Environmental Impact Study

7140 Hurontario Street

Mississauga, Ontario

Submitted to:
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Project 2407290

Statement of Conditions

This Report / Study (the “Work”) has been prepared at the request of, and for the exclusive use of, the Owner / Client, Municipality and its affiliates (the “Intended User”). No one other than the Intended User has the right to use and rely on the Work without first obtaining the written authorization of GEI Consultants Ltd. and its Owner. GEI Consultants Ltd. expressly excludes liability to any party except the Intended User for any use of, and/or reliance upon, the work.

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1.0 INTRODUCTION

1.1 Project Overview and Subject Lands

GEI Consultants Canada Ltd. (GEI) was retained by De Zen Realty Company Limited (De Zen) to complete an Environmental Impact Study (EIS) for a proposed development located at 7140 Hurontario Street in Mississauga, Ontario (herein referred to as the Subject Lands). The lands are described as Part of Lots 11 & 12, Concession 1, West of Hurontario Street. The Subject Lands are generally located south of Highway 407, east of Fletchers Creek, west of Hurontario Street and north of Derry Road (**Figure 1**, **Appendix A**).

The Subject Lands consist primarily of agricultural lands with a swale, remnant farm pond and a tributary to Fletchers Creek bisecting the lands, and with Fletchers Creek and the associated valley generally forming the southern and western boundaries of the Subject Lands. A portion of the Subject Lands east of the tributary of Fletchers Creek has historically been agricultural in nature but is currently being used for the Illumi Toronto lightshow.

The proposed development will be implemented in two phases. Phase 1 will see development on the east side of the Subject Lands (east of the Tributary of Fletchers Creek), and Phase 2 will be developed on the west side of the Tributary. A concept plan has been prepared to demonstrate feasibility of the development when taking into consideration the natural heritage and other constraints on the property.

The client received comments from Credit Valley Conservation (CVC) on February 28, 2012 indicating that a formal EIS was required to address development on these lands. Savanta (now GEI) submitted an EIS in March 2014 (Savanta 2014) to address CVC's comments. CVC issued a second round of comments on August 18, 2014 and a revised EIS was prepared and submitted in February 2018 (Savanta 2018) to address those CVC comments. CVC issued a third round of comments on July 26, 2018 and follow-up comments on May 5, 2020. Th EIS was revised in February 2025 to address design changes in response to agency comments and policy changes since the 2018 version of the EIS was submitted. Comments on the February 2025 version of the EIS were received from the City of Mississauga and CVC in May 2025. This current October 2025 version of the EIS has been revised to address these comments.

1.2 Natural Heritage Planning Considerations

In addition to an assessment of natural heritage features and functions of the Subject Lands, there are several legislation and policy areas that must be examined as preliminary layers of constraint to development proposals. The following municipal and regulatory agencies and relevant items of legislation and policy have been considered in the planning context of the application.

Due to the length of time this proposed development has been in the planning process, there have been changes to planning policies, responsibilities and jurisdiction at the provincial and municipal levels. This current version of the EIS has been prepared to address the most recent relevant planning policy requirements related to natural heritage.

1.2.1 Provincial Planning Statement (2024)

The Province of Ontario's updated Provincial Planning Statement (PPS; MMAH 2024) came into effect on October 20, 2024. This document replaces the previous Provincial Policy Statement (2020) and *A Place to Grow: Growth Plan for the Greater Golden Horseshoe (*2020*).* Many of the natural heritage considerations remain the same as the previous 2020 version of the Provincial Policy Statement. The PPS (MMAH 2024) provides direction on matters of provincial interest related to land use planning and development. It "…supports a comprehensive, integrated and long-term approach to planning…" The PPS is to be read in its entirety and land use planners and decision-makers need to consider all relevant policies and how they work together.

This report addresses those policies that are specific to natural heritage (Section 4.1) with some reference to other policies with relevance to natural heritage and impact assessment considerations and areas of overlap.

Eight types of natural heritage features and areas are identified in the PPS, as follows:

- Significant wetlands;
- Significant coastal wetlands and other coastal wetlands;
- Significant woodlands;
- Significant valley lands;
- Significant wildlife habitat (SWH);
- Fish habitat;
- Habitat of endangered and threatened species; and
- Significant Areas of Natural and Scientific Interest (ANSI).

The PPS indicates that development and site alteration shall not be permitted in significant wetlands or significant coastal wetlands. The PPS indicates that development and site alteration may be permitted on lands adjacent to these natural heritage features provided it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

The PPS indicates that development and site alteration shall not be permitted in significant woodlands, significant valley lands, SWH or significant ANSIs or on lands adjacent to these natural heritage features and areas, unless it is demonstrated that there will be no negative impacts on the natural features or areas or their ecological functions.

The PPS indicates that development and site alteration shall not be permitted in the habitat of endangered and threatened species or in fish habitat, except in accordance with provincial and federal requirements.

The PPS indicates that development and site alteration may be permitted on lands adjacent to the identified natural features and areas provided it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

1.2.2 Region of Peel

Bill 185, the Cutting Red Tape to Build More Homes Act, 2024, received Royal Assent on June 6, 2024. Included in this omnibus bill are Planning Act changes first introduced through Bill 23, the More Homes Built Faster Act, 2022, which remove planning policy and approval responsibilities from several upper-tier municipalities, including Peel Region, as of July 1, 2024. Since July 1, 2024, the Region of Peel Official Plan (RPOP) has become a plan of the local municipalities (including the City of Mississauga), and they will be required to implement and ensure applications conform to the RPOP.

Schedule E-1 (Regional Structure) of the RPOP depicts the Subject Lands as being a part of the Urban System and Regional Intensification Corridor (Conceptual). The Regional Intensification Corridor runs parallel to Hurontario Street and covers approximately half of the Subject Lands. As discussed in Section 5.3.3 of the PROP, Regional Intensification Corridors are “major locations of intensification that include compact forms of urban development and redevelopment providing a range and mix of housing, employment, recreation, entertainment, civic, cultural and other activities for Peel residents”.

As identified in Schedule C-2 of the RPOP(2022), the valley and naturally vegetated area associated with Fletchers Creek are designated as Core Areas of the Greenlands System. Core Areas of the Greenland System contain “ecological features, forms and/or functions that provide favorable conditions for uninterrupted natural systems and maximum biodiversity” (Peel Region 2022).

The RPOP (2022) implements the PPS’s natural heritage system policies by providing policy direction for the protection of natural heritage and water resource features through the Greenlands System’s Core Areas, Natural Areas and Corridors (NAC) and Potential Natural Areas and Corridors (PNAC) policy framework. NHFs and areas identified within this framework include:

- ANSIs;
- Environmentally Sensitive or Significant Areas;
- Escarpment Natural Areas;
- Escarpment Protection Areas;
- Fish and wildlife habitat;
- Habitats of threatened and endangered species;
- Wetlands;
- Woodlands;
- Valley and Stream Corridors;
- Shorelines;
- Natural Lakes;
- Ground water recharge and discharge areas;
- Open space portions of the Parkway Belt West Plan; and
- Other natural features and functional areas.

Section 2.3 of the RPOP(2022) contains natural heritage policies including criteria for determining Core Areas, NAC and PNAC and policies regarding their protection.

Section 2.4 of the RPOP(2022) deals with the policies applied to natural hazards. Specific sections deal with Ravine, Valley and Stream Corridors (Section 2.4.4) and Riverine Floodplains (Section 2.4.5).

The above-noted sections of the RPOP(particularly those related to natural heritage) have been considered in the preparation of this EIS.

1.2.3 City of Mississauga

Schedule 1 (Urban System) of the City of Mississauga Official Plan (MOP; 2024 Office Consolidation) identifies the Subject Lands as primarily being an Employment Area, with the Fletchers Creek corridor and a portion of the Fletchers Creek tributary on the Subject Lands being part of the Green System.

Schedule 10 (Land Use Designations) identifies Business Employment Areas and Greenlands on the Subject Lands. The majority of the Subject Lands are designated as Business Employment Areas, with the Fletchers Creek corridor identified as Greenlands and the Fletchers Creek tributary identified as Natural Hazard.

Schedule 3 (Natural System) depicts the Subject Lands containing Significant Natural Areas and Natural Green Spaces, which corresponds with the valley associated with Fletchers Creek and the Fletchers Creek tributary. No other components of the NHS are identified on the Subject Lands in Schedule 3. Directly south of the Subject Lands, a Special Management Area is depicted.

Schedule 1a (Urban System – Green System) similarly illustrates the Fletchers Creek corridor, including the Tributary to Fletchers Creek, which traverses the Subject Lands from north to south, as being a part of the Green System. Additionally, a diagonal strip of land crossing the northeast portion of the Subject Lands is depicted; this corresponds with the hydro corridor. Presently, this strip of land is used for agricultural purposes.

The City of Mississauga's Natural Areas Survey (2014) Figure 1 (Natural Areas Framework) illustrates the Subject Lands containing a portion of natural area MV15. This corresponds with the Fletchers Creek valley land, which is found on the western and southern portions of the Subject Lands.

The MOP indicates that the City's Green System consists of the Natural Heritage System, Natural Hazard Lands, Urban Forest and Parks and Open Spaces. The Natural Heritage System and Natural Hazard Lands, as defined in the MOP, include the following components:

- Natural Heritage System;
  - Significant Natural Areas;
    - Provincially or regionally significant life science ANSIs;
    - Environmentally sensitive or significant areas;
    - Habitat of endangered or threatened species;
    - Fish habitat;
    - SWH;
    - Significant woodlands;

        - Significant wetlands;
            - Provincially Significant Wetlands (PSWs)
            - Coastal wetlands; and
            - Other wetlands >0.5 ha; and
        - Significant valley lands;
    - Natural Green Spaces;
        - Woodlands >0.5 ha that don't meet criteria to be significant;
        - Wetlands that do not meet criteria to be significant;
        - Watercourses that do not fulfill requirements to be a significant valley land; and
        - All natural areas >0.5 ha that have vegetation that is uncommon in Mississauga;
    - Special Management Areas;
        - Lands adjacent to or near Significant Natural Areas or Natural Green Spaces that will be managed or restored to enhance and support the adjacent areas
    - Residential Woodlands;
    - Linkages;
- Natural Hazard Lands;
    - Valley lands;
    - Floodplain;
    - Lake Ontario Shoreline.

Policies 6.3.7 and 6.3.8 of the MOP indicate that buffers provide physical separation between development from natural heritage feature limits and natural hazard limits are required and shall be determined on a site-specific basis through an EIS.

Section 6.3.11 of the MOP (2024) indicates that the exact limit of each component of the City's NHS is to be determined through an EIS (or other similar study) and that minor refinements to the NHS limits may occur without an amendment to the MOP provided they are supported by an EIS or other similar study and accepted by the City.

Section 6 of the MOP identifies development restrictions for natural areas and natural hazards. Specifically, Policy 6.3.24 outlines the protections and associated management approaches for the City's Natural Heritage System. Policy 6.3.27 indicates that development and site alteration "within or adjacent to a Significant Natural Area will not be permitted unless all reasonable alternatives have been considered and any negative impacts minimized". Policy 6.3.32 indicates that "development and site alteration will not be permitted within or adjacent to Natural Green Spaces, Linkages and Special Management Areas unless it has been demonstrated that there will be no negative impact to the natural heritage features and their ecological functions and opportunities for their protection, restoration, enhancement and expansion have been identified".

Policy 6.3.47 indicates that "development and site alteration will not be permitted within erosion hazards associated with valley land and watercourse features" and Policy 6.3.48 indicates that development adjacent to valley lands and watercourses may need to be supported by slope stability and erosion studies. Policy 6.3.51 indicates that "development and site alteration is generally prohibited on lands subject to flooding".

Policy 6.3.33 of the MOP indicates that EISs will need to

- Delineate the area to be analyzed;
- Describe existing physical conditions;
- Identify environmental opportunities and constraints;
- Evaluate the ecological sensitivity of the area; and
- Outline measures to protect, enhance, restore and expand the NHS and associated ecological functions.

This EIS has been prepared to address the EIS requirements of the MOP. With respect to MOP policy 6.3.11, this EIS determines the exact limits of NHS components (e.g., through on-the-ground assessment such as field staking or desktop analysis) and proposes the NHS boundary accordingly. While the NHS has refined the NHS boundary, these refinements are considered to be minor relative to the existing Natural System mapping in Schedule 3 of the MOP.

1.2.4 Credit Valley Conservation

Within the Credit River watershed, Credit Valley Conservation (CVC) administers Ontario Regulation 41/24 (Prohibited Activities, Exemptions and Permits) under the *Conservation Authorities Act*. Authorizations are required from CVC for any development within their regulated areas which include watercourses, flooding and erosion hazards and wetlands as well as regulated allowances adjacent to these features. In particular, 30 m setbacks from regulated wetlands are required as per O. Reg. 41/24; while this does not determine developable limits, permits are required for any site alteration within this setback and impacts to natural hazards must be considered.

CVC has also prepared an Ecosystem Offsetting Guideline (2020) that provides compensation guidance for the removal and offsetting of natural heritage features to ensure that critical ecosystem functions and services are not negatively impacted by development and can instead be restored or enhanced through the development process. This guideline can be used to help guide municipalities to make decisions related to offsetting during the development process.

CVC regulatory requirements and policies have been considered during the preparation of the EIS.

1.2.5 Provincial Endangered Species Act (2007)

The provincial *Endangered Species Act, 2007* (ESA 2007) was developed to:

- Identify species at risk, based upon best available science;
- Protect species at risk and their habitats and to promote the recovery of species at risk; and
- Promote stewardship activities that would support those protection and recovery efforts.

The ESA 2007 protects all threatened, endangered and extirpated species listed on the Species at Risk in Ontario (SARO) list. These species are legally protected from harm or harassment and their associated habitats are legally protected from damage or destruction, as defined under the ESA 2007.

GEI requested information from the Ontario Ministry of Natural Resources and Forestry (MNRF) on natural heritage features and element occurrences occurring on or adjacent to the Subject Lands. The MNRF responded on March 23, 2012 indicating that they have records of Redside Dace (*Clinostomus elongatus*) for the area. There were no natural heritage features recorded for the area. Further communication with the MNRF in regard to Redside Dace habitat has been conducted. An MNRF representative was present at a site visit on July 6, 2012. During that site visit, MNRF indicated that as per Section 29.1 of Ontario Regulation 242/08 under the ESA 2007, if the bankfull width of Fletchers Creek downstream of the confluence with the headwater Tributary is greater than 7.5 m, then the watercourse will not meet the definition of "Redside Dace Contributing Habitat" under the ESA 2007. As discussed further in this report, the bankfull width does not meet this criteria, so the Tributary is not considered to be regulated Redside Dace habitat.

1.2.6 Federal Fisheries Act

The Department of Fisheries and Oceans Canada (DFO) administers the federal *Fisheries Act* which defines fish habitat as "spawning grounds and other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes". The *Fisheries Act* prohibits the death of fish by means other than fishing and the harmful alteration, disruption or destruction of fish habitat (HADD). A HADD is defined as "any temporary or permanent change to fish habitat that directly or indirectly impairs the habitat's capacity to support one or more life processes" (DFO 2019a).

Some projects may be eligible for exemption from the DFO review process, as specified under Step 3 of the DFO Fish and Fish Habitat Protection Program review process (DFO 2019b; e.g., clear-span bridges and bridge maintenance projects where DFO mitigation measures are applied, artificial waterbodies with no hydrological connection to occupied fish habitat, and projects that follow the Standards and Codes of Practice defined by DFO). All other projects or activities that have the potential to impact fish or fish habitat should be submitted to DFO through the "Request for Review" process. DFO will review the proposed project to determine whether there is potential to (1) impact an aquatic species at risk, (2) cause the death of fish or (3) result in HADD of fish habitat. The death of fish by means other than fishing or a HADD of fish habitat can be authorized by DFO under the Fisheries Act.

1.3 Purpose of the Study

The EIS is a requirement of the municipal planning process and is intended to fulfill the policies of the City of Mississauga and Region of Peel Official Plans and the requirements of CVC.

The study components have included:

- A review of existing background information, policies and legislation applicable to the Subject Lands in its regional context;
- A field review and description of the natural environmental features and functions on and immediately adjacent to the Subject Lands;
- An evaluation of the significance of the natural environmental features relative to relevant policies and guidelines;

- A determination of constraints to development that subsequently identifies a potential development envelope to accommodate development;
- A description of the proposed undertaking and development proposal;
- Identification of the potential for direct and indirect impacts of development approaches on natural features;
- Recommendations for mitigation to avoid or minimize impacts; and
- Identification of offsetting to address identified natural heritage feature impacts.

1.4 Agency Consultation

Extensive agency consultation with respect to natural heritage features has occurred over the history of this development application. Communication items and dates include:

- Agency (City, CVC) top-of-bank staking – June 10, 2010;
- CVC and Parish Geomorphic readjust some top-of-bank stakes – December 16, 2010;
- CVC and Parish Geomorphic readjust some top-of-bank stakes – March 24, 2011;
- Submission of De Zen: Fletchers Creek Hazard Assessment to CVC by Parish Geomorphic – August 29, 2011;
- CVC letter to Lethbridge Planning providing comments on Parish report – February 28, 2012;
- Savanta letter to MNR Re: SAR – March 6, 2012;
- MNR letter to Savanta Re: SAR – March 23, 2012;
- Agency (MNR, CVC, City) thicket dripline and wetland staking – July 6, 2012;
- Meeting with CVC – August 22, 2012;
- Savanta submission of Information Gathering Form (IGF) to MNR – November 26, 2012;
- MNR letter to Savanta Re: DeZen Industrial Lands Letter of Advice AU-LOA-022013 – April 3, 2013;
- Savanta email to MNR for clarification of LOA – April 3, 2013;
- MNR email to Savanta providing clarification – April 4, 2013;
- Savanta and MNRF email correspondence from September 17, 2017 to January 29, 2018 confirming that a revised LOA will be required at the detailed design stage;
- City and CVC comments issued on July 26, 2018;
- Agency (CVC, City of Mississauga) site visit on May 8, 2019 to review potential SWM outlet locations in the Fletchers Creek valley;
- Discussions in June 2019 with CVC regarding the presence of Terrestrial Crayfish on the Subject Lands;
- Discussions with the Ministry of Environment, Conservation and Parks (MECP) regarding proposed changes to the stormwater management plan (i.e., inclusion of an outlet to Fletchers Creek) and associated impacts on Redside Dace (September 2019), and submission of an Information Gathering Form (IGF) to MECP on October 31, 2019;
- A meeting with the City of Mississauga and CVC on February 27, 2020;
- Submission of a draft revised site plan to CVC for review and comment on April 22, 2020.
- EIS resubmission after revisions in response to comments to CVC in June, 2020.
- Re-engagement of discussion with CVC about development application on October 24, 2023.
- Re-engagement of discussion with City of Mississauga about development application on August 27, 2024.

- Redesign was shared with CVC and City of Mississauga for comment on August 28, 2024.

Relevant consultation materials (as requested by the City of Mississauga in their comments on the February 2025 EIS) have been provided in **Appendix D**.

1.5 Subject Lands Evaluation

This work plan was developed to achieve the study components for the EIS and was based on the following:

- A review of background information including previous studies, fieldwork, existing policies and legislation;
- Site walk with agency staff to stake wetland and thicket dripline (completed on July 6, 2012);
- Site visits conducted by Savanta/GEI to determine and investigate the terrestrial and aquatic features (details provided in section 2.4);
- Site visits conducted by Parish Geomorphic, Geomorphic Solutions and GEO Morphix Ltd. to determine and investigate fluvial geomorphic features and functions and other hazards. Details are provided in section 2.3 as well as under separate cover in the DeZen: Fletchers Creek Hazard Assessment (Parish Geomorphic 2011), Detailed Geomorphic Assessment – Fletchers Creek (Geomorphic Solutions 2012) and Tributary of Fletchers Creek Erosion Hazard Assessment (GEO Morphix 2019); and
- Site visits conducted by Soil Engineers Ltd. for the preparation of the Geotechnical Investigation for Slope Stability Study (2008, revised 2016).

The Subject Lands evaluation and subsequently the EIS, are intended to guide the implementation of the proposed development, afford protection to appropriate natural heritage features and satisfy the requirements of CVC, City of Mississauga, and MECP. In addition, the EIS is required to identify any impacts to natural features and determine appropriate remedial measures to offset such impacts (i.e., restoration or enhancement of features, functions and linkages) and to meet municipal/agency policies.

1.6 Background Review

The following resources were reviewed for information relating to natural features and species that may be found on the Subject Lands:

- Ministry of Natural Resources (MNR) Geospatial Ontario (GEO), formerly Land Information Ontario (LIO) geographic database and natural features mapping (2025);
- Natural Heritage Information Centre (NHIC) database (2025);
- Bird Studies Canada's Atlas of the Breeding Birds of Ontario (Cadman et al. 2007);
- Ontario Nature's Reptile and Amphibian Atlas (2019);
- Toronto Entomologists' Association's (TEA) Ontario Butterfly and Moth Atlases (2024, 2025);
- DFO's Aquatic Species at Risk Map (2025);
- Online citizen science databases (e.g., eBird and iNaturalist); and
- City of Mississauga Natural Areas Survey.

A brief summary of the pertinent information regarding the Subject Lands from each of these resources is provided in the following sections.

1.6.1 Geospatial Ontario

MNR's GEO geographic database does not identify any significant or un-evaluated wetlands, woodlands, Conservation Reserves or ANSIs on or within 120 m of the Subject Lands. The mapping does identify Fletcher's Creek and the unnamed Tributary of Fletcher's Creek as watercourses on or within 120 m of the Subject Lands.

1.6.2 Natural Heritage Information Centre

The NHIC (MNR 2025) was searched for records of provincially significant plants, vegetation communities and wildlife on and in the vicinity of the Subject Lands. The database provides occurrence data by 1 km^2 area squares, with one square overlapping the Subject Lands (17PJ0333). Only one species of interest was noted:

- Redside Dace (*Clinostomus elongatus*) – Endangered. Fletcher's Creek is known to be habitat for this species.

1.6.3 Ontario Breeding Bird Atlas

The Ontario Breeding Bird Atlas (OBBA) contains detailed information on the population and distribution status of Ontario birds (Cadman et al. 2007). The data is presented on 100 km^2 area squares with one square overlapping the Subject Lands (17TPJ03).

A total of 90 bird species were recorded in atlas square, with the following species of interest noted:

Species listed as threatened on the SARO list:

- Chimney Swift (*Chaetura pelagica*) – Threatened
- Bobolink (*Dolichonyx oryzivorus*) – Threatened
- Eastern Meadowlark (*Sturnella magna*) – Threatened
- Bank Swallow (*Riparia riparia*) – Threatened

Species of Conservation Concern (i.e., listed as Special Concern on the SARO List or identified as an S1–S3 species):

- Eastern Wood-Pewee (*Contopus sordidulus*) – Special Concern
- Barn Swallow (*Hirundo rustica*) - Special Concern
- Wood Thrush (*Hylocichla mustelina*) - Special Concern

It should be noted that the Subject Lands are a small component of the overall bird atlas square, and therefore it is unlikely that all bird species previously documented within the overall atlas square are found within the Subject Lands. Habitat type, availability and size are all contributing factors in bird species presence and use. The results of breeding bird studies completed on the Subject Lands are discussed in Section 2.4.2.

1.6.4 Ontario Reptile and Amphibian Atlas

The Ontario Reptile and Amphibian Atlas contains detailed information on the population and distribution status of Ontario herpetofauna (Ontario Nature 2019). The data is presented on 100 km^2 area squares with one square overlapping the Subject Lands (17TPJ03). It should be noted that the Subject Lands are a small component of the overall atlas square, and therefore it is unlikely that all herpetofauna species previously noted in the overall atlas square are found within the Subject Lands. Habitat type, availability and size are all contributing factors in herpetofauna species presence and use.

A total of 14 species were recorded in the atlas square that overlaps with the Subject Lands, of which four are salamander species, five are frog and toad species, two are turtle species and three are snake species. Of these species, the following species is of interest were noted:

Species listed as Threatened or Endangered on the SARO List:

- Jefferson Salamander (*Ambystoma jeffersonianum*) – Endangered

Species of Conservation Concern (i.e., listed as Special Concern on the SARO List or identified as an S1–S3 species):

- Snapping Turtle (*Chelydra serpentina*) – Special Concern

Discussions with MNR and MECP during the EIS process did not identify any concerns regarding Jefferson Salamander; therefore, it is expected that this observation is located well outside the Subject Lands and the species is not discussed further in this report.

There is no turtle overwintering habitat on the Subject Lands and no turtle surveys were deemed to be necessary to support this EIS.

1.6.5 Ontario Butterfly and Moth Atlas

The Ontario Butterfly and Moth Atlases (Toronto Entomologists' Association 2024, 2025) contain detailed information on the population and distribution status of butterflies and moths in Ontario. The database provides occurrence data by 10 km x 10 km squares. The Subject Lands is located within one atlas square (17TPJ03), which was used to determine a potential butterfly and moth species list for the area. The Subject Lands is a small component of the overall atlas square, and therefore all the butterfly and moth species listed for this atlas square may not be found within the Subject Lands. Habitat type, availability, and size are all contributing factors to reptile and amphibian species presence and use.

A total of 48 species which were all butterfly species, were recorded in the atlas square. Of these reported species, one species of interest is noted:

- Monarch (*Danaus plexippus*), which is listed as Special Concern in Ontario.

This species was not documented on the Subject Lands as an incidental species during any of the ecological investigations that were undertaken, nor were any substantial accumulations of milkweed, the host species for this this insect.

1.6.6 Online Citizen Science

Ebird

The eBird (2025) database is a large citizen science-based project with a goal to gather bird diversity information in the form of checklists of birds, archive it, and share it to power new data-driven approaches to science, conservation and education. As observations can be submitted by anyone, and the records are not officially vetted, the data obtained from this tool should not be used as a clear indicator of species presence, and species may be filtered out based on habitat and target survey efforts.

This online database was examined to identify observations made within the Subject Lands. However, no hotspots or significant bird species were found on the Subject Lands or within 120 m of its boundaries.

iNaturalist

The iNaturalist (2025) database is a large citizen science-based identification and data collection app. It allows any citizen to submit observations to be reviewed and identified by other naturalists and scientists to help provide accurate species observations. As observations can be submitted by anyone, and the records are not officially vetted, the data obtained from this tool should not be used as a clear indicator of species presence, and species may be filtered out based on habitat and target survey efforts.

This online database was examined to identify observations made within the Subject Lands that were research grade. However, no significant species were found on the Subject Lands or within 120 m of its boundaries.

1.6.7 City of Mississauga Natural Areas Survey

The Subject Lands are directly adjacent to a designated natural area identified as MV15 in the *City of Mississauga Natural Areas Survey* (City of Mississauga, 2023). MV15 encompasses the valley lands associated with Fletcher's Creek and was evaluated as being in "fair to poor condition," indicating a relatively low level of ecological significance in its current state (City of Mississauga, 2023). The observed degradation of this medium-sized feature is attributed to a range of anthropogenic stressors, including yard waste disposal (e.g., grass clippings), illegal dumping of garbage, the establishment of unauthorized recreational trails, impacts of Emerald Ash Borer (*Agrilus planipennis*), and active erosion processes. The 2023 survey also confirmed the presence of six invasive plant species within the feature. No provincially significant vegetation communities or rare flora were recorded; however, two fauna species of provincial conservation concern (i.e., provincially significant or listed as at risk) were documented but not listed by name. From a landscape perspective, the primary ecological function of MV15 is its role in maintaining habitat connectivity by providing a corridor linkage between adjacent natural areas MV2 and MV14.

The City of Mississauga's assessment concluded that targeted management and restoration measures are required to enhance ecological function and improve water quality and habitat conditions for fish communities (City of Mississauga, 2023). Among the recommended strategies, the establishment of a riparian planting program was identified as a priority measure. Such interventions could create a continuous and structurally diverse riparian buffer that could increase canopy shading, reduce stream thermal loading, stabilize eroding banks, and enhance the overall ecological integrity of the Fletcher's Creek corridor. Implementation of these measures is also

anticipated to improve functional linkages with adjacent natural heritage features and provide habitat opportunities for wildlife species within the riparian corridor.

2.0 EXISTING CONDITIONS

2.1 Physiography and Soils

A general description of the physiography of the site is included in Parish Geomorphic's report (2011). Generally, the site is located on the Peel Plain, a physiographic unit characterized as a level to undulating area consisting of thin, heavy-textured, clayey silt soils and fine-textured glaciolacustrine deposits.

Detailed descriptions of the subsurface conditions are provided in the Soil Engineers Ltd. report (2008). The site is predominantly underlain by a stratum of soft to hard, generally hard silty clay till. A layer of very dense sandy silt till was found underlying the silty clay till in two borehole locations on either side of the Tributary to Fletchers Creek (BH 1 and BH2). The soft to stiff soils are restricted to the surficial weathered zone of clay till, extending to a depth of approximately 1 m below the prevailing surface.

2.2 Hydrogeology

Hydrogeological information such as general groundwater conditions has been collected in support of the Geotechnical Investigation for Slope Stability Study (Soil Engineers Ltd. 2008). All four of the boreholes remained dry during completion of the investigation, although some minor groundwater seepage was detected from the sandy silt layer at a depth of approximately 7.6 m below the prevailing ground surface. Soil colour observations imply that the permanent groundwater regime exists at a depth of approximately 4 m or an elevation of 195 m. It is noted that this level is subject to seasonal fluctuations. Due to low permeability of the clay till, the overall yield is suspected to be small and limited.

2.3 Natural Hazard Assessment

The original natural hazard assessment was conducted by Parish Geomorphic in their report DeZen: Fletchers Creek Hazard Assessment (2011). GEO Morphix completed an update of the meander belt in 2025. Details of the study are found under separate cover. The resulting meander belt and floodline mapping are shown in **Figure 4** (**Appendix A**).

The physical top of bank of the Fletchers Creek valley was staked with CVC on October 6, 2010 and March 24, 2011, as shown on **Figure 5** (**Appendix A**).

The slope stability analysis was conducted by Soil Engineers Ltd. in their Geotechnical Investigation for Slope Stability Study (2008, updated in 2025). Details of the study are found under separate cover. The long-term stable slope was updated in 2020 based on the results of a toe-erosion setback suggested by GEO Morphix Ltd. and updated in 2025 to address the GEO Morphix Ltd. meander belt assessment results. The resulting long-term stable slope limit is shown in **Figure 5** (**Appendix A**).

2.4 Biophysical Inventory

Aquatic and terrestrial surveys on the Subject Lands were completed by Savanta, primarily in 2012, with some updates in 2019, to assess the natural features on site and to investigate and compare the features documented in agency and government records, and whether there are any additional natural features present on site, including any potential Species at Risk (SAR) habitat.

2.4.1 Vegetation Communities and Vascular Plants

Botanical investigations were carried out on June 21 and July 23, 2012. Following satellite image interpretation, preliminary mapping of potential vegetation types was created. During the field surveys, the types were confirmed, sampled and revised, if necessary, using the sampling protocol of the Ecosystem Land Classification (ELC) for Southern Ontario (Lee at al. 1998). Species names generally follow the nomenclature of Flora Ontario (University of Guelph 2005; FOIBIS website). The ELC polygons were augmented, where required, using the staking information obtained through the July 6, 2012, staking exercise.

Vegetation Communities

The Subject Lands are almost entirely dominated by an agricultural field (and the Illumi lightshow area), with semi-natural cover types (i.e., primarily cultural thickets with one small cultural woodland) in the peripheral areas along the west and south boundary. A narrow strip of cattail marsh follows the tributary of Fletchers Creek in the centre of the Subject Lands (more details on this feature are provided in section 2.4.6).

The ELC types occurring on the Subject Lands are described in **Table 4** (**Appendix B**) and shown in **Figure 2** (**Appendix A**).

Vascular Plants

One hundred species of vascular plants were recorded from the Subject Lands. Of that number, 42 (or 42%) species are native and 58 (or 58%) species are exotic. The very high percentage of non-native species is a reflection of the highly disturbed character of the vegetation.

Most of the native species, 38 (or 93%), are ranked S5 (Secure – common, widespread and abundant in Ontario), with three species (7%) ranked S4 (Apparently Secure – uncommon, but not rare in Ontario):

- Black walnut (*Juglans nigra*) – occasional at the edge of buckthorn thicket;
- Small-flowered evening-primrose (*Oenothera parviflora*) – an “S4?” species, occasional in the cultural meadow; and
- Bushy knotweed (*Polygonum ramosissimum*) – occurring as a weed, scattered within the old-field meadow.

No nationally or provincially rare or endangered species were recorded from the Subject Lands. A full species list is included in **Table 2** (**Appendix B**).

2.4.2 Breeding Birds

Breeding bird surveys were conducted on June 16 and July 5, 2012. The surveys were completed according to the protocol set forth in the Ontario Breeding Bird Atlas (Cadman et al. 2001). Four-point count locations (**Figure 3**, **Appendix A**) were used during each survey as well as area searches. Each point-count location was surveyed for birds within 100 m and outside 100 m (each counted separately). Birds were observed for signs of breeding behaviour. Surveys were conducted between 5:00 AM and 10:00 AM on sunny to partially cloudy days with winds of less than 15 km/hr.

Savanta recorded 37 species on the Subject Lands during the two rounds of breeding bird surveys (**Table 3**, **Appendix B**). Of these, nine species were confirmed as breeding on the site, seven species were considered probable breeders, 15 are considered possible breeders, while the remaining six are believed to be non-breeding visitors. Species diversity was highest near PC3 on the south side of the site, and lowest at PC1, on the north side.

Two bird SAR were observed on the Subject Lands: Bobolink (*Dolichonyx oryzivorus*) and Barn Swallow (*Hirundo rustica).* Both species are provincially ranked S4B (Apparently Secure – uncommon, but not rare in Ontario). Bobolink are designated as Threatened in both Ontario and Canada, while Barn Swallow are designated as Special Concern in Ontario and Canada.

During the two rounds of breeding bird surveys, a maximum of six individual Barn Swallows were observed flying above all habitats on the Subject Lands, including fallow fields, cultural meadow at the east end of the plot, a sedge/cattail drainage bisecting the north end, as well as over the wooded riparian area to the south. A sex ratio was not determined but no juvenile birds were observed. All activity was feeding behaviour with birds flying onto and out of the Subject Lands from all directions. Some were flying low over the fields, and others much higher above, feeding, flying off, and returning. No suitable Barn Swallow breeding structures are present on the Subject Lands.

On June 16, 2012, one individual male Bobolink was observed in flight over the fallow field between PC1 and PC2. The bird flew in and sang for a couple minutes high atop a tree at the field edge. While conducting the point count, the bird flew off; no behavior that would confirm successful breeding was observed, as no female or young were detected. For the most part, at the time of the survey, the site was dominated by early successional weeds and little grass cover overall. However, currently, the Subject Lands are actively farmed with row crops.

One other finding of interest included an active Red-tailed Hawk (*Buteo jamaicensis*) nest, containing two young, located on a transmission line tower approximately 50 m northwest of the Subject Lands. The young were seen in the nest on June 16, 2012, while both adults were observed hunting on the Subject Lands.

Bird diversity was greatest along the southwest and southeast sides of the site, where habitat was the most diverse. This was particularly noticeable at PC3 and PC4, where the fallow field is bordered by a shrubby/wooded riparian area and cultural meadow, respectively. PC2 was only slightly less diverse, due to its proximity to a parking lot and newly constructed road.

Through discussions with MNRF, it was confirmed that the Subject Lands are not considered to be protected habitat for Bobolink or Barn Swallow (note: at the time of discussions with MNRF, Barn Swallow was identified as threatened in Ontario; it has since been downgraded to special concern).

2.4.3 Breeding Amphibians

Amphibian surveys were conducted on April 5, May 2, and June 13, 2012. The surveys were completed according to the protocol set forth in the Great Lakes Marsh Monitoring Program (Bird Studies Canada 2004). Surveys were conducted on three nights during the spring, beginning one half hour before dusk and ending before midnight. Surveys were conducted on warm nights with little wind.

Each visit was at least 15 days apart. The first visit should be conducted with a minimum nighttime air temperature of 5^0C, the second visit should have a minimum of 10^0C and the third visit a minimum of 17^0C. Each site was surveyed for three minutes (the length of the survey window was extended to compensate for ambient road noise from the ETR407 and Hurontario Street, as well as airplane traffic from Pearson International Airport) and a three-level call category system was used to identify the calling activity. The call levels are: 1) Individual calls do not overlap and calling individuals can be discreetly counted; 2) Calls of individuals sometimes overlap but number of individuals can still be estimated; 3) Overlap among calls seems continuous (full chorus) and a count estimate is impossible. Anurans were recorded as within the station if they were within 100 m. All other species were recorded as outside the station.

Savanta conducted surveys at two locations on the Subject Lands (**Figure 3**, **Appendix A**). Stations were identified using a preliminary review of aerial photography to determine potential station locations, which were then verified in the field to ensure all areas of potential amphibian breeding were surveyed. Station 1 was oriented around a remnant farm pond on the Tributary of Fletchers Creek and Station 2 was located within the shallow mineral marsh to the north of the remnant farm pond.

The results of the amphibian call surveys are summarized in **Table 1** (**Appendix B**). Two calling amphibian species were heard during amphibian surveys: American Toad (*Bufo americanus*), and Green Frog (*Rana clamitans*). Both species are provincially ranked S5. They were recorded at Station 1 during the second and third survey dates. No calls were heard at Station 1 during the initial survey in April, or during any of the three surveys at Station 2. No species of concern were recorded on the Subject Lands.

2.4.4 Terrestrial Crayfish

Terrestrial crayfish chimneys were observed on the Subject Lands, in association with the Tributary of Fletchers Creek that bisects the property, during a site visit on May 8, 2019. Terrestrial crayfish had not been documented on the property during previous investigations completed prior to that date.

Targeted terrestrial crayfish chimney surveys were completed on the Subject Lands on June 12 and 14, 2019 to confirm the presence, distribution and relative abundance of Terrestrial Crayfish along the tributary. The survey involved walking all areas within and adjacent to (i.e., generally within 30 m) the wetland communities associated with the tributary to locate constructed

chimneys. The survey was conducted prior to agricultural activities being completed within the agricultural lands on the property, so visibility was suitable and chimneys had not been disturbed by ploughing or planting. The location of each individual chimney, or cluster of chimneys when they were located in close proximity, was recorded using a GPS. Supplementary information recorded for each chimney included the vegetation community the chimney was constructed in (including the area within a 1-m radius around the chimney), the distance from the chimney to the closest surface water and the number of chimneys present, when the GPS location taken represented a cluster of chimneys.

A total of 2,289 terrestrial crayfish chimneys were observed on and adjacent to the Subject Lands, all in association with the tributary. Chimney locations (i.e., individuals or clusters of chimneys) are shown on **Figure 4** (**Appendix A**). The majority of the observed chimneys (74%) were located within agricultural field areas dominated by bare soils, while 17% were in grassed areas (cultural meadow at the field edge or meadow marsh, although some areas in this category were dominated by bare soil coverage of up to 85% within a 1-m radius of the chimney), 5% were in marsh areas dominated by cattail and 4% were in marsh areas dominated by European Common Reed.

2.4.5 Incidental Wildlife Observations

Incidental wildlife observations were recorded by Savanta/GEI during all of the surveys. Minimal wildlife activity was observed on the Subject Lands. White-tailed Deer tracks were observed adjacent to the woodland and cultural meadow areas.

2.4.6 Aquatic Habitat Assessment

Savanta conducted headwater drainage feature assessments on the Subject Lands on March 23, May 2, May 22, June 7, and July 6, 2012. As noted in earlier versions of this EIS, the evaluation and classification of headwater drainage features relied upon the 2011 version of the CVC/TRCA "Evaluation, Classification, and Management of Headwater Drainage Features" (CVC and TRCA 2011), which was the relevant guidance document at the time the investigations were completed.

Fish habitat classifications from CVC and TRCA (2011) include:

- Permanent Fish Habitat (direct habitat);
- Seasonal Fish Habitat (direct habitat);
- Complex Contributing Habitat (indirect habitat); and
- Simple Contributing Habitat (indirect habitat).

"Permanent Habitat" – includes the presence of direct habitat onsite that would contribute to feeding, breeding and/or migration functions. Further, these functions occur as a result of year-round regional groundwater discharge and/or permanent standing surface water.

"Seasonal Habitat" – (i.e., providing limited direct habitat onsite as a result of seasonally high regional groundwater discharge or seasonally extended contributions from wetlands or other surface storage areas that support intermittent flow conditions, or rarely ephemeral flow conditions). Typically, seasonal habitat will occur within the "mainstem" of the watercourse.

"Contributing Habitat" – (i.e., providing indirect or contributing habitat to downstream reaches) – in these streams, the functions generally increase with flow and/or as flows move downstream with increasing length of channel, or channel density (e.g., extent of contributing area). There are two types of contributing habitat:

"Complex Contributing Habitat" – these features are formed generally as a result of intermittent or ephemeral surface flows and can have marginal sorting of substrates – these are generally well-vegetated features, which can influence flow conveyance/attenuation/storage/infiltration, water quality and sediment, and food (invertebrates). Generally, there are two types: a) defined features with natural bank vegetation consisting of forest, scrubland/thicket or meadow (as defined in the Ontario Stream Assessment Protocol (Stanfield 2018) or ELC); or b) poorly defined features (swales) typically distinguished by hydrophilic vegetation.

