Scoped Environmental Impact Assessment 150 Steeles Avenue East, 248, 250 & 314 Martin Street, Town of Milton

Prepared For:

Neatt Communities

Prepared By:

Beacon Environmental Ltd. & Jennifer Lawrence and Associates Inc.

Date: 2025-04-14 Project: 221265



GUIDING SOLUTIONS IN THE NATURAL ENVIRONMENT

Scoped EIA: 150 Steeles Ave. E., 248, 250 & 314 Martin St., Milton

Table of Contents

page

1.	Introd	ductio	n		1
	1.1	Site Lo	ocation a	nd Study Area	2
	1.2	Site H	istorv		2
	1.3	Study	Team		3
	1.0	Enviro	nmental	Regulatory Framework	0 3
	1.7		Fishorios		0
		1.4.1	Migrator	/ Birds Convention Act	-
		1.4.2	Species	at Pick Act	4 1
		1.4.3	Species Fich and	Al RISK ACI	4 5
		1.4.4	Endongo		5 5
		1.4.5	Drovinge	Plenning Statement (2024)	S
		1.4.0	Provincia	a Planning Statement (2024)	0
		1.4.7		a gion Official Dian (2024)	0
		1.4.8	Halton R	egion Official Plan (2024)	9
		1.4.9	Town of	Militon Official Plan	13
		1.4.10	Conserva	ation Authorities Act	14
2.	Conte	ext & I	Existing	g Conditions	.16
	2.1	Physic	al Enviro	nment	. 16
		2.1.1	Backgrou	und	16
		2.1.2	Bedrock	Geology	17
		2.1.3	Surficial	Geology and Soils	17
		2.1.4	Hydrolog	IY	17
		2.1.5	Hydroge	ology	17
		2.1.6	Local Gr	oundwater Use	18
		2.1.7	Hydraulio	c Conductivity	18
	2.2	Natura	al Environ	ment	. 18
		2.2.1	Backgrou	und	18
		2.2.2	Feature	Staking	19
		2.2.3	Ecologica	al Surveys and Rescues	19
			2.2.3.1	Ecological Land Classification and Flora	19
			2.2.3.2	Tree Inventory	20
			2.2.3.3	Amphibian Surveys and Rescue	21
			2.2.3.4	Avifaunal Surveys	21
			2.2.3.5	Reptile Surveys	22
			2.2.3.6	Bat Surveys – Snag Trees and Acoustic Monitoring	22
			2.2.3.7	Raptor Habitat Survey	23
			2.2.3.8	Progently, Democify, and Rutterfly, Surveyo	23
		0.0.4	2.2.3.9	Dragoniny, Damseiny and Butterny Surveys	23
		2.2.4		Tazalus Dogional Storm Elood Diain	24 24
			2.2.4.1 2212	Neylullal Slullill Fluur Flaill Long Term Stable Ton of Slone	24 21
		225	2.2.4.2 Human M	Lung renn Slavie rup ur Slupe	24 25
		2.2.0	Surface	viaue Liazaius	20 26
		۵.۷.۷	Surface a	anu Giounu Waler Fealures	∠0 27
			2.2.0.1 2262	Ground Water Features	21 27
			2.2.0.2	טוטעווע אימופו ו כמועובט	21

	2.3 E	valuation of Significant Natural Features	
			27
	2.	3.1 Significant Habitat of Endangered or Threatened Species	27
	2.	3.2 Significant and Non-Significant Wetlands	28
	2.	3.3 Significant Woodlands	29
	2.	3.4 Significant Valleylands	29
	2.	3.5 Significant Wildlife Habitat	30
	2.	3.6 Significant Areas of Natural and Scientific Interest	30
	2.	3.7 Fish Habitat	31
	2.	3.8 Flooding and Erosion Hazards	31
	2.	3.9 Surface and Groundwater Resources	31
3. N	latural	Heritage System	31
	3.1 K	ey Features	32
	3.2 E	nhancement to Key Features	32
	3.3 Li	nkages	32
	3.4 R	egulated or Linkage Watercourses	32
	3.5 N	on-Significant Wetlands	33
	3.6 B	uffers & Setbacks	33
	3.7 R	egional Natural Heritage System (RNHS)	33
4. P	Propose	ed Development	34
5 li	mnact	Assessment	35
J. II			
	5.1 5	WM Outlet Alternatives Evaluation	35
	5.2 S	ummary of Mitigation Measures	41
	5.3 S	ummary of Enhancements to Key Features	41
	5.	3.1 Phase 1: Wetland Restoration and Adjacent Invasive Species Management	42
	5.	3.2 Phase 2: Restoration of Significant Woodland and Adjacent Invasive Species	10
	F	Management	43
	5.	5.3 Flidse 5. Residuation at Erodeu Slope and Duner Completion	43 <i>11</i>
		5.3.3.2 Frosion and Sediment Control	44
		5.3.3.3 Debris Management	44
		5.3.3.4 Canopy Pruning	44
		5.3.3.5 Vegetated Interruption Socks Along Contours	45
		5.3.3.6 Planting Approach	45
6. N	lext Ste	eps	46
	6.1 P	ermits from Conservation Halton	46
	6.	1.1 Development within Flooding and Erosion Hazards	46
	6.	1.2 Development within or adjacent to Wetlands	46
	6.2 M	onitoring and Adaptive Management	47
	6.	2.1 Erosion and Sedimentation Control and Monitoring	49
	6.	2.2 Restoration Monitoring	50
	6.	2.3 Buffer Performance Monitoring	51
	6.3 A	nnual Reporting	54
7. P	Policy C	conformity	54
8. C	Conclus	sion	57

9.	References	.59
----	------------	-----

Figures

Figure 1.	Site Lotcation and Study Area	after page 2
Figure 2.	Natural Heritage Features and Context	after page 2
Figure 3.	Ecological Land Classification	after page 20
Figure 4.	Biological Sampling and Relocation	after page 20
Figure 5.	Environmental Constraints and RNHS	after page 24
Figure 6.	Draft Plan of Subdivision	after page 36
Figure 7&	8. Tree Inventory	after page 36

Tables

Table 1.	Impact Assessment and Mitigation	38
Table 2.	Enhancements to Key Features of the NHS	42
Table 3.	Comparison to Derry Green Monitoring Plan	47
Table 4.	Preliminary Monitoring and Adaptive Management Plan	52
Table 5.	Policy Conformity	54

Appendices

Appendix A. Approved Table of Contents

Appendix B. Historic Aerial Photography

Appendix C. Landscape Restoration Drawings

Appendix C1. CH Approved Wetland Restoration Drawings

Appendix C2. Woodland Restoration Drawings

Appendix C3. Proposed Buffer and Eroded Slope Restoration Drawings

Appendix D. Landscape Architect's Certificate of Completion

Appendix E. Restoration Area Photo Log

Report Versions Issued

Version	Date	Revisions
1.	April 2025	

1. Introduction

Beacon Environmental Ltd. (Beacon) and Jennifer Lawrence and Associates Inc. were retained by Neatt Communities (Neatt) to prepare a Scoped Environmental Impact Assessment (EIA) in support of an application for an Official Plan Amendment (OPA), Zoning By-Law Amendment (ZBLA) and Draft Plan of Subdivision (DPoS) for adjoining properties located at 150 Steeles Avenue East, 248 Martin Street, 250 Martin Street, and 314 Martin Street in the Town of Milton (hereafter referred to as the "subject property"). The location of the subject property is illustrated in **Figure 1**. The proposed planning applications are as follows:

- A site-wide OPA to establish new land use designations;
- A ZBLA for Phase 1 lands to implement a shift from industrial uses to a new mixed-use community; and,
- A DPoS to establish five (5) new public streets, 15 development blocks across two phases of development, 2.45 ha of new open space, a 1.52 ha stormwater management (SWM) facility and 5.35 ha of land within the Natural Heritage System (NHS) including associated buffers.

The subject property has undergone extensive site remediation following the decommissioning of former industrial facilities and a landfill, as documented in the Comprehensive Environmental Management Study (CEMS) (Beacon et al. August 2023). The CEMS was prepared in response to a request by the Town of Milton (Town), Region of Halton (Region) and Conservation Halton (CH) to demonstrate how natural heritage features and natural hazards associated with the subject property may be affected and managed during contamination remediation works. The CEMS was approved by the Town, Region, and CH in late 2023. Comprehensive field investigations were conducted as part of the CEMS to identify, characterize, and evaluate the natural heritage features associated with subject property and to delineate the extent of the natural heritage system, post-remediation. This Scoped EIA draws extensively from the accepted CEMS as it relates to the characterization of the site pre-remediation. To assist with agency review, text in this Scoped EIA that has been taken from the approved CEMS is <u>highlighted in gray</u>.

In addition to assessing impacts of the soil remediation works, the CEMS was prepared based on the anticipation of re-developing the property to high density residential development in the future and the need to mitigate associated impacts related to the future change in land use to ensure no negative impacts to the Regional Natural Heritage System (RNHS). The RNHS developed through the CEMS took the future land use into account when recommending appropriate buffers. It was noted in the CEMS that additional reports may be required at subsequent planning stages that detail how the management recommendations of the CEMS (i.e., development limits, buffers, water supply to natural features, if necessary, etc.) are incorporated into the site design.

The terms "remediation" and "restoration" were used extensively in the CEMS and are continued to be used in this Scoped EIA; however, they are not intended to be synonyms. As outlined in the CEMS, and for the purpose of this report, these terms are defined as per the International Restoration Standards (2nd ed.) by the Society for Ecological Restoration (Gann et al. 2019):

Remediation means "a management activity, such as the removal or detoxification of contaminates or excess nutrients from soil and water, that aims to remove sources of degradation".



Restoration means "the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed" which "addresses biodiversity conservation and ecological integrity".

The CEMS included a detailed characterization of the biophysical site conditions, including natural heritage features, natural hazards and the then anticipated extent of site contamination. The limits of the RNHS were also refined by evaluating the significance of natural heritage features, verifying and staking feature limits with agencies, and undertaking technical assessments of natural hazards. The status, as of 2023, and anticipated extent of remediation works and the potential impacts to Key Features were described, and RNHS components and functions were assessed, and mitigation measures prescribed. Additionally, the CEMS identified opportunities for enhancing the condition and quality of Key Features to increase biological diversity and improve ecological resiliency over the long-term.

This Scoped EIA reflects the biophysical characterization of the CEMS, while providing the final limit of remediation works, and the status of the enhancements to the RNHS and restoration of Key Features. It also evaluates impacts of the proposed redevelopment on the RNHS and recommends mitigation measures to avoid or minimize impacts. The Scoped EIA has been prepared to follow the recommendations of the CEMS and a Table of Contents that were agreed to with the Town and their peer reviewer on October 28, 2024 (**Appendix A**).

1.1 Site Location and Study Area

The subject property is 20.8 hectares (ha) in area and is located southeast of Steeles Avenue East, north of the Canadian Pacific Railway, and northeast of the Sixteen Mile Creek valleylands (**Figure 1**).

The study area for this Scoped EIA matches the CEMS and includes the subject property and adjacent lands within 120 metres (m) as shown on **Figure 1.** While the CEMS did not include 248, 250, and 314 Martin Street as part of the subject property at that time, these small residential lots were part of the overall CEMS study area.

Following approval of the CEMS by the Region, CH and Town, the Sixteen Mile Creek valleylands, tableland woodland, re-created wetland and 15 m buffer, were re-zoned as NHS by the Town (**Figure 2**) to reflect the approved RNHS limits as shown in the CEMS. The wetland and woodland that were re-created after removal of contaminated soil are shown on **Figure 2** as blue and green fill, respectively.

1.2 Site History

Prior to the more recent industrial uses on the site, the entire tableland portion of the subject property was used for agriculture for well over a century. In 1954, an industrial manufacturing facility was constructed on the subject property. Over the life span of the manufacturing facility there were several additions completed in 1957, 1965, 1973, 1988, 1994, 1998 and 1999. The building was originally tooled to manufacture automobile bumpers, which included a chrome plating process. In the 1970's, the manufacturing facility was re-tooled and continually expanded to manufacture suspension springs for major car manufacturers. At full operational status, the manufacturing facility had eight operational lines. Historic air photos of the subject property between 1984 and 1994 are provided in **Appendix B**.







ial/Geo Projects/2021/221265 150 Steeles Avenue Milton EIS/Q Project Files/20250206 150Stee eMilton_2025ScopedEIA_221265.qgz DB\OneDrive - Beacon F

Natural Heritage Features and Context

150 Steeles Avenue Milton Scoped EIA Legend Subject Property Study Area Watercourse (MNRF 2024) Milton Natural Heritage System (Zoning By-law 016-2024, Schedule A) Evaluated Wetland - Not Provincially Significant (September 4, 1998) Greenbelt Urban River Valley layer (MMAH 2017) Final Limit of Soil Contamination Remediation in Natural Heritage System (Approximate) Approximate Eroded Slope at Former Storm Sewer Restoration Areas Wetland Woodland Buffer Note: 150 Steeles Avenue has been subject to remediation of contaminated soil and groundwater, as described in the Comprehensive Environmental Management Study (Beacon et al. 2023). Study (Beacon et al. 2023) Project: 221265 Last Revised: April 2025 Client: Neatt Communities Prepared by: BD Checked by: JS 1:3,500 0 70 140 m	150 Steeles Avenue Milton Scoped EIA Legend Subject Property Study Area Watercourse (MNRF 2024) Milton Natural Heritage System (Zoning By-law 016-2024, Schedule A) Evaluated Wetland - Not Provincially Significant (September 4, 1998) Greenbelt Urban River Valley layer (MMAH 2017) Final Limit of Soil Contamination Remediation in Natural Heritage System (Approximate) Approximate Eroded Slope at Former Storm Sewer Restoration Areas Wetland Woodland Buffer Note: 150 Steeles Avenue has been subject to remediation of contaminated soil and groundwater, as described in the Comprehensive Environmental Management Study (Beacon et al. 2023). Eventorementation Project: 221265 Last Revised: April 2025 Client: Neatt Communities Prepared by: BD Checked by: JS Marcol 13,500 70 140 m	Context		-				
Legend Subject Property Study Area Watercourse (MNRF 2024) Milton Natural Heritage System (Zoning By-law 016-2024, Schedule A) Evaluated Wetland - Not Provincially Significant (September 4, 1998) Greenbelt Urban River Valley layer (MMAH 2017) Final Limit of Soil Contamination Remediation in Natural Heritage System (Approximate) Approximate Eroded Slope at Former Storm Sewer Restoration Areas Wetland Woodland Buffer Note: 150 Steeles Avenue has been subject to remediation of contaminated soil and groundwater, as described in the Comprehensive Environmental Management Study (Beacon et al. 2023). Extervised: April 2025 Client: Neat Communities Prepared by: BD Checked by: JS I:3,500 <u>70</u> 140 m	Legend Subject Property Study Area Watercourse (MNRF 2024) Milton Natural Heritage System (Zoning By-law 016-2024, Schedule A) Evaluated Wetland - Not Provincially Significant (September 4, 1998) Greenbelt Urban River Valley layer (MMAH 2017) Final Limit of Soil Contamination Remediation in Natural Heritage System (Approximate) Approximate Eroded Slope at Former Storm Sewer Restoration Areas Wetland Woodland Buffer Note: 150 Steeles Avenue has been subject to remediation of contaminated soil and groundwater, as described in the Comprehensive Environmental Management Study (Beacon et al. 2023). Evaluate Neattor Project: 221265 Last Revised: April 2025 Client: Neattor Prepared by: B0 Checked by: JS Communities Prepared by: B0 Checked by: JS	150 Steeles Avenue Milton Scoped EIA						
Note: 150 Steeles Avenue has been subject to remediation of contaminated soil and groundwater, as described in the Comprehensive Environmental Management Study (Beacon et al. 2023). Management Study (Beacon et al. 2023). Project: 221265 Last Revised: April 2025 Client: Neatt Communities Prepared by: BD Checked by: JS 1:3,500 70 1:3,500 70 1:3,500 70	Note: 150 Steeles Avenue has been subject to remediation of contaminated soil and groundwater, as described in the Comprehensive Environmental Management Study (Beacon et al. 2023). Image: Study (Beacon et al. 2023) Image: Study (Beacon et al. 202	Legend Subject Property Study Area Watercourse (MNRF 2024) Milton Natural Heritage System (Zoning By-law 016-2024, Schedule A) Evaluated Wetland - Not Provincially Significant (September 4, 1998) Greenbelt Urban River Valley layer (MMAH 2017) Final Limit of Soil Contamination Remediation in Natural Heritage System (Approximate) Approximate Eroded Slope at Former Storm Sewer Restoration Areas Wetland Woodland Buffer						
Project: 221265 Last Revised: April 2025 Client: Neatt Communities Prepared by: BD Checked by: JS 1:3,500 70 140 m	Project: 221265 Last Revised: April 2025 Client: Neatt Communities Prepared by: BD Checked by: JS 1:3,500 70 140 m Contains information licensed under the Open Government License- Optario Othering or Papelourer FBS United Basics (2002)	Note: 150 Steeles Avenue has been subject to remediation of contaminated soil and groundwater, as described in the Comprehensive Environmental Management Study (Beacon et al. 2023).						
1:3,500 0 70 140 m	1:3,500 70 140 m Contains information licensed under the Open Government License– Optorio Optorio Optorio (2002)	BEACON ENVIRONMENTAL Las Client: Neatt	Project: 22 at Revised: Ap Prepared by: BD Checked by: JS	1265 oril 2025				
	Contains information licensed under the Open Government License–	1:3,500 0	70	140 m				

In conjunction with the manufacturing facility, an unregulated landfill was created on the subject property in the early 1970's. The landfill was situated south of the former industrial building and was used to dump waste material from the manufacturing process including mill scale, steel shot, brick and construction debris. The landfill was eventually capped in the late 1980's/early 1990's.

The manufacturing facility uses and landfill resulted in various areas and types of contamination on the subject property, as described later in this report.

Major manufacturing operations on the subject property were discontinued in 2009 at which point, the factory was transitioned to general warehousing and storage, utilizing about 30% of the 300,000 sq. ft. building. The remainder of the building and subject property remained vacant / un-used.

The subject property was purchased by 150 Steeles Milton Inc. on April 7, 2021, from the Meritor Suspension Systems Company, Canada (MSSC). As part of the purchase process, environmental testing was completed which identified significant plumes/areas of contamination on the subject property related to the previous manufacturing uses in the factory.

The manufacturing facility was demolished in late 2021 and remediation activities commenced in 2022 following the building demolition. For the purposes of completing a Record of Site Condition (RSC) in phases, the subject property was subdivided into six RSC areas / properties, as documented in the CEMS and the MECP Environmental Site Registry for RSC.

As of the date of this report, remediation of soil contamination on the subject property is near completion, with a small amount of contaminated soil, outside of the NHS, to be removed in spring 2025. The final extent of soil remedial excavation into the NHS is shown on **Figure 2**. Remediation of groundwater contamination has progressed such that only one small plume remains outside of the NHS. As such, the subject property is still undergoing remediation as of the date of this report to address the remaining small area of soil and groundwater contamination. Although remediation of soil contamination is required for the RSC, groundwater remediation is not required for the RSC.

1.3 Study Team

The Study Team relevant to this Scoped EIA includes:

- Beacon natural heritage and landscape architecture;
- Jennifer Lawrence and Associates Inc. environmental planning and project coordination;
- Urbantech Consulting water resources engineering; and
- DS Consultants hydrogeology, geology, slope stability and site contamination.

1.4 Environmental Regulatory Framework

The following subsections provide a framework of key legislation, regulations and policies that apply to the subject property.



1.4.1 Fisheries Act

The purpose of the federal *Fisheries Act* and the Ontario Fishery Regulations (SOR/2007-237) is to ensure the conservation and protection of fish and fish habitat. Sixteen Mile Creek, that traverses a portion of the subject property, is frequented by fish. Activities taking place in or near water may adversely affect fish or fish habitat. The *Fisheries* Act is administered by Fisheries and Oceans Canada (DFO), who recommends that proponents of these activities should undergo the following:

- Understand the types of impacts their projects are likely to cause;
- Take measures to avoid and mitigate impacts to the extent possible; and
- Request authorization from the Minister and abide by the conditions of any such authorization, when it is not possible to avoid and mitigate impacts of projects that are likely to cause serious harm to fish.

It should also be noted that terrestrial crayfish species are regulated under the *Fisheries Act* and Ontario Fishery Regulations. The following sections of the *Fisheries Act* and Ontario Fisheries Regulations may apply:

29(4) no person shall transport crayfish overland except under a licence to collect fish for scientific purposes issued under the Fish and Wildlife Conservation Act, 1997

34.4(1) No person shall carry on any work, undertaking or activity, other than fishing, that results in the death of fish.

Such licences are administered provincially, by the Ministry of Natural Resources and Forestry (MNRF). A license was obtained to rescue a terrestrial crayfish species, Digger Crayfish (*Creaserinus fodiens*), from a contaminated wetland on the tableland, as described in **Section 2.2.3.8** below.

1.4.2 Migratory Birds Convention Act

The federal *Migratory Birds Convention Act* (MBCA; 1994) protects the nests, eggs, and young of most bird species from harassment, harm, or destruction. Generally, this means that clearing of vegetation or removal of other nesting habitats should be avoided during the breeding bird season. Environment Canada considers the 'general nesting period' of breeding birds in nesting zone C2 to be between early April and the end of August; therefore, vegetation clearing should generally be undertaken between September 1 and March 31. The protection provisions are applied in conjunction with other applicable federal laws and regulations, including the *Species at Risk Act* (2002).

Although not required under provincial planning policy, the CEMS included mitigation related to migratory birds.

1.4.3 Species at Risk Act

The purpose of the federal *Species at Risk Act* (SARA) is to ensure the conservation and protection of federally listed species at risk. SARA is also intended to help prevent species listed as special concern from becoming endangered or threatened. To ensure the protection of endangered or threatened species, SARA contains prohibitions that make it an offence to kill, harm, harass, capture, take,



possess, collect, buy, sell, or trade an individual of a species listed in Schedule 1 of SARA as endangered, threatened or extirpated.

SARA primarily applies where lands are under federal jurisdiction. SARA applies to private lands only in so far as the *Fisheries Act* or the MBCA apply. As such, this legislation may only apply to Sixteen Mile Creek and to the extent that the MBCA applies.

The CEMS included an assessment of impact to species at risk regulated under the Fisheries Act.

1.4.4 Fish and Wildlife Conservation Act

The *Fish and Wildlife Conservation Act* enables the MNRF to provide sound management of the province's fish and wildlife. The *Act* provides general prohibitions on the capture or harassment of game wildlife and specially protected wildlife, including mammals, birds, bird nests, reptiles, invertebrates, and amphibians. Section 39 of the *Act* allows MNRF to issue an authorization to capture, kill or possess wildlife for scientific purposes, including rescue of wildlife.

An authorization under section 39 of the *Act* was obtained to rescue amphibians and Digger Crayfish from a contaminated wetland on the tableland, as described in **Sections 2.2.3.3** and **2.2.3.8** below.

1.4.5 Endangered Species Act

Clause 9(1)(a) of the *Endangered Species Act* (ESA) prohibits the killing, harming, harassment, capture, or take of an extirpated, endangered or threatened species, except where regulations allow. Subsection 10(1) of the ESA prohibits the damage or destruction of the habitat of extirpated, endangered, or threatened species.

Section 23.18 of the general regulation of the ESA (Ontario Regulation 242/08) provides an exemption to clause 9(1)(a) and subsection 10(1) of the ESA for "*work undertaken*" … "*to remove or clean an area that has been contaminated or polluted*". Subsection 23.18(5) provides requirements to meet this exemption, such as:

- Giving the Minister of the Ministry of Environment, Conservation and Parks (MECP) notice of activity;
- Preparation of a mitigation plan and carrying out the work in accordance with this mitigation plan;
- Take reasonable steps to minimize adverse effects to the endangered or threatened species and habitat; and
- If a person observes a species identified in the notice of activity during the works, the person must complete a Species at Risk Observation Reporting Form within three months of the observation.

The CEMS included an assessment of endangered species and threatened species.



1.4.6 Provincial Planning Statement (2024)

Subsequent to the approval of the CEMS, an update to the 2020 Provincial Policy Statement under section 3 of the *Planning Act* (1990) has occurred. The Provincial Planning Statement (PPS) (MMAH 2024) took effect in October 2024 and supersedes the 2020 Provincial Policy Statement. While the numbering system has changed, the natural heritage and natural hazard PPS policies addressed by the CEMS have not changed substantively since the 2020 Provincial Policy Statement. An overview of the applicable policies is provided below.

Section 4.0 of the PPS (Wise Use and Management of Resources) provides policy direction related to natural heritage and water, that are applicable to the subject property. Specifically, Section 4.1 (Natural Heritage) provides for the following:

- 4.1.1 Natural features and areas shall be protected for the long term.
- 4.1.2 The diversity and connectivity of natural features in an area, and the longterm ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features.
- 4.1.3 Natural heritage systems *shall be identified in Ecoregions 6E & 7E, recognizing that* natural heritage systems *will vary in size and form in* settlement areas, rural areas, *and* prime agricultural areas.
- 4.1.4. Development and site alteration shall not be permitted in:
 - a) significant wetlands in Ecoregions 5E, 6E and 7E; and
 - b) significant coastal wetlands.
- 4.1.5 Development and site alteration shall not be permitted in:
 - a) significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E;
 - b) significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);
 - c) significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);
 - d) significant wildlife habitat;
 - e) significant areas of natural and scientific interest; and
 - f) coastal wetlands in Ecoregions 5E, 6E and 7E that are not subject to policy 4.1.4.b),

unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

- 4.1.6 Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.
- 4.1.7 Development *and* site alteration *shall not be permitted in* habitat of endangered species and threatened species, *except in accordance with* provincial and federal requirements.



4.1.8 Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 4.1.4, 4.1.5 and 4.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.

4.1.9 Nothing in policy 4.1 is intended to limit the ability of agricultural uses to continue.

Section 4.2.1 of the PPS addresses policies related to water. Specifically, this section requires that planning authorities shall protect, improve or restore the quality and quantity of water by:

- a) using the watershed as the ecologically meaningful scale for integrated and longterm planning, which can be a foundation for considering cumulative impacts of development;
- b) minimizing potential negative impacts, including cross-jurisdictional and crosswatershed impacts;
- c) identifying water resource systems;
- d) maintaining linkages and functions of water resource systems;
- e) implementing necessary restrictions on development and site alteration to:
 - 1. protect all municipal drinking water supplies and designated vulnerable areas; and
 - 2. protect, improve or restore vulnerable surface and ground water and their hydrologic functions;
- f) planning for efficient and sustainable use of water resources, through practices for water conservation and sustaining water quality; and
- g) ensuring consideration of environmental lake capacity, where applicable

Section 4.2.2 of the PPS notes that:

Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restored, which may require mitigative measures and/or alternative development approaches.

In addition to the above, Section 5.0 of the PPS (Protecting Public Health and Safety) also contains policies that are applicable to the subject property. The relevant portions of these policies, to this study, are provided below.

Subsection 5.1.1 states the following:

Development shall be directed away from areas of natural or human-made hazards where there is an unacceptable risk to public health or safety or of property damage, and not create new or aggravate existing hazards.

Subsection 5.2.2 states the following:

Development shall generally be directed to areas outside of:



- a) hazardous lands adjacent to the shorelines of the Great Lakes-St. Lawrence River System and large inland lakes which are impacted by flooding hazards, erosion hazards and/or dynamic beach hazards;
- hazardous lands adjacent to river, stream and small inland lake systems which are impacted by flooding hazards and/or erosion hazards; and,
- c) hazardous sites.

Subsection 5.3.2 states the following:

Sites with contaminants in land or water shall be assessed and remediated as necessary prior to any activity on the site associated with the proposed use such that there will be no adverse effects.

Subsection 2.9.1 of the 2024 PPS also contains the following policies pertaining to climate change that are applicable to this EIA:

Planning authorities shall plan to reduce greenhouse gas emissions and prepare for the impacts of a changing climate through approaches that:

- b) incorporate climate change considerations in planning for and the development of infrastructure, including stormwater management systems, and public service facilities;
- d) promote green infrastructure, low impact development and active transportation, protect the environment and improve air quality; and
- e) take into consideration any additional approaches that help reduce greenhouse gas emissions and build community resilience to the impacts of a changing climate.

The CEMS included an assessment for all provincially significant natural heritage features/functions and recommended a refined RNHS.

1.4.7 Greenbelt Plan

The Greenbelt Plan identifies the Sixteen Mile Creek valley as an Urban River Valley, as shown on **Figure 2**; however, the policies only apply to those portions of a valley that are in public ownership. A portion of the valley, immediately to the west of the subject property, is owned by the Town. As such, the following Urban River Valley policies are applicable to the Town-owned portion of the valley:

- 6.2.1 Only publicly owned lands are subject to the policies of the Urban River Valley designation. Any privately owned lands within the boundary of the Urban River Valley area are not subject to the policies of this designation. For the purposes of this section, publicly owned lands means lands in the ownership of the Province, a municipality or a local board, including a conservation authority.
- 6.2.2 The lands are governed by the applicable official plan policies provided they have regard to the objectives of the Greenbelt Plan.
- 6.2.4 The Protected Countryside policies to not apply except for:



- a) The policies of section 3.2.6; and
- b) The policies of section 3.3.

The relevant policies of Section 3.2.6 are as follows:

- 3.2.6.1 To support the connections between the Greenbelt's Natural System and the local, regional and broader scale natural heritage systems of southern Ontario ... the federal government, municipalities, conservation authorities, other agencies and stakeholders should:
 - a) Consider how activities and land use change both within and abutting the Greenbelt relate to the areas of external connections and Urban River Valley areas identified in this Plan;
 - b) Promote and undertake appropriate planning and design to ensure that external connections and Urban River Valley areas are maintained and/or enhanced
- 3.2.6.2 The river valleys that run through existing or approved urban areas and connect the Greenbelt to inland lakes and the Great Lakes, including areas designated as Urban River Valley, are a key component of the long-term health of the Natural System. In recognition of the function of the urban river valleys, municipalities and conservation authorities should:
 - (1) In considering land conversions or redevelopments in or abutting an urban river valley, strive for planning approaches that:
 - Establish or increase the extent or width of vegetation protection zones in natural self-sustaining vegetation, especially in the most ecologically sensitive areas (i.e., near the stream and below the stable top of bank);
 - ii. Increase or improve fish habitat in streams and in the adjacent riparian lands;
 - iii. Include landscaping and habitat restoration that increase the ability of native plants and animals to use valley systems as both wildlife habitat and movement corridors; and
 - iv. Seek to avoid or, if avoidance is not possible, minimize and mitigate adverse impacts associated with the quality and quantity of urban runoff into the valley systems

Policies within Section 3.3 (Parkland, Open Space and Trails), which is also mentioned in Policy 6.2.4, are related to encouraging the creation of trails and trail planning to provide for accessible recreation opportunities.

The intent of this application is to dedicate the NHS lands to the Town, at which point the Greenbelt Plan Urban River Valley policies will be applicable to the Town-owned valleylands.

1.4.8 Halton Region Official Plan (2024)

As of July 2024, the Halton Region Official Plan (ROP) has become a local plan that is the Town of Milton's responsibility to implement until the ROP is revoked. The ROP contains policies related to the protection, conservation and enhancement of the natural heritage system, management of natural hazards and requirements related to redevelopment and soil contamination. The final iteration of the



ROP is the May 16, 2024, office consolidation and is reflected in this EIA. Relevant policies of the ROP are outlined below:

Natural Heritage System

115.3 The Regional Natural Heritage System is a systems approach to protecting and enhancing natural features and functions and is scientifically structured on the basis of the following components: (1) Key Features, which include:

- (1) Key Features, which include:
 - a) significant habitat of endangered and threatened species,
 - b) significant wetlands,
 - c) significant coastal wetlands,
 - d) significant woodlands,
 - e) significant valleylands,
 - f) significant wildlife habitat,
 - g) significant areas of natural and scientific interest,
 - h) fish habitat,
- (2) Key Features that have been identified are shown on Map 1G.
- (3) enhancements to the Key Features including Centres for Biodiversity,
- (4) linkages,
- (5) buffers,
- (6) watercourses that are within a Conservation Authority Regulation Limit or that provide a linkage to a wetland or a significant woodland, and
- (7) wetlands other than those considered significant under Section 115.3(1)b).
- 115.4. Included within the Regional Natural Heritage System are:
 - (2) Regulated Flood Plains as determined, mapped and refined from time to time by the appropriate Conservation Authority.
- 116.1 The boundaries of the Regional Natural Heritage System may be refined, with additions, deletions and/or boundary adjustments, through:
 - a) a Sub-watershed Study accepted by the Region and undertaken in the context of an Area-Specific Plan;
 - b) an individual Environmental Impact Assessment accepted by the Region, as required by this Plan; or
 - c) similar studies based on terms of reference accepted by the Region.

Once approved through an approval process under the Planning Act, these refinements are in effect on the date of such approval. The Region will maintain mapping showing such refinements and incorporate them as part of the Region's statutory review of its Official Plan.

- 117.1 Subject to other policies of this Plan, applicable policies of the Greenbelt Plan and Niagara Escarpment Plan, and applicable Local Official Plan policies and Zoning By-laws, the following uses may be permitted:
 - (9) essential transportation and utility facilities.



. . .

- 118 It is the policy of the Region to:
 - (2) Apply a systems based approach to implementing the Regional Natural Heritage System by:
 - a) Prohibiting development and site alteration within significant wetlands, significant coastal wetlands, significant habitat of endangered and threatened species and fish habitat except in accordance with Provincial and Federal legislation or regulations;
 - b) Not permitting the alteration of any components of the Regional Natural Heritage System unless it has been demonstrated that there will be no negative impacts on the natural features and areas or their ecological functions; in applying this policy, agricultural operations are considered as compatible and complementary uses in those parts of the Regional Natural Heritage System under the Agricultural System and are supported and promoted in accordance with policies of this Plan
 - c) Refining the boundaries of the Regional Natural Heritage System in accordance with Section 116.1; and
 - d) Introducing such refinements at an early stage of the development or site alteration application process and in the broadest available context so that there is greater flexibility to enhance the ecological functions of all components of the system and hence improve the long-term sustainability of the system as a whole.
 - (3) Require the proponent of any development or site alteration that meets the criteria set out in Section 118(3.1) to carry out an Environmental Impact Assessment (EIA). The purpose of an EIA is to demonstrate that the proposed development or site alteration will result in no negative impacts to that portion of the Regional Natural Heritage System or unmapped Key Features affected by the development or site alteration by identifying components of the Regional Natural Heritage System as listed in Section 115.3 and their associated ecological functions and assessing the potential environmental impacts, requirements for impact avoidance and mitigation measures, and opportunities for enhancement. The EIA, shall, as a first step, identify Key Features on or near the subject site that are not mapped on Map 1G.

The CEMS included an assessment for all provincially significant natural heritage features/functions and Regional Key Features and recommended a refinement to the RNHS as permitted in Policy 116.1. This Scoped EIA is intended to update the findings of the CEMS in so much as it relates to the newly restored areas within the RNHS as a result of the post-remediation restoration efforts. This Scoped EIA is also intended to address Policy 118(3), which is to demonstrate that the proposed development will result in no negative impacts to the RNHS.

As it relates to Policy 117.1(9), 'essential' is defined in the ROP as:

That which is deemed necessary to the public interest after all alternatives have been considered and, where applicable, as determined through an Environmental Assessment process.



