

NATURAL HERITAGE EVALUATION

Nobleton Well 2

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FINAL

6415 Northwest Drive
Units 37-40
Mississauga, ON L4V 1X1
envisionconsultants.ca



August 22, 2023

ETO Engineering
9030 Leslie Street, Unit 300
Richmond Hill, ON L4B 1G2

Attention: Johnny Pang, P.Eng., PMP

SUBJECT: NATURAL HERITAGE EVALUATION, NOBLETON WELL 2

A Natural Heritage Evaluation (NHE) has been prepared for the site described as Nobleton Well 2, located at 22 Faris Avenue in the Township of King, Ontario. Please find the document attached for your review. The study outlines the proposed development and recommends mitigation measures to help maintain the form and function of the Key Natural Heritage Features found on and within the area of influence of the development.

We thank you for utilizing EnVision for this assignment. If there are any questions regarding the enclosed report, please do not hesitate to contact us.

Yours sincerely,

Stephen Dinka, B.Sc., M.Env.Sc.
Project Manager – Ecologist
sdinka@envisionconsultants.ca



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1. INTRODUCTION

EnVision Consultants Ltd. (EnVision) was retained by ETO Engineering (the 'Client') to conduct a Natural Heritage Evaluation (NHE) for the property described as Nobleton Well 2 , herein referred to as the "Site". Refer to **Figure 1** for site location details.

The Site is located at 22 Faris Avenue in the Township of King, Ontario. The Client is proposing capacity and treatment upgrades to the current well facility, primarily within the western and northern portions of the Site. Although the Site is located within a mature residential neighborhood and the works will not affect natural self-sustaining vegetation communities, a Natural Heritage Evaluation is required due to proximity of a stream that transects the property which is designated as a key feature in the local and regional Natural Heritage Systems as outlined in the Township of King and York Region Official Plans (OP) respectively, and is within the Toronto Region Conservation Authority (TRCA) Regulated Area.

A Terms of Reference (TOR) that outlines study scope was prepared by EnVision and approved by TRCA. The work program aims to confirm the presence and boundaries of Key Natural Heritage Features (KNHFs) identified through consultation with regulating agencies, background research, and field reconnaissance. The NHE discusses the potential impacts of the proposed development on these features and proposes relevant mitigation measures to help ensure that the functions and linkages between KNHFs are preserved. This report was prepared in accordance with the TOR and above-noted requirements, and meets the requirements of the Greenbelt Plan and Township of King Official Plan.



2. ENVIRONMENTAL POLICY CONTEXT

2.1. GREENBELT PLAN

The Site is located within a 'Towns and Villages' Settlement Area overlay within the Protected Countryside on Schedule 1 of the Greenbelt Plan (Government of Ontario, 2017). Protected Countryside lands *are intended to enhance the special extent of agriculturally and environmentally protected lands covered by the NEP and the ORMCP while at the same time improving linkages between these areas and the surrounding major lake systems and watersheds* (Government of Ontario, 2017). The Plan contains three types of geographic specific policies that apply to specific lands within the Protected Countryside (as shown on Schedule 1 of the Greenbelt Plan); the Natural System, Agricultural System, and Settlement Areas. Per Section 3.4.3.1 of the Greenbelt plan, locations within Towns and Villages are excluded from the Key Natural Heritage Feature and Key Hydrologic Feature policies that apply to the Protected Countryside outside of Settlement Areas and are instead governed by the natural heritage policies of the applicable municipal official plan(s). The natural heritage system policies of the King Township are described below.

2.2. YORK REGION OFFICIAL PLAN

In general, natural heritage policies of the York Region OP (2022) have generally been integrated within the current consolidation of the Township of King OP (2019) mapping and policies, and implemented by the local planning authority. It is expected that compliance with the natural heritage requirements of the Township of King OP will ensure compliance with York Region policies.

2.3. TOWNSHIP OF KING OFFICIAL PLAN

The Township of King Official Plan (2019) provides goals, objectives and policies to direct land use change and activity in the Township.

This Plan defines a Natural Heritage System and includes policies to ensure its protection and to provide for its restoration and enhancement. The Township's Natural Heritage System includes various natural heritage features and linkages as well as hydrologic features intended for protection by the 2020 Provincial Policy Statement, 2017 Greenbelt Plan, 2017 Oak Ridges Moraine Conservation Plan (ORMCP), the Lake Simcoe Protection Plan (LSPP) and the Natural Heritage System and Restoration Strategy (2018), as well as those identified in the York Region Official Plan (2010) and identified through other reliable information sources, such as Provincial data, the Toronto and Region Terrestrial Natural Heritage System Strategy, and other recently completed studies.

Section 4.2.4.2 of the Plan requires a Natural Heritage Evaluation/Hydrological evaluation where development or site alteration is proposed within 120 m of a wetland, permanent stream, intermittent stream, etc., to determine its importance, functions and means of protection or maintenance of function, in accordance with Provincial plans, technical papers, and guidelines as applicable.



Section 4.2.2.8 states that development or site alteration is not permitted in key natural heritage features and key hydrologic features or a required vegetation protection zone, except: c Infrastructure, provided it is demonstrated through a Natural Heritage Evaluation or Hydrologic Evaluation that there will no negative impact on the feature or its functions or if it is authorized through an Environmental Assessment, and in accordance with the policies of this Plan and any applicable Provincial Plan.

A permanent watercourse identified as a Key Natural Heritage Feature (Fish Habitat) and a Key Hydrologic Feature (Permanent Stream) transects a portion of the Site, therefore the proposed site alteration requires completion of a Natural Heritage Evaluation.

The Township of King Official Plan (2019) integrates requirements of the Provincial Greenbelt Plan and Regional Natural Heritage System, and outlines the following minimum requirements for the Natural Heritage Evaluation:

- Identify and confirm protection of any applicable environmental features, required buffers, setbacks and vegetation protection zones in accordance with the requirements of this Plan;
- Identify and considers opportunities for environmental restoration or enhancement;
- Recommend implementation measures such as monitoring or management; and
- Meet the requirements of the Provincial Plans and in accordance with Provincial and Conservation Authority policies, technical papers and guidelines as applicable.

This study and report are designed to meet the requirements of the Township of King OP, York Region OP, Conservation Authority policies, and the Provincial Greenbelt Plan.

2.4. CONSERVATION AUTHORITIES ACT

The Site is located within the Toronto and Region Conservation Authority (TRCA) Regulated Area. Ontario Regulation 166/06, made under the Conservation Authorities Act, establishes Regulated Areas where development could be subject to flooding, erosion, or dynamic beaches, or where interference with wetlands and alterations to shorelines and watercourses might have an adverse effect on those environmental features. Under Ontario Regulation 166/06, any proposed development, interference or alteration within a Regulated Area requires a permit from TRCA.

2.5. FEDERAL FISHERIES ACT (1985)

The conservation, management, and protection of fish and fish habitat are the responsibility of Fisheries and Oceans Canada (DFO). DFO is given authority to achieve this under the federal Fisheries Act. Fish habitat as defined in the *Fisheries Act*, c. F-14 as “spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes”. The Act also includes a broader definition of fish as shellfish, crustaceans, and marine mammals at all stages of their life cycles.



In Ontario, the Department of Fisheries and Oceans Canada (DFO) manages fish habitat and the Ontario Ministry of Natural Resources and Forestry (MNRF) manages fisheries. Fish and fish habitat are protected under the federal Fisheries Act (1985), last amended on August 28, 2019. The protection provisions of the Fisheries Act apply to all fish and fish habitat throughout Canada, and include 2 key prohibitions, specifically:

- Subsection 34.4(1) – No person shall carry on any work, undertaking or activity, other than fishing, that results in the death of fish.
- Subsection 35(1) – No person shall carry on any work, undertaking or activity that results in the harmful alteration, disruption or destruction of fish habitat.

Proponents are responsible for planning and implementing works, undertakings or activities in a manner that avoids harmful impacts, specifically the death of fish and the harmful alteration, disruption or destruction of fish habitat. Where proponents believe that their work, undertaking or activity will result in negative impacts to fish or fish habitat that cannot be fully mitigated require Fisheries Act Authorization.

2.6. MIGRATORY BIRDS CONVENTION ACT (1994)

The Federal Migratory Birds Convention Act (MBCA) protects the nests, eggs and young of most bird species from harassment, harm or destruction. No permitting or authorization is required under the MBCA, however proponents who fail to comply with the legislation may be fined if found to in contravention of the Act. Migratory may be nesting in the vicinity of the site from April 1st to August 31st, and vegetation clearing outside of this period is the primary mechanism through which proponents avoid potential contravention of the Act. If vegetation clearing must occur within the breeding bird window, clearing may be permissible if nesting birds are not impacted.

2.7. ONTARIO ENDANGERED SPECIES ACT (2007)

The Ontario Endangered Species Act (ESA) came into force in June 2008. Under the Act, species may be listed as Endangered, Threatened or Special Concern on the Species At Risk in Ontario list (O. Reg 240/08). Species listed as Endangered or Threatened, as well as their habitats (e.g., areas essential for breeding, rearing, feeding, hibernation and migration) are afforded legal protection under the Act.

Subsection 9(1) of the ESA states that:

No person shall,

- (a) kill, harm, harass, capture or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species;

Subsection 10(1) of the ESA states that:

No person shall,

- (a) damage or destroy the habitat of a species that is listed on the Species at Risk in Ontario list as an endangered or threatened species.



However, under subsection 17(1) of the ESA, the Minister may issue a permit that authorizes a person to engage in an activity that would otherwise be prohibited by subsection 9(1) or 10(1) if certain conditions outlined in subsection 17(2) are satisfied.

2.8. PROVINCIAL POLICY STATEMENT (2020)

The Provincial Policy Statement (PPS) (Ontario Ministry of Municipal Affairs and Housing (OMMAH), 2020) is a planning document that provides a framework for, and governs development within, the Province of Ontario. In order to preserve various ecological resources deemed significant in the Province, development lands must be assessed for the presence of natural heritage features prior to construction. These natural heritage features (listed below) are both defined and afforded protections under the PPS. Linkages between natural heritage features, surface water and groundwater features are also recognized and afforded similar protections under the policy. Section 2.1.2 of the PPS also requires that the diversity and connectivity of all natural heritage features and the long-term ecological function of natural heritage systems be maintained, restored or improved where possible. Further to this, natural heritage systems within Ecoregions 6E and 7E are to be identified as per Section 2.1.3.

Under the PPS (OMMAH, 2020), development or site alteration is prohibited within significant wetlands in Ecoregions 5E, 6E and 7E and in significant coastal wetlands, but may be allowed adjacent to these features provided the adjacent lands have been evaluated and it has been demonstrated that there will be no negative impacts to these features or their ecological functions. Development may be permitted in or adjacent to significant wetlands north of Ecoregions 5E, 6E and 7E, significant woodlands and significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River), significant wildlife habitat, and significant areas of natural and scientific interest (ANSI), provided there will be no negative impacts to these features or their ecological function due to the proposed undertaking. In addition, development and site alteration is not permitted in fish habitat unless in accordance with provincial and federal legislation.

Natural heritage features as defined by the PPS (OMMAH, 2020) include:

- A. Fish Habitat;
- B. Habitats of Endangered and Threatened Species;
- C. Significant Areas of Natural and Scientific Interest (ANSI);
- D. Significant Wetlands;
- E. Significant Coastal Wetlands;
- F. Other Coastal Wetlands in Ecoregions 5E, 6E and 7E;
- G. Significant Wildlife Habitat;
- H. Significant Woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River); and,
- I. Significant Valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River).