"Simple Contributing Habitat" – these are formed generally as a result of ephemeral or (less commonly) intermittent surface flows – these are generally not well-vegetated features that influence flow conveyance, attenuation, storage and infiltration as well as sediment transport. Generally, there are two types: a) defined features characterized by crop cultivation, mowing or no vegetation; or b) poorly defined features (swales) that may contain terrestrial vegetation.

"Not Fish Habitat" – The use of "**Not Fish Habitat**" is appropriate for some reaches. The elements of this category include "The pre-screened drainage feature has been field-verified to confirm that no features and/or functions associated with headwater drainage features is present – generally characterized by no definition or flow, no groundwater seepage or wetland functions, and evidence of cultivation, furrowing, presence of a seasonal crop, lack of natural vegetation and fine textured soils (i.e., clay and/or silt)".

To assist in the evaluation of aquatic habitat quality of the remnant farm pond, two minnow traps were established in the remnant farm pond for a 48-hour set (May 22 to 24, 2012) – no fish were captured. During each survey for the headwater assessment (i.e., through spring/early summer), the remnant farm pond was visually scanned for fish and none were observed. As well, the tributary was walked from the remnant farm pond downstream to its confluence with Fletchers Creek during each site visit to assess for any observations of fish – particular attention was focused on three "pools". No fish were noted on any occasion. On May 22, a staff gauge was installed in the remnant farm pond to monitor declining water levels during the spring and early summer. The level on the staff gauge measured 36 cm on May 22 and gradually declined until early July (the remnant farm pond was "dry" during the agency site visit on July 6, 2012). These measurements document the reliance on surface water contributions to support this remnant farm pond.

The remnant farm pond and Tributary (south of the remnant farm pond; Reach 1) exhibit "intermittent" flow. Based on site characterization, the supporting flows into the remnant farm pond and to downstream reaches of the Tributary are provided by surface water contributions. The following are some observations regarding the form and function of the watercourse:

- The width of the Tributary downstream of the remnant farm pond ranges from 2 m in a shallow area that has been the location of a tractor crossing for many years, to about 8 cm where the Tributary narrows. Water depths ranged from 4 cm in the shallow area to about 15 cm in a pool. During late spring/early summer, the Tributary became dry;

- The Tributary does exhibit “bed and bank” morphology; and
- Substrate conditions are comprised primarily of silts and organic matter.

Classification – based on the above, GEI has identified this tributary as:

- Intermittent flow;
- Fish Habitat – Although it was considered that portions of the lower reach of the Tributary could be classified as “Seasonal (Fish) Habitat”, GEI’s professional opinion is that the majority of the Tributary, under the majority of flow regimes, would not provide seasonal habitat, and is therefore classified as “Contributing Habitat”;
- Aquatic Habitat – A qualitative assessment of benthic invertebrates (i.e., turning of stones and small rocks in pools or observations of beetles/water striders in pools) provided minimal indication of benthic use. GEI therefore classifies the Tributary as “Low” in this category;
- Terrestrial Habitat – The presence of the MAS2-1 (Cattail Mineral Shallow Marsh) within the Tributary and surrounding the remnant farm pond, and the proximity to Fletchers Creek and associated naturally vegetated area and valley, GEI considers the Tributary connection to Fletchers Creek as a “Low to Medium” ranking in this category;
- Overall Classification – “Complex Contributing Habitat”; and
- Management recommendation – “Conservation”.

Fletchers Creek adjacent to the Subject Lands provides habitat for Redside Dace (*Clinostomus elongatus*). It is considered to be “occupied” habitat by the MECP (as per the ESA 2007 and associated regulations) and Critical Habitat by DFO.

Discussions with the MNRF indicated that if the bankfull width of Fletchers Creek downstream of the confluence with the headwater tributary is greater than 7.5 m, then the watercourse would not meet the definition of “Redside Dace Contributing Habitat” under the Act (pers. comm. Heaton 2012). The rationale being that when a small watercourse flows into a much larger stream (i.e., greater than 7.5 m bankfull), the significance of this small watercourse to serve as “Contributing Habitat” is diminished. Geomorphic Solutions was retained to obtain detailed bankfull measurements within the portion of Fletchers Creek south of the confluence with the Tributary. The result of their survey is that the bankfull width of Fletchers Creek south of the confluence with the tributary is 8.5 m; therefore, the tributary on the Subject Lands is not considered to be “Redside Dace Contributing Habitat”. The tributary and remnant farm pond will be retained with a 15 m buffer on either side (**Figure 5**, **Appendix A**), as per the regulations relating to warmwater fisheries.

The area north of the remnant farm pond (Reach 2) is a broad swale type feature that has no “bed or bank” definition. Based on Savanta’s various site observations through the 2012 spring and summer, as well as consideration of aerial photography of these lands over the past decade, we note that the presence of the current MAS2-1 (Cattail Mineral Shallow Marsh) feature upstream from the remnant farm pond was virtually non-existent prior to the construction of the hydro substation (which does not appear in aerial imagery from November 2007 but is present in aerial imagery from September 2009). Once the substation was constructed (with the fairly substantial volume of fill), it appears that the area to the south now tends to collect and retain surface water in a broad, shallow corridor, thus providing the supporting moisture for the establishment of the anthropogenic MAS2-1 (Cattail Mineral Shallow Marsh). With respect to fish habitat, GEI recommends that Reach 2 be classified as contributing habitat.

3.0 ANALYSIS OF ECOLOGICAL AND NATURAL HERITAGE SIGNIFICANCE

The MOP (2024 Consolidation) identifies the natural heritage features that form a component of the City's NHS and Natural Hazard Lands. This includes the following:

- Natural Heritage System:
  - Significant Natural Areas;
    - Provincially or regionally significant life science ANSIs;
    - Environmentally sensitive or significant areas;
    - Habitat of endangered or threatened species;
    - Fish habitat;
    - SWH;
    - Significant woodlands;
    - Significant Wetlands;
      - Provincially Significant Wetlands (PSWs)
      - Coastal wetlands; and
      - Other wetlands >0.5 ha; and
    - Significant valley lands;
  - Natural Green Spaces:
    - Woodlands >0.5 ha that don't meet criteria to be significant;
    - Wetlands that do not meet criteria to be significant;
    - Watercourses that do not fulfill requirements to be a significant valley land; and
    - All natural areas >0.5 ha that have vegetation that is uncommon in Mississauga;
  - Special Management Areas:
    - Lands adjacent to or near Significant Natural Areas or Natural Green Spaces that will be managed or restored to enhance and support the adjacent areas
  - Residential Woodlands;
  - Linkages;
- Natural Hazard Lands;
  - Valley lands;
  - Floodplain;
  - Lake Ontario Shoreline.

The Significant Natural Areas defined in the MOP (2024 Consolidation) include the eight types of natural heritage features and areas defined in the PPS (2024). In addition to the guidance provided in the MOP (2024 Consolidation), the MNRF's Natural Heritage Reference Manual (NHRM; MNR 2010) provides technical guidance on the identification and definition of the significant natural heritage features defined in the PPS.

The City's NHS and Natural Hazard Lands components generally address the requirements of the RPOP (2022) Greenlands System. However, the following Greenlands System components from the RPOP (2022) are not specifically identified in the City's Green System and will therefore be addressed separately in this EIS:

- Escarpment Natural Areas;

- Escarpment Protection Areas;
- Valley and Stream Corridors;
- Shorelines;
- Natural Lakes;
- Ground water recharge and discharge areas;
- Open space portions of the Parkway Belt West Plan; and
- Other natural features and functional areas.

The following sections provide a detailed discussion regarding the designation of natural heritage and natural hazard features as defined by the PPS, MOP (2024 Consolidation) and RPOP (2022), and whether any of the above noted features are present on or adjacent to (i.e., within 120 m of) the Subject Lands.

3.1 Significant Natural Areas

3.1.1 Provincially or Regionally Significant Life Science ANSIs

An ANSI is an area identified by the MNR as having provincially or regionally significant representative geological or ecological features.

There are no ANSIs identified on or adjacent to the Subject Lands in MNR LIO mapping (MNR 2023). The closest ANSI is the Meadowvale Station Woods regionally significant Life Science ANSI located approximately 2.6 km southwest of the Subject Lands.

3.1.2 Environmentally Sensitive or Significant Areas

The MOP (2024) defines Environmentally Sensitive or Significant Areas as "*places where ecosystem functions or features warrant special protection. These may include but are not limited to rare or unique plant or animal populations or habitats, plant or animal communities, or concentrations of ecological functions*".

The Fletchers Creek valley corridor on and adjacent to the Subject Lands provides fish and wildlife habitat including protected habitat for the endangered Redside Dace. Therefore, it generally meets the criteria and is considered to be an Environmentally Sensitive or Significant Area for the purposes of this EIS. The limit of the area is considered to be the extent of the flooding or erosion hazard (whichever is further). This NHS component is not specifically mapped on **Figure 5** (**Appendix A**).

3.1.3 Habitat of Endangered and Threatened Species

Endangered and threatened species are identified in Ontario by the MECP using procedures established by the Committee on the Status of Species at Risk in Ontario ("COSSARO").

The MNRF previously indicated (prior to MECP assuming jurisdiction over the ESA 2007) that Redside Dace was the only potential SAR on the Subject Lands. Fletchers Creek on and adjacent to the Subject Lands provides occupied Redside Dace habitat and is therefore protected under both the ESA 2007 and the federal Species at Risk Act (as Critical Habitat for the species). These protections are afforded to the watercourse, all areas within the meander belt and all vegetated

or agricultural areas within 30 m of the meander belt. The limit of Regulated Redside Dace habitat/Critical Habitat is depicted as 30 m from the meander belt on **Figure 5** (**Appendix A**).

Given that Fletchers Creek has a bankfull width >7.5 m, the Tributary of Fletchers Creek on the Subject Lands does not meet the criteria to be Contributing Habitat for Redside Dace, per the definitions in O. Reg. 242/08.

As previously discussed, one individual male Bobolink was observed in flight over the field between PC1 and PC2. No behavior that would confirm successful breeding on site was observed, and suitable breeding habitat does not exist on the Subject Lands, given the prominence of row crop agricultural lands.

Therefore, the only habitat for threatened or endangered species is the regulated/Critical Habitat for Redside Dace in Fletchers Creek.

3.1.4 Fish Habitat

Fish habitat, as defined in the federal *Fisheries Act* (R.S.C., 1985, C. F-14; Government of Canada 2019), are those parts of the environment on which fish depend, directly or indirectly, in order to carry out their life processes.

There are two watercourses on the Subject Lands. Fletchers Creek is a permanent watercourse that provides direct fish habitat.

The tributary to Fletchers Creek exists on the tablelands portion of the Subject Lands and includes a remnant farm pond and associated MAS2-1 (Cattail Mineral Shallow Marsh) downstream from the pond. GEI has designated this tributary as Complex Contributing Habitat (i.e. indirect fish habitat), with a corresponding HDFA management recommendation of “Conservation”. This watercourse is not expected to provide direct fish habitat where it is present on the tablelands.

The tributary and associated wetlands provide indirect fish habitat functions by conveying flow to downstream fish habitat in Fletchers Creek and assisting with maintaining water quality.

3.1.5 Significant Wildlife Habitat

SWH is one of the more complex natural heritage features to identify and evaluate. There are several provincial documents that provide guidance for identifying and evaluating SWH: the NHRM (MNR 2010) and the SWH Ecoregion 7E Criterion Schedule (MNRF 2015). In addition, guidance on SWH is also provided by the Peel-Caledon Significant Woodlands and Significant Wildlife Habitat Study (North-South Environmental Inc. et al. 2009).

There are four general types of significant wildlife: seasonal concentration areas, migration corridors, rare or specialized habitat, and species of conservation concern. All types of significant wildlife habitat in relation to the Subject Lands are discussed in more detail below.

Seasonal Concentration Areas

Seasonal concentration areas are those sites where large numbers of a species gather together at one time of the year, or where several species congregate. The following is a partial list of numerous potential examples: deer yards, amphibian breeding ponds, snake and bat hibernacula, waterfowl staging and molting areas, raptor roosts, bird nesting colonies, shorebird staging areas, and passerine migration concentrations. Only the best examples of these concentration areas are usually designated as significant wildlife habitat. Areas that support a species at risk, or if a large proportion of the population may be lost if the habitat is destroyed, are examples of seasonal concentration areas which should be designated as significant.

Based on the surveys conducted, the Subject Lands do not provide suitable Seasonal Concentration Areas.

Rare or Specialized Habitat

Rare or specialized habitat are two separate components. Rare habitats are those with vegetation communities that are considered rare in the province. SRANKS are rarity rankings applied to species at the 'state', or in Canada at the provincial level, and are part of a system developed under the auspices of the Nature Conservancy (Arlington, VA). Generally, community types with SRANKS of S1 to S3 (extremely rare to rare-uncommon in Ontario), as defined by the NHIC, could qualify. It is assumed that these habitats are at risk and that they are also likely to support additional wildlife species that are considered significant. Based on the ecological surveys conducted, there are no rare habitats on the Subject Lands.

Specialized habitats are microhabitats that are critical to some wildlife species. Potential examples include waterfowl nesting areas, turtle nesting areas, groundwater seeps and springs and amphibian breeding habitats.

Based on the habitat types present on the Subject Lands and the ecological surveys conducted, the only potential specialized habitat type that could be present is amphibian breeding habitat (wetland). The MNRF (2015) Eco-Region Criteria Schedule indicates that defining criteria for this type of SWH is "presence of…2 or more of the listed frog/toad species with at least 20 individuals (adults or egg masses) or 2 or more of the listed frog/toad species with Call Level Codes of 3". MNRF (Kowalyck, per. comm. 2018) has further clarified that "the 20 individuals can represent a mix of species, each of which do not need to reach 20 individuals for amphibian habitat to be significant". With respect to cumulative versus individual round total numbers of amphibians, MNRF (Kowalyck, per. comm. 2018) has agreed with "using the highest number of individuals of a species recorded during a round as long as the different breeding periods for all species was covered".

As summarized in **Table 1** (**Appendix B**), amphibian call surveys completed at the remnant farm pond found a cumulative total of six American Toads and four Green Frogs. Based on these results, the remnant farm pond would not meet the MNRF (2015) criteria to be considered amphibian breeding habitat (wetland) SWH, since the required number of individuals (at least 20) was not identified either when assessed using MNRF's intended protocol of peak count per round, or when considered cumulatively.

The Peel-Caledon SWH Study (North-South Environmental Inc. et al. 2009), which CVC had indicated that they use for guidance when determining SWH in Peel Region (Tripodo, pers. comm. 2018), indicates that amphibian breeding SWH for species including American Toad and Green Frog is confirmed where the breeding population contains two or more of the listed species with a combined total of at least 40 individuals present. North-South Environmental Inc. et al. (2009) further clarifies that with respect to the number of individuals present, it is assumed that for every male frog/toad heard during a call survey, that there would also be a female present and that totals are aggregated over all surveys. Based on this assumption, the number of individual frogs/toads present on the Subject Lands would be 20 (10 males heard calling cumulatively across the three rounds, assumed 10 females present as well). This number of individuals would not meet the SWH criteria in the Peel-Caledon SWH Study (North-South Environmental Inc. et al. 2009).

CVC (Tripodo, pers. comm. 2018) has indicated that they apply the assumption that an equal number females are present to the observed numbers of males heard calling when interpreting SWH under the MNRF (2015) Eco-Region Criteria Schedule as well. Based on this assumption, CVC would count the number of individual amphibians present as 20 (i.e., number of males counted cumulatively during call studies, with an equal number of females present) and would consider this as meeting the MNRF (2015) defining criteria threshold and would therefore consider the remnant farm pond to be amphibian breeding (wetland) SWH. While this approach to counting the number of amphibians is not known to be applied outside the Peel Region, nor is it consistent with the guidance provided by MNRF with respect to cumulative counting of numbers of amphibians (Kowalyck, per. comm. 2018), for the purposes of this assessment, the remnant farm pond will be considered a locally important breeding habitat and will be carried forward to the impact assessment.

As shown on **Figure 5** (**Appendix A**), the remnant farm pond represents the limits of the amphibian breeding area, since the pond itself is the only potential breeding habitat present. Amphibian call studies completed in the marsh habitat north of the pond did not identify any amphibian usage of this area. MNRF (2014) notes that American Toads will utilize a wide range of breeding habitat, including open ponds, with the young generally leaving the pond before the end of June and adults moving to open areas (e.g., fields, residential areas) or forested habitat. MNRF (2014) notes that Green Frogs require permanent water bodies to breed, since tadpoles require one year to transform and leave the pond, and adults typically remain within the pond. Amphibian movement corridors are discussed under the Animal Movement Corridors heading below.

Habitat for Species of Conservation Concern

Species of conservation concern include those that are designed as Special Concern on the SARO, or are identified as rare (based on SRanks of S1 – S3). Habitats of species of conservation concern do not include habitats of Endangered or Threatened species, as identified by the ESA, 2007. These are discussed in section 3.2.

According to the Significant Wildlife Habitat Ecoregion Criterion Schedule (MNRF 2015), habitat for species of conservation concern also includes five types of habitats:

a) Marsh bird breeding habitat;
b) Open country bird breeding habitat;
c) Shrub/early successional bird breeding habitat;
d) Terrestrial crayfish; and
e) Special concern and rare wildlife species.

Based on the habitat types present and the ecological surveys conducted, the Subject Lands provide habitat for terrestrial crayfish, but do not provide suitable habitat for any of the other Species of Conservation Concern categories.

With respect to terrestrial crayfish, MNRF (2015) indicates that the presence of one or more chimneys "in suitable meadow marsh, swamp or moist terrestrial sites" provides confirmation of SWH, with the limit of the SWH being the "area of ELC ecosite or an eco-element area of meadow marsh or swamp within the larger ecosite area". CVC has indicated that they consider areas where chimneys are located, provided they are in suitably moist ecosites (i.e., including moist agricultural fields) to be part of the SWH. Therefore, based on this definition, all chimney locations observed on the Subject Lands would be considered Terrestrial Crayfish SWH (**Figure 5**, **Appendix A**).

The limit of the SWH may be highly variable on an annual basis, since the groundwater level likely has a significant bearing on chimney construction, and construction of multiple chimneys (including movement away from the wetland feature to avoid high groundwater) may occur in wetter years, such as occurred in spring 2019. During drier years, chimneys may be located substantially closer to the wetland boundary compared to observations in spring 2019. Chimney locations are also impacted by agricultural activities on the property, although Terrestrial Crayfish tunnel networks are expected to persist below the typical depth of ploughing/planting, provided access to groundwater is maintained.

As previously discussed, Barn Swallows were observed on the Subject Lands. All observed activity was feeding behavior, with birds flying onto and out of the Subject Lands from all directions. This feeding function will be maintained and potentially improved with the expansion of the wetland surrounding the Tributary to Fletchers Creek. General foraging habitat for this species is not considered to be SWH. There are no structures on site to provide suitable nesting habitat for Barn Swallows and this species was not found to be breeding on the Subject Lands.

Animal Movement Corridors

Migration corridors are areas that are traditionally used by wildlife to move from one habitat to another. This is usually in response to different seasonal habitat requirements. Within Eco-Region 7E, the only type of movement corridor that requires consideration is a movement corridor used by amphibians to move between breeding habitat SWH and summering habitat.

Given that this report has assumed that locally important amphibian breeding (wetland) habitat is present in the remnant farm pond (based on criteria used by CVC), a movement corridor has to be identified. Based on the nature of the Subject Lands, specifically in the area around the remnant farm pond, the only movement corridor present would be the Tributary running from the farm pond to the woody valley lands around Fletchers creek to the south. MNRF (2015) indicates that amphibian movement corridors:

- "should consist of native vegetation, with several layers of vegetation. Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant" and
- "corridors should have at least 15 m of vegetation on both sides of waterway or be up to 200 m wide of woodland habitat and with gaps <20 m".

The movement corridor from the farm pond to the adjacent valley lands is approximately 100 m long, and generally consists of an approximately 10 m wide naturalized corridor surrounded by agricultural land use. Vegetation is predominantly meadow and does not generally consist of several layers. Based on these criteria, the corridor does not specifically meet the criteria for significance suggested by MNRF (2015), although given that amphibian breeding habitat is being considered significant by CVC and as locally important in this report, the vegetated portions of the tributary from the remnant farm pond to the Fletchers Creek valley land have been identified as a locally important Amphibian Movement Corridor for the purposes of this assessment, as shown on **Figure 5** (**Appendix A**). This means that this corridor is considered SWH and as a result is a component of a NHS.

3.1.6 Significant Woodlands

Significant woodlands are woodlands that are ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history.

Criteria to identify significant woodlands is provided in both the MOP (2024) and the RPOP (2022); the NHRM (MNR 2010) also provides guidance on delineating significant woodlands in Ontario. For the purposes of this EIS, the MOP criteria will be used.

The MOP (2024) indicates that significant woodlands are woodlands that meets one or more of the following criteria:

- "woodlands, excluding cultural savannahs, greater than or equal to four hectares;
- Woodlands, excluding cultural woodlands and cultural savannahs, greater than or equal to 2 ha and less than 4 ha;
- Any woodland greater than 0.5 ha that:
    - Supports old growth trees (greater than or equal to 100 years old);
    - Supports a significant linkage function as determined through an Environmental Impact Study approved by the City in consultation with the appropriate conservation authority;
    - Is located within 100 metres of another Significant Natural Area supporting a significant ecological relationship between the two features;
    - Is located within 30 metres of a watercourse or significant wetland; or
    - Supports significant species or communities".

There is one small (0.16 ha) cultural woodland community on the Subject Lands and this does not meet the criteria to be considered significant since it is <0.5 ha in size.

The vegetated areas of the Fletchers Creek valley land on and adjacent to the Subject Lands are a cultural thicket and do not meet woodland criteria. Although the dripline of this thicket was staked

on July 6, 2012 (**Figure 5**, **Appendix A**), this staked limit is the limit of the natural vegetation of the valley land and not a woodland dripline.

Therefore, there are no significant woodlands on or within 120 m of the Subject Lands.

3.1.7 Significant Wetlands

Under the MOP (2024), significant wetlands include:

- "Provincially significant coastal wetlands;
- Provincially significant wetlands;
- Coastal wetlands; and
- Other wetlands greater than 0.5 ha."

There are no PSWs or coastal wetlands identified on or adjacent to the Subject Lands.

The wetland associated with the Tributary of Fletchers Creek on the Subject Lands is approximately 0.42 ha and therefore, it doesn't meet the criteria to be a significant wetland under the MOP (2024).

As depicted on **Figure 2** (**Appendix A**), a shallow marsh/meadow marsh wetland has been identified in the Fletchers Creek valley land southwest of the Subject Lands. This wetland has not been evaluated under the Ontario Wetland Evaluation System (OWES; MNRF 2022), but is >0.5 ha and therefore meets the criteria to be a significant wetland under the MOP (2024).

3.1.8 Significant Valley lands

Significant valley lands should be defined and designated by the planning authority. General guidelines for determining significance of these features are presented in the NHRM (MNR 2010) for Policy 2.1 of the PPS. Recommended criteria for designating significant valley lands include prominence as a distinctive landform, degree of naturalness, and importance of its ecological functions, restoration potential, and historical and cultural values.

The development plan will respect the top-of-bank and long-term stable slope of the valley associated with Fletchers Creek (shown on **Figure 5**, **Appendix A**), which meets various criteria for designation as a significant valley land under the PPS and MOP.

3.2 Natural Green Spaces

3.2.1 Non-Significant Woodlands

Woodlands >0.5 ha that do not meet the criteria to be a significant woodland (as discussed in Section 3.1.6) are considered to be Natural Green Spaces under the City's Green System.

The only woodland on the Subject Lands is 0.16 ha and therefore, it does not meet the minimum size criteria to be a Natural Green Space.

3.2.2 Non-Significant Wetlands

Wetlands that do not meet the criteria to be significant wetlands (as discussed in Section 3.1.7) are considered to be Natural Green Spaces under the City's Green System.

The wetland associated with the Tributary of Fletchers Creek running through the Subject Lands does not meet the criteria to be significant, so it is identified as a Natural Green Space.

3.2.3 Watercourses Outside of Significant Valley land

The Tributary of Fletchers Creek running through the Subject Lands is located outside the Fletchers Creek valley system, but it is identified as a regulated watercourse by CVC. Therefore, the watercourse is identified as a Natural Green Space.

3.2.4 Natural Areas >0.5 ha with Uncommon Vegetation

There are no natural areas on the Subject Lands meeting this criteria that haven't already been identified as part of a different Green System component.

3.3 Special Management Areas

There are no areas adjacent to the Significant Natural Areas or Natural Green Spaces on the Subject Lands that warrant designation as a Special Management Area.

3.4 Residential Woodlands

There are no residential woodlands on the Subject Lands.

3.5 Linkages

The MOP (2024) identifies linkages as "*those areas that are necessary to maintain biodiversity and support ecological functions of Significant Natural Areas and Natural Green Spaces but do not fulfil the criteria of Significant Natural Areas, Natural Green Spaces, Special Management Areas or Residential Woodlands*".

No such areas are present on the Subject Lands. The Fletchers Creek valley land would likely provide a linkage corridor along its length. However, it is already considered to be a Significant Natural Area. The Tributary of Fletchers Creek on the Subject Lands is already identified as a Natural Green Space; regardless, it does not appear to provide a linkage corridor to any other natural feature, as it terminates at the transformer station north of the Subject Lands.

3.6 Natural Hazard Lands

3.6.1 Valley lands

The Fletchers Creek valley land is located on and adjacent to the Subject Lands. The physical top of bank was staked with CVC on October 6, 2010 and March 24, 2011. A long-term stable slope assessment was completed by Soil Engineers Ltd. (2008 and 2020), which incorporated the toe erosion setback recommended by GEO Morphix Ltd. (2019). The physical top of bank and

long-term stable slope are also present at the downstream end of the Tributary of Fletchers Creek that runs through the Subject Lands.

The physical top of bank and long-term stable slope are depicted on **Figure 5** (**Appendix A**).

3.6.2 Floodplain

CVC has identified a regulatory floodplain for Fletchers Creek (**Figure 5**, **Appendix A**). The floodplain extends slightly up the lower end of the Tributary of Fletchers Creek, but no floodplain is present on the upper reaches of the tributary (above the staked top of bank).

3.6.3 Lake Ontario Shoreline

The Subject Lands are not located in proximity to Lake Ontario.

3.7 Other Peel Region Greenlands Components

This section addresses the RPOP (2022) Greenlands components that are not addressed in the MOP (2024) Green System.

3.7.1 Escarpment Natural Areas and Protection Areas

The Subject Lands are not located within the Niagara Escarpment Plan Area.

3.7.2 Valley and Stream Corridors

The RPOP (2022) provides criteria to evaluate valley and stream corridors to determine if they meet the criteria to be Core Areas of the Region's Greenlands System. Valley and stream corridors not meeting the Core Area criteria are considered to be Natural Areas and Corridors in the Greenlands System.

Schedule C-2 (Core Areas in the Greenlands System in Peel) identifies Fletchers Creek valley land on and adjacent to the Subject Lands as a Core Area. Based on Table 2 (Criteria and Thresholds for the Identification of Core Area Valley and Stream Corridors) from the RPOP (2022), Fletchers Creek is a tributary of the Credit River that provides habitat for Redside Dace and crosses municipal boundaries. Therefore, it does meet criteria to be a Core Area Valley and Stream Corridor.

Aside from the downstream end located within the Fletchers Creek valley land, the Tributary of Fletchers Creek is not located in a valley landform. Therefore, it does not meet the criteria to be a Core Area Valley and Stream Corridor and is instead identified as part of Natural Areas and Corridors component of the Regional Greenlands System.

3.7.3 Shorelines and Natural Lakes

The Subject Lands do not contain any shorelines or natural lakes.

3.7.4 Groundwater Recharge and Discharge Areas

The Subject Lands have not been identified as a significant groundwater recharge or discharge area. General ground infiltration requirements have been identified in the Functional Servicing Report (SKIRA 2024).

3.7.5 Open Space Portions of Parkway Belt West Plan

The Parkway Belt West Plan Area is located immediately north of the Subject Lands. No impact on land use in this area will occur as a result of the proposed development on the Subject Lands.

3.7.6 Other Natural Features and Functional Areas

There are no other natural features or functional areas located on the Subject Lands that have not already been incorporated under other components of the PPS, MOP or PROP.

3.8 Summary of Natural Heritage and Natural Hazard Features

The natural heritage and natural hazard features present on and adjacent to the Subject Lands are associated with either Fletchers Creek or the Tributary of Fletchers Creek. All other areas of the Subject Lands and adjacent lands consist of active agricultural lands, developed areas (e.g., Illumi lightshow) or infrastructure (e.g. transformer station and transmission lines, municipal roads).

The natural heritage and natural hazards designations associated with each feature, based on the PPS (2024), RPOP (2022) and MOP (2024) are as follows:

<u>Fletchers Creek</u>

- Habitat for endangered species (occupied Redside Dace habitat);
- Fish habitat;
- Significant wetland;
- Significant valley land;
- Core Area Valley and Stream corridor;
- Regulatory floodplain; and
- Erosion hazard (physical top of bank and long-term stable slope).

<u>Tributary of Fletchers Creek (outside Fletchers Creek Valley)</u>

- Natural Areas and Corridors Valley and Stream Corridor;
- Indirect fish habitat;
- Significant Wildlife Habitat
    - Locally important amphibian breeding area and associated movement corridor;
    - Terrestrial Crayfish habitat; and
- Non-significant wetland (Natural Green Space).

These natural heritage and natural hazard features generally meet the PPS (2024), RPOP (2022) and/or MOP (2024) criteria to be part of the City or Region Natural Heritage System and are subject to the relevant policies of the Official Plans.

These features are carried through to the Impact Assessment section of the EIS (**Section 5**).

4.0 DEVELOPMENT PROPOSAL

The proposed development will include the construction of multiple industrial buildings with associated parking and landscape areas in two separate blocks that will be developed in two phases. Phase 1 contains lands west of Derrycrest Drive and east of the Tributary to Fletchers Creek. Phase 2 is comprised of the remainder of the developable lands to the west of Phase 1. The proposed Draft Plan of Subdivision, prepared by Design Plan Services Inc. (September 15, 2025) is provided in **Appendix C**. As depicted on the Draft Plan of Subdivision, the Subject Lands are proposed to be subdivided into four blocks; tow Employment Area Blocks (1 and 4), the Greenlands Area Crossing Block (3) and the Greenlands Area (Block 2).

The proposed Site Plan, prepared by Baldassarra Architects, is also provided in **Appendix C**. The Site Plan and associated grading plan (from the FSR prepared by Skira & Associates, 2025) are overlaid onto the natural heritage and natural hazard constraints plan on **Figure 6** (**Appendix A**).

A road crossing of the Tributary of Fletchers Creek (and its associated wetland) will be required to provide road access between the Phase 1 and Phase 2 areas (**Figure 6**, **Appendix A**). The previous version of this EIS identified that the road would occur north of the pond on the Tributary of Fletcher's Creek. However, in order to minimize impacts on natural heritage features associated with the road crossing, it has been moved south of the pond, as depicted on the Site Plan in **Appendix C**. A 1.5 m wide by 0.90 m high by 26 m long closed-bottom concrete culvert will be installed to convey flows in the Tributary of Fletchers Creek past the road.

Through this development, the natural heritage system surrounding the Tributary to Fletchers Creek will be conveyed to the City of Mississauga to become part of their Green System and Natural Heritage System. The lands within this conveyance, which includes natural features and associated buffer areas and compensation areas, are proposed to be zoned as G1 (Greenbelt). The limit of development adjacent to these areas will be fenced to protect against encroachment. As per the City's requirements, this will include a 1.5-m high, black vinyl chain-link fence constructed 0.15 m inside the boundary of the NHS. The conceptual site plan is provided in **Figure 6** (**Appendix A**).

The end use development of the lands will increase the imperviousness of the Subject Lands compared to the existing land use, through the construction of buildings and pavement areas. Stormwater management measures are discussed in the Functional Servicing Report (Skira & Associates 2025). External drainage from the lands to the north of the Subject Lands (12.16 ha) that is currently conveyed to the Tributary of Fletcher's Creek will continue to do so post-development.

Surface water runoff (up to and including the 100-year flow) from the Phase 1 area will be captured and conveyed to the existing storm sewer on Vicksburg Drive that ultimately discharges to the existing City of Mississauga Stormwater Management (SWM) Pond 4402B, located south of Derry Road. This existing SWM pond was sized to accommodate flow from this proposed development. This SWM pond was designed to provide Level 1 Enhanced (80% Total Suspended Solids (TSS) removal) water quality treatment, 24 hour detention of the 25 mm design storm (per erosion control requirements) and pre to post quantity control.

Surface water runoff from the Phase 2 area (up to the 10-yr peak flow in the minor system) will be captured, treated and conveyed to an outlet in the Fletcher's Creek valley southwest of the Subject Lands. Major system flows in excess of the 10-yr peak flow are planned to use loading and parking area surfaces to control runoff and ultimately convey to the same outlet location. No quantity control is required by the City in this portion of the Fletcher's Creek Subwatershed (Skira & Associates 2025).

Flows from the Phase 2 portion of the Subject Lands will be managed through a treatment train approach using a combination of SWM practices to retain the first 5 mm of rainfall and provide appropriate quality control. The proposed treatment train will be finalized at the detailed design stage but may include the following measures (per Skira & Associates 2025):

- Increased topsoil depth;
- Dedicated clean-water conveyance from rooftops;
- Catch basin treatment (Goss Traps or CB shields);
- Oil-Grit Separator (OGS);
- Erosion control storage tank with filtration; and
- Bio-retention swales.

The FSR indicates that an erosion control storage tank sized to control the post-development 25 mm flow to pre-development levels and an OGS will be provided in the Phase 2 area. The final treatment train approach will capture drainage and provide water quality treatment and control of the 25 mm event to meet erosion control and quality control requirements for Fletchers Creek. The FSR (Skira & Associates 2025) indicates that Low Impact Development (LID) measures including increased topsoil depth, rain gardens/bioretention in landscaped areas and localized permeable paving in parking areas will be considered at the detailed design stage.

The Phase 2 SWM system will convey flows via a buried pipe to an outfall located in the adjacent Fletchers Creek valley (**Figure 6**, **Appendix A**), specifically within the Buckthorn/Hawthorn Cultural Thicket ELC unit (CUT1-7). The outfall will consist of a concrete headwall and a stone core wetland to provide erosion protection and promote infiltration into the floodplain. No constructed outlet channel will be built from the stone core wetland to Fletchers Creek and overflow from the wetland will be discharged as dispersed overflow through a level spreader (300 mm wattle) to the surrounding valley floor. The proposed stone core wetland, outlet headwall and pipe will be installed by open cut installation methodologies, which will include the following main steps:

- Installation of erosion and sedimentation control measures;
- Vegetation removal;
- Open-cut trenching and grading (using heavy equipment);
- Installation of pipe, outlet headwall and stone core wetland;
- Final grading;
- Rehabilitation of disturbed areas; and
- Construction demobilization.

It is expected that the installation of the SWM outfall would take approximately 1 week to complete.

Sanitary flows for the Phase 1 area will be conveyed by the existing 300 mm sanitary sewer on Vicksburgh Drive. Sanitary flows from the Phase 2 area will be conveyed to the existing City of Mississauga 1500-mm trunk sewer located in the Fletchers Creek valley land southwest of the Subject Lands (**Figure 6**, **Appendix A**). The new sewer from the proposed development will be installed by open-cut methodology, in conjunction with the storm sewer discussed previously. Following completion of the construction (which is expected to take 3 to 4 days), the sewer will be completely buried, with no permanent expression on the ground surface. All disturbed areas of the valley will be rehabilitated following installation of the sanitary sewer

GEI understands that trenchless installation for the SWM outlet and sanitary sewer installation was considered by Skira & Associates but was determined to not be feasible. An open-cut installation is the selected installation method. A total of 5,036 m² of land within the NHS is proposed to be temporarily disturbed to allow for the SWM outlet and sanitary sewer install. Rehabilitation of all areas disturbed during installation of these items is discussed in **Section 6.4**. Timing of installation of the works in the valley will be subject to multiple constraints including timing windows for breeding birds and roosting bats, as well as potential considerations associated with work in Redside Dace habitat. Winter construction may be preferred (assuming DFO will approve work in Redside Dace habitat during the winter) given that frozen ground conditions may minimize disturbance to valley ground conditions. If winter construction is not feasible, late August/early September construction may be preferred (subject to bird and bat timing considerations). Bird nesting and bat roosting surveys may be required if vegetation removals are proposed within restricted activity timing windows.

The water supply for the proposed development will come from existing city water distribution system east of the Subject Lands (i.e., existing 300-mm diameter watermain along Vicksburgh Drive). Water supply will be conveyed to the Phase 2 lands via a buried distribution pipe within the right-of-way of the road crossing of the wetland between Phase 1 and 2.

The FSR (Skira & Associates 2025) indicated that an erosion and sediment control plan will be designed at the Site Plan Approval stage, but noted that the following measures will be installed and maintained during construction:

- Temporary sediment control fence installed prior to commencement of grading;
- Sediment traps to manage runoff within the construction site; and
- Gravel mud mats at construction vehicle access points.

The FSR (Skira & Associates 2025) indicates that these measures will be routinely inspected and repaired as necessary throughout construction and that measures will remain in place until the site is restored and stable.

4.1 Development Limits and Buffers

As will be discussed in Section 5 and shown on **Figure 5** and **Figure 6** (**Appendix A**), the proposed development has generally been sited to address natural heritage feature and hazard setbacks, including:

- 10 m setback from staked wetlands (July 6, 2012) along Tributary 1 (including farm pond and wetlands south of the farm pond which are identified as locally important amphibian breeding habitat and corridor, respectively);
- 15 m setback from Tributary 1 watercourse centerline (south of farm pond);

- 10 m setback from long-term stable top of slope of Tributary 1 and Fletchers Creek (which has incorporated the toe erosion allowance where necessary);
- 10 m setback from the staked top of bank (October 6, 2010 and March 24, 2011);
- 30 m setback from the meander belt of Fletchers Creek (Regulated Redside Dace habitat); and
- 10 m setback from the staked dripline of valley land vegetation (July 6, 2012).

In addition, the proposed development has been designed to avoid most Terrestrial Crayfish chimney locations, although some locations will be impacted by the proposed development. This is assessed further in Section 5.

The resulting protected area also protects the majority of the staked wetland along the Tributary of Fletchers Creek, with the exception of the proposed road crossing, which will impact 208 m^2 of wetland (**Figure 6**, **Appendix A**). As discussed further in **Section 5**, wetland compensation plantings are proposed along the tributary south of the farm pond to provide a 1:1 compensation ratio to address the area of wetland impacted by the proposed road crossing. Additional information is provided in **Section 6**.

Encroachment into the 10 m buffer adjacent to the wetland north of the farm pond is proposed in three locations (**Figure 6**, **Appendix A**), with a total impact area of 1,405 m^2. One of those locations is associated with the proposed road crossing (683 m^2, which includes the road surface and embankment grading), which necessarily bisects the wetland and adjacent buffer areas. There is a proposed 483 m^2 wetland encroachment into the buffer on the east side of the Tributary (north of the road crossing). This encroachment is associated with grading only and a minimum distance of approximately 4 m will be retained between the wetland and the limit of grading in this location. No impervious surface will be located within 10 m of the wetland. Finally, there is an encroachment of 239 m^2 on the west side at the north end of the Tributary to facilitate the proposed development. A retaining wall will be constructed a minimum of approximately 2 m from the wetland boundary. Parking and driveway areas will be provided beyond the retaining wall.

Subject to the mitigation discussed in **Section 5**, these encroachment areas are not expected to result in negative impacts on the wetland. However, they will result in a reduction in the size of the Natural Heritage System (which includes buffers) that would otherwise be protected. To address this, two buffer encroachment compensation areas has been proposed along the Tributary (**Figure 6**, **Appendix A**). The proposed compensation areas (totaling 1,405 m^2), directly adjacent to but located outside of all existing features and associated buffers/setbacks, will compensate for the proposed encroachments into the Natural Heritage System area.

Aside from wetlands and encroachments associated with the road crossing (which will necessarily encroach into the floodplain, watercourse, valley vegetation and top of bank buffers), there is one minor encroachment into other buffers around the perimeter of the proposed development. An approximately 2-m encroachment for a retaining wall into the 10-m buffer from the long term stable slope is proposed in the southeast corner of Phase 2. This encroachment is not expected to have any negative impact on the function of the buffer to project the adjacent feature.

The proposed development area outside the NHS includes a portion of a cultural meadow (CUM1-1) community along the western boundary of the Subject Lands (just south of the cultural woodland unit). This cultural meadow unit is considered by CVC to be part of the Natural Area associated with the Fletchers Creek corridor on and adjacent to the Subject Lands. However, the

portion of cultural meadow that is within the proposed development limit is located on the tablelands outside of the long-term stable slope line that has been identified. The Natural Area Survey summary for this site (mv15) notes that the overall area provides the following significant functions:

- Habitat for an uncommon species (Canada Blue-joint – *Calamagrostis canadensis*);
- Habitat for 19 flora Species of Conservation Concern;
- Habitat for 11 fauna Species of Conservation Concern, including 10 birds and one mammal species;
- Linkage functions associated with Fletchers Creek;
- Close proximity to an adjacent natural area (mv11); and
- Floodwater storage within the floodplain.

As a small tableland meadow (approximately 350 m^2), this area provides relatively limited biophysical or ecological functions relative to the main corridor of the valley land. The cultural meadow area is not known to support any of the uncommon species or Species of Conservation Concern known to be located within the valley lands themselves. As a tableland lobe adjacent to an agricultural field, the cultural meadow community is not anticipated to support any significant wildlife linkage function, compared to the main valley. Finally, the cultural meadow is not located within the floodplain and would not provide any floodwater storage function.

