



GUIDING SOLUTIONS IN THE
NATURAL ENVIRONMENT

Environmental Impact Study 230 Finch Avenue City of Pickering

Prepared For:

Fairglen Homes

Prepared By:

Beacon Environmental Limited

Date: Project:

December 2021 220352

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1. Introduction

Beacon Environmental Limited (Beacon) was retained by Fairglen Homes to prepare an Environmental Impact Study (EIS) in support of a proposed residential development of 230 Finch Avenue in the City of Pickering, Regional Municipality of Durham (**Figure 1**). These lands will herein be referred to as the subject property and they total an area of approximately 0.5 ha. The subject property is within the Petticoat Creek watershed.

The Region of Durham Official Plan (2020) and the City of Pickering Official Plan (2018) include policies requiring that an EIS be prepared in support of development applications for lands that are situated within or adjacent to the Region's Natural Heritage System or lands identified as Natural Area on the City's Land Use Structure. As the study area has been identified on the Region's and City's Official Plan as containing a natural feature, an EIS is required to address the potential effects of the proposed development on the natural features. This EIS has also been prepared in support of a concept development application.

The purpose of the EIS is to identify natural heritage features and functions on or adjacent to the study area, to assess impacts of the proposed development, and to recommend mitigation measures to ensure that the significant natural features are not adversely affected. The EIS will also demonstrate that the proposed development complies with applicable environmental legislation, policies and regulations at the provincial, regional and local levels.

2. Policy Review

The following sections summarize key environmental legislation policies and regulations that will apply to the study area within the context of the proposed development application.

2.1 Provincial Policy Statement (2020)

Natural Heritage Policy 2.1 of the *Provincial Policy Statement* (PPS) (MMAH 2020) provides direction to regional and local municipalities regarding planning policies for the protection and management of natural heritage features and resources for applications pursuant to the *Planning Act*. It took effect on April 30, 2014, superseding the PPS of 2005. The PPS defines natural heritage features and provides planning policies for each.

Section 2.1 of the PPS describes eight natural heritage features and provides planning policies for each. The *Natural Heritage Reference Manual* (MNR 2010) is a technical document used to help assess the natural heritage features listed below:

- a) significant wetlands;
- b) significant coastal wetlands;
- c) significant habitat of endangered and threatened species;
- d) fish habitat;
- e) significant woodlands;
- f) significant valleylands;

- g) significant Areas of Natural and Scientific Interest (ANSIs); and*
- h) significant wildlife habitat.*

Each of these features is afforded varying levels of protection subject to guidelines, and in some cases, regulations. Of these features, significant wetlands and ANSIs are designated by the Ministry of Natural Resources and Forestry (MNR), and woodlands are designated by the municipality using criteria provided by the MNR. Habitat of endangered or threatened species is regulated by Ministry of the Environment, Conservation and Parks (MECP) if a species is identified on a property through site specific investigation or through existing information. Fish habitat is governed by Fisheries and Oceans Canada (DFO). The identification and regulation of the remaining features is the responsibility of the municipality or other planning authority.

The key text from the PPS that applies to the study area is reproduced below. The study area is situated in Ecoregion 6E.

- 2.1.4 Development and site alteration shall not be permitted in:*
 - a) significant wetlands in Ecoregions 5E, 6E and 7E; and*
 - b) significant coastal wetlands.*

- 2.1.5 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 2.1.4(b)*

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

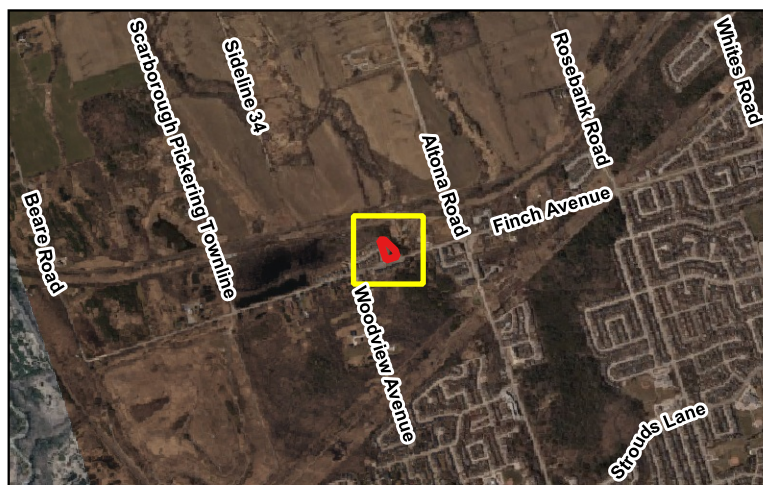
- 2.1.6 Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.*



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

Furthermore, development and site alteration shall not be permitted on “adjacent lands” to the natural heritage features/areas addressed in policies 2.1.4, 2.1.5, 2.1.6 and 2.1.7:

Unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated [through an EIS] that there will be no negative impacts on the natural features or on their ecological functions.

