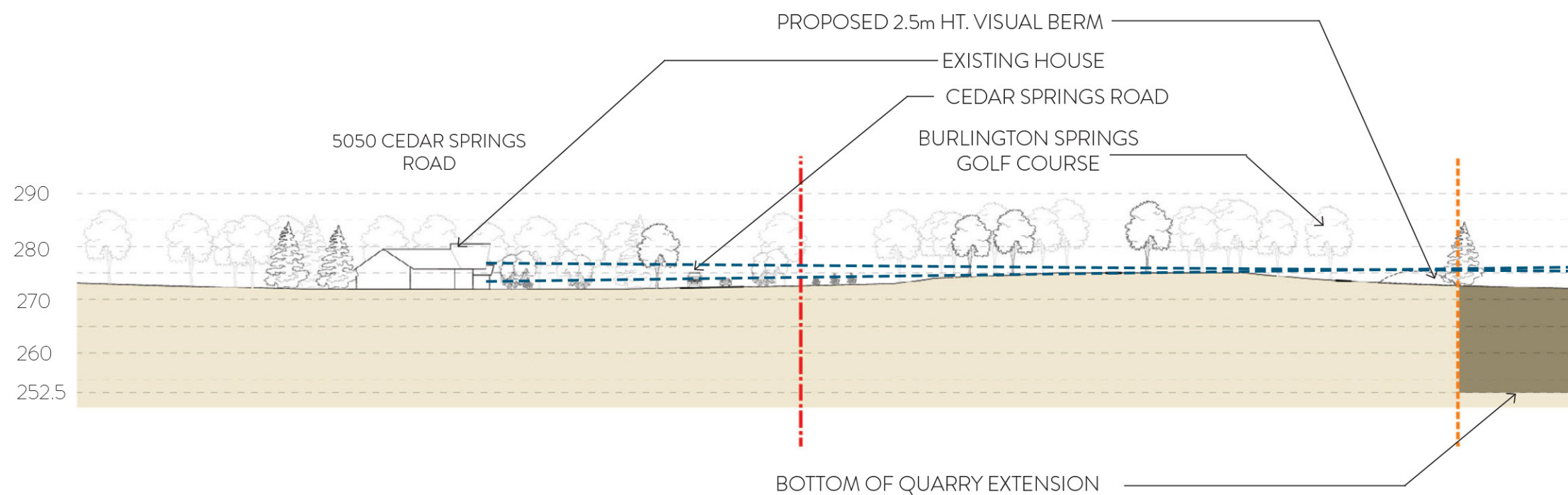
Figure 6 D, E

Cross Sections D & E

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region






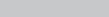

SECTION - D
 NORTHWEST - SOUTHEAST



SECTION - E
 SOUTH - NORTH



Legend

-  Limit of Extraction
-  Licence Boundary
-  Existing Vegetation
-  Line of Sight
-  Area to be Excavated