3. STUDY APPROACH

3.1. TERMS OF REFERENCE

A Terms of Reference (TOR) for the evaluation was reviewed and approved without comment by planning staff from the TRCA (G. Tsourounis, per comm. June 20, 2023). A copy of the TOR is provided in **Appendix A**.

3.2. AGENCY CONSULTATION AND BACKGROUND INFORMATION REVIEW

The following agencies and information sources were consulted in preparation of this study:

- Department of Fisheries and Oceans (DFO) online mapping tool (DFO, 2022);
- Greenbelt Plan (Government of Ontario, 2017);
- MECP staff (J. Anderson, pers. comm. March 27, 2023);
- Natural Heritage Information Centre (NHIC) Mapping and Databases (OMNRF, 2014);
- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2017);
- Significant Wildlife Habitat: Technical Guide (OMNR, 2000) and Ecoregion 6e Criteria Schedules (MNRF 2013);
- Satellite imagery;
- Species at Risk in Ontario (SARO) list (O. Reg. 230/08, e-Laws currency date Jan. 25, 2023);
- TRCA staff (G. Tsourounis, per comm. June 20 and June 29, 2023);
- TRCA Regulation Mapping (TRCA, 2023);
- Township of King Official Plan, 2019 (Office Consolidation – October 2022);
- Township of King Zoning By-Law for the Nobleton Urban Area 2016-71 (2016); and,
- York Region Official Plan (2022).

A complete list of references used in preparation of this study is provided in Section 7 of this report. All information and records obtained through agency consultation and background information review were incorporated as appropriate into the present study. A copy of all email correspondence is provided in **Appendix B**.

3.3. SITE RECONNAISSANCE

Prior to commencing the site reconnaissance, a review of background information and satellite imagery was conducted to identify the presence of KNHFs on the Site. One (1) site reconnaissance was undertaken on May 17, 2023, to confirm presence of KNHFs and determine general characteristics of the Site. The site reconnaissance was conducted under clear sunny skies with a slight breeze and air temperature approximately 2°C. During the reconnaissance, photographs of the Site were taken, and observations of wildlife, vegetation and natural features were recorded.



3.4. KEY NATURAL HERITAGE FEATURE ASSESSMENT AND SPECIES AT RISK SCREENING

A comprehensive review of all potential Key Natural Heritage Features protected under the Provincial Greenbelt plans and Regional/Local Natural Heritage systems was undertaken to verify the presence and location of any regulated features and functions within and adjacent to the Site. This assessment includes a screening of Species At Risk potentially present at the site based on the background information review and agency consultation to evaluate the potential of each species to occur within or adjacent to the Site based on current conditions. This assessment identifies SAR species that may be relevant to the site and that warrant further consideration during field investigation and/or impact assessment, and those that are not relevant to the site and are thus excluded from further consideration. The complete assessment is presented in Section 4.2.3 and summarized in *Table 4-1*.

3.5. PROPOSED DEVELOPMENT, IMPACTS AND MITIGATION

The interaction of the proposed development with all identified natural environment features and functions is reviewed to identify required buffers/setbacks and vegetation protection zones in accordance with the policy requirements outlined in Section 5. General mitigation measures and recommendations are also provided.



4. STUDY FINDINGS AND EXISTING CONDITIONS

The results of the study are presented below.

4.1. SITE DESCRIPTION

The Site is rectangular in shape with approximately 15 m of frontage along Faris Avenue, occupying an area of approximately 0.14 ha (0.35 acres). The Site is currently comprised of manicured grass, trees, and a single-story well facility with an associated driveway. A tributary of the East Humber River transects the southwestern portion of the Site, flowing in a northwest to southeast direction. The tributary occupies the western portion of the study area, flowing south from King Road and redirecting to the southeast prior to entering the Site. To exit the Site, the tributary's flow enters a culvert at the southern edge of the Site, at Faris Avenue. Properties within the study area are primarily comprised of residential dwellings with some commercial operations and churches along King Road.

On Site, the tributary was observed to be flowing in a northwest to southeast direction, toward Faris Avenue, and the water was noted to be slow-moving. The tributary was shallow, and the bottom was comprised of sediment, with no or minimal cobbles or vegetation. Large rocks and cinder blocks were observed within the northern on-Site portion of the tributary.

Vegetation on the Site primarily consisted of manicured lawn, with trees bordering the Site and the northern portion of the tributary located on the southwest portion of the Site. A narrow band of naturalized vegetation surrounds the tributary and includes Manitoba Maple (*Acer negundo*), Red-osier Dogwood (*Cornus sericea*), Garlic Mustard (*Alliaria petiolata*), Bedstraw (*Galium sp.*), and Teasel (*Dipsacus sp.*). Vegetation observed within the manicured lawn on the Site included Strawberry (*Fragaria sp.*), Creeping Charlie (*Glechoma hederacea*), and Dandelion (*Taraxacum officinale*). Tree species along the Site boundaries consisted of Trembling Aspen (*Populus tremuloides*), Manitoba Maple, Norway Spruce (*Picea abies*), and Eastern White Cedar (*Thuja occidentalis*).

4.2. KEY NATURAL HERITAGE FEATURES

An assessment of the Key Natural Heritage Features defined in the PPS and Greenbelt Plan are provided below.

4.2.1. Fish Habitat and Hydrogeologically Sensitive Features

A tributary of the East Humber River, part of the East Humber Subwatershed, occupies the western portion of the study area. This tributary most likely originates through surface water contributions near King Road with flow generally conveyed southeast prior to entering the Site. Through the Site, the tributary transacts the southwest corner and is approximately 25 m in length. Flow is generally conveyed southward through a slight meandering and defined, open channel prior to entering a culvert at the southern edge of the Site, at Faris Avenue. At the time of assessment, the water was noted to be slow-moving and shallow (approximately 0.10 m water depth) with no aquatic vegetation present.



Substrate was comprised of fine sediment, however, within the upstream on-Site portion of the tributary, contained large rocks and cinder blocks which may provide a break in flow or cover areas for fish (if present). A cedar hedgerow located near the upstream portion of the tributary provides a section of full (100%) canopy cover, while the remaining downstream portion had no (0%) canopy cover. Overall, this tributary would provide flat fish habitat.

Based on background information, this tributary is identified as a permanent stream. Further, review of the Ontario GeoHub: Aquatic Resource Area Line Segment (Land Information Ontario, 2019) data, indicates this tributary is classified as a cold-water regime and contains non-sensitive fish species such as Creek Chub (*Semotilus atromaculatus*) and White Sucker (*Catostomus commersonii*).

The tributary is protected under the Fisheries Act as administered by DFO and is considered fish habitat. As such, this feature is also considered a Key Natural Heritage Feature of the Township of King Natural Heritage System. There are no development plans regarding the tributary. Measures to mitigate potential impacts to the west tributary are detailed under Section 5.2.1 of this report.

4.2.2. *Significant Areas of Natural Scientific Interest*

Significant Areas of Natural and Scientific Interest (ANSI) are defined as areas of land and water containing natural landscapes or features that have been identified as having life science or earth science values related to protection, scientific study or education.

The Natural Heritage Information Centre (NHIC) database (OMNR, 2021a) was searched for the presence of ANSIs on or within 120 m of the Site. No ANSIs were identified on or within 120 m of the Site.

4.2.3. *Habitat of Special Concern, Threatened or Endangered Species*

The PPS (OMMAH, 2020) defines the significant habitat of Endangered or Threatened species as the habitat, as approved by the Ontario Ministry of Natural Resources (OMNR), that is necessary for the maintenance, survival and/or the recovery of a naturally occurring or reintroduced population of Endangered or Threatened species, and where those areas of occurrences are occupied or habitually occupied by the species during all or part(s) of their life cycle. The OMNR is mandated to ensure accurate database information for the identification, listing and conduct of ongoing assessments for significant Endangered species and their related habitats.

Special Concern, Threatened or Endangered Species as defined above includes those groups identified as Special Concern, Threatened or Endangered by the Committee on the Status of Species at Risk in Ontario (COSSARO) and listed under the *Endangered Species Act, 2007*, as well as species identified as Special Concern, Threatened or Endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC)

The Natural Heritage Areas online mapping tool (MNRF, 2022) was reviewed to determine if there are known rare, Threatened or Endangered species on or within 120 m of the Site. Two (2) square kilometers (km²) quadrats (17PJ0761 and 17PJ0861) encompassing the Site were searched to ensure potential species at risk with the potential to be in the general area were accounted for in the search.



Redside Dace (*Clinostomus elongatus*) (END), Black Ash (*Fraxinus nigra*) (END), Eastern Meadowlark (*Sturnella magna*) (THR), and Bobolink (*Dolichonyx oryzivorus*) (THR) were identified within the quadrats.

In addition to the NHIC database, the Ontario Breeding Bird Atlas (OBBA) (Bird Studies Canada et al., 2006) was consulted to determine if there were endangered, rare or threatened species known to be present within the vicinity of the Site. The OBBA uses 100 km by 100 km blocks, further subdivided into 10 km by 10 km squares to compartmentalize geographical areas.

The Site lies in the square identified as 17PJ06. Species with breeding evidence values within square 17PJ06 as identified by the OBBA include Wood Thrush (*Hylocichla mustelina*) (SC), Bobolink (THR), and Eastern Meadowlark (THR).

A review of aerial photographs was also conducted to determine if there is suitable habitat for other Threatened or Endangered species on or adjacent to the Site. Based on this review it is reasonable to expect that structures within the study area may provide habitat for Chimney Swift (*Chaetura pelagica*). Based on the site reconnaissance, Chimney Swift are unlikely to occur at the Site as there were no suitable chimneys present. Additionally, trees or buildings within the study area may provide suitable habitat for SAR bats; however, no evidence of suitable habitat for SAR bats was observed on the Site during the site reconnaissance.

An assessment of the habitat potential for the above-mentioned endangered, rare or threatened species on the Site is provided in *Table 4-1*, below. Special consideration was given to these species and their habitat during the site reconnaissance.



Table 4-1 Endangered, Rare or Threatened Species Habitat Potential Assessment

SPECIES NAME	SARO ¹	COSEWIC ²	HABITAT DESCRIPTION ³	HABITAT POTENTIAL	FIELD OBSERVATIONS
BOBOLINK	THR	THR	Bobolink breed in a variety of natural grassland habitat types, including remnant prairies, savannahs and alvar grasslands. They also nest commonly in grassland habitat restoration sites and primarily in hayfields and pastures. Bobolinks will also nest in low densities in large grassy bogs, fens and beaver meadows (MNR, 2013).	Low	Suitable pasture or open field habitat was not identified on or within 120 m of the Site.
BLACK ASH	END	THR	Black Ash is predominantly a wetland species found in swamps, floodplains and fens. Black Ash occurs throughout most of Ontario, except the Far North, ranging from southern Ontario east to the Quebec border, west to the Manitoba border and north to approximately 51° latitude. Approximately 25% of the global range of Black Ash occurs in Ontario (MECP, 2022).	Low	Black Ash was not observed on the Site. It may be found within the 120 m study area; however, upgrades to the existing well facility on the Site are not anticipated to impact the surrounding study area.
CHIMNEY SWIFT	THR	THR	Chimney Swift are more likely to be found in and around urban settlements where they nest and roost (rest or sleep) in chimneys and other manmade structures. In Ontario, it is most widely distributed in the Carolinian zone in the south and southwest of the province. (MNRF, 2014).	Low	Suitable chimneys are not present within the Site. Chimney Swifts may utilize the Site as foraging grounds. There is potential for suitable chimneys to exist within the surrounding study area; however, the proposed well facility upgrades are not anticipated to impact these areas.
EASTERN MEADOWLARK	THR	THR	Eastern Meadowlark breed primarily in moderately tall grasslands, such as pastures and hayfields, but are also found in alfalfa fields, weedy borders of croplands, roadsides, orchards, airports, shrubby overgrown fields, or other open areas. Small trees, shrubs or fence posts are used as elevated song perches (MNRF, 2014).	Low	Suitable open field or pasture habitat was not identified within the vicinity of the Site.