Adjacent lands are defined in the PPS as “those lands contiguous to a specific natural heritage feature or area where it is likely that development or site alteration would have a negative impact on the feature or area.”



Site Location		Figure 1
230 Finch Avenue Pickering		
		Project: 220352 Last Revised: September 2021
Client: Fairglen Homes		Prepared by: BD Checked by: CS
	1:2,000	Inset Map: 1:40,000
Contains information licensed under the Open Government License—Ontario Orthoimagery Baselayer: 2020 (FBS)		

There are features located off the subject property.

2.2 Region of Durham Official Plan (Office Consolidation, 2020)

The Regional Municipality of Durham published its latest *Official Consolidated Plan* on May 26, 2020. It protects natural heritage features through a Greenland system. According to the Official Plan:

The Greenlands System includes areas with the highest concentration of sensitive and/or significant natural features and functions. These areas are to be managed as a connected and integrated natural heritage system recognizing the functional inter-relationships between them. The main features of the Greenlands System, particularly the Oak Ridges Moraine, valley systems and the Waterfronts, shall be protected for their special natural and scenic features, their roles as predominant landscape elements in the Region and the recreational opportunities that they facilitate. Further, linking the waterfronts with the Oak Ridges Moraine through the connecting valley shall be a primary objective of the continuous Greenlands System, as is linking of the valley systems themselves.

Greenlands include the following Key Natural Heritage Features (KNHF). The list of KNHFs is similar, but not identical, to the PPS list:

- Significant habitat of endangered and threatened, special concern and rare species;
- Fish habitat;
- Wetlands;
- Life Science Areas of Natural and Scientific Interest (ANSIs);
- Significant valleylands;
- Significant woodlands;
- Significant wildlife habitat;
- Sand barrens, savannahs and tallgrass prairies; and
- Alvars.

The Region of Durham Official Plan also recognizes the following Key Hydrologic Features (KHF):

- Permanent and intermittent streams;
- Wetlands;
- Lakes and their littoral zones;
- Kettle lakes and their surface catchment areas;
- Seepage areas and springs; and
- Aquifers and recharge areas.

The study area is designated on Schedule A, Map A-4 Regional Structure of the Durham Region Official Plan as Living Areas, within the Built Boundary, and Schedule B, Map B-1d Natural Heritage System & Key Natural Heritage and Hydrologic Features indicates Key Natural Heritage and Hydrologic Features occur east of the study area. Section 2.3.15 states that development or site alteration is not permitted within a key natural heritage and/or hydrologic feature and associated vegetation protection zone.

As per Section 2.3.14, the location and extent of key natural heritage and/or hydrologic features may be further confirmed through an EIS. The study area falls within an Urban Area and the vegetation

protection zone for any features present on the property shall be determined through an EIS completed in accordance with Policy 2.3.43 of the Plan.

There are features located off the subject property.

2.3 City of Pickering Official Plan (2018)

The City of Pickering published its latest Official Consolidated Plan (Edition 8) dated October 2018. It builds on the framework presented in the Region of Durham's Official Plan and protects natural heritage features through the Open Space System, which incorporates three types of natural areas: core areas, corridors and linkages. Schedule I – Land Use Structure identifies the subject property as Low Density Areas with Natural Areas to the north and east of the property.

Land uses for Natural Areas in the Open Space System are restricted and include conservation, environmental protection, restoration, education, passive recreation, existing residential and agricultural uses.

The Open Space System recognizes a connected and integrated natural heritage system comprised of KNHF and KHF and includes minimum vegetation protection zones. KNHF and KHF for the City's Open Space System are consistent with those identified in the PPS and Region of Durham OP. The City identifies the Natural Heritage System on Schedules IIIA through IIIE – Resource Management: Natural Heritage Features of the OP. Schedule IIIA identifies the subject property as Natural Heritage System. Schedule IIIB identifies the Rouge-Duffins Wildlife corridor. Schedule IIIC identifies the Natural Heritage System on the subject property as being comprised of Shorelines, Significant Valley Lands and Stream Corridors and Wetlands. Schedule IIID identifies the subject property as within an area of High Aquifer Vulnerability and Groundwater Recharge.