As a result, any utility facility, such as a stormwater outfall, within the RNHS must be deemed necessary in the public interest and alternatives considered. An Environmental Assessment process is not applicable in this situation.

Natural Hazards

There are several policies within the ROP related to the management of natural hazards and the protection of life and property including:

It is the policy of the Region to: 118 . . . (11)Require that Local Zoning By-laws prohibit new construction and the expansion or replacement of existing non-conforming uses within hazard lands... Require that Local Zoning By-laws impose for development appropriate (12)setbacks from Regulated Flood Plains, based on the kind, extent and severity of existing and potential hazard to public safety... (13)Encourage the Local Municipalities to adopt a One-Zone Concept whereby new development in the Flood Plains, defined by the regulatory flood standard, is to be prohibited or restricted. (14)Encourage the Local Municipalities to: a) acquire public open space on tableland adjacent to watercourses and along the waterfront within the Urban Area.

The CEMS included an assessment of the Regional Storm flood plain limits as well as a long-term stable top of slope (LTSTOS) assessment, to delineate the natural hazards on the subject property. All natural hazards, plus a 15 m setback from the greater of the flooding and erosion hazards was included in the refined RNHS limit.

Although the Region no longer maintains the mapping of RNHS refinements, the Town of Milton zoning map reflects the revised RNHS limit based on the refinement that was approved by Town Council on December 18, 2023, as shown on **Figure 2**.

Contaminated Sites

Section 146 (Land) outlines the Region's objectives, including those related to contaminated sites. Specifically, Policy 146.11 states that it is the Region's objective "To ensure that development takes place on sites that are safe from soil contamination."

Section 147 outlines the Region's policies related to contaminated sites including:

(17) Require that, prior to the Region or Local Municipality considering any development proposals, the proponent undertake a process in accordance with the Region's Guidelines (Protocol) for Reviewing Development Applications with Respect to Contaminated or Potentially Contaminated Sites and any applicable Provincial legislation, regulations and guidelines to determine whether there is



any potential contamination on the site and the steps necessary to bring the site to a condition suitable for its intended use.

(18) Consider approval for development proposals only when the development site complies with Provincial guidelines, Regional standards and other requirements regarding soil and groundwater quality.

Section 2.2.5 below describes how contamination on the subject property has been addressed in accordance with ROP policy.

1.4.9 Town of Milton Official Plan

The Town of Milton Official Plan (MOP) contains policies related to the protection, conservation and enhancement of the NHS, management of natural hazards and requirements related to redevelopment. The subject property is within the Milton 401 Industrial / Business Park Secondary Plan Area (Schedule D1) and the valleylands are generally designated as Natural Heritage System (Zoning By-law 016-2024, Schedule A). This Natural Heritage System designation is intended to encourage the protection, maintenance and enhancement of significant natural features and areas and, according to Policy 4.8.1.2 of the MOP, includes flood plains, Provincially Significant Wetlands, significant valleylands and significant habitat of endangered and threatened species. Note that the NHS mapping in the MOP has not been updated; however, the refinement to the RNHS was accepted as part of the CEMS as shown on Schedule A of the Zoning By-law 016-2024.

Relevant MOP policies related to natural heritage and natural hazards are outlined below:

Natural Heritage

Policy 4.9.1.3 defines the components of the RNHS and reflects ROP policy 115.3.

Policy 4.9.3.1 provides mechanisms for application of the RNHS and reflects ROP policy 118(2). Policy 4.9.3.1(a) prohibits development and site alteration within significant wetlands, significant habitat of endangered and threatened species, and fish habitat except in accordance with Provincial or Federal legislation or regulations.

Policy 4.9.3.2 states the following:

The purpose of an EIA is to demonstrate that the proposed development or site alteration will result in no negative impacts to that portion of the Natural Heritage System or unmapped Key Features affected by the development or site alteration by identifying components of the Regional Natural Heritage System as listed in Section 4.9.1.3 and their associated ecological functions and assessing the potential environmental impacts, requirements for impact avoidance and mitigation measures, and opportunities for enhancement. The EIA, shall, as a first step, identify Key Features on or near the subject site that are not mapped on Schedule "M".

Policy 4.9.3.3 requires that site alteration that is located wholly or partially inside or within 120 m of the RNHS requires an EIA.



Policy 4.3.2.12 provides additional requirements for boundary refinement of the RNHS, including consultation with the Town, and reflects the requirements of ROP Policy 116.1.

Natural Hazards

Policy C.11.6.4.4 addresses refinements to natural hazards and that any proposed development within hazards shall be to the satisfaction of the Town and relevant conservation authority.

As outlined in **Sections 1.4.6** and **1.4.8**, the NHS and natural hazard limits were refined through the CEMS.

1.4.10 Conservation Authorities Act

When the CEMS was approved in 2023, CH's regulation (Ontario Regulation 162/06) was in place. Ontario Regulation (O. Reg.) 41/24 under the *Conservation Authorities Act* (1990) came into effect on April 1, 2024. Similar to O. Reg. 162/06, the revised regulation provides that CH is responsible for reviewing development proposals and approving works within and adjacent to natural hazards (i.e., areas subject to flooding and erosion) such as watercourses, wetlands, floodplains, steep slopes, and shorelines. There is one change to the regulation that affects the subject property: O. Reg. 162/06 provided for CH to regulate lands within 120 m of a wetland whereas O. Reg. 41/24 limits the regulated area adjacent to wetlands to 30 m. CH's O. Reg. 162/06 policy document provided for development to occur within 15 m to 30 m of a non-Provincially Significant Wetland or wetland less than 2 ha and only recommended a 15 m lot line setback from such a wetland for new development. The NHS zone limit, approved as a result of the CEMS, incorporates the recommended 15 m setback to the re-created wetland. This results in CH's regulatory limit extending beyond the NHS limit within the southern portion of the subject property as discussed in **Section 6.1**.

In addition to CH's regulatory responsibilities described above, CH also has provincially delegated responsibilities under O. Reg. 686/21, including acting on behalf of the province to ensure that decisions under the *Planning Act* are consistent with the Natural Hazards sections (4.2, 5.1, and 5.2) of the PPS.

Relevant regulatory policies in CH's *Policies and Guidelines for the Administration of Part VI of the Conservation Authorities Act and Ontario Regulation 41/24 and Land Use Planning Policy Document* (CH 2024) include:

- 2.1 Activities to straighten, change, divert, or interfere with a watercourse, activities to change or interfere with a wetland, and development activities within river or stream valleys, hazardous lands, wetlands and lands adjacent or close to the shoreline of Lake Ontario and Hamilton Harbour or to inland lakes that may be affected by flooding, erosion or dynamic beaches, are prohibited except where allowed under Policies 2.4-2.43 (inclusive) and where:
 - a) The activity is not likely to affect the control of flooding, erosion, dynamic beaches, unstable soil or bedrock;
 - b) The activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; and,



- c) Any other requirements that may be prescribed by the regulations are met.
- 2.2 Development activities are prohibited within 15 metres of the stable top of bank where a valley is apparent, within 15 metres from the greater of the limit of the flood plain or the predicted meander belt width of a watercourse where a valley is not apparent, within 15 metres of the furthest landward extent of the aggregate of the flooding, erosion and dynamic beach hazards along the Lake Ontario and Hamilton Harbour shorelines, as well as within 30 metres from a wetland, except where allowed under Policies 2.4-2.43 (inclusive) and where:
 - a) The activity is not likely to affect the control of flooding, erosion, dynamic beaches, unstable soil or bedrock;
 - b) The activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; and,
 - c) Any other requirements that may be prescribed by the regulations are met.

Policies 2.4.1.1 and 2.4.1.2 requires that CH stake the top of bank of valleys greater than 2 m in height and that CH may request a stable slope assessment to determine the long-term stable top of slope. Policy 2.5 requires that CH attend on-site to stake the limit of wetlands. Policy 2.8 is relevant as it relates to construction access and site controls, given that some of the remediation and restoration works as well as stormwater infrastructure will take place within CH's regulated area:

2.8 Any application for development, permitted in accordance with Policies 2.4 – 2.43, must demonstrate that access to the work area and completion of the works can be carried out in an acceptable manner in accordance with guidance documents in Section 4. Consideration must be given to the impacts on flooding, erosion, valley slope and channel stability. Information required for review and approval includes, but is not limited to: limit of work area delineation; sediment and erosion controls; vegetation protection; staging/phasing, etc.

Policy 2.33 generally does not permit new development within 15 m of wetlands less than 2 ha in size.

Finally, Policy 2.41 is relevant as it relates to the construction of public infrastructure, such as stormwater outfalls:

It is recognized that certain utilities and services such as watermains, storm and sanitary sewers, natural gas or oil pipelines, hydro and communication corridors, footpaths/trails and transportation links will, from time to time, be required to cross hazardous lands, valleylands, wetlands or shorelines. Such uses will be subject to the following criteria:

- a) The need for the project has been demonstrated and there is no reasonable alternative;
- b) The area of construction disturbance will be kept to a minimum;
- *j)* Storm sewer outfalls required to be constructed on valley walls greater than 6 metres in height will normally utilize a drop shaft and tunnel in order to protect the natural integrity of the valley wall



The subject property contains the following areas that are regulated by CH pursuant to O. Reg. 41/24:

- Erosion hazards LTSTOS of Sixteen Mile Creek valley (DS Consultants 2023);
- Flooding hazards Regional storm flood plain associated with Sixteen Mile Creek (Beacon et al. 2023);
- Wetlands within the valley and on the tablelands (Beacon et al. 2023); and
- Regulated Allowances 15 m adjacent to the greater of the Regional Storm flood plain or stable top of bank; and 30 m adjacent to wetlands.

Through the CEMS, the physical top of bank and wetland limits were staked by CH and a LTSTOS assessment was prepared by DS Consultants (2023). The wetland (tailings pond) was removed and replicated within the RNHS with a permit from CH (Permit #8705). The flood plain was delineated by Urbantech, utilizing CH mapping, within the CEMS and is fully contained within Sixteen Mile Creek valley. The NHS zoning limit, approved as part of the previous planning application, contained all of CH's regulated areas at the time of approval (15 m from stable top of bank and 15 m from re-created wetland). As a result of the changes to CH's regulation, there is an additional 15 m of regulated area, beyond the NHS zone, that is associated with the re-created wetland.

2. Context & Existing Conditions

2.1 Physical Environment

This section characterizes the physical environment of the study area and environs. It provides an overview of the bedrock and surficial geology resources, topography, soils, surface water and groundwater resources, including drainage catchments, hydrostratigraphy, groundwater levels and groundwater quality.

2.1.1 Background

The subject property is situated within a mixed residential and industrial neighbourhood and is located approximately 220 m east of the intersection of Steeles Avenue East and Bronte Street North. The portion of the subject property at 150 Steeles was vacant at the time that this report was prepared while 248 and 314 Martin Street contain residential houses.

The tableland portion of the subject property is at an elevation of 205 m above sea level (masl) except for one area toward the centre of the subject property (where the former unregulated landfill was located) where the pre-remediation surface elevation is 211 masl (Beacon et al. 2023). The subject property is located adjacent to, and contains a small portion of, the Sixteen Mile Creek valley. The southwestern portion of the subject property contains a portion of the valley slopes, Regional storm flood plain and a short segment of the creek. The valley floor, associated with the creek, is at an elevation of approximately 198 masl (Beacon et al. 2023).



2.1.2 Bedrock Geology

Based on borehole data logs, shale bedrock belonging to the Queenston Formation was found at approximate depths varying from 15.3 to 18.3 m below the existing ground surface (mbgs), corresponding to elevations varying from 188.0 to 190.2 masl (Beacon et al. 2023).

2.1.3 Surficial Geology and Soils

The subject property is located within the Peel Plain physiographic region (Chapman and Putman 1984). This plain corresponds with the bottom of glacial Lake Peel which formed between an ice front and the Niagara Escarpment. It slopes south to Lake Ontario and follows the topography of the Halton Till. According to the *Physiography of Southern Ontario* (Chapman and Putman 1984), the surficial geology is described as till, clay to silty-textured till (derived from glaciolacustrine deposit of shale). Soils on the tablelands are mapped as Chinguacousy Clay Loams and the valley floor is described as consisting of alluvial soils (Gillespie, Wicklund, and Miller 1971).

2.1.4 Hydrology

The majority of the subject property (11.56 ha) drains from the north to southwest, towards the Sixteen Mile Creek via an overland flow route and existing outlet in the valley. A portion of the site (8.70 ha) drains to the southeast towards an existing drainage swale that outlets to Sixteen Mile Creek. Prior to site remediation works, the property was developed and included approximately 75% impervious coverage in the north portion with site, approximately 30% impervious coverage in the south-east portion of the site and no impervious areas in the south-west portion of the site (Urbantech 2025). Drainage plans are provided in the *Functional Servicing and Stormwater Management Report* (FSR; Urbantech 2025).

There is one historic stormwater outfall from the previously developed portion of the subject property that drained into the Sixteen Mile Creek valley, and an overflow spillway from the previous tailings pond which discharged / spilled to the railway ditch with no formal outfall. The line to the stormwater outfall was decommissioned as part of the demolition works and the tailings pond was removed, and a restored wetland was created in the RNHS. In addition, as part of the site remediation works, the grades were altered such that overland flow is now directed to an erosion and sediment control (ESC) pond in the southeast corner of the subject property. As a result, the storm sewer and tailings pond area no longer convey any flows from the surface to Sixteen Mile Creek (Urbantech 2025).

2.1.5 Hydrogeology

The hydrogeology at the subject property was evaluated using six (6) on-site monitoring wells installed by DS Consultants and nine (9) additional existing monitoring wells installed by other consultants, as well as from local domestic wells and existing environmental reports for the area (Beacon et al. 2023).

DS Consultants measured groundwater levels in six (6) then-newly installed monitoring wells along with nine (9) pre-existing monitoring wells on May 7, 2021. Based on groundwater level measurements on May 9, 2023, the groundwater table was found at a range between 5.81 mbgs and 11.91 mbgs prior to excavation of contaminated soils, which translates to 197.57 masl to 200.49 masl. Based on



groundwater elevations, the flow direction within the subject property is inferred to be southwest toward the Sixteen Mile Creek.

Based on the groundwater pumping test, a significant aquifer is present on the western portion of the subject property (DS Consultants 2025). Well and groundwater information are provided in the *Preliminary Hydrogeological Investigation* (DS Consultants 2025).

2.1.6 Local Groundwater Use

Based on the MECP water well records search, there were seventy-four (74) water wells within a 500 m radius of the subject property (Beacon et al. 2023). All wells were noted as monitoring/test holes or not in use except for five (5) records for domestic, three (3) records for industrial and three (3) records for commercial purposes. The results of the door-to-door survey concluded that there are no wells within a 500 m radius that are used for potable purposes. Figure 2.1 of the CEMS shows the study area (500 m radius of the subject property) is fully serviced with municipal water.

2.1.7 Hydraulic Conductivity

A total of fifteen (15) single well response tests were completed by DS Consultants in monitoring wells on May 5 to 7, 2021 to estimate hydraulic conductivity (k) for the representative geological units in which the wells were completed (Beacon et al. 2023). The values of calculated hydraulic conductivity (k) range from 9.56 × 10⁻⁷ to 1.12 × 10⁻⁴ m/s. Due to the heterogeneous nature of soils and the hydrogeological setting of the site, the geo-mean K-value 5.32 × 10⁻⁶ m/s was considered in the dewatering assessment. Further details are provided in the CEMS.

2.2 Natural Environment

This section characterizes the natural environment by identifying all components of the RNHS as required by the PPS and the ROP, including Key Features and other components of the RNHS as described in Section 115 of the ROP as well as areas regulated by CH pursuant to O. Reg. 41/24.

2.2.1 Background

To identify and characterize the various components of the RNHS, information from the following sources was collected, compiled and mapped:

- MNRF Natural Heritage Information Centre (NHIC) rare species database (accessed February 2025);
- Fisheries and Oceans Canada Aquatic Species at Risk Map (accessed February 2025);
- Slope Stability Assessment; 150 Steeles Avenue East, Milton, Ontario (DS Consultants, January 17, 2023);
- Aerial photographs and topographic mapping;
- CH digital data;
- Provincially Tracked Species Layer from Land Information Ontario (LIO);



- Ontario Breeding Bird Atlas;
- Ontario Reptile and Amphibian Atlas;
- Natural Heritage Information Centre (NHIC) Data via the Make-A-Map application;
- Species at risk range maps <u>https://www.ontario.ca/environment-and-energy/species-risk-ontario-list;</u> and
- Natural and physical feature layers from LIO—these geospatial layers include wetlands (provincially significant and un-evaluated wetlands), and watercourses with thermal regime.

2.2.2 Feature Staking

On July 16, 2021, CH staff staked the top of the bank along the Sixteen Mile Creek valley and the limits of two small wetlands associated with a former tailings pond and a segment of the Milton Wetland Complex. On November 22, 2021, Halton Region staff staked the limits of the woodland feature. These staked limits were surveyed by an Ontario Land Surveyor (OLS), as shown on **Figure 3**, and used to prepare the constraint mapping for refining the RNHS boundaries as part of the CEMS.

Following remediation in portions of the RNHS, the features in these areas were restored in accordance with the CEMS and the landscape designs in **Appendices C1** and **C2**.

2.2.3 Ecological Surveys and Rescues

This section includes ecological surveys undertaken to identify the components of the RNHS and their respective sensitivities. Surveys included: Ecological Land Classification (ELC), flora inventories, tree inventories, amphibian surveys, breeding bird surveys, bat habitat assessments, terrestrial crayfish surveys, and dragonfly and butterfly surveys. The methods and results of these surveys are described in the following sections.

2.2.3.1 Ecological Land Classification and Flora

Beacon conducted field surveys in 2021 and 2022 to classify and map the ecological communities in the Study Area in accordance with the *Ecological Land Classification for Southern Ontario* (Lee *et al.* 1998). Ecological communities were mapped and described following the protocols of the ELC system for Southern Ontario (Lee *et al.* 1998). This involved delineating vegetation communities on aerial photos of the subject property (except for staked boundaries) and recording pertinent information on the vegetation structure and composition. Flora surveys were conducted in conjunction with the ELC surveys. A list of vascular plant species observed in the study area was compiled.

Through the CEMS, ten (10) ELC community classes and associated anthropogenic areas were identified within the study area. As part of the site remediation, mineral cultural meadow (CUM1), mineral cultural savannah (CUS1), Red-osier Dogwood Thicket Swamp (SWT2-5), Cattail Mineral Shallow Marsh (MAS2-1), and a portion of cultural woodland (CUW1) were removed. Following remediation, nine ELC community classes remain (CUW1, CUM1, CUS1, FOD4, FOD5, MAM2, SA, MAS2-1 and CUT) and the equivalent wetland area and woodland area were restored in the NHS, as shown on **Figure 3**.



Prior to site remediation, a total of 108 vascular plant species were recorded, with 54% being nonnative. One species, Honey Locust (*Gleditsia triacanthos*), is provincially imperilled but not endangered or threatened. Additionally, three species are considered uncommon in the Halton Region. The surveys helped adjust the boundaries of wetland and woodland communities consistent with agency feature staking. Subsequent to site remediation, and as a result of landscape plantings and seeding, an additional 52 native vascular plant species have been added to the site to date.

At the time the CEMS was prepared, the intention was for the SWM pond to outlet to an existing swale along the southern property line, thereby negating the need for a new outfall to the creek. However, as a result of the detailed design for the subject property, it has been determined that the SWM pond cannot outlet to the existing swale, due to grading constraints. In order to ensure the most appropriate location for the stormwater outfall to the valley is selected, confirmation of the ecological community within the valley, in the vicinity of potential stormwater outlet locations, was conducted on January 29, 2025 (**Figure 4**). Based on this assessment, the community is a Cattail Mineral Marsh (MAS2-1), that is dominated by Hybrid Cattail (*Typha x glauca*), with associates of Purple Loosestrife (*Lythrum salicaria*), Swamp Red Currant (*Ribes triste*), and Spotted Joe-Pye Weed (*Eutrochium maculatum*), along with some localized inclusions of European Reed (*Phragmites australis ssp. australis*).

2.2.3.2 Tree Inventory

Prior to remediation works, trees on the tableland portion of the subject property with potential to be impacted by the remediation works were inventoried. This inventory was conducted in 2021 and limited to trees with a diameter at breast height (DBH) of at least 15 centimetres (cm), which were marked with numbered metal forestry tags and inventoried.

Prior to remediation works, a total of 402 individual trees were inventoried, primarily within the cultural woodland feature (ELC Unit 2.0). Of these, approximately 66% were Black Walnut (*Juglans nigra*). Following remediation works, the remediated area of ELC Unit 2.0 was restored with 418 replacement tree plantings, primarily consisting of Red Oak (*Quercus rubra*), Basswood (*Tilia americana*), and Sugar Maple (*Acer saccharum*), with an understory composed of Grey Dogwood (*Cornus racemosa*), Nannyberry (*Viburnum lentago*), and Maple-leaved Viburnum (*V. acerifolium*), as shown in landscaping drawings provided in **Appendix C**.

As noted in **Section 2.2.3.1** and described later in this report, a stormwater outfall to the valley is now required. On January 29, 2025, a supplemental tree inventory was conducted by a Beacon arborist certified by the ISA, to document and assess trees in the vicinity of potential stormwater outlet locations (**Figure 4**). Methodology was consistent with the previous tree inventory. Tree locations were recorded using an EOS Arrow 100 GNSS Receiver with sub-meter accuracy.

Within the area of the potential outlet locations within ELC Unit 6.0, a total of 89 trees with a DBH of at least 15 cm were recorded. No trees were located within the adjacent marsh at the valley bottom. Honey Locust accounted for approximately 58% of the tree population, followed by Black Cherry (*Prunus serotina*) at 15% and White Elm (*Ulmus americana*) at 10%. The remaining 17% comprised individual to several occurrences of Black Walnut, Bitternut Hickory (*Carya cordiformis*), Manitoba Maple (*Acer negundo*), Common Pear (*Pyrus communis*), and Green Ash (*Fraxinus pennsylvanica*). The median DBH of the inventoried trees is 26 cm. Of the 89 trees assessed, 65 were determined to be in at least fair condition. Further evaluation is provided in **Section 5.1**.





C:\ODB\OneDrive - Beacon Environmental\GeoSpatial\Geo Projects\2021\221265 150 Steeles Avenue Milton EIS\Q Project Files\20250206 150 eMilton 2025ScopedEIA 221265.ga

Ecological Land Classification Figure 3

150 Steeles Avenue Milton Scoped EIA

Legend



Subject Property

- Ecological Communities
- Watercourse (MNRF 2024)

Restoration Areas

- Wetland
- Woodland
- Buffer

Note: Enhancement areas not shown; See landscape drawings

Unit Number	ELC Code	Ecological Communities
1	ANT	Anthropogenic (units 1.1 - 1.25)
2	CUW1	Mineral Cultural Woodland (units 2.0 - 2.5)
3	CUM1	Mineral Cultural Meadow (units 3.1 - 3.3)
4	CUS1	Mineral Cultural Savanah (units 4.1 - 4.8)
6	FOD4	Dry - Fresh Deciduous Forest (unit 6.0 - 6.2)
7	MAM2	Mineral Meadow Marsh (units 7.1 - 7.7)
8	SA	Shallow Water (unit 8.0 - 8.3)
9	MAS2-1	Cattail Mineral Shallow Marsh (units 9.0 - 9.1)
10	FOD5	Dry - Fresh Sugar Maple Deciduous Forests (units 10.0 - 10.1)
11	CUT	Cultural Thicket (unit 11)

Note: Prior to remediation ELC Unit 5 (SWT2-5) was associated with a contaminated tailings pond, and the equivalent wetland area has been reproduced in the wetland restoration area.





C:\ODB\OneDrive - Beacon Environmental\GeoSpatial\Geo Projects\2021\221265 150 Steeles Avenue Milton EIS\Q Project Files\2025026_150SteelesAvenueMilton_2025ScopedEIA_221265.qgz



	Relocation				
150 Steeles Avenue Milton Scoped EIA					
Legend					
Subject Prop	erty				
Watercourse	(MNRF 2024)				
Breeding Bird	d Survey Area				
Amphibian Ca	all Monitoring Stations	5			
Reptile Monit	oring Areas				
Insect Survey	/ Areas				
Chimney Cra	yfish Survey Areas				
Terrestrial Cr. Vernal Pool (2	ayfish Relocation Site 2023)	-			
Bat Snag Sur	rvey Area				
Bat Detector	Locations				
Tree Inventor	ry (2025)				
BEACON ENVIRONMENTA Client: Neatt Communities	Project: 2 Last Revised: A t Prepared by: E Checked by: S	21265 April 2025			
BEACON ENVIRONMENTA Client: Neat Communities	Project: 2 Last Revised: A t Prepared by: E Checked by: S 0 70	21265 April 2025 G 140 m			

2.2.3.3 Amphibian Surveys and Rescue

In 2022, Beacon conducted amphibian call surveys at six stations (**Figure 4**) around wetland features to confirm the presence/absence of breeding frogs and toads in accordance with the standard survey protocols of the Marsh Monitoring Program (Bird Studies Canada 2008). Three frog species, Green Frog (*Lithobates clamitans*), Gray Treefrog (*Hyla versicolor*), and Spring Peeper (*Pseudacris crucifer*) were recorded, with Spring Peepers observed in high abundance at station 1 and 3. No salamanders or other amphibians were observed.

Prior to remediation of the wetlands associated with the tailings ponds, amphibians were relocated in accordance with a Wildlife Scientific Collector's Authorization (No. 1103736), issued by the MNRF, for the rescue of Spring Peepers observed in 2022, as this species is regulated under the *Fish and Wildlife Conservation Act*. At the time of the rescue, the tailings pond was inundated with approximately 1 m of water and no Spring Peepers or tadpoles were observed in the tailings pond. Green Frog, although unanticipated in the tailings pond based on 2022 observations, were captured in the tailings pond and released to an appropriate area, where they had been observed in 2022, as shown on **Figure 4**.

The re-created wetland area was completed in 2024 and monitoring of this feature will begin in spring 2025. The wetland was designed through the CEMS to provide sufficient hydroperiod for amphibian breeding habitat. Given the preliminary observations of open water in the wetland, it is anticipated that it will provide amphibian breeding habitat in the future.

2.2.3.4 Avifaunal Surveys

To document the composition of the resident avian community, breeding bird surveys were completed during the mornings of May 26 and June 5, 2021. The surveys were completed during periods with low to moderate winds (0–2 Beaufort Scale), no precipitation and temperatures within 5°C of normal average temperatures. The breeding bird community was surveyed using a roving-type survey, in which all parts of the Subject Property were walked (**Figure 4**). All birds observed and exhibiting evidence of breeding were documented and their locations noted on an aerial photograph. This survey method is superior to the point count methods as it more comprehensively documents the avian communities present. Details of these surveys are provided in the approved CEMS.

Thirty-six (36) bird species were observed, with the avian community reflecting the site's open anthropogenic and riparian habitats. The most abundant species included Song Sparrow (*Melospiza melodia*), while Red-winged Blackbird (*Agelaius phoeniceus*), Common Yellowthroat (*Geothlyphis trichas*), House Wren (*Troglodytes aedon*), European Starling (*Sturnus vulgaris*), Baltimore Oriole (*Icterus galbula*), American Robin (*Turdus migratorius*), Gray Catbird (*Dumetella carolinensis*), and Northern Cardinal (*Cardinalis cardinalis*) all had more than two (2) territories present.

During other ecological surveys in 2022 and 2023, three additional bird species were recorded: American Woodcock (*Scolopax minor*), Green Heron (*Butorides virescens*), and Red-Tailed Hawk (*Buteo jamaicensis*).

No critically imperiled species were found, but the Eastern Wood-Pewee, listed as Special Concern, was observed. Two regionally uncommon bird species—Black-and-white Warbler (*Mniotilta varia*) and Green Heron—were identified. No regionally rare avian species or nesting by Barn Swallow and Chimney Swift were recorded.



2.2.3.5 Reptile Surveys

Habitats with potential to support turtle populations such as the former tailings pond / wetland and Sixteen Mile Creek were surveyed for basking turtles by slowly walking along the outer edge of the features and surveying the outer edge using binoculars. Surveys were conducted when the air temperature was greater than water temperature and not during inclement weather. Potential snake hibernaculum areas were also surveyed on the same dates by scanning the edges of vegetation and exposed rubble / rocks and by flipping cover objects in the vicinity of the old rail bed. Details of these surveys are provided in the approved CEMS.

No turtles or snakes were noted by Beacon during targeted surveys in 2022 in the areas shown on **Figure 4** or any other field visits on the subject property. The observations are as follows:

- The tailings pond / wetland was dry during these surveys and therefore are unlikely to support basking or overwintering habitats for turtles;
- Sixteen Mile Creek water temperature relative to air temperature was conducive to basking behaviour on both dates; however, no turtles were observed; and
- No snakes were observed on the tablelands or in the valleylands.

The artificial snake hibernaculum is proposed to be monitored in the fifth year following restoration to allow snakes and other animals time to discover the structure. Additionally, it is possible that the recreated wetland may facilitate basking turtles in future. Should the wetland be conducive to turtle basking in the fifth year following restoration it will be surveyed at that time.

2.2.3.6 Bat Surveys – Snag Trees and Acoustic Monitoring

During the initial tree inventory, trees with at least 10 cm DBH were also assessed for various bat habitat criteria, as per the MECP updated *'Bat Survey Standards Note 2021'* guideline (undated). This assessment took place on January 26 and 27, 2022.

Potential roosting habitat (tree cavities) for endangered bat species were identified in the Cultural Woodland community on the subject property (ELC Unit 2.0).

To confirm the presence/absence of bat species that may be utilizing the woodland, acoustic monitors were deployed in the vicinity of the identified snags and call data was recorded between June 1 and June 13, 2022 (**Figure 4**) in accordance with methods described within *Phase III: Acoustic Surveys of the Survey Protocol for Species at Risk Bats within Treed Habitats Little Brown Myotis, Northern Myotis & Tri-Colored Bat* (MNRF 2017). A 2022 analysis of the acoustic monitoring data confirmed the occurrence of *Myotis* and *Perimyotis* bat species that are regulated under the *Endangered Species Act*, and auto-identification suggests the presence of the three bat species newly listed as endangered: Eastern Red Bat (*Lasiurus borealis*), Hoary Bat (*L. cinereus*), and Silver-haired Bat (*Lasionycteris noctivagans*).

Although roosting habitat on the subject property did not meet the criteria for provincial significance for Big Brown Bat (*Eptesicus fuscus*) some calls from this species were also detected during acoustic monitoring.



On January 29, 2025, an additional bat habitat survey was undertaken at the potential locations for the SWM outlet in ELC Unit 6.0 (**Figure 4**). A total of 13 potential bat habitat trees were recorded within the study area. All 13 snag trees demonstrated characteristics favourable to *Myotis* species. Since the area studied for potential SWM outlet locations is 0.1 ha (100 m x 10 m), the area has a snag density of approximately 130 snags/ha.

2.2.3.7 Raptor Habitat Survey

To detect potential woodland raptor nest sites and assess their winter habitat, a survey was conducted on January 22, 2023. The wooded portions of the Subject Property were walked to within 50 m to search suitable trees for potential raptor nests. Adjacent woodlands to the southeast of the Subject Property and treed areas to the west, in association with the Sixteen Mile Creek wetland, were also scanned for potential stick nests.

Three stick nests potentially suitable for Cooper's Hawk (*Accipiter cooperii*) were located in the woodland, with no nest-building activity observed.

No raptor overwintering habitat was found in 2023; however, one Red-tailed Hawk was observed in the Sixteen Mile Creek wetland.

2.2.3.8 Terrestrial Crayfish Surveys and Rescue

Beacon conducted surveys for terrestrial crayfish in depressions, swales, and wet areas on the subject property in 2022, primarily around the former tailings pond/wetland, as shown on **Figure 4**. An additional survey in 2023 on the adjacent Town property identified a suitable relocation site. A total of 56 crayfish burrows were found, mainly around the tailings pond/wetland. These burrows, often capped with mud to prevent water loss, indicated the presence of groundwater-dependent crayfish.

Prior to remediation of the wetlands associated with the tailings ponds, terrestrial crayfish were relocated in accordance with the Authorization noted above (No. 1103736) and a Licence to Collect Fish for Scientific Purposes (No. 1103737) from MNRF. The rescues were conducted at night, on June 29 and July 3, 2023, when the tailings pond was inundated and Terrestrial Crayfish were found near the ground surface. Terrestrial Crayfish were captured in the tailings pond and released to a nearby appropriate area, as specified in the application to MNRF and shown on **Figure 4**.

2.2.3.9 Dragonfly, Damselfly and Butterfly Surveys

Field investigations for species of Odonata (dragonflies and damselflies) and Lepidoptera (butterflies, skippers and moths) were conducted by Beacon during warm, sunny days with minimal winds on August 5 and 12, 2022, in locations shown on **Figure 4**. Binoculars were used to observe insect species. If required, individuals were captured using a net and examined using a hand lens before being released. Species locations are typically noted if they had a ranking of S4 or lower (more sensitive) or if a species generally occurs in densities low enough as to warrant mention. Details of these surveys are provided in the approved CEMS.



Thirteen (13) species of Odonata and Lepidoptera, with a ranking of S4 or lower, were found on the subject property. Monarch was observed in the vicinity of the former tailings pond / wetland; however, there was no significant habitat on site as milkweed was not abundant.

It is possible that the re-created wetland may provide habitat for Odonata and Lepidoptera in future. Should the wetland continue to hold water for the duration of the monitoring, Odonata and Lepidoptera surveys will be conducted in the fifth year following restoration.

2.2.4 Natural Hazards

As discussed in **Section 1.4.6** above, Section 5.2.2 of the PPS states that "*development shall generally* be directed to areas outside of … hazardous lands adjacent to river, stream and small inland lake systems which are impacted by flooding hazards and/or erosion hazards". The following subsections provide an overview of the components of this policy that are applicable to the subject property.

2.2.4.1 Regional Storm Flood Plain

Sixteen Mile Creek crosses a small part of the subject property's western edge, with most of the watercourse off-site (Beacon et al. 2023). Through the CEMS, the HEC-RAS model and digital elevation model (DEM) files were obtained from CH to confirm model geometry and assist in floodplain mapping (Beacon et al. 2023). The model parameters were found to be consistent with acceptable values (Beacon et al. 2023). Flood mapping showed that the Regional Storm flood plain is contained within the creek valley and does not affect the tablelands of the subject property, as illustrated on **Figure 5**. CH noted that the peak flows in the HEC-RAS model were based on the preliminary results from the Urban Milton Floodplain Mapping Update that was released in March 2020 (Beacon et al. 2023). At this time, the study team does not have the latest HEC-RAS model; however, the updated model will be incorporated when it is available in the next design phase.