SPECIES NAME	SARO ¹	COSEWIC ²	HABITAT DESCRIPTION ³	HABITAT POTENTIAL	FIELD OBSERVATIONS
REDSIDE DACE	END	END	Redside Dace are found in pools and slow-moving areas of small streams and headwaters with a gravel bottom. They are generally found in areas with overhanging grasses and shrubs and can leap up to 10 cm out of the water to catch insects. Redside Dace are found in a few tributaries of Lake Huron, in streams flowing into western Lake Ontario, the Holland River (which flows into Lake Simcoe), and Irvine Creek of the Grand River system (which flows into Lake Erie) (MNRF, 2014).	Low	Based on mapping tools and background research, Redside Dace habitat was not identified in the immediate vicinity. This is consistent with our field observations, as the tributary did not appear to provide the preferred habitat for this species. The tributary lacked observable pooled areas and gravel substrate. Thus, there is a low probability of Redside Dace being found within the tributary on Site.
WOOD THRUSH	SC	THR	The Wood Thrush lives in mature deciduous and mixed (conifer-deciduous) forests. They seek moist stands of trees with well-developed undergrowth and tall trees for singing perches. These birds prefer large forests but will also use smaller stands of trees. They build their nests in living saplings, trees or shrubs, usually in Sugar Maple or American Beech. (MNRF, 2014).	Low	Forested area containing a thick understory was not identified on or within 120 m of the Site.

¹ Committee on the Status of Endangered Wildlife in Canada; and ² Species at Risk in Ontario Status; END – Endangered, THR – Threatened, SC – Special concern, ‘‘ – Not Listed. ³ Nature Conservancy conservation concern rankings (NHIC, 2010): G - Global Level, S - Sub-national Rank (Ontario), 1 - Critically Imperiled, 2 - Imperiled, 3 - Vulnerable, 4 - Apparently Secure, 5 – Secure, GNA – Not Applicable.



4.2.4. Significant Wetlands

Wetlands are defined in the PPS (OMMAH, 2020) as lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. There are four major wetland types; which are classified as swamps, marshes, bogs, and fens. A significant wetland is defined as an area identified as provincially significant by the Ministry of Natural Resources using evaluation procedures established by the Province, as amended from time to time (OMMAH, 2020). Accordingly, it is the responsibility of the OMNR to both identify and classify wetlands as significant in Ontario.

Based on a review of the NHIC online mapping tool (MNR, 2022) no Provincially Significant Wetlands (PSW) were identified on or within 120 m of the Site. Additionally, no unevaluated or non-provincially significant wetlands were identified on or within 120 m of the Site.

4.2.5. Significant Wildlife Habitat

Wildlife habitat is defined as areas where plants, animals, and other organisms live and find adequate amounts of food, water, shelter, and space needed to sustain their populations. Specific wildlife habitats of concern may include areas where species concentrate at a vulnerable point in their annual life cycle; and areas which are important to migratory or non-migratory species (OMMAH, 2020).

Wildlife habitat is referred to as significant if it is ecologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area or Natural Heritage System (OMMAH, 2020).

Guidelines and criteria for the identification of SWH are detailed in the Significant Wildlife Habitat: Technical Guide (OMNR, 2000) and the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (OMNRF, 2015). Significant wildlife habitat is described under four main categories:

- Seasonal concentrations of animals;
- Rare vegetation communities or specialized habitats for wildlife;
- Habitat for species of conservation concern; and,
- Animal movement corridors.

SWH on or adjacent to the Site was not identified in the York Region OP (2022), the Township of King OP (2016), or other background sources reviewed in the preparation of this report, and no potential SWH were observed during the site reconnaissance.



4.2.6. *Significant Woodlands*

Significant woodlands are defined as treed areas that provide environmental and economic benefits such as erosion prevention, water retention, and provision of habitat, recreation and the sustainable harvest of woodland products (OMMAH, 2020). Woodlands include treed areas, woodlots or forested areas and vary in their level of significance. The identification and assessment of significant woodlands is the responsibility of the local planning bodies, in this case York Region, and should be identified using criteria established by the OMNRF. Woodland significance is typically determined by evaluating key criteria which relate to woodland size, ecological function, uncommon woodland species, and economic and social value.

Significant woodlands were not identified on either the York Region OP (2022) nor the Township of King OP (2016).

4.2.7. *Significant Valleylands*

The PPS (OMMAH, 2020) refers to a significant valleyland as a natural area that occurs in a valley or other landform depression that has water flowing through or standing for some period of the year and is ecologically important in terms of features, functions, representation, or amount, and contributes to the quality or diversity of an identifiable geographic region or natural heritage system. The local planning authority is responsible for identifying and evaluating significant valleylands.

Significant valleylands were not identified within the York Region (2022) and Township of King (2016) Official Plans.

4.2.8. *Sand Barrens, Savannahs and Tall Grass Prairies*

An assessment of sand barrens, savannahs, and tall grass prairies was not relevant to this Site. These habitats areas are not present on or within 120 m of the Site.

4.2.9. *Significant Feature Summary*

The results of the assessment of Key Natural Heritage Features identified on or adjacent to the Site are provided in *Table 4-2* below.



Table 4-2 Summary of Key Natural Heritage Features

CRITERION	PRESENT	RECORDS REVIEW RESULTS
FISH HABITAT AND HYDROLOGICALLY SENSITIVE FEATURES	Yes	<p>A tributary of the East Humber River is present within the southwestern corner of the Site, approximately 25 m in length and flows southwards. This tributary generally consists of a slight meandering and defined, open channel with fine substrate and no aquatic vegetation. However, the upstream portion of the tributary contains large rocks and cinder blocks, providing potential cover habitat for fish. This tributary is identified a permanent cold water stream and is considered to provide fish habitat for non-sensitive fish species.</p> <p>Other hydrological sensitive features (kettle lakes, seepage, and springs) or other waterbodies supporting fish habitat were not identified on or within 120 m of the Site.</p> <p>The proposed development does not directly impact the tributary. Measures to mitigate potential indirect impacts are detailed in Section 5.2.1 of the report.</p>
SIGNIFICANT ANSI	No	There are no ANSIs on or within 120 m of the Site.
RARE, THREATENED OR ENDANGERED SPECIES HABITAT	No	Habitat of rare, threatened or endangered species was not observed within 120 m of the Site.
SIGNIFICANT WETLANDS	No	There were no significant wetlands identified on or within 120 m of the Site.
SIGNIFICANT WILDLIFE HABITAT	No	Significant Wildlife Habitat was not identified on or within 120 m of the Site.
SIGNIFICANT WOODLAND	No	Significant woodland was not identified on or within 120 m of the Site.
SIGNIFICANT VALLEYLANDS	No	There were no significant valleylands identified on or within 120 m of the Site.
SAND BARRENS, SAVANNAHS AND TALL GRASS PRAIRIES	No	There were no sand barrens, savannahs and tall grass prairies on or within 120 m of the Site.



5. POTENTIAL IMPACTS AND PROPOSED MITIGATION

5.1. PROPOSED DEVELOPMENT

It is understood that approval is sought by the Client to complete capacity and treatment upgrades to the existing well facility, primarily on the northern and eastern portions of the Site, as shown on **Figure 2**. The proposed upgrades are anticipated to affect only the areas already occupied by manicured lawn and asphalt driveway, and are not proposed to occur in the vicinity of the tributary on the southwest portion of the Site.

5.2. IMPACTS AND MITIGATION

Potential impacts and recommended mitigation measures for Natural heritage features/functions identified for the Site, as summarized in *Table 4-2* above, are provided below. Items not identified in *Table 4-2* are deemed not to be present, and therefore no further discussion of those features is provided.

5.2.1. *Fish Habitat/KNHF/KHF of the NHS*

The tributary on the southwestern portion of the Site is considered to be fish habitat. Fish habitat is recognized as a Key Natural Heritage Feature of the Township of King Official Plan. Table 3 in Section 4.2.3.5 of the Township of King OP specifies minimum setbacks to development and site alteration the township specifies a minimum 30 m vegetation protection zone from fish habitat. Section 4.2.2.8c allows for development or site alteration in a KNHF and KHF or its required vegetation protection zone, for *Infrastructure*, provided it is demonstrated through a Natural Heritage Evaluation or Hydrologic Evaluation that there will be no negative impact on the feature or its functions or if it is authorized through an Environmental Assessment, and in accordance with the policies of this Plan and any applicable Provincial Plan.

Because the proposed development will not result in permanent changes to water balance (e.g., permanent footprint changes or permanent pumping), and all works will be conducted within manicured vegetation and paved areas, no direct or indirect impacts to Fish Habitat (or KNHF/KHF) are anticipated as long as general mitigation measures for sediment and erosion control, outlined below, are implemented.



5.2.2. General Site Mitigation

The following general recommendations are proposed to reduce impacts to local wildlife and key natural heritage features on and within 120 m of the Site:

- Maintenance, cleaning, or refuelling of construction equipment and machinery should be completed offsite or at a designated onsite location away from natural features and grassed areas, with the use of contractor provided containment systems, to prevent potential fouling of natural features adjacent to work areas.
- Temporarily store, handle, and dispose of materials used or generated (e.g., organics, soils, woody debris, temporary stockpiles) during site preparation and construction in a manner that prevents their entry into naturalized areas. It is recommended that materials temporarily stored onsite are to be stockpiled on the existing driveway, as far away from the tributary as possible, in an attempt to mitigate negative impacts. Only if the existing driveway is not feasible, should the material be stockpiled on a manicured area away from the tributary.
- Sediment and erosion control fencing should be designed and installed to isolate the construction zone, including any soil stockpiling areas, to prevent any sediment migration into the tributary that could negatively impact fish habitat. Erosion control fencing should be inspected and maintained for the duration of the construction project, until all disturbed areas are fully re-vegetated.
- Re-vegetate soils exposed by construction with an appropriate seed mix or sod as soon as feasible.
- To improve the quality of fish habitat associated with the tributary, it is recommended that a permanent vegetation protection zone (VPZ) be established on the manicured lawn portion of the Site to locally enhance water quality and habitat potential for local urban adapted species expected to utilize the site. The VPZ should be as wide as feasible based on operational requirements of the Site, and should be planted with native wetland vegetation shrubs and herbaceous species.
- It is recommended that warranty conditions of the trees and planting material be discussed between the source nursery, the proponent/developer and the contracted qualified gardener/tree planter. The planter is to abide by those conditions to guarantee the warranty.
- Wildlife incidentally encountered during construction shall not be knowingly harmed and shall be allowed to move away from construction on its own. In the event wildlife encountered during construction does not move from the construction zone, the contractor shall contact MNR Aurora District Office to move the animal to a safe area.
- If a Species at Risk is encountered within or adjacent to the construction site, the MECP SAR Branch is to be contacted immediately.
- The contractor shall not destroy an active nest or wound or kills birds of species protected under the Migratory Birds Convention Act, 1994 and/or Regulations under that Act. Any required tree clearing activities should be completed outside of the breeding bird nesting window, which extends from April 1st to August 31st in Ontario. If active nests are encountered, the contractor shall contact a qualified biologist and/or the MNR Aurora District for direction.
- To protect trees on Site and within the nearby proximity, the York Region NHF – 402: Standard Tree Protection Notes (2022) should be added to the construction drawing package with all works completed in accordance with the note.