The tableland cultural meadow does provide buffering of the valley land from runoff and other active agricultural activities occurring within the agricultural field. Post-development, a 10 m setback from the greatest constraint (typically the long-term stable top of slope in this area) will be maintained and the area within the setback will be vegetated to provide similar buffering functions. The majority of the buffer will be located in areas that are currently actively farmed, resulting in an overall increase in the amount of meadow habitat adjacent to the valley lands. The setback from the long-term stable top of slope will also incorporate some of the existing tableland cultural meadow community. Given the relatively limited biophysical and ecological function provided by the tableland meadow community and that the overall amount of vegetated area adjacent to the valley will be increased due to vegetation planting within the 10 m setback from the greatest constraint, removal of a portion of the tableland cultural meadow (outside the 10 m setback from the greatest constraint) is not anticipated to have any negative impacts on the residual natural features associated with the Fletchers Creek valley lands.

The March 2018 version of the EIS did not incorporate the 10 m setback from the staked dripline into the development limit shown on **Figure 5** (**Appendix A**). The development limit has been revised in this current version to generally incorporate the 10 m dripline setback in all areas of the Subject Lands.

4.2 Water Balance

A wetland water balance analysis has been prepared by Skira & Associates (2024) to assess potential impacts on the wetland associated with the Tributary of Fletchers Creek running through the Subject Lands. Off-site drainage from the adjacent transformer station is the primary source of water for this wetland and this will be maintained post-development.

The Phase 1 and 2 tableland areas both convey surface water runoff towards the wetland under pre-development conditions. Skira & Associates (2024) have indicated that overall unmitigated surface water runoff from the Phase 1 and 2 development areas would be anticipated to increase as a result of increased imperviousness, but that runoff towards the wetland may decrease as a result of redirection of flows towards SWM Pond 4402B (Phase 1) and towards Fletchers Creek (Phase 2). The water balance assessment indicated that, during the spring, summer and fall months, a reduction of 350 m^3/year would be expected, incorporating 105 m^3 of surface runoff and 244 m^3/yr of groundwater recharge volume. Based on the calculated existing water volume delivered to the wetland, this represents an overall 4% reduction, which is not anticipated to have a negative impact on wetland form and function. The majority of water supplied to the wetland is from external drainage areas that will not change in the post-development scenario. When winter months are considered, the total annual surface water volume to the wetland would be reduced by 13%.

The monthly changes in surface water balance were also assessed by Skira & Associates (2024). The assessment indicated that surface runoff volumes to the wetland would be reduced by 16% from December to March and 14% in April. Corresponding increases of 16% are expected between June and October. This represents an actual change of between 79 and 93 m^3/month, which will be concentrated around precipitation events. This minor increase in precipitation event runoff volume during the late spring through early fall period is not anticipated to have any negative effect on the wetland.

To mitigate changes in infiltration and surface water runoff supporting the wetland, a number of measures are proposed including:

- Permeable pavement in parking areas in Phase 1;
- Uncontrolled landscape areas adjacent to the north and south sections of the wetland; and
- LID measures in the Phase 2 area to provide 5 mm runoff storage, potentially including:
    - Rain gardens/bioretention;
    - Increased topsoil depth;
    - Filter strips;
    - Attenuation galleries/infiltration swales;
    - Clean water conveyance from rooftops; and
    - Perforated pipe systems.

LID measures to maintain water balance will be confirmed during the detailed design process.

5.0 IMPACT ASSESSMENT

Table 5 below discusses the potential direct and indirect impacts of the proposed development on natural heritage features within and adjacent to the Subject Lands.

Table 5 – Impact Assessment, Mitigation and Net Effects

NATURAL HERITAGE FEATURE	POTENTIAL DIRECT OR INDIRECT IMPACT	COMMENTARY	PROPOSED AVOIDANCE ALTERNATIVES AND/OR MITIGATION MEASURES	RESIDUAL EFFECT
Thicket and Cultural Woodland	*Potential Direct Impacts:* - Encroachment into woodland and thicket by industrial development - Installation of SWM outfall piping and sanitary sewer piping through thicket community on valley land slope *Potential Indirect Impacts:* - Rooting zone compaction/alteration	Cultural woodland does not meet criteria for significant woodland or Natural Green Space. Cultural thicket on its own does not meet criteria to be a component of the NHS. However, both communities are located within the limits of the significant valley land	- The proposed tableland development will not encroach into the cultural woodland and thicket to avoid impacts. - A vegetated buffer of at least 10m will be established from the staked dripline. With one minor exception (a buffer encroachment discussed in Section 4), no development or site alteration is proposed within the buffer. This buffer will be allowed to naturalize through the installation of trees and shrubs and seeded meadow. This will have the effect of expanding the natural area around the existing wooded edge in what historically have been active agricultural fields - The limit of development adjacent to the buffer and feature will be fenced to prevent human encroachment - Some thicket vegetation on the valley land slope will be removed to facilitate installation of the SWM and buried sewer piping. Following construction, the area will be revegetated with native shrub and groundcover species. - The proposed SWM outfall will result in a permanent minor decrease in thicket habitat (108 m^2), although it will be revegetated as a stone core wetland.	Some short-term impacts on thicket vegetation in the valley land will occur for installation of the SWM discharge and buried sewer connection. Minor permanent impact due to SWM outlet headwall and stone core wetland (108 m^2). Tree compensation proposed to address removal of small number of trees in valley. No long-term impact following site restoration Net overall increase in thicket and woodland due to woodland and buffer planting plans

NATURAL HERITAGE FEATURE	POTENTIAL DIRECT OR INDIRECT IMPACT	COMMENTARY	PROPOSED AVOIDANCE ALTERNATIVES AND/OR MITIGATION MEASURES	RESIDUAL EFFECT
			Enhancement*:* Net increase in natural vegetation cover due to long-term vegetation growth in tableland buffer. Woodland vegetation planting is proposed in three locations (shown on **Figure 6**, **Appendix A**) to result in long-term increase in woodland on the Subject Lands	
Valley land Associated with Fletchers Creek	*Potential Direct Impacts:* - Encroachment into valley land by industrial development - Construction and operation of a SWM outfall in the valley land - Installation of buried sanitary sewer pipe in valley land *Potential Indirect Impacts:* - Erosion due to vegetation removal	Valley land is considered significant (PPS) and as a Core Area Valley and Stream Corridor. Wetland within the valley is a significant wetland under the MOP (2024). Valley expected to provide linkage functions.	- The proposed development area (with the exception of the SWM outlet and sanitary connection) will not encroach into the valley land and a 10 m buffer will be provided for the staked top of bank and long-term stable slope limit. One minor grading encroachment into the staked top of bank buffer is proposed, but graded area will be vegetated following completion of grading activities. The 6-m erosion access allowance next to the top of bank will remain undisturbed - A portion of the cultural meadow community outside the 10 m setback from the long-term stable top of slope will be removed. Net increase in meadow habitat due to enhancement associated with planting within existing agricultural areas of the 10 m setback. No negative impacts on functions of Fletchers Creek natural area due to removal of cultural meadow - Surface water from the development area will be collected and piped to an outlet and stone core wetland on the valley floor, therefore, minor permanent removal of valley floor vegetation - SWM pipe to outlet will be installed by open-cut methodology, therefore,	No impacts on significant valley land anticipated due to tableland industrial development. Permanent SWM outlet in valley land, short-term impacts during and following construction (during revegetation period), but no long-term negative impact on valley function anticipated. SWM outlet will result in minor (108 m^2) permanent loss of natural vegetation on the valley floor and altered vegetation / topography in the stone core wetland area, but no negative impact on the valley expected as a result of this permanent loss. Permanent buried sanitary sewer in valley land, short-term impacts during construction but no long-term negative impact

NATURAL HERITAGE FEATURE	POTENTIAL DIRECT OR INDIRECT IMPACT	COMMENTARY	PROPOSED AVOIDANCE ALTERNATIVES AND/OR MITIGATION MEASURES	RESIDUAL EFFECT
			temporary disturbance to vegetation on the valley floor and slope. Vegetation community in the are of the SWM outlet is not sensitive, dominated by shrubs, including invasive Common Buckthorn, with limited trees. Disturbed area will be restored following pipe installation. No long-term impact on valley land anticipated due to short-term disturbance associated with construction or long-term presence of the outlet - SWM outlet will be designed as a stone-core wetland to prevent erosion of the valley floor due to SWM discharge and promote infiltration. No outlet channel will be constructed from the wetland to minimize disturbance to the valley floor - Sewer installation disturbance area to be fully restored following completion of construction - The SWM outlet location will be finalized through consultation with CVC during detailed design. A detailed restoration plan for the disturbed area will also be prepared during detailed design.	anticipated after restoration completed. Short term potential disruption to wildlife movements along the valley corridor during construction. Following rehabilitation, no negative impacts on the corridor function of the valley expected to occur.
Fletchers Creek, Fish Habitat, Redside Dace Habitat	*Potential Direct Impacts:* - Alteration of watercourse - SWM outlet and sewer pipe construction and operation *Potential Indirect Impacts:*	Watercourse is designated as Redside Dace regulated habitat, direct fish habitat and a Core Area Valley and Stream Corridor.	- There will be no direct alteration to the watercourse as a result of the proposed tableland development - A 30m buffer for the tableland development will be provided to the meander belt of the watercourse to protect Redside Dace habitat - Fencing will be installed along the limit of development where it borders the valley lands to prevent human encroachment	No direct residual effects anticipated as a result of the tableland components of the development SWM outlet will result in minor permanent loss (108 m^2) of natural vegetation on the valley floor and altered vegetation / topography in the stone core wetland area. No impact on fish habitat or function of overall

NATURAL HERITAGE FEATURE	POTENTIAL DIRECT OR INDIRECT IMPACT	COMMENTARY	PROPOSED AVOIDANCE ALTERNATIVES AND/OR MITIGATION MEASURES	RESIDUAL EFFECT
	See Surface Water Quality discussion below		- The SWM outlet in the valley land will be constructed within Redside Dace habitat and will result in permanent loss of a minor amount of natural valley land vegetation (108 m^2) - A stone core wetland will be installed at the SWM outlet to promote infiltration and dispersed overland flow; no direct conveyance of storm flows to the creek will occur (i.e., no channel will be constructed) - SWM outlet and sewer pipe construction will result in temporary disturbance in regulated habitat on the valley floor and slope, but area will be restored following completion of construction - Erosion and sedimentation control measures will be installed prior to construction, maintained and monitored throughout construction and left in place until vegetation is sufficient to take over functions - Stormwater storage tank will provide quality control (80% TSS removal) and erosion control (25 mm storm event). Quantity control is not required - Use of buried stormwater management tank, stone core wetland and LID measures on the development will assist in mitigating impacts on water quality and temperature in Fletchers Creek - Discussions with MECP required to ensure that all requirements under the ESA are met with respect to activities in regulated Redside Dace habitat	Redside Dace habitat is anticipated as a result of this minor removal. No long-term impact on valley slopes anticipated due to temporary construction of SWM piping and outlet. Short term impact on vegetation and associated functions will occur. No long-term impacts on water quality/temperature predicted as a result of stormwater management

NATURAL HERITAGE FEATURE	POTENTIAL DIRECT OR INDIRECT IMPACT	COMMENTARY	PROPOSED AVOIDANCE ALTERNATIVES AND/OR MITIGATION MEASURES	RESIDUAL EFFECT
Wetland along Tributary of Fletchers Creek	*Potential Direct Impacts:* - encroachment into wetland due to access road crossing *Potential Indirect Impacts:* - Changes in wetland form and function due to water balance changes	Wetland is not a significant wetland but is a Natural Green Space under the MOP (2024). Wetland part of the Natural Areas and Corridors Valley and Stream Corridor. Wetland supports indirect fish habitat and provides Terrestrial Crayfish Significant Wildlife Habitat.	- This wetland will generally be protected in place to protect wetland form and function and Terrestrial Crayfish Significant Wildlife Habitat. - A 10 m buffer will be maintained from the staked wetland boundary (with some minor encroachments proposed as discussed below). Buffers will be naturalized with plantings to enhance buffer function compared to current agricultural (row crop) conditions. - Fencing will be installed along the limit of development where it borders the valley lands to prevent human encroachment - Wetland will not receive direct surface water inputs from adjacent development areas. All runoff from industrial development will be collected and discharged through SWM system. Direct runoff from vegetated buffers will continue to occur. - Existing hydrological inputs from the adjacent (off-site) transformer station will continue to be directed to the feature to maintain water balance - Water balance to the tributary will be maintained through the continued conveyance of off-site drainage and use of LID techniques on the Subject Lands, such as increased topsoil depth in landscaped areas, attenuation galleries/infiltration swales, rain gardens/bioretention, perforated pipe systems, constructed wetland and filter strips	Majority of wetland will be protected, and no residual effects anticipated. Some wetland area will be impacted by the proposed road crossing, but the wetland compensation area will ensure overall area of wetland is maintained. Enhanced buffer vegetation anticipated to result in long-term improvements in wetland riparian function compared to current agricultural conditions adjacent to wetland Minor buffer encroachments are proposed, but a buffer encroachment compensation is proposed to ensure a net ecological gain in natural heritage system lands and overall function

NATURAL HERITAGE FEATURE	POTENTIAL DIRECT OR INDIRECT IMPACT	COMMENTARY	PROPOSED AVOIDANCE ALTERNATIVES AND/OR MITIGATION MEASURES	RESIDUAL EFFECT
			- Approximately 208 m^2 of wetland will be removed for the access road crossing. Road crossing will be designed to continue to convey flows through wetland to avoid changes in water balance - Wetland compensation plantings will occur within a 208 m^2 area along the tributary north of the road crossing to ensure a 1:1 ratio of wetland is provided to address the removal required for the access road. A detailed compensation plan will be prepared at the Site Plan stage for CVC approval prior to implementation - Encroachment into the 10 m wetland buffer is required in three locations. A total encroachment area of 1,405 m^2 is proposed. Buffer compensation areas (totally 1,405 m^2) are proposed that are located outside of any other NHS component. Additional areas outside other features and buffers are also included outside the development to ensure a net ecological gain. - Fencing, stormwater management, planting in the residual buffer area, erosion and sedimentation controls and spill prevention and response measures will be implemented to prevent negative impacts on the adjacent wetland as a result of the proposed encroachment. - Vegetation salvage to be completed in road disturbance area with any desirable native species being transplanted to adjacent wetland/buffer areas Enhancement: Net increase in natural vegetation cover due to long-term vegetation	

NATURAL HERITAGE FEATURE	POTENTIAL DIRECT OR INDIRECT IMPACT	COMMENTARY	PROPOSED AVOIDANCE ALTERNATIVES AND/OR MITIGATION MEASURES	RESIDUAL EFFECT
			growth in buffer and buffer compensation area. Wetland vegetation compensation area to maintain overall wetland area on the Subject Lands	
Locally Important Amphibian Breeding Habitat (Wetland)	*Potential Direct Impacts:* - Removal of habitat *Potential Indirect Impacts:* - Alteration to catchment area of habitat - Noise and lighting from development	Locally important amphibian breeding (wetland) habitat present (based on criteria used by CVC) in the remnant farm pond	- Existing habitat (i.e., very limited within the remnant farm pond) is being retained - Water balance to the farm pond will be maintained through the continued conveyance of off-site drainage and use of LID techniques on the Subject Lands, such as increased topsoil depth in landscaped areas, attenuation galleries/infiltration swales, rain gardens/bioretention, perforated pipe systems, constructed wetland and filter strips - Ambient noise at this location is very high due to its proximity to ETR 407 and Hurontario Street. Noise walls proposed for parts of the development. Therefore, any potential increase in noise after development will be minor and would not be expected to disrupt breeding activities of the tolerant amphibian species previously confirmed within this pond. - Use of shielded lighting fixtures and/or motion-activated fixtures that will focus lighting downward and away from the natural areas are recommended	No direct or indirect residual effects anticipated
Locally Important Amphibian Movement Corridor	*Potential Direct Impacts:* - Removal of habitat - Road crossing *Potential Indirect Impacts:*	Amphibian movement corridor present along Fletchers Creek tributary from Farm Pond (breeding habitat) to thicket/valley land	- The proposed general development retains this feature throughout its length on the Subject Lands, with a minimum 15 m setback (from the centerline of the channel downstream from the farm pond) - The proposed road crossing culvert (1.5 m by 0.90 m by 26 m) has an openness ratio	No negative impacts on amphibian movements along the corridor expected to occur. Culvert exceeds some minimum recommended criteria for amphibian passage (CVC 2017) and is only slightly below

NATURAL HERITAGE FEATURE	POTENTIAL DIRECT OR INDIRECT IMPACT	COMMENTARY	PROPOSED AVOIDANCE ALTERNATIVES AND/OR MITIGATION MEASURES	RESIDUAL EFFECT
	- Alteration to catchment area of habitat	around Fletchers Creek	of 0.052, which is slightly below the minimum recommended openness ratio for amphibian passage of 0.07 identified in CVC's Fish and Wildlife Crossing Guidelines (2017). The culvert exceeds the CVC (2017) minimum recommended width and height of 0.5 m and is just slightly longer than the recommended maximum length of 25 m. Barrier fencing should be considered as part of detailed design to prevent amphibian movement over the road surface to minimize the potential for morality and direct wildlife to the culvert - Revegetation within the buffer and buffer compensation area, as well as wetland compensation plantings along the channel will result in long-term enhancement to the corridor compared to current agricultural conditions *Enhancement:* Net increase in natural vegetation cover in riparian area due to vegetation plantings in buffer compensation area, feature buffers and wetland compensation area	other identified criteria. No significant movement of American Toad and Green Frog from the existing pond is expected to be occurring under current conditions. Long-term improvement in corridor form and function anticipated due to vegetation enhancements compared to existing agricultural operations adjacent to the feature

Terrestrial Crayfish SWH	*Potential Direct Impacts:* - Removal of habitat for development and proposed access road *Potential Indirect Impacts:* - Alteration to surface and groundwater balance due to development	Terrestrial Crayfish habitat is present along both sides of the Tributary to Fletchers Creek throughout its reach on the Subject Lands.	- The site plan, which previously called for removal of all wetland upstream from the remnant farm pond was revised to retain these wetland areas and associated Terrestrial Crayfish SWH. The majority of areas where Terrestrial Crayfish chimneys were observed in 2019 are protected within the revised site plan. Some chimney areas were observed outside the areas that will be retained, but the amount of land protected within and around the wetland feature is anticipated to provide sufficient habitat for the existing Terrestrial Crayfish population, such that negative impacts are not expected - The proposed access road will result in the removal of approximately 208 m^2 of potential Terrestrial Crayfish burrowing habitat associated with the wetland. However, the area lost will be a small portion of the overall amount of habitat available and no negative impacts on the overall terrestrial crayfish population are anticipated. The culvert beneath the access road will continue to provide a Terrestrial Crayfish movement corridor to permit dispersal of the species - A Terrestrial Crayfish salvage program will be implemented to remove crayfish from within the proposed development area prior to any site grading being completed. A permit from the MNR will be required to implement the salvage program. Potential relocation areas within existing suitable habitat on the Subject Lands are shown in **Figure 6** (**Appendix A**)	Majority of existing Terrestrial Crayfish SWH to be protected in place. Minor amount of removal of some agricultural land that supported chimney construction in 2019 and some wetland habitat for the proposed access road. However, amount of habitat removed is minor compared to overall habitat retained and no negative impacts on the Terrestrial Crayfish population are anticipated to occur A salvage program will be implemented to minimize the potential for negative impacts on individual crayfish

NATURAL HERITAGE FEATURE	POTENTIAL DIRECT OR INDIRECT IMPACT	COMMENTARY	PROPOSED AVOIDANCE ALTERNATIVES AND/OR MITIGATION MEASURES	RESIDUAL EFFECT
			- Mitigation to maintain water balance and continued conveyance of off-site drainage through the wetland are anticipated to maintain groundwater levels in the vicinity of the Tributary, where Terrestrial Crayfish reside	
Mammal Habitat	*Potential Direct Impacts:* - Alteration of land could lead to removal of ground based mammal and bat habitat *Potential Indirect Impacts*: - Alteration of land could lead to decreased mobility across lands - Noise and lighting from development	No rare mammal species or habitat was encountered No bat or bat habitat studies completed.	- The proposed development area consists of agricultural land and does not provide any habitat necessary to maintain existing wildlife species and populations in the area. It is anticipated that following development of these lands, wildlife will continue to use the adjacent natural areas, the area adjacent to the Tributary to Fletchers Creek, and the naturalized buffer area - No removal of any mature trees that could potentially provide roosting habitat for bats is expected to be required - See discussions related to noise and lighting from Amphibian Habitat section	Some short-term disruption of wildlife habitat use in the Fletchers Creek valley expected due to construction noise and disturbance during installation of the SWM outfall and sanitary sewer connection. Mammals may avoid the area during periods when construction is active. This is not expected to have a negative impact on wildlife species or populations Minor alterations in habitat in the Fletchers Creek valley will occur due to the SWM outlet and associated construction disturbance area. Area will be revegetated following completion of construction. Permanent SWM outlet not expected to have long-term impact on wildlife. Mammals are not expected to be using the Tributary of Fletchers Creek as a potential linkage corridor to facilitate any specific movements on the

NATURAL HERITAGE FEATURE	POTENTIAL DIRECT OR INDIRECT IMPACT	COMMENTARY	PROPOSED AVOIDANCE ALTERNATIVES AND/OR MITIGATION MEASURES	RESIDUAL EFFECT
				Subject Lands. No natural features present north of the developable portion of the Subject Lands. Post-development, wildlife will continue to be able to move past the Subject Lands via the Fletchers Creek valley land. No direct or indirect residual effects anticipated due to any other component of the development.
Breeding Bird Habitat	*Potential Direct Impacts:* - Alteration of land could lead to removal of breeding bird breeding habitat *Potential Indirect Impacts*: - Alteration of land could lead to removal of breeding bird foraging habitat - Noise and lighting from development	- Bobolink and Barn Swallow were observed on these lands, but indications of breeding were not observed	- Alteration of the Subject Lands is not anticipated to have any impact on Bobolink - Barn Swallow are expected to continue to use the riparian area of the Tributary to Fletchers creek as foraging, which will be enhanced with the wetland rehabilitation - See discussions related to noise and lighting from Amphibian Habitat section - Vegetation removal should occur outside the general bird breeding period (April 1 to August 31) to avoid direct impacts on nesting birds.	Some short term disruption to bird use of adjacent natural areas may occur due to noise and disturbance during construction. No direct or indirect residual effects anticipated
Natural Hazards – Regional Flood lines, Erosion and Stable Slope Limits	*Potential Direct Impacts:* - Encroachment into these features (tableland development or infrastructure) *Potential Indirect Impacts:*	Features are designated by CVC and have been staked	- A 10 m setback is provided from these features for the proposed tablelands industrial development - One minor encroachment into the erosion hazard buffer is proposed, but this is not expected to have any negative impact on erosion hazards. Graded areas will be revegetated following completion of	No direct or indirect residual effects anticipated

NATURAL HERITAGE FEATURE	POTENTIAL DIRECT OR INDIRECT IMPACT	COMMENTARY	PROPOSED AVOIDANCE ALTERNATIVES AND/OR MITIGATION MEASURES	RESIDUAL EFFECT
	- None anticipated		grading. The 6 m erosion access allowance will remain undisturbed. - Installation of the SWM outfall and buried sewer pipe in the valley land is not anticipated to have any negative impact on flood lines or valley land erosion following implementation of appropriate design and construction mitigation (e.g., sediment and erosion control, slope restoration)	
Surface Water Resources (Fletchers Creek and tributary)	*Potential Direct Impacts:* - Alteration in surface water quantity and quality due to stormwater runoff *Potential Indirect Impacts:* - Alterations in water quality due to erosion and sedimentation during construction	See rows regarding Fletchers Creek and its Tributary for more detail.	- Erosion and sedimentation control and spill prevention and response measures implemented during construction - Disturbed areas will be revegetated following construction - SWM mitigation (i.e., storage tank, stone core wetland outlet, LID measures) will be used to prevent negative impacts on water quality - Site-wide water balance will be maintained through SWM and LID measures - Existing off-site inputs to tributary (i.e., from transformer station) will be maintained	No direct or indirect residual effects anticipated following implementation of mitigation
Ground Water Resources	*Potential Direct Impacts:* - Alteration in ground water quantity or quality *Potential Indirect Impacts:* - None anticipated	Not designated as a significant source of groundwater recharge or discharge	- Site wide water balance will be maintained to prevent effects on groundwater resources	No direct or indirect residual effects anticipated

6.0 CONCEPTUAL COMPENSATION AND RESTORATION PLAN

To address potential ecological impacts that cannot be entirely avoided or mitigated through design, a conceptual compensation and restoration strategy is proposed. This approach aligns with the policies and principles outlined in the CVC's Ecosystem Offsetting Guidelines (2020) and Buffer Enhancement Guidelines (2023) and aims to ensure no net loss of ecological function. Use of tables 3, 4, 5, and 6 from the Ecosystem Offsetting Guidelines (2020) will be utilized at the detailed design stage to determine plant sizing, quantities, and plant species. Post-installation monitoring is outlined in **Section 7**; a detailed plan for monitoring and maintenance will also be included at detailed design stage.

Four restoration treatments are proposed and illustrated on **Figure 6 (Appendix A)**:

- Proposed Buffer Naturalization Area;
- Proposed Wetland Compensation;
- Proposed Buffer Encroachment Compensation;
- Proposed Woodland Rehabilitation (within the NHS Buffer) ; and
- Proposed Stabilization and Naturalization of areas following vegetation removal to install storm and sanitary infrastructure.

Each of these restoration treatments is discussed in the following sections.

6.1 Buffer Naturalization Area

Naturalization of the buffer lands along the entire southern and eastern portions of the subject property is proposed in order to enhance and protect the NHS from development impacts. The buffer naturalization will turn result in the conversion of existing agricultural areas to naturalized, maintenance free vegetation communities with expected long-term benefits including, but not necessarily limited to:

- Increase in general wildlife habitat;
- Increased tree and shrub woody cover on the Subject Lands;
- Enhanced soil stabilization and overland flow runoff regulation; and
- Increased natural vegetation and associated functions in Redside Dace Critical Habitat (e.g., shading, organic material and large woody debris provision, soil stabilization, terrestrial insect habitat enhancements).

The proposed buffer naturalization is also expected to assist in mitigating potential impacts associated with the development, including:

- Stabilization of soils to assist in preventing erosion due to overland runoff from adjacent uncontrolled portions of the proposed development (e.g., vegetated areas of site grading or landscaping);
- Providing a long-term buffer from development related anthropogenic disturbance including noise and light; and
- Discouraging human access into the buffer and associated NHS (through dense vegetation plantings).

As shown on **Figure 6** (**Appendix A**), the proposed buffer area includes all lands from the dripline limit of the Buckthorn/Hawthorn Cultural Thicket and Cultural Woodland community up to the limit of development and ends at the eastern limit of the proposed road over Fletcher's Creek. As per CVC's Guidelines for Designing Enhancement Plans within Setbacks and Buffers (2023) plantings of trees, shrubs and native seed mix and cover crop is required.

Due to the buffer's minimum width of 10m the mass planting approach from CVC's guidelines (2023) will be adopted during detailed design. This will include planting nodes of 10 x 10 meters within the buffer naturalization area. **Table 6.1** provides a summary of species to be included in the mass plantings.

Table 6.1 – Recommended Buffer Naturalization Area Plant List

Latin Name	Common Name	HT (mm)	Cond	Spacing	QTY. or %
Tree – Deciduous					
Acer saccharum	Sugar Maple	1500-2500 or 40mm caliper	Container or Caliper	3 m	tbd
Carya ovata	Shagbark Hickory	1500-2500 or 40mm caliper	Container or Caliper	3 m	tbd
Ostrya virginiana	Eastern Hop-Hornbeam	1500-2500 or 40mm caliper	Container or Caliper	3 m	tbd
Populus grandidentatum	Large tooth Aspen	1500-2500 or 40mm caliper	Container or Caliper	3 m	tbd
Populus tremuloides	Trembling Aspen	1500-2500 or 40mm caliper	Container or Caliper	3 m	tbd
Prunus serotina	Black Cherry	1500-2500 or 40mm caliper	Container or Caliper	3 m	tbd
Quercus alba	White Oak	1500-2500 or 40mm caliper	Container or Caliper	3 m	tbd
Quercus rubra	Red Oak	1500-2500 or 40mm caliper	Container or Caliper	3 m	tbd
Tilia americana	Basswood	1500-2500 or 40mm caliper	Container or Caliper	3 m	tbd
Trees – Coniferous					
Pinus strobus	White Pine	1500-2500	Container	3 m	tbd
Thuja occidentalis	Eastern White Cedar	1500-2500	Container	3 m	tbd
Shrubs					
Amelanchier laevis	Serviceberry	1000	Container	1-2 m	tbd
Cornus racemosa	Grey Dogwood	1000	Container	1-2 m	tbd
Cornus rugosa	Round Leaved Dogwood	1000	Container	1-2 m	tbd
Diervilla lonicera	Bush Honeysuckle	1000	Container	1-2 m	tbd
Hamamelis virginiana	Witch-hazel	1000	Container	1-2 m	tbd
Prunus pensylvanica	Pin Cherry	1000	Container	1-2 m	tbd
Prunus virginiana	Choke Cherry	1000	Container	1-2 m	tbd
Rhus typhina	Staghorn Sumac	1000	Container	1-2 m	tbd
Rubus occidentalis	Black Raspberry	1000	Container	1-2 m	tbd
Rubus idaeus spp. Strigosus	American red Raspberry	1000	Container	1-2 m	tbd
Rubus odoratus	Purple Flowering Raspberry	1000	Container	1-2 m	tbd
CVC 1 – Upland Mix					
Anemone canadensis	Canada Anemone	-	Seed Mix	25 kg/ha	1
Asclepias syriaca	Common Milkweed	-			2
Carex granularis	Meadow/Open Field Sedge	-			15
Elymus virginicus var. virginicus	Virginia Wildrye	-			40

Latin Name	Common Name	HT (mm)	Cond	Spacing	QTY. or %
Euthamia graminifolia	Grass Leaved Goldenrod	-			1
Monarda fistulosa	Wild Bergamot	-			1
Oenethera biennis	Evening Primrose	-			25
Rudbeckia hirta	Black Eyed Susan	-			10
Solidago canadensis	Canada Goldenrod	-			1
Solidago juncea	Early Goldenrod	-			1
Solidago nemoralis ssp. nemoralis	Gray-stemmed Goldenrod	-			1
Symphyotrichum novae-angliae	New England Aster	-			1
Verbean urticifolia	White Vervain	-			1

6.2 Wetland Compensation

As shown on **Figure 6** (**Appendix A**), wetland compensation areas are proposed along both sides of the Tributary to address wetland impacts from the proposed road crossing. The impacted wetland area (208 m^2) consists of a narrow Cattail Mineral Shallow Marsh (MAS2-1) along the Tributary. This wetland area has 100% cover of graminoids and forbs. Based on Table 4 in CVC's Offsetting Guidelines (2020), which requires replacement of graminoid and forb vegetation using 25 kg of seed/ha, this would require 0.52 kg of seed to address the required offset.

A total compensation area of 208 m^2 is provided to ensure a 1:1 compensation ratio, in accordance with CVC's Ecosystem Offsetting Guidelines (CVC 2020). The intent of the proposed compensation is to expand the existing area of the wetland associated with the Tributary into the adjacent area that is currently subject to intensive agriculture practices. Locating the wetland compensation directly adjacent to the existing wetland ensures suitable hydrological conditions. The only grading envisioned in this area, would be to connect the area to the existing wetland elevations and to install hydric soil to a 30 cm depth. This hydric soil would be salvaged from the wetland being removed, or, if not feasible, hydric soil shall be brought to site.

The proposed wetland compensation will consist of a variety of native shrub and ground cover suitable for the local site conditions. In addition to shrub plantings, a ground cover seed mix will be applied. The proposed wetland compensation area is expected to be semi-moist and therefore an appropriate lowland restoration mix (e.g., CVC 3 – Lowland Restoration Mix) will be selected and applied at 25 kg per hectare, based on CVC guidelines (2018). The appropriate seed mix will be confirmed at the detailed design stage based on site-specific conditions in the proposed compensation area.

The wetland compensation area is anticipated to:

- Provide enhanced wildlife habitat adjacent to the watercourse by providing a structurally diverse mix of native vegetation forms and species;
- Increase the width of the naturally vegetated locally important amphibian movement corridor between the valley land to the south and the farm pond breeding area to the north; and

- Provide enhanced riparian vegetation functions compared to existing agricultural riparian zones, including water quality and hydrology regulation, soil stabilization, shading and allochthonous inputs to benefit the downstream fish community in Fletchers Creek (including Redside Dace).

A detailed wetland compensation plan will be prepared at the detailed design stage in accordance with CVC's guidelines (2020) and submitted with site plan applications. This will include a detailed design brief outlining the restoration, as well as landscape plan drawings. This will include specifications of appropriate species and seed mixes, planting densities (in accordance with CVC's guidelines), temporary measures (e.g., erosion control blanket), additives (e.g., hydric soils), maintenance and monitoring requirements. The compensation plan will require CVC approval prior to implementation. The recommended species have been included in **Table 6.2** for agency review, along with the recommended spacing for each species.

Table 6.2 – Recommended Wetland Compensation Plant List

Latin Name	Common Name	Cond	Spacing	QTY. or %
CVC 3 – Lowland Restoration Mix				
Anemone canadensis	Canada Anemone	Seed Mix	25 kg/ha	1
Bidens cernua	Nodding Beggarticks			1
Carex vulpinoidea	Fox Sedge			25
Elymus virginicus var. virginicus	Virginia Wildrye			25
Eutrochium maculatum var. maculatum	Spotted Joe Pye Weed			1
Juncus effsus ssp. Solutus	Soft Rush			5
Juncus tenuis	Path Rush			5
Poa palustris	Fowl Bluegrass			25
Scirpus atrovirens	Dark-green Bulrush			5
Symphyotrichum novae-angliae	New England Aster			1
Symphyotrichum puniceum	Swamp Aster			1
Verbean hastata	Blue Vervain			5

6.3 Proposed Wetland Buffer Encroachment Compensation

As shown on **Figure 6** (**Appendix A**), wetland buffer encroachment compensation areas are proposed to address the three proposed encroachments into the 10 meter buffer to the wetland. The areas where encroachments are proposed into the buffer are currently agricultural field. The compensation areas, which are located outside of any existing natural feature or buffer, have a total area of 1,405 m^2, which will compensate for loss/alteration of the wetland buffer area at a 1:1 basis. The three encroachment areas will occur within existing agricultural fields that are contiguous with the NHS and are directly adjacent to the Fletcher's creek corridor. The proposed compensation areas will be planted with an upland seed mix (e.g., CVC 1 – Upland Mix, per CVC 2018), and a variety of shrubs. The areas will be allowed to naturally succeed following planting (i.e., no vegetation maintenance will occur). Proposed planting within these areas will be included as part of the detailed wetland compensation plan discussed in the paragraph above.

All groundcover seed mixes will be distributed in combination with a nurse crop to provide short-term erosion and weed control allowing for the native seed mixes to establish. For seeding during May-September CVC (2018) recommends an annual nurse crop of 40% Common Oats (*Avena sativa*) and 45% Barley (*Hordeum vulgare),* and 15% Canada Wild Rye (*Elymus canadensis)* applied at a rate of 15 kg/ha. For fall seeding (October-November) a nurse crop of 100% Winter Wheat (*Triticum aestivium)* is recommended (CVC, 2018). The recommended species have been included in **Table 6.3** for agency review, along with the recommended spacing for each species.

Table 6.3 – Recommended Wetland Buffer Encroachment Compensation Plant List

Latin Name	Common Name	HT (mm)	Cond	Spacing	QTY. or %
Shrubs					
Amelanchier arborea	Downy Serviceberry	tbd	Container	1-2 m	tbd
Cornus racemosa	Grey Dogwood	tbd	Container	1-2 m	tbd
Cornus sericea	Red Osier Dogwood	tbd	Container	1-2 m	tbd
Lonicera canadensis	Canada Fly Honeysuckle	tbd	Container	1-2 m	tbd
Prunus virginiana	Choke Cherry	tbd	Container	1-2 m	tbd
Ribes americanum	Wild Black Currant	tbd	Container	1-2 m	tbd
Rosa blanda	Smooth Rose	tbd	Container	1-2 m	tbd
CVC 1 – Upland Mix					
Anemone canadensis	Canada Anemone	-	Seed Mix	25 kg/ha	1
Asclepias syriaca	Common Milkweed	-			2
Carex granularis	Meadow/Open Field Sedge	-			15
Elymus virginicus var. virginicus	Virginia Wildrye	-			40
Euthamia graminifolia	Grass Leaved Goldenrod	-			1
Monarda fistulosa	Wild Bergamot	-			1
Oenethera biennis	Evening Primrose	-			25
Rudbeckia hirta	Black Eyed Susan	-			10
Solidago canadensis	Canada Goldenrod	-			1
Solidago juncea	Early Goldenrod	-			1
Solidago nemoralis ssp. nemoralis	Gray-stemmed Goldenrod	-			1
Symphyotrichum novae-angliae	New England Aster	-			1
Verbean urticifolia	White Vervain	-			1

6.4 Proposed Forest Rehabilitation (within the NHS Buffer)

As shown on **Figure 6** (**Appendix A**), a total area of 895 m^2 of woodland rehabilitation is proposed in three locations that are currently agricultural field adjacent to the existing cultural thicket associated with Fletchers Creek. The existing cultural thicket community is comprised of a tall shrub layer of very densely growing common buckthorn and hawthorn species, with a few remaining old domestic apple trees, Tartarian honeysuckle, and a few single white elm trees, emerging over the shrubs. The herb layer is poorly developed, with scattered garlic mustard, enchanter's nightshade and yellow avens. Plantings in this area will be selected to buffer the Fletcher's Creek corridor and provide increased habitat and ecological diversity. Native tree and shrub species will be planted within these areas, with a cover crop to provide short-term stabilization and long-term native groundcover seeding. The target long-term community is anticipated to be a Fresh-moist Sugar Maple Deciduous Forest. Detailed planting plans including species lists and densities will be prepared through discussions with the CVC during the detailed

design stage of the project. The recommended species have been included in **Table 6.4** for agency review, along with the recommended spacing for each species.

Table 6.4 – Recommended Forest Rehabilitation (within the NHS Buffer) Plant List

Latin Name	Common Name	HT (mm)	Cond	Spacing	QTY. or %
Tree – Deciduous					
Acer saccharinum	Silver Maple	tbd	Container	3 m	tbd
Acer saccharum	Sugar Maple	tbd	Container	3 m	tbd
Betula papyrifera	Paper Birch	tbd	Container	3 m	tbd
Carya cordiformis	Bitternut Hickory	tbd	Container	3 m	tbd
Ostrya virginiana	Eastern Hop-Hornbeam	tbd	Container	3 m	tbd
Prunus serotina	Black Cherry	tbd	Container	3 m	tbd
Populus tremuloides	Trembling Aspen	tbd	Container	3 m	tbd
Quercus rubra	Red Oak	tbd	Container	3 m	tbd
Quercus macrocarpa	Bur Oak	tbd	Container	3 m	tbd
Ulmus americana	White Elm	tbd	Container	3 m	tbd
Trees – Coniferous					
Pinus strobus	White Pine	3 m	Container	3 m	tbd
Thuja occidentalis	Eastern White Cedar	3 m	Container	3 m	tbd
Shrubs					
Amelanchier laevis	Serviceberry	1 m	Container	1-2 m	tbd
Cornus racemosa	Grey Dogwood	1 m	Container	1-2 m	tbd
Cornus rugosa	Round Leaved Dogwood	1 m	Container	1-2 m	tbd
Diervilla lonicera	Bush Honeysuckle	1 m	Container	1-2 m	tbd
Hamamelis virginiana	Witch-hazel	1 m	Container	1-2 m	tbd
Amelanchier laevis	Serviceberry	1 m	Container	1-2 m	tbd
CVC 1 – Upland Mix					
Anemone canadensis	Canada Anemone	-	Seed Mix	25 kg/ha	1
Asclepias syriaca	Common Milkweed	-			2
Carex granularis	Meadow/Open Field Sedge	-			15
Elymus virginicus var. virginicus	Virginia Wildrye	-			40
Euthamia graminifolia	Grass Leaved Goldenrod	-			1
Monarda fistulosa	Wild Bergamot	-			1
Oenethera biennis	Evening Primrose	-			25
Rudbeckia hirta	Black Eyed Susan	-			10
Solidago canadensis	Canada Goldenrod	-			1
Solidago juncea	Early Goldenrod	-			1
Solidago nemoralis ssp. nemoralis	Gray-stemmed Goldenrod	-			1
Symphyotrichum novae-angliae	New England Aster	-			1
Verbean urticifolia	White Vervain	-			1

6.5 Proposed Restoration of Area Temporarily Disturbed to Install Storm and Sanitary Infrastructure in Valley

As shown on **Figure 6** (**Appendix A**), a large area within the existing woodland/thicket associated with Fletchers Creek valley is proposed to be disturbed for the installation of storm and sanitary infrastructure. The total area of disturbance within the staked existing dripline limit is approximately 4,344 m^2. Installation of the sanitary sewer will result in temporary disturbance, with no permanent grade alteration to the valley land. The SWM outfall will have a permanent footprint of approximately 108 m^2 within the valley (for the headwall and stone core wetland), but the remainder of the area will only be a temporary disturbance.