2.2.4.2 Long Term Stable Top of Slope

CH staked the limit of the physical top of bank in 2021. A Slope Stability Assessment (DS Consultants 2023) was conducted to determine the Long-Term Stable Top of Slope (LTSTOS). The LTSTOS was identified based on whether the stable top of slope from the analysis was further away or closer to the creek than the staked top of slope. An area of slope erosion near the storm sewer outfall was noted (**Figure 2**), and the LTSTOS was determined, as shown on **Figure 5**. The LTSTOS points at the west part of the subject property were designated as S1-S2a-S3a-S4.





eMilton_2025ScopedEIA_221265.qgz ntal\GeoSpatial\Geo Projects\2021\221265 150 Steeles Avenue Milton EIS\Q Project Files\20250206_150

Environmental Constraints

Figure 5

150 Steeles Avenue Milton Scoped EIA Image: Subject Property Watercourse (MNRF 2024) Regulatory Floodplain (Digitized by CH, 2021) coincident with Long-Term Stable Top of Slope (DS Consultants - July 5, 2022) Long Term Stable Top of Slope + 15 m Woodland Limit (Staked by CH - July 16, 2021) and Restoration Planting Limit Post-Remediation Woodland Buffer (15 m) Wetland (Staked by CH - July 16, 2021) Wetland (Staked by CH - July 16, 2021) Wetland (Staked by CH - July 16, 2021) Wetland the 15 m RNHS Limit Habitat for Endangered and Threatened Species Significant Wallylands Significant Wallylands Significant Wallylands Significant Wallylands Significant Wallylands (Restored) Significant Wallands (Resto	and	RNHS		riguie o			
Legend Subject Property Watercourse (MNRF 2024) Regulatory Floodplain (Digitized by CH, 2021) coincident with Long-Term Stable Top of Slope (DS Consultants - July 5, 2022) Long Term Stable Top of Slope (DS Consultants - July 5, 2023) Long Term Stable Top of Slope + 15 m Woodland Limit (Staked by Region of Halton - Nov 22, 2021) and Restoration Planting Limit Post-Remediation Woodland Buffer (15 m) Wetland (Staked by CH - July 16, 2021) Wetland Restoration Area Wetland + 15 m RNHS Limit CH Regulated Allowance The RNHS contains the following components: - Key Features, such as: - Habitat for Endangered and Threatened Species - Significant Wellands - Significant Wellands Significant Wellands Significant Wellands Regulated Materourse - Non-Significant Wellands (Restored) - Fish Habitat - Enkages Regulated Floodplains Project: 221265 Last Revised: April 2025 Client: Neatt Communities Prepared by: BD Checked by: JS 1:3,000 <u>60</u> 120 m 1:3,000 <u>60</u> 120 m	150 Steele	s Avenue	e Milton Scop	ed EIA			
Subject Property Watercourse (MNRF 2024) Regulatory Floodplain (Digitized by CH, 2021) coincident with Long-Term Stable Top of Slope (DS Consultants - July 5, 2022) Long Term Stable Top of Slope (DS Consultants - July 5, 2022) Long Term Stable Top of Slope + 15 m Woodland Limit (Staked by Region of Halton - Nov 22, 2021) and Restoration Planting Limit Post-Remediation Woodland Buffer (15 m) Wetland (Staked by CH - July 16, 2021) Wetland (Staked by CH - July 16, 2021) Wetland (Staked by CH - July 16, 2021) Wetland Restoration Area Wetland (Staked by CH - July 16, 2021) Wetland (Staked allowance The RNHS contains the following components: • Key Features, such as: • Habitat for Endangered and Threatened Species • Significant Walelands (Restored) • Significant Watercourse • Non-Significant Wetlands (Restored) • Fish Habitat • Linkages • Regulated Floodplains Project: 221265 Linkages • Regulated Floodplains	Legend						
Watercourse (MNRF 2024) Regulatory Floodplain (Digitized by CH, 2021) Top of Slope (Staked by CH - July 16, 2021) coincident with Long-Term Stable Top of Slope (DS Consultants - July 5, 2022) Long Term Stable Top of Slope (DS Consultants - Jan 2023) Long Term Stable Top of Slope + 15 m Woodland Limit (Staked by Region of Halton - Nov 22, 2021) and Restoration Planting Limit Post-Remediation Woodland Buffer (15 m) Wetland (Staked by CH - July 16, 2021) Wetland Restoration Area Wetland t 15 m RNHS Limit CH Regulated Allowance New Significant Weidlands (Restored) Significant Woodlands (Restored) Significant Woldlands (Restored) Significant Woldlands (Restored) Significant Weidlands (Restored) Significant Woldlands (Restored) Buffers Regulated Floodplains Project: 221265 Client: Neatt Prepared by: BD Checked by: JS 1:3,000 0 1:3,000 120 m	Subject Prop	perty					
Regulatory Floodplain (Digitized by CH, 2021) Top of Slope (Staked by CH - July 16, 2021) coincident with Long-Term Stable Top of Slope (DS Consultants - Jan 2023) Long Term Stable Top of Slope + 15 m Woodland Limit (Staked by Region of Halton - Nov 22, 2021) and Restoration Planting Limit Post-Remediation Woodland Buffer (15 m) Wetland (Staked by CH - July 16, 2021) Wetland (Staked by CH - July 16, 2021) Wetland (Staked by CH - July 16, 2021) Wetland Restoration Area Wetland + 15 m RNHS Limit Habitat for Endangered and Threatened Species Significant Wellands Significant Wellands Significant Wallands (Restored) Buffer Regulated Floodplains	—— Watercourse (MNRF 2024)						
Wetland (Staked by CH - July 16, 2021) Wetland Restoration Area Wetland + 15 m RNHS Limit CH Regulated Allowance The RNHS contains the following components: · Key Features, such as: · Habitat for Endangered and Threatened Species · Significant Wetlands · Significant Voodlands (Restored) · Significant Wildlife Habitat (Restored) · Fish Habitat · Linkages · Regulated Watercourse · Non-Significant Wetlands (Restored) · Buffers · Regulated Floodplains Project: 221265 Last Revised: April 2025 Client: Neatt Communities Prepared by: BD Checked by: JS 1:3,000 <u>60</u> 120 m	 Regulatory Floodplain (Digitized by CH, 2021) Top of Slope (Staked by CH - July 16, 2021) coincident with Long-Term Stable Top of Slope (DS Consultants - July 5, 2022) Long Term Stable Top of Slope (DS Consultants - Jan 2023) Long Term Stable Top of Slope + 15 m Woodland Limit (Staked by Region of Halton - Nov 22, 2021) and Restoration Planting Limit 						
Wetland Restoration Area Wetland + 15 m RNHS Limit CH Regulated Allowance The RNHS contains the following components: · Key Features, such as: ' Habitat for Endangered and Threatened Species · Significant Wetlands · Significant Woodlands (Restored) · Significant Woldline Habitat (Restored) · Fish Habitat · Linkages · Regulated Floodplains Project: 221265 Last Revised: April 2025 Client: Neatt Communities Prepared by: BD Checked by: JS 1:3,000 <u>60</u> 120 m	Wetland (Sta	aked by C	H - $\frac{1}{10}$ H - $\frac{1}{10}$	21)			
• Wetland + 15 m • RNHS Limit • CH Regulated Allowance The RNHS contains the following components: • Key Features, such as: • Habitat for Endangered and Threatened Species • Significant Wetlands • Significant Wetlands • Significant Woollands (Restored) • Significant Valleylands • Significant Valleylands • Significant Valleylands • Significant Wetlands (Restored) • Fish Habitat • Non-Significant Wetlands (Restored) • Buffer • Regulated Floodplains • Regulated Floodplains • Encommunities Project: 221265 List Revised: April 2025 Client: Neatt Communities Prepared by: BD Checked by: JS • 1:3,000 <u>6</u> 120 m • Contains information licensed under the Open Government License-	Wetland Res	storation A	vrea	- ' /			
RNHS Limit	Wetland + 1	5 m					
CH Regulated Allowance The RNHS contains the following components: - Yey Features, such as: - Habitat for Endangered and Threatened Species - Significant Wetlands - Significant Valleylands - Significant Wildlife Habitat (Restored) - Fish Habitat - Significant Wildlife Habitat (Restored) - Fish Habitat - Non-Significant Wetlands (Restored) - Buffers - Regulated Floodplains Project: 221265 Last Revised: April 2025 Client: Neatt Communities Prepared by: BD Checked by: JS 1:3,000 0 60 120 m	RNHS Limit						
The RNHS contains the following components: - Key Features, such as: - Habitat for Endangered and Threatened Species - Significant Wetlands - Significant Woollands (Restored) - Significant Valleylands - Significant Valleylands - Significant Wildlife Habitat (Restored) - Fish Habitat - Inkages - Regulated Watercourse - Non-Significant Wetlands (Restored) - Buffers - Regulated Floodplains Project: 221265 Last Revised: April 2025 Client: Neatt Communities Prepared by: BD Checked by: JS 1:3,000 <u>60</u> 120 m	CH Regulate	ed Allowar	nce				
Project: 221265 Last Revised: April 2025 Client: Neatt Communities Prepared by: BD Checked by: JS 1:3,000 0 60 120 m Contains information licensed under the Open Government License–	The RNHS contains f - Key Features, such - Habitat for Endar - Significant Wetla - Significant Wood - Significant Valley - Significant Wildlif - Fish Habitat - Linkages - Regulated Watercco - Non-Significant We - Buffers - Regulated Floodpla	the followin as: Igered and Ids lands (Res lands e Habitat (Purse ttlands (Re	g components: Threatened Spe tored) Restored) stored)	cies			
1:3,000 0 60 120 m Contains information licensed under the Open Government License–	BEACO ENVIRONMENT Client: Nea Communiti	N Las	Project: 22 st Revised: Ap Prepared by: BD Checked by: JS	1265 ril 2025			
Contains information licensed under the Open Government License–	1:3,000		60	120 m			
	Contains information	icensed und	er the Open Gover	nment License–			



Photograph 1. Mid- and Upper-Slope of Eroded Slope. Upper eroded slope is indicated with yellow dashed line. Note the side slopes of this area are approximately ³/₄ h:1 v. Photo facing north, taken July 18, 2023.



Photograph 2. Lower Slope of Eroded Slope. Boundary between mid- and lower-slope indicated with orange dashed line. Note the side slopes of this area are approximately ³/₄ h:1 v. Photo facing north, taken July 18, 2023.

Opportunities to address the erosion as identified above were explored in the CEMS. It was determined that vegetating the area, to mitigate the erosion of soils was the best option that minimized impacts to the valleyland. This recommendation continues to be applicable, and a CH permit will be required for this work pursuant to O. Reg. 41/24.

2.2.5 Human-Made Hazards

As discussed in **Section 1.4.6** above, Section 5.3 of the PPS states that:

Sites with contaminants in land or water shall be assessed and remediated as necessary prior to any activity on the site associated with the proposed use such that there will be no adverse effects.

Soil and groundwater quality assessments prior to remediation identified petroleum hydrocarbons (PHCs), metals (mainly hexavalent chromium), cadmium, lead, and inorganics (electrical conductivity [EC] and sodium adsorption ratio [SAR]) as primary contaminants. The site also contained a landfill with construction debris, oily mill scale, and soil. Remediation involved excavation and off-site disposal of



contaminated soil, followed by chemical testing to ensure remaining soil met standards. Groundwater contamination, though not a hazard to human health, was treated using a pump and treat system.

The final limits of remedial excavation within the RNHS are shown on Figure 2.

Past environmental investigations revealed metal-based contaminants exceeding standards in Sixteen Mile Creek's sediment. A Risk Assessment, in accordance with O. Reg. 153/04 (as amended), identified potential exposure pathways for aquatic life, with nickel and zinc posing risks. However, DS Consultants recommended against dredging due to potential environmental harm. Alternatives considered included physical capping, direct removal, and a no-action approach. DS Consultants recommended the no-action alternative to avoid significant disruption to the ecosystem. It is anticipated that the province will approve the Risk Assessment in 2025 (P. Fioravanti, pers. comm., 26 Feb. 2025).

Subsequent to the CEMS, the RSC and Risk Assessment processes have been implemented to address contamination on the subject property in compliance with provincial standards. To date, all soil and groundwater contamination has been remediated on the subject property within the tableland RNHS (as per RSC No. B-403-6303613911). Small areas of contaminated soil and groundwater remain <u>outside of the RNHS</u>, with the soil planned to be remediated in spring 2025. Although groundwater treatment will continue, the human risk of contaminated groundwater is mitigated by the implementation of risk management measures, which are limited to a restriction on the installation of drinking water wells on the property (P. Fioravanti, pers. comm., 26 Feb. 2025).

2.2.6 Surface and Ground Water Features

Section 4.2.2 of the PPS notes that:

Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restored, which may require mitigative measures and/or alternative development approaches.

Sensitive surface water features and groundwater features are defined by the PPS as "features that are particularly susceptible to impacts from activities or events including, but not limited to, water withdrawals, and additions of pollutants." The Halton-Hamilton Source Protection Plan (2022) does not identify this reach of Sixteen Mile Creek as a sensitive water feature nor is it within an area of sensitive groundwater features.

The subject property was within the study area for the Sixteen Mile Creek Areas 2 and 7 Subwatershed Study (SWS), prepared by Philips Planning and Engineering Limited (2000). There are a few characterizations that were made with respect to water resources on the subject property:

- The Sixteen Mile Creek, flowing to the west of the subject property, was identified as a Perennial Stream with Natural Channel Form on Figure 10 of the SWS; and
- Fish sampling stations 2A8 (described as from Bronte Road bridge to 50m downstream) and 2A7 (immediately downstream of footbridge adjacent to Mill Pond) are shown on Figure 11 of the SWS. The fish species recorded in the SWS are consistent with recent CH records.



2.2.6.1 Surface Water Features

The surface water features in the valley system (i.e., riparian wetland) is assumed to be maintained primarily by flows from the creek and upstream catchment area. As noted in the CEMS, the upstream catchment area to the riparian wetland is 7,969 ha at Bronte Street North.

Overland flow to the valley from the subject property is limited, as a result of the remediation works and installation of an ESC pond (Urbantech 2025). As discussed in **Section 2.1.4**, a stormwater outlet was decommissioned as part of the demolition works and no longer contributes stormwater into the valley of Sixteen Mile Creek. No indicators of groundwater discharge were observed along the slope at the west limit of the subject property, suggesting little to no groundwater input. As the remediation works were not anticipated to impact surface flows in the long-term and will address the presence of pollutants, Sixteen Mile Creek and the riparian wetland are expected to benefit from the site remediation works through the removal of contaminants in nearby soils and groundwater and no negative impacts are anticipated.

2.2.6.2 Ground Water Features

The study area is fully serviced by municipal water supply. No short-term or long-term impacts on private water wells are anticipated from the proposed dewatering activities to treat the contaminated groundwater.

The Region has previously confirmed that the subject property is not located within a wellhead protection area, nor is it located within a highly vulnerable aquifer.

No groundwater-dependent features (e.g., seeps or springs) were identified within the study area.

2.2.7 Anthropogenic Features

Near the toe of the localized area of slope erosion (see **Photograph 2** above) there is a concrete enclosure, that is not a well, which houses a small compression chamber with a gas pressure valve. The structure does not appear to be connected in any apparent way (Beacon et al. 2023).

Other anthropogenic surface debris, including old tents, garbage and rubble, were observed in the Cultural Woodland community (ELC 2.0). Such debris was removed as part of restoration and enhancement works in the NHS.

2.3 Evaluation of Significant Natural Features

2.3.1 Significant Habitat of Endangered or Threatened Species

Significant habitat for endangered and threatened species is recognized as a Key Feature within the RNHS. ROP Policy 118(2)(a) allows development or site alteration within such habitats in accordance with Provincial and Federal regulations. Ecological surveys confirmed that the woodland on the subject property supports habitat for endangered bat species. The pre-remediation limit of this habitat corresponded with the staked woodland dripline.


As documented in the CEMS, prior to remediation activities in habitat of endangered species, Neatt Communities Inc. qualified for an exemption of the *Endangered Species Act*. As soil contamination was identified within the habitat, it met the definition of a "Threat to Health and Safety, Not Imminent" under section 23.18 of O. Reg. 242/08. As such, qualification for this exemption involved providing notice to MECP prior to tree removal, implementing a mitigation plan that included reasonable steps to minimize adverse effects on bat species and an appropriate process for reporting observations of endangered species, along with training to contractors undertaking the works in the habitat area.

Although the equivalent woodland area was restored as described in **Section 5.3.2**, section 23.18 of O. Reg. 242/08 does not require restoration of endangered species habitat; therefore, until the tree plantings grow large enough, the remaining bat habitat is in the woodland communities outside the limits of remedial excavation.

2.3.2 Significant and Non-Significant Wetlands

There are no Provincially Significant Wetlands (PSWs) on or adjacent to the subject property. The Milton Wetland Complex associated with the Sixteen Mile Creek floodplain has been evaluated by MNRF; however, it is not provincially significant.

The following definition of significance, from the ROP also needs to be considered for this study:

- 1. For lands within the Greenbelt Plan Area but outside the Niagara Escarpment Area, Provincially Significant Wetlands and wetlands as defined in the Greenbelt Plan;
- For lands within the Regional Natural Heritage System but outside the Greenbelt Plan Area, Provincially Significant Wetlands and wetlands that make an important ecological contribution to the Regional Natural Heritage System; and
- 3. Outside the Regional Natural Heritage System, Provincially Significant Wetlands.

Although the wetlands associated the with Milton Wetland Complex within the study area are not PSW, they do meet the ROP definition of significance and would be considered Regionally significant. Based on the definition above, these wetlands are significant because they are either within the Urban River Valley designation of the Greenbelt Plan and publicly-owned and/or they make an important ecological contribution to the RNHS. Regionally significant wetland units include ELC Units 7.3, 7.5, 7.6, 7.7, and 9.1 on **Figure 3.**

The small wetland that was associated with the former tailings pond (ELC Units 5.1, 5.2, and 9.0) did not provide an important ecological contribution to the RNHS, as it was a contaminated, anthropogenic feature, and very small in area; therefore, it would not meet the definition of a significant wetland under the ROP. This feature instead was considered a '*wetland other than those considered significant under Section 115.3(1)b*)' as per ROP Policy 115.3(6), which, rather than being a Key Feature, was a component of the RNHS.

As noted above, the small non-significant wetland was reconfigured and restored. The ecological contribution of the restored wetland to the RNHS will be evaluated through monitoring, as discussed in **Section 6.2**.



2.3.3 Significant Woodlands

The ROP and MOP include definitions of woodlands and significant woodlands. A Significant Woodland is considered a woodland that is 0.5 ha or larger determined through a Watershed Plan, a Subwatershed Study or a site-specific Environmental Impact Assessment to meet one or more of the following criteria:

- The woodland contains forest patches over 99 years old;
- The patch size of the woodland is 2 ha or larger if it is located in the Urban Area, or 4 ha or larger if it located outside the Urban Area but below the Escarpment Brow, or 10 ha or larger if it located outside the Urban Area but above the Escarpment Brow;
- The woodland has an interior core area of 4 ha or larger, measured 100 m from the edge; or
- The woodland is wholly or partially within 50 m of a major creek or certain headwater creek or within 150 m of the Escarpment brow.

The following ELC units met the ROP and MOP definition of a Significant Woodland:

- ELC Unit 2.0 The tableland-associated cultural woodland community that is 2.4 ha in area. Note that a portion of this community was removed and restored to remediate contaminated soils;
- ELC Unit 6.0 The slope-associated deciduous forest community that is 1.2 ha in area and within 50 m of the regulated watercourse of Sixteen Mile Creek; and
- ELC Unit 10.0 A Sugar Maple forest community outside of the subject property, divided by a railway corridor, that is approximately 5.2 ha in area.

The limits of the Significant Woodland on the subject property were staked with Region staff in 2021 (**Figure 3**).

Areas of the woodland that were affected by soil remediation works and were restored through revegetation. The pre-remediation woodland (ELC Unit 2.0) is/was early successional and established following abandonment of farming in the 1960's. It is dominated by Black Walnut and Ash, which are not reflective of the original composition of forest communities in this area. There is however a small patch of remnant forest on the subject property to the south (ELC Unit 10) which has been classified as a Dry–Fresh Sugar Maple Forest (FOD5) and represents a more appropriate target community for restoration. The intention of the Restoration Plan is to direct the ecological trajectory of the woodland towards this target community.

Although the restoration plantings have just taken place, the intention through the CEMS was to treat the newly planted area as a future Significant Woodland by providing a 15 m buffer to the new woodland limit.

2.3.4 Significant Valleylands

Significant Valleylands are also Key Features of the RNHS. The ROP and the MOP do not identify significant valleylands and, as such, it is the responsibility of individual proponents to evaluate for significance. Table 8-1 in the *Natural Heritage Reference Manual* (MNR 2010) provides recommended criteria for evaluating significant valleylands, including criteria relating to landform functions and



attributes, ecological features and restored ecological functions. The Sixteen Mile Creek valleyland adjacent to the subject property meets many of the criteria in this table and is therefore considered significant valleyland and a Key Feature of the RNHS.

For the purpose of defining the constraint limits, the greater of the staked top of slope or LTSTOS plus the 15 m setback has been used to define the limits of the Significant Valleyland (**Figure 5**).

2.3.5 Significant Wildlife Habitat

Significant Wildlife Habitat (SWH) is also a Key Feature of the RNHS (**Figure 5**). Based on the *Significant Wildlife Habitat Criteria for Ecoregion 7E* (MNRF 2015), the woodland habitat and former tailings pond/wetland associated with the subject property potentially meet the criteria for several habitat types. The full SWH assessment is provided in the approved CEMS.

- Cultural Woodland (ELC Unit 2.0):
 - Amphibian Breeding Habitat (Woodland)
 - Possible Woodland Raptor Nesting (Cooper's Hawk)
- Former Tailings Pond/Wetland (ELC Units 5.1, 5.2, 9.0):
 - Amphibian Breeding Habitat (Woodland)
 - Possible Special Concern and Rare Wildlife Species (Eastern Wood-Pewee)
 - Terrestrial Crayfish
- Sixteen Mile Creek Wetlands (ELC Unit 7.3):
 - Amphibian Breeding Habitat (Woodland)
- Sixteen Mile Creek Bankfull Width (ELC Unit 8)
 - Possible Special Concern and Rare Wildlife Species (Northern Sunfish) (see Section 2.3.7)

Additionally, potential SWH identified on adjacent lands, which would require further investigation to confirm (not part of this study), include:

- Sixteen Mile Creek Wetlands (ELC Unit 7.3):
 - Possible Colonially-Nesting Bird Breeding (Tree/Shrubs)
- Deciduous Forest (ELC Unit 10.0):
 - Possible Bat Maternity Colonies

As noted in **Sections 2.2.3.3** and **2.2.3.8** above, the former tailings pond / wetland and portion of the woodland (ELC Unit 2.0) was removed as a result of the site remediation and a rescue was conducted for Terrestrial Crayfish and amphibians under a license and authorization from MNRF prior to remediation. These animals were relocated to areas shown on **Figure 4**.

The potential for the restored wetland to serve as Amphibian Breeding Habitat (Woodland) or Terrestrial Crayfish SWH will be evaluated through monitoring, as discussed in **Section 6.2**.

2.3.6 Significant Areas of Natural and Scientific Interest

There are no provincially significant ANSI proximal to the subject property. The closest ANSI is the Provincially Significant Milton Heights Earth Science ANSI which is located more than 2 km to the west.



2.3.7 Fish Habitat

Fish habitat is present in Sixteen Mile Creek and limited to the bankfull width of the watercourse.

Sixteen Mile Creek on and adjacent to the subject property is mapped as critical habitat of Northern Sunfish (*Lepomis peltastes*), which is designated Special Concern under SARA. Northern Sunfish is sensitive to declining water quality, especially due to increases in chloride concentration from de-icing salts and increased siltation (COSEWIC 2016). SARA does not impose prohibitions on habitat of Special Concern species, or identify the area of critical habitat, beyond such provisions of the *Fisheries Act*.

2.3.8 Flooding and Erosion Hazards

Flooding hazards are contained within the confined valley system associated with Sixteen Mile Creek and do not extend onto the tableland portion of the subject property, as shown on **Figure 5**. Erosion hazards have been determined through the completion of an LTSTOS assessment (DS Consultants 2023). This assessment determined that, for the majority of the subject property, the physical top of bank as staked by CH is equivalent to the LTSTOS. The one exception is in the area of localized erosion associated with the previous storm sewer outfall.

2.3.9 Surface and Groundwater Resources

The Sixteen Mile Creek and associated riparian wetland represent the surface water resources on, and immediately adjacent to, the subject property and are completely contained within the Sixteen Mile Creek valley. Neither the watercourse nor the groundwater in this area were identified as sensitive water resources within the Halton-Hamilton Source Protection Plan.

3. Natural Heritage System

The PPS describes natural heritage systems as follows:

A system made up of natural heritage features and areas, and linkages intended to provide connectivity (at the regional or site level) and support natural processes which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species, and ecosystems.

The MOP states that the natural heritage system consists of the RNHS and the Greenbelt NHS.

The RNHS was refined through the approval of the CEMS. The RNHS includes Key Features and components (as per ROP policy 115.3) based on field studies that included delineating these areas in consultation with the agencies, as well as natural hazards and ecological buffers.



3.1 Key Features

Based on the evaluation of significance in the CEMS and **Section 2.3** above, the following Key Features have been identified within the study area:

- Habitat for Endangered or Threatened Species;
- Regionally Significant Wetlands;
- Significant Woodlands;
- Significant Valleylands;
- Significant Wildlife Habitat; and
- Fish Habitat.

3.2 Enhancement to Key Features

Enhancements to Key Features are another component of the RNHS as defined in ROP policy 115.3.

ROP policy 229.1.1 defines Enhancements to Key Features as follows:

Means ecologically supporting areas adjacent to Key Features and/or measures internal to the Key Features that increase the ecological resilience and function of individual Key Features or groups of Key Features.

For the purpose of this report, this RNHS component is further addressed in Section 5.

3.3 Linkages

Linkages are another component of the RNHS as defined in ROP policy 115.3.

The Sixteen Mile Creek valleylands are considered to represent Significant Valleylands and recognized as a regional scale linkage. This linkage is defined by the valleyland corridor which has been included within the RNHS.

3.4 Regulated or Linkage Watercourses

Watercourses that are within a Conservation Authority Regulation Limit or that provide a linkage to a wetland, or a significant woodland are another component of the RNHS as defined in ROP policy 115.3.

The Sixteen Mile Creek is the only regulated watercourse within the study area and is contained within the RNHS.



3.5 Non-Significant Wetlands

The small wetland associated with the former tailings pond (ELC Units 5.1, 5.2, and 9.0) was considered non-significant under ROP Policy 115.3(6) because it did not provide an important ecological contribution to the RNHS as it was contaminated. The wetland was restored of the same size as the staked wetland, slightly reconfigured and positioned closer to the woodland.

3.6 Buffers & Setbacks

ROP policies require that buffer widths be determined through site-specific study taking into consideration the significance and sensitivity of the Key Features and NHS components and the potential impact(s) of adjacent land use.

The CEMS demonstrated, to the satisfaction of the Region, Town, and CH, that a 15 m buffer with fencing at the RNHS limit and no trail within the RNHS was sufficient to protect the RNHS from the future adjacent development and was consistent with the *Framework for Regional Natural Heritage System Buffer Width Refinements for Area-Specific Planning* (Region of Halton 2017) and CH's Land Use Planning policies at that time. As such, the buffer design principles for the proposed development — including the 15 m buffer width — were accepted as part of the approved CEMS.

3.7 Regional Natural Heritage System (RNHS)

Based on the above, the RNHS includes the following, as shown on Figure 5:

- Key Features:
 - Regionally Significant Wetland within the Sixteen Mile Creek valley based on limit staked by CH and property line;
 - Significant Woodland based on dripline staked by the Region and restored woodland limit;
 - Significant Valleyland based on limits of the LTSTOS which is equal to or greater than the physical top of bank as staked by CH;
 - Fish Habitat within the Sixteen Mile Creek;
 - Significant Habitat of Endangered and Threatened Species:
 - Habitat for Endangered Bat Species
 - Significant Wildlife Habitat:
 - Terrestrial Crayfish.
- Other Components:
 - Wetland other than those considered significant re-created wetland in area proximal to the former contaminated wetland plus a 15 m buffer, which was inkeeping with CH policy at the time of CEMS approval;
 - Buffers 15 m buffer adjacent to the Key Features, which is coincident with 15 m LTSTOS setback pursuant to CH policy;
 - Linkages Sixteen Mile Creek valleylands corresponds with Significant Valleyland;



- Watercourses Sixteen Mile Creek; and
- Regulatory flood plain Regional Storm flood plain associated with Sixteen Mile Creek.

4. **Proposed Development**

In accordance with the CEMS, the proposed DPoS consists of blocks for high density residential development with public streets, parkland/open space, a SWM pond and a Natural Heritage Area and associated Buffer Block, as described in **Section 1** above, and shown on **Figure 6**. It establishes five new public streets, 15 development blocks across two phases of development, 2.45 ha of new open space, a 1.52 ha SWM facility and 5.35 ha of land within the NHS including associated buffers.

Underground parking is proposed in mid-rise blocks 01, 03, 05, 06, and 08-09. Each parking level is 3 m in height, with the first underground level (P1) being less than 3 m below grade. Parking will extend as deep as P4. Where parking will extent to P3 or deeper, water-tight underground (i.e., bath tubbing) is recommended (DS Consultants 2025). Parking levels in each block are as follows:

- Block 01 P1, P2
- Block 03 P1, P2
- Block 05 P1, P2, P3, P4
- Block 06 P1, P2, P3
- Block 08-09 P1, P2

The location of the proposed SWM facility follows from the CEMS, as this location was assumed in the buffer refinement of the CEMS. However, the outlet for this SWM facility, at the time of the CEMS, was intended to be the existing swale along the southern limit of the subject property. As such, no formal evaluation for the stormwater outfall was required as part of the CEMS. As noted earlier, the detailed grading plan associated with this current planning application has confirmed that grading constraints preclude the ability for the SWM pond to drain to the existing swale without the additional of significant volumes of fill across the subject lands. As such, a formal stormwater outfall to the Sixteen Mile Creek is required. Beacon worked collaboratively with Urbantech to identify a potential area within the valley that a stormwater outfall could be constructed. In identifying the potential area, one goal was to avoid having the stormwater pipe constructed under the newly created wetland.

The FSR (Urbantech 2025) summarizes the following SWM targets and design criteria:

- 1. SWM pond with 2 m deep permanent pool with a bottom draw outlet and reverse outlet pipe;
- Provide extended detention drawdown volume for the 25 mm rainfall event based on the erosion threshold target flow rate and a minimum drawdown time within the SWM facility within a range of 24–48 hours;
- Ensure adequate stormwater quality treatment of runoff is provided. Town requires Level 1
 Protection (Enhanced 80% Average Annual Removal of Total Suspended Solids) for all
 developments;
- Maintain water balance to infiltrate the 90th percentile storm event (27 mm) as required by the Town of Milton Consolidated Linear Infrastructure Environmental Compliance Approval (CLI-ECA);



- 5. Provide safe overland flow conveyance of the 100-year event; and
- 6. Target release rates for post-development are the pre-development controls for the 2-year to 100-year event as well as the Regional Storm.

As described in the FSR (Urbantech 2025), the 90th percentile storm event (i.e., first 27 mm) runoff from the proposed development must be controlled (i.e., be retained onsite). The design of the infiltrationbased low-impact developments (LIDs) is subject to the determination of onsite percolation rates and the proximity to groundwater. Infiltration design may be precluded, as it relates to insufficient drawdown times and groundwater interference. If infiltration design is precluded, it is recommended that the water balance only rely on passive measures and that filtration will be incorporated on a best-efforts basis. LIDs will be included in later design phases, and may include rainwater harvesting, downspout disconnection, additional topsoil, pits or infiltration chambers, bioretention, permeable pavement, grassed swales, and/or rear yard infiltration trenches/swales (Urbantech 2025).

Catchment areas are proposed to remain similar between pre- and post-development, with drainage to the Sixteen Mile Creek valley being maintained (Urbantech 2025). There are three (3) pre-development catchments, each draining to the Sixteen Mile Creek valley, as shown on Drawing STM-1 (Urbantech 2025). Post-development, catchment areas within the NHS will not be altered; however, the remaining catchments will drain to the SWM pond and ultimately to the proposed outlet at the Sixteen Mile Creek valley, as shown on Drawing STM-2 (Urbantech 2025).

With respect to the proposed land uses adjacent to the NHS, the CEMS, when identifying the required buffer widths, assumed a SWM pond along the southern limit of the NHS and high density residential along the remaining length of the NHS. Based on the proposed DPoS (**Figure 6**), the SWM pond remains in the same location as assumed in the CEMS; however, there is now an Open Space area proposed between the SWM pond and the residential blocks (Block 21). There is no trail proposed within the NHS and a fence is still recommended along the NHS limit.

5. Impact Assessment

An assessment of impacts associated with the proposed development and recommended mitigation are described in the following sections and described in **Table 1** below.

5.1 SWM Outlet Alternatives Evaluation

As noted earlier, the CEMS assumed that the SWM pond would outlet to the existing swale along the southern property limit. Detailed grading plans revealed that this was not feasible. Alternative locations for the SWM outlet were assessed to first demonstrate that the outlet is essential (as per the definition in the ROP) and then to demonstrate that all alternatives have been considered (as required by ROP Policy 117.1(9)). The locations explored are as follows:

1. As part of the remediation works, a temporary sediment pond was constructed that outlets to the eastern property limit, which is adjacent to an abandoned rail line and associated swale along the southern property limit. The first alternative evaluated was to retrofit the existing outlet of the temporary sediment pond, such that the SWM pond would outlet to the



same swale and drain south towards the Sixteen Mile Creek valley. Through SWM pond design, it was determined that the grade differential to the swale was too small to accommodate the depth of the pond. As such, the entire developed area would need to be raised by approximately 2 - 3 m in order to utilize the swale for the SWM pond outlet (Urbantech 2025). This alternative was deemed to be unfeasible as the resultant grades would not be in-keeping with the adjacent, existing residential development along Martin Street.

- 2. Apart from location 1 above, the Sixteen Mile Creek valley is the only other alternative location for a SWM pond outlet. The valley in this location is greater than 6 m in depth thereby removing the need for substantial fill to facilitate the SWM outfall. As a result of the valley depth, CH Policy 2.41(j) requires the use of a drop shaft and tunnel to construct the outfall. Based on this requirement, the second alternative evaluated is an outfall to the valley utilizing horizontal boring (approximately 2 m in diameter). All equipment for the construction of the headwall, and for future maintenance, will access the valley through the 2 m pipe; therefore, the impact will be limited to the footprint of the outlet and associated wing walls and no separate access route through the valley is required. Two potential locations within the valley were assessed, both of which avoid constructing the outfall pipe beneath the newly created wetland:
 - a. The first location for an outfall constructed via horizontal boring represents the shortest distance between the proposed SWM pond and the toe of valley slope. This alternative results in the shortest length of pipe, the lowest cost of horizontal boring and provides sufficient grade differential to mitigate raising the existing grades. This alternative is presented in **Figure 7** and would require the removal of approximately seven (7) trees, one (1) of which meet the criteria to be considered a bat habitat snag. Tree details are provided on **Figure 8**.
 - b. The second location for an outfall constructed via horizontal boring represents a longer distance between the SWM pond and the valley slope which will result in a longer length of pipe and a higher cost of horizontal boring, as compared to Alternative 2a, but continues to provide sufficient grade differential to mitigate raising the existing grades. This alternative is also presented on Figure 7 and was chosen as an alternative location to evaluate because it is in an area where no snags or trees greater than 15 cm DBH would require removal. Tree details are provided on Figure 8.

There is a Regionally Significant Wetland adjacent to the toe of slope in the vicinity of the required stormwater outfall, as described in **Section 2.2.3.1**. The wetland is a MAS2-1 and generally characterized by non-native species that are highly resistant to anthropogenic disturbance (Hybrid Cattail). As the area of wetland vegetation that would be impacted by the outfall is similar in Alternatives 2a and 2b (approximately 25 m²), there is no difference in wetland impact between the two alternatives. Approximately 25 m² of wetland is anticipated to be impacted during installation of erosion protection at the downstream limit of the outfall.