Section 16.51 requires that within the Open Space System, outside of the Oak Ridges Moraine and the Seaton Urban Area, development or site alteration proposed within the minimum area of influence of a KNHF or HSF requires an environmental study to be completed. Table 18 summarizes the minimum area of influence and prescribes the following minimum protection zone for KNHF and HSF:

- **Wetlands** – all land within 30 metres of any part of the feature;
- **Fish habitat** - all land within 30 metres of any part of the feature;
- **Significant valleylands** - all land within 30 metres of any part of the feature;
- **Significant woodlands** – all land within 10 metres from the dripline of woodlands;
- **Permanent and intermittent streams inside the Pickering urban area** – all land within 10 metres of the stable top of bank or the limit of the floodplain, whichever is the greater;
- **Seepage areas and springs** – all land within 30 metres of any part of the feature;
- **Shoreline along Lake Ontario** – all lands within 30 m of the shoreline; and
- Any additional distances demonstrated as necessary through technical reports.

The subject property is within the South Pickering urban area and Section 16.51(c) states:

Consider vegetation protection zones smaller than those distances specified in Table 18 in the South Pickering where the conservation authority determined it to be appropriate, and where it can be demonstrated that there is no increase in risk to life or property; no

impact to the control of flooding, erosion, dynamic beach, or pollution; and where a net environmental benefit can be established on the property.

There are features located off the subject property.

2.4 Toronto and Region Conservation Authority Regulations and Guidelines

2.4.1 Conservation Authorities Act (Ontario Regulation 166/06)

The TRCA regulates hazard lands including creeks, valleylands, shorelines, and wetlands.

With respect to wetlands, the regulated area extends to within 30 m of an unevaluated wetland and within 120 m of a Provincially Significant Wetland (or any ORM wetland). The regulation requires the issuance of a permit from the Conservation Authority to allow “interference” with a wetland. With respect to floodplain and valleylands, the regulation extends 15 m from the greater level of constraint.

In the case of a proposed development (or interference in the case of wetlands) the presence of any regulated features may trigger the need for a permit and consequentially a supporting EIS. Once requested studies have been completed there may be a requirement for features to be maintained and/or for protective buffers to be placed on features or hazard lands within the study area.

The TRCA will generally require that all watercourses stay in their natural state with respect to development proposals, while development within the flood limit of a watercourse is generally not allowed. However, subject to conformity with the applicable Official Plan, completion of appropriate studies and completion of the Conservation Authority process, a permit *may* be issued for development or site alteration within the regulated area.

The subject property is regulated by the TRCA based on the presence of a top of bank within 15 m associated with Petticoat Creek to the east.

2.4.2 TRCA Living City Policies for Planning and Development (2014)

The Living City Policies (LCP) for Planning and Development in the watersheds of the TRCA was approved by the Authority Board on November 28, 2014.

The LCP contains policies related to terrestrial resources, water resources, natural features and areas, natural hazards, and potential natural cover and buffers. Section 7.3 contains TRCA’s policies for how to define, protect, enhance, and secure a Natural Heritage System. The policies described in Section 7.3.1.4 have been identified with the goal of protecting lands that have the potential to be restored in order to enhance existing natural cover and manage natural hazards. The LCP do not permit new development (including lot creation) within hazard lands (i.e., within the floodplain) where no development previously existed.

As per Section 7.3.1.4 of the LCP, the TRCA prescribes the following buffers to natural features and hazards as it relates to the subject property:

Valley or Stream Corridors – a 10-metre buffer from the greater of the long term stable top of slope/bank, stable toe of slope, Regulatory flood plain, meander belt, and any contiguous natural features or areas; and

Wetlands – a 30-metre buffer from provincially significant wetlands and a 10-metre buffer for all other wetlands and any contiguous natural features or areas.

Woodlands – a 10-metre buffer from the dripline and any contiguous natural features or areas.

Section 7.5.2.5 and Sections 8.4 and 8.5 outline TRCA's policies as they pertain to O. Reg. 166/06 and state that TRCA may permit development, interference or alteration within valley or stream corridor subject to the results of technical reports or assessments conducted in accordance with provincial and TRCA standards.