DATE: March 2020

SCALE: 1:1000

FILE: 9135S

DRAWN: PB

Figure 6 F, G

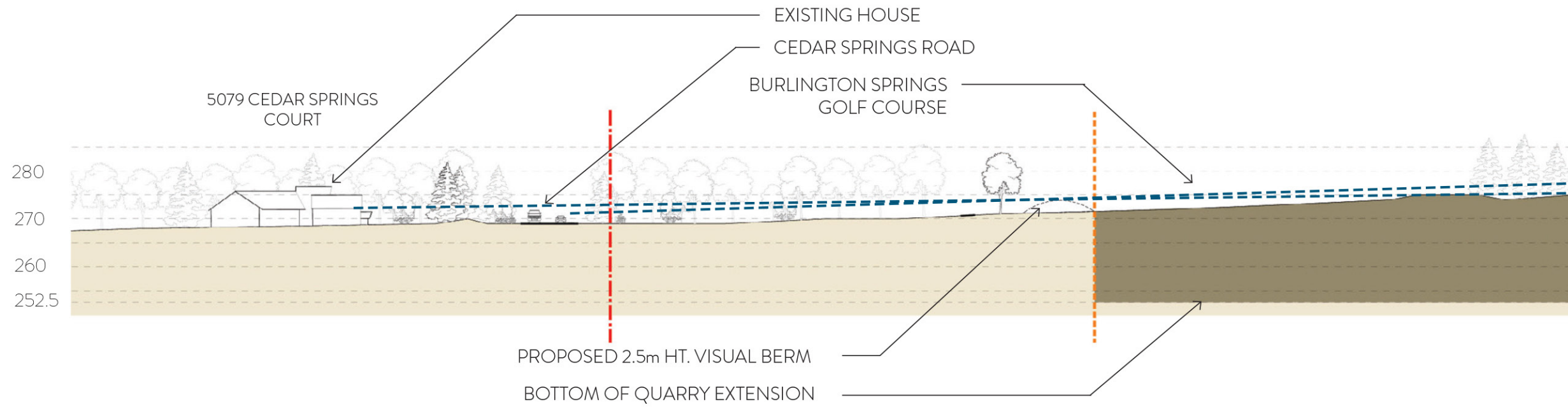
Cross Sections F & G

Project Sideways - Quarry Expansion
Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
Town of Burlington
Halton Region

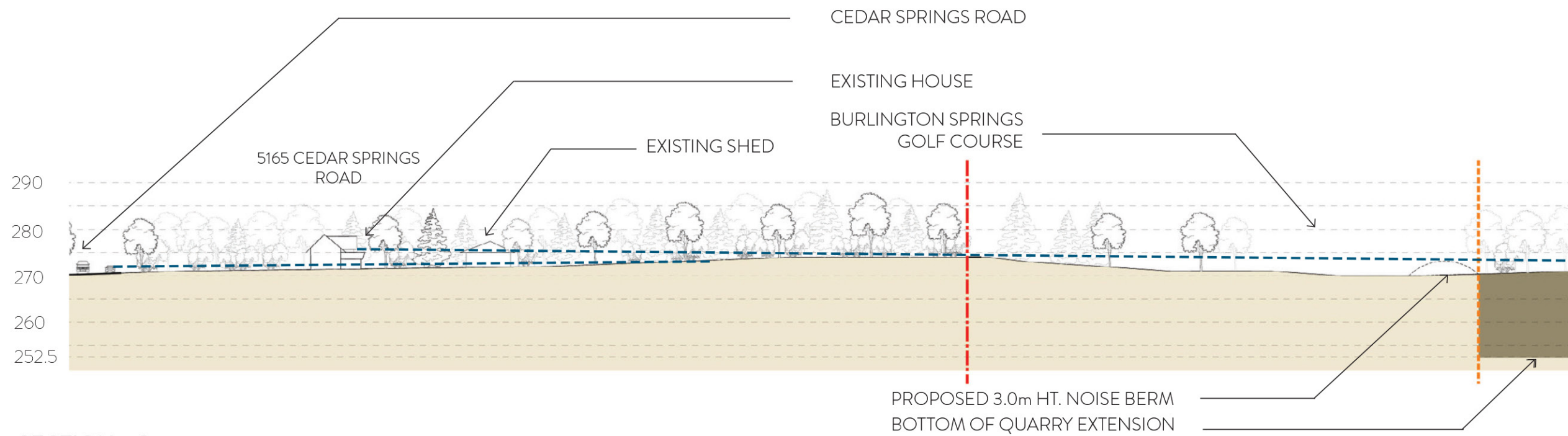


Legend

- Limit of Extraction
- Licence Boundary
- Existing Vegetation
- Line of Sight
- Area to be Excavated