Given that both Alternative 2a and 2b have the same impact to the wetland, the only other difference between the two alternatives is the impact to tree removal and potential bat habitat. As a result, Alternative 2b is the preferred approach from an ecological perspective as it results in public infrastructure that will have minimal impact to the RNHS after reviewing all reasonable alternatives. A stormwater outfall is required to service this proposed development area and, as such, would be in the public interest.





DRAFT PLAN OF SUBDIVISION

150 Steeles Avenue East

PART OF LOT 15 CONCESSION 2, AND PART OF LOT 7

GEOGRAPHIC TOWNSHIP OF TRAFALGAR NOW IN THE TOWN OF MILTON, REGIONAL MUNICIPALITY OF HALTON

OWNER'S AUTHORIZATION

I HEREBY AUTHORIZE URBAN STRATEGIES INC. TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION TO THE TOWN OF OAKVILLE FOR APPROVAL.

SIGNED_

DATE

MIKE VERNOOY 150 STEELES MILTON INC. 775 MAIN ST. E. MILTON, ON L9T 3Z3 TEL. (905) 876–7129

Mike Vernooy, A.S.O.

SURVEYOR'S CERTIFICATE

AS SHOWN ON THIS PLAN AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE CORRECTLY AND ACCURATELY SHOWN.

SIGNED

DATE

Christopher Wahba, OLS, OLIP C. Wahba Surveying Ltd. 285 Vaughan Valley Boulevard, Vaughan, Ontario L4H 3B5, Canada Tel. (905) 851-1300

BLOCK SCHEDULE

Name	Area (ha)
	<u>.</u>
BLOCK 01	0.49
BLOCK 02	0.74
BLOCK 03	0.47
BLOCK 04	1.01
BLOCK 05	0.48
BLOCK 06	0.40
BLOCK 07	1.52
BLOCK 08	0.24
BLOCK 14	0.56
BLOCK 15	0.49
BLOCK 16	0.74
BLOCK 17	0.28
BLOCK 18	0.54
BLOCK 19	0.40
BLOCK 20	0.96
BLOCK 21	2.45
BLOCK 22 (Reserve)	0.005
STREET 'A'	1.45
STREET 'B'	0.65
STREET 'C'	0.21
STREET 'D'	0.74
STREET 'E'	0.22
	15.04
Natural Heritage	<u> </u>
BLOCK 12 (Buffer)	0.68
BLOCK 13	4.67
	5.35
248 Martin	
BLOCK 09	0.21
BLOCK 10	0.14
BLOCK 11	0.06
	0.41
TOTAL	20.80

NOTES:





TREE INVENTORY TABLE

Tree	Scientific Name	Common Name	DBH (cm)	Crown Diameter	Condition 1	Comments	TPZ Radius 2 (m)	Notes
60	Juglans nigra	Black Walnut	39, 41 (57)	9	Good	Good form and vigour	7.2	
555	Ulmus americana	White Elm	20	5	Fair-Good	Good vigour; Epicormic growth along trunk; Slightly	3.6	
557	Gleditsia triacanthos	Honey Locust	25	6	Fair	Suppressed by neighbouring trees; Crooked stem.	3.6	
558	Gleditsia triacanthos	Honey Locust	37	9	Good	Good form and vigour.	4.8	
559	Ulmus americana	White Elm Black Cherry	45	8	Fair-Good	Good form and vigour.	6	
567	Gleditsia triacanthos	Honey Locust	20	7	Poor-Fair	Dieback and decay.	3.6	
568	Gleditsia triacanthos	Honey Locust	39	6	Poor-Fair	Dieback and thinning.	4.8	Potential injury for swm outfall alternative #2
569	Carya cordiformis	Bitternut Hickory	24	6	Good	Good form and vigour.	3.6	
572	Gleditsia triacanthos	Honey Locust	21	6	Fair-Good	trees.	3.6	Removal required for swm outfall alternative #2
573	Gleditsia triacanthos	Honey Locust	26	6	Fair	Good vigour;; Growing on a heavy lean to the north.	3.6	Removal required for swm outfall alternative #2
574	Ulmus americana	White Elm	36	7	Good	Good form and vigour.	4.8	Removal required for swm outfall alternative #2
577	Gleditsia triacanthos	Honey Locust	37	7	Fair	Good vigour; Suppressed by neighbouring trees; Growing	4.8	Potential injury for swm outfall alternative #2
579	Claditaia triaganthan		20	6	Fair	Good vigour; Suppressed by neighbouring trees; Growing	3.6	Potential injury for swm outfall alternative #2
570		Plack Walnut	20	0	Fair Foir Cood	on a lean to the south.	3.0	
583	Juglans nigra	Black Walnut	57	12	Good	Good form and vigour.	7.2	
585	Prunus serotina	Black Cherry	29	6	Fair	Good vigour; Growing on a lean to the south.	3.6	
587	Gleditsia triacanthos	Honey Locust	49	10	Poor-Fair	Dieback and thinning.	6	Potential injury for swm outfall alternative #3
588	Carya cordiformis	Bitternut Hickory	21, 18 (28)	7	Fair	neighbouring trees.	3.6	Potential injury for swm outfall alternative #3
589	Prunus serotina	Black Cherry	59	7	Poor	Nearly dead.	7.2	
593	Juglans nigra	Black Walnut	35	7	Good	Good form and vigour. Good vigour: Growing on a lean to the north: Slightly	4.8	
601	Gleditsia triacanthos	Honey Locust	24	6	Fair-Good	suppressed by neighbouring trees.	3.6	
604	Prunus serotina	Black Cherry	16	2	Poor	Previously tagged; Nearly dead.	2.4	
605	Olmus americana		17	N/a		Previously tagged; Standing snag. Previously tagged; Good vigour; Growing on a lean to the	2.4	
613			24	5	Fair-Good	north.	3.6	
618	Gleditsia triacanthos Gleditsia triacanthos	Honey Locust	22	6	Fair-Good Good	Good form and vigour.	3.6	
623	Prunus serotina	Black Cherry	20	N/a	Dead	Standing snag.	2.4	
626	Prunus serotina	Black Cherry	23	5	Fair	Dieback and thinning.	3.6	
627	Gleditsia triacanthos	Honey Locust	32	6	Poor	Significant dieback. Good form: Crooked stem, slightly suppressed by	4.8	
628	Gleditsia triacanthos	Honey Locust	39	7	Fair-Good	neighbouring trees.	4.8	
633	Juglans nigra	Black Walnut	65	12	Good	Good form and vigour.	8.4	
634	Gleditsia triacanthos	Honey Locust	26	7	Fair	Crooked stem.	3.6	
635	Gleditsia triacanthos	Honey Locust	26	6	Fair-Good	Good vigour; Growing on a lean to the west.	3.6	
637	Gleditsia triacanthos	Honey Locust	27	6	Fair	suppressed by neighbouring trees.	3.6	
639	Gleditsia triacanthos	Honey Locust	30	7	Good	Good form and vigour.	3.6	
645	Gleditsia triacanthos	Honey Locust Black Cherry	29	8	Fair-Good	Good vigour; Growing on a lean to the north.	3.6	
652	Prunus serotina	Black Cherry	37	4	Poor	Nearly dead.	4.8	
655	Gleditsia triacanthos	Honey Locust	36	6	Fair	Slightly undersized canopy; Suppressed by vines.	4.8	
656	Prunus serotina	Black Cherry Honey Locust	50	N/a	Dead	Standing snag.	6	
660			42	5	Fair	Good vigour; Intertwined with and suppressed by	0	
662	Gieditsia triacantnos		34	6	Fair	neighbouring trees.	4.8	
663	Gleditsia triacanthos	Honey Locust	28	7	Fair	neighbouring trees.	3.6	
664	Gleditsia triacanthos	Honey Locust	27	6	Fair-Good	Good vigour; Slightly suppressed by neighbouring trees.	3.6	
701	Jugians nigra	Black Walnut	33	7	Good	Good form and vigour. Good form and vigour: Large wound on trunk and broken	4.8	
702	Juglans nigra	Black Walnut	27	5	Fair	limbs on north side appear to be construction damage;	3.6	
703	Prunus serotina	Black Cherry	16	N/a	Dead	good woundwood. Standing spag	24	
703	Ulmus americana	White Elm	15	4	Good	Good form and vigour.	2.4	
705	Ulmus americana	White Elm	22	5	Poor-Fair	Dieback and thinning; Suppressed by neighbouring trees.	3.6	
706	Prunus serotina	Black Cherry	22	5	Fair	Dieback and broken limbs; Suppressed by neighbouring trees.	3.6	
707	Gleditsia triacanthos	Honey Locust	27	6	Fair-Good	Good vigour; Growing on a lean to the north.	3.6	
708	Gleditsia triacanthos	Honey Locust	31	6	Fair	Good vigour; Growing on a lean to the north; Interfering with neighbouring trees.	4.8	
709	Gleditsia triacanthos	Honev Locust	24	6	Fair-Good	Good vigour; Growing on a lean to the north; Intertwined	3.6	
710	Gleditsia triacanthos	Honey Locust	23	5	Good	with neighbouring trees.	3.6	
711	Gleditsia triacanthos	Honey Locust	23	6	Fair-Good	Good form and vigour; Slightly crooked trunk.	3.6	
712	Ulmus americana	White Elm	16	5	Good	Good form and vigour.	2.4	
713	Prunus serotina	Black Cherry Honey Locust	31	6	Poor-Fair	Dieback and thinning.	4.8	
714			10	5	Fail-Good	Good vigour; Growing on a lean to the north; Intertwined	2.4	
/ 15			15	5	Fair	with neighbouring trees.	2.4	
716	Gleditsia triacanthos	Honey Locust	25		Fair-Good	with neighbouring trees.	3.6	
717	Prunus serotina	Black Cherry	16	5	Poor-Fair	Growing on a lean to the north; Intertwined with neighbouring trees: Fruiting bodies throughout concerve	2.4	
710	l Ilmus americana	White Flm	15	5	Fair-Good	Good form and vigour; Slightly suppressed by neighbouring	21	
710	Gleditsia triacanthos	Honey Locust	15	З	Cood	trees.	2. 4	
720	Gleditsia triacanthos	Honey Locust	58	9	Good	Good form and vigour.	7.2	
721	Gleditsia triacanthos	Honey Locust	24	4	Poor	Undersized canopy; Suppressed by neighbouring trees and	3.6	
722	Gleditsia triacanthos	Honey Locust	17	5	Fair	Good vigour; Slightly suppressed by neighbouring trees.	2.4	
723	Gleditsia triacanthos	Honey Locust	42	7	Fair-Good	Good form and vigour.	6	
724	Gleditsia triacanthos	Honey Locust	23	6	Fair-Good	Good form and vigour; Crooked stem.	3.6	
725	Gleditsia triacanthos	Honey Locust	39	6	Fair-Good	Good vigour; Growing on a lean to the north.	4.8	
727	Gleditsia triacanthos	Honey Locust	15, 32 (35)	6	Fair-Good	Good vigour; Growing on a lean to the south.	4.8	
728	Gleditsia triacanthos	Honey Locust	15	6	Poor	Nearly dead.	2.4	
/29	Gieditsia triacanthos	Rittorput Lieken	19	N/a		Good form and vigour; Slightly suppressed by neiabbouring	2.4	
/30			21	5	⊢air-Good	trees.	3.6	
731	Gleditsia triacanthos	Honey Locust	38	5	Fair	neighbouring trees.	4.8	
732	Gleditsia triacanthos	Honey Locust	30	N/a	Dead	Standing snag.	3.6	Removal required for swm outfall alternative #2
733	Gleditsia triacanthos	Honey Locust	21	7	Fair	Dieback and thinning.	3.6	Removal required for swm outfall alternative #2
735	Ulmus americana	White Elm	32 42	N/a N/a	Dead	Standing snag.	4.8 6	
736	Gleditsia triacanthos	Honey Locust	35	6	Fair	Suppressed by and Intertwined with neighbouring trees.	4.8	
737	Gleditsia triacanthos	Honey Locust	58	9	Good	Good form and vigour.	7.2	
739	Acer negundo	Manitoba Maple	32	5	Poor	Nearly dead.	3.0 4.8	
740	Acer negundo	Manitoba Maple	21	4	Fair-Good	Epicormic growth along trunk.	3.6	
741	Fraxinus pennsylvanica	Green Ash Honey Locust	15	3	Poor	Nearly dead.	2.4	
742	Gleditsia triacanthos	Honey Locust	23	7	Good	Good form and vigour.	3.6	
1. The t	tree health condition rating was ba	sed on factors that could incl	ude one or a combina	tion of:				
F	roor Condition – Severe dieback, s air Condition – Moderate dieback	and/or lean, limb defects mis	ssing leader, significan	t disease presence a foliage damage from	n stress			

Good Condition – Healthy vigorous growth, no or minor visible defects or damage

. The TPZ as per the City of Mississauga's Tree Preservation & Protection Standards (2024) for trees in Open Spaces and Woodlands

SNAG INVENTORY TABLE

	,						, ,		1	
Snag ID #	Species	# of Cavities	DBH (cm)	Approx. Cavity Height (m)	Approx. Tree Height (m)	% Loose Bark	Decay Class	Canopy Cover (%)	# of Leaf nests	Notes
1	Black Cherry	2	16	5 to 10	50 to 75	5 to 10	6	< 25	0	Loose Bark,Woodpecker hole
2	White Elm	2	17	10 to 15	1 to 25	10 to 15	4	< 25	0	Crack,Loose Bark
3	Black Cherry	1	14	0 to 5	1 to 25	5 to 10	6	< 25	0	Loose Bark
4	Hawthorn species	4	56	5 to 10	1 to 25	10 to 15	2	50 to 75	0	Crack,Woodpecker hole,Knot hole
5	Black Cherry	3	50	10 to 15	1 to 25	10 to 15	3	25 to 50	0	Cavity,Woodpecker hole
6	Black Locust	2	39	10 to 15	1 to 25	15 to 20	1	25 to 50	0	Loose Bark
7	Black Locust	3	32	15 to 20	25 to 50	15 to 20	4	25 to 50	0	Loose Bark
8	Black Locust	2	49	20 to 25	1 to 25	15 to 20	2	50 to 75	0	Loose Bark
9	Black Locust	1	19	10 to 15	1 to 25	10 to 15	6	25 to 50	0	Cavity
10	Black Cherry	2	59	20 to 25	25 to 50	20 to 25	2	50 to 75	0	Loose Bark
11	Black Locust	2	30	5 to 10	50 to 75	5 to 10	5	50 to 75	0	Loose Bark,Cavity. Removal required for swm outfall alternative #2
12	White Elm	6	42	15 to 20	50 to 75	20 to 25	4	50 to 75	0	Crack,Cavity,Loose Bark,Woodpecker hole
13	Manitoba Maple	3	32	5 to 10	25 to 50	5 to 10	2	25 to 50	0	Loose Bark,Woodpecker hole



Based on this assessment, Alternative 2b meets the test of an "essential infrastructure" (in the public interest after all alternatives have been considered) in accordance with ROP Policies 117.1(9) and 233 and should be considered as a permitted use in the RNHS.



Photograph 3. General area of proposed stormwater outlet (Alternative 2b) January 29, 2025 (west-facing view)



Table 1. Impact Assessment and Mitigation

Category	Feature/Function	Proposed or Potential Impacts	Recommended Mitigation/Management	Net Effect
Soils	Topsoil and Subsoils	Soil contamination has been addressed through remediation.	N/A	N/A
G Groundwater G		The groundwater flow direction within the Site is inferred to be southwest toward the Sixteen Mile Creek; however, no groundwater-dependent natural heritage features or areas (e.g., seeps or springs) have been identified in the study area.	There were no groundwater-dependent natural features or areas identified in the study area; therefore, no negative impacts to the RNHS are anticipated.	
	Groundwater Flows	Ex-situ remediation of contaminated groundwater was not anticipated to have a significant impact on the groundwater flow regime outside of the groundwater treatment zone. Impacts associated with remediation were addressed through the CEMS.	infiltration will be addressed through LIDs if feasible, as described in Section 4 and the FSR (Urbantech 2025). The design will include infiltration of the 90 th percentile storm event (27 mm), required by the CLI-ECA (Urbantech 2025).	Neutral
		Limited drawdown of groundwater is anticipated during construction of and around underground facilities, such as underground parking, as described in the <i>Hydrogeological Investigation</i> (DS Consultants 2025).	To mitigate impacts to the significant aquifer, any buildings that extend to P3 or deeper are recommended to be bath tubbed (i.e., water-tight underground) (DS Consultants 2025). If bath tubbing is not a viable option, alternative strategies should be explored to minimize groundwater impact. This includes designing the structure to remain above the water table where feasible, implementing rebust waterpressing systems, and considering dewatering techniques to manage	
		Underground parking levels P3 or deeper are anticipated to intercept a significant aquifer; however, it has not been identified as vulnerable (DS Consultants 2025).	groundwater levels during long-term operation (DS Consultants 2025).	
	Groundwater Quality	Remediation of existing contaminants in groundwater, that included PHCs, metals, inorganics EC and SAR.	Contaminated groundwater in the RNHS has been treated in an on-site treatment plant. Where treated water met reuse standards, it was reinjected back into the on-site shallow aquifer.	
		Remediation of groundwater in the RNHS to prevent migration of contaminants in the direction of Sixteen Mile Creek. Impacts associated with remediation were addressed through the CEMS.	Implement SWM pond design as per Urbantech (2025) to address potential adverse effects to groundwater quality, in accordance with the Town administrated Consolidated Linear Infrastructure Environmental Compliance Approval (CLI-ECA) from the MECP. Provide a SWM pond liner if recommended by the geotechnical engineer.	Neutral
		The proposed Swim pond could have an impact on groundwater quality.	The preferred SWM outlet design will avoid the potential for removal of endangered bat babitat	
		Remediation of acil within habitat was conducted in appardance with the	(trees).	
	Habitat of Endangered or Threatened Species (Key Feature)	Endangered Species Act and regulations. If unmitigated, construction of SWM outlet could impact on habitat of	Should tree removal be determined to be unavoidable through detailed design, the SWM outlet design will be provided to MECP to ensure compliance with the ESA.	Neutral
		endangered bat species.	Vegetation removal should be conducted between November 1 st to March 31 st to prevent adverse effects to endangered bat species.	
		Significant wetlands on the subject property include the Milton Wetland	See groundwater mitigation and management above.	
Regional Natural		Complex within the Sixteen Mile Creek valley. This is not a PSW but meets the criteria for significance under the ROP.	Maintain catchment area to Sixteen Mile Creek and wetland, as shown in FSR Drawing STM-2 (Urbantech 2025).	Neutral
Heritage System	Significant Wetlands	Due to the migration of existing contaminants via groundwater, the remediation works have mitigated the potential migration of contaminants towards the Significant Wetland.	SWM facilities to be designed to enhanced provincial standards (e.g., 80% total suspended solids removal), in accordance with CLI-ECA. Develop SWM-related monitoring plan during detailed design.	
	(noy routeroy	The Significant Wetland is riparian and maintained by an upstream catchment of approximately 8,000 ha; therefore, water balance effects of the proposed development are anticipated to be negligible.	Should any vegetation require removal to construct the SWM outlet, vegetation clearing should occur outside of the migratory bird nesting window, which is consistent with the bat window (November 1 st to March 31 st).	
		The proposed SWM outlet is to be constructed at the edge of the significant wetland. Stormwater, if untreated, could impact the wetland.	Implement SWM pond design and erosion protection as per FSR (Urbantech 2025) to address potential adverse effects to water quality, in accordance with CLI-ECA. Undertake monitoring at SWM outlet as described in Section 6.2 below.	



Scoped EIA: 150 Steeles Ave. E., 248, 250 & 314 Martin St., Milton

Category	Feature/Function	Proposed or Potential Impacts	Recommended Mitigation/Management	Net Effect
	Significant Woodlands (Key Feature)	Significant woodlands have been delineated as per the CEMS. Woodland area disturbed by remediation activities has been replanted. SWM outlet is proposed within the significant woodland and has potential to remove or injure trees during construction. Eroded slope within the woodland, if unmitigated, could result in continued erosion and potential tree loss/damage.	 Plantings in post-remediation restoration area will be maintained for a warranty period (2 years). Should any vegetation require removal to construct the SWM outlet, vegetation clearing should occur outside of the migratory bird nesting window and bat roosting window (November 1st to March 31st). The preferred stormwater outfall location has been selected based on the ability to avoid removal of trees or snags > 15 cm DBH. The DPoS incorporates a 15 m buffer from the limit of the woodland. Landscaping plans have been prepared to naturalize the buffer, in accordance with CH Landscaping Guidelines, as per drawings in Appendix C3. Eroded slope in woodland and buffer restoration plans are proposed to be finalized as a condition of draft plan approval, as described in Section 5.3.3 below and as per the agreed upon approach in the CEMS. 	Neutral
	Significant Valleylands (Key Feature)	The valley wall in one location has been eroded by a former storm outfall and natural erosion (Figure 2). The area is a steep gully with unstable slopes (Beacon et al, 2023). Although the storm pipe has been decommissioned from use, the natural erosion of the gully has been exacerbated by the prior use of the storm pipe. If unmitigated, the proposed SWM outlet could cause instability and/or erosion of the Valleyland slope.	 15 m LTSTOS setback is included in the RNHS. Implement 15 m buffer and naturalize in accordance with CH guidelines. Based on conversations with the Region and CH, the preferred alternative for the slope that has eroded around the former storm pipe is as follows: Undertake no specific geotechnical solutions to address the localized erosion but rather, improve the vegetation cover in this area using species conducive to bioengineering (the "almost do-nothing approach"). If necessary, at detailed design, undertake minor grading east of the top of slope to divert overland flow away from the eroded slope. Capping and grouting of the existing pipe Remove debris (broken pipe, etc.) within proximity of the existing outfall. Eroded slope in woodland and buffer restoration plans are proposed to be finalized as a condition of draft plan approval, as described in Section 5.3.3 below. The following measures are recommended for the new proposed SWM outlet: Review of the final detailed design by a geotechnical engineer to confirm that the proposed outlet design will not destabilize the surrounding slope. 	Neutral – Positive
	Significant Wildlife Habitat (SWH; Key Feature)	Candidate SWH is present in the significant woodland and the former tailings pond / wetland (Beacon et al, 2023). Candidate SWH is present in Sixteen Mile Creek watercourse (Northern Sunfish). Impacts to SWH within the woodland and former tailings pond / wetland were addressed in the CEMS. Stormwater and sediment, if unmitigated, could impact SWH associated with Northern Sunfish.	 Wildlife rescue and relocation for terrestrial crayfish and amphibians was conducted prior to remediation. The DPoS incorporates a 15 m buffer from the limit of the woodland and created wetland. Monitoring as it relates to potential Amphibian Breeding (Woodland) or Terrestrial Crayfish SWH is described in Section 6.2. See Fish Habitat row below for mitigation measures related to Northern Sunfish. 	Neutral



Scoped EIA: 150 Steeles Ave. E., 248, 250 & 314 Martin St., Milton

Category	Feature/Function	Proposed or Potential Impacts	Recommended Mitigation/Management	Net Effect
	Fish Habitat (Key Feature)	There is a potential for construction and the proposed development to indirectly impact downstream fish habitat within Sixteen Mile Creek if sediment migrates to the watercourse or if water is released without appropriate mitigation measures.	 Implement the Erosion and Sediment Control (ESC) measures, as outlined in the FSR (Urbantech, 2025). Implement the slope improvements outlined in Section 5.3 to mitigate the existing risk of further erosion and sedimentation to the Sixteen Mile Creek. SWM facilities to be designed to enhanced provincial standards (e.g., 80% total suspended solids removal), as outlined in the FSR (Urbantech, 2025). Should works near the watercourse be needed, a <i>Fisheries Act</i> self-assessment will be conducted, which may precipitate filing of a DFO request for review. As fish habitat is also regulated under the federal <i>Species at Risk Act</i>, DFO will provide direction on such regulatory matters and consultation with MECP is not anticipated to be required. 	Neutral
	Linkages	The Sixteen Mile Creek valleylands are assumed to be significant valleylands and assumed to represent a regional scale linkage. The linkage function of these valleylands is not proposed to be altered.	See Significant Woodlands and Significant Valleylands mitigation and management measures above.	Neutral
	Watercourses	There is a potential impact on the CH-regulated watercourse (Sixteen Mile Creek) if sediment migrates to the watercourse or if water is released without appropriate mitigation measures.	Implement the Erosion and Sediment Control (ESC) recommendations as detailed in the FSR (Urbantech 2025). See Fish Habitat row above.	Neutral
	Wetlands other than those considered Significant	As documented in the CEMS, wetlands associated with the former tailings pond were remediated and re-created. No alteration to the re- created wetlands is proposed. Stormwater and sediment, if unmitigated, could impact the wetland.	 The CEMS identified a catchment area to the created wetland that is entirely within the NHS. The stormwater pond will treat all surface drainage outside of the NHS and discharge to the Sixteen Mile Creek. As such, no mitigation measures are required from a stormwater perspective. Implement ESC measures as outlined in the FSR (Urbantech, 2025). Based on the recommendations of the CEMS, it is proposed to monitor the hydrology of the recreated wetlands to ensure an appropriate hydroperiod has been achieved. This monitoring may also help determine if the wetland starts to significantly contribute to the RNHS and qualifies as a Significant Wetland. The DPoS incorporates a 15 m buffer from the limit of this wetland. 	Neutral



5.2 Summary of Mitigation Measures

The following list of recommendations reflects the mitigation measures provided in **Table 1** above:

- 1. Design SWM facilities to Level 1 protection standard (80% average annual removal of total suspended solids), in accordance with CLI-ECA, including erosion protection at the outlet, as recommended in the FSR (Urbantech 2025).
- 2. Design LIDs to infiltrate the 90th percentile storm event (27 mm), required by the CLI-ECA (Urbantech 2025).
- 3. Design any buildings that extend to P3 or deeper to be bath tubbed (i.e., water-tight underground) (DS Consultants 2025).
- 4. Locate preferred SWM outlet to avoid tree removals. Should tree removals be necessary, consult with MECP to ensure compliance with the *Endangered Species Act*.
- 5. Should vegetation removal be necessary, it should take place between November 1st and March 31st to avoid harm or harassment of (a) nesting birds protected under the *Migratory Birds Convention Act* and (b) roosting bats protected under the *Endangered Species Act*.
- 6. Maintain drainage from the subject property to Sixteen Mile Creek, as recommended in the FSR (Urbantech 2025).
- 7. Prior to servicing, implement the landscape design for the ecological buffer to woodland, stable top of bank, and significant wildlife habitat (**Appendix C3**). Maintain existing 15 m wetland buffer.
- 8. Implement ecological restoration of the eroded slope around the historic storm sewer as per drawings in **Appendix C3** and **Section 5.3.3**.
- 9. At detailed design, obtain confirmation from a geotechnical engineer as to (a) whether a SWM pond liner is recommended and (b) that the proposed SWM outlet will maintain the existing stable slope.
- 10. Undertake monitoring of the proposed SWM outlet, as described in **Section 6.2**.
- 11. Undertake monitoring of the re-created wetlands to identify potential amphibian and terrestrial crayfish SWH and target wetland hydrology, as described in **Section 6.2**.
- 12. Implement ESC measures, as recommended in the FSR (Urbantech 2025).
- 13. Should works near the watercourse be needed, a *Fisheries Act* self-assessment will be conducted, which may precipitate consultation with DFO.

5.3 Summary of Enhancements to Key Features

Enhancements to Key Features were recommended in the CEMS to provide net benefit to the RNHS, as illustrated in the CEMS' Conceptual Restoration Plan. To date, several recommended enhancements have been implemented; however, the remainder are proposed to be completed as part of the proposed development. **Table 2** below represents the status of the enhancements recommended in the CEMS.



Table 2. Enhancements to Key Features of the NHS

Enhancement Recommendation from CEMS	Status as of March 2025
Remediation of contaminated soil in Key Features and restoration of pre-landfill grades with clean soil	Complete
Wetland recreated adjacent to Significant Woodland for enhanced connectivity	Complete
Native plantings in Key Features in former locations of debris and invasive species	Complete
Remediation of contaminated groundwater in the NHS to mitigate the risk to NHS	Complete (P. Fioravanti, pers. comm., 26 Feb 2025)
Increase total woodland area and reduce the ratio of woodland edge length to total area	Complete
Removal of anthropogenic refuse and waste	Complete
Removal or control of invasive species	Complete
Diversification of vegetation by underplanting with native species	Complete
Creation of supplemental wildlife habitat using natural or artificial structures	The artificial snag, bat roost box, and snake hibernaculum are complete. Brush piles, bat roost and artificial snag are included in the buffer planting plan and will be completed as a condition of draft plan approval.
Address area of slope failure around former storm sewer by grouting pipe in situ and vegetating the area.	To be completed as a condition of draft plan approval. A permit will be required from CH pursuant to O. Reg. 41/24.

5.3.1 Phase 1: Wetland Restoration and Adjacent Invasive Species Management

Restoration of the small tableland wetland and management of the adjacent population of invasive species was completed as of June 21, 2024, pursuant to drawings in **Appendices C1** and **C2**. This work has been completed as demonstrated by the Landscape Architect certification letter in **Appendix D**, Photographs 1, 2, and 3 in **Appendix E**, and **Photograph 4** below.



Scoped EIA: 150 Steeles Ave. E., 248, 250 & 314 Martin St., Milton



Photograph 4. Wetland Restoration Area, July 15, 2024 (east-facing view)

5.3.2 Phase 2: Restoration of Significant Woodland and Adjacent Invasive Species Management

Restoration of significant woodland and adjacent invasive species management was completed as of November 8, 2024, as per the concept that was agreed to with the Town through the CEMS and drawings in **Appendix C2**. This work has been completed as demonstrated by the Landscape Architect certification letter in **Appendix D** and Photographs 1, 4, and 5 in **Appendix E**.

5.3.3 Phase 3: Restoration at Eroded Slope and Buffer Completion

The storm sewer pipe and outfall infrastructure that had been previously constructed within the valleylands to service the manufacturing facility resulted in erosion and slope failure along the valley wall in a localized area. This outfall is no longer in use.

Design alternatives to address this area of erosion were explored through the CEMS submission process. Through acceptance of the CEMS, CH and the Region requested a geotechnical "do nothing" approach with some slope plantings or seeding to address the area of existing erosion. It should be noted that this approach acknowledges that the slope will continue to naturally erode over the long-term, to the LTSTOS.



To prevent further erosion and restore an area in a degraded Key Feature (Significant Valleyland), it was proposed that the affected area be stabilized and vegetated to help mitigate erosion of the exposed soils. This would also serve to enhance a natural corridor along a hydrologic linkage. The extent of this restoration work was illustrated in the Conceptual Restoration Plan and described in the CEMS. It was anticipated that the Significant Valleyland would continue to function as a regional linkage, as there was nothing in the proposed landscaping restoration that would prevent the continued linkage function.

The limit of the RNHS in the vicinity of the slope failure was based on the existing LTSTOS plus the 15 m setback. This area was to be naturalized with buffer plantings, in accordance with CH requirements.

A plan for the buffer and conceptual vegetation treatment of the eroded slope is provided in **Appendix C3** and is described in this section. Drawings will be finalized as part of detailed design by Beacon and included in an application for a permit pursuant to O. Reg. 41/24, as described in **Section 6.1** below.

5.3.3.1 Capping and Decommissioning Storm Sewer

This outfall is no longer in use and will be capped and grouted, in consultation with the project engineer. The entire pipe that is buried within the slope will not be removed to mitigate anticipated impacts to the valley wall.

5.3.3.2 Erosion and Sediment Control

A Silt Sock at the bottom of slope will be installed immediately south of the proposed restoration area to provide temporary erosion and sediment control. The contractor will be required to install the Silt Sock prior to the commencement of any work and must be reviewed and approved by Beacon before the start of the work. The Contractor will be required to maintain the Sock in a good functioning condition until the area is sufficiently stable.

5.3.3.3 Debris Management

Three segments of storm sewer pipe and associated debris are present at the bottom of the eroded slope. The pipe segments are proposed to be lifted out of the valley using an excavator and chain(s). The excavator will be parked beyond the top of bank and will extend the hydraulic arm down the slope. A long chain will be inserted through one concrete pipe segment at a time and the chain will be secure to the hydraulic bucket before lifting to the top of slope for off-site disposal.

Prior to the seeding of the steep slopes, removal of woody debris, stones including scarification of the soil surface will be required.

5.3.3.4 Canopy Pruning

It is proposed to prune the lower and upper branches of the adjacent trees, as needed, to allow more sunlight to reach the slope restoration plantings. Canopy pruning will be undertaken by ISA Certified



Arborists following arboricultural Best Management Practices and working around nesting birds protected under the *Migratory Birds Convention Act*.

5.3.3.5 Vegetated Interruption Socks Along Contours

A Vegetated Interruption Sock is a physical barrier designed to reduce runoff flow velocity and erosion. The Sock consists of a tubular mesh netting that is filled with a growth medium (e.g., compost and soil mixture). At the time of installation, Socks will be filled near their final location with the specified seed mixtures and growth medium. The Socks are then anchored to the slope with wooden stakes.

Smaller 20 cm diameter Interruption Socks will be installed along the steep slope, whereas larger Socks ranging from 45 cm - 60 cm diameter will be used along the lower portion of the slopes as well a across the gully to create barriers and hold the growth medium to be placed at the bottom of the gully and valley slope.

5.3.3.6 Planting Approach

The Vegetated Socks will provide growing medium for the establishment of native grasses and forbs as well as native shrubs. Live stakes of selected native shrub species will be planted in a horizontal line through the Socks. If feasible, it is also proposed to install fascines in a horizontal line atop live stakes between two Interruption Socks and or between the Interruption Sock and the native slope. Shrub species selected for the live stakes and fascines shall consist of the following:

- Cornus amomum Silky Dogwood
- C. racemosa Gray Dogwood
- C. rugosa Round-leaved Dogwood*
- *C. sericea* Red-osier Dogwood
- Salix exigua Sandbar Willow
- Viburnum lentago Nannyberry

* If Round-leaved Dogwood is not available, it will be substituted with another species approved by Beacon.

Planting densities for 1-gallon potted shrubs are 1.7 per square metre, whereas 8.5 herbaceous plugs are proposed per square metre.

On the very steep slopes, it is proposed to hydroseed a native seed mix and nurse grass seed mix with the application of a soil amendment and engineered fibre matrix product(s). The proposed soil amendment is designed to accelerate the development of soils and helps the establishment of vegetation. The Engineered Fibre Matrix is a non-toxic biodegradable hydraulic mulch that promote rapid establishment of vegetation and temporarily reduces erosion and sediment transport. Following the planting of the shrubs and herbaceous ground cover, the restoration planting area will be seeded with the Woodland Seed Mix. The method of seeding for this area will be determined during the preparation of the detailed design drawings.



6. Next Steps

This section presents the next steps for implementation of the recommendations in this Scoped EIA. Included in this Scoped EIA are preliminary landscaping designs for review by agencies and support of the application for draft plan of subdivision.

6.1 **Permits from Conservation Halton**

The following items to facilitate the proposed development require a permit pursuant to O. Reg. 41/24, to undertake work within the CH regulated area shown on **Figure 5**:

- Development within flooding and erosion hazards (stormwater outfall and vegetating eroded slope); and
- Development within or adjacent to wetlands (development between 15–30 m of a wetland — SWM pond and development within and adjacent to a wetland — proposed SWM outfall).