Two vegetation communities will be impacted by this work; 2,736 m² of Buckthorn/Hawthorn Cultural Thicket and 1,603 m² of Cattail Mineral Shallow Marsh/Meadow Marsh. Temporary vegetation removal and grading will occur within these communities to facilitate installation of the proposed infrastructure. Within the Cattail Mineral Shallow Marsh/Meadow Marsh, temporarily removed vegetation will be replaced through seeding of an appropriate restoration mix (e.g., CVC 3 – Lowland Restoration Mix) at 25 kg per hectare, based on CVC guidelines (2018). This is expected to result in relatively rapid regeneration of vegetation in the area following completion of construction.

Within the Cultural Thicket, restoration plantings will include seeding of an appropriate restoration mix (e.g., CVC 1 – Upland Mix, per CVC 2018), and minor nodal shrub plantings to aid in erosion control and re-vegetation. Additionally, tree compensation plantings required for trees removed to accommodate the storm and sanitary installation will be included in the restoration plantings within the disturbance area.

SBK (2025) completed an inventory of trees located within and adjacent to the proposed valley land disturbance area. Based on this data, compensation calculation has been completed based on CVC's offsetting document Table 3 - Form for calculating offset for replacing larger trees in sparsely treed vegetation communities based on diameter at breast height. SBK (2025) calculated that 294 compensation trees are required. Compensation trees are recommended for planting in the valley restoration area and the proposed woodland compensation area (discussed in Section 6.4).

Detailed planting plans including species lists and densities will be prepared through discussions with the CVC during the detailed design stage of the project. The recommended species have been included in **Tables 6.5** and **6.6** for agency review, along with the recommended spacing for each species.

Table 6.5 – Recommended Cattail Mineral Shallow Marsh/Meadow Marsh Restoration Plant List

Latin Name	Common Name	HT (mm)	Cond	Spacing	QTY. or %
CVC 3 – Lowland Restoration Mix					
Anemone canadensis	Canada Anemone	-	Seed Mix	25 kg/ha	1
Bidens cernua	Nodding Beggarticks	-			1
Carex vulpinoidea	Fox Sedge	-			25
Elymus virginicus var. virginicus	Virginia Wildrye				25
Eutrochium maculatum var. maculatum	Spotted Joe Pye Weed	-			1
Juncus effsus ssp. Solutus	Soft Rush	-			5
Juncus tenuis	Path Rush	-			5
Poa palustris	Fowl Bluegrass	-			25
Scirpus atrovirens	Dark-green Bulrush	-			5
Symphyotrichum novae-angliae	New England Aster	-			1
Symphyotrichum puniceum	Swamp Aster	-			1
Verbean hastata	Blue Vervain	-			5

Table 6.6 – Recommended Buckthorn/Hawthorn Cultural Thicket Restoration Plant List

Latin Name	Common Name	HT (mm)	Cond	Spacing	QTY. or %
Tree – Deciduous					
Acer saccharum	Sugar Maple	tbd	Container	3 m	tbd
Carya cordiformis	Bitternut Hickory	tbd	Container	3 m	tbd
Ostrya virginiana	Eastern Hop-Hornbeam	tbd	Container	3 m	tbd
Populus tremuloides	Trembling Aspen	tbd	Container	3 m	tbd
Quercus rubra	Red Oak	tbd	Container	3 m	tbd
Quercus macrocarpa	Bur Oak	tbd	Container	3 m	tbd
Trees – Coniferous					
Pinus strobus	White Pine	3 m	Container	3 m	tbd
Thuja occidentalis	Eastern White Cedar	3 m	Container	3 m	tbd
Shrubs					
Amelanchier canadensis	Serviceberry	1 m	Container	1-2 m	tbd
Cornus racemosa	Grey Dogwood	1 m	Container	1-2 m	tbd
Prunus pensylvanica	Pin Cherry	1 m	Container	1-2 m	tbd
Prunus virginiana	Choke Cherry	1 m	Container	1-2 m	tbd
Rhus typhina	Staghorn Sumac	1 m	Container	1-2 m	tbd
Rubus occidentalis	Black Raspberry	1 m	Container	1-2 m	tbd
Rubus idaeus spp. Strigosus	American red Raspberry	1 m	Container	1-2 m	tbd
Rubus odoratus	Purple Flowering Raspberry	1 m	Container	1-2 m	tbd
CVC 1 – Upland Mix					
Anemone canadensis	Canada Anemone	-	Seed Mix	25 kg/ha	1
Asclepias syriaca	Common Milkweed	-			2
Carex granularis	Meadow/Open Field Sedge	-			15
Elymus virginicus var. virginicus	Virginia Wildrye	-			40
Euthamia graminifolia	Grass Leaved Goldenrod	-			1
Monarda fistulosa	Wild Bergamot	-			1
Oenethera biennis	Evening Primrose	-			25
Rudbeckia hirta	Black Eyed Susan	-			10
Solidago canadensis	Canada Goldenrod	-			1
Solidago juncea	Early Goldenrod	-			1
Solidago nemoralis ssp. nemoralis	Gray-stemmed Goldenrod	-			1
Symphyotrichum novae-angliae	New England Aster	-			1
Verbean urticifolia	White Vervain	-			1

6.6 Consideration of Soil Characteristics

Based on the reporting completed by Soil Engineers Ltd. (2020), the boreholes indicate that below a layer of topsoil, 15 to 30± cm thick, the site is underlain by a layer of generally hard silty clay till and very dense sandy silt till. Samples were not taken in the areas proposed for compensation or enhancement. Prior to finalizing restoration plans at the detailed design stage, soil samples will be required for the areas proposed for compensation or enhancement. Analysis of soil samples will indicate if selected ecological communities are suitable within the enhancement areas.

7.0 MONITORING AND IMPLEMENTATION

7.1 Monitoring

7.1.1 Construction Administration of Landscape Contractor

A Landscape Architect and/or restoration ecologist will conduct the following site inspections:

Pre-construction and mobilization meeting on-site with contractor to determine site protocols and obtain material delivery and construction schedule

Attendance at construction review meetings. These meetings will include, but are not limited to, the following tasks:

- Inspection and confirmation of fine grading and site preparation for restoration areas;
- Review of plant material to confirm appropriate species, quality, and quantities; and
- Progress checks to verify that planting and grading are in conformance with approved design.
- Substantial performance/completion site inspection.

7.1.2 Erosion and Sediment Control Inspections

It is recommended that an ESC plan be prepared prior to on-site works. ESC inspections are required to document the condition of the ESC measures, conducted concurrently with construction inspections. These inspections will identify the potential release of debris, sediment, and other harmful substances into the NHS and will inform any necessary mitigation measures.

7.1.3 Compliance Monitoring

Compliance monitoring will be conducted to ensure the effectiveness of measures and practices designed and implemented to manage impacts during construction (e.g., maintenance of ESC measures, proper installation of plant materials, etc.). Compliance monitoring will include post-construction monitoring for plant survivorship, which will take place for two years following installation as per the warranty period for the plant material. Annual survivorship assessments will be completed by a Landscape Architect or the Project Ecologist in years 1 and 2 post-construction. A survivorship target of 80% will be implemented.

7.1.4 Performance Monitoring and Adaptive Management

Post-construction performance monitoring will assess the ecological function of the woodland restoration, wetland restoration, buffer enhancement plantings, valley land restoration and wildlife habitat features. Three years of performance monitoring are proposed (years 1, 2 and 3 post construction). The purpose of the monitoring is to confirmed that the restoration areas are functioning as designed and identify any gaps in expected outcomes; this monitoring will supplement the survivorship assessments proposed for years 1 and 2 by focusing on the ecological aspects of the restoration areas.

Performance monitoring is recommended to be addressed through a site visit and subsequent memo documenting the general condition of the woodland restoration, wetland restoration, valley restoration, buffer enhancement plantings, and wildlife habitat features. Adaptive management recommendations will be provided should encroachment be observed within the restoration areas or should new establishment of Category 1 invasive species be observed at greater than 5% cover within the restoration areas (UFOA 2002).

7.2 Implementation During Construction

7.2.1 Terrestrial Crayfish Salvage

A Terrestrial Crayfish salvage program will be implemented prior to any development or site alteration within the identified Terrestrial Crayfish SWH area. A wildlife collectors' authorization will need to be obtained from the MNR prior to any wildlife salvage on the Subject Lands. A detailed salvage plan will need to be included in the permit application for MNR's review. The key elements of the salvage plan include:

- Timing – Terrestrial Crayfish typically leave their tunnel network in spring (early June) where they seek out temporary pooled water to deposit eggs. Site alteration in Terrestrial Crayfish habitat would be preferred during this time period since there is a good probability the species will not be impacted. Alternatively, site alteration in summer, when crayfish are typically deeper in their burrows (as groundwater table has dropped) could also minimize potential impacts. Regardless of timing, salvage will still be required.

- Salvage – Several salvage methods have been identified for Terrestrial Crayfish:

    - Flushing – GEI has been successful in capturing Terrestrial Crayfish using the following methods

        - Remove the chimney and excavate the top of the burrow by hand (to approximate forearm depth);

        - Fill the burrow with water (from nearby wetland or watercourse, or brought to site if needed).

        - When crayfish come to the surface of the hole (typically exposing the antennae or chelae) they can be captured by hand or with a small fish net.

    - Trapping – Norrocky (1984) developed a simple trap constructed of plastic drain pipe, sheet metal and wire that can be set at the exit from the chimney. GEI has not attempted this trapping method, but would consider experimenting with it in advance of salvage to assess its viability as a larger scale salvage option.

- Relocation – captured crayfish should be immediately relocated to the perimeter of the retained wetland along the Tributary of Fletchers Creek on the Subject Lands.

8.0 CONCLUSIONS AND RECOMMENDATIONS

This EIS has resulted in the preparation of the natural heritage and natural hazard feature Constraints Plan (**Figure 5**, **Appendix A**) and a proposed wetland/woodland rehabilitation strategy (**Figure 6**, **Appendix A**).

Constraint mapping and the resultant development limit has been prepared to incorporate the following natural features and associated setbacks:

- 30 m buffer from the meander belt, as required due to the presence of Redside Dace in Fletchers Creek;
- 10 m buffer from the top-of-bank;
- 10 m buffer to the stable slope limit (incorporating toe erosion allowances where necessary);
- 10 m buffer from staked wetlands;
- 10 m buffer from staked valley land vegetation along Fletchers Creek;
- 15 m buffer from the centerline of the Tributary of Fletchers Creek;
- 10m buffer from dripline of Buckthorn/Hawthorn Cultural Thicket and Cultural Woodland
- Terrestrial Crayfish SWH; and
- Locally Important Amphibian Breeding and Amphibian Movement Corridor Wildlife Habitat.

The buffers will be naturalized through plantings of native trees, shrubs, and seed mix. This will have the effect of expanding the natural area in what has historically been active agricultural fields.

In addition to the plantings within the buffer, there will be a net gain by 895 m^2 of forested area through the forest rehabilitation plantings as outlined in section 6.

A total of 208 m^2 of wetland will be impacted by the proposed road crossing of the Tributary running through the Subject Lands. To address this loss, wetland compensation is proposed at a ratio of 1:1 to address CVC's ecological offsetting requirements. The proposed compensation area is anticipated to result in a number of ecological benefits including enhanced watercourse riparian function, improved wildlife habitat and amphibian movement corridor functions.

Localized encroachments into the 10 m buffer area adjacent to the wetland are proposed in three locations, with a total area of 1,405 m^2. These encroachments are not anticipated to impact the adjacent wetland but will result in a reduction in the size of the natural heritage system that would otherwise be conveyed to the City. To address this reduction, buffer compensation areas (totaling 1,405 m^2) are proposed.

A detailed ecosystem compensation plan will be prepared at the site plan stage in accordance with CVC (2020) requirements. Maintenance and monitoring measures will also be specified in the plan.

Temporary removal of the vegetation in a portion of the Fletchers Creek valley land will be required to allow installation of a SWM outfall and sanitary connection to the existing sewer in the valley. All disturbed areas will be rehabilitated following construction. The only permanent alteration will be the small stone core wetland and outlet headwall for the SWM outfall. These features are not expected to have any negative impact once they are constructed and surrounding areas are restored. Additionally, the 2,736 m² of Buckthorn/Hawthorn Cultural Thicket proposed for removal will be re-planted with native species; Including nodal shrub plantings, native seed mix and trees required as compensation for those removed to accommodate the installation work. Due to the vegetation community in this area being dominated by invasive species these plantings can be seen as enhancements to the existing community and providing a net ecological gain in this area.

A 3-year post-construction ecological monitoring program has been recommended to confirm restoration areas are having the intended functions.

With respect to MOP policy 6.3.11, this EIS determines the exact limits of NHS components (e.g., through on-the-ground assessment such as field staking or desktop analysis) and proposes the NHS boundary accordingly. While the NHS has refined the NHS boundary, these refinements are considered to be minor relative to the existing Natural System mapping in Schedule 3 of the MOP.

Considering the above, and as discussed within the accompanying Impact Assessment table, the development of the Subject Lands can be completed without negative impact on the significant natural heritage features and associated functions.

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REFERENCES AND BACKGROUND MATERIAL

Bird Studies Canada 2004. The Marsh Monitoring Program 1995-2004. A Decade of Marsh Monitoring in the Great Lakes Region. Available online: http://www.bsc-eoc.org/mmp10yrpt.html

Cadman, Michael D., Sutherland, Donald A., Beck, Gregor G., Lepage, Denis and Courturier, Andrew R. 2001-2005. Ontario Breeding Bird Atlas, Second Atlas. Bird Studies Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources and Ontario Nature. 728 pgs.

City of Mississauga 2011. Mississauga Official Plan. Available Online: http://www.mississauga.ca/portal/residents/mississaugaofficialplan

City of Mississauga 2014. Natural Areas Survey 2014 Update. Available online: http://www5.mississauga.ca/research_catalogue/N_21_NAS2014Update_Final_Report.pdf

City of Mississauga 2014. Natural Heritage and Urban Forest Strategy. Available online: http://www7.mississauga.ca/Departments/Rec/parks/nhufs/pdf/FINAL_nhufs.pdf

City of Mississauga 2016. City of Mississauga Storm Drainage Design Requirements.

City of Mississauga 2024. Mississauga Official Plan. 2024 Office Consolidation. Available online: https://www.mississauga.ca/projects-and-strategies/strategies-and-plans/mississauga-official-plan/

CVC 2018. Plant Selection Guideline. Species List for Planting Plans within the Credit River Watershed. April 2018.

CVC 2017. Fish and Wildlife Crossing Guidelines. April 28, 2017. 32 pp.

CVC 2020. Ecosystem Offsetting Guidelines. March 13, 2020. 72 pp.

CVC 2023. Guidelines for Designing Enhancement Plans within Setbacks and Buffers. August 2023. 20 pp.

Credit Valley Conservation and Toronto Region Conservation 2011. Evaluation, Classification and Management of Headwater Drainage Features: Interim Guidelines.

Department of Fisheries and Oceans (DFO) 2019a. Fish and Fish Habitat Protection Policy Statement, August 2019. 36 pp.

DFO 2019b. Fish and Fish Habitat Protection Program, August 2019. Request a Review of Your Project Near Water: Step 3. Check if Your Project Needs A Review. Available online at: http://www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/request-review-demande-d-examen-003-eng.html

GEO Morphix Ltd. 2019. Tributary of Fletchers Creek Erosion Hazard Assessment. Prepared for DeZen Realty. April 15, 2019.

Geomorphic Solutions 2012. Detailed Geomorphic Assessment – Fletchers Creek.

James Lethbridge Planning Inc. 2018. Draft Plan of Subdivision, January 2018.

Kowalyk, B. 2018. Personal Communication. Email from B. Kowalyk (MNRF) to N. Boucher (Savanta). December 7, 2018.

Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray 1998. Ecological land classification for Southwestern Ontario: first approximation and its application. Ontario Ministry of Natural Resources, South Central Region, Science Development and Transfer Branch. Technical Manual ELC-005.

Ministry of Natural Resources (MNR) 2023. Land Information Ontario Mapping. King's Printer for Ontario, 2023. Online at https://www.lioapplications.lrc.gov.on.ca/Natural_Heritage/index.html?viewer=Natural_Heritage.Natural_Heritage&locale=en-CA. (Accessed February 3, 2025).

MNR 2010. Natural Heritage Reference Manual for the Natural Heritage Policies of the Provincial Policy Statement. Available online: http://www.mnr.gov.on.ca/en/Business/LUEPS/Publication/249081.html

MNR 2007. Endangered Species Act. Available online: http://www.search.e-laws.gov.on.ca/en/isysquery/9b701b73-97b5-4e77-ae26-6bf09fa309a6/1/doc/?search=browseStatutes&context=#BK50

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

MNRF 2014. Significant Wildlife Habitat Mitigation Support Tool. Version 2014. 533 pp.

Ministry of Municipal Affairs and Housing (MMAH) 2024. Provincial Planning Statement. Available Online: http://www.mah.gov.on.ca/Page215.aspx

North-South Environmental Inc., Dougan & Associates and Sorensen Gravely Lowes 2009. Peel-Caledon Significant Woodlands and Significant Wildlife Habitat Study. Report prepared for the Region of Peel and the Town of Caledon, Ontario. xi + 187 pp. + Appendices.

Parish Geomorphic 2011. DeZen: Fletchers Creek Hazard Assessment.

Region of Peel 2022. Region of Peel Official Plan. April 2022. Available online: https://peelregion.ca/business/planning/official-plan/download-official-plan

Savanta Inc. (Savanta). 2014. Environmental Impact Study. DeZen Industrial Lands. City of Mississauga, Ontario. Prepared for Sandro DeZen. March 2014. 25 pp. + Appendices.

Savanta. 2018. Environmental Impact Study. DeZen Industrial Lands. Mississauga, Ontario. Prepared for Sandro DeZen. February 2018. 27 pp. + Appendices.

Skira & Associates Ltd. (2025). Functional Servicing Report. DeZen Industrial Lands. Prepared for 678604 Ontario Inc. & 1105239 Ontario Inc. Revised Oct 9, 2025.

Soil Engineers Ltd. 2008 (Revised 2016). Geotechnical Investigation for Slope Stability Study. Proposed Employment Lands. DeZen Industrial, City of Mississauga.

Soil Engineers Ltd. 2025. Supplementary Slope Stability Study Letter Report. Proposed Employment Lands. DeZen Industrial – Phase 2, Southwest Quadrant of Highway 407 and Hurontario Street, City of Mississauga. Prepared for De Zen Realty Company Limited. September 18, 2025.

Strybos Barron King (SBK). 2025. Arborist Report. Proposed Industrial Development Part of Lots 11 & 12, Concession 1 WHS Mississauga, Ontario. Prepared for Dezen Realty Company Limited. October 17, 2025.

University of Guelph 2005. Flora Ontario – Integrated Botanical Information System. Available online: http://www.uoguelph.ca/foibis/

APPENDICES

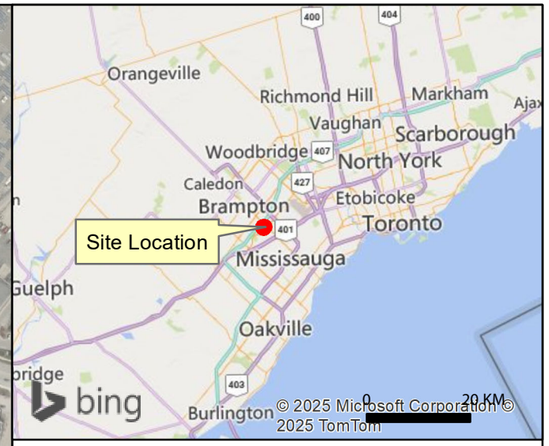
Appendix A – Figures

Appendix B – Tables

Appendix C – Draft Plan and Site Plan

Appendix D – Agency Consultation

Appendix A – Figures



Subject Lands

Off-Site Servicing Study Area

Watercourse

Drainage Feature

7140 Hurontario Street, Mississauga

Figure 1
Location of Subject Lands

0 100 M

1:5,000

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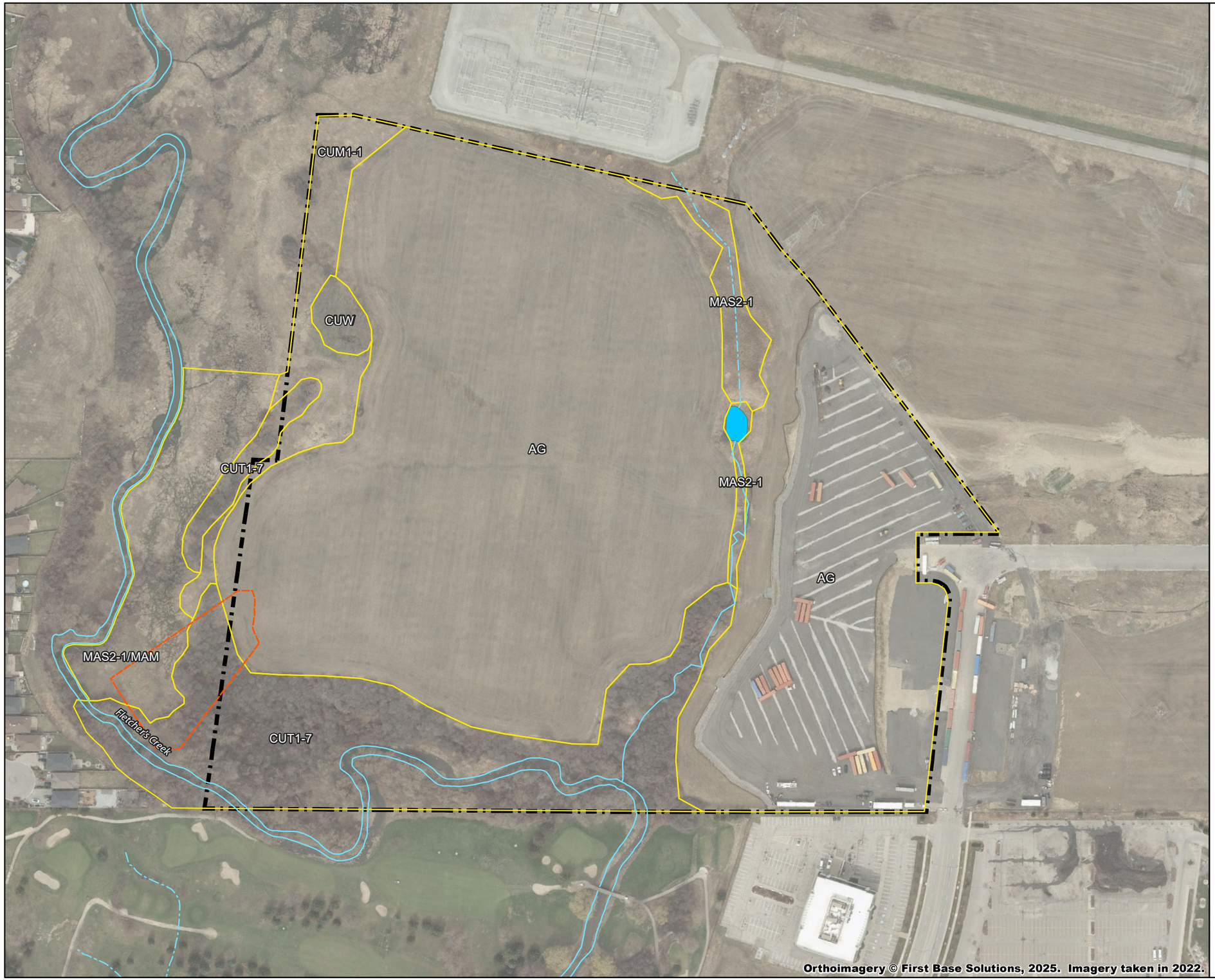
GEI Consultants



Subject Lands

Proposed Temporary Servicing Disturbance Area

Ecological Land Classification

Watercourse

Drainage Feature

Agricultural Pond

ELC Legend
AG, Agricultural
CUM1-1, Dry-Fresh Old Field Meadow
CUT1-7*, Buckthorn-Hawthorn Cultural Thicket
CUW, Cultural Woodland
MAM, Meadow Marsh
MAS2-1, Cattail Mineral Shallow Marsh

**Type not listed in Southern Ontario ELC Guide*

7140 Hurontario Street, Mississauga

Figure 2
ELC Vegetation Communities

0 50 M

1:2,500

N

GEI Consultants

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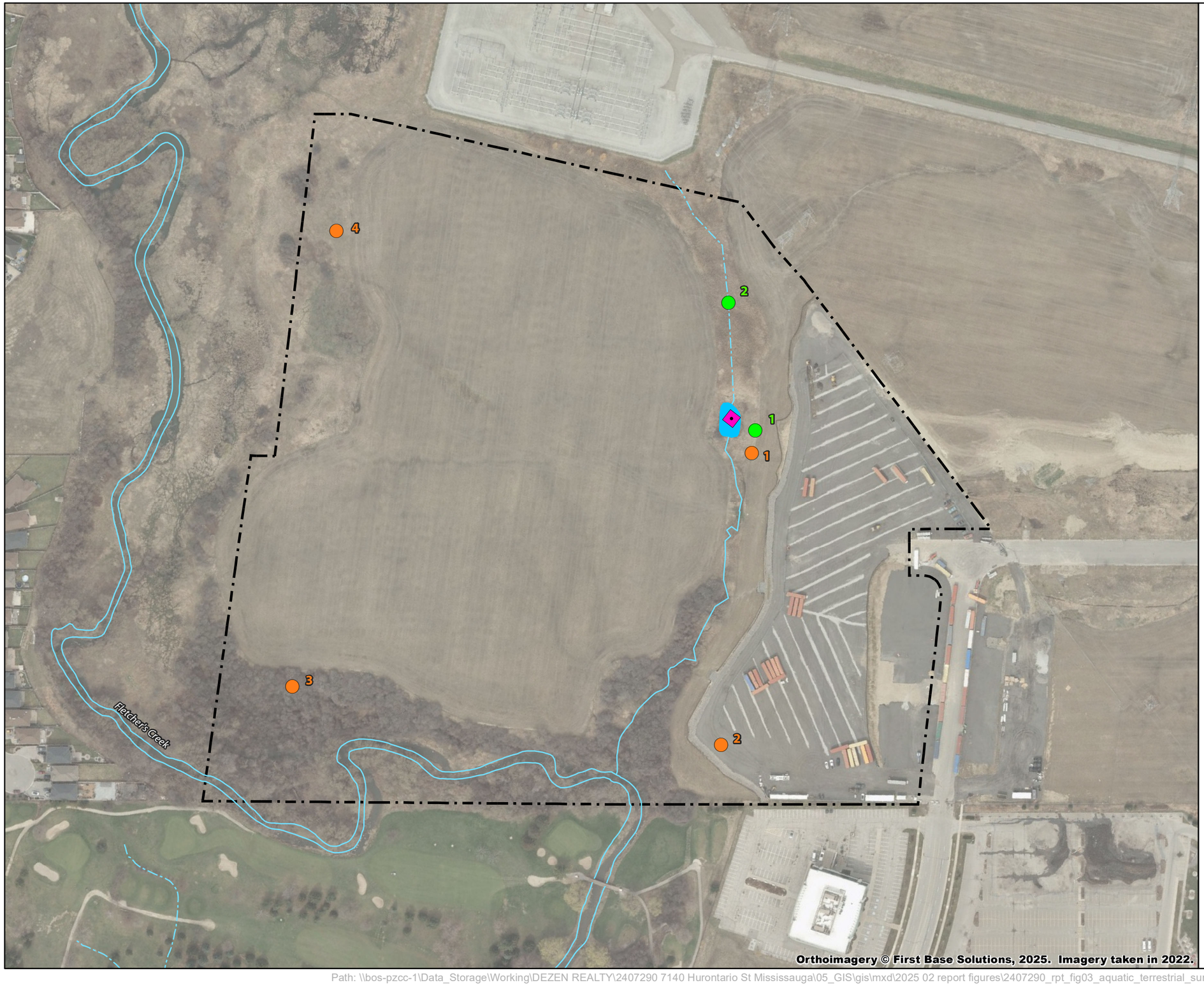

Subject Lands

Watercourse

Drainage Feature

Agricultural Pond

Calling Amphibian Survey Location

Breeding Bird Point Count Station

Minnow Trap and Staff Gauge

7140 Hurontario Street, Mississauga

Figure 3
Aquatic and Terrestrial Survey Station Locations

0 50 M

1:2,500

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Subject Lands

Ecological Land Classification

Watercourse

Drainage Feature

Agricultural Pond

Crayfish Flags (Savanta Inc. on May 7, 2024)

Terrestrial Crayfish Chimneys June 12 and 14, 2019

ELC LEGEND

CULTURAL	
CUW	Black Locust Cultural Woodland
CUT1-7*	Buckthorn-Hawthorn Cultural Thicket
CUM1-1	Dry-Fresh Old Field Meadow
MARSH	
MAS2-1	Cattail Mineral Shallow Marsh

**type not listed in Southern Ontario ELC*

AG	Agricultural

7140 Hurontario Street, Mississauga

Figure 4
Terrestrial Crayfish Chimneys

0 50 M

1:2,500

N

GEI Consultants

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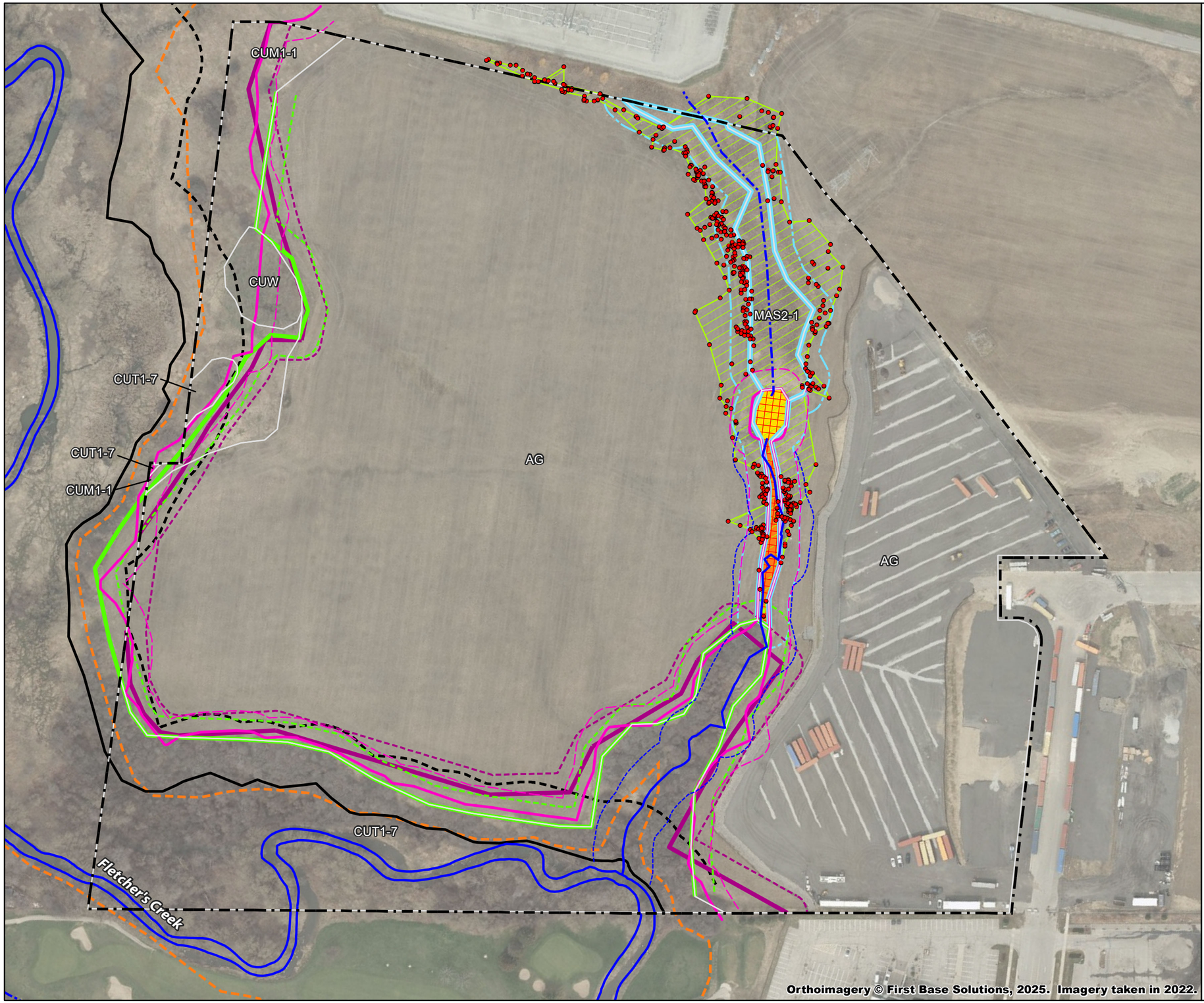


- Subject Lands
- Watercourse
- Drainage Feature
- 15m Watercourse Buffer
- CVC Floodline
- Final Meander Belt
- 30 m Setback from Meander Belt
- Staked Dripline July 6, 2012
- 10m Setback from Staked Dripline
- Staked Wetland July 6, 2012
- 10m Setback from Staked Wetland/Locally Important Amphibian Breeding Habitat & Corridor (where necessary)
- Long-term Stable Slope
- 10m Setback from Long-term Stable Slope
- Top of Bank Staked October 6, 2010 and March 24, 2011
- 10m Setback from Top of Bank
- Terrestrial Crayfish Chimney June 14, 2019
- Terrestrial Crayfish SWH (Based on furthest extent of 2019 Chimney Observations)
- Ecological Land Classification
- Approximate location of *Galium trifidum*
- Amphibian Movement Corridor
- Locally Important Amphibian Breeding Habitat (Wetland)

ELC LEGEND

CULTURAL

CUW	Black Locust Cultural Woodland
CUT1-7*	Buckthorn-Hawthorn Cultural Thicket
CUM1-1	Dry-Fresh Old Field Meadow

MARSH

MAS2-1	Cattail Mineral Shallow Marsh

**type not listed in Southern Ontario ELC*

AG	Agricultural

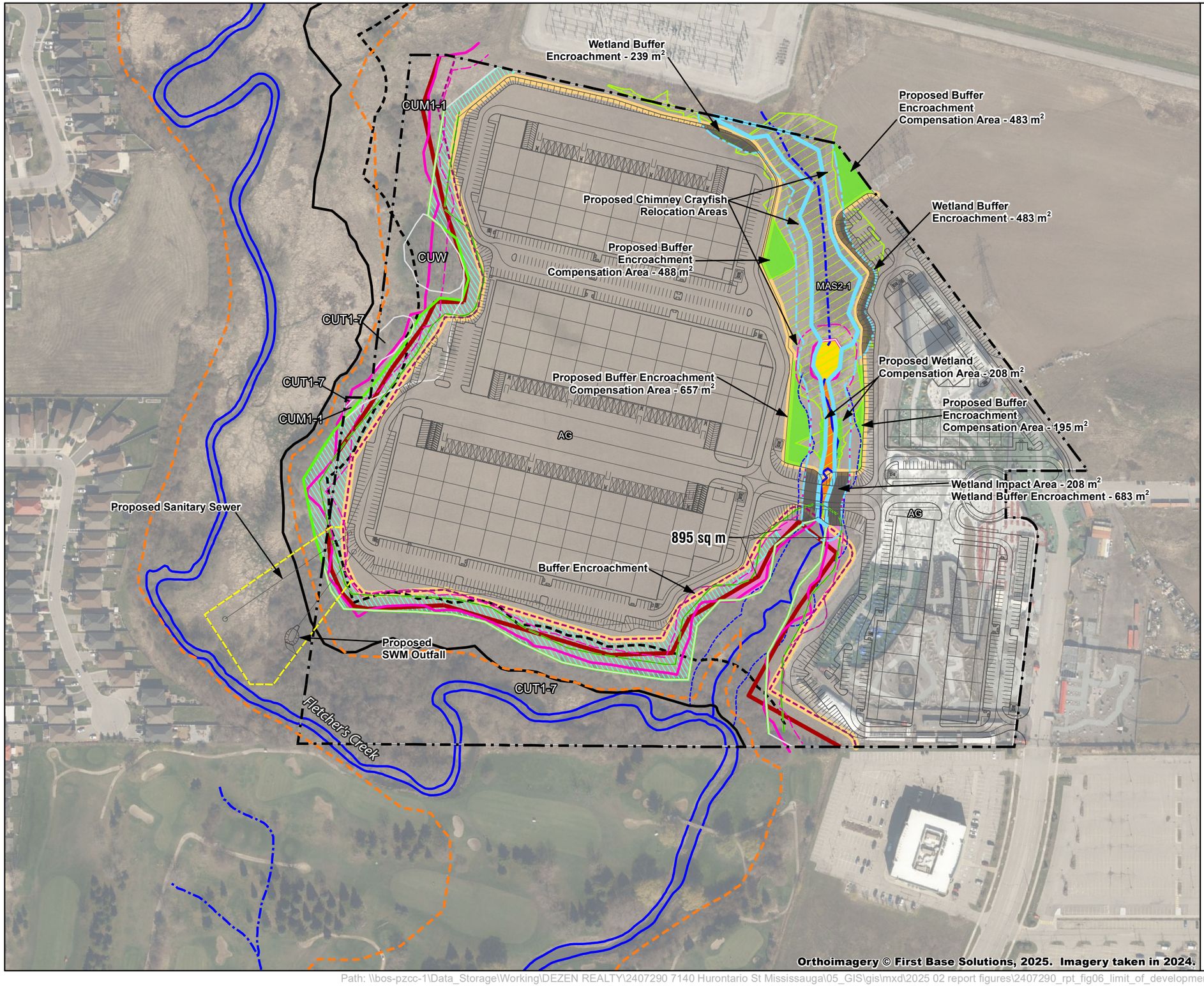
7140 Hurontario Street, Mississauga

Figure 5
Natural Heritage Feature Constraints

0 50 M
1:2,000

GEI Consultants

Path: \\bos-pzcc-1\Data_Storage\Working\DEZEN REALTY\2407290 7140 Hurontario St Mississauga\05_GIS\gis\mxd\2025 02 report figures\2407290_rpt_fig05_natural_heritage_feature_constraints.mxd Date Saved: Tuesday, October 21, 2025



- Subject Lands
- Limit of Development
- Proposed Temporary Disturbance Area to be Rehabilitated
- Watercourse
- Drainage Feature
- 15m Watercourse Buffer
- CVC Floodline
- Final Meander Belt
- 30 m Setback from Meander Belt
- Staked Wetland July 6, 2012
- 10m Setback from Staked Wetland/Locally Important Amphibian Breeding Habitat & Corridor (where necessary)
- Long-term Stable Slope
- 10m Setback from Long-term Stable Slope
- Top of Bank Staked October 6, 2010 with Revisions on March 24, 2011
- 10m Setback from Top of Bank
- Amphibian Movement Corridor
- Locally Important Amphibian Breeding Habitat (Wetland)
- Dripline Staked July 6-12
- 10 m Setback from Staked Dripline
- Proposed Forest Rehabilitation
- Ecological Land Classification
- Terrestrial Crayfish SWH (Based on furthest extent of 2019 Chimney Observations)
- Proposed Encroachment Compensation Area
- Wetland Buffer Encroachment
- Buffer Naturalization Area

ELC LEGEND

CULTURAL	
CUW	Black Locust Cultural Woodland
CUT1-7*	Buckthorn-Hawthorn Cultural Thicket
CUM1-1	Dry-Fresh Old Field Meadow
MARSH	
MAS2-1	Cattail Mineral Shallow Marsh

**type not listed in Southern Ontario ELC*

AG Agricultural

7140 Hurontario Street, Mississauga

Figure 6
Conceptual Site Plan, Limit of Development and Proposed Restoration

0 50 M

1:2,500

GEI Consultants

Appendix B – Tables

Table 1: Amphibian Call Count Survey Results

SURVEY ROUND	STATION NUMBER	SPECIES CODE											
		NOAM	AMTO	FOTO	GRTR	SPPE	CHFR	WOFR	NLFR	PIFR	GRFR	BULL	MIFR
1	1	X											
2	1		1(4)								1(2)		
3	1		1(2)								1(2)		
1	2	X											
2	2	X											
3	2	X											

Note: Survey dates for Round 1, 2 and 3 were April 5, May 2 and June 13, 2012 respectively.