Section 8.4.9 states that in recognition of the redevelopment and intensification trends within existing urbanized areas of TRCA's watersheds and Lake Ontario shoreline, development may be set back distances other than those listed in Section 8.4 where TRCA determines it to be appropriate and where the following have been demonstrated to the satisfaction of TRCA:

- a) *The development has regard for the existing development setbacks on the subject property and within the context of existing development patterns and characteristics within the valley and stream corridor reach, the Lake Ontario shoreline reach or adjacent to a wetland; and*
- b) *There is no increase in risk to life or property; and there is no impact to the control of flooding, erosion, dynamic beaches, pollution or the conservation of land, which may need to be demonstrated through a comprehensive environmental study or technical report.*

2.5 Endangered Species Act (2007)

Ontario's *Endangered Species Act*, (2007, ESA) came into effect on June 30, 2008 and replaced the former 1971 Act. The ESA protects species listed as threatened or endangered by the Committee on the Status of Species at Risk in Ontario (COSSARO). Under the 2008 ESA over 200 species in Ontario are identified as extirpated, endangered, threatened, or of special concern.

The purposes of the *Endangered Species Act* (ESA) are:

- To identify species at risk based on the best available scientific information, including information obtained from community knowledge and aboriginal traditional knowledge;
- To protect species that are at risk and their habitats, and to promote the recovery of species that are at risk; and
- To promote stewardship activities to assist in the protection and recovery of species that is at risk.

Section 9 of the ESA generally prohibits the killing or harming of an endangered or threatened species, as well as the destruction of its habitat.

Section 10 of the ESA prohibits the damage or destruction of the habitat of all endangered or threatened species.

A permit from MECP is required under Section 17(2) (c) of the ESA for any works proposed within the habitat of a threatened or endangered species. Searches for these species require seasonal field work and in some cases even if the species are found to be present certain permit exemptions may be available.

3. Methodology

To characterize natural heritage resources and functions associated with the study area and adjacent lands, Beacon completed a review of available background information and undertook seasonally appropriate field investigations. A summary of the information reviewed, and surveys is summarized below.

3.1 Background Review

Background documents and supporting technical documents containing information relevant to the biophysical features of the study area were gathered and reviewed. This included, however was not limited, to the following sources:

- *Regional Municipality of Durham Official Plan (2020)*;
- *City of Pickering Official Plan (2018)*;
- Toronto and Region Conservation Authority Regulations and Policies;
- Ministry of Natural Resources and Forestry (MNRF) information; and
- *Endangered Species Act (2007)*.

Other sources of information, such as aerial photography and topographic maps, were also consulted prior to commencing field assessments.

Desktop Species at Risk Assessment

In preparation for on-site investigations Beacon conducted a desktop Species at Risk assessment and the following information sources were reviewed as part of the desktop screening:

- Provincially Tracked Species Layer (1 km grid) from LIO;
- Ontario Reptile and Amphibian Atlas (ORAA);
- Ontario Breeding Bird Atlas (OBBA);
- Natural Heritage Information Centre (NHIC) Data via the Make-A-Map application;
- Species at risk range maps <https://www.ontario.ca/environment-and-energy/species-risk-ontario-list>;
- High Resolution aerial photography of the property; and
- Natural heritage and physical feature layers from Land Information Ontario (LIO), including wetlands (provincially significant and un-evaluated wetlands), watercourses with thermal regime, as well as other geospatial layers.

The information sources referenced above were reviewed in a Geographic Information System (GIS) mapping environment that Beacon uses to assess the likelihood that species at risk and other significant natural heritage features and functions are present in an area of interest. This system allows Beacon to combine the most current information provided by MNRF through the LIO portal with GIS layers from provincial floral and faunal atlases. All relevant layers can then be overlaid on the most recent high resolution ortho-imagery. The screening process helps identify areas that can then be targeted (for example, potential habitat) during field assessment to maximize the efficiency and effectiveness of on-site investigations.

During field study, staff assessed the potential for protected species of flora and fauna to occur on the subject property.

3.2 Field Investigations

Field investigations were made by Beacon ecologists who undertook field surveys in 2020. Beacon corresponded with TRCA staff (Jamie Milnes, Ecologist and Stephanie Worrone, Planner) to ensure agreement with the work plan provided.

Vegetation Communities

A reconnaissance level site visit was conducted on September 9, 2020 to generally characterize the subject property and perform a natural heritage feature assessment.

Vegetation units on the subject lands were described and mapped on current colour ortho-photography of the lands using the Ecological Land Classification system for southern Ontario (Lee *et al.* 1998) to the extent possible given the season at the time of field investigations. This is the standard method used for describing vegetation communities in southern Ontario.

Habitat Assessment for Threatened and Endangered Wildlife

A search for Butternut (*Juglans cinerea*) trees took place concurrently with the ecological mapping. This is a relatively common tree species that is listed provincially and federally as Endangered.

Habitat for other wildlife protected under the ESA was considered at the time of field study.