A stormwater outlet design, detailed Landscaping Plan, ESC Plan and Staging Plan will be required as part of the future permit application. The following subsections include the items that will be addressed in these applications.

6.1.1 Development within Flooding and Erosion Hazards

The restoration of the eroded slope at the historic storm sewer outfall was agreed to with CH as part of the CEMS and is described in **Section 5.3.3** above.

Although not discussed in the CEMS, a stormwater outlet is proposed at the toe of slope of the Sixteen Mile Creek valley, as described in **Section 4**, to accommodate the proposed development. The need for this has been demonstrated in **Section 5.1** and there are no reasonable alternatives outside of the RNHS. This infrastructure and its proposed construction method will be designed to comply with CH Policy 2.41(j) (Public Infrastructure, Utilities).

6.1.2 Development within or adjacent to Wetlands

Since O. Reg. 41/24 came into force, CH regulation of wetlands is limited to a 30 m regulatory allowance adjacent to wetlands. Previously, when the CEMS was prepared, CH regulated 120 m adjacent to PSWs and wetlands greater than or equal to 2 ha and 30 m adjacent to non-PSWs and wetlands less than 2 ha.

The restorative works proposed at the eroded slope, which was approved conceptually as part of the CEMS, is within 30 m of a wetland greater than 2 ha. The erosion mitigation measures at the downstream limit of the stormwater outfall will result impact approximately 25 m² of wetland. Therefore, the detailed designs of these works will need to comply with relevant CH polices and will require a permit from CH.



The SWM pond is proposed to be outside of the 15 m buffer to the restored wetland but within 30 m of the restored wetland. As noted earlier, the restored wetland and NHS limit were designed through the CEMS and were compliant with CH's regulation and policy at that time. As a result, of the revisions to CH's regulation, the construction of the SWM pond is now within CH's regulated area (between 15 m - 30 m of a wetland) and will require a permit from CH.

6.2 Monitoring and Adaptive Management

The preliminary monitoring plan proposed in this Scoped EIA follows from the approved CEMS monitoring plan. As noted in the CEMS, this section describes additional monitoring measures to ensure that the specified mitigation measures have been implemented and are performing as anticipated. It is proposed that a monitoring and adaptive management plan be finalized during detailed design.

This section has been divided into Erosion and Sediment Control monitoring and Ecological Restoration monitoring. Following the CEMS, one additional section has been added for Buffer performance monitoring.

At the request of the Town, this monitoring plan has been reconsidered in the context of the Derry Green Corporate Business Park Subwatershed Impact Study Monitoring Terms of Reference (AMEC 2015). Note that the Derry Green Subwatershed Study (SWS) area, that was the basis of the Monitoring Terms of Reference, was large and complex, covering approximately 800 ha in area, whereas the proposed development covers less than 3% of that area (20.3 ha). The Derry Green SWS also pre-dates the Town's CLI-ECA, and the latter contains its own monitoring requirements. As such, some aspects of the Derry Green monitoring program are not applicable to the subject property and/or may duplicate the requirements under the CLI-ECA. **Table 3** gives a summary of the components in the Derry Green monitoring program, adapted from Table 5.1 (AMEC 2015), and their applicability to this Scoped EIA. If applicable, the requirement has been carried forward to the proposed Monitoring and Adaptive Management Plan (**Table 4**).

It should be noted that SWM monitoring required by the CLI-ECA is discussed in the FSR (Urbantech 2025) and that such a monitoring plan will be prepared as part of detailed design.

Derry Green Monitoring Component in 2015	Applicability to 150 Steeles Ave E Scoped EIA
SWM facility inlet and outlet inspection	Limited — SWM facilities in 2025 are designed to rigorous provincial standards, administered by the MECP and Town under a CLI-ECA. Under the CLI-ECA, the Town is required to develop and implement a monitoring plan on or before January 21, 2025, or following publication of MECP monitoring guidance. No such plan or guidance is published as of the writing of this Scoped EIA; therefore, no monitoring requirements are present. The monitoring plan will be prepared as part of future design phase. In anticipation of the above, localized erosion monitoring is proposed at the SWM outlet in Section 6.2.1 .

Table 3. Comparison to Derry Green Monitoring Plan



Scoped EIA: 150 Steeles Ave. E., 248, 250 & 314 Martin St., Milton

Derry Green Monitoring Component in 2015	Applicability to 150 Steeles Ave E Scoped EIA
Water temperature at SWM outlet	None — The SWM facility is designed for typical Town and MECP requirements, which included consideration of thermal mitigation features. Based on the receiving features, thermal mitigation is not a requirement.
Groundwater recharge	Limited/if required — Remediation of contaminated groundwater has proceeded as documented in the RSC; therefore, the impact to groundwater quality is positive in the long-term. No groundwater monitoring is required following the remediation.
and quality	Infiltration testing of LIDs may be implemented, subject to the CLIECA.
	Groundwater level monitoring may be accommodated with existing well(s) in the NHS, if required by the Town; however, such monitoring may not be actionable in an adaptive management context.
Fluvial geomorphology	None — Fluvial geomorphology is the study of river systems. No rivers were impacted during the remediation and no rivers are proposed to be disturbed as part of the proposed development. The proposed storm outlet will be located approximately 180 m from the closest river (Sixteen Mile Creek). Given the extensive upstream drainage area, it is unlikely that erosion monitoring within Sixteen Mile Creek could identify any issues as a result of works on the subject property. The SWM pond is designed to provide SWM quantity controls to mitigate downstream erosion. As such fluvial monitoring is not recommended as part of the future monitoring program.
Fish habitat mapping and fish community sampling	None — Fish habitat on and adjacent to the subject property is associated with Sixteen Mile Creek. Such monitoring may be a requirement under the <i>Fisheries Act</i> , subject to consultation with DFO. The proposed storm outlet will be located approximately 180 m from Sixteen Mile Creek. Fish community sampling was not completed as part of the CEMS, and it is not recommended as part of the future monitoring program.
Chemical analysis of sediment and water in SWM facility	To be determined — The SWM facility is designed to mitigate certain water quality parameters as described in the FSR. Monitoring at the SWM facility inlet and outlet for water quality parameters is anticipated to be determined through the CLI-ECA process and will be part of the future SWM monitoring program.
Natural Heritage System: Boundary integrity (i.e., buffer performance and human impacts)	Yes — See Section 6.2.3 for description.
Natural Heritage System: ELC	None —Vegetation communities typically change slowly over time; therefore, ELC monitoring would likely not detect a change in vegetation within the NHS over the monitoring timeframe
Natural Heritage System: Woody canopy health	None — In recent years, widespread canopy decline has been caused by the proliferation of invasive pests or disease, such as Emerald Ash Borer (<i>Agrilus planipennis</i>) and Dutch Elm Disease (<i>Ophiostoma spp</i>). Any change in canopy in the near future is anticipated to be attributable to introduction of invasive species by humans on a continental-scale, rather than any impact of localized development. Any effect of development would be likely not be detectable on a site level.



Derry Green Monitoring Component in 2015	Applicability to 150 Steeles Ave E Scoped EIA
	The CEMS identified the requirement to monitor conformance with the landscaping plans and CH planting densities for plantings within the slope vegetation area (plantings to be completed as a draft plan condition), remediated woodland area and re-created wetland (monitoring to begin in 2025), within the buffer (plantings to be completed as a draft plan condition) and within the additional Enhancement Areas (monitoring to begin in 2025). The CEMS also noted that the monitoring of these areas is to confirm that the conditions of the planting warranty are met by the end of the two-year warranty period.
Natural Heritage System: Floristic Quality Assessment	None — The pre-remediation NHS studied in the CEMS was low in plant species diversity, with a high proportion of exotic species or those that are tolerant of disturbance. Following the restoration plantings and seeding, this diversity is anticipated to improve. The CEMS did not identify the need to monitor for floristic quality assessment and it is not proposed as part of this report.
Natural Heritage System: Invasive plant mapping	Yes — This was agreed to in the CEMS and invasive species management has already taken place. See Table 4 below for details related to the monitoring program.
Natural Heritage System: Wetland hydrology	Yes — This was agreed to in the CEMS and will begin in 2025. See Table 4 below for details related to the monitoring program.
Natural Heritage System: Wildlife surveys for target species	Yes — Incidental wildlife observations around the re-created wetland were agreed to in Table 17 of the CEMS. Given that the hydroperiod for the ponds has exceeded expectations, amphibian surveys are recommended to be completed, as detailed in Table 4 , for information purposes.

6.2.1 Erosion and Sedimentation Control and Monitoring

Erosion and Sediment Control (ESC) is a first line of water quality protection and is implemented prior to construction. ESC measures are described in the FSR (Urbantech 2025) and detailed plans will be developed in a future design phase. The ESC plan will outline the various measures that will be implemented to address erosion and sedimentation during construction.

The following list provides a summary of key components of the ESC monitoring strategy:

- Inspections conducted by a competent person (e.g., CAN-CISEC);
- Inspections frequency on weekly basis, at a minimum:
 - Prior to predicted rain events;
 - After rain events;
 - After significant snow melt; and
 - Daily during extended rain or snow melt;
- Damaged ESC measures to be repaired within 48 hours of inspection;
- ESC Strategies that will be illustrated on drawings are not intended to be static and should be adaptively managed as needed to prevent sediment release; and
- Sediment accumulation by ESC measures to be inspected and cleaned, if required, to maintain function.



As noted in the FSR (Urbantech 2025), erosion and sediment controls will be implemented during all site construction works including topsoil stripping, bulk earthworks, foundation excavation, site servicing and stockpiling of materials and will conform to ESC guidelines. These measures will include:

- 1. Installing heavy duty silt control fencing along the perimeter of the site at strategic locations;
- 2. Installing a temporary mud mat at the construction site entrance;
- 3. Wrapping the tops of all inlet structures with filter fabric and using inlet silt sacks; and
- 4. Inspecting all sediment and erosion control controls to maintain them in good repair until such time as the Engineer or the Town approves their removal.

If required, site-specific measures will be determined during the detailed design/site alteration application stage, to comply with the CLI-ECA that is held and administrated by the Town on behalf of MECP.

ESC specifications and notes will be in conformance with CSA standards and the *Sustainable Technologies Evaluation Program: Erosion and Sediment Control Guide for Urban Construction* (TRCA 2019).

Construction and post-development localized erosion monitoring is proposed at the SWM outlet to identify any channelization or concentration of flows in the wetland, as described in **Table 4**.

6.2.2 Restoration Monitoring

Restoration monitoring will be conducted for five-years following restoration of the woodland or wetland, whichever is later, to ensure that long-term impacts to the RNHS are as anticipated. A network of monumented photo stations will be established to document the evolution of the RNHS during the monitoring period.

The timeline for restoration works to date is as follows:

- 1. In late 2023, wetland cells were constructed, nearby invasive species removed (European Buckthorn) from the enhancement area, wetland buffer graded, and planted, as per **Appendix C1**.
- 2. By June 21, 2024, the wetland, enhancement area, and wetland buffer plantings were completed. The two-year planting warranty for these areas will continue through June 21, 2026.
- 3. By November 8, 2024, the significant woodland was restored to pre-landfill grades and planted, while the remainder of the invasive species areas were treated and planted, as per **Appendix C2**. The two-year planting warranty for these areas will continue through November 8, 2026.

Regular inspections in the above restoration areas have been ongoing by a Beacon landscape architect between 2023 and 2024 to ensure conformance with the landscaping plans. As the woodland was completed out of season in late 2024, the first year of restoration monitoring will be 2025.

Regarding the hydrology of the re-created wetland, the modelling carried out in the CEMS suggested the water level in the depressions would have seasonal drawdown and an ephemeral hydroperiod.



Following construction, based on site inspections during the restoration works, the hydroperiod for the wetland depressions extends throughout the growing season in wet years.

The restoration area and wetland buffer, as of October 2024, is in accordance with drawings in **Appendix C1**, as demonstrated by drone photography in **Appendix E**.

The remaining restoration following from the CEMS is: (1) vegetating the eroded slope; and (2) the planting of the woodland buffer. Buffer planting warranty and performance monitoring is discussed below in **Section 6.3.3**.

6.2.3 Buffer Performance Monitoring

Similar to restoration monitoring above, buffer performance monitoring will be conducted for five-years following complete planting of the buffer to ensure that long-term impacts to the RNHS are as anticipated and the principles of buffer design, outlined in Section 3.6 and the CEMS, are continued to be met.

As noted above, the portion of the buffer that surrounds the re-created wetland was completed with the wetland creation and is already in the two-year warranty period. The remainder of the buffer (i.e., woodland buffer) will be subject to a separate two-year warranty period, which will begin upon completion.

Monitoring activities and requirements are outlined in Table 4.



Table 4. Preliminary Monitoring and Adaptive Management Plan

Category	Monitoring Target(s)	Adaptive Management Action(s)	Methods	Monitoring Frequency	Reporting Requirements	Responsibilities for Monitoring
Landscaped Areas: 1) Slope Vegetation Area 2) Remediated Woodland Area 3) Re-created Wetland Area 4) Buffer Area 5) Additional Enhancement Area(s)	In conformance with landscaping plans and CH planting densities Conditions of planting warranty for the given area are met by end of two-year period	Any planting deficiencies to be corrected by landscaping contractor	Inventory and assess landscaped areas	At time of installation Prior to expiration of two-year warranty period	In first annual report following the start of warranty for the given area, include confirmation of planting conformance with landscaping plans In annual report following the end of any warranty period, include confirmation that planting warranty conditions are met	Beacon
Hydrology of Re-Created Wetland	Appropriate hydroperiod for the establishment of wetland vegetation	If necessary, modify pit and mounds to achieve desired hydrology	Continuous monitoring of water depth in large pit via pressure transducer, beginning in spring of 2025 Confirm and map the extent of hydrophytic and water tolerant vegetation using the OWES wetland plant list	Annually, beginning in 2025 for a period of five years. As required for continuous monitoring Annually for wetland plant establishment	In each annual report, include: - results of continuous water level monitoring in the large pit; and - mapping of extent of wetland vegetation. If terrestrial crayfish are observed during annual surveys, these observations will be included in the monitoring report	Beacon
Amphibian Breeding Function of Re-Created Wetland	None — for information purposes only	None — for information purposes only. Based on Beacon's inspections, the hydroperiod is anticipated to facilitate amphibian breeding.	Three nocturnal surveys to document calling anurans (frogs and toads) in spring and early summer, as per the Marsh Monitoring Protocol (Bird Studies Canada 2019).	Annually, beginning in 2025, for a period of five years.	In each annual report, include results of amphibian monitoring.	Beacon
Reptile Habitat	None — for information purposes only	None — for information purposes only	The artificial snake hibernaculum and adjacent area will be surveyed as per the <i>Survey Protocol for</i> <i>Ontario's Species at Risk Snakes</i> (OMNRF 2016). If any wetland pit is continuously inundated following the fourth year of monitoring, it will be surveyed for basking turtles as per the <i>Survey</i> <i>Protocol for Blanding's Turtle in</i> <i>Ontario</i> (OMNRF 2015).	Once, in 2029. Turtle survey will only be conducted if suitable habitat appears to exist.	In the fifth annual report, include results of reptile monitoring.	Beacon
Dragonfly, Damselfly, and Butterfly Habitat	None — for information purposes only	None — for information purposes only	The wetland area will be surveyed as per the CEMS.	Once, in 2029.	In the fifth annual report, include results of insect monitoring.	Beacon
Anthropogenic Refuse/Waste in Woodland	In conformance with landscaping plans	Direct contractor to rectify deficiencies	Inventory of previously mapped refuse/waste	Once within the season that waste was removed	In first annual report, include confirmatior of conformance with landscaping plans	Beacon
Invasive Species Treatment in Tableland Woodland	In conformance with landscaping plans Post treatment or removal to have 10% or less of previous cover	Direct contractor to rectify deficiencies	Mapping/ inventory of areas identified for invasive species management	If herbicide application is specified, compliance monitoring shall occur at the time of herbicide application If removal is specified, compliance monitoring may occur within the same season All treatments/ removals shall be subject to annual	In first annual report, include confirmatior of conformance with landscaping plans In each annual report following the first year, include mapping of invasive species extent	Beacon



Scoped EIA: 150 Steeles Ave. E., 248, 250 & 314 Martin St., Milton

Category	Monitoring Target(s)	Adaptive Management Action(s)	Methods	Monitoring Frequency	Reporting Requirements	Responsibilities for Monitoring
				performance monitoring for five years beginning in 2025		
Supplemental Wildlife Habitat Structures	In conformance with landscaping plans In functional state in subsequent years	Direct contractor to rectify deficiencies	Visual inspection	At time of installation Annually, beginning in 2025, for a period of five years	Include status of habitat structures in all annual reports	Beacon
Outlet (subject to monitoring plan to be developed under CLI-ECA in detailed design phase)	Erosion comparison to pre- development	Wetland shrub plantings to dissipate concentrated flows	Visual inspection — monumented photos	Annually, beginning in 2025, for a period of five years, coinciden with buffer performance monitoring	In all annual reports, include statement on condition of wetland near outlet and monumented photo	Beacon
Water quality effect of SWM pond	To be determined (TBD) by CLI-ECA requirements.	TBD by CLI-ECA requirements.	TBD by CLI-ECA requirements.	TBD by CLI-ECA requirements.	TBD by CLI-ECA requirements.	TBD following finalization of CLI- ECA requirements.
Buffer Performance	Mitigating human disturbance in the Key Features of the NHS	Repair fencing; removal of dumped waste; closure of informal trails; resident education through signage if needed.	Visual inspection along the length of the buffer. If disturbance extends into the Key Feature, inspection will extend into the feature.	Annually, beginning in the growing season following the landscaping of the buffer, beginning in 2025 for a period c five years.	In all annual reports, include details of disturbance so the landowner may implement adaptive management. If In all annual reports, include an assessment whether the buffer is effective in protecting the Key Feature.	Beacon



6.3 Annual Reporting

The first monitoring report will be submitted to the Town and CH by March 1, 2026. Subsequent monitoring reports will be submitted annually for five years by March 1 of the year following monitoring. The final monitoring report will be submitted by March 1, 2030. Should these dates conflict with CLI-ECA requirements, the latter will take precedence.

7. Policy Conformity

Table 5 below provides a summary of how the proposed development complies with applicable provincial, municipal, and conservation authority policies and regulations.

A	pplicable Policy / Legislation	Policy/Legislative Intent	Scoped EIA Findings & Recommendations		
Pro	Provincial Planning Statement (2024) under the <i>Planning Act</i> (1990)				
1.	Habitat of Endangered Species and Threatened Species	The PPS does not permit development or site alteration in habitat of threatened or endangered species except in accordance with provincial and federal requirements.	Habitat of endangered bat species exists within the woodland communities on the subject property. No impacts to woodlands and associated habitat for endangered or threatened species are proposed or anticipated.		
2.	Significant Wetlands	The PPS does not permit development or site alteration in Significant Wetlands, except for conservation, wildlife management and stewardship purposes. The PPS also does not permit development or site alteration on lands adjacent to Significant Wetlands unless it can be demonstrated there will be no negative impact upon the feature	Provincially Significant Wetlands are not present in the study area.		
3.	Significant Woodlands	The PPS does not permit development or site alteration in Significant Woodland or its adjacent lands unless it can be demonstrated through an EIA that there will be no negative impact upon the feature and its functions.	As noted above, no negative impacts to woodlands are proposed or anticipated. This feature will be protected in the long-term by a 15 m naturalized buffer.		
4.	Significant Valleylands	The PPS does not permit development or site alteration in Significant Valleyland or its adjacent lands unless it can be demonstrated through an EIA that there will be no	Significant Valleyland is identified along Sixteen Mile Creek on the subject property. This Scoped EIA recommends that the valley be protected in the long-term with a 15 m naturalized setback from the LTSTOS; however, in many cases the setback is much greater than 15 m given the presence of the		

Table 5. Policy Conformity



A	pplicable Policy / Legislation	Policy/Legislative Intent	Scoped EIA Findings & Recommendations	
	<u> </u>	negative impacts upon the feature and its functions.	Significant Woodland, re-created wetland, and associated buffers.	
			Where the short section of unstable slope is present, it is recommended this area be cleaned of anthropogenic debris and revegetated. A permit from CH will be required to complete this work pursuant to O. Reg. 41/24.	
			A storm outlet is proposed to be installed at the toe of slope by direct drilling, and the Scoped EIA recommends this area be monitored for downstream erosion. A permit from CH will be required for the stormwater outfall pursuant to O. Reg. 41/24.	
5.	Significant Wildlife Habitat	The PPS does not permit development or site alteration in Significant Wildlife Habitat or its adjacent lands unless it can be demonstrated through an EIA that there will be no negative impacts upon the feature and its functions.	Mitigation for SWH was implemented following the CEMS. This feature is proposed to be both monitored in the short- term and protected, by a 15 m naturalized buffer in the long- term.	
6.	Significant Areas of Natural and Scientific Interest (ANSI)	The PPS does not permit development or site alteration in Significant ANSIs or the adjacent lands unless it can be demonstrated through an EIA that there will be no negative impacts upon the feature and its functions.	There are no ANSIs on or in the vicinity of the subject property.	
7.	Natural and Human-Made Hazards	Development shall be directed away from areas of natural or human- made hazards where there is an unacceptable risk to public health or safety or of property damage and not create new or aggravate existing hazards.	Natural hazards (flooding and erosion) are identified on the subject property and development is directed away from these areas with appropriate setbacks (i.e., 15 m from LTSTOS). Human-made hazards have been mitigated by remediation following the CEMS, as documented in RSC.	
Official Plans made under the <i>Planning Act</i> (1990)				
Halton Region Official Plan		Halton Region identifies an NHS as being comprised of significant natural heritage features, watercourses, enhancement areas, linkages, and buffers. Generally, development is not permitted within the NHS, unless in accordance with Federal and Provincial legislation and it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.	The Scoped EIA demonstrates that the proposed development will have no negative impact on components of the NHS, provided that the recommended mitigation measures in Section 5.2 are implemented. The Scoped EIA has demonstrated that the stormwater outfall to the significant valleyland (Key Feature) is essential and therefore in conformity with the ROP.	



Scoped EIA: 150 Steeles Ave. E., 248, 250 & 314 Martin St., Milton

Applicable Policy / Legislation	Policy/Legislative Intent	Scoped EIA Findings & Recommendations
Town of Milton Official Plan	The Town of Milton identifies a Greenlands System, with corresponding policies for the protection, maintenance and enhancement of significant natural features and areas.	The Scoped EIA demonstrates that the proposed development will have no negative impact on the NHS or Greenlands System, provided that mitigation measures in Section 5.2 are implemented. The NHS will be dedicated to the Town through the DPoS process to ensure the long-term protection of the system.
Federal Legislation		
Fisheries Act (1985)	Fish and fish habitat are protected under the <i>Fisheries Act</i> (1985). Proponents are responsible for planning and implementing works, undertakings or activities in a manner that avoids harmful impacts, specifically the death of fish and the harmful alteration, disruption, or destruction of fish habitat. The PPS also does not permit development or site alteration in Fish Habitat or its adjacent lands unless it can be demonstrated through an EIA that there will be no negative impacts upon the feature and its functions	The subject property contains a watercourse (Sixteen Mile Creek) that provides Fish Habitat. The watercourse will be maintained and protected in the long term within the NHS. Greater than 30 m buffers are provided to the watercourse. Regarding the proposed SWM outlet, detailed design will seek to avoid in-water works, otherwise consultation with DFO will occur to avoid contravention of the <i>Fisheries Act</i> .
<i>Migratory Birds Convention Act</i> (1994)	The federal <i>Migratory Birds</i> <i>Convention Act</i> (1994) and the Migratory Bird Regulations regulate migratory bird species in Canada. The regulation prohibits the destruction, damage, or disturbance of nesting migratory birds and applies to nests that contain a live bird or viable egg, and the nest of Schedule 1 species whenever and wherever they occur.	Section 5.2 recommends that clearing of vegetation be avoided during the breeding bird season, which coincides with the endangered bat roosting season. No nests of Schedule 1 species were identified on the subject property.
Other Relevant Provin	cial Legislation and Regulations	
Endangered Species Act (2007)	The Endangered Species Act (2007) protects species listed as endangered and threatened by the province. Section 9 of the Act prohibits the killing, harming, harassing, possession, collection, buying and selling of extirpated, of members of endangered or threatened species. Section 10 prohibits the damage or destruction of habitat of species listed as extirpated, endangered, or threatened.	Habitat for endangered bat species exists within the woodland communities on the subject property. No tree removal is proposed within the woodlands; therefore, no impacts on threatened or endangered species or their habitats are anticipated. Should tree removal be deemed necessary through detailed design, consultation with MECP will occur to ensure compliance with the <i>Endangered Species Act</i> .



Applicable Policy / Legislation	Policy/Legislative Intent	Scoped EIA Findings & Recommendations
Greenbelt Plan (2017) under the <i>Greenbelt Act</i> (2005)	The Greenbelt Plan, together with the Oak Ridges Moraine Conservation Plan and the Niagara Escarpment Plan, identifies where urbanization should not occur in order to provide permanent protection to the agricultural land base and the ecological and hydrological features, areas and functions occurring on the landscape. The Sixteen Mile Creek valleylands are identified as Urban River Valley	A portion of the Sixteen Mile Creek valleylands, immediately west of the subject property, is owned by the Town of Milton. As a result, the Greenbelt Plan Urban River Valley policies are applicable to those off-site lands. Once the valleyland on the subject property is dedicated to the Town through the DPoS process, the Urban River Valley policies will apply to that portion of the valley as well. The dedication of these lands into public ownership will assist with implementing Greenbelt Plan policy 3.2.6.1(b) which recommends that public agencies promote and undertake appropriate planning and design to ensure that external connections and Urban River Valley areas are maintained and/or enhanced.
	in the Greenbelt Plan. Such a designation is only applicable to publicly-owned lands.	implementation of several aspects of Policy 3.2.6.2 related to enhanced vegetative buffers and habitat restoration.
		Hazards on the subject property (flooding and erosion) have been confirmed with CH through the CEMS. Permit(s) have been obtained for some of the works to date (soil remediation within 120 m of a wetland and wetland removal and replacement). Additional permits will be obtained from CH to address the eroded slope and the stormwater outfall, as described in Section 6.1 .
Prohibited Activities, Exemptions, and Permits (O. Reg. 41/24) under the <i>Conservation</i> <i>Authorities Act</i> (1990)	CH regulates hazard lands including stable slope, floodplains, and wetlands and ensures implementation of the Natural Hazard sections of the PPS.	When the CEMS was approved, and the NHS limits established, CH's regulation (O. Reg. 162/06) and associated policy document only required a 15 m buffer to non-PSWs and wetlands less than 2 ha in size. As a result, the re-created wetland was provided with a 15 m buffer. This limit was incorporated into the NHS zone as part of the previous planning application. Subsequent to the approval of the CEMS, CH's regulates all land within 30 m of a wetland, regardless of its size. As a result, a portion of the proposed development (i.e., those lands between 15 m to 30 m of the re-created wetland) will be regulated by CH. This includes the SWM Pond as shown on Figure 5 . A permit from CH will be required for the construction of the SWM Pond.

8. Conclusion

This Scoped EIA has been prepared in accordance with the approved CEMS (Beacon et al. 2023) and the approved Scoped EIA Table of Contents.



The primary purpose of this Scoped EIA is to demonstrate that the proposed development will not negatively impact the natural features and areas of the NHS that was previously identified through the approved CEMS.

The Scoped EIA has evaluated the existing biophysical resources, described the ecological mitigation and restoration, along with the natural hazards to identify all Key Features and other components of the RNHS in accordance with Regional, Town and CH policies.

The impact assessment describes in detail the proposed development, the ecological restoration that has taken place, along with the proposed eroded slope vegetation plan and related mitigative and restoration measures and their short and long-term impacts on various components of the RNHS. The impact assessment of the CEMS found that the proposed remediation would have a positive impact on the RNHS and its functions. Restoration following the CEMS is demonstrated in **Appendices D** and **E** of this Scoped EIA. This Scoped EIA demonstrates that the proposed development will not have a negative impact on the RNHS and its functions. Conceptual Restoration Plans related to the remaining buffer and the eroded slope are also appended to this Scoped EIA, which identify how the buffer will be implemented and how the slope will be restored. Except for the stormwater outfall, no development or site alteration is proposed within the NHS. Construction of the stormwater outfall is proposed through horizontal boring with all access to the valley provided through the outfall pipe. Future maintenance of the headwall, if needed, can also be through the outfall pipe. As a result, impacts to the valley and wetland will be minimized both during and post-construction.

Prepared by: Beacon Environmental Ltd.

= hay

James Seery, B.Sc., Ecologist, ISA Certified Arborist (ON-2350A)

Reviewed by: Beacon Environmental Ltd.

Daraltestertrop

Dan Westerhof, B.Sc, M.E.S, Senior Terrestrial Ecologist, ISA Certified Arborist (ON-1536A)

This report has been developed with significant input and contributions from Jennifer Lawrence, MCIP, RPP, of Jennifer Lawrence and Associates Inc.



9. References

AMEC Environmental & Infrastructure (AMEC). 2015.

Terms of Reference: Sixteen Mile Creek Areas 2 & 7 Subwatershed Impact Study Requirements: Derry Green Corporate Business Park. November 2015.

Beacon Environmental Ltd., DS Consultants Ltd., Jennifer Lawrence and Associates Inc., and Urbantech Consulting (Beacon et al.). 2023.

Comprehensive Environmental Management Study (2nd Submission): 150 Steeles Avenue East, Milton. August 2023.

Chapman, L.J., and Putnam, D.F. 1984.

Physiography of Southern Ontario, 3rd ed. Ontario Geological Survey.

Conservation Halton (CH). 2024.

Policies and Guidelines for the Administration of Part VI of the *Conservation Authorities Act* and Ontario Regulation 41/24 and Land Use Planning Policy Document. June 21, 2024.

DS Consultants. 2023.

Slope Stability Assessment: 150 Steeles Avenue East, Milton, Ontario. January 17, 2023.

DS Consultants. 2025.

Preliminary Hydrogeological Investigation: Proposed Residential Buildings, 150 Steeles Avenue East, Milton, ON. March 28, 2025.

Gann, G.D. et al. 2019.

International principles and standards for the practice of ecological restoration. Second edition. Restoration Ecology, 27: S1-S46. https://doi.org/10.1111/rec.13035

Gillespie, J. E., R. E. Wicklund, and M. H. Miller. 1971.

The Soils of Halton County. Ottawa: Canada Dept. of Agriculture.

Halton-Hamilton Source Protection. 2022.

Source Protection Plans for the Halton Region Source Protection Area and the Hamilton Region Source Protection Area. Version 4.1. November 4, 2022.

Ministry of Environment Conservation and Parks (MECP). Undated. Bat Survey Standards Note 2021

Ministry of Natural Resources (MNR). 2010.

Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. Second Edition. March 18, 2010.

Ministry of Natural Resources and Forestry (MNRF). 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E.



Ministry of Natural Resources and Forestry (MNRF). 2017.

Survey Protocol for Species at Risk Bats within Treed Habitats Little Brown Myotis, Northern Myotis & Tri-Colored Bat.

Philips Planning and Engineering Limited. 2000.

Sixteen Mile Creek Subwatershed Planning Study, Areas 2 and 7, Town of Milton. January 2000.

Region of Halton. 2017.

Framework for Regional Natural Heritage System Buffer Width Refinements for Area-Specific Planning. February 2017.

Urbantech Consulting (Urbantech). 2025.

Functional Servicing and Stormwater Management Report: 150 Steeles Avenue East, Town of Milton. March 2025.




Appendix A

Approved Table of Contents

Table of Contents - Final Scoped Environmental Impact Assessment 150 Steeles Avenue Milton October 2024

1.	Introc	luctio	n	
	1.1	Site Lo	ocation a	nd Study Area
	1.2	Site H	istory	· · · · · · · · · · · · · · · · · · ·
	1.3	Study	Team	
	1.0	Enviro	nmontal	Regulatory Framework (Summany from August 2023 CEMS
	1.4	with ur	ndates wh	pere/if necessary)
			Enderal I	Eichorios Act
		1.4.1	Migrator	Birds Convention Act
		1.4.2	Spacias	at Dick Act
		1.4.3	Species Eich and	Wildlife Conconvotion Act
		1.4.4	Endonac	red Species Act
		1.4.5	Brovincia	aled Species Addition
		1.4.0	Croopho	
		1.4.7	Decion	f Letter Official Dian
		1.4.0	Taura	Milton Official Plan
		1.4.9	Concern	Millon Official Plan
	4 5	1.4.10 Dener		alion Authonities Act – Ontario Regulation 41/24
	1.5	керог	t Outline.	
2.	Conte	ext & E	Existin	g Conditions
	2.1	Physic	al Enviro	nment (Summary from August 2023 CEMS – with updates only
		to add	ress resto	pration works associated with groundwater contamination
		subse	quent to t	he approval of the CEMS; no new fieldwork)
		2.1.1	Backgrou	und
		2.1.2	Bedrock	Geology
		2.1.3	Surficial	Geology and Soils
		2.1.4	Drainage	and Topography
		2.1.5	Hydrolog	у
		2.1.6	Hydroge	plogy
		2.1.7	Local Gr	oundwater Use
		2.1.8	Groundw	ater Conditions
		2.1.9	Hydrauli	c Conductivity
	2.2	Natura	al Environ	ment (Summary from August 2023 CEMS with updates only to
		addres	ss restora	tion works that have occurred subsequent to the approval of
		the CE	:MS; no r	iew fieldwork)
		2.2.1	Backgro	und
		2.2.2	Feature	Staking
		2.2.3	Ecologic	al Surveys
			2.2.3.1	Ecological Surveys & Assessments
			2.2.3.2	I ree Inventory
			2.2.3.3 2 2 2 1	Aniphinan Surveys
			2.2.3.4 2225	Rentile Surveys
			222.3.5	Bat Surveys – Snag Trees and Acoustic Monitoring
			2.2.3.7	Raptor Habitat Survey
			2.2.3.8	Terrestrial Crayfish Survey
			2.2.3.9	Dragonfly, Damselfly and Butterfly Surveys

Table of Contents - Final Scoped Environmental Impact Assessment 150 Steeles Avenue Milton October 2024

	2.2.4	Natural H	Hazards
		2.2.4.1	Regional Storm Flood Plain
		2.2.4.2	Long Term Stable Top of Slope
	2.2.5	Human-I	Made Hazards
	2.2.6	Surface	and Ground Water Features
		2.2.6.1	Surface Water Features
		2.2.6.2	Ground Water Features
	2.2.7	Man-Ma	de Features
	2.2.8	Natural I	Heritage System (Summary from CEMS)
		2.2.8.1	Key Features
		2.2.8.2	Enhancements to Key Features
		2.2.8.3	Linkages
		2.2.8.4	Regulated or Linkage Watercourses
		2.2.8.5	Non-Significant Wetlands
		2.2.8.0	DUITERS & SETDACKS
		2.2.0.1	
3.	Evaluation	of Sig	nificant Natural Features (Summary from August
	2023 CEMS up	dated if r	necessary to address restored features)
4.	Proposed [Develop	oment
5.	Impact Ass	essme	nt and Mitigation
-	5.1 li	mpacts to	the Key Features and Components of the RNHS
	5.2 N	<i>litigation</i>	Measures
	4.3 A	daptive E	Environmental Management and Monitoring
6.	Environme	ntal Ma	inagement
-	6.1 Next S	Stens	
	6.1.1	CH Pern	nit SWM Outfall
7.	Conclusion		
0			

8. References



October 28, 2024

Jessica Tijanic, M.Sc. MCIP RPP Senior Planner, Development Review 150 Mary Street., Milton ON, L9T 6Z5 905-878-7252 ext. 2221 Sent via email: Jessica.Tijanic@milton.ca

RE: Peer Review of Draft Table of Contents for Agency Review, Scoped Environmental Impact Assessment, 150 Steeles Ave, Milton, July 2024

Dear Jessica:

The Town of Milton has requested North-South Environmental Inc. (NSE) to complete a peer review of the Draft Table of Contents for Agency Review, Scoped Environmental Impact Assessment, 150 Steeles Ave, Milton, prepared by Beacon Environmental, dated July 2024. NSE has previously provided comments on the Comprehensive Environmental Management Study prepared for 150 Steeles Ave (the 'subject property'). The review of the Draft Table of Contents has taken into consideration previous agency comments, including those provided by Halton Region, to which NSE was providing peer review services with regards to natural heritage planning matters.