LEGEND:

SPECIES CODE	COMMON NAME	SCIENTIFIC NAME
NOAM	No Amphibians	No amphibians despite survey effort
AMTO	American Toad	*Anaxyrus americanus*
FOTO	Fowler's Toad	*Anaxyrus fowleri*
GRTR	Gray Treefrog	*Hyla versicolor*
CHFR	Western Chorus Frog	*Pseudacris triseriata*
WOFR	Wood Frog	*Lithobates sylvaticus*
NLRF	Northern Leopard Frog	*Lithobates pipiens*
PIFR	Pickerel Frog	*Lithobates palustris*
GRFR	Green Frog	*Lithobates clamitans*
BULL	American Bullfrog	*Lithobates catesbeianus*
MIFR	Mink Frog	*Lithobates septentrionalis*
SPPE	Spring Peeper	*Pseudacris crucifer*

CALL CODES	
X	No amphibians heard
1	Calls can be counted without error
2	Calls overlap but can be reliably estimated
3	Calls overlap too much to estimate number

Note: For each species, the first number is the call code and the second number, which is in brackets, is the number of individuals of that species heard calling

Latin Name	Common Name	Coefficient of Conservatism	Wetness Index	Weediness Index	Provincial Status S-Rank	OMNR Status	COSEWIC Status	Global Status G-Rank	Local Status (Peel)	Local Status (GTA)	Local Staus (CVC/Peel)	Local Status (Peel)
									Varga 2005	Varga 2005	CVC 2002	
DICOTYLEDONS	**DICOTS**											
Aceraceae	**Maple Family**											
Acer negundo	Manitoba Maple	0	-2		S5			G5	X	X	X	X
Anacardiaceae	**Sumac or Cashew Family**											
Rhus typhina	Staghorn Sumac	1	5		S5			G5	X	X	X	X
Apiaceae	**Carrot or Parsley Family**											
Daucus carota	Wild Carrot		5	-2	SNA			GNR	X	X	X	I
Asclepiadaceae	**Milkweed Family**											
Asclepias syriaca	Common Milkweed	0	5		S5			G5	X	X	X	X
Asteraceae	**Composite or Aster Family**											
Ambrosia artemisiifolia	Annual Ragweed	0	3		S5			G5	X	X	X	X
Anthemis arvensis	Corn Chamomille		5	-1	SNA			GNR	X	X	X	I
Arctium lappa	Greater Burdock				SNA			GNR	X	X	X	I
Arctium minus	Common Burdock		5	-2	SNA			GNR	X	X	X	I
Bidens frondosa	Devil's Beggaticks	3	-3		S5			G5	X	X	X	X
Cichorium intybus	Chicory		5	-1	SNA			GNR	X	X	X	I
Cirsium arvense	Canada Thistle		3	-1	SNA			GNR	X	X	X	I
Cirsium vulgare	Bull Thistle		4	-1	SNA			GNR	X	X	X	I
Erigeron strigosus	Daisy Fleabane	0	1		S5			G5	X	X	X	X
Inula helenium	Elecampane Flower		5	-2	SNA			GNR	X	X	I	I
Lactuca serriola	Prickly Lettuce		0	-1	SNA			GNR	X	X	I	I
Leucanthemum vulgare	Oxeye Daisy		5	-1	SNA			GNR	X	X	X	I
Matricaria discoidea	Pineapple-weed Chamomile				SNA			G5	X	X	I	I
Solidago altissima	Tall Goldenrod	1	3		S5			G5	X	X	X	X
Sonchus arvensis ssp. *arvensis*	Field Sow-thistle				SNA			GNRTNR	X	X	I	I
Symphyotrichum lanceolatum var. lan	White Panicled Aster	3	-3		S5			G5T5	X	X	X	X
Symphyotrichum novae-angliae	New England Aster	2	-3		S5			G5	X	X	X	X
Taraxacum officinale	Common Dandelion		3	-2	SNA			G5	X	X	I	I
Tragopogon pratensis	Meadow Goat's-beard		5	-1	SNA			GNR	X	X	I	I
Balsaminaceae	**Touch-me-not Family**											
Impatiens capensis	Spotted Jewelweed	4	-3		S5			G5	X	X	X	X
Brassicaceae	**Mustard Family**											
Alliaria petiolata	Garlic Mustard		0	-3	SNA			GNR	X	X	X	I
Barbarea vulgaris	Yellow Rocket		0	-1	SNA			GNR	X	X	X	I
Capsella bursa-pastoris	Common Shepherd's Purse		1	-1	SNA			GNR	X	X	X	I
Lepidium campestre	Field Pepper-grass		5	-1	SNA			GNR	X	X	I	I
Rorippa palustris ssp. *hispida*	Hispid Marsh Yellowcress				S5			G5T5	X	X	X	X
Sinapis arvensis	Corn Mustard		5	-1	SNA			GNR	X	X	I	I
Thlaspi arvense	Field Penny-cress		5	-1	SNA			GNR	X	X	I	I
Caprifoliaceae	**Honeysuckle Family**											
Lonicera tatarica	Tartarian Honeysuckle		3	-3	SNA			GNR	X	X	I	I
Caryophyllaceae	**Pink Family**											
Dianthus armeria	Deptford-pink		5	-1	SNA			GNR	X	X	X	I
Chenopodiaceae	**Goosefoot Family**											
Atriplex patula	Halberd-leaf Saltbush	0	-2		S5			G5	X	X	X	X
Chenopodium album var. *album*	White Goosefoot		1	-1	SNA			G5TNR	X	X	X	I
Salsola kali	Russian Thistle		3	-1	SNA			GNR			I	I
Cornaceae	**Dogwood Family**											
Cornus sericea	Red-osier Dogwood	2	-3		S5			G5	X	X	X	X
Dipsacaceae	**Teasel Family**											
Dipsacus fullonum	Fuller's Teasel		5	-1	SNA			GNR	X	X	X	I

Latin Name	Common Name	Coefficient of Conservatism	Wetness Index	Weediness Index	Provincial Status S-Rank	OMNR Status	COSEWIC Status	Global Status G-Rank	Local Status (Peel)	Local Status (GTA)	Local Staus (CVC/Peel)	Local Status (Peel)
									Varga 2005	Varga 2005	CVC 2002	
Fabaceae	**Pea Family**											
Medicago lupulina	Black Medic		1	-1	SNA			GNR	X	X	I	I
Melilotus officinalis	Yellow Sweetclover		3	-1	SNA			GNR	X	X	I	I
Robinia pseudoacacia	Black Locust		4	-3	SNA			G5	X	X	I	I
Securigera varia	Common Crown-vetch		5	-2	SNA			GNR	X	X	X	I
Trifolium pratense	Red Clover		2	-2	SNA			GNR	X	X	I	I
Vicia cracca	Tufted Vetch		5	-1	SNA			GNR	X	X	I	I
Guttiferae	**St. John's-wort Family**											
Hypericum perforatum	Common St. John's-wort		5	-3	SNA			GNR	X	X	I	I
Juglandaceae	**Walnut Family**											
Juglans nigra	Black Walnut	5	3		S4?			G5	X	X	X	X
Lamiaceae	**Mint Family**											
Leonurus cardiaca	Common Motherwort		5	-2	SNA			GNR	X	X	I	I
Nepeta cataria	Catnip		1	-2	SNA			GNR	X	X	I	I
Lythraceae	**Loosestrife Family**											
Lythrum hyssopifolia	Hyssop-leaved Loosestrife				SNA			G5				
Lythrum salicaria	Purple Loosestrife		-5	-3	SNA			G5	X	X	I	I
Onagraceae	**Evening-primrose Family**											
Circaea lutetiana	Enchanter's Nightshade	3	3		S5			G5	X	X	X	X
Epilobium hirsutum	Great-hairy Willow-herb		-4	-2	SNA			GNR	X	X	X	I
Epilobium parviflorum	Small-flower Willow-herb		3	-1	SNA			GNR	X	X	X	I
Oenothera parviflora	Northern Evening-primrose	1	3		S4?			G4?	X	X	X	X
Plantaginaceae	**Plantain Family**											
Plantago lanceolata	English Plantain		0	-1	SNA			G5	X	X	I	I
Plantago major	Common Plantain		-1	-1	SNA			G5	X	X	I	I
Polygonaceae	**Smartweed Family**											
Persicaria maculosa	Lady's-thumb		-3	-1	SNA			G3G5	X	X	I	I
Polygonum ramosissimum	Bushy Knotweed	8	1		S4			G5				
Rumex crispus	Curly Dock		-1	-2	SNA			GNR	X	X	I	I
Primulaceae	**Primrose Family**											
Anagallis arvensis	Scarlet Pimpernel		4	-1	SNA			GNR	X	X	X	I
Ranunculaceae	**Buttercup Family**											
Ranunculus sceleratus var. sceleratus	Cursed Buttercup	2	-5		SU			G5T5			X	X
Rhamnaceae	**Buckthorn Family**											
Rhamnus cathartica	Common Buckthorn		3	-3	SNA			GNR	X	X	I	I
Rosaceae	**Rose Family**											
Crataegus monogyna	English Hawthorn		5	-1	SNA			G5	X	X	I	I
Crataegus species	Hawthorn species											
Geum aleppicum	Yellow Avens	2	-1		S5			G5	X	X	X	X
Geum canadense	White Avens	3	0		S5			G5	X	X	X	X
Potentilla norvegica ssp. *norvegica*	Norwegian Cinquefoil				S5			G5	X	X	I	I
Potentilla recta	Sulphur Cinquefoil		5	-2	SNA			GNR	X	X	I	I
Rubus idaeus ssp. *strigosus*	Red Raspberry	0	-2		S5			G5T5	X	X	X	X
Rubiaceae	**Madder Family**											
Galium trifidum	Small Bedstraw	5	-4		S5			G5	R4	U	L	L
Salicaceae	**Willow Family**											
Salix bebbiana	Bebb's Willow	4	-4		S5			G5	X	X	X	X
Salix x rubens	Reddish Willow		-4	-3	SNA			GNA	XSR	X		

Latin Name	Common Name	Coefficient of Conservatism	Wetness Index	Weediness Index	Provincial Status S-Rank	OMNR Status	COSEWIC Status	Global Status G-Rank	Local Status (Peel)	Local Status (GTA)	Local Staus (CVC/Peel)	Local Status (Peel)
									Varga 2005	Varga 2005	CVC 2002	
Scrophulariaceae	**Figwort Family**											
Linaria vulgaris	Butter-and-eggs		5	-1	SNA			GNR	X	X	I	I
Verbascum thapsus	Common Mullein		5	-2	SNA			GNR	X	X	I	I
Solanaceae	**Nightshade Family**											
Solanum dulcamara	Climbing Nightshade		0	-2	SNA			GNR	X	X	I	I
Ulmaceae	**Elm Family**											
Ulmus americana	White Elm	3	-2		S5			G5	X	X	X	X
Urticaceae	**Nettle Family**											
Urtica dioica ssp. *gracilis*	American Stinging Nettle	2	-1		S5			G5T5	X	X	X	X
Vitaceae	**Grape Family**											
Vitis riparia	Riverbank Grape	0	-2		S5			G5	X	X	X	X
MONOCOTYLEDONS	**MONOCOTS**											
Alismataceae	**Water-plantain Family**											
Alisma triviale	Northern Water-plantain	3	-5		S5			G5	X	X	X	X
Cyperaceae	**Sedge Family**											
Carex bebbii	Bebb's Sedge	3	-5		S5			G5	X	X	X	X
Carex vulpinoidea	Fox Sedge	3	-5		S5			G5	X	X	X	X
Eleocharis erythropoda	Red-footed Spike-rush	4	-5		S5			G5	X	X	X	X
Schoenoplectus tabernaemontani	American Great Bulrush	5	-5		S5			G5	X	X	X	X
Juncaceae	**Rush Family**											
Juncus bufonius	Toad Rush	1	-4		S5			G5	X	X	X	X
Juncus dudleyi	Dudley's Rush	1	0		S5			G5	X	X	X	X
Juncus torreyi	Torrey's Rush	3	-3		S5			G5	X	X	X	X
Poaceae	**Grass Family**											
Agrostis gigantea	Redtop		0	-2	SNA			G4G5	X	X	I	I
Agrostis stolonifera	Redtop		-3		S5			G5	X	X	X	X
Bromus inermis	Awnless Brome		5	-3	SNA			G5TNR	X	X	I	I
Bromus secalinus	Cheat Chess		5	-1	SNA			GNR	X	X	I	I
Elymus repens	Quack Grass		3	-3	SNA			GNR	X	X	I	I
Hordeum jubatum ssp. jubatum	Foxtail Barley		-1	-1	S5?			G5T5	X	X	I	I
Phalaris arundinacea var. arundinacea	Reed Canary Grass	0	-4		S5			GNR	X	X	X	X
Phleum pratense	Timothy		3	-1	SNA			GNR	X	X	I	I
Phragmites australis ssp. americanus	American Reed	0	-4		S4?			G5T4			X	X
Poa compressa	Canada Blue Grass	0	2		SNA			GNR	X	X	X	X
Poa palustris	Fowl Meadow Grass	5	-4		S5			G5	X	X	X	X
Poa pratensis ssp. pratensis	Kentucky Bluegrass	0	1		SNA			G5T5	X	X	X	X
Puccinellia distans	Spreading Goose Grass		-5	-1	SNA			G5	X	X	I	I
Typhaceae	**Cattail Family**											
Typha latifolia	Broad-leaved Cattail	3	-5		S5			G5	X	X	X	X
Typha x glauca	Glaucous Cattail	3	-5		SNA			GNA	X	X	X	X

STATISTICS		
Species Richness		
Total Number of Species:	100	
Native Species:	42	42%
Exotic Species:	58	58%
S1-S3 Species:	0	0%
S4 Species:	4	10%
S5 Species:	36	90%

Latin Name	Common Name	Coefficient of Conservatism	Wetness Index	Weediness Index	Provincial Status S-Rank	OMNR Status	COSEWIC Status	Global Status G-Rank	Local Status (Peel)	Local Status (GTA)	Local Staus (CVC/Peel)	Local Status (Peel)
									Varga 2005	Varga 2005	CVC 2002	

Floristic Quality Indices		
Mean Co-efficient of Conservatism (CC)	2.2	
CC 0 - 3 = lowest sensitivity	31	79%
CC 4 - 6 = moderate sensitivity	7	18%
CC 7 - 8 = high sensitivity	1	3%
CC 9 - 10 = highest sensitivity	0	0%
Floristic Quality Index (FQI)	14	
Weedy and Invasive Species		
Mean Weediness Index:	-1.6	
-1 = low potential invasiveness	30	57%
-2 = moderate potential invasiveness	14	26%
-3 = high potential invasivenss	9	17%
Wetland Species		
Mean Wetness Index	0.7	
upland	24	26%
facultative upland	19	20%
facultative	20	22%
facultative wetland	21	23%
obligate wetland	9	10%

See next page for explanation of terms*

EXPLANATION OF TERMINOLOGY

Botanical and Common Name: From Newmaster et. al, 1998. Species requiring confirmation noted (cf).
Co-efficient of Conservatism: This value, ranging from 0 (low) to 10 (high), is based on a species tolerance of disturbance and fidelity to a specific habitat integrity.

Wetness Index: This value, ranging from -5 (obligate wetland) to 5 (upland) provides the probability of a species occurring in wetland or upland habitats.
Weediness Index: This value, ranging from -1 (low) to -3 (high) quantifies the potential invasiveness of non-native plants. In combination with the percentage of non-native plants, it can be used as an indicator of disturbance.
Provincial Status: Provincial ranks are used by the NHIC to set protection priorities for rare species and natural communities. These ranks are not legal designations. S4 and S5 species are generally uncommon to common in the province. Species ranked S1-S3 are considered to be rare in Ontario.

Local Status:

X: native species present (collection-based) and all exotic species
R: native species locally rare (number of sites): Hamilton-Wentworth (<6 sites), Durham (<10 sites), GTA (<40 sites), Site District 6E7 (<20 sites), Oak Ridges Moraine (20 or fewer sites), Halton (<5 sites); Peterborough (suspected of being rare, 5 or fewer occurrences); CVC/Peel Region (<11 sites)
U: native species locally uncommon Hamilton-Wentworth (6-10 sites), Durham (11-20 sites), GTA (41-80 sites), Site District 6E7 (21-40 sites), Halton (5-15 sites).

E: Presumed Extirpated

?: More work required to determine status

H: historic record

O: only old (>20 years) records known (Peterborough)

Record Type

SR - sight record

SRP - sight record with photograph

VARGA 2005 Rankings:

+ Introduced species
X+ Native species that is introduced in that municipality
(+) Possibly introduced species or a native species that is introduced in some municipalities
X Common native species or an introduced species that is present
R Rare native species
E Extirpated native species that has not been refound at its known locations or its habitat is gone
SR Species record based on a sight record (all other species records based on herbarium collections)
LR Species record based on a literature record
U Uncommon native species
R6 Number of stations for a rare native species
H Historical species not seen since 1950, however its habitat is still present
X̲ Species that occur only in the portion of site district 6E7 outside of the Greater Toronto Area

TRCA Rankings (April 2016):

L5: able to withstand high levels of disturbance; generally secure throughout the jurisdiction, including the urban matrix. May be of very localized concern in highly degraded areas

L4: able to withstand some disturbance; generally secure in rural matrix; of concern in urban matrix

L3: able to withstand minor disturbance; generally secure in natural matrix; considered to be of regional concern.

L2: unable to withstand disturbance; some criteria are very limiting factors; generally occur in high-quality natural areas, in natural matrix; probably rare in the TRCA jurisdiction; of concern regionally

L1: unable to withstand disturbance; many criteria are limiting factors; generally occur in high-quality natural areas in natural matrix; almost certainly rare in the TRCA jurisdiction; of concern regionally

LX: extirpated from our region with remote chance of rediscovery. Presumably highly sensitive

LH: hybrid between two native species. Usually not scored unless highly stable and behaves like a species (e.g. *Equisetum x nelsonii*)

L+: exotic. Not native to TRCA jurisdiction. Includes hybrids between a native species and an exotic

L+?: origin uncertain or disputed, i.e. may or may not be native

pL : found in natural cover, but only as planted, not regenerating

Status in Region of Waterloo: * significant but with the expectation that additional research may prove otherwise, + significant only if demonstrably indigenous - most populations in Region of Waterloo are thought to be of non-indigenous origin, # significant but known Region of Waterloo reports are treated as hypothetical.

The sensitivity of natural areas can be assessed through application of the Weediness Index. The Weediness Index quantifies the potential invasiveness of non-native plants, and, in combination with the percentage of non-native plants can be used as an indicator of disturbance. Values (ranging from 1- to -3) have been assigned to most non-native species based on the potential impact each species can have in natural areas:

-1: little or no impact on natural areas (most non-native plants are in this category)

-2: occasional impacts on natural areas, generally infrequent or localized

-3: major potential impacts on natural areas

Status in Niagara Regional Municipality (Oldham 2010)

R: Rare, 10 or fewer post 1980 records

RH: Rare Historic, no records post 1980

U: Uncommon, 11-20 post 1980 records

C: Common, more than 20 post 1980 records

DD: Data deficient, further work needed to determine status

I: Introduced

hyb: hybrid, no Niagara status assigned

Status in Haldimand-Norfolk (Sutherland 1987)

R: Rare, 1-5 sites, number of sites indicated

VU: Very Uncommon, 6-8 sites

U: Uncommon, 9-15 sites

C: Common, more than 15 sites

I: Introduced, not native

X: Present in Haldimand-Norfolk, no status assigned

?: Status uncertain

Status in Wellington (Frank and Anderson 2009)

R1: 1-3 sites

R2: 4-6 sites

R3: 7-10 sites

FACW (Facultative Wetland): usually occurs in wetlands, but occasionally found in non-wetlands (estimated 67-99% probability)

FAC (Facultative): equally likely to occur in wetlands or non-wetlands (estimated 34-66% probability)

FACU (Facultative Upland): occasionally occurs in wetlands, but usually occurs in non-wetlands (estimated 1-33% probability)

UPL (Upland): occurs almost never in wetlands under natural conditions (estimated <1% probability)

Further refinement of the Facultative categories are denoted by a "+" or "-" to express exaggerated tendencies for those species. The "+" denotes a greater estimated probability occurring in wetlands than species in the general indicator category, but a lesser probability than species occurring in the next higher category. The "-" denotes a lesser estimated probability of occurring in wetlands than species in the general indicator category, but a greater probability than species occurring in the next lower general category.

Each wetland category has been assigned a numerical value to facilitate the quantification of the wetness index. The wetland categories and their corresponding values are as follows:

OBL : -5

FACW+: -4

FACW: -3
FACW-: -2
FAC+: -1
FAC: 0
FAC-: 1
FACU+: 2
FACU: 3
FACU-: 4
UPL: 5

Provincial Status
Provincial ranks are used by the NHIC to set protection priorities for rare species and natural communities. These rankings are based on the total number of extant Ontario populations and the degree to which they are potentially or actively threatened with destruction. The ranks are:
S1: Critically Imperiled - Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.
S2: Imperiled - Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.
S3: Vulnerable - Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
S4: Apparently Secure - Uncommon but not rare; some cause for long-term concern due to declines or other factors.
S5: Secure - Common, widespread, and abundant in the nation or state/province.
SH: Possibly Extirpated (Historical)—Species or community occurred historically in the nation or state/province, and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years. A species or community could become NH or SH without such a 20-40 year delay if the only known occurrences in a nation or state/province were destroyed or if it had been extensively and unsuccessfully looked for. The NH or SH rank is reserved for species or communities for which some effort has been made to relocate occurrences, rather than simply using this status for all elements not known from verified extant occurrences.
SR: Reported in Ontario, but without persuasive documentation.
SX: Presumed Extirpated—Species or community is believed to be extirpated from the nation or state/province. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.
SE: Exotic; not believed to be a native component of Ontario's flora. Numerical rankings after SE follow designations described above for native species.
SNA: Unranked — Status not assigned.
SU: Unranked — Nation or state/province conservation status not yet assessed.
Rank ranges, e.g. S2S3, indicate that the rank is either S2 or S3, but that current information is insufficient to differentiate.
"?" following a rank indicates uncertainty about the assigned rank.
Q: Questionable taxonomy —Taxonomic distinctiveness of this entity is questionable; resolution of this uncertainty may result in change from a species to a subspecies or hybrid, or the inclusion of this taxon in another taxon, with the resulting taxon having a lower-priority conservation status.

REFERENCES

Nomenclature based on:
Newmaster, S.G., A. Lehela, P.W.C Uhlig, S. McMurray and M.J. Oldham. 1998. Ontario plant list. Ontario Ministry of Natural Resources, Ontario Forest Research Institute, Sault Ste. Marie, ON, Forest Research Information Paper No. 123. 550 pp. + appendices.

Co-efficient of Conservatism, Wetness & Weediness
Oldham, M.J., W.D. Bakowsky and D.A. Sutherland. 1995. Floristic quality assessment for southern Ontario. OMNR, Natural Heritage Information Centre, Peterborough. 68 pp.

Provincial (Ontario) Status:
Natural Heritage Information Centre (NHIC). 2000. Provincial status of plants, wildlife and vegetation communities database. http://www.mnr.gov.on.ca/MNR/nhic/nhic.html. OMNR, Peterborough.

Local Status:
Varga, S., editor. 2005. Distribution and status of the vascular plants of the Greater Toronto Area. Ontario Ministry of Natural Resources, Aurora District. 96 pp.

Goodban, A.G. September 1995. The vascular plant flora of the Regional Municipality of Hamilton-Wentworth, Ontario. First Edition, Hamilton Region Conservation Authority, Ancaster, Ontario. 86 pp.

Ministry of Natural Resources, February 2004. List of rare vascular plants on the Oak Ridges Moraine, excluding provincially and nationally rare species. Technical Paper 6, Appendix A-1.

Goodban, A.G. 2003. Nature Counts Project; Hamilton Natural Areas Inventory 2003, Species Checklist. Hamilton Naturalists Club, Hamilton, Ontario.

Riley, J.L., 1989. Distribution and Status of the Vascular Plants of Central Region. Ontario Ministry of Natural Resources, Central Region, Richmond Hill, ON. 110 pp.

Crins, W.J., McIlveen, W.D., Goodban, A.G., O'Hara, P.G. 2006. Halton Natural Areas Inventory 2006: Volume 2 Species Checklists (The Vascular Plants of Halton Region, Ontario: Species Checklist).

TRCA, 2003. List provided by the Toronto Region Conservation, based on April 2003 rankings. (A pdf file.)

Oldham, M.J. 1999. Checklist of the Vascular Plants of Peterborough County, Ontario.

Credit Valley Conservation, 2002. Plants of the Credit River Watershed. Checklist on CVC website.

Waterloo Regional Council. 1999. Regionally Significant Vascular Plants. List adopted by Waterloo Regional Council.

Oldham, M.J. 2010. Checklist of the Vascular Plants of Niagara Regional Municipalty. Ontario Natural Heritage Information Centre, Ministry of Natural resources. Peterborough, Ontario for Niagara Peninsula Conservation Authority, Welland, Ontario.

Sutherland, D.A. 1987. The Vascular Plants of Haldimand-Norfolk. In: M.E. Gartshore, D.A. Sutherland & J.D. McCracken (Eds.). Final report on the natural areas inventory of the Regional Municipality of Haldimand-Norfolk. 1985-86. Vol. II: Annotated checklists. (pp.1-152). Simcoe, Ontario. Norfolk Field Naturalists.

COSEWIC status: SC-Special Concern

Oldham, M.J. 1993. Distribution and Status of the Vascular Plants of Southwestern Ontario. Draft. Ontario Ministry of Natural Resources, Aylmer District, Aylmer. xix + 150 pages.

Provincial status after 2013 NHIC species naster list (online).

Frank. R. and A. Anderson. 2009. The Flora of Wellington County. Wellington County Historical Society. Fergus, Ontario. 145 pp.

Common Name	Species Code	Scientific Name	Breeding Evidence	#PC	Inc	National Status (Grank)	Provincial Status (Srank)	COSSARO (MNR)	COSEWIC
Anseriformes									
Anatinae									
Mallard	MALL	*Anas platyrhynchos*	H	0	x	G5	S5		
Pelecaniformes									
Ardeidae									
Great Blue Heron	GBHE	*Ardea herodias*	X	1	x	G5	S4		
Accipitriformes									
Accipitridae									
Red-tailed Hawk	RTHA	*Buteo jamaicensis*	NY	2	x	G5	S5	NAR	NAR
Charadriiformes									
Charadriinae									
Killdeer	KILL	*Charadrius vociferus*	H	0	x	G5	S5B,S5N		**Candidate (low priority)**
Larinae									
Ring-billed Gull	RBGU	*Larus delawarensis*	X	2	x	G5	S5B,S4N		
Columbiformes									
Columbidae									
Rock Pigeon	ROPI	*Columba livia*	X	3	x	G4	SNA		
Mourning Dove	MODO	*Zenaida macroura*	H	2	x	G5	S5		
Piciformes									
Picinae									
Downy Woodpecker	DOWO	*Picoides pubescens*	H	0	x	G5	S5		
Northern Flicker	NOFL	*Colaptes auratus*	H	1	x	G5	S4B		
Passeriformes									
Fluvicolinae									
Willow Flycatcher	WIFL	*Empidonax traillii*	P	2	x	G5	S5B		
Vireonidae									
Warbling Vireo	WAVI	*Vireo gilvus*	A	1	x	G5	S5B		
Red-eyed Vireo	REVI	*Vireo olivaceus*	S	1	x	G5	S5B		
Corvidae									
Blue Jay	BLJA	*Cyanocitta cristata*	H	0	x	G5	S5		
American Crow	AMCR	*Corvus brachyrhynchos*	H	0	x	G5	S5B		
Alaudidae									
Horned Lark	HOLA	*Eremophila alpestris*	H	0	x	G5	S5B		
Hirundininae									
Tree Swallow	TRES	*Tachycineta bicolor*	H	0	x	G5	S4B		
Northern Rough-winged Swallow	NRWS	*Stelgidopteryx serripennis*	X	2	x	G5	S4B		
Cliff Swallow	CLSW	*Petrochelidon pyrrhonota*	X	0	x	G5	S4B		
Barn Swallow	BARS	*Hirundo rustica*	X	3	x	G5	S4B	**THR**	**THR**
Paridae									
Black-capped Chickadee	BCCH	*Poecile atricapillus*	FY	0	x	G5	S5		
Turdidae									
American Robin	AMRO	*Turdus migratorius*	FY	4	x	G5	S5B		
Mimidae									
Gray Catbird	GRCA	*Dumetella carolinensis*	CF	2	x	G5	S4B		
Northern Mockingbird	NOMO	*Mimus polyglottos*	H	1		G5	S4		
Sturnidae									
European Starling	EUST	*Sturnus vulgaris*	P	2	x	G5	SNA		
Bombycillidae									
Cedar Waxwing	CEDW	*Bombycilla cedrorum*	H	3	x	G5	S5B		
Parulidae									
Common Yellowthroat	COYE	*Geothlypis trichas*	S	1	x	G5	S5B		
Yellow Warbler	YWAR	*Setophaga petechia*	P	3	x	G5	S5B		
Emberizidae									
Savannah Sparrow	SAVS	*Passerculus sandwichensis*	FY	4	x	G5	S4B		
Song Sparrow	SOSP	*Melospiza melodia*	FS	4	x	G5	S5B		
Cardinalidae									
Northern Cardinal	NOCA	*Cardinalis cardinalis*	P	1	x	G5	S5		
Icteridae									
Bobolink	BOBO	*Dolichonyx oryzivorus*	S	1	x	G5	S4B	**THR**	**THR**
Red-winged Blackbird	RWBL	*Agelaius phoeniceus*	CF	4	x	G5	S4		

Common Name	Species Code	Scientific Name	Breeding Evidence	#PC	Inc	National Status (Grank)	Provincial Status (Srank)	COSSARO (MNR)	COSEWIC
Common Grackle	COGR	*Quiscalus quiscula*	FY	3	x	G5	S5B		
Brown-headed Cowbird	BHCO	*Molothrus ater*	D	3	x	G5	S4B		
Orchard Oriole	OROR	*Icterus spurius*	FY	4	x	G5	S4B		
Baltimore Oriole	BAOR	*Icterus galbula*	H	0	x	G5	S4B		
Carduelinae									
American Goldfinch	AMGO	*Spinus tristis*	P	4	x	G5	S5B		

Species Common Name and Scientific Name: consistent with the American Ornithologists' Union. 2012. Check-list of North American Birds. Accessed May 25, 2012. Available online: www.aou.org/checklist/north/full.php/

Species Code: consistent with the American Ornithologists' Union. 2012. Species 4-Letter-Codes. Accessed May 25, 2012. Available online: www.birdsontario.org/atlas/codes.jsp?lang=en&pg=species/

Breeding Evidence[2]: Codes assigned for breeding evidence are consistent with the Ontario Breeding Bird Atlas (OBBA). 2012. Breeding Evidence Codes. Accessed May 25, 2012. Available online: http://www.birdsontario.org/dataentry/codes.jsp?page=breeding/. Several different types of breeding evidence are often recorded for any given species over the course of surveys and incidental observations - this table reports only the highest level of breeding evidence

#PC[+]: total number of point count (PC) stations on the Subject Lands where each bird species was observed. Detailed point count data is provided in in the Breeding Bird Survey Point Count Table

Inc[t]: an "x" in this column means an incidental observation(s) was made of this species; the "Breeding Bird Point Count Data and Incidental Bird Observations Table" provides the date and number of individuals observed.

S ranks: Provincial ranks are from the Natural Heritage Information Centre; S1 (critically imperiled), S2 (imperlied), S3 (vulnerable), S4 (apparently secure), S5 (secure); ranks were updated using NHIC species list Feb 17, 2012

G ranks: National ranks are from the Natural Heritage Information Centre; G1 (extremely rare), G2 (very rare), G3 (rare to uncommon), G4 (common), G5 (very common); ranks were updated using NHIC species list Feb 17, 2012

COSSARO (MNR): Ontario Species at Risk as listed by the Committee on the Status of Species at Risk in Ontario (from NHIC Table Feb 17, 2012); END - Endangered, THR - Threatened, SC - Special Concern, NAR - Not at Risk; Candidate Species at Risk to be assessed by COSSARO are listed online: www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/STDPROD_068707.html/.

COSEWIC: Canada Species at Risk as listed by the Committee on the Status of Endangered Wildlife in Canada (from NHIC Table Feb 17, 2012); END - Endangered, THR - Threatened, SC - Special Concern, NAR - Not at Risk; Candidate Species at Risk to be assessed by COSEWIC are listed online: www.cosewic.gc.ca/eng/sct3/index_e.cfm/.

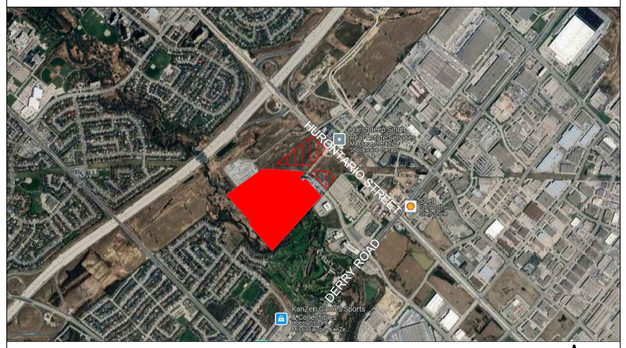
Table 4: ELC Community Summary Table

ELC Community Code	Description
CULTURAL	
CUW Black Locust Cultural Woodland	This is a small and low-quality patch of Black Locust entirely dominating the tree layer. Locust saplings are also present in the shrub layer, together with scattered presence of Tartarian Honeysuckle and some Riverbank Grape. Ground herbaceous cover is almost exclusively of Garlic Mustard, followed by native Tall Goldenrod and Yellow Mustard, and non-native Quack Grass, Awnless Brome and Common Motherwort.
CUT1-7* Buckthorn-Hawthorn Cultural Thicket	This community is floristically and structurally simple. The tall shrub layer is that of very densely growing mix of Common Buckthorn and hawthorn species, with a few remaining old domestic apple trees, Tartarian Honeysuckle, and a few single White Elm trees emerging over the shrubs. The herb layer is poorly developed, with scattered Garlic Mustard, Yellowish Enchanter's Nightshade and Yellow Avens. This unit covers the slopes of the Fletcher's Creek valleyland.
CUM1-1 Dry-Fresh Old Field Meadow	Surrounding the locust woodland, this is a diverse assemblage of exotic species and native species of weedy predisposition. Several species can attain local dominance, or are scattered throughout, for example, Canada Thistle, Quack Grass, Tall Goldenrod, Prickly Lettuce, Common Ragweed, Teasel, Charlock, and Corn Chamomile.
MARSH	
MAS2-1 Cattail Mineral Shallow Marsh	This community is defined by the width of the swale. Glaucous Cattail and occasional Wide-leaved Cattail form a dense tall herb layer. Associates include Reed-canary Grass, Great Hairy Willow-herb, Red-footed Spike-rush, Tall White Aster, Red-top, and a short cover of Toad Rush.

ELC Community Code	Description
MAS2-1/MAM Cattail Mineral Shallow Marsh/Meadow Marsh	This is a complex unit of forb-dominated meadow marsh on the creek floodplain, with areas of cattail shallow marsh in small depressions and old oxbows. The meadow component is dominated by Tall Panicled Aster (*Symphyotrichum lanceolatum*), Reed-canary Grass (*Phalaris arundinacea*), Elecampane (*Inula helenium*) and Spotted Joe-pye Weed (*Eupatorium maculatum*), while the Glaucous Cattail (*Typha* x *glauca*) is the main shallow marsh species.

Appendix C – Draft Plan and Site Plan

PROPOSED DRAFT PLAN OF SUBDIVISION
PART OF LOTS 11 AND 12, CONCESSION 1
WEST OF HURONTARIO STREET
(GEOGRAPHIC TOWNSHIP OF TORONTO, COUNTY OF PEEL)
CITY OF MISSISSAUGA
REGIONAL MUNICIPALITY OF PEEL



KEYMAP

Subject Property

Additional land owned by the Applicant/owner

0 km 0.5 km 1 km

LEGEND

- Subject Site Boundary
- Block Lines
- Easement

AREA TABLE

Employment Area Block 1	11.69	ha.
Greenlands Area Block 2	5.77	ha.
Road	0.11	ha
TOTAL	17.57	ha

ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51 (17) OF THE PLANNING ACT

C. The applicant owns additional land adjacent to the proposed subdivision.
D. Industrial Buildings.
H. Piped water to be provided.
I. Silty clay till & sandy silt till.
K. Sanitary and storm sewers to be provided

SURVEYOR'S CERTIFICATE

I hereby certify that the boundaries of the land to be subdivided as shown on this plan, and their relationship to the adjacent lands are accurately and correctly shown.

Anthony Vaz – O.L.S. Signature Day Month Year

OWNERS AUTHORIZATION

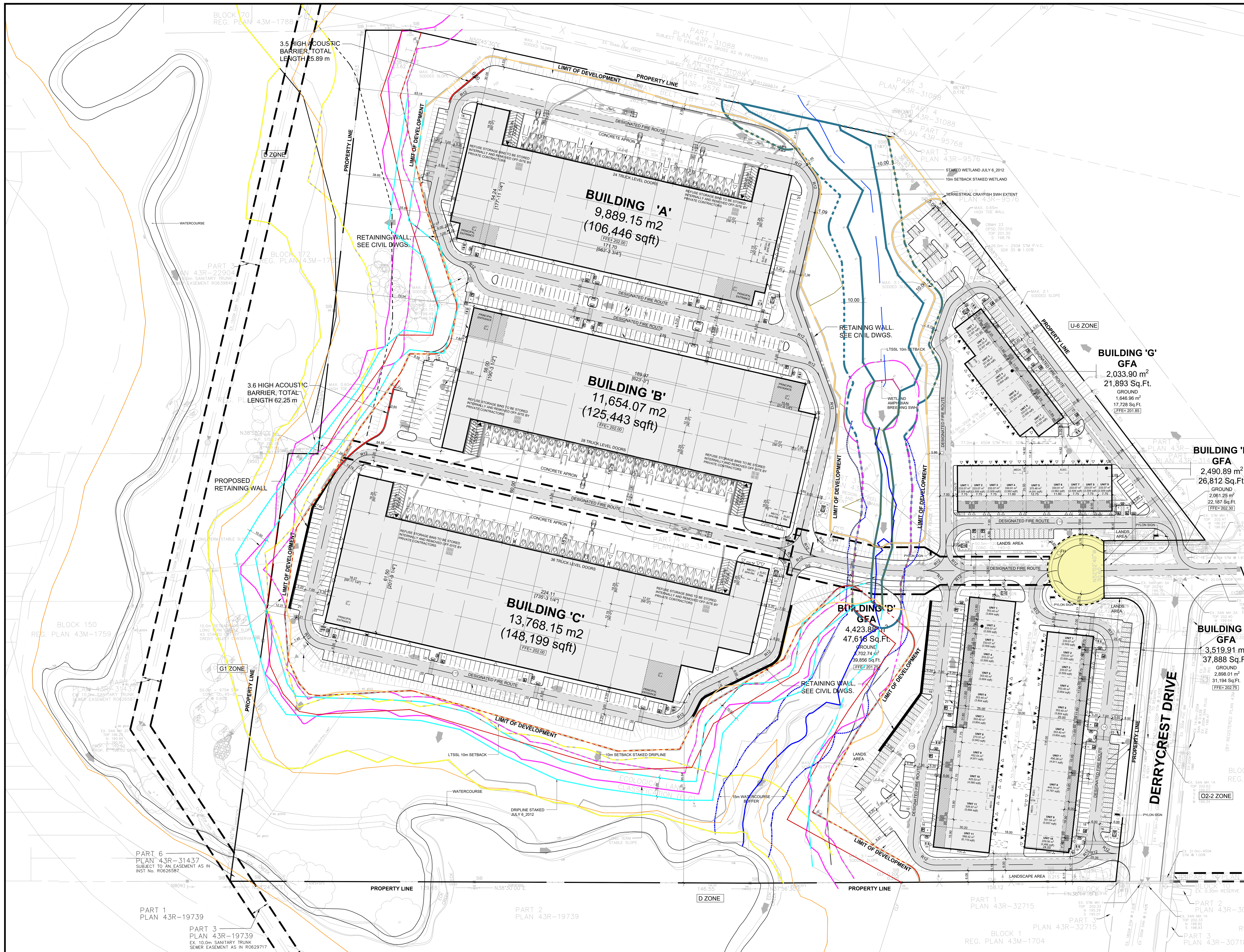
I, _____ here by authorize Design Plan Services Inc. to prepare and submit a draft plan of subdivision for approval.