Incidental Wildlife

While on site for the above noted tasks, staff recorded incidental observations of wildlife outside of the scoped work plan. This included evidence of species presence including scat and footprints, along with the organisms themselves.

4. Existing Conditions

4.1 Aquatic Resources

Petticoat creek is situated east of the subject property, 30 m from the limit at its closest point and is a warmwater system. A floodline to the watercourse is visualized on **Figure 2** and was extracted from the TRCA's publicly available floodplain mapping tool.

Site drainage is currently towards Finch Avenue and Nature Haven Crescent *via* sheet flow (Valdor Engineering Ltd. 2021).

4.2 Vegetation Communities

Vegetation on the study area was classified according to Ecological Land Classification (ELC) to the vegetation type (**Figure 2**).

A remnant hedgerow was delineated in the southeastern portion of the property that appeared to have previously encircled a formed homestead. The hedgerow is entirely composed of Eastern White Cedar (*Thuja occidentalis*) trees of varying ages and size, however maintained a linear and evidently planted nature (**Photograph 1**).



Photograph 1. Remnant Coniferous Hedgerow (September 9, 2020)

4.2.1 Cultural Communities

Most of the subject property was characterized as a form of cultural community, defined as areas either arising from or maintained from human activity. Typically, a high proportion of non-native species are found in cultural areas. The following communities were recorded at this location:

Mineral Cultural Thicket (CUT1)

A relatively small area contained within the hedgerow in the southeastern portion of the property was delineated and was predominantly composed of Staghorn Sumac (*Rhus typhina*) and European Buckthorn (*Rhamnus cathartica*). This was situated within the approximate area where a residential dwelling previously stood.

Mineral Cultural Meadow (CUM1-1)

A meadow community was located centrally (**Photograph 2**). This area was characterized as a CUM1-1 unit based on the dominance of herbaceous meadow species including asters (*Symphyotrichum* spp.), goldenrods (*Solidago* spp.), grasses (*Bromus inermis*, *Dactylis glomerata*), Common Milkweed (*Asclepis syriaca*), Queen Anne's Lace (*Daucus carota*) and extensive patches of Tansy (*Tanacetum vulgare*). Sparse occurrences of European Buckthorn were noted, along with patches of honeysuckle (*Lonicera* sp.).



Photograph 2. Dominant Meadow Community (CUM1-1; September 9, 2020)



Legend

- ▭ Subject Property
- ▭ Ecological Communities
- Approximate Top of Bank (Beacon 2020)
- TRCA Floodline
- Watercourse (MNR 2019)

Code	Community Description
CUM1-1	Dry-Moist Old Field Meadow
HE	Hedgerow
CUT1	Mineral Cultural Thicket

Existing Conditions

Figure 2

230 Finch Avenue Pickering



Project: 220352
Last Revised: September 2021

Client: Fairglen Homes

Prepared by: BD
Checked by: CS



1:600

0 10 20 m

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Orthoimagery Baselayer: 2020 (FBS)

4.2.2 Off-Site Vegetation

A wooded area is present to the north and east of the subject property and was not studied in detail given it is located generally further than 10 m from the subject property boundary. The woodland corridor appeared to be on a downslope and almost entirely composed of Eastern White Cedar (*Thuja occidentalis*) and is a Dry-Fresh White Cedar Coniferous Forest (FOC2-2).

4.3 Endangered or Threatened Species

As described in the preceding sections, Beacon staff conducted both desktop and on-site investigations to assess whether any endangered or threatened species were likely to occur on or adjacent to the subject property. **Table 1** provides Beacon’s assessment based on the results of field investigations combined with knowledge of the habitat preferences and natural history of the species being considered.

Table 1. Endangered or Threatened Species

Species	Status on SARO List	Were Species and/or Habitat Documented during on-site Assessment?
Vascular Plants (Dicots)		
Butternut, <i>Juglans cinerea</i>	END	Habitat present species absent. A targeted search for Butternut trees (<i>Juglans cinerea</i>) was conducted. This species is a provincially and nationally endangered tree species that, while still relatively common in southern Ontario, has been listed because the population has been declining due to the presence of a Butternut Canker disease. No Butternut were present on the subject property.
Reptiles and Amphibians		
Blanding’s Turtle, <i>Emydoidea blandingii</i>	END	No , although Blanding’s Turtle is known to be present in wetlands and waterbodies within 3 km of the subject property, it is highly unlikely that the species would be present on site because there are no habitat features present and the property is not situated between areas of habitat (nesting and/or aquatic).
Birds		
Bank Swallow, <i>Riparia riparia</i>	THR	No , vertical exposed banks (suitable habitat) are not present at this location.
Barn Swallow, <i>Hirundo rustica</i>	THR	No , a comprehensive habitat assessment was undertaken for this species. These birds construct conspicuous mud-based nests on the exterior of structures. The structure on site was thoroughly searched and nests were not identified.
Chimney Swift, <i>Chaetura pelagica</i>	THR	No , no structures were present on the subject property that would support breeding of this species. Chimney Swift typically nest in vertical structures such as chimneys.
Bobolink, <i>Dolichonyx oryzivorus</i>	THR	No , extensive grassland habitat is absent at this location and therefore suitable habitat is absent.