To inform my review of the Draft Table of Contents for a scoped Environmental Impact Assessment (EIA) I have taken into consideration the Comprehensive Environmental Management Study (2nd Submission), 150 Steeles Avenue East, Milton. Prepared by Beacon Environmental Limited et. al., August 2023.

The Draft Table of Contents identifies the main sections that would be anticipated to be contained within the EIA. Given the specific content expected to be contained within each section heading is not described, the following comments are provided to ensure sufficient information is provided in the EIA:

- 1. Please ensure that the scoped EIA is completed in accordance with the Halton Region Environmental Impact Assessment Guidelines, 2020.
- 2. In the "Introduction" section, please include a sub-section that provides an overview of the previous studies (e.g., Comprehensive Environmental Management Study) along with a summary of previous agency correspondence, comments and direction regarding next steps.
- 3. Please ensure the "Adaptive Environmental Management and Monitoring" section is consistent with and refers to the Detailed Monitoring Plan that is anticipated to be prepared as part of the complete submission.

North-South Environmental Inc. • 101B King Street West • Cambridge, Ontario •



Please contact the undersigned if you have any questions or require clarification on the comments.

Sincerely,

1th

Sal Spitale Principal, Senior Ecologist North-South Environmental Inc.



Appendix B

Historic Aerial Photography



C:\ODB\OneDrive - Beacon Environmental\GeoSpatial\Geo Projects\2021\221265 150 Steeles Avenue Milton EIS\Q Project Files\2022-11-09 150 Steeles Avenue Milton EIS 221265.ggz

Historic Condition 1984

Appendix A Figure 1

150 Steeles Avenue Milton Scoped EIA	

Legend

Subject Property

	EACON	Last	Project: 2212 Revised: Februa	65 ary 2025	
Client: 150 Steeles Milton Inc.			Prepared by: BD Checked by: SG		
Ň	1:3,500	0	70	140 m	
Contains information licensed under the Open Government License– Ontario Orthoimagery Baselayer: Northway/Photomap/Remote Sensing Ltd.					



C:\ODB\OneDrive - Beacon Environmental\GeoSpatial\Geo Projects\2021\221265 150 Steeles Avenue Milton EIS\Q Project Files\2022-11-09_150 Steeles Avenue Milton EIS_221265.ggz

Historic Condition 1987

Appendix A Figure 2

150 Steeles Avenue	e Milton Scoped EIA
Legend	
Subject Property	
Study Area	
ML.	
BEACON	Project: 221265
environmental Las	t Revised: February 2025
Client: 150 Steeles	Prepared by: BD Checked by: SG
Finton Inc.	

Contains information licensed under the Open Government License– Ontario Orthoimagery Baselayer: Northway/Photomap/Remote Sensing Ltd.

1:3,500

70

140 m



C:\ODB\OneDrive - Beacon Environmental\GeoSpatial\Geo Projects\2021\221265 150 Steeles Avenue Milton EIS\Q Project Files\2022-11-09 150 Steeles Avenue Milton EIS 221265.ggz

Historic Condition 1994



Legend

Subject Property

Project: 221265 ENVIRONMENTAL Last Revised: February 2025						
Clie	nt: 150 Stee Milton Inc.	eles	Prepared by: BD Checked by: SG			
Z	1:3,500	0	70	140 m		
Contains information licensed under the Open Government License– Ontario Orthoimagery Baselayer: Northway/Photomap/Remote Sensing Ltd.						



Appendix C





C1. CH Approved Wetland Restoration Drawings



ALL WORKS IN THESE DRAWINGS WERE COMPLETED IN 2023/2024

WOODLAND REMEDIATION PART OF SEPARATE APPLICATION

INVASIVE REMOVAL REMEDIATION AREAS (SHEET L-5)

BUFFER PLANTING AREA (SHEET L-3) WETLAND REMEDIATION PLANTING AREA (SHEET L-4)









				TREES					
KEY	QTY	SCIENTIFIC NAME	MON NAME	5	SIZE		STOCK TYPE	SPACING	
AS	7	Acer saccharum	Sugar Maple 2		25mm cal (200-250cm ht)		ht)	10 gal	4 m O.C. min.
BP	7	Betula papyrifera	Paper Birc	h	150-1	75cm ht		5-7 gal	4 m O.C. min.
OV	7	Ostrya virginiana	Ironwood		150-1	75cm ht		3-5 gal	4 m O.C. min.
PG	7	Populus grandidentata	Large-Too	thed Aspen	150-1	75cm ht		3-5 gal	4 m O.C. min.
PT	7	Populus tremuloides	Trembling	Aspen	25mm cal (2	200-250cm	ht)	3-5 gal	4 m O.C. min.
PS	7	Prunus serotina	Black Che	rry	150-1	75cm ht		3-5 gal	4 m O.C. min.
QM	7	Quercus macrocarpa	Bur Oak		150-1	75cm ht		5-7 gal	4 m O.C. min.
QR	8	Quercus rubra	Red Oak		25mm cal (2	200-250cm	ht)	10 gal	4 m O.C. min.
ТА	7	Tilia americana	Basswood		25mm cal (2	25mm cal (200-250cm ht)		10 gal	4 m O.C. min.
Total	64		1		1				
				SHRUBS					
KEY	QTY	SCIENTIFIC NA	ME	COMMON	INAME	SIZE		STOCK TYPE	SPACING
Са	35	Cornus alternifolia		Alternate-leave	d Dogwood	75-100cm	ht	3 gal	1 m O.C. min.
Cr	95	Cornus racemosa		Gray Dogwood	45-75cm ht		nt	1 gal	1 m O.C. min.
Pv	24	Prunus virginiana ssp. vii	rginiana	Chokecherry		75-100cm ht		3 gal	1 m O.C. min.
Ri	11	Rubus idaeus ssp. strigo	sus	Wild Red Rasp	berry	45-75cm ht		1-2 gal	1 m O.C. min.
Sp	12	Sambucus pubens		Red Elderberry	45-75cm ht		nt	1-2 gal	1 m O.C. min.
Va	24	Viburnum acerifolium		Maple-Leaved	Viburnum 45-75cm ht		nt	1-2 gal	1 m O.C. min.
VI	35	Viburnum lentago		Nannyberry		75-100cm	ht	3 gal	1 m O.C. min.
Total	235								
			GRAS	SES AND FO	DRBS				
QTY	S	CIENTIFIC NAME		COMMON NAME			S	TOCK TYPE	SPACING
400	Anemone v	rirginiana	Tall Anem	one			2 x 5 inch PLUG		6 per 1 m ²
600	Elymus hys	trix	Bottlebrus	h Grass			2 >	5 inch PLUG	6 per 1 m ²
	1		<u>-</u>						

	WOODLAND EDGE S	EED MIX				
SCIENTIFIC NAME	COMMON NAME	SEEDING RATE (kg PLS per/10 000 sq. m)	PROPORTION OF SEED MIX(%)			
ORBS			- ·			
Anemone virginiana	Tall Anemone	1.35	5.0			
Eurybia macrophylla	Large-leaved Aster	1.35	5.0			
Rudbeckia hirta	Black-eyed Susan	1.35	5.0			
Solidago flexicaulis	Zig-Zag Goldenrod	0.54	2.0			
Solidago juncea	Early Goldenrod	0.14	0.5			
Solidago nemoralis	Grey Goldenrod	0.14	0.5			
Solidago rugosa	Rough Goldenrod	0.14	0.5			
Symphiotrichum laterflorum	Calico Aster	0.54	2.0			
Symphiotrichum novae-angliae	New England Aster	0.68	2.50			
			_			
GRASSES						
Carex pensylvanica	Pennsylvania Sedge	2.70	10			
Elymus canadensis	Canada Wild Rye	7.30	27			
Elymus virginicus	Virginia Wild Rye	5.4	20			
Elymus hystrix	Bottlebrush Grass	5.4	20			
TOTAL NATIVE SPECI	ES	27	100			
	NURSE CROP SEE	D MIX				
SCIENTIFIC NAME	COMMON NAME	SEEDING RATE (kg PLS per/ 10 000 m ²)	PLS REQUIRED (kg PLS per/2359 m ²)			
	FORBS					
Agrostis stolonifera	Creeping Bent Grass	15	3.53			
Elymus canadensis	Canada Wild Rye	20	4.72			
Avena sativa	Oats	30	7.08			
		· · ·				
TOTAL NURSE CROP 65 15.34						
seeding in late fall, substitute the O	ats with winter hardy species. (Agrostis st	onlonifera, Elymus canaden	sis, Elymus virginicus)			

TOTAL PLANTABLE	WIDTH (m)	PLANT (MIN. QT
AREA (m ²)		TREES
1080	N/A	0
2977	N/A	5
782	5	5
800	5	3
777	5	0
	TOTAL PLANTABLE AREA (m ²) 1080 2977 782 800 777	TOTAL PLANTABLE AREA (m²)WIDTH (m)1080N/A2977N/A782580057775

DATE:

15 October 2023



			SHRUE	3S				
KEY	QTY	SCIENTIFIC NAME	COMMON NAME	WETLAND INDICATOR (OWES)	SIZE	E	STOCK TYPE	SPACING
Cr	50	Cornus racemosa	Gray Dogwood	N	N 45-75cm		1 gal	1 m O.C. min.
Cs	135	Cornus sericea	Red-Osier Dogwood	Y	45-75cr	m ht 1 gal		1 m O.C. min.
Se	27	Salix eriocephala	Heart-Leaved Willow	N	45-75cr	n ht	1 gal	1 m O.C. min.
Sa	30	Spiraea alba	Narrow-Leaved Meadowsweet	Y	45-75cr	n ht	1 gal	1 m O.C. min.
VI	22	Viburnum lentago	Nannyberry	N	100cm	ht	3 gal	1 m O.C. min.
			GRASSES AN	D FORBS	5			
QTY		SCIENTIFIC NAME	COMMON NAME	WETLAN INDICATOR (ND OWES)	S	СТОСК ТҮРЕ	SPACING
750	Hydrophy	(llum canadense	Canada Waterleaf	N		Plugs or 3.5" Pots		6 per 1 m ²
750	Lysimach	ia ciliata	Fringed Loosestrife	N			ugs or 3.5" Pots	6 per 1 m ²
750	Ranuncul	us hispidus var. caricetorum	Swamp Buttercup	Y	F		ugs or 3.5" Pots	6 per 1 m ²
800	Symphyotrichum lanceolatum ssp.		Panicled Aster	Y		Plugs or 3.5" Pots		6 per 1 m ²
750	Verbena i	urticifolia	White Vervain	N	N		ugs or 3.5" Pots	6 per 1 m ²
	•							
QTY		SCIENTIFIC NAME	COMMON NAME	WETLAND INDICATOR (OWES)		ç	STOCK TYPE	SPACING
750	Asclepias	s incarnata ssp. incarnata	Swamp Milkweed	Y		Plugs or 3.5" Pots		6 per 1 m ²
750	Eupatoriu	ım maculatum ssp. maculatum	Spotted Joe-Pye Weed	Y		Plugs or 3.5" Pots		6 per 1 m ²
750	Eupatoriu	ım perfoliatum	Boneset	Y		Plugs or 3.5" Pots		6 per 1 m ²
750	Verbena	hastata	Blue Vervain	Y		Plugs or 3.5" Pots		6 per 1 m ²
QTY	SCIENTIFIC NAME		COMMON NAME	WETLAND INDICATOR (OWES)		STOCK TYPE		SPACING
765	Alisma pl	antago-aquatica	Water-plantain	Y		Plugs or 3.5" Pots		6 per 1 m ²
796	Carex be	bbii	Bebb's Sedge	Y		Plu	igs or 3.5" Pots	6 per 1 m ²
765	Carex vu	pinoidea	Fox Sedge	Y		Plu	igs or 3.5" Pots	6 per 1 m ²
765	Iris versio	olor	Blue Flag Iris	Y		Plu	igs or 3.5" Pots	6 per 1 m ²
765	Juncus to	prreyi	Torrey's Rush	Ν		Plugs or 3.5" Pots		6 per 1 m ²

Wool-Grass

6 per 1 m 2

Plugs or 3.5" Pots

Y

765 Scirpus cyperinus

CONSERVAT	CONSERVATION HALTON (CH) MEADOW MARSH SEED MIX								
SCIENTIFIC NAME	COMMON NAME	SEEDING RATE (kg PLS per/10 000 m ²)	PROPORTION OF SEED MIX(%)						
Carex bebbi	Bebb's Sedge	0.25	1						
Carex granularis	Meadow/Open Field Sedge	2.5	10						
Carex stipata	Stalk Grain Sedge	0.5	2						
Carex vulpinoidea	Fox Sedge	6.25	25						
Eupatorium perfoliatum	Boneset	0.5	2						
Euthamia graminifolia	Grass-Leaved Goldenrod	0.25	1						
Eutrochium maculatum ssp. Maculatum	Spotted Joe-Pye Weed	0.5	2						
Glyceria grandis	Tall Manna Grass	0.5	2						
Juncus effusus	Soft Rush	1.25	5						
Lobelia siphilitica	Blue Lobelia	0.25	1						
Mimulus ringens	Monkey Flower	0.25	1						
Poa palustris	Fowl Bluegrass	6.25	25						
Scirpus atrovirens	Dark Green Bulrush	1.25	5						
Scirpus cyperinua	Woolgrass	0.5	2						
Symphyotrichum puniceum	Purple-Stemmed Aster	0.25	1						
Verbena hastata	Blue Vervain	3.75	15						
TOTAL NATIVE SPECIES		25	100						
	NURSE CROP SEED	MIX							
SCIENTIFIC NAME	COMMON NAME	SEEDING RATE (kg PLS per/ 10 000 m ²)	PLS REQUIRED (kg PLS per/2286 m ²)						
Agrostis stolonifera	Creeping Bent Grass	5	1.15						
Avena sativa	Annual Oats	15	3.43						
Elymus canadensis	Canada Wild Rye	15	3.43						
Festuca rubra	Red Fescue	5	1.15						
		10	F 70						

	TOTAL PI ANTABI F	WIDTH (m)	PLAN (MIN. (
	AREA (m ²)		TRE
Wetland Remediation	1080	N/A	0
Invasive Species Management	2977	N/A	5
Buffer Band 1	782	5	5
Buffer Band 2	800	5	3
Buffer Band 3	777	5	0

CHECKED BY:

DATE:

SC

15 October 2023

L-4



INVASIVE AREA PLANTING SCHEDULE

	1	1				1
KEY	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	CONDITION	SPACING
AS	16	Acer saccharum	Sugar Maple	150-175cm ht. 3-5 gal		
AS1	16	Acer saccharum	Sugar Maple	25-30mm ca.	10 gal	4 m O.C. min.
BP	14	Betula papyrifera	Paper Birch	150-175cm ht.	3-5 gal	4 m O.C. min.
OV	12	Ostrya virginiana	Ironwood	150-175cm ht.	3-5 gal	4 m O.C. min.
PG	13	Populus grandidentata	Large-Toothed Aspen	150-175cm ht.	3-5 gal	4 m O.C. min.
PT	13	Populus tremuloides	Trembling Aspen	150-175cm ht.	3-5 gal	4 m O.C. min.
PS	13	Prunus serotina	Black Cherry	150-175cm ht.	5-7 gal	4 m O.C. min.
QM	17	Quercus macrocarpa	Bur Oak	150-175cm ht.	5-7 gal	4 m O.C. min.
QR	7	Quercus rubra	Red Oak	150-175cm ht.	5-7 gal	4 m O.C. min.
QR1	10	Quercus rubra	Red Oak	25-30mm ca.	10 gal	4 m O.C. min.
ТА	10	Tilia americana	Basswood	150-175cm ht.	5-7 gal	4 m O.C. min.
TA1	10	Tilia americana	Basswood	25-30mm ca.	10 gal	4 m O.C. min.
			SHRU	JBS		
KEY	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	CONDITION	SPACING
AI	60	Amelanchier laevis	Allegheny Serviceberry	100-125cm ht	3 gal	1 m O.C. min.
Ca	130	Cornus alternifolia	Alternate-Leaved Dogwood	75-100cm ht	3 gal	1 m O.C. min.
Cr	790	Cornus racemosa	Gray Dogwood	50-75cm ht	1-2 gal	1 m O.C. min.
Pv	140	Prunus virginiana ssp. virginiana	Chokecherry	50-75cm ht	1-2 gal	1 m O.C. min.
Ri	135	Rubus idaeus ssp. strigosus	Wild Red Raspberry	50-75cm ht	1-2 gal	1 m O.C. min.
Sr	165	Sambucus pubens	Red Elderberry	50-75cm ht	1-2 gal	1 m O.C. min.
Va	255	Viburnum acerifolium	Maple-Leaved Viburnum	50-75cm ht	1-2 gal	1 m O.C. min.
VI	120	Viburnum lentago	Nannyberry	75-100cm ht	3 gal	1 m O.C. min.
Pi	15	Parhenocissus inserta	Thicket Creeper	75-100cm ht	1 gal	1 m O.C. min.

TREES



WOODLAND EDGE SEED MIX					
SCIENTIFIC NAME	COMMON NAME	SEEDING RATE (kg PLS per/10 000 sq. m)	PROPORTION OF SEED MIX(%)		
ORBS	•				
Anemone virginiana	Tall Anemone	1.35	5.0		
Eurybia macrophylla	Large-leaved Aster	1.35	5.0		
Rudbeckia hirta	Black-eyed Susan	1.35	5.0		
Solidago flexicaulis	Zig-Zag Goldenrod	0.54	2.0		
Solidago juncea	Early Goldenrod	0.14	0.5		
Solidago nemoralis	Grey Goldenrod	0.14	0.5		
Solidago rugosa	Rough Goldenrod	0.14	0.5		
Symphiotrichum laterflorum	Calico Aster	0.54	2.0		
Symphiotrichum Iovae-angliae	New England Aster	0.68	2.50		
GRASSES					
Carex pensylvanica	Pennsylvania Sedge	2.70	10		
Elymus canadensis	Canada Wild Rye	7.30	27		
Elymus virginicus	Virginia Wild Rye	5.4	20		
Elymus hystrix	Bottlebrush Grass	5.4	20		
OTAL NATIVE SPECIE	S	27	100		
	NURSE CROP SEED	MIX			
SCIENTIFIC NAME	COMMON NAME	SEEDING RATE (kg PLS per/10 000 m ²)	PLS REQUIRED (kg PLS per/2977 m ²)		
ORBS					
Agrostis stolonifera	Creeping Red Bent Grass	15	4.50		
lvena sativa	Oats	20	5.95		
lymus canadensis	Canada Wild Rye	30	8.93		
OTAL NURSE CROP		65	19.38		

If seeding in late fall, substitute the Oats with winter hardy species. (Agrostis stonlonifera, Elymus canadensis)

TABLE 1: PLANTING AREAS

	TOTAL PLANTABLE	WIDTH (m)	PLANTI (MIN. QT)
	AREA (m ²)		TREES
Wetland 1080 Remediation		N/A	0
Invasive Species Management 2977		N/A	5
Buffer Band 1	782	5	5
Buffer Band 2	800	5	3
Buffer Band 3	777	5	0





			∽Subject Site		
******				****	
	- Industry (D)		HARMAN HARMAN HARMAN		
		HHHHHHHHHH		Stating of	
			And	184	
K	EYMAP			O NTS	
	LEC	GEND			
		SERVAT			
	Octo	ber 16, 20)23		
	L				
	HALTON REGION CONS	SERVATION	AUTHORITY		
	APPROVED BY: DATE: November 1	, 2023	. ()4 <i>1/a</i> w		
	Subject to the conditio	ns provided	on PERMIT		
	No.: _8705				
Notes For ill	s: Scale shown is for an 36" x 24" page. ustrative purposes. Do not scale				
Nº 6	REVISIONS		DATE:	BY:	
5 4 3			0002/10/12		
2 1	ISSUED FOR CONSTRUCTION ISSUED FOR PERMIT		2023/10/13 2023/08/15 2023/04/06	SC SC SC	
SCA	ALE				
NO		SEAL			
NOr	(IT ARROW		ONOF LAN	25C	
			NOT FOR CONSTRUCTION	PERA	
		40.0	UNLESS SIGNED & DATE		
V		NOT FOR CO	DNSTRUCTION UNLESS SIG	NED & DATED	
	RF	46	'O'	N	
111		ONN			
	MARKHAM OFFICE 80 MAIN ST NORTH MARKHAM, ON L3P 1X5	T) 9 F) 9 www	05.201.7622 05.201.0639 v beaconenviro c	om	
CLI		<u> </u>			
PRO				-0	
RESTORATION AND BUFFER					
PLANTING CONCEPT PLANS 150 STEELES AVE.					
SHEE		ON, ON	N		
C					
C		ULE			
DESI	GN BY: MB	PROJECT Nº:	221	265	
DRA	NN BY: MB	FIGURE №:	. -		
CHE	CKED BY: SC		L-6	5	



DECIDUOUS TREE WHIP PLANTING DETAIL '**_-6** / NTS

GENERAL NOTES

- 1. This design has been prepared in response to the requirement to remediate existing soil contamination on the Subject Property and to meet the ecological restoration goals outlined in the Comprehensive Environmental Management Study by Beacon Environmental Limited, dated March 2023.
- 2. This drawing is to be read in conjunction with the written specifications for the project and all other drawings.
- 3. Any ambiguity in this drawing or accompanying details is to be reported to the project Landscape Architect from Beacon Environmental. Contractor is not to proceed in uncertainty
- 4. Limits or work to be clearly understood by the contractor prior to any work taking place on
- Access to invasive species removal and enhancement areas shall be limited to established routes to minimize disturbance to the woodland. Existing desirable vegetation (e.g., hawthorn shrubs) are to be preserved.
- The Contractor shall visit the site to confirm all site conditions prior to submitting a bid. Report all discrepancies in writing to the project Landscape Architect
- The Contractor must notify the project Landscape Architect a minimum of 5 (five) days prior to the commencement of any construction work.
- 8. If any part of this plan cannot be followed due to site conditions contact the Project Landscape Architect for instruction prior to commencing work.
- Perform excavation in the vicinity of underground utilities with care and by hand if necessary. The Contractor bears full responsibility for this work and disruption of damaged utilities shall be repaired at no expense to the Owner.
- 10. Drawings may be scaled for layout measurement but dimensions and elevations shown are subject to verification on site.
- 11. The Contractor shall maintain all areas until Owner's acceptance of the project in accordance with the specifications.
- 12. It is the responsibility of the Contractor and/ or Owner to ensure that the drawings with the latest revisions are used for construction.

PLANTING NOTES

- 13. As per Conservation Halton (CH) policy, the buffer is to be planted in three bands as described in Table 1 on this drawing package.
- 14. As per CH policy, only native species shall be used for planting, with the exception of the seed nurse crop. Nurse crop mix used in this plan shall conform to CH policy.
- 15. All planting material to meet horticultural standards of the Canadian Nursery Trades Association Guide Specification for Nursery Stock. All plant material to be No. 1 Grade and to the approval of the Landscape Architect.
- 16. No plant substitutions will be permitted without the written approval of the project Landscape Architect. Plant identification tags for all plant material are to remain on material until inspected
- 17. All damaged material will be rejected. Trees without central leaders, with trunk wounds, or damaged major limbs will be rejected. Shrubs with damaged branches or insufficient root mass will be rejected.
- 18. Planting of herbaceous material is to be completed outside of frost period with sufficient time for plants to take root.
- 19. All material that can not be planted within 48 hours of delivery shall be healed in on site and be kept properly protected from desiccation by wind or sun.
- 20. The Planting Design presented will require field fitting based on site condition. Spacing between the woody plants will be form-fitted on site and will vary based on site conditions and direction from the project Landscape Architect.
- 21. The Contractor shall flag out the location of tree and shrub planting modules for field review with the project Landscape Architect prior to commencing planting works.
- 22. The distribution of species across the site shall be reviewed and approved on site by the Landscape Architect at the time of planting operation.
- 23. The Contractor shall relocate any trees or shrubs on the property as directed by the project Landscape Architect
- 24. Any dead or damaged branches are to be pruned according to horticultural standards and timing appropriate to each species.
- 25. All plant materials shall be planted in naturalistic groupings and in accordance with the layout and planting details and written specifications.
- 26. Staking of trees shall be as per detail provided. Alternative methods may be acceptable with the approval of the Landscape Architect prior to installation.

- 27. All large caliper trees shall have an earth saucer at the base with a diameter as large as the excavated area to retain water AQUATIC PLANTING NOTES
- 28. Plant aquatic plants only when there is sufficient water level to allow for plant establishment.
- 29. Plant centre of large pit only with submergent and floating leaved plants.
- 30. Plant edge of large pit with emergent plants, using sloped rocky shelves to accommodate variation in water level.
- 31. Large pit to be planted by removing containers from stock and most of the soil. Do not plant in plastic containers.
- 32. Aquatic plants may be held in place beneath the water level using small rocks or small amounts of sandy soil.
- 33. Plant small pits with remaining hydrophytic species (e.g., tall herbaceous species).
- WATERING REQUIREMENTS:
- 34. All material delivered to site shall be either watered immediately or within 24 hours as warranted by the moisture content of the root balls/containers.
- 35. All material shall be watered at the time of planting
- 36. All material shall be watered regularly (weekly basis if conditions require) during the first year of establishment. More frequent watering will be required during periods of drought.
- MULCHING REQUIREMENTS:
- 37. All trees and shrubs are to be planted in continuous mulched beds unless otherwise indicated on the drawings, or as field directed by the the Project Landscape Architect.
- 38. Mulch shall be topped up during the warranty period to ensure the specified minimum depth is maintained on all planting beds.
- 39. Continuous mulch bed around all tree and shrub plantings shall consist of hardwood mulch/wood chips to a depth of 150 mm (6") or shredded pine/cedar bark to a depth of 100 mm (4").
- 40. Shrub pit, saucer and planting beds shall be soaked with water & mulched immediately following planting. Top dress area immediately over root mass (saucer area) with bone meal or compost

RODENT PROTECTION:

- 41. The contractor shall be responsible for the protection of all trees and shrubs from rodent injury for the duration of the guarantee period.
- 42. Install an approved wrap-around type plastic tree guard on all deciduous and coniferous for rodent protection. Refer to planting detail and specification.
- 43. All shrubs and coniferous trees shall have an application of "skoot' or approved equivalent rodent formula, to be applied at the end of October. Follow manufacturer's directions for application.

SEEDING:

- 44. Large pit and other pits holding water are to be seeded by hand broadcasting or cyclone. Place no compost, topsoil, or peat in pits holding water.
- 45. Seed all other areas by pneumatic terraseeding (hydraulic seeding is not acceptable). Seed and compost mix will be blown over all disturbed areas and around all planted shrubs and perennials
- 46. Depth of composted soil/seed mix will vary dependent upon the slope as follows: 0-25% slopes: 20-25 mm depth -26% and greater slopes: 50 mm depth
- 47. The Contractor shall be responsible for all labor, materials and equipment necessary to Terraseed the specified seed mixtures as designated on this plan and in accordance with the specifications.
- 48. Terraseeding operation shall not commence until Beacon's Landscape Architect has inspected compost and has approved the seed test results in a Certificate of Seed Analysis. Compost contaminated with plastic will be rejected.



CONIFEROUS PLANTING DETAIL

NTS

_-6

- 49. Terraseeding is to be executed following completion of the planting operations.
- 50. The Contractor shall be responsible to seed and stabilize all disturbed areas unless otherwise instructed on site by Beacon's Landscape Architect.
- 51. At the time of Terraseeding all surface designated for this operation shall be friable and fine graded to a relative uniform surface. If the soil is not friable, the surface shall be cultivated to a depth between 50mm (2") and 75mm (3").
- 52. Terraseeding operation shall not commence until Beacon's Landscape Architect has inspected and approved the surface preparation including verification of the seed mixtures being applied and the layout of the permanent seed mixtures locations as demarcated in the field by the Contractor.
- 53. Seeding and or re-seeding shall not be carried out under adverse field conditions such as high wind, frozen ground or ground covered with snow, ice or standing water.
- 54. The site and erosion control measures shall be maintained until conditions permit the Terraseed application or re-application of seeds and compost material.
- 55. Ensure that seeds are spread only in the top 2cm of compost. Seeds should not be buried in soil but should be on the top. To achieve this an initial layer of compost may need to be put down before mixing seed in with the final layer of compost for spreading.
- 56. All surfaces to be Terraseeded shall be prepared not more than 3 days before the seeding operation. The surface shall not have stones greater than 25 mm in diameter, weeds or other unwanted vegetation.
- 57. Seeding and or re-seeding shall be performed only between spring start up and May 31 or between October 1 and freeze up.
- 58. No seeding or cover application shall not come in contact with the foliage of existing vegetation. No seed or cover shall come in contact with existing water bodies.
- 59. Refer to specifications for submission requirements, supplier, seeding rates, construction schedule and performance measure.
- WARRANTY PERIOD AND MAINTENANCE ACTIVITIES:
- 60. All workmanship, and plant materials to be guaranteed for a period of two years following the date of initial acceptance of the project by the project Landscape Architect.
- 61. It is the responsibility of the Contractor to ensure nurse crop establishment and maintain plant materials in good condition from the date of initial planting to the end of the 2 years warranty period.
- 62. General maintenance requirements shall be performed during the growing season and shall include, but not limited to the following activities: -Weekly inspection until nurse crop seed is well established with good coverage (>80%) -Watering regularly on a weekly basis as required during the first year of establishment depending on weather conditions. -Pruning -Mulching
 - -Replacement Plantings
- 63. The Contractor shall be responsible for the Replacement of unacceptable or dead material, straightening trees that lean, and any other procedure consistent with good horticultural practice necessary to ensure normal, healthy growing condition of plant material.
- 64. During the warranty period the contractor is responsible for maintaining the depth of mulch that is specified in these notes under all plantings.
- 65. At the end of the warranty period, it is the responsibility of the Contractor to remove and properly dispose of all plant tags, plastic tree guards, stakes and tree ties.
- 66. Prior to acceptance of the end of the warranty period all planting beds are to be supplemented, where necessary, with additional mulch in order that the specified minimum thickness described for each of the planting areas is maintained.
- 67. The Consultant reserves the right to extend contractor's warranty responsibilities for an additional year if, at the end of initial warranty period, leaf development and growth is not sufficient to ensure future survival.











DATE:

09 August 2023



Bat Conservation International

- 5. Attach spacer blocks to pole sleeve as shown (four per side) using two 1¹/4" screws per block. Bottom spacer blocks are 9" up from bottom of pole sleeve. Top spacer blocks are 5" from top. Alternate spacer blocks on left and right sides, 5" apart. 6. Assemble four inner shell boards into a hollow, square box as in
- step 4. 7. Slide pole sleeve into inner shell until top edges are flush. Bat passage holes will be towards the top. Mark location of spacer blocks. Secure inner shell to pole sleeve with 2" screws through the spacer blocks to ensure no screws pro t rude into roosting chambers. Pre-drill holes first to avoid splitting spacer blocks (countersinking holes may also help).
- 8. Attach spacer blocks (4 per side) to inner shell as shown, using two 1[']/₄" screws per block. Bottom spacer blocks are 10" up from two 14 serves per block. Bottom spacer blocks are 10 up from the bottom edge of the inner shell. Top spacers are 4" from top. Alternate spacers left and right sides, 4" apart.9. Assemble four outer-shell boards into a hollow, square box as in
- step 4. Vent slots are on opposing sides and oriented towards the
- 10. Slide finished outer shell over inner shell, so that 6" of inner shell pro t rudes below outer shell. Mark locations of spacer blocks. Secure outer shell to inner shell as in step 7 (pre-drill holes first). Ensure that no screws pro t rude into the roosting chambers. 11. Caulking first, attach inner roof to box with $1\frac{1}{4}$ " screws.
- C a refully drive screws into top edges of shells to prevent screws from entering roosting chambers.
- 12. Center and attach outer roof to inner roof with 11/4" screws, caulking first. 13. Paint or stain exterior three times (use primer for first coat).
- Cover roof with shingles or dark galvanized metal. 14. Slide completed rocket box over pole. One inch up from the bottom edge of pole sleeve, drill a ¼" hole all the way through pole and sleeve. Rotate box and pole 90° and drill another ¹/₄" hole, 2 inches from the bottom, through pole and sleeve. Secure box to pole with two 4½" bolts, washers and nuts. Orient vent slots north and south during installation.

Optional modifications to the rocket box

- 1. For extra mounting height, insert a 4½" bolt and nut about halfway up through pole sleeve after completing
- step 5. 2. For extra heat-holding capacity, create a compartment in upper half of pole sleeve with a 2½"-square piece of leftover plywood. Fill upper half of sleeve with sand,
- gravel or dirt, and seal with another piece of plywood flush with top. 3. In warmer climates, a larger outer roof with more ove rhang can be used for addi-

tional shading.