6. CONCLUSION AND RECOMMENDATIONS

EnVision Consultants Ltd. (EnVision) was retained by ETO Engineering (the 'Client') to conduct a Natural Heritage Evaluation (NHE) for the property described as Nobleton Well 2. The Client is proposing capacity and treatment upgrades to the current well facility, primarily within the western and northern portions of the Site. Although the Site is located within a mature residential neighborhood and the works will not affect natural self-sustaining vegetation communities, a Natural Heritage Evaluation was undertaken due to proximity of a stream that transects the property which is designated as a key feature in the local and regional Natural Heritage Systems as outlined in the Township of King and York Region Official plans respectively, and is within the TRCA Regulated Area. While the Site is also located within the Greenbelt Plan Protected Countryside, it is within a Settlement Area and therefore the natural heritage policies of the Greenbelt Plan do not apply, and instead the natural heritage policies of the Township of King Official Plan apply.

The background information review, agency consultation, reconnaissance field visit, and natural heritage feature/function screening exercise completed by EnVision identified the presence of a permanent stream that supports a tolerant cold water fish community, and is a designated Key Natural Heritage Feature and Key Hydrologic Feature of the Township of King Natural Heritage System. No other protected natural heritage features or functions were identified.

While a 30 m vegetation protection zone/setback to development and site alteration is required under the natural heritage policies of the Township of King Official Plan, the Site is located entirely within 30 m of the tributary and therefore the maintenance of the vegetation protection zone is not feasible. However, the plan also allows for infrastructure within Key Natural Heritage Feature and Key Hydrologic Feature and required Vegetation Protection Zones if a Natural Heritage Evaluation determines there will be no negative impact to the feature or its function. Based on the location of the proposed works being contained within existing manicured vegetation on the Site, and with implementation of general mitigation measures to control potential impacts associated with erosion and sediment deposition within fish habitat, no negative impacts to the feature or its function are anticipated.

This report satisfies the Natural Heritage Evaluation requirements of the Township of King Official Plan and was completed in accordance with the York Region official plan, Provincial Greenbelt Plan, and all applicable conservation and planning authority policies.

6.1. SIGNATURES

Prepared by

Tiffany Waters, M.E.S., ISA Cert. Arb.
Environmental Scientist
twaters@envisionconsultants.ca

Reviewed by

Stephen Dinka, B.Sc., M.Env.Sc.
Project Manager- Ecologist
sdinka@envisionconsultants.ca



6.2. QUALIFIER

EnVision prepared this report solely for the use of the intended recipient in accordance with the professional services agreement. In the event a contract has not been executed, the parties agree that the EnVision General Terms and Conditions, which were provided prior to the preparation of this report, shall govern their business relationship.

The report is intended to be used in its entirety. No excerpts may be taken to be representative of the findings in the assessment. The conclusions presented in this report are based on work performed by trained, professional and technical staff, in accordance with their reasonable interpretation of current and accepted engineering and scientific practices at the time the work was performed.

The content and opinions contained in the report are based on the observations and/or information available to EnVision at the time of preparation, using investigation techniques and engineering analysis methods consistent with those ordinarily exercised by EnVision and other engineering/scientific practitioners working under similar conditions, and subject to the same time, financial and physical constraints applicable to this project.

EnVision disclaims any obligation to update this report if, after the date of this report, any conditions appear to differ significantly from those presented in this report; however, EnVision reserves the right to amend or supplement this report based on additional information, documentation or evidence.

EnVision makes no other representations whatsoever concerning the legal significance of its findings. The intended recipient is solely responsible for the disclosure of any information contained in this report. If a third party makes use of, relies on, or makes decisions in accordance with this report, said third party is solely responsible for such use, reliance or decisions. EnVision does not accept responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken by said third party based on this report.

EnVision has provided services to the intended recipient in accordance with the professional services agreement between the parties and in a manner consistent with that degree of care, skill and diligence normally provided by members of the same profession performing the same or comparable services in respect of projects of a similar nature in similar circumstances. It is understood and agreed by EnVision and the recipient of this report that EnVision provides no warranty, express or implied, of any kind. Without limiting the generality of the foregoing, it is agreed and understood by EnVision and the recipient of this report that EnVision makes no representation or warranty whatsoever as to the sufficiency of its scope of work for the purpose sought by the recipient of this report.

In preparing this report, EnVision has relied in good faith on information provided by others, as noted in the report. EnVision has reasonably assumed that the information provided is correct and EnVision is not responsible for the accuracy or completeness of such information.

Unless otherwise agreed in writing by EnVision, the Report shall not be used to express or imply warranty as to the suitability of the site for a particular purpose. EnVision disclaims any responsibility for consequential financial effects on transactions or property values, or requirements for follow-up actions /or costs.

This limitations statement is considered an integral part of this report.



7. REFERENCES

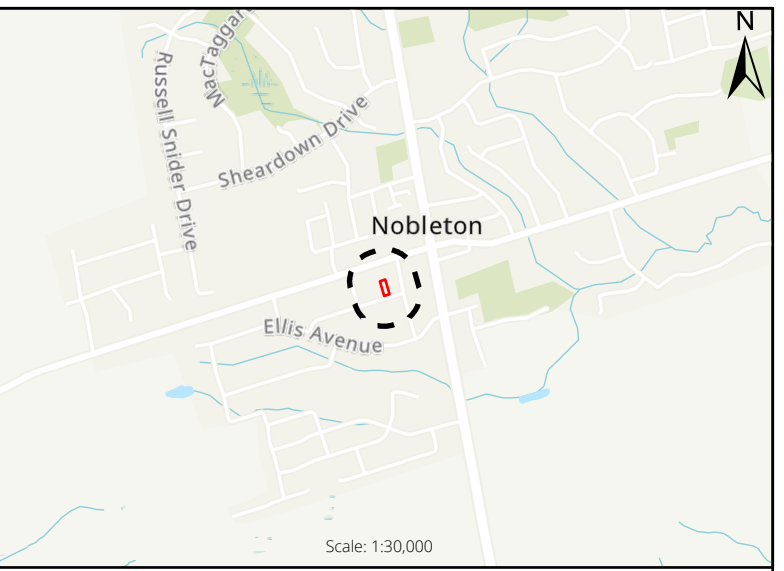
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- Township of King. 2019. Township of King Official Plan. 336 pp.
- Township of King. 2016. Township of King Zoning By-Law for the Nobleton Urban Area 2016-71.





FIGURES

Prepared By: Tanya Peterson
 C:\Users\Tanya Peterson\OneDrive - Envirovision Consultants\Documents\17_GIS\Projects\2023\23-0358\Well_2\APPROX\HE02_0358_Figure_1_Site_Location.aprx
 Data Source: Open Data Ontario, York Region, TRCA



LEGEND

- SITE LOCATION
- 120 m STUDY AREA
- WATERCOURSE
- TRCA REGULATED AREA

Scale: 1:1,500

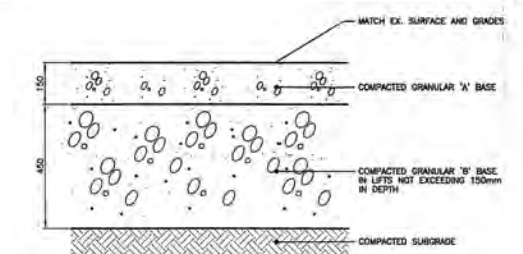
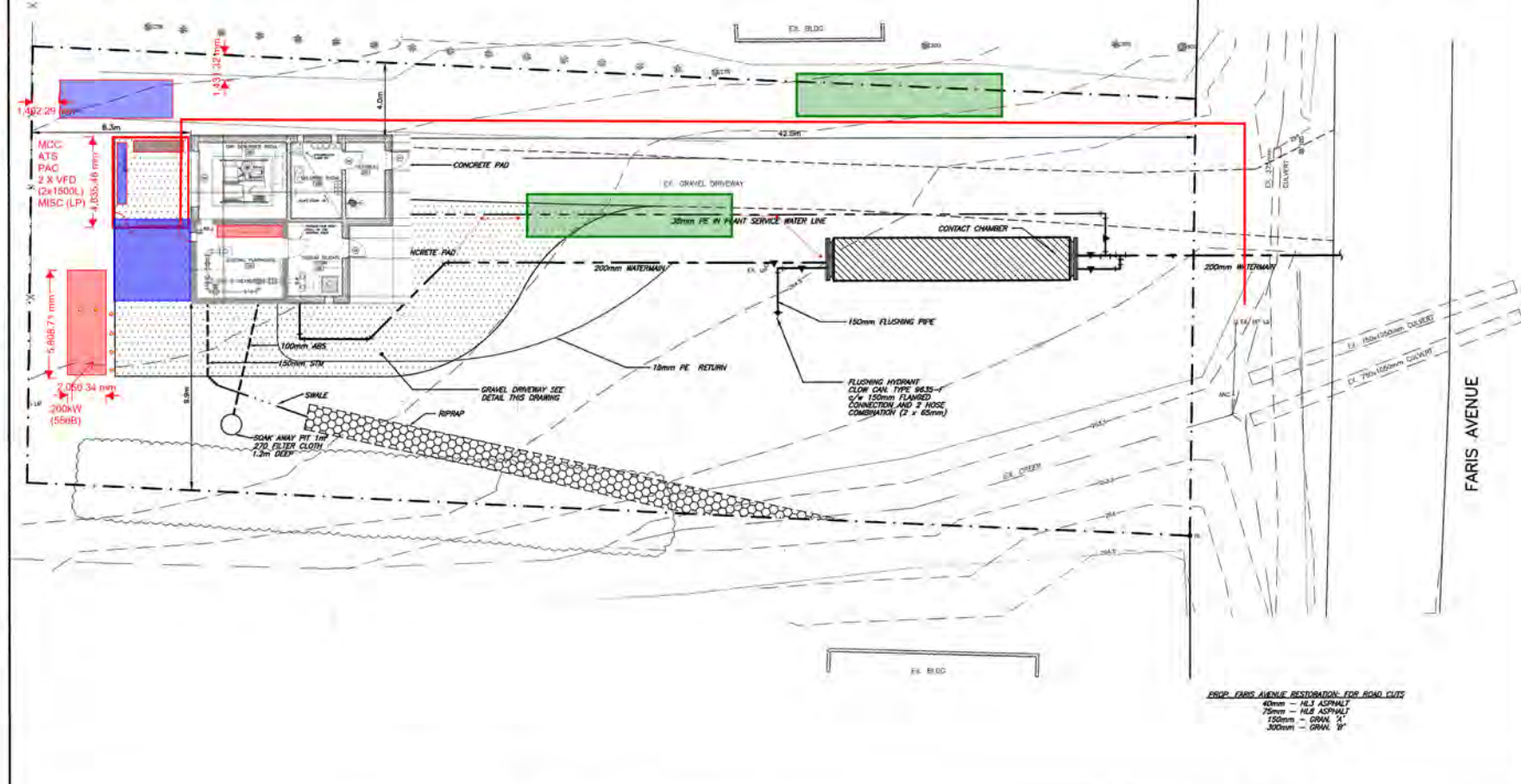
TITLE SITE LOCATION PLAN				
PROJECT NATURAL HERITAGE EVALUATION WELL 2, 22 FARIS AVENUE NOBLETON, ONTARIO				
CLIENT ETO ENGINEERING				
PROJECT NO. 23-0358	DATE JUNE 2023	PREPARED BY TP	APPROVED BY MC	FIGURE 1