– Owner Signature Day Month Year

DESIGN PLAN SERVICES INC.
Town Planning Consultants

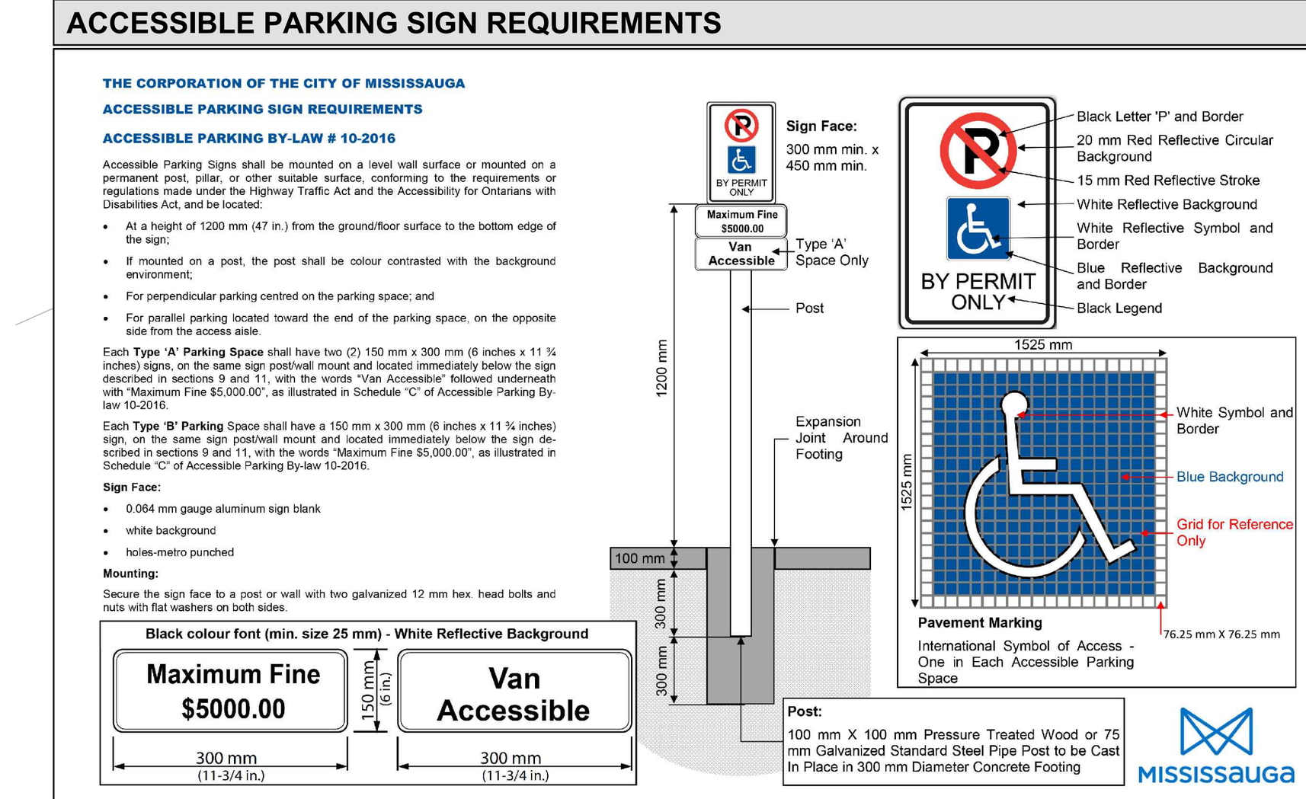
87 Skyway Avenue, Suite 200
Toronto, ON M9W 6R3
Telephone: 416.626.5445
www.designplan.ca

1:1000	Sept 15th /2025	22332-8	Rev.	Drawn	RW Design
Scale	Date	Drawing Number			



SYMBOL LEGEND	
▷	MAN DOOR
|▷	LOADING DOCK DOOR
|▶	DRIVE-IN / OVERHEAD DOOR
FH	HYDRANT + VALVE
FDC	FIRE DEPARTMENT CONNECTION / SIAMESE
CB	CATCH BASIN
SANMH	SANITARY MAN HOLE
CB/MH	CATCH BASIN / MAN HOLE
SMH	STORM MAN HOLE
HP	HYDRO POLE STANDARD / UTILITY POLE
BR	BIKE RACK (2-3 BIKES)
HT	HYDRO TRANSFORMER
	ACCESSIBLE PARKING SPACE
	ACCESSIBLE PARKING SPACE SIGNAGE
SNW	SNOW STORAGE AREA
G	REFUSE STORAGE BINS
	STOP SIGNS
B	CONC. FILLED STEEL BOLLARDS, EXT. TYPE A, IN ACCORDANCE MS-25 WITH, DRAWING A-0.0
	LOADING SPACE 9.0 m x 3.5 m x 4.2 m H
M	GAS METER
FR	FIRE ROUTE SIGNS
	PROPERTY LINE
	LIMIT OF DEVELOPMENT
	WATERCOURSE
	15m WATERCOURSE BUFFER
	DRAINAGE FEATURE
	FINAL MEANDER BELT
	30m SETBACK FROM MEANDER BELT
	STAKED WETLAND JULY 6,2012
	10m SETBACK FROM STAKED WETLAND/LOCALLY IMPORTANT AMPHIBIAN BREEDING HABITAT & CORRIDO (WHERE NECESSARY)
	LONG-TERM TABLE SLOPE
	10m SETBACK FROM LONG-TERM STABLE SLOPE
	TOP OF BANK STAKED OCTOBER. 6, 2010 WITH REVISIONS ON MARCH 24, 2011
	10m SETBACK FROM TOP OF BANK
	DRIPLINE STAKED JULY 6-12
	10m SETBACK FROM STAKED DRIPLINE
	CVC FLOODLINE
	EASEMENT

ACCESSIBLE PARKING SIGN REQUIREMENTS



PARKING SPACES RESERVED FOR PEOPLE WITH DISABILITIES MUST BE IDENTIFIED BY A SIGN, INSTALLED AT THE APPLICANT'S EXPENSE, IN ACCORDANCE WITH THE DESIGN SPECIFICATIONS OF SCHEDULES 2 & 3 OF BY-LAW #10-2016.

AUTHORITIES HAVING JURISDICTION & GENERAL NOTES

PLANNING AND BUILDING DEPARTMENT
PLANNER:

i) I HEREBY CERTIFY THAT THIS DRAWING CONFORMS IN ALL RESPECTS TO THE SITE PLAN DEVELOPMENT PLANS AS APPROVED BY THE CITY OF MISSISSAUGA UNDER FILE NUMBER:

SP 25-XX WX ARCHITECT'S SIGNATURE ____ DATED XXX. XX 2025

ii) THE CITY OF MISSISSAUGA REQUIRES THAT ALL WORKING DRAWINGS SUBMITTED TO THE BUILDING DIVISION AS PART OF AN APPLICATION FOR THE ISSUANCE OF A BUILDING PERMIT SHALL BE CERTIFIED BY THE ARCHITECT OR ENGINEER WITH THE SITE DEVELOPMENT PLAN AS APPROVED BY THE CITY OF MISSISSAUGA.

iii) ALL EXTERIOR LIGHTING WILL BE DIRECTED ONTO THE SITE AND WILL NOT INFRINGE UPON THE ADJACENT PROPERTIES.

iv) ALL ROOF TOP MECHANICAL UNITS SHALL BE SCREENED FROM VIEW BY THE APPLICANT.

v) PARKING SPACES RESERVED FOR PEOPLE WITH DISABILITIES MUST BE IDENTIFIED BY A SIGN, INSTALLED AT THE APPLICANT'S EXPENSE, IN ACCORDANCE WITH THE DESIGN SPECIFICATION OF SCHEDULES 2 & 3 OF BY-LAW #10 -2016.

vi) THE APPLICANT WILL BE RESPONSIBLE FOR ENSURING THAT ALL PLANS CONFORM TO TRANSPORT CANADA'S RESTRICTIONS.

vii) GRADES WILL BE MET WITHIN A 33% MAXIMUM SLOPE AT THE PROPERTY LINES AND WITHIN THE SITE.

viii) ALL DAMAGED AREAS ARE TO BE REINSTATED WITH TOPSOIL AND SOD PRIOR TO THE RELEASE OF SECURITIES.

ix) SIGNAGE SHOWN ON THE SITE DEVELOPMENT PLANS IS FOR INFORMATION PURPOSES ONLY. ALL SIGNS WILL BE SUBJECT TO THE PROVISIONS OF SIGN BY-LAW 0054-2002, AS AMENDED, AND A SEPARATE SIGN APPLICATION WILL BE REQUIRED THROUGH THE BUILDING DIVISION.

x) ANY FENCING ADJACENT TO MUNICIPAL LANDS IS TO BE LOCATED 15 cm (60 in.) INSIDE THE PROPERTY LINE.

xi) ONLY "SHIELDED" LIGHTING FIXTURES ARE PERMITTED FOR ALL DEVELOPMENT, EXCEPT FOR DETACHED AND SEMI-DETACHED DWELLINGS WITHIN 60 m (196.8 ft) OF A RESIDENTIALLY ZONED PROPERTY AND MUST CONFORM TO THE ENGINEER CERTIFIED LIGHTING PLAN.

xii) THE ENGINEER CERTIFIED LIGHTING PLAN MUST BE SIGNED BY THE CONSULTING ENGINEER.

xiii) THE OWNER COVENANTS AND AGREES TO CONSTRUCT AND INSTALL "SHIELDED" LIGHTING FIXTURES ON THE SUBJECT LANDS, IN CONFORMITY WITH THE SITE PLAN AND ENGINEER CERTIFIED LIGHTING PLAN TO THE SATISFACTION OF THE CITY OF MISSISSAUGA.

xiv) THE STRUCTURAL DESIGN OF ANY RETAINING WALL OVER 0.6m IN HEIGHT OR ANY RETAINING WALL LOCATED ON A PROPERTY LINE IS TO BE SHOWN ON THE SITE GRADING PLAN FOR THIS PROJECT AND IS TO BE APPROVED BY THE CONSULTING ENGINEER FOR THE PROJECT.

xv) CONTINUOUS 15 cm HIGH BARRIER TYPE POURED CONCRETE CURBING WILL BE PROVIDED BETWEEN ALL ASPHALT AND LANDSCAPED AREAS THROUGHOUT THE SITE.

xw) ALL UTILITY COMPANIES WILL BE NOTIFIED FOR LOCATES PRIOR TO THE INSTALLATION OF THE HOARDING THAT LIES WITHIN THE SITE AND WITHIN THE LIMITED OF THE CITY BOULEVARD AREA.

LANDSCAPE ARCH:

i) THE APPLICANT IS RESPONSIBLE FOR ENSURING THAT TREE PROTECTION HOARDING IS MAINTAINED THROUGHOUT ALL PHASES OF DEMOLITION AND CONSTRUCTION IN THE LOCATION AND CONDITION AS APPROVED BY THE PLANNING AND BUILDING DEPARTMENT. NO MATERIALS (BUILDING MATERIALS, SOIL, ETC.) MAY BE STOCKPILED WITHIN THE AREA OF HOARDING. FAILURE TO MAINTAIN THE HOARDING AS ORIGINALLY APPROVED OR THE STORAGE OF MATERIALS WITHIN THE HOARDING WILL BE CAUSE FOR THE LETTER OF CREDIT TO BE HELD FOR TWO (2) YEARS FOLLOWING COMPLETION OF ALL SITE WORKS.

OWNER'S SIGNATURE: ____ DATED: ____

ii) NOTE: IF THE FINAL COURSE OF ASPHALT PAVING IS DELAYED, INSTALL A TEMPORARY LIFT OF ASPHALT AT RAMPS OR CURB CUTS TO PROVIDE BARRIER-FREE ACCESS.

TRANSPORTATION & WORKS
DEVELOPMENT ENGINEERING:

i) THIS SITE PLAN IS TO BE READ IN CONJUNCTION WITH THE SITE GRADING & SERVICING PLANS SW1A, SW1B, SW1C, SW2A, SW2B, AND SW2C PREPARED BY SKIRA ENGINEERING.

ii) PORTIONS OF THE DRIVEWAY WITHIN THE MUNICIPAL BOULEVARD WILL BE PAVED BY THE APPLICANT.

iii) AT THE ENTRANCES TO THE SITE, THE MUNICIPAL CURB AND SIDEWALK SHALL BE CONTINUOUS THROUGH THE DRIVEWAY AND A CURB DEPRESSION WILL BE PROVIDED FOR EACH ENTRANCE.

iv) "ALL PROPOSED CURBING WITHIN THE MUNICIPAL BOULEVARD AREA FOR THE SITE IS TO SUIT AS FOLLOWS:
- FOR ALL OTHER PROPOSALS INCLUDING INDUSTRIAL, COMMERCIAL AND CONDOMINIUM DEVELOPMENTS TO THE SITE ARE TO BE IN ACCORDANCE WITH O.P.S.D. 350.010. (save and accept Detail 'A' which shall match City of Mississauga Standard 2240.031).

v) "ALL EXCESS EXCAVATED MATERIAL WILL BE REMOVED FROM SITE."

vi) "THE APPLICANT WILL BE REQUIRED TO CONTACT ALL UTILITY COMPANIES TO OBTAIN ALL REQUIRED LOCATES PRIOR TO THE INSTALLATION OF HOARDING WITHIN THE MUNICIPAL RIGHT- OF- WAY."

vii) " ALL INTERNAL CURBS ARE TO BE STANDARD CURB AND GUTTER AS PER O.P.S.D. 600.070."

viii) "SHOULD ANY WORKS BE REQUIRED WITHIN THE MUNICIPAL RIGHT-OF-WAY, A ROAD OCCUPANCY PERMIT WILL BE REQUIRED. PUCC APPROVAL WILL BE REQUIRED. FOR FURTHER INFORMATION, PLEASE CONTACT THE PUCC/PERMIT TECHNOLOGIST, LOCATED AT 3185 MAVIS ROAD."

ix) ALL LANDSCAPING AND GRADING WITHIN CLOSE PROXIMITY TO THE PROPOSED ACCESS POINTS IS TO BE DESIGNED TO INSURE THAT ADEQUATE SIGHT DISTANCES ARE AVAILABLE FOR ALL APPROACHING AND EXITING MOTORISTS AND PEDESTRIANS.

x) ALL DAMAGED OR DISTURBED AREAS WITHIN THE MUNICIPAL RIGHT-OF-WAY ARE TO BE REINSTATED AT THE APPLICANT'S EXPENSE.

xi) ALL SURFACE DRAINAGE WILL BE SELF CONTAINED, COLLECTED AND DISCHARGED AT A LOCATION TO BE APPROVED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. THE APPLICANT WILL BE REQUIRED TO CONTACT ALL UTILITY COMPANIES TO OBTAIN ALL REQUIRED LOCATES PRIOR TO THE INSTALLATION OF HOARDING WITHIN THE MUNICIPAL RIGHT OF WAY.

xii) WORKS IN THE MUNICIPAL RIGHT OF WAY BEING PERFORMED BY THE CITY'S CONTRACTOR WILL REQUIRE 4 TO 6 WEEKS NOTICE PRIOR TO COMMENCEMENT OF CONSTRUCTION AFTER ALL DRAWINGS HAVE BEEN APPROVED AND SECURITIES HAVE BEEN RECEIVED.

FIRE PREVENTION
FIRE DEPARTMENT NOTE:

i) THE FIRE ACCESS ROUTE SHALL BE DESIGNED TO SUPPORT THE LOADS IMPOSED BY FIREFIGHTING EQUIPMENT. THE FIRE ACCESS ROUTE WILL HAVE CHANGE IN GRADIENT OF NOT MORE THAN 1 IN 12.5 OVER A MINIMUM DISTANCE OF 15m.

ii) FIRE ROUTE SHALL BE DESIGNATED AS PER CITY'S FIRE ACCESS ROUTE BY-LAW.

iii) FIRE DEPARTMENT ACCESS ROUTE SHALL BE CONSTRUCTED OF HARD SURFACE MATERIAL SUCH AS ASPHALT, CONCRETE OR LOCKSTONE.

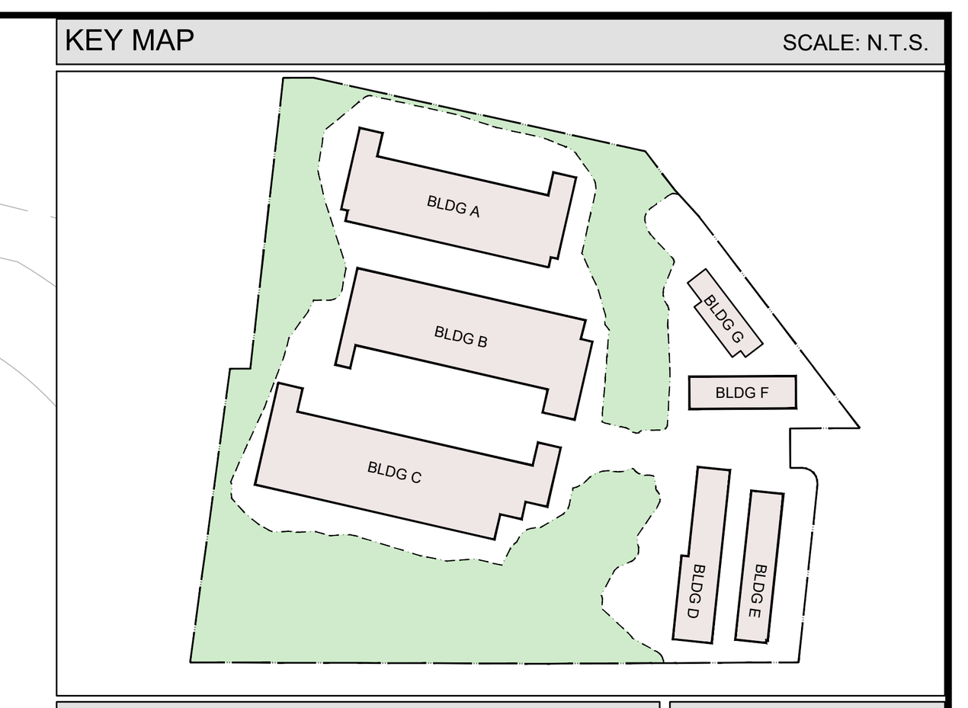
iv) FIRE DEPARTMENT ACCESS ROUTES SHALL HAVE AN OVERHEAD CLEARANCE OF NOT LESS THAN 5 m.

ENVIRONMENTAL ENGINEERING:

THE GEOTECHNICAL AND ENVIRONMENTAL SUITABILITY OF THE FILL WILL BE ASSESSED BY THE GEOTECHNICAL ENGINEER.

KEY MAP

SCALE: N.T.S.



LEGAL DESCRIPTION

PLAN OF SURVEY OF
PART OF LOTS 11 AND 12
CONCESSION 1
(GEOGRAPHIC TOWNSHIP OF TORONTO, COUNTY OF PEEL)

CITY OF MISSISSAUGA
REGIONAL MUNICIPALITY OF PEEL

PROJECT NORTH

TRUE NORTH

SITE STATISTICS

SITE AREA	175,684.18 m2 or 43.41 acres or 17.57 ha		
SITE AREA W/ CUL DE SAC	174,737.71 m2 or 43.18 acres or 17.48 ha		
DEVELOPABLE SITE AREA	116,785.42 m2 or 28.86 acres or 11.68 ha		
ZONING	D ZONE (DEVELOPMENT)		
FOOTPRINT AREA	45,616.75 m2	or	490,015 sf
SITE COVERAGE	45,616.75 m2	or	39.06 %
LANDSCAPED AREA	21,085.18 m2	or	18.05 %
PAVED AREA	50,083.49 m2	or	42.89 %

		REQUIRED	PROVIDED
SETBACKS	FRONT YARD (DERRYCREST DRIVE)	7.50 m	25.39 m
	REAR YARD (WEST)	7.50 m	31.21 m
	EXTERIOR SIDE YARD (NORTH)	7.50 m	30.08 m
	EXTERIOR SIDE YARD (SOUTH)	7.50 m	15.15 m
LANDS. BUFFER	ALONG G1 ZONE	5.00 m	16.07 m
	ALONG D ZONE	3.00 m	6.08 m
	ALONG U-6 ZONE	0.00 m	6.01 m
	ALONG O2-2 ZONE	3.00 m	6.00 m

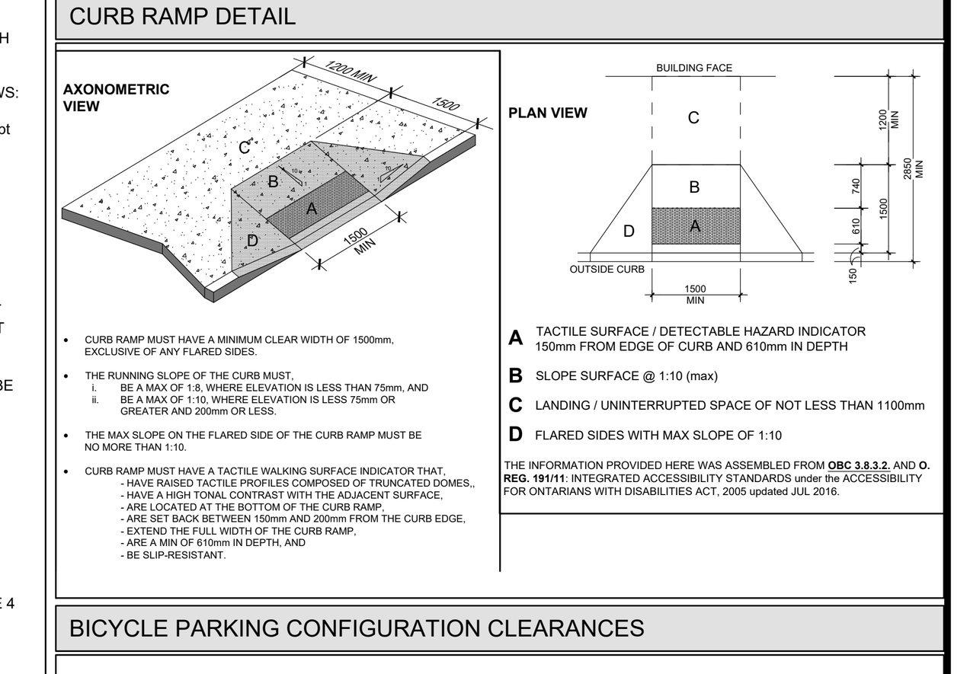
GROSS FLOOR AREA			
BUILDING 'A'	9,889.15 m2	or	106,446 sf
MECH. / ELECTR./ STAIRS/ WR.	108.40 m2	or	1,167 sf
BUILDING 'B'	11,654.07 m2	or	125,443 sf
MECH. / ELECTR./ STAIRS/ WR.	108.40 m2	or	1,167 sf
BUILDING 'C'	13,768.15 m2	or	148,199 sf
MECH. / ELECTR./ STAIRS/ WR.	108.40 m2	or	1,167 sf
BUILDING 'D'	4,423.88 m2	or	47,618 sf
MEZZANINE	721.65 m2	or	7,768 sf
GROUND FLOOR	3,702.74 m2	or	39,856 sf
MECH. / ELECTR./ STAIRS/ WR.	153.00 m2	or	1,647 sf
BUILDING 'E'	3,519.91 m2	or	37,888 sf
MEZZANINE	624.35 m2	or	6,720 sf
GROUND FLOOR	2,898.01 m2	or	31,194 sf
MECH. / ELECTR./ STAIRS/ WR.	138.61 m2	or	1,492 sf
BUILDING 'F'	2,490.89 m2	or	26,812 sf
MEZZANINE	430.33 m2	or	4,632 sf
GROUND FLOOR	2,061.25 m2	or	22,187 sf
MECH. / ELECTR./ STAIRS/ WR.	122.26 m2	or	1,316 sf
BUILDING 'G'	2,033.90 m2	or	21,893 sf
MEZZANINE	386.87 m2	or	4,164 sf
GROUND FLOOR	1,646.96 m2	or	17,728 sf
MECH. / ELECTR./ STAIRS/ WR.	104.56 m2	or	1,125 sf
TOTAL GFA	47,779.95 m2	or	514,299 sf

GFA NON-RESIDENTIAL BREAKDOWN

BUILDING	TOTAL GFA	M/E ROOM GFA	GFA NON-RES
A	9,889.15 m2	108.40 m2	9,780.75 m2
B	11,654.07 m2	108.40 m2	11,545.67 m2
C	13,768.15 m2	108.40 m2	13,659.75 m2
D	4,423.88 m2	153.00 m2	4,270.88 m2
E	3,519.91 m2	138.61 m2	3,381.30 m2
F	2,490.89 m2	122.26 m2	2,368.63 m2
G	2,033.90 m2	104.56 m2	1,929.34 m2
TOTAL	47,779.95 m2	843.63 m2	46,936.32 m2

		REQUIRED	PROVIDED
PARKING	1.1 spaces / 100 m2 of MUITI-UNIT WAREHOUSE GFA		
	BUILDING 'A'	108 spaces	141 spaces
	BUILDING 'B'	127 spaces	130 spaces
	BUILDING 'C'	151 spaces	182 spaces
	BUILDING 'D'	47 spaces	106 spaces
	BUILDING 'E'	38 spaces	74 spaces
	BUILDING 'F'	26 spaces	26 spaces
	BUILDING 'G'	22 spaces	55 spaces
	TOTAL PARKING	516 spaces	714 spaces
	ACCESSIBLE PARKING Required Regular Parking Spaces (201-1000, 2.0 + 2% of total)	23 spaces	28 spaces
BICYCLES	LONG TERM SPACES 0.10/ 100 m2 GFA (EXACT LOCATION TBD DURING TENANT FIT-OUT) BUILDING A= 10 spaces BUILDING B= 12 spaces BUILDING C= 14 spaces BUILDING D= 4 spaces BUILDING E= 3 spaces BUILDING F= 2 spaces BUILDING G= 2 spaces	47 spaces	TBD during tenant fit-out
	SHORT TERM SPACES 2 spaces/ ring	14 spaces	56 spaces/ 28 rings
LOADING	Greater than 250 m2 but less than or equal to 2,350 m2	1 Spaces	
	Greater than 2,350 m2 but less than or equal to 7,500 m2	6 Spaces	
	Greater than 7,500 m2 but less than or equal to 14,000 m2	9 Spaces	
	TOTAL LOADING	16 spaces	95 spaces
BUILDING HEIGHT		N/A	XX.XX m
FLOOR SPACE INDEX (FSI)		1.0	0.38 m

CURB RAMP DETAIL

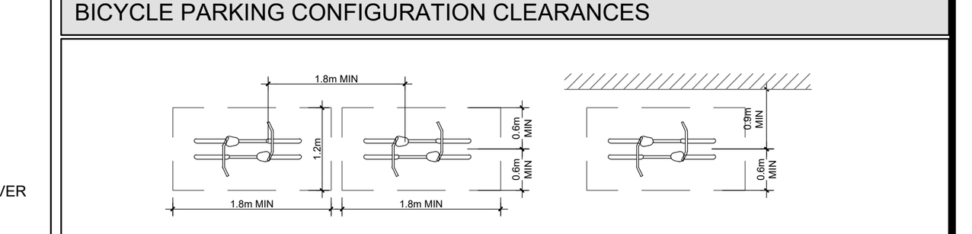


- CURB RAMP MUST HAVE A MINIMUM CLEAR WIDTH OF 1500mm, EXCLUSIVE OF ANY FLARED SIDES.
- THE RUNNING SLOPE OF THE CURB RAMP MUST,
  i. BE A MAX OF 1:8, WHERE ELEVATION IS LESS THAN 75mm, AND
  ii. BE A MAX OF 1:10, WHERE ELEVATION IS LESS 75mm OR GREATER AND 200mm OR LESS.
- THE MAX SLOPE ON THE FLARED SIDE OF THE CURB RAMP MUST BE NO MORE THAN 1:10.
- CURB RAMP MUST HAVE A TACTILE WALKING SURFACE INDICATOR THAT,
  - HAVE RAISED TACTILE PROFILES COMPOSED OF TRUNCATED DOMES.,
  - HAVE A HIGH TONAL CONTRAST WITH THE ADJACENT SURFACE,
  - ARE LOCATED AT THE BOTTOM OF THE CURB RAMP,
  - ARE SET BACK BETWEEN 150mm AND 200mm FROM THE CURB EDGE,
  - EXTEND THE FULL WIDTH OF THE CURB RAMP,
  - ARE A MIN OF 610mm IN DEPTH, AND
  - BE SLIP-RESISTANT.

A TACTILE SURFACE / DETECTABLE HAZARD INDICATOR 150mm FROM EDGE OF CURB AND 610mm IN DEPTH
B SLOPE SURFACE @ 1:10 (max)
C LANDING / UNINTERRUPTED SPACE OF NOT LESS THAN 1100mm
D FLARED SIDES WITH MAX SLOPE OF 1:10

THE INFORMATION PROVIDED HERE WAS ASSEMBLED FROM OBC 3.8.3.2. AND O. REG. 191/11: INTEGRATED ACCESSIBILITY STANDARDS under the ACCESSIBILITY FOR ONTARIANS WITH DISABILITIES ACT, 2005 updated JUL 2016.

BICYCLE PARKING CONFIGURATION CLEARANCES



OTM BOOK 18 - CYCLING FACILITIES

SITE PLAN NOTES

1. SNOW TO BE REMOVED OFF-SITE BY PRIVATE CONTRACTOR
2. ALL ROOF TOP MECHANICAL UNITS SHALL BE ADEQUATELY SCREENED FROM PUBLIC VIEWS BY THE APPLICANT. THE DESIGN, PLACEMENT AND SCREENING OF THE UNITS SHOULD COMPLEMENT THE BUILDING ARCHITECTURE WITH RESPECT TO FORM, MATERIALS AND COLOUR.

No.	ISSUED	DATE

No.	REVISION	DATE

BALDASSARRA Architects Inc.

30 Great Gulf Drive, Unit 20 | Concord ON | L4K 0K7
T. 905.660.0722 | www.baldassarra.ca

OWNERS INFORMATION:

HWY 10 & HWY 407

MISSISSAUGA, ON

SITE PLAN INDUSTRIAL DEVELOPMENT

DATE:	DRAWN BY:	CHECKED:	SCALE:
DEC. 2024	HP	JP	1:1000
PROJECT No. P-24058		DRAWING No. A-1.0	

Appendix D – Agency Consultation

March 6, 2012

Aurora District Ministry of Natural Resources
50 Bloomington Road
Aurora ON L4G 0L8

Attention: Ms. Melinda Thompson

Reference: Information and Mapping Request
Proposed Subdivision for Employment Use
7140 and 7230 Hurontario Street
Part of Lots 11 and 12, Concession 1 WHS
City of Mississauga

PROJECT DESCRIPTION

DeZen Construction Ltd. proposes to develop land adjacent to Fletcher's Creek in Mississauga, Ontario. In support of this residential development project, PARISH Geomorphic, Ltd. performed a Meander Belt Width and Hazard Assessment for a segment of Fletcher's Creek and a small tributary that flows through the property. The purpose of this assessment was to establish the hazard limits for the subject property.

Savanta Inc. (Savanta) has recently been retained to provide ecological advice to the DeZen consulting team in assessing potential impacts to the local terrestrial and aquatic habitats, and to determine a final development limit that considers all aspects of the natural environment (eg., meanderbelt, stable slope, and ecological constraints). We understand that on February 28, 2012 you were copied on a letter from Michael Crechiolo, a planner with the CVC outlining that MNR consultation is required. As a first step in the consultation process, we are submitting the following information and mapping request.

INFORMATION AND MAPPING REQUEST

Savanta would like to request information/mapping data (where available) for:

1) watercourse classification as it relates to Redside Dace regulated habitat, specifically for the small tributary that extends north from Fletchers Creek (identified in the attached figure), and Fletchers Creek itself;
2) other endangered and threatened species (provincial and/or federal) that may occur on the Subject Lands; and,
3) any natural heritage features recorded for this area.

The attached figure shows the general location and limits of the Subject Lands.

8800 Dufferin Street Suite 200 Vaughan, ON, L4K 0C5
Voice 905-321-1969 Fax 905-738-0065

Kind Regards,

Melanie Adamson, B.SC (Env)
Environmental Scientist
melanieadamson@savanta.com

C.C. Rick Hubbard, Savanta Inc.
Steve Lawson, Lethbridge & Lawson Inc.
Paul Brown, Urbantech

Attachment: Figure illustrating the location of the Subject Lands


General location of Subject Lands
What is designation of this Tributary to Fletcher's Creek?
What is designation of Fletcher's Creek in this area?
Cherrytree Dr
Express Toll Route (Toll road)
Meadowlark Dr
407
10
5
Statesman Dr
Export Blvd
Topflight Dr
Hurontario St
Capital Ct
Admiral Blvd
Wigley Ct
St Barbara Blvd
Meadowridge Ct
McLaughlin Rd
Derry Rd W
Maritz Dr
Longside Dr
Image © 2012 DigitalGlobe
© 2012 Google
Google earth
Imagery Date: 8/31/2009
2003
17 T 603734.98 m E 4833542.99 m N elev 197 m
Eye alt 2.15 km

Southern Region
Aurora District Office
50 Bloomington Road West
Aurora, ON L4G 0L8

Ontario

Ministry of Natural Resources | **Ministere des Richesses Naturelles**

March 23, 2012

Melanie Adamson
Savanta Consulting Inc.
8800 Dufferin St, Suite 200
Vaughan ON, L4K 0C5
Phone: (905) 321-1965
melanieadamson@savanta.ca

Re: Proposed Subdivision for Employment Use- 7140 and 7230 Hurontario Street, Part of Lots 11 and 12, Concession 1 WHS, City of Mississauga

Dear Ms. Adamson,

In your email dated March 6th, 2012 you requested information on natural heritage features and element occurrences occurring on or adjacent to the above mentioned location.

There are Species at Risk recorded from your study area. We have records of Redside Dace. Please note that Fletcher's Creek is designated as Redside Dace habitat. The unnamed tributary of Fletcher's Creek located in your study area may be designated as Redside Dace habitat. This species receives protection under the *Endangered Species Act 2007* and thus, a permit may be required if the work you are proposing could cause harm to this species or its habitat. Please provide additional information on your proposal to our office, and we will assess it to determine whether a permit under the ESA 2007 is required for the works to proceed.

There are no natural heritage features recorded for your area.

This species at risk information is highly sensitive and is not intended for any person or project unrelated to this undertaking. Please do not include any specific information in reports that will be available for public record. As you complete your fieldwork in these areas, please report all information related to any species at risk to the NHIC and to our office. This will assist with updating our database.

If you have any questions or comments, please do not hesitate to contact me at 905-713-7425.

Sincerely,

Melinda Thompson

Melinda Thompson
Species at Risk Biologist
Ontario Ministry of Natural Resources, Aurora District

Ministry ofNatural Resources

Information Gathering Form for activities that may affect species or habitat protected under the *Endangered Species Act*

For Internal Use Only

Tracking Number	Lead District

Personal information in this form is collected under the authority of Section 53 of the *Endangered Species Act, 2007*. The information provided will be used for the purposes of administering the Act and its Regulations. Questions about the use of this information should be directed to the species at risk representative at the local MNR office (http://www.mnr.gov.on.ca/en/ContactUs/2ColumnSubPage/STEL02_179002.html) where the proposed activity will take place.

Fields marked with an asterisk (*) are mandatory.

1. Contact Information

Proponent Contact Information ☐ check this box if the proponent is an individual

Legal Last Name*	First Name*	Legal Middle Initial(s)
DeZen		

Full Mailing Address

Unit No.	Street No.*	Street Name*	P.O. Box
	23	Windsor Street	

Rural Route	Postal Station	Lot No.	Concession

City/Town*	Province*	Postal Code*
Toronto	ON	M8Y 2V9

Telephone No.*	Fax No.	Email (if available)
416 255-0890		

Primary Contact for Proponent

Is the proponent the primary contact for this form?*

☐ Yes ☑ No

Last Name*	First Name*	Middle Initial(s)
Hubbard	Rick	

Position/Title

Legal Name of Organization/Company

Savanta Inc.

Full Business Mailing Address

Unit No.	Street No.*	Street Name*	P.O. Box
200	8800	Dufferin Street	

Rural Route	Postal Station	Lot No.	Concession

City/Town*	Province*	Postal Code*
Vaughan	ON	L4K 0C5

Business Telephone No.*	Business Fax No.	Business Email (if available)
647 280-5200 ext.		rickhubbard@savanta.ca

Authorization*

☑ I, Sandro DeZen (proponent's name), authorize

Rick Hubbard (primary contact's name) to disclose information required by the Ministry of Natural Resources for the purpose of administering the *Endangered Species Act, 2007* and its Regulations and in accordance with the *Freedom of Information and Protection of Privacy Act, 1990*.

Save Go back to the form

Species at Risk Field Surveys

Has MNR determined whether species at risk surveys required?* If proponent has not already contacted the local MNR office regarding species surveys, please do so before proceeding with the form.

☐ Yes, surveys required ☑ No, surveys not required

2. Activity Overview

Primary Activity Sector (please check one)*

- ☐ aggregate
- ☐ agriculture
- ☑ construction or development
- ☐ mining
- ☐ forestry
- ☐ non-renewable energy (e.g., oil and gas, nuclear)
- ☐ other (specify)
- ☐ renewable energy (hydroelectric)
- ☐ renewable energy (wind/solar/biofuel)
- ☐ transportation
- ☐ existing infrastructure (e.g., utility corridors, dams, drains)
- ☐ research
- ☐ tourism, culture, recreation

Save | Go back to the form

3. Activity Details – Where, When, and How

Activity Location(s): *1*

Provide detailed descriptions of the location(s) of the proposed activity according to each of the items below. In cases where the activity will occur in multiple locations, the following should be described for each location.

A. Location*

☑ Geographic coordinates of the activity location

☐ Legal Description of activity location

Geographic coordinates of the activity location

UTM Map Datum	Zone	Coordinates – Easting	Coordinates – Northing
WGS84	17T	603516	4833478

Latitude	Longitude

Legal Description of activity location

Civic Address

Unit No.	Street No.	Street Name	P.O. Box	Rural Route

City/Town	Province	Postal Code

Lot(s) and Concession(s)	Assessment Roll Number(s)	Geographic Township(s)

Local Municipality(ies)	Regional Municipality, County or Territorial District(s)

B. Land Ownership

Indicate the land ownership for the proposed activity (please check all that apply)

☐ Federal crown land/water or protected area

☑ Municipal land/water

☐ Provincial crown land/water

☐ Other (identify)

☐ First Nation Reserve

☑ Private property

☐ Provincial crown land – provincial park/conservation reserve

C. MNR district(s) where the activity will take place

Aurora

D. Identify the **ecological communities** (e.g., agricultural (hayfield, crop, pasture), forest type and age (deciduous, coniferous, mixed wood; early/late successional forest), tallgrass prairie, etc.) at and surrounding the activity location.
If this information is available in an existing report, proponents can copy and paste the relevant information from the report(s) into the space provided below. Please reference the title, author and date of the report(s) from which the copy and paste sections originate.

Ecological Communities

Agricultural (soy bean) crops, mixed woodland along valley to the west, all other adjacent lands are developed.

Activity Methodology
(How each stage of the activity will be carried out)

In Table 1, please provide a detailed **description** of the various components of the proposed activity over the activity's full lifespan. In the context of this form, "activity" is defined broadly to include all components associated with all stages of the activity including, but not limited to, site access and investigation, site preparation and construction, operation and maintenance, closure, decommissioning and completion, and rehabilitation and restoration stages. **The level of detail provided should reflect the size and complexity of the activity.**
If this information is available in an existing report, proponents can copy and paste the relevant information from the report(s) into Table 1. Please reference the title, author and date of the report(s) from which the copy and paste sections originate.

Save | Go back to the form

Table 1. Detailed description of the various components/stages of the proposed activity.

Component / Stage	Targeted Dates		Detailed Description of Methodology
	Start Date (yyyy-mm-dd)	Completion Date (yyyy-mm-dd)	
site investigations for EIS	2012-03-01	2012-07-01	- three amphibian surveys; - two breeding bird surveys; - two headwater drainage assessments during the mid-spring and early summer; - assessment of fish habitat; and, - two-season botanical survey and Ecological Land Classification (including delineation of any wetland communities).
site investigations for EIS	2012-03-01	2012-07-01	- three amphibian surveys; - two breeding bird surveys; - two headwater drainage assessments during the mid-spring and early summer; - assessment of fish habitat; and, - two-season botanical survey and Ecological Land Classification (including delineation of any wetland communities).
site investigations for EIS	2012-03-01	2012-07-01	- three amphibian surveys; - two breeding bird surveys; - two headwater drainage assessments during the mid-spring and early summer; - assessment of fish habitat; and, - two-season botanical survey and Ecological Land Classification (including delineation of any wetland communities).

Are there any site-related or technical limitations that restrict how this activity may be carried out?

All constraints to development have been identified and illustrated on Figure 4.

Save | Go back to the form

4. Indication of Species at Risk and Habitat Found at or near the Activity Location

Records Review

Proponents are requested to outline what protected species at risk or habitats may be present at or near the proposed activity location. An activity is considered "near" a species at risk or its habitat if the activity is physically located within a reasonable distance of the species or habitat **and** there is a reasonable likelihood that the adverse effects of the activity will affect the species or extend into its habitat. In outlining this, proponents should consider the area that is reasonably likely to be affected by any of the stages of the proposed activity. This area may extend beyond the physical (direct) footprint of the activity itself.

While the local MNR office may be able to provide advice for completing this information, proponents are expected to conduct a records review. Some links to information sources can be found on page 1 of this form under the information sources tab. The results of the records review should be recorded in Table 3. The results of the records review should be recorded in Table 3.

Species at Risk Surveys

Where there is insufficient species at risk data or information, proponents may also be required to conduct species at risk surveys at or near the proposed activity location. The methodology and results from these species surveys can be recorded in Tables 2 and 3.
An ESA authorization (e.g., a permit under clause 17(2)(b) of the Act) may be required to conduct species at risk surveys. Determining the presence of species at risk and their habitats often requires a higher degree of knowledge and expertise that may not be a standard requirement for routine environmental assessments. Species at risk surveys must be undertaken by a qualified professional who is familiar with the species/habitat anticipated to be at or near the proposed activity location. Survey methods must be specific to each species at risk (or groups of similar species) that is reasonably expected to be found at or near the proposed activity location. **It is strongly recommended that proponents contact the local MNR office prior to conducting any surveys to confirm whether surveys are required,** that they are conducted using appropriate methods and protocols, and that any required ESA or other MNR authorizations are obtained. *Note: costs associated with conducting surveys are the responsibility of the proponent.*

In Table 2, please describe any surveys that have been (or will be) undertaken to assess what protected species at risk and habitats may be present at or near the activity location.
If this information is available in an existing report, proponents can copy and paste the relevant information from the report(s) into Table 2. Please reference the title, author and date of the report(s) from which the copy and paste sections originate.

Save | Go back to the form

4. Indication of Species at Risk and Habitat Found at or near the Activity Location

Table 2. Overview of species at risk surveys to outline what species at risk and habitats may be present at or near the activity location

☑ Check this box if no species at risk surveys have been done or are planned

Save | Go back to the form

In Table 3, please record:

- all protected species at risk occurrences and habitat observations made at or near the proposed activity location;
- the SARO list status for each species;
- the rationale which indicates that the species or habitat may be present at or near the proposed activity location. This rationale should be based on information and data collected during the records review and through field surveys (if applicable).