NTS



2' x 2' x ¾" AC plywood

Outer roof 12" x 12"

Inner roof

10" x 10



TWO CHAMBER ROCKET BOX BAT HOUSE DETAIL

Open Source Publication Tuttle, Merlin; Kiser, Mark; and Kiser, Selena, "Two-chamber Rocket Box Bat House Plans" (2005). Other Publications in Wildlife Management. 2. http://digitalcommons.unl.edu/icwdmother/2













ALL WORKS IN THESE DRAWINGS WERE COMPLETED IN 2024

WOODLAND REMEDIATION AREA (SHEET L-

WETLAND AND RESTORATION PART OF SEPARATE





			TREES			
KEY	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	STOCK TYPE	SPACING
AS	27	Acer saccharum	Sugar Maple	150-175cm ht.	5-7 gal	4 m O.C. min.
AS1	15	Acer saccharum	Sugar Maple	25-35mm cal.	10-15 gal	4 m O.C. min.
BP	34	Betula papyrifera	Paper Birch	150-175cm ht.	5-7 gal	4 m O.C. min.
OV	34	Ostrya virginiana	Ironwood	150-175cm ht.	5-7 gal	4 m O.C. min.
PG	39	Populus grandidentata	Large-Toothed Aspen	150-175cm ht.	5-7 gal	4 m O.C. min.
PT	39	Populus tremuloides	Trembling Aspen	150-175cm ht.	5-7 gal	4 m O.C. min.
PS	34	Prunus serotina	Black Cherry	150-175cm ht.	5-7 gal	4 m O.C. min.
QM	37	Quercus macrocarpa	Bur Oak	150-175cm ht.	5-7 gal	4 m O.C. min.
QR	39	Quercus rubra	Red Oak	150-175cm ht.	5-7 gal	4 m O.C. min.
QR1	41	Quercus rubra	Red Oak	25-35mm ca.	10-15 gal	4 m O.C. min.
TA	39	Tilia americana	Basswood	150-175cm ht.	5-7 gal	4 m O.C. min.
TA1	40	Tilia americana	Basswood	25-35mm ca.	10-15 gal	4 m O.C. min.
Total	418					
			SHRUBS			
KEY	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	CONDITION	SPACING
Al	60	Amelanchier laevis	Allegheny Serviceberry	100-125cm ht	3 gal	1 m O.C. min.
Са	127	Cornus alternifolia	Alternate-Leaved Dogwood	75-100cm ht	3 gal	1 m O.C. min.
Cr	792	Cornus racemosa	Gray Dogwood	50-75cm ht	1-2 gal	1 m O.C. min.
Pv	181	Prunus virginiana ssp. virginiana	Chokecherry	50-75cm ht	1-2 gal	1 m O.C. min.
Ri	210	Rubus idaeus ssp. strigosus	Wild Red Raspberry	50-75cm ht	1-2 gal	1 m O.C. min.
Sp	280	Sambucus pubens	Red Elderberry	50-75cm ht	1-2 gal	1 m O.C. min.
Va	340	Viburnum acerifolium	Mapleleaf Viburnum	50-75cm ht	1-2 gal	1 m O.C. min.
VI	400	Viburnum lentago	Nannyberry	75-100cm ht	3 gal	1 m O.C. min.
Total	2390					

QTY	SCIENTIFIC NAME	COMMON NAME	STOCK TYPE	SPACING
300	Anemone virginiana	Tall Anemone	2 x 5 inch plug	3 per 1 m ²
475	Elymus canadensis	Canada Wild Rye	2 x 5 inch plug	3 per 1 m ²
425	Elymus hystrix	Bottlebrush Grass	2 x 5 inch plug	3 per 1 m ²
300	Monarda fistulosa	Wild Bergamot	2 x 5 inch plug	3 per 1 m ²
300	Symphiotrichum ericoides	White Heath Aster	2 x 5 inch plug	3 per 1 m ²
1800	Total			

	WOODLAND EDGE
SCIENTIFIC NAME	COMMON NAME
FORBS	
Anemone virginiana	Tall Anemone
Eurybia macrophylla	Large-leaved Aster
Rudbeckia hirta	Black-eyed Susan
Solidago flexicaulis	Zig-Zag Goldenrod
Solidago juncea	Early Goldenrod
Solidago nemoralis	Grey Goldenrod
Solidago rugosa	Rough Goldenrod
Symphiotrichum ericoides	White Heath Aster
Symphiotrichum laterflorum	Calico Aster
Symphiotrichum novae-angliae	New England Aster
Symphiotrichum pilosum	Frost Aster
Verbena stricta	Hoary vervain
GRASSES	
Elvmus canadensis	Canada Wild Rve

Elymus canadensis	Canada Wild Rye
Elymus trachycaulus	Slender Wheat Grass
Elymus hystrix	Bottlebrush Grass
Panicum clandestinum	Deer-Tongue Grass
Sorghastrum nutans	Indian Grass

	NURSE CROP SE
SCIENTIFIC NAME	COMMON NAME
	FORBS
Lolium multiflorum	Annual rye grass
Elymus canadensis	Canada Wild Rye

INVASIVE/DEBRIS AREA PLANTING SCHEDULE (L-3 & L-4)

			IREES			
KEY	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	CONDITION	SPACING
AS	5	Acer saccharum	Sugar Maple	150-175cm ht.	5-7 gal	4 m O.C. min.
BP	4	Betula papyrifera	Paper Birch	175-200cm ht.	5-7 gal	4 m O.C. min.
OV	4	Ostrya virginiana	Ironwood	150-175cm ht.	5-7 gal	4 m O.C. min.
PG	4	Populus grandidentata	Large-Toothed Aspen	150-175cm ht.	5-7 gal	4 m O.C. min.
PT	4	Populus tremuloides	Trembling Aspen	175-200cm ht.	5-7 gal	4 m O.C. min.
PS	5	Prunus serotina	Black Cherry	150-175cm ht.	5-7 gal	4 m O.C. min.
QM	4	Quercus macrocarpa	Bur Oak	175-200cm ht.	5-7 gal	4 m O.C. min.
QR	7	Quercus rubra	Red Oak	150-175cm ht.	5-7 gal	4 m O.C. min.
QR1	6	Quercus rubra	Red Oak	25-35mm ca.	10-15 gal	4 m O.C. min.
ТА	6	Tilia americana	Basswood	150-175cm ht.	5-7 gal	4 m O.C. min.
TA1	5	Tilia americana	Basswood	25-35mm ca.	10-15 gal	4 m O.C. min.
Total	54					
			SHRUBS			
KEY	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	CONDITION	SPACING
AI	21	Amelanchier laevis	Allegheny Serviceberry	125-150cm ht	3-5 gal	1 m O.C. min.
Ca	54	Cornus alternifolia	Alternate-Leaved Dogwood	75-100cm ht	3 gal	1 m O.C. min.
Cr	329	Cornus racemosa	Gray Dogwood	50-75cm ht	1-2 gal	1 m O.C. min.
Pv	77	Prunus virginiana ssp. virginiana	Chokecherry	75-100cm ht	3 gal	1 m O.C. min.
Ri	60	Rubus idaeus ssp. strigosus	Wild Red Raspberry	50-75cm ht	1-2 gal	1 m O.C. min.
Sp	105	Sambucus pubens	Red Elderberry	50-75cm ht	1-2 gal	1 m O.C. min.
Va	135	Viburnum acerifolium	Mapleleaf Viburnum	50-75cm ht	1-2 gal	1 m O.C. min.
VI	120	Viburnum lentago	Nannyberry	75-100cm ht	3 gal	1 m O.C. min.
Total	901					

Aner
Eury
Rudk
Solia
Solia
Solia
Solia
Sym
Sym
Sym
nova
Sym
Verb
Cara

Carex Elymu Elymu Elymu

тот

Loliun Elymu

ΤΟΤΑ

INVASIVE/DEBRIS AREA SEEDING SCHEDULE (L-3 & L-4)

	WOODLAND EDG	E SEED MIX	
CIENTIFIC NAME	COMMON NAME	SEEDING RATE (kg PLS per/10 000 sq. m)	PROPORTION OF SEED MIX(%)
	FORBS		
none virginiana	Tall Anemone	0.81	3.0
bia macrophylla	Large-leaved Aster	1.35	5.0
eckia hirta	Black-eyed Susan	0.54	2.0
ago flexicaulis	Zig-Zag Goldenrod	0.54	2.0
ago juncea	Early Goldenrod	0.16	0.6
ago nemoralis	Grey Goldenrod	0.16	0.6
ago rugosa	Rough Goldenrod	0.16	0.6
phiotrichum ericoides	White Heath Aster	0.16	0.6
phiotrichum laterflorum	Calico Aster	0.16	0.6
phiotrichum e-angliae	New England Aster	0.27	1.0
phiotrichum pilosum	Frost Aster	0.27	1.0
ena stricta	Hoary vervain	0.81	3.0
	GRASSE	S	
x pensylvanica	Pennsylvania Sedge	2.70	10
us canadensis	Canada Wild Rye	7.30	27
us virginicus	Virginia Wild Rye	5.4	20
us hystrix	Bottlebrush Grass	5.4	20
AL NATIVE SPECIE	S	27	100
	NURSE CROP S	SEED MIX	
SCIENTIFIC NAME	COMMON NAME	SEEDING RATE (kg PLS per/10 000 m ²)	PLS REQUIRED (kg PLS per/ _{1,122} m ²)
	FORBS	3	
m multiflorum	Annual rye grass	35	3.98
us canadensis	Canada Wild Rye	30	3.42
AL NURSE CROP		65	7.4

TABLE 1: PLANTING AREAS

	TOTAL PLANTABLE	WIDTH (m)	PLANTI (MIN. QT`
ANEA	AREA (m ²)		TREES
Woodland Remediation	8760	N/A	5
Invasive Species Management	979	N/A	5
Buffer	4655	15	5

	_Subject Site	
		WHHHHHHHH
	And the second s	/
	Mill Pond	
	E Hard Contraction	Constant Constant
		\bigcirc
		NTS
Notes: Scale shown is for an 36" x 24" page. For illustrative purposes. Do not scale		
№ REVISIONS	DATE:	BY:
N° REVISIONS 6 5	DATE:	BY:
№ REVISIONS 6 5 4 3 3 Updated Plan Addendum # 1	DATE:	BY:
№ REVISIONS 6	DATE: 2024/08/ 27 2024/08/06 2023/03/31	BY: SC SC TS
№ REVISIONS 6	L	BY: SC SC TS SIGNED & DATED
N° REVISIONS 6		BY: SSC SC TS SIGNED & DATED
N° REVISIONS 6 5 4 3 3 Updated Plan Addendum # 1 2 REVISED AND ISSUED FOR TENDERING 1 ISSUED FOR PERMIT SCALE NORTH ARROW NORTH ARROW SEA MORTH ARROW SEA MORTH ARROW SEA MORTH ARROW SEA MARKHAM OFFICE SO MAIN ST NORTH MARKHAM OFFICE SO MAIN ST NORTH MARKHAM, ON L3P 1X5 CLIENT NEATT COMULATION PROJECT	DATE: 2024/08/27 2024/08/06 2023/03/31	BY: SC SC TS SC TS SC TS SC TS SC TS SC TS SC TS SC SC TS SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC SC TS SC SC SC TS SC SC SC TS SC SC SC SC SC SC SC SC SC SC SC SC SC
N° REVISIONS 6 5 4 3 3 Updated Plan Addendum # 1 2 REVISED AND ISSUED FOR TENDERING 1 ISSUED FOR PERMIT SCALE NORTH ARROW SEA SEA NORTH ARROW SEA MARKHAM OFFICE SO MAIN ST NORTH MARKHAM OFFICE MARKHAM, ON L3P 1X5 CLIENT NEATT COMI PROJECT RESTORATION PL 150 STEELE MILTON, MILTON,	DATE: 2024/08/27 2024/08/06 2023/03/31 L L L L L L L L L L L L L L L L L L	BY: SC SC TS TS SC TS SC TS SC TS SC TS SC TS SC TS SC SC TS SC TS SC TS SC TS SC TS SC TS SC TS SC TS SC TS SC TS SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC SC TS SC SC TS SC SC SC TS SC SC SC TS SC SC SC SC SC SC SC SC SC SC SC SC SC
N° REVISIONS 6	DATE: 2024/08/27 2024/08/06 2023/03/31 L L L L L L L L L L L L L L L L L L	BY: SC SC TS SC TS SC SC TS SC TS SC TS SC TS SC TS SC TS SC TS SC TS SC TS SC TS SC TS SC SC TS SC TS SC TS SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC SC TS SC SC SC TS SC SC SC SC SC SC SC SC SC SC SC SC SC
N° REVISIONS 6	DATE: 2024/08/27 2024/08/06 2023/03/31 L L L L L L L L L L L L L L L L L L	BY: SC SC TS TS SIGNED & DATED
N° REVISIONS 6	DATE: 2024/08/27 2024/08/06 2023/03/31 2023/03/31 L L L L L L L L L L L L L	BY: SC SC TS TS SIGNED & DATED
N° REVISIONS 6		BY: SC SC TS TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC TS SC SC SC TS SC SC SC TS SC SC SC TS SC SC SC SC SC SC SC SC SC SC SC SC SC

DECIDUOUS TREE WHIP PLANTING DETAIL L-6 / NTS

GENERAL NOTES

- 1. This design has been prepared in response to the requirement to remediate existing soil contamination on the Subject Property and to meet the ecological restoration goals outlined in the Comprehensive Environmental Management Study by Beacon Environmental Limited, dated March 2023.
- This drawing is to be read in conjunction with the written specifications for the project and all other drawings.
- 3. Any ambiguity in this drawing or accompanying details is to be reported to the project Landscape Architect from Beacon Environmental. Contractor is not to proceed in uncertaint
- 4. Limits or work to be clearly understood by the contractor prior to any work taking place on
- 5. Access to invasive species removal and enhancement areas shall be limited to established routes to minimize disturbance to the woodland. Existing desirable vegetation (e.g., hawthorn shrubs) are to be preserved.
- 6. The Contractor shall visit the site to confirm all site conditions prior to submitting a bid. Report all discrepancies in writing to the project Landscape Architect
- 7. The Contractor must notify the project Landscape Architect a minimum of 5 (five) days prior to the commencement of any construction work.
- 8. If any part of this plan cannot be followed due to site conditions contact the Project Landscape Architect for instruction prior to commencing work.
- 9. Perform excavation in the vicinity of underground utilities with care and by hand if necessary. The Contractor bears full responsibility for this work and disruption of damaged utilities shall be repaired at no expense to the Owner.
- 10. Drawings may be scaled for layout measurement but dimensions and elevations shown are subject to verification on site.
- 11. The Contractor shall maintain all areas until Owner's acceptance of the project in accordance with the specifications.
- 12. It is the responsibility of the Contractor and/ or Owner to ensure that the drawings with the latest revisions are used for construction. PLANTING NOTES :
- 13. As per Conservation Halton (CH) policy, the buffer is to be planted in three bands as described in Table 1 on this drawing package.
- 14. As per CH policy, only native species shall be used for planting, with the exception of the seed nurse crop. Nurse crop mix used in this plan shall conform to CH policy.
- 15. All planting material to meet horticultural standards of the Canadian Nursery Trades Association Guide Specification for Nursery Stock. All plant material to be No. 1 Grade and to the approval of the Landscape Architect.
- 16. No plant substitutions will be permitted without the written approval of the project Landscape Architect. Plant identification tags for all plant material are to remain on material until inspected
- 17. All damaged material will be rejected. Trees without central leaders, with trunk wounds, or damaged major limbs will be rejected. Shrubs with damaged branches or insufficient root mass will be rejected.
- 18. Planting of herbaceous material is to be completed outside of frost period with sufficient time for plants to take root.
- 19. All material that can not be planted within 48 hours of delivery shall be healed in on site and be kept properly protected from desiccation by wind or sun.
- 20. The Planting Design presented will require field fitting based on site condition. Spacing between the woody plants will be form-fitted on site and will vary based on site conditions and direction from the project Landscape Architect.
- 21. The Contractor shall flag out the location of tree and shrub planting modules for field review with the project Landscape Architect prior to commencing planting works.
- 22. The distribution of species across the site shall be reviewed and approved on site by the Landscape Architect at the time of planting operation.
- 23. The Contractor shall relocate any trees or shrubs on the property as directed by the project Landscape Architect
- 24. Any dead or damaged branches are to be pruned according to horticultural standards and timing appropriate to each species.

-6

- 26. Staking of trees shall be as per detail provided. Alternative methods may be acceptable with the approval of the Landscape Architect prior to installation.
- 27. All large caliper trees shall have an earth saucer at the base with a diameter as large as the

layout and planting details and written specifications.

WATERING REQUIREMENTS:

excavated area to retain water

- 28. All material delivered to site shall be either watered immediately or within 24 hours as warranted by the moisture content of the root balls/containers.
- 29. All material shall be watered at the time of planting.
- 30. All material shall be watered regularly (weekly basis if conditions require) during the first year of establishment. More frequent watering will be required during periods of drought. MULCHING REQUIREMENTS:

- 31. All shrubs are to be planted in continuous mulched beds unless otherwise indicated on the drawings, or as field directed by the the Project Landscape Architect.
- 32. All trees are to be planted in individually mulched beds that shall consist of shredded pine/cedar bark to a depth of 100 mm (4")
- 33. Mulch shall be topped up during the warranty period to ensure the specified minimum depth is maintained on all planting beds
- 34. Continuous mulch beds around all shrub plantings and individually mulched tree saucers shall consist of shredded pine/cedar bark to a depth of 100 mm (4").
- 35. Shrub pit, tree saucers and planting beds shall be soaked with water & mulched immediately following planting. Top dress area immediately over root mass (shrub bed/saucer area) with bone meal or compost.

RODENT PROTECTION:

- 36. The contractor shall be responsible for the protection of all trees and shrubs from rodent injury for the duration of the guarantee period.
- 37. Install an approved wrap-around type plastic tree guard on all deciduous and coniferous for rodent protection. Refer to planting detail and specification.
- 38. All shrubs and coniferous trees shall have an application of "skoot' or approved equivalent rodent formula, to be applied at the end of October. Follow manufacturer's directions for application.

TERRASEEDING:

- 39. Seeding to be completed by pneumatic terraseeding (hydraulic seeding is not acceptable). Seed and compost mixture will be blown over all disturbed areas and around all planted shrub beds.
- 40. A 50 mm depth of compost blanket to be applied over all disturbed areas to be stabilized and revegetated.
- 41. The Contractor shall be responsible for all labor, materials and equipment necessary to Terraseed the specified seed mixtures as designated on this plan and in accordance with the specifications.
- 42 Terraseeding operation shall not commence until Beacon's Landscape Architect has reviewed and approved the seed test results in a Certificate of Seed Analysis. Compost contaminated with plastic will be rejected.
- 43. Terraseeding is to be executed following completion of the planting operations.
- 44. The Contractor shall be responsible to seed and stabilize all disturbed areas unless otherwise instructed on site by Beacon's Landscape Architect.
- 45. At the time of Terraseeding all surface designated for this operation shall be friable and fine graded to a relative uniform surface. If the soil is not friable, the surface shall be cultivated to a depth between 50mm (2") and 75mm (3").

CONIFEROUS PLANTING DETAIL NTS

- 25. All plant materials shall be planted in naturalistic groupings and in accordance with the

- 46. Terraseeding operation shall not commence until Beacon's Landscape Architect has inspected and approved the surface preparation including verification of the seed mixtures being applied and the layout of the permanent seed mixtures locations as demarcated in the field by the Contractor.
- 47. Seeding and or re-seeding shall not be carried out under adverse field conditions such as high wind, frozen ground or ground covered with snow, ice or standing water.
- 48. The site and erosion control measures shall be maintained until conditions permit the Terraseed application or re-application of seeds and compost material.
- 49. Ensure that seeds are injected only in the top 25 mm of compost. Seeds should not be buried in soil but should be on the top. To achieve this, the initial 25 mm compost layer is to be applied with no seeds. The seeds are to be injected only in the top 25 mm compost
- 50. All surfaces to be Terraseeded shall be prepared not more than 3 days before the seeding operation. The surface shall not have stones greater than 25 mm in diameter, weeds or other unwanted vegetation.
- 51. Seeding and or re-seeding shall be performed only between spring start up and May 31 or between October 1 and freeze up.
- 52. No seeding or cover application shall not come in contact with the foliage of existing vegetation. No seed or cover shall come in contact with existing water bodies.
- 53. Refer to specifications for submission requirements, supplier, seeding rates, construction schedule and performance measure.
- WARRANTY PERIOD AND MAINTENANCE ACTIVITIES:
- 54. All workmanship, and plant materials to be guaranteed for a period of two years following the date of initial acceptance of the project by the project Landscape Architect.
- 55. It is the responsibility of the Contractor to ensure nurse crop establishment and maintain plant materials in good condition from the date of initial planting to the end of the 2 years warranty period.
- 56. General maintenance requirements shall be performed during the growing season and shall include, but not limited to the following activities: -Weekly inspection until nurse crop seed is well established with good coverage (>80%)
 - -Watering regularly on a weekly basis as required during the first year of establishment depending on weather conditions. -Pruning -Mulching -Replacement Plantings
 - -Weeding all shrub planting beds and individually mulched tree saucers two times per growing season (June and August)
- 57. The Contractor shall be responsible for the Replacement of unacceptable or dead material, straightening trees that lean, and any other procedure consistent with good horticultural practice necessary to ensure normal, healthy growing condition of plant material.
- 58. During the warranty period the contractor is responsible for maintaining the minimum depth of mulch that is specified for all plantings.
- 59. At the end of the warranty period, it is the responsibility of the Contractor to remove and properly dispose of all plastic tree guards, stakes and tree ties.
- 60. Prior to acceptance of the end of the warranty period all planting beds are to be supplemented, where necessary, with additional mulch in order that the specified minimum thickness described for each of the planting areas is maintained.
- 61. The Consultant reserves the right to extend contractor's warranty responsibilities for an additional year if, at the end of initial warranty period, leaf development and growth is not sufficient to ensure future survival.

UNLESS DIRECTED OTHERWISE.

STRAIGHT AND UNDAMAGED

HERBACEOUS PLUG PLANTING DETAIL

HERBACEOUS PLANTING DETAIL (POTTED)

C3. Proposed Buffer and Eroded Slope Restoration Drawings

			TREES			
KEY	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	STOCK TYPE	SPACING
AS	9	Acer saccharum	Sugar Maple	150-175cm ht.	5-7 gal	4 m O.C. min.
AS1	10	Acer saccharum	Sugar Maple	25-35mm cal.	10-15 gal	4 m O.C. min.
BP	10	Betula papyrifera	Paper Birch	150-175cm ht.	5-7 gal	4 m O.C. min.
OV	8	Ostrya virginiana	Ironwood	150-175cm ht.	5-7 gal	4 m O.C. min.
PG	10	Populus grandidentata	Large-Toothed Aspen	150-175cm ht.	5-7 gal	4 m O.C. min.
PG1	8	Populus grandidentata	Large-Toothed Aspen	25-35mm cal.	10-15 gal	4 m O.C. min.
PT	18	Populus tremuloides	Trembling Aspen	150-175cm ht.	5-7 gal	4 m O.C. min.
PS	6	Prunus serotina	Black Cherry	150-175cm ht.	5-7 gal	4 m O.C. min.
QM	6	Quercus macrocarpa	Bur Oak	150-175cm ht.	5-7 gal	4 m O.C. min.
QR	20	Quercus rubra	Red Oak	150-175cm ht.	5-7 gal	4 m O.C. min.
QR1	10	Quercus rubra	Red Oak	25-35mm ca.	10-15 gal	4 m O.C. min.
ТА	8	Tilia americana	Basswood	150-175cm ht.	5-7 gal	4 m O.C. min.
TA1	12	Tilia americana	Basswood	25-35mm cal.	10-15 gal	4 m O.C. min.
Total	135					
			SHRUBS		•	
KEY	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	CONDITION	SPACING
AI	12	Amelanchier laevis	Allegheny Serviceberry	100-125cm ht	3 gal	1 m O.C. min.
Ca	33	Cornus alternifolia	Alternate-Leaved Dogwood	75-100cm ht	3 gal	1 m O.C. min.
Cr	200	Cornus racemosa	Gray Dogwood	50-75cm ht	1-2 gal	1 m O.C. min.
Pv	47	Prunus virginiana ssp. virginiana	Chokecherry	50-75cm ht	1-2 gal	1 m O.C. min.
Ri	60	Rubus idaeus ssp. strigosus	Wild Red Raspberry	50-75cm ht	1-2 gal	1 m O.C. min.
Sr	60	Sambucus pubens	Red Elderberry	50-75cm ht	1-2 gal	1 m O.C. min.
Va	75	Viburnum acerifolium	Mapleleaf Viburnum	50-75cm ht	1-2 gal	1 m O.C. min.
VI	60	Viburnum lentago	Nannyberry	75-100cm ht	3 gal	1 m O.C. min.
Total	547					

	GRASSES AND FORBES				
ΤY	SCIENTIFIC NAME	COMMON NAME	STOCK TYPE	SPACING	
22	Anemone virginiana	Tall Anemone	2 x 5 inch plug	3 per 1 m ²	
22	Elymus canadensis	Canada Wild Rye	2 x 5 inch plug	3 per 1 m ²	
22	Elymus hystrix	Bottlebrush Grass	2 x 5 inch plug	3 per 1 m ²	
22	Monarda fistulosa	Wild Bergamot	2 x 5 inch plug	3 per 1 m ²	
22	Symphiotrichum ericoides	White Heath Aster	2 x 5 inch plug	3 per 1 m ²	
10	Total				

			וט
SCIENTIFIC NAME	COMMON NAME		(kg
FORBS			
Anemone virginiana	Tall Anemone		
Eurybia macrophylla	Large-leaved Aster		
Rudbeckia hirta	Black-eyed Susan		
Solidago flexicaulis	Zig-Zag Goldenrod		
Solidago juncea	Early Goldenrod		
Solidago nemoralis	Grey Goldenrod		
Solidago rugosa	Rough Goldenrod		
Symphiotrichum ericoides	White Heath Aster		
Symphiotrichum laterflorum	Calico Aster		
Symphiotrichum novae-angliae	New England Aster		
Symphiotrichum pilosum	Frost Aster		
Verbena stricta	Hoary vervain		
GRASSES			
Elymus canadensis	Canada Wild Rye		
Elymus canadensis Elymus trachycaulus	Canada Wild Rye Slender Wheat Grass		
Elymus canadensis Elymus trachycaulus Elymus hystrix	Canada Wild Rye Slender Wheat Grass Bottlebrush Grass		
Elymus canadensis Elymus trachycaulus Elymus hystrix Panicum clandestinum	Canada Wild Rye Slender Wheat Grass Bottlebrush Grass Deer-Tongue Grass		
Elymus canadensis Elymus trachycaulus Elymus hystrix Panicum clandestinum Sorghastrum nutans	Canada Wild RyeSlender Wheat GrassBottlebrush GrassDeer-Tongue GrassIndian Grass		
Elymus canadensis Elymus trachycaulus Elymus hystrix Panicum clandestinum Sorghastrum nutans	Canada Wild RyeSlender Wheat GrassBottlebrush GrassDeer-Tongue GrassIndian Grass		
Elymus canadensis Elymus trachycaulus Elymus hystrix Panicum clandestinum Sorghastrum nutans TOTAL NATIVE SPECI	Canada Wild Rye Slender Wheat Grass Bottlebrush Grass Deer-Tongue Grass Indian Grass		
Elymus canadensis Elymus trachycaulus Elymus hystrix Panicum clandestinum Sorghastrum nutans TOTAL NATIVE SPECI	Canada Wild Rye Slender Wheat Grass Bottlebrush Grass Deer-Tongue Grass Indian Grass ES NURSE CROF	P SEED	MI>
Elymus canadensis Elymus trachycaulus Elymus hystrix Panicum clandestinum Sorghastrum nutans TOTAL NATIVE SPECI	Canada Wild Rye Slender Wheat Grass Bottlebrush Grass Deer-Tongue Grass Indian Grass ES NURSE CROF COMMON NA	P SEED	
Elymus canadensis Elymus trachycaulus Elymus hystrix Panicum clandestinum Sorghastrum nutans TOTAL NATIVE SPECI SCIENTIFIC NAME	Canada Wild Rye Slender Wheat Grass Bottlebrush Grass Deer-Tongue Grass Indian Grass ES NURSE CROF COMMON NA FOR	P SEED	MI>
Elymus canadensis Elymus trachycaulus Elymus hystrix Panicum clandestinum Sorghastrum nutans TOTAL NATIVE SPECI SCIENTIFIC NAME Lolium multiflorum	Canada Wild Rye Slender Wheat Grass Bottlebrush Grass Deer-Tongue Grass Indian Grass ES NURSE CROF COMMON NA FOR Annual rye grass	P SEED ME BS	

GENERAL NOTES

- 1. This design has been prepared in response to the requirement to remediate existing soil contamination on the Subject Property and to meet the ecological restoration goals outlined in the Comprehensive Environmental Management Study by Beacon Environmental Limited, dated March 2023.
- This drawing is to be read in conjunction with the written specifications for the project and all other drawings.
- 3. Any ambiguity in this drawing or accompanying details is to be reported to the project Landscape Architect from Beacon Environmental. Contractor is not to proceed in uncertaint
- 4. Limits or work to be clearly understood by the contractor prior to any work taking place on
- 5. Access to invasive species removal and enhancement areas shall be limited to established routes to minimize disturbance to the woodland. Existing desirable vegetation (e.g., hawthorn shrubs) are to be preserved.
- 6. The Contractor shall visit the site to confirm all site conditions prior to submitting a bid. Report all discrepancies in writing to the project Landscape Architect
- 7. The Contractor must notify the project Landscape Architect a minimum of 5 (five) days prior to the commencement of any construction work.
- 8. If any part of this plan cannot be followed due to site conditions contact the Project Landscape Architect for instruction prior to commencing work.
- 9. Perform excavation in the vicinity of underground utilities with care and by hand if necessary. The Contractor bears full responsibility for this work and disruption of damaged utilities shall be repaired at no expense to the Owner.
- 10. Drawings may be scaled for layout measurement but dimensions and elevations shown are subject to verification on site.
- 11. The Contractor shall maintain all areas until Owner's acceptance of the project in accordance with the specifications.
- 12. It is the responsibility of the Contractor and/ or Owner to ensure that the drawings with the latest revisions are used for construction.

PLANTING NOTES :

- 13. As per Conservation Halton (CH) policy, the buffer is to be planted in three bands as described in Table 1 on this drawing package.
- 14. As per CH policy, only native species shall be used for planting, with the exception of the seed nurse crop. Nurse crop mix used in this plan shall conform to CH policy.
- 15. All planting material to meet horticultural standards of the Canadian Nursery Trades Association Guide Specification for Nursery Stock. All plant material to be No. 1 Grade and to the approval of the Landscape Architect.
- 16. No plant substitutions will be permitted without the written approval of the project Landscape Architect. Plant identification tags for all plant material are to remain on material until inspected
- 17. All damaged material will be rejected. Trees without central leaders, with trunk wounds, or damaged major limbs will be rejected. Shrubs with damaged branches or insufficient root mass will be rejected.
- 18. Planting of herbaceous material is to be completed outside of frost period with sufficient time for plants to take root.
- 19. All material that can not be planted within 48 hours of delivery shall be healed in on site and be kept properly protected from desiccation by wind or sun.
- 20. The Planting Design presented will require field fitting based on site condition. Spacing between the woody plants will be form-fitted on site and will vary based on site conditions and direction from the project Landscape Architect.
- 21. The Contractor shall flag out the location of tree and shrub planting modules for field review with the project Landscape Architect prior to commencing planting works.
- 22. The distribution of species across the site shall be reviewed and approved on site by the Landscape Architect at the time of planting operation.
- 23. The Contractor shall relocate any trees or shrubs on the property as directed by the project Landscape Architect
- 24. Any dead or damaged branches are to be pruned according to horticultural standards and timing appropriate to each species.

25. All plant materials shall be planted in naturalistic groupings and in accordance with the layout and planting details and written specifications.

-5

- 26. Staking of trees shall be as per detail provided. Alternative methods may be acceptable with the approval of the Landscape Architect prior to installation.
- 27. All large caliper trees shall have an earth saucer at the base with a diameter as large as the excavated area to retain water

WATERING REQUIREMENTS:

- 28. All material delivered to site shall be either watered immediately or within 24 hours as warranted by the moisture content of the root balls/containers.
- 29. All material shall be watered at the time of planting.
- 30. All material shall be watered regularly (weekly basis if conditions require) during the first year of establishment. More frequent watering will be required during periods of drought.

MULCHING REQUIREMENTS:

- 31. All shrubs are to be planted in continuous mulched beds unless otherwise indicated on the drawings, or as field directed by the the Project Landscape Architect.
- 32. All trees are to be planted in individually mulched beds that shall consist of shredded pine/cedar bark to a depth of 100 mm (4")
- 33. Mulch shall be topped up during the warranty period to ensure the specified minimum depth is maintained on all planting beds
- 34. Continuous mulch beds around all shrub plantings and individually mulched tree saucers shall consist of shredded pine/cedar bark to a depth of 100 mm (4").
- 35. Shrub pit, tree saucers and planting beds shall be soaked with water & mulched immediately following planting. Top dress area immediately over root mass (shrub bed/saucer area) with bone meal or compost.

RODENT PROTECTION:

- 36. The contractor shall be responsible for the protection of all trees and shrubs from rodent injury for the duration of the guarantee period.
- 37. Install an approved wrap-around type plastic tree guard on all deciduous and coniferous for rodent protection. Refer to planting detail and specification.
- 38. All shrubs and coniferous trees shall have an application of "skoot' or approved equivalent rodent formula, to be applied at the end of October. Follow manufacturer's directions for application.

TERRASEEDING:

- 39. Seeding to be completed by pneumatic terraseeding (hydraulic seeding is not acceptable). Seed and compost mixture will be blown over all disturbed areas and around all planted shrub beds.
- 40. A 50 mm depth of compost blanket to be applied over all disturbed areas to be stabilized and revegetated.
- 41. The Contractor shall be responsible for all labor, materials and equipment necessary to Terraseed the specified seed mixtures as designated on this plan and in accordance with the specifications.
- 42 Terraseeding operation shall not commence until Beacon's Landscape Architect has reviewed and approved the seed test results in a Certificate of Seed Analysis. Compost contaminated with plastic will be rejected.
- 43. Terraseeding is to be executed following completion of the planting operations.
- 44. The Contractor shall be responsible to seed and stabilize all disturbed areas unless otherwise instructed on site by Beacon's Landscape Architect.
- 45. At the time of Terraseeding all surface designated for this operation shall be friable and fine graded to a relative uniform surface. If the soil is not friable, the surface shall be cultivated to a depth between 50mm (2") and 75mm (3").