Species	Status on SARO List	Were Species and/or Habitat Documented during on-site Assessment?
Eastern Meadowlark, <i>Sturnella magna</i>	THR	No , extensive grassland habitat is absent at this location and therefore suitable habitat is absent.
Acadian Flycatcher, <i>Empidonax vireescens</i>	THR	No , these birds require extensive and mature woodlands which are absent at this location.
Least Bittern, <i>Ixobrychus exilis</i>	THR	No , these birds require extensive marsh and wetland habitat in which to breed which is absent at this location
Invertebrates		
Rusty-patched Bumble Bee, <i>Bombus affinis</i>	END	No , natural habitat on the subject property was limited and few flowering plants were present to support habitat for this species.
Eastern Pondmussel, <i>Ligumia nasuta</i>	END	No , aquatic habitat is absent on the subject property and therefore habitat for this species is not present.
Aquatic Species		
Redside Dace, <i>Clinostomus elongatus</i>	END	No , Redside Dace are extirpated from Petticoat Creek. These fish have not been captured since 1954 despite intermittent attempts since that time. The lack of Redside Dace in sampling efforts and lack of reports beyond a 50-year period suggests that this species is extirpated (COSEWIC 2007)
Mammals		
Little Brown Myotis, <i>Myotis lucifugus</i>	END	No , the methodology of the MNRF Guelph District's 'Bat and Bat Habitat Surveys of Treed Habitats' guideline, (April 2017) was implemented to determine the potential for suitable bat habitat to occur within the study area. Wooded communities including forests and swamps are absent on the subject property and therefore suitably maternity roosting habitat is absent.
Northern Myotis, <i>Myotis septentrionalis</i>	END	
Tri-colored Bat, <i>Perimyotis subflavus</i>	END	
Eastern Small-footed Myotis, <i>Myotis leibii</i>	END	

SARO: Species at Risk in Ontario List

END: Endangered

THR: Threatened

ORAA: Ontario Reptile and Amphibian Atlas

Based on the habitats present, no specimens of, or suitable habitat for, regulated species is present on or immediately adjacent the subject property.

4.4 Wetlands

Wetlands are evaluated by the province according to the Ontario Wetland Evaluation System (OWES), where significance is determined based on biological, social, hydrological, and other special features.

No wetlands occur on the subject property under the OWES or ELC methodology, and the closest wetland mapped by Land Information Ontario (LIO) is approximately 95 m to the northeast. This is an unevaluated wetland. A unit of the Townline Swamp Wetland Complex is situated northwest of the subject property and is approximately 112 m distant. and no hydrological interaction is anticipated.

4.5 Other Wildlife

No specific wildlife surveys were conducted on subject property, as it was not deemed necessary based on the habitat that is present.

Based on the existing habitat conditions on the property the potential for wildlife habitat was assessed. The property likely provides habitat for a limited number of common urban-tolerant wildlife species. Some mammals common to southern Ontario are also likely present in limited numbers. For example, Gray Squirrel (*Sciurus carolinensis*), Raccoon (*Procyon lotor*), Striped Skunk (*Mephitis mephitis*) and other common species are likely to occur. Similarly, a range of urban-tolerant and common breeding bird species are likely to occur. Habitat for rare or regulated species is not present.

5. Proposed Development

The proposed infill development envisions the construction of eight novel detached dwellings on lots having fronting on either Finch Avenue or Nature Haven Crescent (**Figure 3**).

The servicing details for the site are detailed in the Functional Servicing Report prepared by Valdor Engineering Inc (April 2021) and is summarized below from that report.

5.1 Water and Sanitary Servicing

An existing 250 mm watermain is located on the southside of Finch Avenue and a 150 mm watermain is located in the west boulevard of Nature Haven Crescent. The proposed detached dwellings will be serviced with 25 mm water connections.

An existing 200 mm diameter sanitary sewer is located on Nature Haven Crescent and on Finch Avenue across the frontage of the proposed dwellings. The proposed dwellings will be serviced within a 100 mm diameter sanitary pipe which will connect to the sewers.