If this information is available in an existing report, proponents can copy and paste the relevant information from the report(s) into Table 3.Please reference the title, author and date of the report(s) from which the copy and paste sections originate.
Please submit all new observation data for any endangered or threatened species to the Natural Heritage Information Centre (NHIC) using the Rare Species reporting form available at: http://nhic.mnr.gov.on.ca/species/species_report.cfm.
Any new observation data for other provincially tracked species (e.g., special concern species) that may have been observed at or near the proposed activity location should also be submitted to the NHIC.

Save Go back to the form

Table 3: Summary of species at risk and their habitats found at or near the proposed activity location. Identify information sources as required. Note: It is recommended that representative photos of the habitat areas and features found at or near the proposed location of the activity be submitted with this form (opportunity to add attachments is in the next section). Be sure to include the time, date and location where each photo was taken.

	Species 1	***Species 2***
Species name*	Redside Dace	Barn Swallow
Species status in Ontario* (provided in the SARO List)	☐ Threatened ☑ Endangered	☑ Threatened ☐ Endangered
Presence/absence of species/habitat at or near the proposed activity location*	☐ individuals of the species **absent** ☑ individuals of the species **present**	☑ individuals of the species **absent** ☐ individuals of the species **present**
Number of individuals observed and how (e.g., visual sighting, auditory observation, etc.) Also indicate life stage of the individuals (e.g., adult, juvenile, fruiting, etc.) where possible, dates the observations were made, the geographic coordinates of the observations, etc.	Data not provided by MNR.	Barn Swallows were observed flying above all habitats on the Subject Lands during breeding bird surveys conducted on June 16 and July 5, 2012. No juvenile birds were observed and all activity was feeding behaviour. No suitable structures for nests are present on or directly adjacent to the Subject Lands, suggesting that these lands do not support breeding, but simply provide foraging habitat. Given that there is a large area of suitable foraging habitat nearby in the Fletchers Creek valley, it is not
Detailed ecological description of the landscape. Include the Ecological Land Classification (ELC), Forest Ecosystem Classification (FEC), or Aquatic Resource Area (ARA) information, slope, aspect, soils, substrate, dominant plant species, associated plant species, etc.. If you require assistance in completing the required information, please contact the local MNR office.	Fletcher's Creek designated as Redside Dace habitat by MNR.	CUW, CUT1-7, CUM1-1, MAS2-1 and agriculture
Description of habitat features on site. Note any key habitat features (e.g., nests, hibernacula, calving areas, dens, roost trees, etc) observed at or near the activity location including the geographic coordinates of the observations. If you require assistance in completing the requested information, please contact the local MNR office species at risk representative.	Tributary to Fletcher's Creek on Subject Lands is not considered contributing habitat because downstream reach of Fletcher's Creek has a bankfull width greater than 7.5m. Meanderbelt width for Fletcher's Creek has been determined and a 30m buff	Active agricultural lands with a small Tributary and historic agricultural irrigation pond with an area of wetland to the north. This wetland area will be removed and rehabilitation south of pond will mitigate the impacts to this feature (Figure 5).

How and when the species is (or may be) using the habitat to carry out its life processes Indicate if the habitat is being used by the species for reproduction, rearing, hibernation, over-wintering, migration, feeding, resting (including predator avoidance), dispersal, daily movement, or any other life process (please specify). If it is not clear which life process the habitat is supporting, please indicate "unknown". If you require assistance in completing the requested information, please contact the local MNR office species at risk representative.	"Cold water" construction timing window is between July 1 and September 15.	Habitat is used for foraging while the species is in it's northern range
Other available information that suggests the effects of the activity, not just the physical (direct) footprint, may overlap with species at risk occurrences and/or habitat (e.g., species expert's opinion, etc.).		
	Species 1	***Species 2***
Species name*	Redside Dace	Barn Swallow
Species status in Ontario* (provided in the SARO List)	☐ Threatened ☑ Endangered	☑ Threatened ☐ Endangered
Presence/absence of species/habitat at or near the proposed activity location*	☐ individuals of the species **absent** ☑ individuals of the species **present**	☑ individuals of the species **absent** ☐ individuals of the species **present**
Number of individuals observed and how (e.g., visual sighting, auditory observation, etc.) Also indicate life stage of the individuals (e.g., adult, juvenile, fruiting, etc.) where possible, dates the observations were made, the geographic coordinates of the observations, etc.	Data not provided by MNR.	Barn Swallows were observed flying above all habitats on the Subject Lands during breeding bird surveys conducted on June 16 and July 5, 2012. No juvenile birds were observed and all activity was feeding behaviour. No suitable structures for nests are present on or directly adjacent to the Subject Lands, suggesting that these lands do not support breeding, but simply provide foraging habitat. Given that there is a large area of suitable foraging habitat nearby in the Fletchers Creek valley, it is not
Detailed ecological description of the landscape. Include the Ecological Land Classification (ELC), Forest Ecosystem Classification (FEC), or Aquatic Resource Area (ARA) information, slope, aspect, soils, substrate, dominant plant species, associated plant species, etc.. If you require assistance in completing the required information, please contact the local MNR office.	Fletcher's Creek designated as Redside Dace habitat by MNR.	CUW, CUT1-7, CUM1-1, MAS2-1 and agriculture

Description of habitat features on site. Note any key habitat features (e.g., nests, hibernacula, calving areas, dens, roost trees, etc) observed at or near the activity location including the geographic coordinates of the observations. If you require assistance in completing the requested information, please contact the local MNR office species at risk representative.	Tributary to Fletcher's Creek on Subject Lands is not considered contributing habitat because downstream reach of Fletcher's Creek has a bankfull width greater than 7.5m. Meanderbelt width for Fletcher's Creek has been determined and a 30m buff	Active agricultural lands with a small Tributary and historic agricultural irrigation pond with an area of wetland to the north. This wetland area will be removed and rehabilitation south of pond will mitigate the impacts to this feature (Figure 5).
How and when the species is (or may be) using the habitat to carry out its life processes Indicate if the habitat is being used by the species for reproduction, rearing, hibernation, over-wintering, migration, feeding, resting (including predator avoidance), dispersal, daily movement, or any other life process (please specify). If it is not clear which life process the habitat is supporting, please indicate "unknown". If you require assistance in completing the requested information, please contact the local MNR office species at risk representative.	"Cold water" construction timing window is between July 1 and September 15.	Habitat is used for foraging while the species is in it's northern range
Other available information that suggests the effects of the activity, not just the physical (direct) footprint, may overlap with species at risk occurrences and/or habitat (e.g., species expert's opinion, etc.).		

Save Go back to the form

5. Activity and Species at Risk Maps and Photos

Provide one or more maps of appropriate scale that clearly illustrate the following items. In cases where the activity will occur in multiple locations, the following should be illustrated for each location.

- **Ecological Land Classifications (ELC), Forest Ecosystem Classifications (FEC), or Aquatic Resource Areas (ARA) for the location and surrounding area (if available);**
- **Topographic information;**
- **Any designated natural features;**
- **Name(s) of any waterbodies occurring at or near the activity location (if applicable);**
- **Current land uses (if available);**
- Location and boundaries (i.e. footprint) of the proposed activity **in relation to the surrounding landscape**;
- Location of each species at risk occurrence and habitat found at or near the proposed activity location. Also, include the location and description of any habitat features (e.g., nest, hibernaculum, calving area, vernal pools, spawning beds) found at or near the proposed activity location; and
- **Data sources, scale, north arrow and legend for the maps.**

Use of aerial photography and satellite imagery is strongly encouraged. Please indicate the date aerial photos or satellite images were taken as well as the date maps were created.
Please list and attach relevant maps, shapefiles, photos and satellite images that are available.
Do not include personal information on maps, aerial photos and satellite images.

List of Attached Documents

Note: The total space for attachments is limited to 25MB. Links to existing FTP sites containing photos and other materials for the proposed activity can be indicated in the list of attached documents space.

Figure 5 Rehabilitation Strategy.pdf

Save | Go back to the form

6. Species at Risk and Habitat that may be Affected by the Activity

In Table 4, please provide your interpretation of:

- the protected species at risk and habitats that are likely to be affected by the proposed activity; and
- how and to what extent these protected species and habitats may be affected. Where the proponent requires assistance in completing the information in this part of the form, contact th local MNR office species at risk representative.

This information and other information submitted in this form will be considered by MNR when assessing and determining whether a proposed activity is likely to contravene subsections 9(1) or 10(1) of the ESA and thus whether it is advisable for the proponent to apply for and obtain an overall benefit permit under clause 17(2)(c) of the ESA prior to proceeding with the proposed activity to avoid contravening the Act.

Species affected by activity	How and to what extent each species or habitat may be *positively* affected	How and to what extent each species or habitat may be *adversely* affected

Save | Go back to the form

7. Submission Information

Date this form was submitted to the local MNR office (yyyy-mm-dd)*

2012-05-04

Local MNR office this form is submitted to*

Aurora

Proposal Title*

Proposed Subdivision for Industrial Use: DeZen Lands, Mississauga, Ontario

Authorization*

☑ I, Sandro DeZen (insert name, hereafter "proponent"), confirm that the information provided in this form is accurate and complete to the best of my knowledge. I understand that a summary of the information provided in this form, excluding any personal information or details that could be used to locate or harm an endangered species, may be posted on the Ministry of Natural Resources Species at Risk website and the Environmental Registry. I also understand that this information will be used for the purpose of administering the *Endangered Species Act, 2007* and its Regulations in accordance with the *Freedom of Information and Protection of Privacy Act, 1990.*

Save | Print summary pages | Go back to the form | Email Form

Issuance of Letter of Advice AU-LOA-022-13

Ministry of Natural Resources | **Ministere des Richesses Naturelles**

Southern Region
Aurora District Office
50 Bloomington Road West
Aurora, ON L4G OL8

April 3, 2013

Ms. Melanie Adamson
Savanta Inc.
200 8800 Dufferin St.
Vaughan, ON L4K 0C5
Tel: 905-321-1969
melanieadamson@savanta.ca

RE: DeZen Industrial Lands, Issuance of Letter of Advice #AU-LOA-022-13;

Dear Ms. Adamson,

The Ministry of Natural Resources has reviewed the information that you provided in support of the above noted project to assess the potential impacts of the proposal on Redside Dace which is an endangered species projected under the *Endangered Species Act, 2007 (ESA 2007)*.

From the information provided, it is our understanding that the proposed project falls within the following parameters:

- Construction of Industrial buildings adjacent to regulated habitat for Redside Dace.
- No work within the regulated habitat of Redside Dace will occur.
- Appropriate erosion and sediment control measures will be implemented and maintained during construction

Based on a review of the above information, Ministry staff have determined that the activities associated with the project, as currently proposed, **will not adversely effect** Redside Dace **provided the following conditions are implemented:**

1. Erosion and sediment controls will be installed prior to beginning work and maintained in working order at all times until all disturbed areas have been appropriately stabilized to ensure that no deleterious substances enter the watercourse at any time;
2. Erosion and sediment controls will include a double row of sediment silt fencing consisting of a non-woven geotextile with straw bales staked in between;
3. All work areas will be effectively isolated from the watercourse with appropriate erosion and sediment controls in order to ensure that deleterious substances do not enter the watercourse at any time;
4. All erosion and sediment control measures will be inspected daily including after every rainfall, cleaned, maintained and/or adjusted accordingly to ensure sediment does not enter the watercourse at any time;
5. No machinery or equipment will be maintained or refueled within 30 metres of the watercourse;

Ministry of Natural Resources | **Ministere des Richesses Naturelles**

Southern Region
Aurora District Office
50 Bloomington Road West
Aurora, ON L4G OL8

6. Any equipment, stockpiled material or construction material will be stored a minimum of 30 metres from the watercourse and in a manner that prevents sediment or deleterious substances from entering the watercourse;
7. All construction equipment used for the purpose of carrying out the work will be operated in a way that prevents deleterious substances from entering the watercourse;
8. No equipment or machinery will cross through the watercourse, unless otherwise authorized by MNR;
9. No sediment-laden water will be discharged to the watercourse at any time; and
10. All disturbed areas will be appropriately and effectively stabilized and/or restored immediately following completion of the works.

If these conditions are implemented, the activity would not be prohibited under Section 9 (species protection) or Section 10 (habitat protection)] of the *Endangered Species Act, 2007*.

Please be advised that it is your responsibility to comply with all other relevant provincial or federal legislation, municipal by-laws, other MNR approvals or required approvals from other agencies.

Should any of the project parameters change, please notify the MNR Aurora District office immediately to obtain advice on whether the changes may require authorization under the *Endangered Species Act 2007*. Failure to carry out these projects as described above could result in contravention of the *Endangered Species Act 2007*.

If you have any concerns or questions please contact Danielle Aulenback at 905-713-7732 or at danielle.aulenabck@ontario.ca.

Sincerely,

Melinda Thompson

Melinda Thompson, Species at Risk Biologist
Aurora District, Ontario Ministry of Natural Resources

CC: Mark Heaton, Biologist, MNR

From: "Aulenback, Danielle (MNR)" <Danielle.Aulenback@ontario.ca>
Date: April 4, 2013 9:39:16 AM EDT
To: Melanie Adamson <melanieadamson@savanta.ca>
Cc: "Heaton, Mark (MNR)" <mark.heaton@ontario.ca>, Rick Hubbard <rickhubbard@savanta.ca>
Subject: **RE: DeZen Industrial Lands Letter of Advice AU-LOA-022013**

Hi Melanie,

With respect to the other species Identified in the IGF; based on the information you provided there is no concern at this time. We will not be providing a letter of advice for these species. Our main concern was with respect to Redside Dace

In the LOA when referring to the "watercourse" I am specifically speaking to Fletcher's creek (the watercourse running along the west and south of the development limits Identified and not the tributary through the property where work will occur.

Hope this provides clarification.

Regards,
Danielle Aulenback
Assistant Species at Risk Biologist
Ministry of Natural Resources
50 Bloomington Rd. West
Aurora, ON, L4G 0L8
Ph: 905-713-7732
E-mail: danielle.aulenback@ontario.ca

From: Melanie Adamson [mailto:melanieadamson@savanta.ca]
Sent: 3-Apr-13 3:57 PM
To: Aulenback, Danielle (MNR)
Cc: Heaton, Mark (MNR); Rick Hubbard
Subject: Re: DeZen Industrial Lands Letter of Advice AU-LOA-022013

Hello Danielle,

Thank you for much for this LOA, we really appreciate your efforts in providing us this information. I want to confirm that when referring to "the watercourse", you mean the Tributary to Fletchers Creek that is on the tablelands portion of the Subject Lands, up to and including the remnant farm pond, shown within the orange "Development Limit" in

the attached figure. The portion of the Tributary and associated wetland north of the remnant farm pond will be removed, with rehabilitation of the wetland occurring adjacent to the existing wetland south of the farm pond. The details of this rehabilitation will be discussed and finalized through communication with the CVC.

I also wanted to confirm that there is no further concern regarding the other species discussed in the IGF, i.e., Barn Swallow and Bobolink. Can we expect to also receive LOAs for these species?

Thank you again Danielle,
Melanie.

Melanie Adamson
melanieadamson@savanta.ca
905-321-1969

On 2013-04-03, at 11:07 AM, Aulenback, Danielle (MNR) wrote:

Hi Melanie.

As discussed, attached is a Letter of Advice (LOA) in regards to the DeZen Industrial Lands. Should you have any further questions please do not hesitate to contact me.

Regards,
Danielle Aulenback
Assistant Species at Risk Biologist
Ministry of Natural Resources
50 Bloomington Rd. West
Aurora, ON, L4G 0L8
Ph: 905-713-7732
E-mail: danielle.aulenback@ontario.ca

<AU-LOA-022-13-DeZenIndustrialLands-3-April-2013.pdf>

From: **Heaton, Mark (MNRF)** mark.heaton@ontario.ca
Subject: RE: DeZen Industrial Lands - Redside Dace question
Date: January 29, 2018 at 9:45 AM
To: Melanie Randolph melanierandolph@savanta.ca

MH

Hello Melanie,

Once you have CVC on board with your plans, send MNRF a letter with the updated details.

Regards,

Mark Heaton
Fish and Wildlife Biologist
OMNRF Aurora District
(905) 713 7406 office
(416) 993 1295 mobile

From: Melanie Randolph [melanierandolph@savanta.ca]
Sent: Friday, January 26, 2018 4:57 PM
To: Heaton, Mark (MNRF)
Cc: Rick Hubbard; Nicholas Mead-Fox; Rob Merwin; Tripodo, Paul
Subject: Re: DeZen Industrial Lands - Redside Dace question

Thanks for this confirmation Mark. Please let me know if you need any further information from me in order to facilitate preparation of the revised LOA.

On Jan 26, 2018, at 4:56 PM, Heaton, Mark (MNRF) <mark.heaton@ontario.ca<mailto:mark.heaton@ontario.ca>> wrote:

Yes

Mark Heaton
Fish and Wildlife Biologist
OMNRF Aurora District
(905) 713 7406 office
(416) 993 1295 mobile

From: Melanie Randolph [melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>]
Sent: Friday, January 26, 2018 4:44 PM
To: Heaton, Mark (MNRF)
Cc: Rick Hubbard; Nicholas Mead-Fox; Rob Merwin; Tripodo, Paul
Subject: Re: DeZen Industrial Lands - Redside Dace question

Thanks for this update Mark.

I just wanted to remind you that an LOA has already been prepared for this site, but that was before the external drainage, and storm drainage from Phase 2 were being outlet into the Tributary to Fletchers Creek, instead of the SWM pond further downstream (i.e., Pond 4402B). Will a new LOA be required given these changes to the original SWM plan?

The previous LOA is attached for your convenience.

Have a great weekend!
Melanie.

Melanie Randolph
Savanta Inc.
Cell: 905-321-1969
Toll Free: 1-800-810-3281 Ext 1080
melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca><mailto:melanierandolph@savanta.ca>
www.savanta.ca<http://www.savanta.ca/>

On Jan 26, 2018, at 12:12 PM, Heaton, Mark (MNRF) <mark.heaton@ontario.ca<mailto:mark.heaton@ontario.ca>
<mailto:mark.heaton@ontario.ca>> wrote:

Hello Melanie

Discussion went well. Once you have agreement with CVC on the stormwater management, check back in with MNRF. Letter of Advice would be based on SWM and ESC measures.

Regards

Mark Heaton
OMNRF Aurora

From: Melanie Randolph [mailto:melanierandolph@savanta.ca]
Sent: January 26, 2018 9:43 AM
To: Heaton, Mark (MNRF)
Cc: Rick Hubbard; Nicholas Mead-Fox; Rob Merwin; Tripodo, Paul
Subject: Re: DeZen Industrial Lands - Redside Dace question

Hello Mark,

I was just wondering how the discussion with CVC went on Monday regarding this file.

Do you feel comfortable with us moving forwards working with the CVC to ensure that the water balance to the existing feature is maintained as closely as possible to existing conditions, or would you still like to be involved in review of this file?

Thank you Mark,
Melanie.

On Jan 19, 2018, at 12:54 PM, Heaton, Mark (MNRF) <mark.heaton@ontario.ca<mailto:mark.heaton@ontario.ca> <mailto:mark.heaton@ontario.ca>> wrote:

Hello Melanie

Thank you. Also – the pond permanent pool is 3m.

Will be discussing this project with CVC on Monday.

Regards

Mark Heaton
OMNRF Aurora

From: Melanie Randolph [mailto:melanierandolph@savanta.ca]
Sent: January 18, 2018 3:51 PM
To: Heaton, Mark (MNRF)
Cc: Rick Hubbard; Nicholas Mead-Fox; Rob Merwin
Subject: Re: DeZen Industrial Lands - Redside Dace question

Hello Mark,

Please find attached a revised version of the post-development storm drainage plan that includes the 30 m setback from the meander belt of Fletchers Creek. Also attached is the Operation and Maintenance Manual for Pond 4402B (the SWM pond downstream of our site that will receive inputs from Phase 1). As indicated in the highlighted portion on page 5, it does appear that the pond is bottom draw.

Please let us know if you would like any further information about this site.

Kind regards,
Melanie.

Melanie Randolph
Savanta Inc.
Cell: 905-321-1969
Toll Free: 1-800-810-3281 Ext 1080
melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca><mailto:melanierandolph@savanta.ca>
www.savanta.ca<http://www.savanta.ca/><http://www.savanta.ca/>

On Jan 12, 2018, at 3:34 PM, Heaton, Mark (MNRF) <mark.heaton@ontario.ca<mailto:mark.heaton@ontario.ca> <mailto:mark.heaton@ontario.ca>> wrote:

Thanks Melanie

I can understand what is going on for SWM. Could you also include on the drawing, the limits of meander belt +30m. Development limit looks very close to Fletchers Creek corridor.

Check with Mississauga to see if existing SWM pond is bottom draw. Some of the older ponds built in mid 1990s are.

Regards

Mark Heaton
Fish and Wildlife Biologist
OMNRF Aurora District
(905) 713 7406 office
(416) 993 1295 mobile

_____
From: Melanie Randolph [melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>
<mailto:melanierandolph@savanta.ca>]
Sent: Friday, January 12, 2018 2:50 PM
To: Heaton, Mark (MNRF)
Cc: Rick Hubbard; Nicholas Mead-Fox; Rob Merwin
Subject: Fwd: DeZen Industrial Lands - Redside Dace question

Hello again Mark,

I hope you had a wonderful holiday and are enjoying the new year so far. It sure has been interesting weather-wise!

I was wondering if you'd had a chance to review the brief summary of the SWM plan for the proposed DeZen Industrial lands that I sent over just before Christmas (below).

I now have a figure to add to provide a bit more context.

Please let me know your thoughts as I would like to have your input prior to submitting the EIS, which Urbantech is patiently waiting for. Feel free to give me a call if you would like to discuss over the phone instead of through email.

Kind regards,
Melanie.

Melanie Randolph
Savanta Inc.
Cell: 905-321-1969
Toll Free: 1-800-810-3281 Ext 1080
melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>
<mailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca%3cmailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>>>
www.savanta.ca<http://www.savanta.ca/><http://www.savanta.ca/>

Begin forwarded message:

From: Melanie Randolph <melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>
<mailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca%3cmailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>>>>
Subject: Re: DeZen Industrial Lands - Redside Dace question
Date: December 22, 2017 at 6:28:39 PM EST
To: Mark Heaton <mark.heaton@ontario.ca<mailto:mark.heaton@ontario.ca>
<mailto:mark.heaton@ontario.ca<mailto:mark.heaton@ontario.ca%3cmailto:mark.heaton@ontario.ca<mailto:mark.heaton@ontario.ca

>>>>
Cc: Rick Hubbard <rickhubbard@savanta.ca<mailto:rickhubbard@savanta.ca>
<mailto:rickhubbard@savanta.ca<mailto:rickhubbard@savanta.ca%3cmailto:rickhubbard@savanta.ca<mailto:rickhubbard@savanta.ca>>>>, Peter Horn <phorn@urbantech.com<mailto:phorn@urbantech.com>
<mailto:phorn@urbantech.com<mailto:phorn@urbantech.com%3cmailto:phorn@urbantech.com<mailto:phorn@urbantech.com>>>>,
Nicholas Mead-Fox <nmead-Fox@urbantech.com<mailto:nmead-Fox@urbantech.com><mailto:nmead-Fox@urbantech.com<mailto:nmead-Fox@urbantech.com%3cmailto:nmead-Fox@urbantech.com<mailto:nmead-Fox@urbantech.com>>>>

Hello Mark,

As we discussed, please find below a brief summary of the stormwater management plan for the proposed development on the DeZen lands.

There is a Subwatershed Study for Fletcher's Creek that AMEC produced for the City of Brampton that has alternate Erosion Control requirements. I am still waiting on confirmation from the City of Mississauga regarding whether or not we can use those criteria. I think for this iteration we should just plan for the full 25mm Erosion Control Retention requirement (which is more conservative).

Quantity:
N/A as per City of Mississauga Standards

Quality and Erosion Control:

Phase 1:
80% TSS Removal: Provided by downstream SWM Pond
25mm Erosion Control Retention: Provided by downstream SWM Pond

Phase 2:
80% TSS Removal: Provided by LID TTT and OGS
25mm Erosion Control Retention and Controlled Release provided by Storage Tank
Discharge to Proposed Wetland adjacent to existing Tributary to Fletchers Creek

External:
Conveyed directly to existing farm pond through constructed drainage feature. The drainage feature will be constructed with 3:1 side slopes and a 4.4m wide top of bank and pass through a 1050mm circular pipe culvert which has capacity to convey 100-YR and Regional Flows from the contributing external drainage areas.

Please let me know if you have any questions or concerns as they relate to the direct Redside Dace habitat within Fletchers Creek, the downstream receiving waters of this Tributary (that is not considered contributing Redside Dace habitat).

Thanks Mark, and I hope you have a great Holiday,
Melanie.

Melanie Randolph
Savanta Inc.
Cell: 905-321-1969
Toll Free: 1-800-810-3281 Ext 1080
melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>
<mailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca%3cmailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>>>
www.savanta.ca<http://www.savanta.ca/><http://www.savanta.ca/>

Please note that our business will be closed during the period December 25, 2017 to January 1, 2018, inclusive. We re-open for business on January 2, 2018. All the best over the Christmas and New Year holiday season!

On Oct 31, 2017, at 6:59 PM, Heaton, Mark (MNRF) <mark.heaton@ontario.ca<mailto:mark.heaton@ontario.ca>
<mailto:mark.heaton@ontario.ca>> wrote:

Sure - summary be email is fine

Mark Heaton
Fish and Wildlife Biologist
OMNRF Aurora District
(905) 713 7406 office
(416) 993 1295 mobile

From: Melanie Randolph [melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>
<mailto:melanierandolph@savanta.ca>]
Sent: Tuesday, October 31, 2017 1:39 PM
To: Heaton, Mark (MNRF)
Cc: Rick Hubbard; Peter Horn
Subject: Re: DeZen Industrial Lands - Redside Dace question

Hi Mark,

These details have not been worked out yet. We are in the process of preparing a technical rationale for the preferred SWM option to present to the CVC, Town and Region. It seems as though you would be interested in reviewing this as well?

The ESC plans will not be prepared until detailed design. Would you want to review those?

Melanie Randolph
Savanta Inc.
Cell: 905-321-1969
Toll Free: 1-800-810-3281 Ext 1080
melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>
<mailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca%3cmailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>>>
www.savanta.ca<http://www.savanta.ca/><http://www.savanta.ca/>

On Oct 31, 2017, at 7:42 AM, Heaton, Mark (MNRF) <mark.heaton@ontario.ca<mailto:mark.heaton@ontario.ca>
<mailto:mark.heaton@ontario.ca<mailto:mark.heaton@ontario.ca%3cmailto:mark.heaton@ontario.ca<mailto:mark.heaton@ontario.ca>>>> wrote:

Hello Melanie

Whatvis being done ro treat tge stormwater before discharging? Is there an ESC plan?

Mark Heaton
Fish and Wildlife Biologist
OMNRF Aurora District
(905) 713 7406 office
(416) 993 1295 mobile

From: Melanie Randolph [melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>
<mailto:melanierandolph@savanta.ca><mailto:melanierandolph@savanta.ca>]
Sent: Monday, October 30, 2017 4:43 PM
To: Heaton, Mark (MNRF)
Cc: Rick Hubbard; Peter Horn
Subject: Re: DeZen Industrial Lands - Redside Dace question

Hello Mark,

Just following up on my previous email.

Thanks,
Melanie.

Melanie Randolph
Savanta Inc.
Cell: 905-321-1969
Toll Free: 1-800-810-3281 Ext 1080
melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca><mailto:melanierandolph@savanta.ca>
<mailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca%3cmailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>%3e%3cmailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>>>
www.savanta.ca<http://www.savanta.ca/><http://www.savanta.ca/><http://www.savanta.ca<http://www.savanta.ca/>
<http://www.savanta.ca<http//www.savanta.ca/%3E>>

On Sep 27, 2017, at 3:55 PM, Melanie Randolph <melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>
<mailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca%3cmailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>>>> wrote:

Hello Mark,

Just following-up to make sure you received my response to your previous email providing the information you were looking for. Can you confirm if there are any particular Redside Dace SWM requirements needed, and if further MNRF review is required for these works?

Please feel free to give me a call if you'd like to discuss anything further.

Thank you,
Melanie.

Melanie Randolph
Savanta Inc.
Cell: 905-321-1969
Toll Free: 1-800-810-3281 Ext 1080
melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>
<mailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca%3cmailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>>>
www.savanta.ca<http://www.savanta.ca/><http://www.savanta.ca/><http://www.savanta.ca<http://www.savanta.ca/>
<http://www.savanta.ca<http//www.savanta.ca/%3E>>

On Sep 18, 2017, at 1:16 PM, Melanie Randolph <melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>
<mailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca%3cmailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>>>> wrote:

Hi Mark,

Thank you for your quick response!

You are right, Fletcher's creek is > 7.5 m and, therefore, the tributary does not qualify as contributing habitat.

The stormwater would be discharging at the top end of the pond; therefore, outside of the 30 m buffer to the contributing habitat i.e., Fletcher's Creek.

Thanks again,
Melanie.

On Mon, Sep 18, 2017 at 12:26 PM, Heaton, Mark (MNRF) <mark.heaton@ontario.ca<mailto:mark.heaton@ontario.ca>
<mailto:mark.heaton@ontario.ca<mailto:mark.heaton@ontario.ca%3cmailto:mark.heaton@ontario.ca<mailto:mark.heaton@ontario.ca>>>> wrote:
Hello Melanie

Tributary was not qualified because? You should have documentation to explain that the Fletcher's Creek bankfull dimension is >7.5m and, therefore, the tributary does not qualify as contributing habitat.

Where is the stormwater being discharged? Within regulated habitat for Fletcher's (meanderbelt +30)?

Regards

Mark Heaton
OMNRF Aurora

-----Original Message-----
From: Melanie Randolph
[mailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca%3cmailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>>>]
Sent: September 17, 2017 8:52 PM
To: Heaton, Mark (MNRF)
Cc: Rick Hubbard; Peter Horn
Subject: DeZen Industrial Lands - Redside Dace question

Hello Mark,

The DeZen Industrial Lands file is becoming active again. I have attached a map of the Subject Lands to refresh your memory of the site. You may recall that we walked these lands back in 2012 and determined that the watercourse feature on the Subject Lands was not considered contributing Redside Dace habitat, although Fletcher's Creek, which it outlets into, is. We are working with Urbantech to develop a SWM plan that involves a treatment train approach for parking lot drainage, and using clean roof leaders to achieve water balance to feed into the existing agricultural pond and wetland, and to maintain flows into Fletcher's Creek. Please note that a SWM pond on the Subject Lands is not part of this plan.

As this approach was not explicitly discussed with the MNRF back in the day, the CVC would like to have confirmation from the MNRF that there are no specific Redside Dace SWM requirements (water quality, water quantity, water temperature) for this SWM discharge, and that the MNRF does not need to provide further review of the SWM plans. We will be working with Urbantech to ensure that we

and that the MNRF does not need to provide further review of the SWM plans. We will be working with Urbantech to ensure that we are comfortable that the proposed plan will not have measurable effects on Fletcher's creek.

If you could please provide your thoughts on this, that would be greatly appreciated.

Kind regards,
Melanie.

--

Melanie Randolph

Savanta Inc.

Cell: 905-321-1969

Toll Free: 1-800-810-3281 Ext 1080

melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>
<mailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca%3cmailto:melanierandolph@savanta.ca<mailto:melanierandolph@savanta.ca>>>

www.savanta.ca<http://www.savanta.ca/><http://www.savanta.ca/><http://www.savanta.ca/>

Ministry ofNatural Resources

Information Gathering Form for activities that may affect species or habitat protected under the *Endangered Species Act*

For Internal Use Only

Tracking Number	Lead District

Personal information in this form is collected under the authority of Section 53 of the *Endangered Species Act, 2007*. The information provided will be used for the purposes of administering the Act and its Regulations. Questions about the use of this information should be directed to the species at risk representative at the local MNR office (http://www.mnr.gov.on.ca/en/ContactUs/2ColumnSubPage/STEL02_179002.html) where the proposed activity will take place.

Fields marked with an asterisk (*) are mandatory.

1. Contact Information

Proponent Contact Information ☐ check this box if the proponent is an individual

Legal Last Name*	First Name*	Legal Middle Initial(s)
Dezen		

Full Mailing Address

Unit No.	Street No.*	Street Name*	P.O. Box
	23	Windsor Street	

Rural Route	Postal Station	Lot No.	Concession

City/Town*	Province*	Postal Code*
Toronto	Ontario	M6Y 2V9

Telephone No.*	Fax No.	Email (if available)
416 255-0890		

Primary Contact for Proponent

Is the proponent the primary contact for this form?*

☐ Yes ☑ No

Last Name*	First Name*	Middle Initial(s)
Boucher	Noel	A

Position/Title: Senior Fisheries Biologist

Legal Name of Organization/Company: Savanta Inc. - A GEI Company

Full Business Mailing Address

Unit No.	Street No.*	Street Name*	P.O. Box
118	450	Bronte Street South	

Rural Route	Postal Station	Lot No.	Concession

City/Town*	Province*	Postal Code*
Milton	Ontario	L9T 8T2

Business Telephone No.*	Business Fax No.	Business Email (if available)
289 929-6951 ext.		nboucher@savanta.ca

Authorization*

☑ I, Sandro DeZen (proponent's name), authorize Noel Boucher (primary contact's name) to disclose information required by the Ministry of Natural Resources for the purpose of administering the *Endangered Species Act, 2007* and its Regulations and in accordance with the *Freedom of Information and Protection of Privacy Act, 1990*.

Save | Go back to the form

Species at Risk Field Surveys

Has MNR determined whether species at risk surveys required?* If proponent has not already contacted the local MNR office regarding species surveys, please do so before proceeding with the form.

☐ Yes, surveys required ☑ No, surveys not required

2. Activity Overview

Primary Activity Sector (please check one)*

- ☐ aggregate
- ☐ agriculture
- ☑ construction or development
- ☐ mining
- ☐ forestry
- ☐ non-renewable energy (e.g., oil and gas, nuclear)
- ☐ other (specify)
- ☐ renewable energy (hydroelectric)
- ☐ renewable energy (wind/solar/biofuel)
- ☐ transportation
- ☐ existing infrastructure (e.g., utility corridors, dams, drains)
- ☐ research
- ☐ tourism, culture, recreation

Save | Go back to the form

3. Activity Details – Where, When, and How

Activity Location(s): *1*

Provide detailed descriptions of the location(s) of the proposed activity according to each of the items below. In cases where the activity will occur in multiple locations, the following should be described for each location.

A. Location*

☑ Geographic coordinates of the activity location

☐ Legal Description of activity location

Geographic coordinates of the activity location

UTM Map Datum	Zone	Coordinates – Easting	Coordinates – Northing
NAD 83	17T	603466	4833183

Latitude	Longitude

Legal Description of activity location

Civic Address

Unit No.	Street No.	Street Name	P.O. Box	Rural Route

City/Town	Province	Postal Code

Lot(s) and Concession(s)	Assessment Roll Number(s)	Geographic Township(s)

Local Municipality(ies)	Regional Municipality, County or Territorial District(s)

B. Land Ownership

Indicate the land ownership for the proposed activity (please check all that apply)

☐ Federal crown land/water or protected area

☑ Municipal land/water

☐ Provincial crown land/water

☐ Other (identify)

☐ First Nation Reserve

☑ Private property

☐ Provincial crown land – provincial park/conservation reserve

C. MNR district(s) where the activity will take place

Aurora

D. Identify the **ecological communities** (e.g., agricultural (hayfield, crop, pasture), forest type and age (deciduous, coniferous, mixed wood; early/late successional forest), tallgrass prairie, etc.) at and surrounding the activity location.

If this information is available in an existing report, proponents can copy and paste the relevant information from the report(s) into the space provided below. Please reference the title, author and date of the report(s) from which the copy and paste sections originate.

Ecological Communities

The tablelands consist of agricultural cropland (soy beans).

The proposed stormwater management outfall and sanitary sewer pipe locations are located in the Fletcher's Creek valleylands. The valley slopes are primarily dominated by Buckthorn-Hawthorn Cultural Thicket (CUT1-7), although some Old Field Meadow (CUM1-1) is present (see attached ELC community map). The valley floor consists of a mosaic of vegetation community types including Cattail Shallow Marsh (MAS2-1) and meadow marsh (MAM) in lower lying areas and old field meadow in topographically elevated areas of the valley floor.

Activity Methodology
(How each stage of the activity will be carried out)

In Table 1, please provide a detailed **description** of the various components of the proposed activity over the activity's full lifespan. In the context of this form, "activity" is defined broadly to include all components associated with all stages of the activity including, but not limited to, site access and investigation, site preparation and construction, operation and maintenance, closure, decommissioning and completion, and rehabilitation and restoration stages. **The level of detail provided should reflect the size and complexity of the activity.**
If this information is available in an existing report, proponents can copy and paste the relevant information from the report(s) into Table 1. Please reference the title, author and date of the report(s) from which the copy and paste sections originate.

Save | Go back to the form

Table 1. Detailed description of the various components/stages of the proposed activity.

Component / Stage	Targeted Dates		Detailed Description of Methodology
	Start Date (yyyy-mm-dd)	Completion Date (yyyy-mm-dd)	
Stormwater Management outlet construction	2020-07-01	2020-09-15	Construction of the stormwater management outfall will potentially consist of the following steps: 1. Installation of sediment and erosion controls; 2. Removal of any woody vegetation present along the valley slope; 3. Installation of temporary granular access road down the valley slope to access the valley floor work area; 4. Topsoil and herbaceous vegetation stripping and stockpiling (on the tablelands); 5. Excavation of the open-cut trench for installation of the stormwater discharge pipe from the underground storage tank on the tablelands; 6. Installation of the concrete outfall headwall on the valley floor; 7. Installation of the buried pipe from the storage tank to the concrete outlet headwall; 8. Backfilling and grading of the open-cut trench area; 9. Grading and installation of stone core fill and sediment within the stone core wetland outlet feature; 10. Vegetation planting in the stone core wetland; 11. Removal of temporary work areas and access roads; and 11. Vegetation planting throughout disturbed areas.
Stormwater Management outlet construction	2020-07-01	2020-09-15	Construction of the stormwater management outfall will potentially consist of the following steps: 1. Installation of sediment and erosion controls; 2. Removal of any woody vegetation present along the valley slope; 3. Installation of temporary granular access road down the valley slope to access the valley floor work area; 4. Topsoil and herbaceous vegetation stripping and stockpiling (on the tablelands); 5. Excavation of the open-cut trench for installation of the stormwater discharge pipe from the underground storage tank on the tablelands; 6. Installation of the concrete outfall headwall on the valley floor; 7. Installation of the buried pipe from the storage tank to the concrete outlet headwall; 8. Backfilling and grading of the open-cut trench area; 9. Grading and installation of stone core fill and sediment within the stone core wetland outlet feature; 10. Vegetation planting in the stone core wetland; 11. Removal of temporary work areas and access roads; and 11. Vegetation planting throughout disturbed areas.

Are there any site-related or technical limitations that restrict how this activity may be carried out?

Tie-in of the new sanitary sewer pipe with the existing trunk sewer on the valley floor necessitates that open-cut pipe installation be used as opposed to directional drilling. The depth of the existing trunk sewer also limits the depth at which the new sanitary sewer from the development can be installed below the valley floor, since it is gravity drained and must be at a higher elevation than the tie-in point with the new sewer.

Save | Go back to the form

4. Indication of Species at Risk and Habitat Found at or near the Activity Location

Records Review

Proponents are requested to outline what protected species at risk or habitats may be present at or near the proposed activity location. An activity is considered "near" a species at risk or its habitat if the activity is physically located within a reasonable distance of the species or habitat **and** there is a reasonable likelihood that the adverse effects of the activity will affect the species or extend into its habitat. In outlining this, proponents should consider the area that is reasonably likely to be affected by any of the stages of the proposed activity. This area may extend beyond the physical (direct) footprint of the activity itself.

While the local MNR office may be able to provide advice for completing this information, proponents are expected to conduct a records review. Some links to information sources can be found on page 1 of this form under the information sources tab. The results of the records review should be recorded in Table 3. The results of the records review should be recorded in Table 3.

Species at Risk Surveys

Where there is insufficient species at risk data or information, proponents may also be required to conduct species at risk surveys at or near the proposed activity location. The methodology and results from these species surveys can be recorded in Tables 2 and 3.
An ESA authorization (e.g., a permit under clause 17(2)(b) of the Act) may be required to conduct species at risk surveys. Determining the presence of species at risk and their habitats often requires a higher degree of knowledge and expertise that may not be a standard requirement for routine environmental assessments. Species at risk surveys must be undertaken by a qualified professional who is familiar with the species/habitat anticipated to be at or near the proposed activity location. Survey methods must be specific to each species at risk (or groups of similar species) that is reasonably expected to be found at or near the proposed activity location. **It is strongly recommended that proponents contact the local MNR office prior to conducting any surveys to confirm whether surveys are required,** that they are conducted using appropriate methods and protocols, and that any required ESA or other MNR authorizations are obtained. *Note: costs associated with conducting surveys are the responsibility of the proponent.*

In Table 2, please describe any surveys that have been (or will be) undertaken to assess what protected species at risk and habitats may be present at or near the activity location.
If this information is available in an existing report, proponents can copy and paste the relevant information from the report(s) into Table 2. Please reference the title, author and date of the report(s) from which the copy and paste sections originate.