SECTION - F
SOUTH - NORTH



SECTION - G
SOUTHWEST - NORTHEAST

DATE:	March 2020
SCALE:	1:1000
FILE:	9135S
DRAWN:	PB




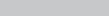

Figure 6 H, I

Cross Sections H & I

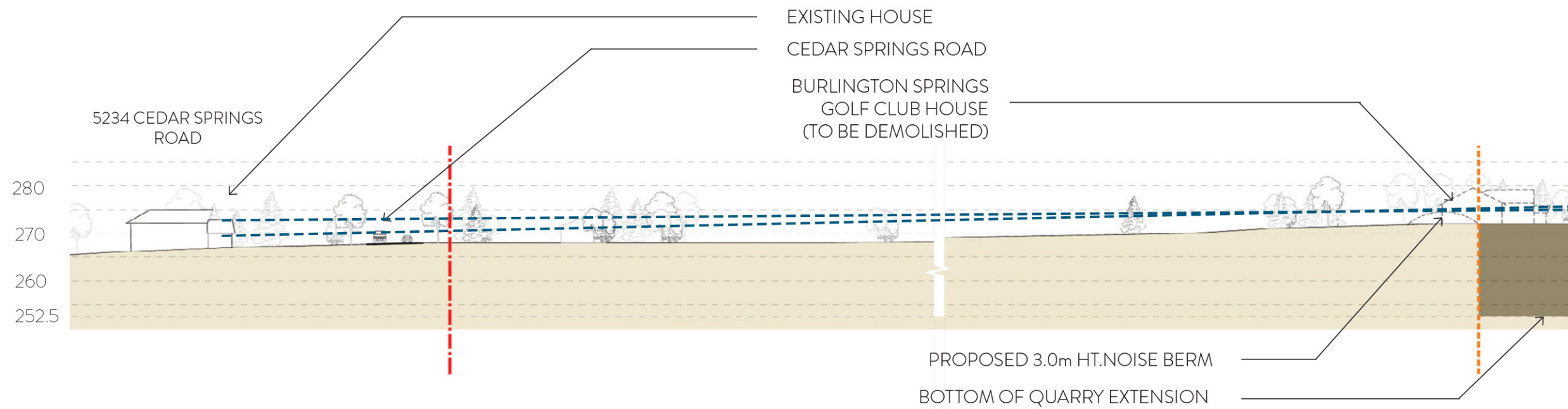
Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region



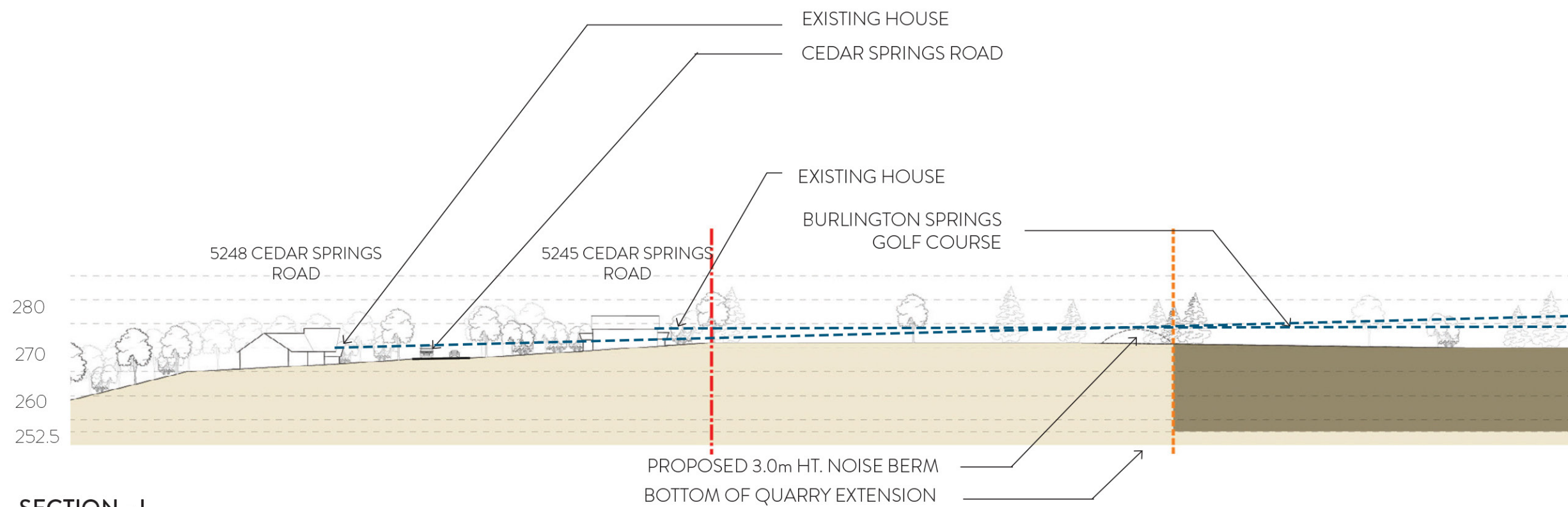
Legend

-  Limit of Extraction
-  Licence Boundary
-  Existing Vegetation
-  Line of Sight
-  Area to be Excavated