5.2 Stormwater Management

Given the relatively small size of the site, the in-fill nature of the development and the fact that there are no new municipal roads proposed, Low Impact Development (LID) measures are proposed to provide a level of mitigation against an increase of peak flows.

Soak-away pits are proposed to infiltrate runoff from the roof areas. Rear lot catch basins will be implemented to convey flows along flows along grass swales to promote infiltration.

5.3 Water Balance

In accordance with the City and TRCA criteria, a minimum of 5 mm of rainfall depth is to be retained on site and either infiltrated or re-used. The water volume required to achieve water balance at this site is

25.61 cubic meters. Soak-away pits will be used to address the water balance, these pits will be located at the rear yard of each lot and will receive roof runoff from the downspout.

6. Potential Impacts and Mitigation

The following sections present the key potential negative effects of the proposed residential development and identify mitigation opportunities to be utilized to minimize the adverse effects of the project.

The proposed development is situated within an area that has been transforming towards an urbanized landscape, which inevitably reduces natural heritage functions of any particular site within that larger landscape area. However, these kinds of landscape level changes cannot be wholly mitigated on a site-by-site basis, and a shift in the natural heritage values towards an urban tolerant system will continue to occur.

6.1 Impact Assessment

Background review and field investigations identified that the subject property is primarily dry-moist old field meadow with a cultural thicket and hedgerow. (**Figure 2**). The proposed development will involve removing the vegetation communities on this site. Based on the assessment of existing conditions, the following provides a summary of the potential impacts of the proposed development:

Removal of Vegetation

As noted, the subject property consists primarily of anthropogenic areas with two small areas of cultural meadow and hedgerows. The proposed residential development will require the removal of all existing vegetation including the southwestern meadow and a small number of trees occurring in the anthropogenic area.

None of these vegetation communities are ecologically important as they are dominated by either commonly occurring, readily establishing and disturbance tolerant species, or non-native vegetation. Any native plant species or wildlife likely to be using the subject property are provincially secure.

Tree Removals

An Arborist and Tree Inventory Report was prepared by Beacon (2021). A total of 74 trees 15 cm DBH or greater were inventoried and assessed. Of the 74 trees inventoried, 42 trees occur on the subject property or property line, 28 trees occur within the Finch Avenue right-of-way (ROW) and four trees occur on adjacent property. Of the 74 trees all 42 of the subject property are recommended for removal. There are 13 trees in the Finch Avenue right-of-way that are recommended for removal due to the proposed development.



Legend

- Subject Property
- Proposed Development
- Ecological Communities
- Approximate Top of Bank (Beacon 2020)
- Approximate Top of Bank + 10 m
- TRCA Floodline
- Watercourse (MNRF 2019)

Code	Community Description
CUM1-1	Dry-Moist Old Field Meadow
HE	Hedgerow
CUT1	Mineral Cultural Thicket

Proposed Development

Figure 3

230 Finch Avenue Pickering



Project: 220352
Last Revised: December 2021

Client: Fairglen Homes

Prepared by: BD
Checked by: CS



1:600

0 10 20 m

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Orthoimagery Baselayer: 2020 (FBS)

Increase in Impervious Surfaces

The proposed development includes converting currently vacant and vegetated lands into partially paved lands inclusive of the dwellings and driveway access points. This represents an increase in impervious surfaces.

Soil Mobilization

Construction works such as grading, grubbing and excavation could cause the movement of sediment into the valley corridor on the eastern edge of the property.

Noise and Light Effects

These effects are very difficult to quantify. Noise in particular may be a reason why landscape-level effects are known to occur within urban matrices even as natural areas are set aside. The effects of these stressors could be important except that this system is already heavily influenced by the light and noise of the nearby urban areas. This has resulted in a suite of species that is already fairly urban-tolerant. Based on this assessment we do not anticipate a measurable effect provided that access issues are addressed (see People and their Companion Animals below).

People and their Companion Animals

Uncontrolled access into natural areas will often result in trampling, proliferation of trails and direct effects on flora and fauna. This can result in physical damage and degradation of the natural system that is being protected from development.

6.2 Proposed Mitigation Measures

Based on the assessment of the existing conditions within the subject property and the proposed development, the mitigation measures have been provided to limit any potential negative effects on the surrounding environment.

Buffers

The proposed development footprint is 10 m and greater from the approximated physical top of bank, the TRCA floodline and is generally 10 m or greater from the edge of the cedar woodland on the adjacent property. This represents an adequate buffer between the development, natural hazards and root zones of the woody vegetation within the woodland area adjacent to the subject property.