Prepared By: Tanya Peterson

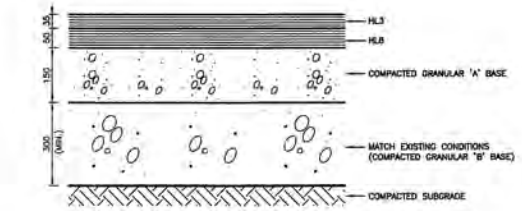
METRIC

GENERAL NOTES:

- COORDINATE CONSTRUCTION AND EQUIPMENT DELIVERY WITH ENGINEER, YORK REGION AND OPERATIONS STAFF TO MINIMIZE DISRUPTIONS TO OPERATIONS OF THE FACILITIES.
- MINIMUM 48 HOURS WRITTEN NOTICE TO RESIDENTS, YORK REGION, AND THE ENGINEER IS REQUIRED PRIOR TO ANY DISRUPTIONS TO WATER, GAS OR OTHER SERVICE. ALL DISRUPTIONS MUST BE PRE-APPROVED BY THE ENGINEER IN WRITING.
- ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT YORK REGION, TOWNSHIP OF KING, CITY OF VAUQUAN AND OPSD STANDARDS AND DRAWINGS.
- CONTRACTOR TO SCHEDULE ALL REMOVALS TO ENSURE ACCESS TO ALL BUILDINGS AND SITE AT ALL TIMES. CONTRACTOR TO MAINTAIN ACCESS BY PROVIDING TEMPORARY WALKS AND STEPS AS REQUIRED. MAJOR REMOVALS MUST BE PRE-APPROVED BY THE ENGINEER.
- EXISTING BURIED UTILITIES HAVE BEEN SHOWN FOR DESIGN PURPOSES ONLY. IT IS THE CONTRACTORS RESPONSIBILITY TO HAVE ALL UTILITIES LOCATED IN FIELD AND ANY CONFLICTS SHALL BE REPORTED TO THE ENGINEER PRIOR TO EXCAVATION. CONTRACTOR TO PRESERVE AND PROTECT ALL EXISTING UTILITIES.
- ALL AREAS DISTURBED SHALL BE RESTORED TO ORIGINAL CONDITIONS OR BETTER. ESTABLISHED LAIRNS, BOULEVARDS, AND EXISTING DRIVES SHALL BE RESTORED WITH 100mm OF TOP SOIL AND 500 STAKED ON SLOPES.
- THE CONTRACTOR SHALL COORDINATE AND COMPLY WITH THE REQUIREMENTS OF ALL UTILITIES WHEN CROSSING OR WORKING NEAR THE FACILITIES.
- EXISTING TREES AND SHRUBS LOCATED WITHIN THE LIMITS OF THIS CONTRACT NOT SHOWN AS REMOVABLE SHALL BE PROTECTED DURING CONSTRUCTION. TREES AND SHRUBS DAMAGED AS A RESULT OF THE CONTRACTORS ACTIVITIES SHALL BE REPLACED AT THE CONTRACTORS EXPENSE TO THE SATISFACTION OF THE ENGINEER.
- ALL NATIVE BACKFILL TO BE APPROVED BY THE SOILS CONSULTANT. BACKFILL TO BE COMPACTED TO 100% SPKMC.
- ALL GRANULAR 'A' SHALL BE COMPACTED TO 100% SPKMC IN LIFTS NOT EXCEEDING 150mm.
- ALL WATERMANS AND APPURTENANCES TO CONFORM TO THE SPECIFICATIONS. MAINTAIN MIN. 1.5m COVER OVER ALL WATERMAIN PIPE.
- ALL PIPE JOINTS SHALL BE MECHANICALLY RESTRAINED WHERE SHOWN ON CONTRACT DRAWINGS. CONCRETE THRUST BLOCKS SHALL BE CAST ONLY WHERE SPECIFICALLY DETAILLED. ALL BURIED PIPE SHALL HAVE MECHANICAL JOINT CONNECTIONS UNLESS OTHERWISE NOTED, AS PER YORK REGION STANDARD DRAWINGS W-212.
- ALL PROCESS PIPING TO BE RATED FOR 150psi (1034 kPa) COLD WATER WORKING PRESSURE.
- EXCESS EXCAVATED MATERIAL TO BE REMOVED FROM SITE. YORK REGION TO BE GIVEN FIRST RIGHT OF REFUGAL OF SURPLUS MATERIAL. ANY MATERIALS STORED ON SITE FOR LATER USE SHALL BE STORED WITH 5% SLOPES WITH MAXIMUM VERTICAL TO 3 HORIZONTAL, COMPLETE WITH SLOPE FENCE TO PREVENT WEIGHDOWN. THE CONTRACTOR WILL BE RESPONSIBLE TO TAKE THE MATERIAL TO THE QUARRIES. RESTORE AREA TO ORIGINAL CONDITION OR BETTER AT THE END OF CONSTRUCTION.
- ALL EXTERIOR LIGHTING WILL BE DIRECTED ONTO THE SITE AND SHALL NOT INFRINGE UPON THE ADJACENT PROPERTIES DURING CONSTRUCTION PERIOD.
- THE CONTRACTOR SHALL MATCH PROPOSED GRADES TO EXISTING GRADES AND PROVIDE POSITIVE DRAINAGE AWAY FROM EXISTING AND PROPOSED STRUCTURES. CONTRACTOR SHALL PROVIDE SMOLES AS REQUIRED.
- CONTRACTOR TO CONFIRM EXISTING GRADES ON SITE PRIOR TO COMMENCEMENT OF EARTHWORKS AND GRADING. NOTIFY ENGINEER IN WRITING OF ANY ERRORS OR DISCREPANCIES.
- FOR TRENCH AND BEDDING SEE REGION OF YORK STANDARD DRAWING W-206.
- FOR DUCTILE IRON W.M AND CATHODIC PROTECTION SEE REGION OF YORK STANDARD DRAWINGS W-213, W-214, W-215 AND W-245.
- CONTRACTORS SHALL BE AWARE OF THE REQUIREMENTS OF REGULATION 459/00 AND YORK REGION OPERATING & REPORTING REQUIREMENTS. ANY INCIDENTS WHICH COULD AFFECT THE INTEGRITY OF OR CONTAMINATE THE WATERWORKS SHALL BE REPORTED IN ACCORDANCE WITH THE REGULATIONS.
- THE CONTRACTOR TO POST DANGER CONSTRUCTION ACTIVITY AND DANGER KEEP OUT SIGNS AROUND PROPOSED CONSTRUCTION FENCE.
- THE CONTRACTOR SHALL ENSURE THAT ALL EXISTING PIPES THAT ARE TO REMAIN DURING THE CONSTRUCTION PERIODS SHALL BE PROTECTED FROM ANY POTENTIAL DAMAGE DUE TO CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL SUPPLY, INSTALL AND REMOVE 2.4m HIGH TEMPORARY SECURITY FENCE AROUND THE SITE FOR THE DURATION OF CONSTRUCTION. THE SECURITY FENCE SHOULD BE SUPPLIED WITH MAIN WAY AND VEHICLE ACCESS GATES COMPLETE WITH CHAIN AND PAD LOCKS. PROVIDE KEYS TO THE ENGINEER AND THE OWNER.



MINIMUM GRAVEL DRIVEWAY RESTORATION
N.T.S.




ASPHALT DRIVEWAY RESTORATION
N.T.S.

LEGEND:

- EXISTING PROPERTY LINE
- - - EXISTING CONTOURS
- EXISTING SQUARE IRON BAR
- - - - EXISTING FENCE LINE
- EXISTING DECIDUOUS TREE
- ⊗ EXISTING CONIFEROUS TREE
- ~ ~ ~ EXISTING BUSHLINE
- EXISTING ROAD SIGN
- — — EXISTING HYDR. POLE
- — — EXISTING BURIED HYDR.
- EXISTING WATERMAIN
- EXISTING VALVE AND BOX
- — — PROPOSED CONTOURS
- PROPOSED WATERMAIN
- ▽ PROPOSED VALVE & BOX
- ◆ PROPOSED FLUSHING CONNECTION
- PROPOSED M.A. x M.A. TEE
- PROPOSED 90° M.A. x M.A. BEND
- PROPOSED 45° M.A. x M.A. BEND
- /// ITEMS TO BE REMOVED

CONSTRUCTION RECORD
CONSTRUCTION PERIOD: APRIL 2003 TO JULY 2004

TITLE					
PROPOSED WELL FACILITY UPGRADE PLAN					
PROJECT					
NATURAL HERITAGE EVALUATION WELL 2, 22 FARIS AVENUE NOBLETON, ONTARIO					
CLIENT					
ETO ENGINEERING		PROJECT NO. 23-0358			
DATE	JUNE 2023	PREPARED BY	TP	APPROVED BY	MC
FIGURE		2			

Scale: NTS

Prepared By: Tanya Peterson
C:\Users\Tanya Peterson\OneDrive - Envivision Consultants\Documents\17_GIS\Projects\2023\23-0358\Well_2\APPROX\Well_2\APPROX\HE03_0358_Figure 3 Mitigation Measures.aprx
Data Source: Open Data Ontario, York Region, TRCA



LEGEND

- SITE LOCATION
- WATERCOURSE
- 30 m SETBACK

Scale: 1:500

0 10 20 Metres

TITLE				
MITIGATION MEASURES				
PROJECT				
NATURAL HERITAGE EVALUATION WELL 2, 22 FARIS AVENUE NOBLETON, ONTARIO				
CLIENT				
ETO ENGINEERING				
PROJECT NO.	DATE	PREPARED BY	APPROVED BY	FIGURE
23-0358	JULY 2023	TP	MC	3





APPENDIX A:

Terms of Reference

April 18, 2023

Project #: 23-0358

The Township of King
2585 King Road
King City, Ontario L7B 1A1

Attention: Kristen Harrison, MCIP, RPP, Policy Planner, Planning Division

Sent via email: kharrison@king.ca

SUBJECT: TERMS OF REFERENCE, NOBLETON WELLS 2 AND 5 UPGRADES

EnVision Consultants Ltd. (EnVision) was retained by ETO Engineering (the 'Client') to conduct a Natural Heritage Evaluation (NHE) to support the capacity and treatment upgrades proposed for the Nobleton Wells 2 and 5 Upgrades (the 'Site'). This document proposes the Terms of Reference for the NHE.