DATE: March 2020
 SCALE: 1:1000
 FILE: 9135S
 DRAWN: PB



SECTION - H
 SOUTHWEST - NORTHEAST



SECTION - I
 SOUTHWEST - NORTHEAST


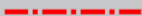



Figure 6 J, K

Cross Sections J & K

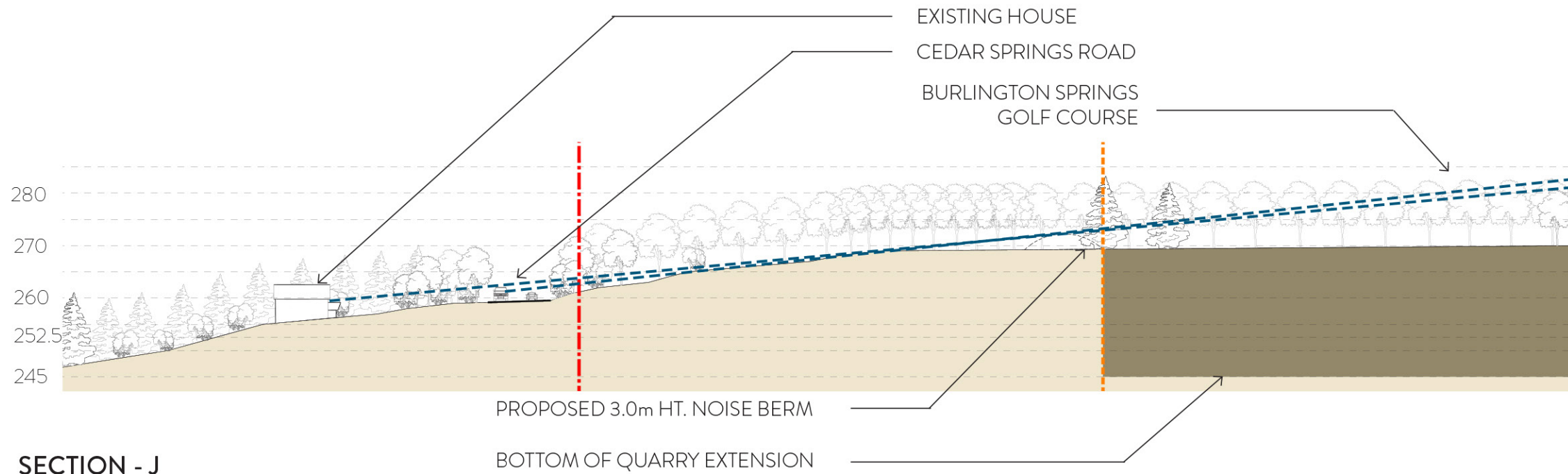
Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region