Save | Go back to the form

4. Indication of Species at Risk and Habitat Found at or near the Activity Location

Table 2. Overview of species at risk surveys to outline what species at risk and habitats may be present at or near the activity location

☑ Check this box if no species at risk surveys have been done or are planned

Save | Go back to the form

In Table 3, please record:

- all protected species at risk occurrences and habitat observations made at or near the proposed activity location;
- the SARO list status for each species;
- the rationale which indicates that the species or habitat may be present at or near the proposed activity location. This rationale should be based on information and data collected during the records review and through field surveys (if applicable).

If this information is available in an existing report, proponents can copy and paste the relevant information from the report(s) into Table 3.Please reference the title, author and date of the report(s) from which the copy and paste sections originate.
Please submit all new observation data for any endangered or threatened species to the Natural Heritage Information Centre (NHIC) using the Rare Species reporting form available at: http://nhic.mnr.gov.on.ca/species/species_report.cfm.
Any new observation data for other provincially tracked species (e.g., special concern species) that may have been observed at or near the proposed activity location should also be submitted to the NHIC.

Save Go back to the form

Table 3: Summary of species at risk and their habitats found at or near the proposed activity location. Identify information sources as required. Note: It is recommended that representative photos of the habitat areas and features found at or near the proposed location of the activity be submitted with this form (opportunity to add attachments is in the next section). Be sure to include the time, date and location where each photo was taken.

	Species 1	***Species 2***
Species name*	Redside Dace	
Species status in Ontario* (provided in the SARO List)	☐ Threatened ☑ Endangered	☐ Threatened ☐ Endangered
Presence/absence of species/habitat at or near the proposed activity location*	☐ individuals of the species **absent** ☑ individuals of the species **present**	☐ individuals of the species **absent** ☐ individuals of the species **present**
Number of individuals observed and how (e.g., visual sighting, auditory observation, etc.) Also indicate life stage of the individuals (e.g., adult, juvenile, fruiting, etc.) where possible, dates the observations were made, the geographic coordinates of the observations, etc.	No individuals have been observed but this portion of Fletcher's Creek is considered to be occupied by Redside Dace, as per previous communications with MNRF.	

Detailed ecological description of the landscape. Include the Ecological Land Classification (ELC), Forest Ecosystem Classification (FEC), or Aquatic Resource Area (ARA) information, slope, aspect, soils, substrate, dominant plant species, associated plant species, etc.. If you require assistance in completing the required information, please contact the local MNR office.	Fletcher's Creek in the vicinity of the proposed activity is approximately 8.5 m in average width and up to 1 m deep. The channel is well defined and primarily consists of run morphology with some deeper pooled areas on outside meander bends. Substrate is primarily fine-grained and some woody debris is present within the watercourse. The south bank (right bank, looking downstream) is generally steep (up to approximately 6 m in height), with woody vegetation and signs of erosion at the toe and along the slope. The north bank (left bank, looking downstream) adjacent to the proposed work area is approximately 1-m in height, with overhanging meadow and shrubby vegetation. The floodplain adjacent to the left bank (where installation of the stormwater outfall and sanitary sewer pipe is proposed) is relatively flat and approximately 70 m wide to the base of the valley slope. Vegetation communities consist of a mix of open wetland (shallow marsh and meadow marsh) and cultural old field meadow communities.	

Description of habitat features on site. Note any key habitat features (e.g., nests, hibernacula, calving areas, dens, roost trees, etc) observed at or near the activity location including the geographic coordinates of the observations. If you require assistance in completing the requested information, please contact the local MNR office species at risk representative.	The watercourse appears generally suitable to provide habitat for a range of life history functions for the species, although no riffle habitat (that could provide spawning habitat) is observed within the project study area	
How and when the species is (or may be) using the habitat to carry out its life processes Indicate if the habitat is being used by the species for reproduction, rearing, hibernation, over-wintering, migration, feeding, resting (including predator avoidance), dispersal, daily movement, or any other life process (please specify). If it is not clear which life process the habitat is supporting, please indicate "unknown". If you require assistance in completing the requested information, please contact the local MNR office species at risk representative.	The species may use the habitat within the study area (i.e., within Fletcher's Creek) for a range of life processes including rearing, over-wintering (deeper pools), migration (to potential upstream spawning or foraging areas) and foraging (open meadow with overhanging grasses promoting insect use	
Other available information that suggests the effects of the activity, not just the physical (direct) footprint, may overlap with species at risk occurrences and/or habitat (e.g., species expert's opinion, etc.).	N/A	

Save Go back to the form

5. Activity and Species at Risk Maps and Photos

Provide one or more maps of appropriate scale that clearly illustrate the following items. In cases where the activity will occur in multiple locations, the following should be illustrated for each location.

- **Ecological Land Classifications (ELC), Forest Ecosystem Classifications (FEC), or Aquatic Resource Areas (ARA) for the location and surrounding area (if available);**
- **Topographic information;**
- **Any designated natural features;**
- **Name(s) of any waterbodies occurring at or near the activity location (if applicable);**
- **Current land uses (if available);**
- Location and boundaries (i.e. footprint) of the proposed activity **in relation to the surrounding landscape**;
- Location of each species at risk occurrence and habitat found at or near the proposed activity location. Also, include the location and description of any habitat features (e.g., nest, hibernaculum, calving area, vernal pools, spawning beds) found at or near the proposed activity location; and
- **Data sources, scale, north arrow and legend for the maps.**

Use of aerial photography and satellite imagery is strongly encouraged. Please indicate the date aerial photos or satellite images were taken as well as the date maps were created.
Please list and attach relevant maps, shapefiles, photos and satellite images that are available.
Do not include personal information on maps, aerial photos and satellite images.

List of Attached Documents

Note: The total space for attachments is limited to 25MB. Links to existing FTP sites containing photos and other materials for the proposed activity can be indicated in the list of attached documents space.

DeZen_ELC_Vegetation_Community_Mapping.pdf

Save | Go back to the form

6. Species at Risk and Habitat that may be Affected by the Activity

In Table 4, please provide your interpretation of:

- the protected species at risk and habitats that are likely to be affected by the proposed activity; and
- how and to what extent these protected species and habitats may be affected. Where the proponent requires assistance in completing the information in this part of the form, contact th local MNR office species at risk representative.

This information and other information submitted in this form will be considered by MNR when assessing and determining whether a proposed activity is likely to contravene subsections 9(1) or 10(1) of the ESA and thus whether it is advisable for the proponent to apply for and obtain an overall benefit permit under clause 17(2)(c) of the ESA prior to proceeding with the proposed activity to avoid contravening the Act.

Species affected by activity	How and to what extent each species or habitat may be *positively* affected	How and to what extent each species or habitat may be *adversely* affected

Species affected by activity	How and to what extent each species or habitat may be *positively* affected	How and to what extent each species or habitat may be *adversely* affected
Redside Dace	The species is not anticipated to be positively affected	No direct alteration of habitat for the species within the watercourse is anticipated to occur. However, riparian habitat will be altered for construction and long-term presence of the project components. Construction of the sanitary sewer and stormwater outfall will require temporary removal of vegetation within the floodplain, installation of temporary fill (to create working areas) and use of construction machinery within close proximity to the watercourse, potentially resulting in disturbance due to noise and vibration. All disturbed areas (with the exception of permanent project components) will be restored with suitable vegetation communities following completion of construction. The long-term presence of the sanitary sewer pipe is not anticipated to have long-term adverse effects on the species or its habitat, since it will be buried and existing vegetation communities within the construction area required for installation will be restored. The stormwater outfall will result in a permanent change in habitat conditions within the floodplain due to the presence of the concrete outlet structure and stone core wetland. The outlet structure will likely result in small permanent loss of riparian vegetation. The stone core wetland will change habitat conditions but will continue to provide vegetation on the valley floor. No long-term impacts on Redside Dace are anticipated as a result of the loss of a small amount of floodplain vegetation and alteration in vegetation communities, given that these areas are located approximately 60 m from the watercourse channel. However, they represent a long-term change in vegetation within the meander belt + 30 m zone. No adverse effects on Redside Dace habitat in Fletcher's Creek are anticipated due to the long-term operation of the stormwater outlet. The outlet will receive discharge from a buried stormwater tank, which will assist in mitigating thermal impacts compared to a more conventional open stormwater management pond. The use of a stone core wetland

Save | Go back to the form

7. Submission Information

Date this form was submitted to the local MNR office (yyyy-mm-dd)*

2019-10-31

Please note: the email function will not work if you do not have your automatic email settings established. In these cases, please save a copy of your form, access your email account and attach a copy of the form for email submission to your local MNR. The list of MNR office email addresses is below for your reference.

Email Client Option *

☑ Default Email Application (e.g., MS Outlook)

☐ Internet Email (e.g., Yahoo or Hotmail. Save the form and send it manually to the MNR office by using internet email service.)

Local MNR office this form is submitted to*	MNR Email Address for reference
Aurora	esa.aurora@ontario.ca

Proposal Title*

DeZen Industrial Lands - Stormwater Outlet and Sanitary Sewer

Authorization*

☑ I, Sandro Dezen (insert name, hereafter "proponent"),

confirm that the information provided in this form is accurate and complete to the best of my knowledge. I understand that a summary of the information provided in this form, excluding any personal information or details that could be used to locate or harm an endangered species, may be posted on the Ministry of Natural Resources Species at Risk website and the Environmental Registry. I also understand that this information will be used for the purpose of administering the *Endangered Species Act, 2007* and its Regulations in accordance with the *Freedom of Information and Protection of Privacy Act, 1990*.

Save | Print summary pages | Go back to the form | Email Form

SAVANTA
A GEI Company

October 30, 2019

Ministry of the Environment, Conservation and Parks
50 Bloomington Road
Aurora, ON L4G 0L8

Attention: Jeff Andersen
Management Biologist

Dear Mr. Andersen:

RE: DeZen Industrial Lands, Mississauga ON
Stormwater Discharge Outfall and Sanitary Sewer in Redside Dace Habitat
Technical Letter to Support Information Gathering Form

Savanta has been retained by 678604 Ontario Inc. (the project proponent) to assist with ecological permitting for the proposed DeZen Industrial Lands development at 7140 Hurontario Street, in the City of Mississauga (**Figure 1**, **Attachment A**). The proponent is proposing an industrial development on the tablelands adjacent to Fletcher's Creek, which is designated as occupied habitat for Redside Dace (*Clinostomus elongatus*). The development will generally be situated outside regulated habitat for the species (i.e., meander belt plus 30 m). However, a stormwater discharge outfall and buried sanitary sewer pipe are proposed for installation within regulated habitat (**Figure 2**, **Attachment A**). Photographs of existing conditions in the Fletcher's Creek valley in the general location of the proposed infrastructure components are provided in **Attachment B**.

This letter has been prepared to provide additional technical information on the proposed activities within regulated habitat to supplement the Information Gathering Form (IGF) that is being distributed to the Ministry of Environment, Conservation and Parks (MECP) to facilitate review of the project under the *Endangered Species Act, 2007* (ESA).

Additional information regarding the proposed stormwater outfall and sanitary sewer pipe is provided in the following sections. The proposed development is currently going through the municipal planning approvals stage and, therefore, detailed design has not been completed. The information provided regarding these project components is therefore preliminary in nature and subject to change during detailed design.

1. STORMWATER DISCHARGE OUTFALL

Stormwater collected within a portion of the proposed industrial development (i.e., Phase 2) will be conveyed to an underground storage tank in the southwestern corner of the Subject Lands. In combination with rooftop storage, an oil-grit separator and Low Impact Development (LID) measures (e.g., bio-retention cells), the 800 m^3 stormwater storage tank will provide quality control (80% total suspended solids removal) and erosion control (25 mm storm event) for discharge to Fletcher's Creek. Quantity control is not required for the proposed discharge. The underground storage tank will also

provide thermal mitigation, compared to a conventional wet stormwater management (SWM) pond that is exposed to sunlight.

The underground storage tank will convey discharge flows, via a buried 1350 mm, reinforced concrete storm sewer pipe, to a new stormwater outfall structure located in the adjacent Fletcher's Creek valleyland (i.e., within Redside Dace regulated habitat). The conceptual location of the outfall is depicted on **Figure 2** (**Attachment A**) and Urbantech Drawing GR-1 (**Attachment C**).

No detailed design of the outfall structure has been completed to date, but it is anticipated that the outfall will be a small concrete structure located close to the toe of slope to minimize intrusion on the valley floor. Subject to confirmation during detailed design, the proposed outlet will be located approximately 60 m from the Fletcher's Creek bankfull channel. The footprint of the outlet will be confirmed during the detailed design process.

The outfall will discharge directly into a constructed stone core wetland (the conceptual design from GEO Morphix is provided in **Attachment C**) to provide energy dissipation, promote infiltration and retention and prevent concentrated discharge flows within the floodplain to Fletcher's Creek. The wetland pocket is anticipated to provide a number of additional benefits including organic inputs, thermal regulation and water quality polishing. The footprint of the stone core wetland will be confirmed during the detailed design process. Conceptually, the central portion of the excavated depressional feature will consist of 70% riverstone and 30% granular B material, overlaid by 150 mm of topsoil. The peripheral areas of the structure will consist of a mix of 50% topsoil and 50% granular B material to promote vegetation growth. The wetland pocket will provide both depressional and subsurface storage and promote filtration as water flows through the soil medium (GEO Morphix Ltd. 2019).

The areas adjacent to the wetland (i.e., all areas disturbed during installation of the feature) will be overlaid with 150 mm of topsoil and 100% biodegradable erosion control blanket will be installed around the wetland pocket, to a minimum distance of 1 m away from the wetland edge. The area will be seeded, and live stakes will be installed to promote shrub growth for stability and shading.

No direct discharge channel will be constructed from the stone core wetland to the Fletcher's Creek channel. The wetland will be designed with a level spreader, consisting of a biodegradable Filtrexx Siltsoxx, to promote dispersed overland flows away from the structure into the floodplain when the water level capacity of the depression has been exceeded. Over time, the periphery of the wetland pocket will stabilize with vegetation, which will take over the function of the Siltsoxx as it biodegrades.

No construction methodologies have been confirmed at this stage in the planning process. However, for the purposes of this preliminary assessment, construction of the stormwater management outlet will potentially consist of the following steps:

1. Installation of sediment and erosion controls;
2. Removal of any woody vegetation present along the valley slope;
3. Installation of temporary granular access road down the valley slope to access the valley floor work area;
4. Topsoil and herbaceous vegetation stripping and stockpiling (on the tablelands);
5. Excavation of the open-cut trench for installation of the stormwater discharge pipe from the underground storage tank on the tablelands;
6. Installation of the concrete outlet headwall on the valley floor;
7. Installation of the buried pipe from the storage tank to the concrete outlet headwall;

8. Backfilling and grading of the open-cut trench area;
9. Grading and installation of stone core fill and sediment within the stone core wetland outlet feature;
10. Vegetation planting in the stone core wetland;
11. Removal of temporary work areas and access roads; and
12. Vegetation planting throughout disturbed areas.

2. SANITARY SEWER PIPE

The western portion of the proposed development will require a sanitary servicing connection to the existing City of Mississauga 1500-mm diameter trunk sanitary sewer, located in the adjacent Fletcher's Creek valley (see attached Urbantech Sanitary Drainage Plan in **Appendix C**). From the limit of the development, the new proposed sanitary sewer will consist of a 98.9-m long, 250-mm diameter sewer pipe. The proposed sanitary sewer will be located along the alignment of the storm sewer discussed in section 1 in order to minimize disturbance within the Fletcher's Creek valley during installation.

The tie-in location with the existing sanitary sewer will be at an existing sanitary manhole on the valley floor. The elevation at the surface of the manhole is 193.196 m, while the tie-in elevation at the existing trunk sewer is 191.0 m, resulting in a maximum buried depth of approximately 2.2 m, which is limited by the depth of the existing storm sewer.

No construction methodologies have been confirmed at this stage in the planning process. However, for the purposes of this preliminary assessment, construction of the buried sanitary sewer pipe will potentially consist of the following steps:

1. Installation of sediment and erosion controls;
2. Removal of any woody vegetation present along the valley slope;
3. Installation of temporary granular access road down the valley slope to access the valley floor work area;
4. Topsoil and herbaceous vegetation stripping and stockpiling (on the tablelands);
5. Excavation of the open-cut trench for installation of the sanitary sewer pipe from the industrial development on the tablelands to the existing trunk sewer in the valley;
6. Installation of the sewer pipe within the open-cut trench and tie-in with the existing trunk sewer;
7. Backfilling and grading of the open-cut trench area;
8. Removal of temporary work areas and access roads; and
9. Vegetation planting throughout disturbed areas.

Installation of the sewer pipe will occur in conjunction with the stormwater management outfall and a number of the construction steps for each component will be shared.

I trust the information provided in this letter, in conjunction with the IGF, will facilitate your review of the proposed stormwater outfall and buried sanitary sewer pipe and potential requirements under the ESA.

Yours truly,
SAVANTA INC.
A GEI Company

Noel Boucher
Project Manager
1-800-810-3281 Ext 1250
nboucher@savanta.ca

Heather Whitehouse
Project Director
1-800-810-3281 Ext 1040
hwhitehouse@savanta.ca

Attachments (3)

- Attachment A – Figures
- Attachment B – Photo Log
- Attachment C – Concept Drawings

REFERENCES

GEO Morphix 2019. Tributary of Fletcher's Creek Erosion Hazard Assessment. Mississauga, Ontario. Prepared for DeZen Realty. April 15, 2019. 18 pp. + Appendices.

Attachment A – Figures

Subject Lands

Watercourse

Drainage Feature

DeZen Industrial Lands

Figure 1
Location of Subject Lands

0 100 M
1:5,000

N

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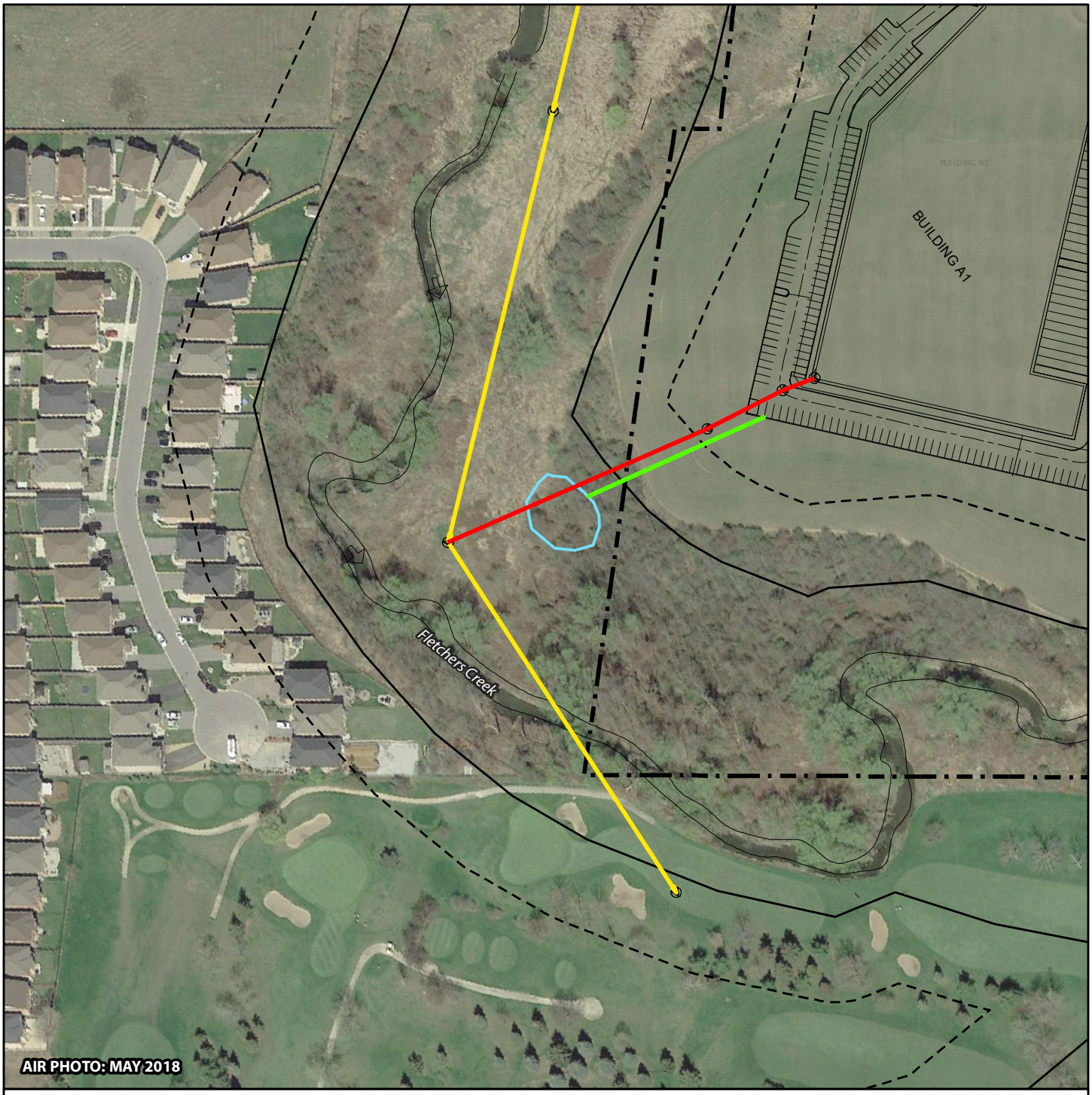
Path: S:\8500 - SAV 7176 DeZen Industrial Lands\gis\mxd\2018 12 19 report figures\Figure 1 Location of Subject Lands.mxd Date Saved: December 19, 2018



DeZen Industrial Lands

Figure 2
Project Components in Redside Dace Habitat

- Subject Lands
- Final Meaderbelt
- 30m Setback from Meanderbelt
- Existing 1500 mm Sanitary Sewer
- Stone Core Wetland
- Proposed Sanitary Sewer
- Proposed Storm Sewer

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0 50 M
1:2,000

N

Path: S:\8500 - SAV 7176 DeZen Industrial Lands\gis\mxd\2019 09 18\Figure 2 Project Components in Redside Dace Habitat.mxd Date Saved: September 18, 2019

Attachment B – Photo Log

Photo 1 – View of Fletcher's Creek adjacent to proposed stormwater outfall and sanitary sewer location

Photo 2 – View of the Fletcher's Creek valley from the approximate stormwater outfall location towards the sanitary sewer tie-in location (note existing sanitary manhole in background).

PHOTOGRAPHIC RECORD

Prepared for: 678604 Ontario Inc.

Appendix B

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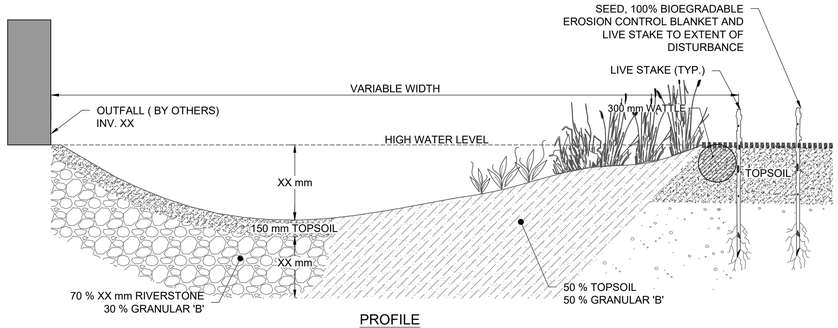
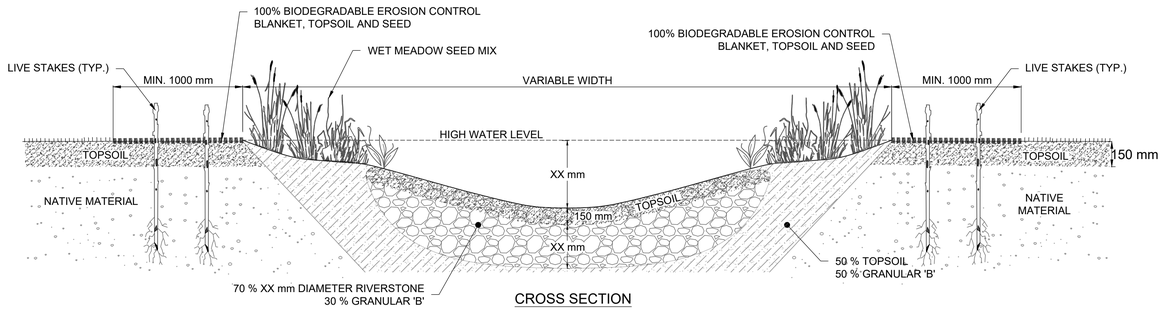
A GEI Company

Attachment C – Concept Drawings

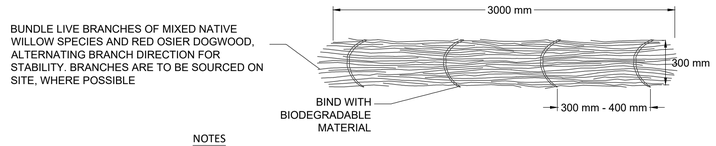


PROFILE



CROSS SECTION

STONE CORE WETLAND
N.T.S



NOTES

1. WATTLES TO BE INSTALLED IN A 400 mm WIDE TRENCH AND STAKED EVERY METER.
2. WATTLE AND GRADING INSTALLATION TO RESULT IN A LEVEL BERM WITHOUT BREAKS.
3. MATCH GRADES AS SHOWN IN PLAN.

WATTLE/ FASCINE DETAIL
N.T.S.

DRAFT - NOT FOR CONSTRUCTION

	DATE	BY	REVISIONS

DESIGNED BY: LD	CHECKED BY: PV
DRAWN BY: LD	DATE: DECEMBER 2018

GEO MORPHIX
Geomorphology Earth Science Observations
2800 High Point Drive, Suite 100a
Milton, Ontario L9T 6P4
T: 416.920.0926
www.geomorphix.com

TRIBUTARY 1 FLETCHER'S CREEK
DEZEN INDUSTRIAL LANDS

CONCEPTUAL OUTFALL DESIGN DETAIL

PROJECT No.: 18129	DRAWING No.: DET-1
SCALE: NTS	SHEET 1 OF 1

HYDRO ONE LANDS

HYDRO ONE LANDS

PROPERTY LINE

LIMIT OF PARKING AREA BY O. REG. 406/19

EX. 10.0m SANITARY TRUNK SEWER EASEMENT

BUILDING 'B'

LIMIT OF DEVELOPMENT

PROPERTY LINE

900X1500mm ELLIPTICAL CULVERT SIZED TO CONVEY GREATER OF 100-YEAR OR REGIONAL STORM

HYDRO ONE CORRIDOR

PROPERTY LINE

FLETCHER'S CREEK

PHASE 2

BUILDING 'A1'

BUILDING 'A2'

PHASE 1

BUILDING 'C'

VICKSBURGH DRIVE

EX. 300mm ø TEE

EX. 675mmø CONC. STM. 16.1m @ 1.99%

EX. 675mmø CONC. STM. 77.6m @ 2.12%

EX.MH23

EX.MH24

EX.MH2A

EX.1200mmø CONC. STM. 27.9m @ 0.86%

EX. 300mmø PVC SAN. 5.0m @ 0.31%

EX. 375mmø PVC STM. 19.2m @ 2.26%

EX. 675mmø PVC STM. 20.8m @ 961.56%

EX. 300mmø PVC SAN. 19.9m @ 0.33%

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PROPOSED WM CONNECTION TO BE DETAILED AT SITE PLAN APPROVAL STAGE

BUILDING 'D'

LIMIT OF DEVELOPMENT

PROPERTY LINE

DERRYCREST DRIVE

1350mmø Reinforced Concrete STM. 67.8m @ 1.12%

PHASE 2 STORM SEWER OUTFALL LOCATION

FLETCHER'S CREEK TRIBUTARY

FLETCHER'S CREEK

PROPERTY LINE

EX. 10.0m SANITARY TRUNK SEWER EASEMENT

DERRYDALE GOLF COURSE

BH2

BH1

HIGHWAY 407

M G S LANDS

HYDRO ONE LANDS

HYDRO ONE LANDS

SITE

McLAUGHLIN ROAD

DERRYDALE GOLF COURSE

DERRY ROAD WEST

HURONTARIO STREET (HWY 10)

POND 4402B

KEY PLAN
N.T.S.

LEGEND

- SITE BOUNDARY
- PHASE BOUNDARIES
- PROPOSED WATERMAIN
- EXISTING WATERMAIN
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- PROPOSED STORM SEWER
- EXISTING STORM SEWER

NOTE: THE FINAL LOCATION OF ALL VALVE BOXES AND HYDRANTS WILL BE DETERMINED AT THE SITE PLAN APPROVAL STAGE

WM SERVICING LAYOUT AND SIZING IS PRELIMINARY AND WILL BE FINALIZED AT THE SITE PLAN APPROVAL STAGE

NOT FOR CONSTRUCTION

DEZEN INDUSTRIAL PH2

urbantech west
Urbantech West, A Division of Leighton-Zec West Ltd.
2030 Bristol Circle, Suite 105 Oakville, Ontario L6H 0H2
tel: 905.829.8818 fax: 905.829.4804
www.urbantech.com

FIGURE 9
GENERAL SERVICING PLAN

PROJ. No.:	DATE:	SCALE:
12-020W	NOV 2017	1:1000

PLOT DATE: July 12, 2019 11:07:46 AM

File: F:\PROJECTS\12-020W (DEZEN INDUSTRIAL-PH2 12-04)\DRAWING\00_FUNCTIONAL\05_FD_FIGURES\12-020W_GEN-1_SERVICING PLAN.DWG

HYDRO ONE LANDS

HYDRO ONE LANDS

CONSTRUCTED SWALE TO TIE INTO EXISTING GRADES:
BOTTOM WIDTH = 1.2m
3:1 SIDE SLOPE
LENGTH = 171 m
TOTAL WIDTH = 6 m

6m SETBACK ON PROPOSED SWALE

EX. 10.0m SANITARY TRUNK SEWER EASEMENT

SAN MH
TOP=194.32

PROPOSED ACOUSTIC BARRIER AS PER REGION OF PEEL COMMENTS. TO BE REFINED AT SITE PLAN APPROVAL STAGE BY ACOUSTIC CONSULTANT.

BUILDING 'B'

900X1500mm ELLIPTICAL CULVERT SIZED TO CONVEY GREATER OF 100-YEAR OR REGIONAL STORM

HYDRO ONE CORRIDOR

SAN MH
TOP=193.83

FLETCHER'S CREEK

BUILDING 'A1'
FFE = 200.80

CLEAN WATER PIPE OUTLET

TOP OF POND
198.24

BUILDING 'C'
FFE = 201.50

CUL-DE-SAC GRADING DETAILS PROVIDED IN GR-3

VICKSBURGH DRIVE

30m MEANDER BELT SETBACK

10m SETBACK ON PROPOSED WETLAND BOUNDARY

BUILDING 'A2'
FFE = 201.90

WETLAND RESTORATION AREA = 3086 m² AS PER 2018 SAVANTA EIS WETLAND ELEVATION SET TO 198.50M TO ENSURE PONDING THROUGHOUT THE WETLAND AREA

10m DRIPLINE SETBACK AS STAKED OUT BY CREDIT VALLEY CONSERVATION (JULY 6, 2012)

10m SETBACK ON LONG TERM STABLE SLOPE AS STAKED OUT BY CREDIT VALLEY CONSERVATION

EX. 10.0m SANITARY

10m TOP OF BANK SETBACK AS STAKED OUT BY CREDIT VALLEY CONSERVATION (MARCH 24, 2011)

FOREST RESTORATION AREA = 895 m² AS PER 2018 SAVANTA EIS

EXISTING TRIBUTARY TO FLETCHER'S CREEK

100-YEAR CAPTURE POINT

SAN MH
TOP=195.25

BUILDING 'D'
FFE = 201.00

DERRYCREST DRIVE

STONE CORE WETLAND DESIGNED BY GEOMORPHIX FOR EROSION PROTECTION

FLETCHER'S CREEK TRIBUTARY

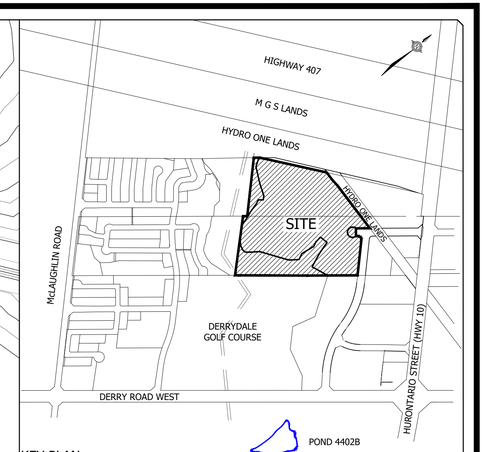
FLETCHER'S CREEK

5m SETBACK ON TOE EROSION ALLOWANCE BY GEOMORPHIX (NOVEMBER 30, 2018)

SLOPE TO BE REGRADED TO 2.2:1 PER SOIL ENGINEERS LTD. RECOMMENDATION. DETAILS TO BE PROVIDED AT SITE PLAN APPROVAL STAGE

EX. 10.0m SANITARY TRUNK SEWER EASEMENT

DERRYDALE GOLF COURSE



KEY PLAN
N.T.S.

LEGEND

- SITE BOUNDARY
- EASEMENT
- EXISTING SPOT ELEVATIONS/CONTOURS
- EXISTING STORM/SANITARY MANHOLE
- EXISTING GRADE
- PROPOSED GRADE
- SLOPE
- MAX 3:1 EMBANKMENT (SLOPE AS NOTED)
- PROPOSED OVERLAND FLOW ARROW
- EXISTING OVERLAND FLOW ARROW
- LONG TERM STABLE SLOPE
- 10m SETBACK ON DRIPLINE
- 10m TOP OF BANK SETBACK
- 30m MEANDER BELT SETBACK

BENCHMARK: ELEVATIONS ARE REFERRED TO THE CITY OF MISSISSAUGA BENCHMARK NO. 1079. BENCHMARK IS SET HORIZONTALLY AT THE NORTH EAST CORNER OF TOPFLIGHT DRIVE AND HURONTARIO STREET, HAVING AN ELEVATION OF 205.342m.

VERTICAL DATUM - CANADIAN GEODETIC DATUM, 1928

NOT FOR CONSTRUCTION

DEZEN INDUSTRIAL PH2

urbantech west
Urbantech West, A Division of Leighton-Zec West Ltd.
2030 Bristol Circle, Suite 105 Oakville, Ontario L6H 0H2
tel: 905.829.8818 fax: 905.829.4804
www.urbantech.com

GR-1
PRELIMINARY GRADING PLAN

PROJ. No.:	DATE:	SCALE:
12-020W	NOV 2017	1:1000

PLOT DATE: July 12, 2019 11:08:08 AM

File: F:\PROJECTS\12-020W (DEZEN INDUSTRIAL PH2 12-04)\DRAWINGS\00_FUNCTIONAL\05_FD_FIGURES\12-020W_GR-1_GRADING PLAN.DWG

NOT FOR CONSTRUCTION

DEZEN INDUSTRIAL PH2

urbantech west
Urbantech West, A Division of Leighton-Zec West Ltd.
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FIGURE 8
SANITARY DRAINAGE PLAN

PROJ. No.:	DATE:	SCALE:
12-020W	NOV 2017	1:1500

PLOT DATE: July 12, 2019 11:09:17 AM
File: F:\PROJECTS\12-020W (DEZEN INDUSTRIAL-PH2 12-04)\DRAWINGS\00_FUNCTIONAL\05_FD_FIGURES\12-020W_SAN-1_SANITARY DRAINAGE PLAN.DWG

Subject: Information Gathering Form - DeZen Industrial Lands, 7140 Hurontario Street, Mississauga
Date: Thursday, October 31, 2019 at 8:51:00 AM Eastern Daylight Time
From: Boucher, Noel
To: SAROntario@ontario.ca
CC: Park, Olivia, jlethbridge@bellnet.ca
Attachments: image001.png, DeZen_IGF Supporting Information_Oct2019.pdf, DeZen Lands_IGF_30Oct2019.pdf

To Whom It May Concern:

On behalf of 678604 Ontario Inc., please find attached an Information Gathering Form (IGF) addressing the installation of a stormwater discharge outfall and buried sanitary sewer within regulated Redside Dace habitat associated with Fletcher's Creek, in the City of Mississauga. The stormwater outfall and sanitary sewer are required to facilitate an industrial development on the adjacent tablelands (outside of regulated habitat), located at 7140 Hurontario Street.

To facilitate your review of this project, I have attached the following:

- Completed Information Gathering Form; and
- A letter providing additional detail on the proposed project components within Redside Dace habitat.

As per our previous discussions with Jeff Andersen, submission of this IGF is required to advance discussions with the Ministry to ensure all requirements under the *Endangered Species Act* are met for this proposed project. I trust the attached IGF and supporting letter provide the information you require to complete your review at this stage in the process.

Please do not hesitate to contact me to discuss any aspect of this proposed development and we look forward to hearing back at your earliest convenience.

Regards,
Noel

SAVANTA
A GEI Company

Noel Boucher
Senior Fisheries Biologist
Toll Free: 1.800.810.3281 Ext 1250
Direct: 289.929.6951

Boucher, Noel

From: Boucher, Noel
Sent: Monday, May 4, 2020 2:07 PM
To: Eplett, Megan (MECP)
Cc: James Lethbridge (jlethbridge@bellnet.ca); 'SKIRA ADMIN'
Subject: RE: Information Gathering Form - DeZen Industrial Lands, 7140 Hurontario Street, Mississauga

Hi Megan,

Based on the current conceptual design, the stone core wetland at the stormwater outlet in the Fletcher's Creek valley would have a permanent footprint of 275 m^2.

The permanent sanitary sewer within the valley will all be buried and will have no surface footprint following completion of construction.

The estimated overall temporary disturbance area associated with installation of the SWM outlet, stone core wetland and sanitary sewer line would be 1,600 m^2, although this is definitely subject to change during detailed design as it is only roughly estimated at this point. If there are any specific thresholds in terms of areas that wouldn't trigger a permit being required, there may be flexibility to work on this number.

I trust this provides the information you require to complete your review of the IGF, but please let me know if you have any further questions or need anything else from us.

Regards,
Noel

From: Eplett, Megan (MECP) <Megan.Eplett@ontario.ca>
Sent: Friday, March 27, 2020 11:35 AM
To: Boucher, Noel <nboucher@savanta.ca>
Subject: [EXT] RE: Information Gathering Form - DeZen Industrial Lands, 7140 Hurontario Street, Mississauga

Hi Noel,

Ok great thanks for providing me an update on the status of the project.

If you could calculate the temporary impacts as well that would be useful.

Thanks,

Megan

Megan Eplett | Management Biologist | Permissions and Compliance | Species at Risk Branch | Ontario Ministry of Environment, Conservation and Parks
50 Bloomington Road, Aurora, Ontario, L4G 0L8 | Phone: 289-221-1794 |
Email: megan.eplett@ontario.ca

From: Boucher, Noel <nboucher@savanta.ca>
Sent: Friday, March 27, 2020 11:22 AM
To: Eplett, Megan (MECP) <Megan.Eplett@ontario.ca>
Subject: RE: Information Gathering Form - DeZen Industrial Lands, 7140 Hurontario Street, Mississauga

Hi Megan,

Thanks very much for getting back to me.

The engineers are just finishing up some design work on the outlet structures (headwalls and stone core wetlands), so I hope to get back to you at some point mid-next week or so with some surface areas of infrastructure within regulated habitat.

Do you require estimates of temporary construction disturbance area as well?

Thanks very much,
Noel

From: Eplett, Megan (MECP) <Megan.Eplett@ontario.ca>
Sent: Thursday, March 26, 2020 3:06 PM
To: Boucher, Noel <nboucher@savanta.ca>
Subject: [EXT] RE: Information Gathering Form - DeZen Industrial Lands, 7140 Hurontario Street, Mississauga

Hi Noel,

Apologies for the delayed review of this file. From the information provided I understand that the sanitary sewer (headwall and outlet) and the storm sewer (outlet and proposed stone crop wetland) will be constructed within habitat for Redside Dace.

Are you able to provide the measurements in m2 of impacts within regulated habitat?

Thanks,

Megan

Megan Eplett | Management Biologist | Permissions and Compliance | Species at Risk Branch | Ontario Ministry of Environment, Conservation and Parks
50 Bloomington Road, Aurora, Ontario, L4G 0L8 | Phone: 289-221-1794 |
Email: megan.eplett@ontario.ca

From: Boucher, Noel <nboucher@savanta.ca>
Sent: March 25, 2020 2:22 PM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Cc: James Lethbridge <jlethbridge@bellnet.ca>
Subject: FW: Information Gathering Form - DeZen Industrial Lands, 7140 Hurontario Street, Mississauga

Hello,

I am following up on the email/Information Gathering Form submitted below.

Would it be possible to confirm which Management Biologist this file currently sits with? I am just hoping to obtain an update on when MECP review and follow-up may occur.

Thanks very much,
Noel

From: Boucher, Noel <nboucher@savanta.ca>
Sent: Thursday, October 31, 2019 8:51 AM
To: SAROntario@ontario.ca
Cc: Park, Olivia <opark@savanta.ca>; jlethbridge@bellnet.ca
Subject: Information Gathering Form - DeZen Industrial Lands, 7140 Hurontario Street, Mississauga

To Whom It May Concern:

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Please do not hesitate to contact me to discuss any aspect of this proposed development and we look forward to hearing back at your earliest convenience.

Regards,
Noel

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