The Sites are located near King Road and Highway 27, Nobleton, Ontario. Well 2 occupies an approximate area of 0.16 hectares (0.38 acres), while Well 5 occupies an approximate area of 0.91 hectares (2.26 acres) and are currently Well Facilities located primarily within an urban residential area. Well 2 includes a small section of a watercourse feature along the southwest border of the Site. No natural heritage features were shown to be within the vicinity of Well 5, however, there is a naturalized area with an associated watercourse adjacent to Well 5 located approximately 25 m south of the Site. Both watercourses are regulated by the Toronto and Region Conservation Authority (TRCA).

REVIEW OF BACKGROUND INFORMATION

Relevant information resources will be reviewed in order to provide information related to Significant Wildlife Habitat (SWH) and Species at Risk (SAR) that have potential to occur on the Site or within the surrounding area (within 120 m of the Site). The resources to be reviewed are listed below:

- Aerial Photographs and Satellite Imagery;
- Atlas of the Breeding Birds of Ontario internet site (Bird Studies Canada, 2006);
- Conservation Authorities Act, Ontario Regulation 166/06 Toronto and Region Conservation Authority;
- Correspondence with TRCA, MNRF, and MECP staff;
- Fisheries and Oceans Canada Aquatic Species at Risk Mapping Tool (2022);
- Environmental Study Report (ERS) (Black & Veatch, 2021);



-
- Natural Heritage Areas Mapping, including Natural Heritage Information Centre (NHIC) data (MNRF, 2022);
 - Nobleton Community Plan OPA No. 57 (2005);
 - Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015b);
 - Significant Wildlife Habitat: Technical Guide (MNRF, 2000);
 - Species at Risk in Ontario (SARO) List, Ontario Regulation 230/08 (Government of Ontario, 2018);
 - Species at Risk Public Registry (Government of Canada, 2015);
 - Township of King Official Plan (2019); and,
 - York Region Official Plan (2022).

FIELD PROGRAM

VEGETATION COMMUNITY DESCRIPTION AND MAPPING

The vegetation on the Site will be inspected during a single site reconnaissance and details pertaining to the species and frequency of occurrence on the Site will be recorded. Additionally, details including the presence of any SAR plants, surficial soil types, and indication of human disturbance will be noted. Vegetation communities on the Site will be recorded, mapped, and classified based on the Ecological Land Classification (ELC) for Southern Ontario (Lee et al. 1998)

VEGETATION INVENTORY

The Site will be visited on one (1) occasion, once in the spring, to conduct vegetation inventories. All species at the Site will be recorded, and the location of any SAR plants will be documented with a handheld GPS unit. This information will be used in the classification of ELC polygons on the Site.

SIGNIFICANT HABITAT ASSESSMENT AND WILDLIFE DOCUMENTATION

The Site will be assessed for SWH and presence of or habitat for SAR, and any pertinent findings will be documented, photographed, and the location will be georeferenced using a handheld GPS unit. All incidental wildlife observations or evidence of wildlife will be recorded during each visit to the Site.

REPORTING

The findings from the field program will be included in a NHE report, along with relevant figures and regulatory communications. An assessment of the potential impacts of the proposed development to the natural heritage features and other communities on the Site will be conducted and included in the report. The report will also include recommendations for mitigation of impacts and the monitoring of these mitigations, and list enhancement opportunities on the Site. The report will be submitted to the Growth Management Services Department at The Town of King for review.



CLOSING

This Terms of Reference, was prepared for the account of ETO Engineering. EnVision has completed this assessment in accordance with generally accepted professional practises and procedures applicable at the time of preparation. These services are not subject to any express or implied warranties, and none should be inferred. The material in this memo reflects EnVision's judgement in light of the information available at the time of preparation. Any use, which a Third Party not noted above makes of this report, or nay reliance on decisions to be made based on it, are the responsibility of such Third Parties. EnVision accepts no responsibility for damages, if any, suffered by a Third Party as a result of decisions made or actions based on this report.

We thank you for allowing us to take part in your project. Should you have any questions or wish to review the contents of this letter in more detail, please do not hesitate to contact the undersigned.

Yours sincerely,

EnVision Consultants Ltd.

Anne Ha, B.Sc.
Junior Ecologist
aha@envisionconsultants.ca

Mark Cece, B.Sc.
Director - Ecology
mcece@envisionconsultants.ca



APPENDIX B:

Agency Consultation

Anne Ha

Subject: Nobleton Wells: TOR Submission + Request for Information Follow-up - TRCA Response July 5, 2023


From: George Tsourounis <george.tsourounis@trca.ca>

Sent: Wednesday, July 5, 2023 1:18 PM

To: Anne Ha <aha@envisionconsultants.ca>

Subject: RE: Nobleton Wells: TOR Submission + Request for Information Follow-up - TRCA Response July 5, 2023

Hi Anne,

Please find attached link with the requested data:  [Nobelton Well Upgrades](#).

Regards,

George Tsourounis, MES Pl.

Planner I

Infrastructure Planning & Permits | Development and Engineering Services

T: [437-880-2472](tel:437-880-2472)

E: george.tsourounis@trca.ca

A: [101 Exchange Avenue, Vaughan, ON, L4K 5R6](#) | trca.ca



From: George Tsourounis <george.tsourounis@trca.ca>

Sent: Tuesday, June 27, 2023 9:29 AM

To: Anne Ha <aha@envisionconsultants.ca>

Cc: Mark Cece <mcece@envisionconsultants.ca>; Tiffany Waters <twaters@envisionconsultants.ca>; Johnny Pang <johnny.pang@etoengineering.ca>

Subject: RE: Nobleton Wells: TOR Submission + Request for Information Follow-up - TRCA Response June 27, 2023

Some people who received this message don't often get email from george.tsourounis@trca.ca. [Learn why this is important](#)

Hi Anne,

Please be advised that TRCA staff are completing the data request.

Also, please note that fish data can be found in our open data portal: [Datasets - TRCA Open Data](#).

Please let me know if you have any questions.

Regards,

George Tsourounis, MES Pl.

Planner I

Infrastructure Planning & Permits | Development and Engineering Services



From: Anne Ha <aha@envisionconsultants.ca>

Sent: Tuesday, June 20, 2023 3:19 PM

To: George Tsourounis <george.tsourounis@trca.ca>

Cc: Mark Cece <mcece@envisionconsultants.ca>; Tiffany Waters <twaters@envisionconsultants.ca>; Johnny Pang <johnny.pang@etoengineering.ca>

Subject: RE: Nobleton Wells: TOR Submission + Request for Information Follow-up - TRCA Response June 20, 2023

Hi George,

Thank you for the review of our TOR. As for the data request, we would like to request any available Natural Heritage Information for the Sites and general vicinity including any available fish community data for the nearby tributaries to our two Well sites would be greatly appreciated.

I believe both are part of the East Humber River watershed with an unnamed tributary runs along our Well 2 Site and another branch of the East Humber River runs nearby our Well 5 Site.

Please let me know if any additional information is needed.

Thank you,



Anne Ha, B.Sc.

Junior Ecologist

Cell / 647-997-5650

Email / aha@envisionconsultants.ca

From: George Tsourounis <george.tsourounis@trca.ca>

Sent: Tuesday, June 20, 2023 2:49 PM

To: Anne Ha <aha@envisionconsultants.ca>

Cc: Mark Cece <mcece@envisionconsultants.ca>; Tiffany Waters <twaters@envisionconsultants.ca>; Johnny Pang <johnny.pang@etoengineering.ca>

Subject: RE: Nobleton Wells: TOR Submission + Request for Information Follow-up - TRCA Response June 20, 2023

Some people who received this message don't often get email from george.tsourounis@trca.ca. [Learn why this is important](#)

Hi Anne,

Thank you for your email and your patience.

Please note that TRCA has reviewed the ToR and has no comments.

TRCA staff are working on the data request for these two locations. Can you please confirm what specific data you are requesting?

Thank you,

George Tsourounis, MES Pl.

Planner I

Infrastructure Planning & Permits | Development and Engineering Services



From: Anne Ha <aha@envisionconsultants.ca>
Sent: Thursday, June 8, 2023 12:27 PM
To: Nida Mirza <Nida.Mirza@trca.ca>
Cc: Mark Cece <mcece@envisionconsultants.ca>; Tiffany Waters <twaters@envisionconsultants.ca>;
johnny.pang@etoengineering.ca
Subject: Nobleton Wells: TOR Submission + Request for Information Follow-up

Hi Nida,

I wanted to send a follow-up to my previous email regarding the Nobleton Wells Sites and the request for natural heritage information and fish community data on April 24th, as it has been a few weeks and I have not heard back.

Additionally, a Terms of Reference (TOR) was originally submitted to the Town of King's Planning Department on April 18th, and they have indicated as the lands are regulated by the TRCA, we should confirm the TOR with the TRCA.

Thus, attached to this email is the submission of the TOR for your review.

Please let me know if you have any questions or concerns.

Thank you,

Anne Ha, B.Sc.
Junior Ecologist



6415 Northwest Drive U37-40,
Mississauga, ON, L4V1X1
Cell / 647-997-5650
Office/ 905-677-0202
Email / aha@envisionconsultants.ca
Website / www.envisionconsultants.ca

Anne Ha

From: Kristen Harrison <kharrison@king.ca>
Sent: June 8, 2023 11:49 AM
To: Anne Ha
Cc: Mark Cece; Mandy Paglia; johnny.pang@etoengineering.ca; Gaspare Ritacca; Kyle Snell
Subject: RE: Nobleton Wells TOR Submission

Hi Anne,

My apologies for not getting back to you sooner on this. The lands appear to be regulated by the Toronto and Region Conservation Authority. The TOR should be confirmed with the CA.

Thank you,

Kristen Harrison, MCIP, RPP

Manager of Policy Planning
Planning Division, Growth Management Services
King Township
905-833-4065

[ATTENTION – KING TOWNSHIP SERVICES DURING COVID-19](#)

King Township is pleased to welcome you in person to our Township facilities, programs and services, with Provincial COVID-19 safety protocols in place.

Many services are also available online by visiting www.king.ca. All staff can be contacted directly by email or phone. Your health and safety is our top priority. For COVID-19 information, visit York Region's website at www.York.ca/covid19 and the Ontario Health website at www.Ontario.ca/covid19

From: Anne Ha <aha@envisionconsultants.ca>
Sent: Tuesday, April 18, 2023 1:10 PM
To: Kristen Harrison <kharrison@king.ca>
Cc: Mark Cece <mcece@envisionconsultants.ca>; johnny.pang@etoengineering.ca
Subject: Nobleton Wells TOR Submission

You don't often get email from aha@envisionconsultants.ca. [Learn why this is important](#)

CAUTION! This email originated from **outside your organization**. Verify the sender's email address and carefully examine any links or attachments before clicking. If you believe this may be a phishing email, please use the **Report a Phish** Outlook add-in. If you think you may have clicked on a phishing link, please mention that when reporting the phishing email.

Hello Kristen,

EnVision Consultants Ltd (EnVision) has been retained to complete a Natural Heritage Evaluation (NHE) report for two wells located near King Rd. and Hwy 27, Nobleton, Ontario (please see the attached .jpeg for the study area).

Additionally, attached to this email is the submission of the Terms of Reference (TOR) for your review.