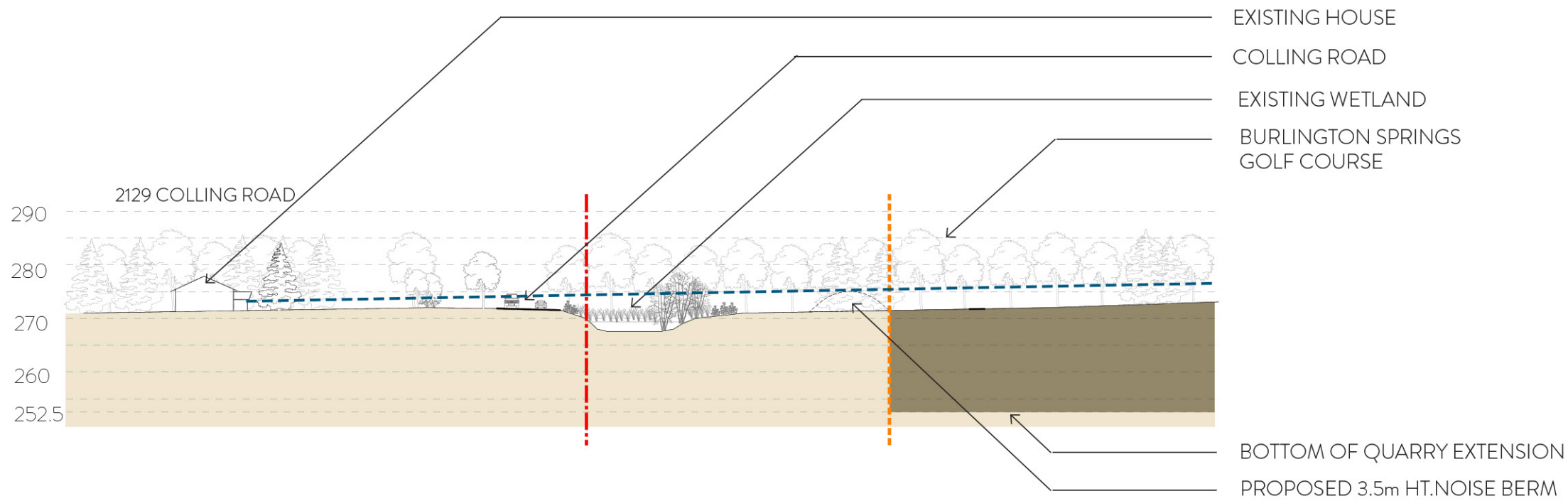
Legend

-  Limit of Extraction
-  Licence Boundary
-  Existing Vegetation
-  Line of Sight
-  Area to be Excavated

DATE:	March 2020
SCALE:	1:1000
FILE:	9135S
DRAWN:	PB



SECTION - J
 SOUTHWEST - NORTHEAST



SECTION - K
 NORTHWEST - SOUTHEAST

Figure 7
Rehabilitation Plan

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region



DATE: March 2020

SCALE: N.T.S

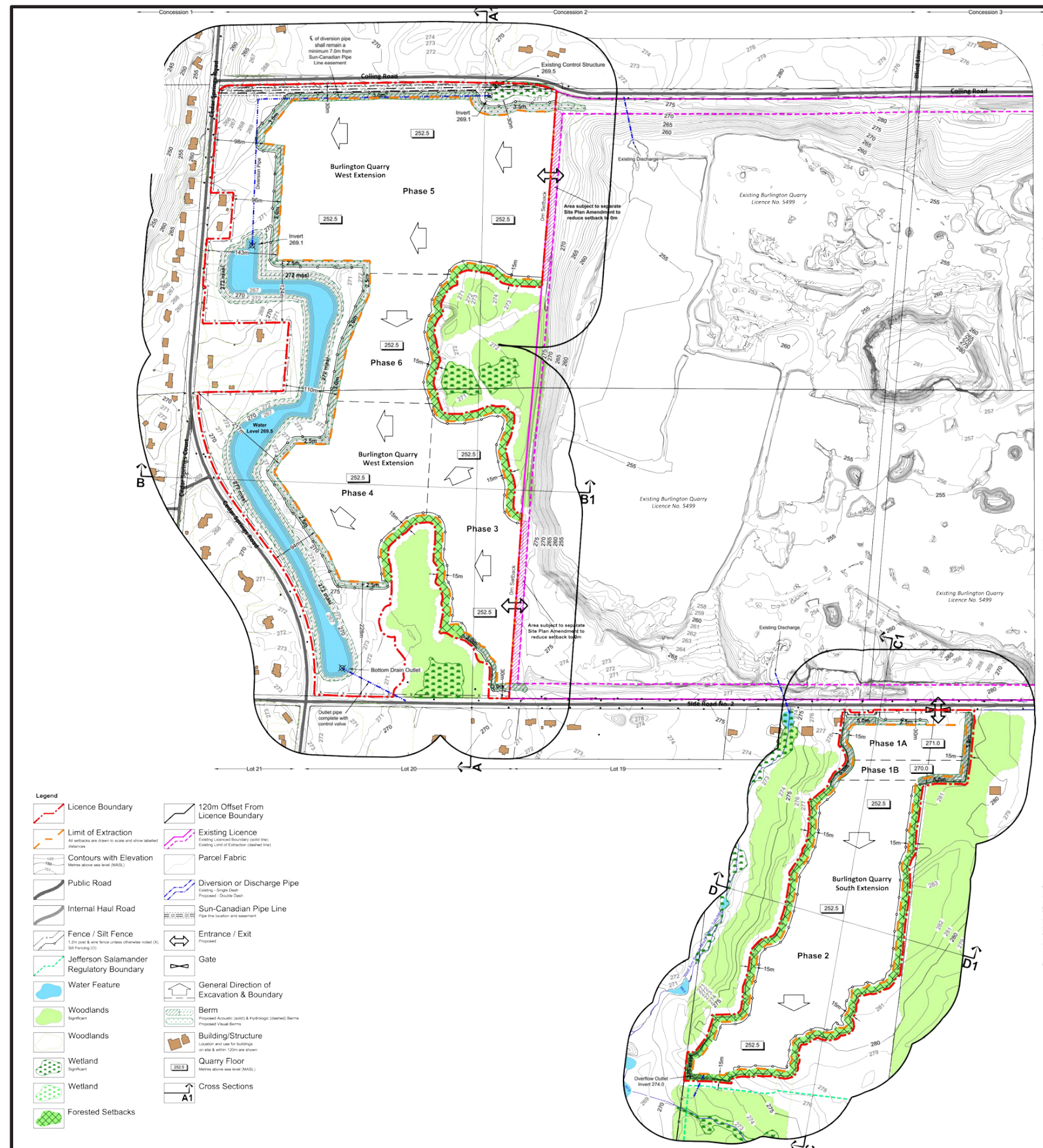
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Figure 8
Operations Plan