Tree Preservation

The Beacon Arborist report (Beacon 2021) provides details the on measures to ensure the protection of trees adjacent to the property that will not be removed. Tree protection measures detailed in the report should be in place on the property prior to construction and should be inspected as prescribed.

Stormwater Management

Low Impact Development (LID) measures are proposed to address the increase impervious surfaces in the post-development condition. These include soak-away pits to infiltrate runoff from the roof areas and no new storm sewer systems will be implemented such that runoff will be conveyed along grass swales to promote infiltration. The soak-away pits also offer sufficient volume capacity to ensure water balance is achieved (Valdor Engineering Ltd. 2021).

An existing oil/grit separator will receive flows along Finch Avenue to ensure quality control of runoff is maintained (Valdor Engineering Ltd. 2021).

Timing of Vegetation Removal

The federal *Migratory Bird Convention Act* (1994) protects the nests, eggs and young of most bird species from harm or destruction. Environment Canada considers the 'general nesting period' of breeding birds in southern Ontario to be between late March and the end of August. This includes times at the beginning and end of the season when only a few species might be nesting. In light of this it is recommended that during the peak period of bird nesting (i.e., between mid-April and mid-July), no vegetation clearing or disturbance to nesting bird habitat should occur.

In the 'shoulder' seasons of April 1 to April 15, and July 16 to August 31, vegetation clearing could occur, but only after an ecologist with appropriate avian knowledge has surveyed the area to confirm lack of nesting. For any proposed clearing of vegetation within the breeding bird season an ecologist should undertake detailed nest searches immediately prior to site alteration to ensure that no active nests are present.

If nesting is found, then vegetation clearing in an area around the nest, the size of which depends on the specific circumstances, has to wait until nesting has concluded. The likelihood of nesting birds being present in the 'shoulder' seasons also depends on the habitat type.

From September 1 through to March 31, vegetation clearing can occur without nest surveys, but the need to ensure nest protection still applies (i.e., if an active nest is known to be present it must be protected).

Lighting

Where possible, lighting along the eastern edge of the proposed development should be directed away from natural features (i.e., valleyland and woodland) to minimize the impact on adjacent development on the function of these areas.

Erosion and Sediment Control

An erosion and sediment control plan should be prepared and submitted prior to construction works. Silt fencing should include along the limits of development (i.e. at the west edge of the buffer) to minimize sediment leaving the site and should be removed when development work is completed and exposed soils stabilized.

Standard Best Management Practices should also be employed during the construction process.

People and their Companion Animals

Chain link fencing should be placed at the rear of the proposed dwellings along side the eastern property boundary to limit access into the valley feature.

7. Policy Conformity

7.1 Provincial Policy Statement

There are no provincially significant wetlands, significant coastal wetlands, significant woodlands, significant valleylands, significant wildlife habitat, significant ANSI, fish habitat or habitat of endangered or threatened species on the property or in the area of the proposed development plan.

Petticoat Creek is east of the study area and contains fish habitat. Development is greater than 30m from the creek at its closest point and no negative effects are anticipated.

7.2 Regional Municipality of Durham Official Plan

The proposed developable land is outside of the limits of the natural features east of the property including wetland, valleyland and watercourse. This EIS recommends mitigation measures to limit the potential impacts on the adjacent natural feature during construction and post-construction.

7.3 City of Pickering Official Plan

The subject property is designated on Schedule I – Land Use Structure as Low Density Urban Residential Areas with Natural Areas to the north and east portions of the subject property. The proposed development is outside the limits of the natural features identified adjacent to the subject property (top of bank, floodplain, woodland and watercourse). Appropriate buffers have been applied to the proposed development to protect these natural features.

7.4 Toronto Region Conservation Authority Regulations and Policies

Petticoat Creek is present east of the property. The buffers are consistent with the recommendations and requirements of the TRCA.

7.5 *Endangered Species Act*

No potential habitat for regulated species occurs on or immediately adjacent the subject property.

8. Summary

Beacon has conducted a background review and undertaken field investigations in order to prepare this Environmental Impact Study for the proposed development of the study area.

The limits of the features (top of bank, woodland, floodplain) are located adjacent to the subject property on the east/ northeast limits. Seasonally appropriate field investigations have been completed and the dripline was staked by TRCA.

Mitigation measures have been recommended to address any potential negative impacts on the natural features including buffers, Low Impact Developments for stormwater control and erosion and sediment controls during construction.

The proposed development is in conformity with the applicable natural heritage policies as set out in the PPS, Region of Durham Official Plan, City of Pickering Official Plan and TRCA regulations and policies.

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