Please let me know if you have any questions or concerns.

Thank you,

Anne Ha, B.Sc
Junior Ecologist

Anne Ha

From: Andersen, Jeff (MECP) <Jeff.Andersen@ontario.ca>
Sent: March 27, 2023 8:44 AM
To: Anne Ha
Subject: RE: Request for Information: Nobleton, ON

Anne;

MECP staff cannot confirm there are no other records at the site but have nothing further to add save consideration for species at risk Bats and their habitat.

Regards;

JJA

JEFF J. ANDERSEN

**MANAGEMENT BIOLOGIST
PERMISSIONS SECTION, SPECIES AT RISK BRANCH
LAND AND WATER DIVISION
ONTARIO MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS**

50 Bloomington Road, Aurora ON L4G 0L8 | jeff.andersen@ontario.ca | 289-221-1705



From: Anne Ha <aha@envisionconsultants.ca>
Sent: March 24, 2023 2:19 PM
To: Andersen, Jeff (MECP) <Jeff.Andersen@ontario.ca>
Subject: Request for Information: Nobleton, ON

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Hi Jeff,

EnVision Consultants Ltd (EnVision) has been retained to complete a Natural Heritage Evaluation (NHE) report for two wells located near King Rd. and Hwy 27, Nobleton, Ontario. Well 2: 608007 E 4861744 N and Well 5: 608218 E 4861430 N (see attached .jpeg). The purpose of this email is to request any available information regarding species at risk (SAR).

A review of background information including the Natural Heritage Information Center (NHIC) data available through the Ministry of Natural Resources and Forestry Make a Map: Natural Heritage Areas application, ebird, and iNaturalist indicate the following SAR have been documented within the vicinity of the Site:

- Bobolink (*Dolichonyx oryzivorus*);
- Eastern Meadowlark (*Sturnella magna*);
- Wood Thrush (*Hylocichla mustelina*); and,
- Redside Dace (*Clinostomus elongatus*).

Based on aerials potential habitat for:

- Chimney Swift (*Chaetura pelagica*);

If possible, please confirm:

- That there are no other records of SAR or species of conservation concern on or within the vicinity of the Site.

Any other details or information that you can provide to help our natural heritage inventory would be greatly appreciated.

Thank you,

Anne Ha, B.Sc
Junior Ecologist

ENVISION
CONSULTANTS LTD

6415 Northwest Drive U37-40,
Mississauga, ON, L4V1X1
Cell / 647-997-5650
Office/ 905-677-0202
Email / aha@envisionconsultants.ca
Website / www.envisionconsultants.ca



APPENDIX C:

Photo Page



PHOTO 1: Overview of the Site, looking north from Faris Avenue.



PHOTO 2: Overview of the Site, looking south from the Site Building.



PHOTO 3: View of the water wells located to the southwest of the Site Building, looking northwest.



PHOTO 4: View of the south side and main entrance of the well facility, facing northeast.



PHOTO 5: View of the north side of the well facility, facing southwest.



PHOTO 6: View of the tributary of the East Humber River that transects the southwest corner of the Site, facing north.



PHOTO 7: View of the southern portion of the tributary, entering the culvert at the southwest corner of the Site, oriented toward Faris Avenue.



PHOTO 8: View of a dry channel to the north of where the tributary enters the Site, facing south.



PHOTO 9: View of the northern portion of the tributary on the Site, where it enters the Site, facing northwest.



PHOTO 10: View of the southern portion of the tributary on the Site, facing south.



PHOTO 11: View of the northern portion of the tributary within the Study Area, flowing south from King Road.

NATURAL HERITAGE EVALUATION

Nobleton Well 5

Project #: 23-0358
Prepared for: ETO Engineering
Date: August 22, 2023

Report Version: 01

FINAL

6415 Northwest Drive
Units 37-40
Mississauga, ON L4V 1X1
envisionconsultants.ca



August 22, 2023

ETO Engineering
9030 Leslie Street, Unit 300
Richmond Hill, ON L4B 1G2

Attention: Johnny Pang, P.Eng., PMP

SUBJECT: NATURAL HERITAGE EVALUATION, NOBLETON WELL 5

A Natural Heritage Evaluation (NHE) has been prepared for the site described as Nobleton Well 5, located at 12860 Highway 27 in the Township of King, Ontario. Please find the document attached for your review. The study outlines the proposed development and recommends mitigation measures to help maintain the form and function of the Key Natural Heritage Features found on and within the area of influence of the development.

We thank you for utilizing EnVision for this assignment. If there are any questions regarding the enclosed report, please do not hesitate to contact us.

Yours sincerely,

Stephen Dinka, B.Sc., M.Env.Sc.
Project Manager – Ecologist
sdinka@envisionconsultants.ca



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1. INTRODUCTION

EnVision Consultants Ltd. (EnVision) was retained by ETO Engineering (the 'Client') to conduct a Natural Heritage Evaluation (NHE) for the Site described as Nobleton Well 5.

The property is described as Part of Lot 4, Concession 9, Township of King, Regional Municipality of York, with the municipal address of 12860 Highway 27 in the Township of King, Ontario, herein referred to as "the Site". The Site is currently occupied by a municipal well facility known as Nobleton Well 5. The Client is proposing upgrades to the current well facility, primarily to the west of the existing building and on the northeast portion of the Site. Although the Site is located within a mature residential neighborhood and the works will not affect natural self-sustaining vegetation communities, a Natural Heritage Evaluation is required due to proximity of a stream that transects the property which is designated as a key feature in the local and regional Natural Heritage Systems as outlined in the Township of King and York Region Official Plans (OP) respectively, and is within the Toronto Region Conservation Authority (TRCA) Regulated Area.

A Terms of Reference (TOR) that outlines study scope was prepared by EnVision and approved by TRCA. The work program aims to confirm the presence and boundaries of Key Natural Heritage Features (KNHFs) identified through consultation with regulating agencies, background research, and field reconnaissance. The NHE discusses the potential impacts of the proposed development on these features and proposes relevant mitigation measures to help ensure that the functions and linkages between KNHFs are preserved. This report was prepared in accordance with the TOR and above-noted requirements, and meets the requirements of the Greenbelt Plan and Township of King Official Plan.



2. ENVIRONMENTAL POLICY CONTEXT

2.1. GREENBELT PLAN

The Site is located within a 'Towns and Villages' Settlement Area overlay within the Protected Countryside on Schedule 1 of the Greenbelt Plan (Government of Ontario, 2017). Protected Countryside lands *are intended to enhance the special extent of agriculturally and environmentally protected lands covered by the NEP and the ORMCP while at the same time improving linkages between these areas and the surrounding major lake systems and watersheds* (Government of Ontario, 2017). The Plan contains three types of geographic specific policies that apply to specific lands within the Protected Countryside (as shown on Schedule 1 of the Greenbelt Plan); the Natural System, Agricultural System, and Settlement Areas. Per Section 3.4.3.1 of the Greenbelt plan, locations within Towns and Villages are excluded from the Key Natural Heritage Feature and Key Hydrologic Feature policies that apply to the Protected Countryside outside of Settlement Areas and are instead governed by the natural heritage policies of the applicable municipal official plan(s). The natural heritage system policies of the King Township are described below.

2.2. YORK REGION OFFICIAL PLAN

In general, natural heritage policies of the York Region OP (2022) have generally been integrated within the current consolidation of the Township of King OP (2019) mapping and policies, and implemented by the local planning authority. It is expected that compliance with the natural heritage requirements of the Township of King OP will ensure compliance with York Region policies.

2.3. TOWNSHIP OF KING OFFICIAL PLAN

The Township of King Official Plan (2019) provides goals, objectives and policies to direct land use change and activity in the Township.

This Plan defines a Natural Heritage System and includes policies to ensure its protection and to provide for its restoration and enhancement. The Township's Natural Heritage System includes various natural heritage features and linkages as well as hydrologic features intended for protection by the 2020 Provincial Policy Statement, 2017 Greenbelt Plan, 2017 Oak Ridges Moraine Conservation Plan (ORMCP), the Lake Simcoe Protection Plan (LSPP) and the Natural Heritage System and Restoration Strategy (2018), as well as those identified in the York Region Official Plan (2010) and identified through other reliable information sources, such as Provincial data, the Toronto and Region Terrestrial Natural Heritage System Strategy, and other recently completed studies.

Section 4.2.4.2 of the Plan requires a Natural Heritage Evaluation/Hydrological evaluation where development or site alteration is proposed within 120 m of a wetland, permanent stream, intermittent stream, etc., to determine its importance, functions and means of protection or maintenance of function, in accordance with Provincial plans, technical papers, and guidelines as applicable.



Section 4.2.2.8 states that development or site alteration is not permitted in key natural heritage features and key hydrologic features or a required vegetation protection zone, except: c Infrastructure, provided it is demonstrated through a Natural Heritage Evaluation or Hydrologic Evaluation that there will no negative impact on the feature or its functions or if it is authorized through an Environmental Assessment, and in accordance with the policies of this Plan and any applicable Provincial Plan.

A permanent watercourse identified as a Key Natural Heritage Feature (Fish Habitat) and a Key Hydrologic Feature (Permanent Stream) transects a portion of the Site, therefore the proposed site alteration requires completion of a Natural Heritage Evaluation.

The Township of King Official Plan (2019) integrates requirements of the Provincial Greenbelt Plan and Regional Natural Heritage System, and outlines the following minimum requirements for the Natural Heritage Evaluation:

- Identify and confirm protection of any applicable environmental features, required buffers, setbacks and vegetation protection zones in accordance with the requirements of this Plan;
- Identify and considers opportunities for environmental restoration or enhancement;
- Recommend implementation measures such as monitoring or management; and
- Meet the requirements of the Provincial Plans and in accordance with Provincial and Conservation Authority policies, technical papers and guidelines as applicable.

This study and report are designed to meet the requirements of the Township of King OP, York Region OP, Conservation Authority policies, and the Provincial Greenbelt Plan.

2.4. CONSERVATION AUTHORITIES ACT

The Site is located within the Toronto and Region Conservation Authority (TRCA) Regulated Area. Ontario Regulation 166/06, made under the Conservation Authorities Act, establishes Regulated Areas where development could be subject to flooding, erosion, or dynamic beaches, or where interference with wetlands and alterations to shorelines and watercourses might have an adverse effect on those environmental features. Under Ontario Regulation 166/06, any proposed development, interference or alteration within a Regulated Area requires a permit from TRCA.

2.5. FEDERAL FISHERIES ACT (1985)

The conservation, management, and protection of fish and fish habitat are the responsibility of Fisheries and Oceans Canada (DFO). DFO is given authority to achieve this under the federal Fisheries Act. Fish habitat as defined in the *Fisheries Act*, c. F-14 as “spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes”. The Act also includes a broader definition of fish as shellfish, crustaceans, and marine mammals at all stages of their life cycles.



In Ontario, the Department of Fisheries and Oceans Canada (DFO) manages fish habitat and the Ontario Ministry of Natural Resources and Forestry (MNR) manages fisheries. Fish and fish habitat are protected under the federal Fisheries Act (1985), last amended on August 28, 2019. The protection provisions of the Fisheries Act apply to all fish and fish habitat throughout Canada, and include 2 key prohibitions, specifically:

- Subsection 34.4(1) – No person shall carry on any work, undertaking or activity, other than fishing, that results in the death of fish.
- Subsection 35(1) – No person shall carry on any work, undertaking or activity that results in the harmful alteration, disruption or destruction of fish habitat.