Project Sideways - Quarry Expansion
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2,
 Town of Burlington
 Halton Region



DATE: March 2020
 SCALE: 1:8,500
 FILE: 91355
 DRAWN: CC



Visual Impact Report
 Part Lot 1 & 2, Conc. 2 and Part Lot 17 & 18, Conc. 2, City of Burlington

		screening of potential views.		
Photo 40	5352 Cedar Springs Road	Existing topography and vegetation provides full screening of potential views.	None	Mitigation measures not required.
Photo 41	5360, 5370, 5380 Cedar Springs Road	Photo taken between 5360 & 5370.	None	Mitigation measures not required.
Photo 42	5390 Cedar Springs Road	Existing topography and vegetation provides full screening of potential views. 5390 at significantly lower grade than other side of the road.	None	Mitigation measures not required.
Photo 43	2129 & 2139 Colling Road	Photo taken between 2129 & 2139. Clear views anticipated. Extraction activities occurring close to public right of way.	High	Proposed noise berm will provide adequate screening.
Photo 44	5374 Blind Line (Property Frontage)	Existing topography, distance, and vegetation provides full screening of potential views.	None	Mitigation measures not required.
Photo 45	5374 Blind Line (Colling Road Frontage)	Existing topography, distance, and vegetation provides full screening of potential views.	None	Mitigation measures not required.
Photo 46	2519 2 Side Road	Topography and vegetation creates minimal opportunity for views.	None	Mitigation measures not required.
Photo 47	2509 & 2495 2 Side Road	Photo taken between 2509 & 2495. Topography and	None	Mitigation measures not required.

		vegetation creates minimal opportunity for views.		
Photo 48	2585 & 2479 2 Side Road	Photo taken between 2585 & 2479. Topography and vegetation creates minimal opportunity for views.	None	Mitigation measures not required.
Photo 49	2473 2 Side Road	Topography and vegetation creates minimal opportunity for views.	None	Mitigation measures not required.

Cross-sections are included in **Figures 6A to 6K**, which illustrate the views relative to the subject lands. The sections illustrate that the location, topography and existing conditions around the majority of the subject lands are conducive to effectively screened quarry operations. There are some areas, however, where sparse vegetation and relatively flat topography create the opportunity for views into the site and visual mitigation is proposed in these areas (**See Figure 5, Mitigation Plan**). Mitigation strategies outlined in the table above are also shown on the post-mitigation sections, which show how the proposed strategies provide an effective screening from quarry operations.

8.0 Future Rehabilitation

After extraction activities of the proposed extensions have ended, a rehabilitation strategy will be implemented in order to restore and enhance the subject landscapes. As shown in **Figure 7**, a multitude of landscape ecologies will be created enhance the open landscape character of the sites, while providing opportunities for recreation and the creation of natural habitats for a variety of species.

As part of the rehabilitation plan, visual and noise berms will be removed and gradually regraded to create a more natural grade change to the new topography on site. Improvements in planting and landform creation will end the need for visual mitigation and will create the desire for views into the rehabilitated extension lands. Any structures within the extensions that were not removed as part of the operations of the quarry will be removed as part of the rehabilitation plan.

Prior to extraction commencing in the West Extension, a pond will be built to the west of the proposed extraction area. It is recommended that the trees within the existing young conifer plantation in this area be retained insofar as is possible, and some transplanted as may be necessary to provide additional visual screening within the immediate area.

The overall goal of the proposed rehabilitation will be to restore the natural character of the proposed extensions and enhance the existing open landscape character of the area as to create a visually appealing, ecologically functional, and vibrant landscape.