SC

29 March 2025

DATE:

		_Subject Site	
		and the second s	HHHHHHM.
Industrial Con-			/
	Mill Por		15 HIR C 84
Martin Harrison Harrison			
KEYMAP			⊕ NTS
LEC	GEND		
Notes: Scale shown is for an 36" x 24" page.			
N° REVISIONS		DATE:	BY:
6 5			
3			
1 ISSUED FOR REVIEW SCALE		2025/03/12	SC
NORTH ARROW	SEAL	NOF/A	
		CRUNCE CR	A CAF
		NOT FOR CONSTRUC	
		MEMBER NOSI	JIII
	NO	FOR CONSTRUCTION UNLESS	SIGNED & DATED
	AC		NT
BE	AC	U	N
ENVIR	ONN	NEN	TAL
GUELPH OFFICE 373 WOOLWICH ST, GUELPH, ON N1H 3W4	T) 5* w) 519.826.0419 19.826.9306 ww.beaconenvi	ro.com
CLIENT			
150 STEELES	s Mil	TON	INC.
PROJECT			
PLANTI 150 STE	NG PI FI FS A	_AN .VF	
MILT	ON, ON	١	
SHEET TITLE			
HABITAT FEA	TURE	DET	AILS
DESIGN BY: MB/JA	PROJECT Nº:	221	1265
DRAWN BY: MB/JA	FIGURE Nº:		
CHECKED BY: SC]		5 I
DATE: 29 March 2025	1		




Needy	Diant Lint Lin		\		SUBJECT SITE
woody		es Slakes (8/ L.M.+/-)	• •	And state and st
Est. Qty	Scientific Name	Common Name	Size	Spacing	
50 100	Cornus amomum	Sllky Dogwood 15-3	35mm dia x 600 -100	00mm L 0.6m 0.C. +/-	And A Canada And
50	Cornus racemosa Cornus rugosa	Round Leaf Dogwood 15-3	35mm dia x 600 -100 35mm dia x 600 -100	00mm L 0.6m 0.C. +/-	A THE PORT AND THE PORT
40	Cornus sericea	Red Osier Dogwood 15-3	35mm dia x 600 -100	00mm L 0.6m 0.C. +/-	HARD REAL PROPERTY AND THE REAL PROPERTY AND
40	Salix exigua	Sandbar Willow 15-3	35mm dia x 600 -100	00mm L 0.6m 0.C. +/-	The second secon
350	viburnum ientago	Nannyberry 15-3	35mm dia x 600 - 100	10mm L 0.6m 0.C. +/-	
					LEGEND
Voody	Plant List - (Sh	ort Fascines) Horizor	ntal Layout btw S	oxx & Slope (50L.M.)	
Est. Qty	Scientific Name	Common Name	Size	Layout	
30	Cornus amomum	Sllky Dogwood 15-3	35mm dia x 1000 - 1	200mm L Bundle	C C C EXISTING SURVEYED TREES
40	Cornus racemosa	Gray Dogwood 15-3	35mm dia x 1000 - 1	200 mm L Bundle	
35	Cornus rugosa	Round Leaf Dogwood 15-3	35mm dia x 1000 - 1. 35mm dia x 1000 - 1	200 mm L Bundle	
15	Salix exigua	Sandbar Willow 15-3	35mm dia x 1000 - 1. 35mm dia x 1000 - 1.	200 mm L Bundle	
35	Viburnum lentago	Nannyberry 5-35	5mm dia x 1000 - 12	00 mm L Bundle	PROPOSED 20-30cm DIA VEGETATED
150					SLOPE INTERRUPTION SOXX (20-30 l.m.)
					PROPOSED 45-60cm DIA. VEGETATED
Voody	Plant List				
Est. Qty	Scientific Name	Common Name	Size Condit	ion Spacing	
50	Cornus racomaca	Gray Dogwood	45-75cm 1 ~-	1 0m 0 C staggard	WOODLAND MEADOW SEED MIX WITH
50 50	Diervila lonicera	Bush Honevsuckle	45-75cm 1 ga	1 1.0m O.Cstaggered	
5	Parthenocisus inse	erta Thicket Creeper	2 years min 1 ga	I 1.0m O.Cstaggered	(50 sq.m. +/-)
50 50	Prunus virginiana	Choke Cherry	45-75cm 1 ga	1 1.0m O.Cstaggered	
50 50	Symphoricarpus a	<i>Ibus</i> Common Snowberry	/ 45-75cm 1 ga	1 1.0m O.Cstaggered	SPECIFIED PLANTING SOIL MIXTURE
50	Viburnum lentago	Nannyberry	45-75cm 1 ga	1.0m O.Cstaggered	(50 sq.m) VARYING DEPTH (0.575m.)
80					MASS PLANTING OF SHRUBS (80.)
					AND HERBACEOUS PLUGS (400)
Herbac	eous Plant Lis	t			Ave Shrub Spacing 1.0m O.C.
Est. Qty	Scientific Name	Common Name	Size / Conditio (mm)	on Spacing	Ave Herbaceous Spacing 0.4m 0.C.
0	Anemone canader	sis Canada Anemone	50 x 125 plug	0.3 - 0.5m 0.C.	PROPOSED 30/45cm. DIA. SILT SOXX
0	Eurybia macrophy	lla Large Leaved Aste	r 50 x 125 plug	9 0.3 - 0.5m O.C.	
0	Carex arctata	Drooping Wood Sec	dae 50 x 125 plug	0.3 - 0.5 m 0.0.	N° REVISION DATE BY
0	Carex penduncular	ta Long-Stalked Sedge	e 50 x 125 plug	0.3 - 0.5m 0.C.	
0	Carex pensylvanic	a Pensylvania Sedge	50 x 125 plug	9 0.3 - 0.5m O.C.	
0	Elymus hystrix	Bottlebrush Grass	50 x 125 plu	0.3 - 0.5 m 0.0.	1. ISSUED FOR APPROVAL 2025/03/31 SC
0	Panicum clandesti	num Deer- Tongue	50 x 125 plug	9 0.3 - 0.5m O.C.	SCALE
400					0 1 2 3 4 5
14/000	lland Edge Se	a d Mix			NORTH ARROW SEAL
Scientific	Name	Common Name	(kg PLS per Prop	ortion of	T STEPHAN CRISAND
			/10,000 sq.m) seed	l mix (%)	
Forbs (b	road-leaved species) Canada Anemone	_	3.5	NOT FOR CONSTRUCTION UNLESS SIGNED & DATED
Desmodiu	um canadense	Showy Tick Trefoil	-	3.5	2 NOSLJJJ
i⊏urybia n Helianthu	acropnylla s divaricalus	Large-leaved Aster Woodland Sunflower	-	2.5 2.5	NOT FOR CONSTRUCTION UNLESS SIGNED & DATED
Solidago Solidago	flexicaulis nemoralis	Zig-Zag Goldenrod Grev Goldenrod	-	2.0	
Solidago	rugosa richum cordifolium	Rough Goldenrod	-	1.5	
o yn prilot			-	0.0	
Grasses Carex arc	tata	Drooping Wood Sedge	-	10.0	MARKHAM OFFICE T) 905. 201. 7622
Carex per	dunculata nsvlvanica	Long-stalked Sedge Pensylvanica Sedge	-	10.0	80 MAIN ST NORTH F) 905. 201. 0639 MARKHAM, ON L3P 1X5 www.beaconenviro.com
Elymus ca	anadensis	Canada Wild Rye	-	15.0	
Elymus h	ystrix (Hystrix patula)	Bottlebrush Grass	-	20.0	NEATT COMMUNITIES
Panicum Panicum	virgatum	Switch Grass	-	10.0	PROJECT
Total nat	ive species		27	100.0	RESTORATION PLAN
					150 STEELES AVE MILTON
Nurse Species	Crop Seed Mix	on Name Sood	ling rate DI S D	auired	
Sheries		(PLS kg/	10,000 sq.m.) (kg/ 11)	0 sq.m.)	
Avena sa Festuca r	uva Oats ubra Creenir	a Red Fescue	30 1	0	SI OPE RESTORATION DI ANI
Total nur	se grasses		60 2	0	PLANTING CONCEPT PLAN
L					
					DESIGN BY: SC PROJECT NO: 221265
					DRAWN BY: SC SHEET NO:
				NOTRUCTION	CHECKED BY: SC/JS
					DATE: 2025/03/21

Woodv	Plant I ist - I iv	es Stakes (87 L.M.+/	(-)		SUBJECT SITE
Est. Qtv	Scientific Name		Size	Spacing	
50 100 50 40 40 70	Cornus amomum Cornus racemosa Cornus rugosa Cornus sericea Salix exigua Viburnum lentago	Sllky Dogwood15Gray Dogwood15Round Leaf Dogwood15Red Osier Dogwood15Sandbar Willow15Nannyberry15	-35mm dia x 600 -1000 -35mm dia x 600 -1000	mm L 0.6m 0.C. +/- mm L 0.6m 0.C. +/-	
350	<u> </u>				
					LEGEND
Woody	Plant List - (Sh	ort Fascines) Horizo	ontal Layout btw So	xx & Slope (50L.M.	EXISTING CONTOUR ELEVATION
EST. QTY	Scientific Name		Size	Layout	
30 40 35 25 15 35	Cornus amomum Cornus racemosa Cornus rugosa Cornus sericea Salix exigua Viburnum lentago	Sllky Dogwood15Gray Dogwood15Round Leaf Dogwood15Red Osier Dogwood15Sandbar Willow15Nannyberry5-3	-35mm dia x 1000 - 120 -35mm dia x 1000 - 120	DOmm LBundleD0 mm LBundleD0 mm LBundleD0 mm LBundleD0 mm LBundleD0 mm LBundleD0 mm LBundle	PRUNED TREE CANOPY
150					PROPOSED 20-30cm DIA. VEGETATED SLOPE INTERRUPTION SOXX (20-30 l.m.)
Woody Est. Qtv	Plant List	Common Name	Size Conditio	n Spacing	PROPOSED 45-60cm DIA. VEGETATED SLOPE INTERRUPTION SOXX STAKED INTO EXISTING GROUND (80-85 l.m.+/-)
				opuoling	HYDROSEEDING:
50 50 5 50	<i>Cornus racemosa Diervila lonicera Parthenocisus inse Prunus virginiana</i>	Gray Dogwood Bush Honeysuckle Erta Thicket Creeper Choke Cherry	45-75cm 1 gal 45-75cm 1 gal 2 years min 1 gal 45-75cm 1 gal	1.0m O.Cstaggered 1.0m O.Cstaggered 1.0m O.Cstaggered 1.0m O.Cstaggered	PROGANICS DUAL BIOTIC SOIL MEDIA AND ENGINEERED FIBER MATRIX (EFM) (50sq.m. +/-)
50 50 <u>50</u> 80	<i>Rhus typhina Symphoricarpus a Viburnum lentago</i>	Staghorn Sumac Ibus Common Snowber Nannyberry	45-75cm 1 gal ry 45-75cm 1 gal 45-75cm 1 gal	1.0m O.Cstaggered 1.0m O.Cstaggered 1.0m O.Cstaggered	FILLING LOWER SLOPE AREAS WITH SPECIFIED PLANTING SOIL MIXTURE (50 sq.m) VARYING DEPTH (0.575m.)
	no este Dient I in	•			MASS PLANTING OF SHRUBS (80) AND HERBACEOUS PLUGS (400) (47 sq.m.)
Herba	ceous Plant Lis		Size / Condition		Ave Shrub Spacing 1.0m O.C. Ave Herbaceous Spacing 0.4m O.C.
Est. Qty	Scientific Name	Common Name	(mm)	Spacing	
0	Anemone canader Eurvbia macrophy	nsis Canada Anemone Large Leaved Ast	50 x 125 plug er 50 x 125 plug	0.3 - 0.5m 0.C. 0 3 - 0 5m 0 C	PROPOSED 30/45cm. DIA. SILT SOXX
0	Solidago flexicauli	s Zig-Zag Goldenroo	50 x 125 plug	0.3 - 0.5m 0.C.	N° REVISION DATE BY
0	Carex arctata Carex penduncula	ta Long-Stalked Sed	ge 50 x 125 plug	0.3 - 0.5m 0.C. 0.3 - 0.5m 0.C.	
0	Carex pensylvanic Elymus virginicus	a Pensylvania Sedge Virginia WildRye	e 50 x 125 plug 50 x 125 plug	0.3 - 0.5m O.C. 0.3 - 0.5m O.C.	
0	Elymus hystrix	Bottlebrush Grass	50 x 125 plug	0.3 - 0.5m 0.C.	1. ISSUED FOR APPROVAL 2025/03/31 SC SCALE SCALE SCALE
400		nam Deer Tongue	50 x 125 plug	0.5 - 0.5m 0.C.	1:75 0 1 2 3 4 5
Wood	lland Edge Se	ed Mix			NORTH ARROW
Scientifi	c Name	Common Name	(kg PLS per Propor	tion of	S STEPHAN CR/SB
Forbs (k Anemone Desmodi	oroad-leaved species e canadensis um canadense	5) Canada Anemone Showy Tick Trefoil	- 3 - 3	.5 .5	MOTFOR CONSTRUCTION UNLESS SIGNED & DATED OF MEMBER 10051031
Helianthu	laciopriyna is divaricalus flexicaulis	Woodland Sunflower Zig-Zag Goldenrod	- 2	.5 .5	NOT FOR CONSTRUCTION UNLESS SIGNED & DATED
Solidago Solidago Symphiot	nemoralis rugosa trichum cordifolium	Grey Goldenrod Rough Goldenrod Heart-leaved Aster	- 1 - 1 - 3	.5 .5 .0	BEACON
Carex arc	, ctata dunculata	Drooping Wood Sedge	- 10 - 10).0).0	L I
Carex pe Elymus c	nsylvanica anadensis	Pensylvanica Sedge Canada Wild Rve	- 10 - 15).0 5.0	MARKHAM, ON L3P 1X5 www.beaconenviro.com CLIENT
Elymus v Elymus h Panicum Panicum	irginicus ystrix (Hystrix patula) clandestinum virgatum	Virginia Wild Rye Bottlebrush Grass Dear -Tongue Switch Grass	- 15 - 20 - 10 - 10	5.0).0).0).0	NEATT COMMUNITIES
Total nat	ive species		27 10	0.0	
<i>Nurse</i> Species	Crop Seed Mix	on Name See	eding rate PLS Req	uired	150 STEELES AVE. MILTON
Avena sa	<i>tiva</i> Oats	(PLS kg	30 (kg/ 110 s 30 10	sq.m.)	
Festuca i Total nui	rubra Creepir rse grasses	ng Red Fescue	30 10 60 20		SLOPE RESTORATION PLAN PLANTING CONCEPT PLAN
				JCEU	DESIGN BY: SC PROJECT NO: 221265
			NOT FOR CON	STRUCTION	DRAWN BY: SC SHEET NO: CHECKED BY: SC/JS DATE: 2025/03/21

						SUBJECT SITE
Woody	Plant List - Liv	es Stakes (87 L.M.+/	-) Sizo	Specing	A state to the state of the sta	A CONTRACTOR OF
			Size	Spacing		
50 100	Cornus amomum Cornus racemosa	Gray Dogwood 15-	35mm dia x 600 -1000	mm L 0.6m 0.C. +/- mm L 0.6m 0.C. +/-	The Carl State State Carl State Carl State Carl State	Milli Pond
50	Cornus rugosa	Round Leaf Dogwood 15-	35mm dia x 600 -1000	mm L 0.6m 0.C. +/-	The second secon	A A A A A A A A A A A A A A A A A A A
40 40	<i>Salix exigua</i>	Sandbar Willow 15-	35mm dia x 600 -1000	mm L 0.6m 0.C. +/- mm L 0.6m 0.C. +/-	HIN THE REAL PROPERTY OF THE R	Star I Star
70	Viburnum lentago	Nannyberry 15-	35mm dia x 600 -1000	mm L 0.6m 0.C. +/-	KEYMAP	
350					LEGE	:ND
Woody	Plant List - (Sh	ort Fascines) Horizo	ntal Layout btw So	xx & Slope (50L.M.)		
Est. Qty	Scientific Name	Common Name	Size	Layout		JNTOUR ELEVATION
30	Cornus amomum	Sllky Dogwood 15-	-35mm dia x 1000 - 120	00mm L Bundle		JRVEYED TREES
40 35	Cornus racemosa	Gray Dogwood 15-	35mm dia x 1000 - 120 35mm dia x 1000 - 120	00 mm L Bundle		
25	Cornus sericea	Red Osier Dogwood 15	35mm dia x 1000 - 120	00 mm L Bundle		EE CANOPY
15 35	Salix exigua Viburnum lentado	Sandbar Willow 15- Nannyberry 5-3	35mm dia x 1000 - 120 5mm dia x 1000 - 1200	0 mm L Bundle		
150	visamam rentago				PROPOSED 2 SLOPE INTER	0-30cm DIA. VEGETATED RUPTION SOXX (20-30 l.m.)
Waadu	Plant Liet				PROPOSED 4	5-60cm DIA. VEGETATED
Est. Qtv	Scientific Name	Common Name	Size Conditio	n Spacing	INTO EXISTIN	IG GROUND (80-85 l.m.+/-)
					HYDROSEED WOODLAND	ING: MEADOW SEED MIX WITH
50 50	Cornus racemosa Diervila lonicera	Gray Dogwood Bush Honevsuckle	45-75cm 1 gal 45-75cm 1 gal	1.0m O.Cstaggered	PROGANICS	DUAL BIOTIC SOIL MEDIA
5	Parthenocisus inse	erta Thicket Creeper	2 years min 1 gal	1.0m O.Cstaggered	(50sq.m. +/	-)
50 50	Prunus virginiana Rhus typhina	Choke Cherry Staghorn Sumac	45-75cm 1 gal 45-75cm 1 gal	1.0m O.Cstaggered 1.0m O.Cstaggered	FILLING LO	WER SLOPE AREAS WITH
50	Symphoricarpus a	Ibus Common Snowberr	y 45-75cm 1 gal	1.0m O.Cstaggered	SPECIFIED P	LANTING SOIL MIXTURE
<u> </u>	Viburnum lentago	Nannyberry	45-75cm 1 gal	1.0m O.Cstaggered	(30 sq.m) v	ARTING DEPTH (0.57 5III.)
					MASS PLAN AND HERBA	TING OF SHRUBS (80) CEOUS PLUGS (400)
Herbac	ceous Plant Lis	t]	Ave Shrub S	Spacing 1.0m O.C.
Est. Qty	Scientific Name	Common Name	(mm)	Spacing		Bous Spacing 0.4m O.C.
0	Anemone canader	nsis Canada Anemone	50 x 125 plug	0.3 - 0.5m O.C.	PROPOSED	30/45cm. DIA. SILT SUXX
0	Solidago flexicauli	s Zig-Zag Goldenrod	50 x 125 plug	0.3 - 0.5m 0.C.	N° REVISION	DATE BY
0	Carex arctata Carex penduncula	Drooping Wood Se ta Long-Stalked Sede	edge 50 x 125 plug 50×125 plug	0.3 - 0.5m 0.C.		
0	Carex pensylvanic	a Pensylvania Sedge	50 x 125 plug	0.3 - 0.5m 0.C.		
0	Elymus virginicus Elymus hystrix	Virginia WildRye Bottlebrush Grass	50 x 125 plug 50 x 125 plug	0.3 - 0.5m 0.C.	1. ISSUED FOR APPROVAL	2025/03/31 SC
0	Panicum clandesti	num Deer- Tongue	50 x 125 plug	0.3 - 0.5m 0.C.	SCALE	
400					0 1	2 3 4 5
Wood	lland Edge Se	ed Mix			NORTH ARROW	SEAL
Scientific	c Name	Common Name	(kg PLS per Propor /10,000 sq.m) seed m	tion of hix (%)		A SEPTIME STORE
Forbs (b	proad-leaved species	S)	0		E	NOT FOR CONSTRUCTION UNLESS SIGNED & DATED
Desmodiu	um canadensis	Showy Tick Trefoil	- 3.	5	TOX	MEMBER NOSLO31
Helianthu	nacropnylla Is divaricalus	Woodland Sunflower	- 2.	5		NOT FOR CONSTRUCTION UNLESS SIGNED & DATED
Solidago Solidago	nemoralis	Cig-Zag Goldenrod Grey Goldenrod	- 2.	5		
Solidago Symphiot	rugosa richum cordifolium	Rough Goldenrod Heart-leaved Aster	- 1. - 3.	0	BF	ACON
Grasses	i				ENVIR	ΟΝΜΕΝΤΑΙ
Carex ard Carex pe	ctata dunculata	Drooping Wood Sedge Long-stalked Sedge	- 10 - 10	.0 .0	MARKHAM OFFICE 80 MAIN ST NORTH MARKHAM, ON L3P 1X5	T) 905. 201. 7622 F) 905. 201. 0639 www.beaconenviro.com
Carex per Elymus ca	nsylvanica anadensis	Pensylvanica Sedge Canada Wild Rye	- 10 - 15	.0 .0	CLIENT	
Elymus vi Elymus h	irginicus ystrix (Hystrix patula)	Virginia Wild Rye Bottlebrush Grass	- 15 - 20	.0 .0	NEATT COI	MMUNITIES
Panicum Panicum	clandestinum virgatum	Dear -Tongue Switch Grass	- 10 - 10	.U .0	PROJECT	
Total nat	ive species		27 100	0.0	BESTORA	TION PLAN
					150 STEELES	AVE. MILTON
NURSE Species	Crop Seed Mix Comm	on Name See	ding rate PLS Requ	Jired		
Avena sa	<i>tiva</i> Oats	(PLS kg	10,000 sq.m.) (kg/ 110 s 30 10	<u>.q.m.)</u>	SHEET TITLE	MINARY
Festuca r	ubra Creepir	ng Red Fescue	30 10		SLOPE REST	ORATION PLAN
l otal nur	se grasses		ου 20		PLANTING C	UNCEPT PLAN
			חחחם		DESIGN BY: SC	PROJECT NO: 221265
			TROPL	ノンヒロ	DRAWN BY: SC	SHEET NO:
			NOT FOR CONS	STRUCTION	CHECKED BY: SC/JS	I_8
					DATE: 2025/03/21	
					•	

					SUBJECT SITE
	Plant List - Liv	es Stakes (87 L.M.+/·	-) Sizo	Spacing	A support the second se
			312e		
50 100	Cornus amomum Cornus racemosa	Gray Dogwood 15-	35mm dia x 600 -1000	0.6 m O.C. +/-	O? THE REAL COMMENTATION AND A COMMENTATION OF THE PORT
50	Cornus rugosa	Round Leaf Dogwood 15-	35mm dia x 600 -1000	0.6m 0.C. +/-	
40 40	Cornus sericea Salix exigua	Red Osier Dogwood 15- Sandbar Willow 15-	35mm dia x 600 -1000 35mm dia x 600 -1000	0 mm L = 0.6 m 0.0 mm L = 0.6 m 0.0 m +/-	manufacture the second se
70	Viburnum lentago	Nannyberry 15-	35mm dia x 600 -1000	0mm L 0.6m 0.C. +/-	
350					
'oodv	Plant List - (Sh	ort Fascines) Horizo	ntal Lavout btw Sc	oxx & Slope (50L.M.)	LEGEND
st. Qty	Scientific Name	Common Name	Size	Layout	206.00 EXISTING CONTOUR ELEVATION
20		Siller Degrade 15	25 mm dia y 1000 12		EXISTING SURVEYED TREES
30 40	Cornus racemosa	Gray Dogwood 15-	35mm dia x 1000 - 12	00 mm L Bundle	
35	Cornus rugosa	Round Leaf Dogwood 15-	35mm dia x 1000 - 12	00 mm L Bundle	
25 15	Salix exigua	Sandbar Willow 15-	35mm dia x 1000 - 12	00 mm L Bundle	PRUNED TREE CANOPY
35	Viburnum lentago	Nannyberry 5-3	5mm dia x 1000 - 120	0 mm L Bundle	PROPOSED 20-30cm DIA. VEGETATED
130					SLOPE INTERRUPTION SOXX (20-30 l.m.
oodv	Dlant I iet				PROPOSED 45-60cm DIA. VEGETATED
st. Qtv	Scientific Name	Common Name	Size Conditi	on Spacing	INTO EXISTING GROUND (80-85 l.m.+/-)
				Spacing	
50	Cornus racemosa	Gray Dogwood	45-75cm 1 gal	1.0m O.Cstaggered	PROGANICS DUAL BIOTIC SOIL MEDIA
50	Parthenocisus inse	erta Thicket Creeper	2 years min 1 gal	1.0m O.Cstaggered	AND ENGINEERED FIBER MATRIX (EFM)
50	Prunus virginiana	Choke Cherry	45-75cm 1 gal	1.0m O.Cstaggered	
50 50	Rhus typhina Symphoricarpus a	Staghorn Sumac	45-75cm 1 gal	1.0m O.Cstaggered	FILLING LOWER SLOPE AREAS WITH SPECIFIED PLANTING SOIL MIXTURE
50	Viburnum lentago	Nannyberry	45-75cm 1 gal	1.0m O.Cstaggered	(50 sq.m) VARYING DEPTH (0.575m.)
80					MASS PLANTING OF SHRUBS (80)
le v i e e e					AND HERBACEOUS PLUGS (400) (47 sq.m.)
ierbac	eous Plant Lis	L	Size / Condition	n]	Ave Shrub Spacing 1.0m O.C. Ave Herbaceous Spacing 0.4m O.C.
st. Qty	Scientific Name	Common Name	(mm)	Spacing	PROPOSED 30/45cm DIA_SILT_SOXX
0	Anemone canader	<i>isis</i> Canada Anemone	50 x 125 plug	0.3 - 0.5 m 0.C	
0	Solidago flexicauli	<i>zig-Zag Goldenrod</i>	50 x 125 plug	0.3 - 0.5m 0.C.	N° REVISION DATE BY
0	Carex arctata	Drooping Wood Se	dge 50 x 125 plug	0.3 - 0.5m O.C.	
0	Carex pensylvanic	a Pensylvania Sedge	50 x 125 plug	0.3 - 0.5m 0.C.	
0	Elymus virginicus	Virginia WildRye	50 x 125 plug	0.3 - 0.5m O.C.	
0	Elymus nystrix Panicum clandesti	num Deer- Tonque	50 x 125 plug 50 x 125 plug	0.3 - 0.5m 0.C.	SCALE
400					1:75
					NORTH ARROW SEAL
Nood	lland Edge Sec	ed Mix	(ka PLS per Propo	rtion of	TION OF LAAD
	, name		/10,000 sq.m) seed	mix (%)	
Forbs (b	road-leaved species) Canada Anemone	-	3.5	NOT FOR CONSTRUCTION UNLESS SIGNED & DATED
Desmodiu Eurypia m	im canadense	Showy Tick Trefoil	-	3.5	2 NOSLO3L
lelianthu.	s divaricalus	Woodland Sunflower	- 2	2.5	NOT FOR CONSTRUCTION UNLESS SIGNED & DATED
Solidago I Solidago I	nemoralis	Grey Goldenrod	- 2	1.5	
Solidago i Symphioti	rugosa richum cordifolium	Rough Goldenrod Heart-leaved Aster	- 1 - ?	3.0	BEACON
Grasses					ENVIRONMENTAL
Carex arc Carex peo	tata dunculata	Drooping Wood Sedge Long-stalked Sedge	- 1 - 1	0.0 0.0	MARKHAM OFFICE T) 905. 201. 7622 80 MAIN ST NORTH F) 905. 201. 0639 MARKHAM ONLOS (VE F) 905. 201. 0639
Carex per	nsylvanica anadensis	Pensylvanica Sedge Canada Wild Rve	- 1 - 1	0.0	CLIENT
Elymus vi Elymus bi	rginicus vstrix (Hystrix patula)	Virginia Wild Rye Bottlebrush Grass	- 1	5.0	NEATT COMMUNITIES
Panicum (clandestinum virgatum	Dear -Tongue	- 2 - 1	0.0	
otal nati	ive species	CWIGH CHUSS	27 1(
					RESTORATION PLAN
Nurse	Crop Seed Mix		dina sets	uire d	TOUSTEELES AVE. MILTON
pecies	Commo	א name See (PLS kg/	aing rate PLS Rec /10,000 sq.m.) (kg/ 110	juirea sq.m.)	SHEET TITLE
Vena sat	tiva Oats	a Red Fescue	<u>30</u> 10 30 10		SI OPE RESTORATION DI ANI
fotal nur	se grasses		60 20		PLANTING CONCEPT PLAN
					DESIGN BY: DO PROJECT NO: DO LOOF
				JSFD	
				STRUCTION	SC SHEET NO:
					CHECKED BY: SC/JS
					DATE: 2025/03/21

	<u> </u>				SUBJECT SITE
Woody	Plant List - Liv	es Stakes (87 L.M.+	/-)		T The second sec
Est. Qty	Scientific Name	Common Name	Size	Spacing	
50 100	Cornus amomum	Sllky Dogwood 15 Grav Dogwood 15	-35mm dia x 600 -1000	mm L 0.6m 0.C. +/-	The second secon
50	Cornus rugosa	Round Leaf Dogwood 15	-35mm dia x 600 -1000	mm = 0.6m 0.0. +/-	
40	Cornus sericea	Red Osier Dogwood 15	-35mm dia x 600 -1000	mm L 0.6m 0.C. +/-	with the state of the second
40	Salix exigua	Sandbar Willow 15	-35mm dia x 600 -1000	mm L 0.6m 0.C. +/-	Man and States
70	Viburnum lentago	Nannyberry 15	-35mm dia x 600 -1000	mm L 0.6m 0.C. +/-	KEYMAP
350					
Woody	Plant List - (Sh	ort Fascines) Horizo	ontal Layout btw So	xx & Slope (50L.M.)
Est. Qty	Scientific Name	Common Name	Size	Layout	EXISTING CONTOUR ELEVATION
30	Cornus amomum	Sllky Dogwood 15	-35mm dia x 1000 - 120	00mm I Bundle	EXISTING SURVEYED TREES
40	Cornus racemosa	Gray Dogwood 15	-35mm dia x 1000 - 120	00 mm L Bundle	
35	Cornus rugosa	Round Leaf Dogwood 15	-35mm dia x 1000 - 120	00 mm L Bundle	
25	Cornus sericea	Red Osier Dogwood 15	-35mm dia x 1000 - 120	00 mm L Bundle	PRUNED TREE CANOPY
35	Viburnum lentado	Nannvberrv 5-3	35mm dia x 1000 - 120	0 mm L Bundle	
150				-	PROPOSED 20-30cm DIA. VEGETATED SLOPE INTERRUPTION SOXX (20-30 l.m.)
Noody	Plant I iet				PROPOSED 45-60cm DIA. VEGETATED
Est. Qtv	Scientific Name	Common Name	Size Conditio	on Spacina	INTO EXISTING GROUND (80-85 l.m.+/-)
·· - y				<u>د</u> ۲-	
50	Cornus racemosa	Gray Dogwood	45-75cm 1 gal	1.0m O.Cstaggered	PROGANICS DUAL BIOTIC SOIL MEDIA
50 5	Diervila Ionicera	Bush Honeysuckle	45-75CM 1 gal	1.0m O.Cstaggered	AND ENGINEERED FIBER MATRIX (EFM)
50	Prunus virainiana	Choke Cherry	45-75cm 1 dal	1.0m O.Cstaggered	(SUSQ.M. +/-)
50	Rhus typhina	Staghorn Sumac	45-75cm 1 gal	1.0m O.Cstaggered	FILLING LOWER SLOPE AREAS WITH
50	Symphoricarpus a	Ibus Common Snowber	ry 45-75cm 1 gal	1.0m O.Cstaggered	SPECIFIED PLANTING SOIL MIXTURE
50	Viburnum lentago	Nannyberry	45-75cm 1 gal	1.0m O.Cstaggered	(50 sq.m) VARTING DEPTH (0.575III.)
80					MASS PLANTING OF SHRUBS (80) AND HERBACEOUS PLUGS (400)
Herbac	ceous Plant Lis	t			(47 sq.m.) Ave Shrub Spacing 1.0m O.C.
Est. Qty	Scientific Name	Common Name	Size / Conditior (mm)	Spacing	Ave Herbaceous Spacing 0.4m 0.C.
0	Anemone canader	nsis Canada Anemone	50 x 125 plug	0.3 - 0.5m O.C.	PROPOSED 30/45cm. DIA. SILT SOXX
0	Eurybia macrophy	<i>lla</i> Large Leaved Ast	cer 50 x 125 plug	0.3 - 0.5m O.C.	
0	Solidago flexicauli. Carex arctata	5 Zig-Zag Goldenroo Drooning Wood S	$50 \times 125 \text{ plug}$	0.3 - 0.5 m 0.C	N° REVISION DATE BY
0	Carex penduncula	ta Long-Stalked Sed	$\frac{1}{9}$	0.3 - 0.5m 0.C.	
0	Carex pensylvanic	a Pensylvania Sedg	e 50 x 125 plug	0.3 - 0.5m 0.C.	
0	Elymus virginicus	Virginia WildRye	50 x 125 plug	0.3 - 0.5m O.C.	
0	Elymus hystrix Panicum clandesti	Bottlebrush Grass	50 x 125 plug	0.3 - 0.5m 0.C.	SCALE
400		nam Deel Tongue		0.5 - 0.511 0.0.	1:75
					NORTH ARROW
Wood	lland Edge Se	ed Mix	<i>"</i> , 51.0 5		TION OF LAND
Scientific	c Name	Common Name	(kg PLS per Propo /10,000 sq.m) seed r	nix (%)	
Forbs (b	proad-leaved species	;)			
Anemone	canadensis	Canada Anemone	- 3	.5	THE MEMBER
Eurybia n	nacrophylla	Large-leaved Aster	- 3	.5	TWOSL'S
Helianthu	s divaricalus flexicaulis	Woodland Sunflower	- 2	.5	NOT FOR CONSTRUCTION UNLESS SIGNED & DATED
Solidago	nemoralis	Grey Goldenrod	- 1	.5	
Solidago Svmphiot	rugosa richum cordifolium	Rough Goldenrod Heart-leaved Aster	- 1 - 3	.5 .0	
			-		
Grasses Carex arc	tata	Drooping Wood Sedge	- 10	0.0	L IN V I IN U IN IVI E IN I A L MARKHAM OFFICE T) 905. 201. 7622
Carex per	dunculata nsvlvanica	Long-stalked Sedge	- 10	0.0	80 MAIN ST NORTH F) 905. 201. 0639 MARKHAM, ON L3P 1X5 www.beaconenviro.com
Elymus ca	anadensis	Canada Wild Rye	- 15	5.0	CLIENT
Elymus vi Elymus h	irginicus vstrix (Hvstrix patula)	Virginia Wild Rye Bottlebrush Grass	- 15	5.0	NEATT COMMUNITIES
Panicum Panicum	clandestinum virgatum	Dear -Tongue Switch Grass	- 10).0	
Total not			27 40	0.0	PROJECT
Total hat	ive species		21 10	0.0	RESTORATION PLAN
Nurco	Crop Sood Mix				150 STEELES AVE. MILTON
Species	Comm	on Name Se	eding rate PLS Req	uired	
Avena sa	<i>tiva</i> Oats	(FL3 K	30 10	<u></u>	SHEET TITLE
Festuca r	ubra Creepir	ng Red Fescue	30 10		SLOPE RESTORATION PLAN
Total nur	se grasses		60 20		PLANTING CONCEPT PLAN
					DESIGN BY: PROJECT NO: DOLLARS
			PR()P()SED	SC 221265
					DRAWN BY: SC SHEET NO:
				SIKUCTION	CHECKED BY: SC/JS
					DATE: 2025/03/21



Appendix D

Landscape Architect's Certificate of Completion



www.beaconenviro.com

January 30, 2025

BEL 221265

Mr. Mike Vernooy Neatt Communities 775 Main St. E. Milton, On L9T 3Z3 via email: mike@neattcommunities.com

Re: Certificate of Completion for the Restoration and Buffer Plans, Drawing # L-0 to L-9 dated October 13, 2023, and Restoration Planting Plans Drawing # L0 to L-6 dated August 27, 2024, at 150 Steeles Ave., Town of Milton, Regional Municipality of Halton

Dear Mike,

Please accept this letter as certification that as of June 21 2024, the Restoration and Buffer Plans constructed at the above noted address have been completed in accordance with the approved plans (Stamped November 1 2023) and to the satisfaction of Beacon Environmental. The 2-year warranty period begins on June 21, 2024 and will continue through to June 21, 2026.

This letter also certifies that as of November 8, 2024, the Restoration Planting Plans, Drawing L-1 to L-6 were implemented to the satisfaction of Beacon Environmental. The 2-year warranty period begins on November 8, 2024 and will continue through to November 8, 2026.

Should you have any questions, please contact the undersigned at <u>scrispin@beaconenvironemtal.com</u> or 519-400-9491.

Prepared by: Beacon Environmental Ltd. Reviewed By: Beacon Environmental Ltd.



Stephan Crispin, B.L.A, OALA, CSLA, Senior Landscape Architect

Jan Gr

Jean-Marc Daigle, B.L.A., M.E.S., OALA, CSLA Senior Landscape Architect



Appendix E

Restoration Area Photo Log



Photograph 1. NHS Restoration and Adjacent NHS, South-Facing View (Oct 16, 2024).



Photograph 2. Wetland (foreground) and Enhancement Area (background), South-Facing.





Photograph 3. Enhancement Area: Former Buckthorn Thicket with Native Trees and Shrubs.



Photograph 4. Eastern Portion of Woodland Restoration. Note photo predates topsoiling.



Appendix E Photo Log



Photograph 5. Western Portion of Woodland Restoration and NHS Enhancement Area.