9.0 Recommendations

It is recommended that the following mitigation measures be implemented for the two proposed Quarry Extensions:

- a) For both extension areas, existing vegetation located along the site perimeter and within the setback area should be retained where possible. Berms should be laid out in a way that favours the retention of existing vegetation where possible.
- b) Visual berms are to be installed as per the berm elevation detail and berm requirements as outlined in the noise report and as noted on the Mitigation Plan (**See Figure 5**).
- c) Visual berms are to be installed as outlined in this report and as noted on the Operations Plan (**See Figure 8**).
- d) Where berms are deemed to be required, they are to only be constructed where proposed (**See Figure 5**). Berms are to be 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 should be seeded with a naturalizing mix of wildflowers and grasses to stabilize slopes and minimize mowing and maintenance.
- e) Existing trees and shrubs are to be retained in front of the proposed southern noise berm in the West Extension running along No. 2 Side Road.
- f) Where proposed, trees should be planted as supplementary visual screening. This applies to the visual berms proposed for the South Extension (**See Figure 5**). Trees are to be planted at a spacing of 5 to 10 m on centre, depending on species. 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. 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 1.2m height, and shrub species of minimum 40cm height.

Where small species are indicated, this shall mean deciduous tree whips of 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).

Plant species may include, but are not limited to the following:

Trees

White Pine	Common Hackberry	Chokecherry
White Spruce	Paper Birch	Pin Oak
Sugar / Silver Maple	Trembling Aspen	Basswood
White Pine	White Spruce	White Cedar

Shrubs

Staghorn Sumac	Nannyberry	Common Ninebark
American Elder	Dogwood	Highbush Cranberry

- g) 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.
- h) During the first year, it is recommended that the planted trees are watered and monitored until established. After the first year, it is recommended that the trees are 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.
- i) If any of the planted trees die, they should be replaced yearly, preferably 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.

10.0 Conclusions

It is our professional opinion that if the mitigation measures identified in this report are implemented, views from roadways and receptor homes into the subject lands will be effectively screened year-round in a way that maintains the open landscape character, and limits visual impacts.

Through our investigations, we conclude that the proposed Quarry Extensions will not adversely affect significant views, or changes to natural landscapes provided the recommendations outlined in this report are implemented. Furthermore, through the enhancement and strengthening of the open landscape character of the proposed extension lands, the rehabilitation strategy (**See Figure 7**) will create a visually appealing landscape that will be used for public leisure and recreation.

Visual screening measures are also outlined on the operations and rehabilitation site plans submitted with the applications and these shall be referenced in conjunction with this report. Please feel free to contact the undersigned with any questions regarding this report.

Respectfully submitted,

MHBC Planning, Urban Design & Landscape Architecture

Report Prepared by:



Nick A. Miele, BLA, OALA, CSLA, ISA
Partner

APPENDIX **A**



CURRICULUM VITAE

Nick A. Miele, BLA, OALA, MALA, AALA, SALA, CSLA, ISA

EDUCATION

1997
Bachelor of Landscape
Architecture, University of Toronto

Nick Miele, a Partner with MHBC, joined the firm in 2004. Mr. Miele has been responsible for designing and managing a broad range of project work locally and internationally for both public and private sector clients.

Mr. Miele's project experience ranges from large scale residential and commercial developments, community and urban design, institutional landscapes, recreational facilities, parks, public open spaces, environmental design and restorations.

Mr. Miele is an accredited Landscape Architect and is a full member in good standing with the Ontario Association of Landscape Architects, Manitoba Association of Landscape Architects, Alberta Association of Landscape Architects, Saskatchewan Association of Landscape Architects and Canadian Society of Landscape Architects as well as being an ISA Certified Arborist.

Highlights of Mr. Miele's career include being a member on an award winning team for environmental design in stormwater management (CSLA), and being a Lead Designer on a short listed team for designs for the 2008 summer olympic games in Beijing, People's Republic of China. At the OALA's 50th Anniversary AGM and Conference, Mr. Miele was awarded the David Erb Memorial Award, a high honour recognizing an OALA member who through their volunteer efforts has made an exceptional contribution towards advancing the profession of Landscape Architecture.

Mr. Miele is involved in overseeing all aspects of project development and management from planning and design through to implementation, construction contract administration, and project close-out.

PROFESSIONAL ASSOCIATIONS

Full Member, Ontario Association of Landscape Architects (OALA)
Full Member, Manitoba Association of Landscape Architects (MALA)
Full Member, Alberta Association of Landscape Architects (AALA)
Full Member, Saskatchewan Association of Landscape Architects (SALA)
Full Member, Canadian Society of Landscape Architects (CSLA)
Certified Arborist, International Society of Arboriculture (ISA)

PROFESSIONAL DEVELOPMENT

Examining Board Member (Current Chairperson), OALA, 2005 - present
Professional Advisor, OALA, 2001 - present
LARE (Landscape Architect Registration Examination), Advisor, 2001-present.
Teaching Assistant, University of Toronto, School of Architecture and Landscape Architecture, 1997.

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CURRICULUM VITAE

Nick A. Miele, BLA, OALA, MALA, AALA, SALA, CSLA, ISA

PROFESSIONAL HISTORY

- 2009 - Present **Partner**, MHBC Planning, Urban Design & Landscape Architecture
- 2004 - 2009 **Senior Landscape Architect and Associate**, MHBC Planning, Urban Design & Landscape Architecture
- 2003 - 2004 **Principal**, MEP Design Inc.
- 1999 - 2003 **Senior Landscape Architect**, Terraplan Landscape Architects Inc.
- 1997 - 1999 **Intermediate Landscape Architect**, Terraplan Landscape Architects Inc.

PROFESSIONAL EXPERIENCE

Selected Parks and Open Space Projects

- Riverwood Park – Kitchener
- Oakdale Park, Bridge and Creek Restoration – Oakville
- Morrison Creek Bridge, Stairs and Trail Restoration – Oakville
- Rainbow Creek Park: Bridges and Trail Revitalization - Vaughan
- Dufferin Hill Woodland Trail – Vaughan
- Woodbridge Memorial Park - Vaughan
- Milton Quarry Trail Head Master Plan – Milton
- Agostino Park – Vaughan
- Alexander Park – Vaughan
- Snowbirds Park – Oshawa
- Lakeview Neighbourhood Park – Oshawa

Selected Stormwater Management and Ecological Restoration Projects

- Waterside Marsh Restoration - Vaughan
- Vellore Woods Stormwater Management Facility – Vaughan
- Stormwater Corridor / Habitat Restoration – Georgetown
- Humber River, Pond Diversion and Fish Habitat Restoration – Caledon
- Naturalized Corridor for Jefferson Salamander– Oak Ridges
- Various storm water management facilities in the GTA, Collingwood, Stayner, Cobourg and Southern Ontario
- Various Private Naturalization / Restoration Plans in Toronto, Vaughan, and Caledon

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CURRICULUM VITAE

Nick A. Miele, BLA, OALA, MALA, AALA, SALA, CSLA, ISA

Selected Residential Projects

- Riverwood Community – Kitchener
- South Unionville Square – Mixed Use / Condominiums - Markham
- Amica Retirement Community - Oakville
- Vellore Woods Community Masterplan – Vaughan
- Dufferin Hill Community Masterplan – Vaughan
- Trafalgar Hills – Georgetown
- Lakeview Park Community – Oshawa
- Edgeley Village – Toronto

Selected Commercial & Institutional Projects

- Various Home Depot stores across Ontario
- Various Shoppers Drug Mart stores across Ontario
- Bradford Shopping Centre – Bradford
- Alcona Shopping Centre – Innisfil
- Allandale Veterinary Clinic - Barrie
- Colossus Centre, Streetscape Concepts - Vaughan
- Pickering College School, Expansion and Playground Relocation - Newmarket
- Metro Toronto Zoo, Children's Wet Play Area Conceptual Design -Toronto
- Nanjing Youth Sciences Centre - Nanjing, People's Republic of China
- Various Commercial Plazas throughout Ontario, Quebec, and Manitoba
- Various Supermarkets in Toronto, Vaughan, Markham, Newmarket

Selected Transit Projects

- Rouge Hill GO Station Parking Lot Expansion – Toronto
- Metrolinx Bronte Station Parking Lot Expansion – Oakville

Selected Visual Impact Assessments

- Dufferin Milton Quarry, VIA and Screening – Milton
- Rogers / Bell Telecommunications Tower VIA – Halton Hills
- Dufferin Acton Quarry, VIA and Screening – Acton
- Bell Telecommunications Tower VIA – Milton
- Olympia Gravel Pit VIA – Caledon
- Bell Telecommunications Tower VIA – Burlington

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