Proponents are responsible for planning and implementing works, undertakings or activities in a manner that avoids harmful impacts, specifically the death of fish and the harmful alteration, disruption or destruction of fish habitat. Where proponents believe that their work, undertaking or activity will result in negative impacts to fish or fish habitat that cannot be fully mitigated require Fisheries Act Authorization.

2.6. MIGRATORY BIRDS CONVENTION ACT (1994)

The Federal Migratory Birds Convention Act (MBCA) protects the nests, eggs and young of most bird species from harassment, harm or destruction. No permitting or authorization is required under the MBCA, however proponents who fail to comply with the legislation may be fined if found to be in contravention of the Act. Migratory birds may be nesting in the vicinity of the site from April 1st to August 31st, and vegetation clearing outside of this period is the primary mechanism through which proponents avoid potential contravention of the Act. If vegetation clearing must occur within the breeding bird window, clearing may be permissible if nesting birds are not impacted.

2.7. ONTARIO ENDANGERED SPECIES ACT (2007)

The Ontario Endangered Species Act (ESA) came into force in June 2008. Under the Act, species may be listed as Endangered, Threatened or Special Concern on the Species At Risk in Ontario list (O. Reg 240/08). Species listed as Endangered or Threatened, as well as their habitats (e.g., areas essential for breeding, rearing, feeding, hibernation and migration) are afforded legal protection under the Act.

Subsection 9(1) of the ESA states that:

No person shall,

- (a) kill, harm, harass, capture or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species;

Subsection 10(1) of the ESA states that:

No person shall,

- (a) damage or destroy the habitat of a species that is listed on the Species at Risk in Ontario list as an endangered or threatened species.



However, under subsection 17(1) of the ESA, the Minister may issue a permit that authorizes a person to engage in an activity that would otherwise be prohibited by subsection 9(1) or 10(1) if certain conditions outlined in subsection 17(2) are satisfied.

2.8. PROVINCIAL POLICY STATEMENT (2020)

The Provincial Policy Statement (PPS) (Ontario Ministry of Municipal Affairs and Housing (OMMAH), 2020) is a planning document that provides a framework for, and governs development within, the Province of Ontario. In order to preserve various ecological resources deemed significant in the Province, development lands must be assessed for the presence of natural heritage features prior to construction. These natural heritage features (listed below) are both defined and afforded protections under the PPS. Linkages between natural heritage features, surface water and groundwater features are also recognized and afforded similar protections under the policy. Section 2.1.2 of the PPS also requires that the diversity and connectivity of all natural heritage features and the long-term ecological function of natural heritage systems be maintained, restored or improved where possible. Further to this, natural heritage systems within Ecoregions 6E and 7E are to be identified as per Section 2.1.3.

Under the PPS (OMMAH, 2020), development or site alteration is prohibited within significant wetlands in Ecoregions 5E, 6E and 7E and in significant coastal wetlands, but may be allowed adjacent to these features provided the adjacent lands have been evaluated and it has been demonstrated that there will be no negative impacts to these features or their ecological functions. Development may be permitted in or adjacent to significant wetlands north of Ecoregions 5E, 6E and 7E, significant woodlands and significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River), significant wildlife habitat, and significant areas of natural and scientific interest (ANSI), provided there will be no negative impacts to these features or their ecological function due to the proposed undertaking. In addition, development and site alteration is not permitted in fish habitat unless in accordance with provincial and federal legislation.

Natural heritage features as defined by the PPS (OMMAH, 2020) include:

- A. Fish Habitat;
- B. Habitats of Endangered and Threatened Species;
- C. Significant Areas of Natural and Scientific Interest (ANSI);
- D. Significant Wetlands;
- E. Significant Coastal Wetlands;
- F. Other Coastal Wetlands in Ecoregions 5E, 6E and 7E;
- G. Significant Wildlife Habitat;
- H. Significant Woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River); and,
- I. Significant Valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River).



3. STUDY APPROACH

3.1. TERMS OF REFERENCE

A Terms of Reference (TOR) for the evaluation was reviewed and approved without comment by planning staff from the TRCA (G. Tsourounis, per comm. June 20, 2023). A copy of the TOR is provided in [Appendix A](#).

3.2. AGENCY CONSULTATION AND BACKGROUND INFORMATION REVIEW

The following agencies and information sources were consulted in preparation of this study:

- Department of Fisheries and Oceans (DFO) online mapping tool (DFO, 2022);
- Greenbelt Plan (Government of Ontario, 2017);
- MECP staff (J. Anderson, pers. comm. March 27, 2023);
- Natural Heritage Information Centre (NHIC) Mapping and Databases (OMNRF, 2014);
- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2017);
- Significant Wildlife Habitat: Technical Guide (OMNR, 2000) and Ecoregion 6e Criteria Schedules (MNRF 2013);
- Satellite imagery;
- Species at Risk in Ontario (SARO) list (O. Reg. 230/08, e-Laws currency date Jan. 25, 2023);
- TRCA staff (G. Tsourounis, per comm. June 20 and June 29, 2023);
- TRCA Regulation Mapping (TRCA, 2023);
- Township of King Official Plan, 2019 (Office Consolidation – October 2022);
- Township of King Zoning By-Law for the Nobleton Urban Area 2016-71 (2016); and,
- York Region Official Plan (2022).

A complete list of references used in preparation of this study is provided in Section 7 of this report. All information and records obtained through agency consultation and background information review were incorporated as appropriate into the present study. A copy of all email correspondence is provided in [Appendix B](#).

3.3. SITE RECONNAISSANCE

Prior to commencing the site reconnaissance, a review of background information and satellite imagery was conducted to identify the presence of KNHFs on the Site. One (1) site reconnaissance was undertaken on May 17, 2023, to confirm presence of KNHFs and determine general characteristics of the Site. The site reconnaissance was conducted under clear sunny skies with a slight breeze and air temperature approximately 2°C. During the reconnaissance, photographs of the Site were taken, and observations of wildlife, vegetation and natural features were recorded.



3.4. KEY NATURAL HERITAGE FEATURE ASSESSMENT AND SPECIES AT RISK SCREENING

A comprehensive review of all potential Key Natural Heritage Features protected under the Provincial Greenbelt plans and Regional/Local Natural Heritage systems was undertaken to verify the presence and location of any regulated features and functions within and adjacent to the Site. This assessment includes a screening of Species At Risk potentially present at the site based on the background information review and agency consultation to evaluate the potential of each species to occur within or adjacent to the Site based on current conditions. This assessment identifies SAR species that may be relevant to the site and that warrant further consideration during field investigation and/or impact assessment, and those that are not relevant to the site and are thus excluded from further consideration. The complete assessment is presented in Section 4.2.3 and summarized in *Table 4-1*.

3.5. PROPOSED DEVELOPMENT, IMPACTS AND MITIGATION

The interaction of the proposed development with all identified natural environment features and functions is reviewed to identify required buffers/setbacks and vegetation protection zones in accordance with the policy requirements outlined in Section 5. General mitigation measures and recommendations are also provided.



4. STUDY FINDINGS AND EXISTING CONDITIONS

The results of the study are presented below.

4.1. SITE DESCRIPTION

The Site is irregular in shape with approximately 110 m of frontage along Highway 27, occupying an area of approximately 1.12 ha (2.76 acres). The Site is currently comprised of manicured grass, planted trees and shrubs, a single-story well facility and asphalt driveway on the northern portion of the Site, with naturalized area occupying the southern portion of the Site. A culvert was observed on the northeastern portion of the Site, connecting to the naturalized area on the southern portion of the Site; however, there was no water observed on the Site. Properties within the study area were primarily occupied by residential dwellings and commercial operations to the north, east, and west of the Site. A naturalized area was observed within the southern portion of the study area and tributaries of the East Humber River, both oriented in a northwest to southeast direction, were located approximately 20 m south and 30 m northeast of the Site.

Tree species observed on the northern portion of the Site included Manitoba Maple (*Acer negundo*), White Spruce (*Picea glauca*), Freeman Maple (*Acer x freemanii*), Sugar Maple (*Acer saccharum*), Elm species (*Ulmus sp.*), Trembling Aspen (*Populus tremuloides*), Eastern White Cedar (*Thuja occidentalis*), and Blue Spruce (*Picea pungens*). Staghorn Sumac (*Rhus typhina*), Red-osier Dogwood (*Cornus sericea*) and other planted shrub species were observed on the northeastern portion of the Site. Vegetation observed within the manicured lawn on the northeastern portion of the Site included Cow Vetch (*Vici cracca*), Dandelion (*Taraxacum officinale*), Birdsfoot Trefoil (*Lotus corniculatus*), and grasses. The southern portion of the Site comprised naturalized vegetation and planted trees including various grasses, Dandelion, Queen Anne's Lace (*Daucus carota*), White Spruce, Eastern White Cedar, Black Walnut (*Juglans nigra*) and Sugar Maple. Planted trees on the north neighbouring properties included Norway Maple (*Acer platanoides*), Norway Spruce (*Picea abies*), and Willow species (*Salix sp.*), among others.

The tributary to the south of the Site was observed to flow in a southeast direction. The tributary was shallow, and the bottom of the tributary was composed of sediment, with little to no occurrence of vegetation or cobbles. The tributary to the northeast of the Site was observed on the west side of Highway 27, at the intersection of Ellis Avenue and Highway 27. The tributary was flowing in a southeast direction, into a culvert which passed under Highway 27, and was surrounded by vegetation and trees. No fish were observed at the time of the site reconnaissance.



4.2. KEY NATURAL HERITAGE FEATURE ASSESSMENT

An assessment of the Key Natural Heritage Features defined in the ORMCP is provided below.

4.2.1. *Fish Habitat and Hydrogeologically Sensitive Features*

There were no watercourses found on the Site. There are two (2) nearby tributaries located approximately 20 m south (referred to as the South Tributary) and 30 m northeast (referred to as the Northeast Tributary) from the Site. Both tributaries originate most likely through surface water runoff near King Road with the South Tributary originating approximately 1.12 km northwest of the Site, while the Northeast Tributary originates approximately 0.5 km north of the Site. Both tributaries are part of the East Humber Subwatershed and generally flow towards the southeast.

The South Tributary is characterized as a defined naturalized channel through a riparian zone primarily comprised of shrubs, deciduous trees and herbaceous vegetation. The surrounding trees provide the channel with sections of varying upper canopy cover. The South Tributary was noted as having a fine sediment bottom dominated by sand and no occurrence of aquatic vegetation was observed during the site visit. Flow continues through a box culvert, located approximately 60 m south of the Site, along Highway 27 before continuing downstream.

The Northeast Tributary was observed on the west side of Highway 27, at the intersection of Ellis Avenue and Highway 27. This tributary is characterized as a defined, realigned drainage channel with diffuse flow through vegetation. Near the Site, flow continues through a culvert under Ellis Avenue and continues through a drainage channel which runs along Highway 27, before continuing into another culvert which passed under Highway 27. Flow continues for 0.2 km before joining with the confluence of the South Tributary. No fish were observed in either tributary at the time of the site visit.

Based on background information, both tributaries are identified as permanent streams/drains. Further, review of the Ontario GeoHub: Aquatic Resource Area Line Segment (Land Information Ontario, 2019) data, indicates this tributary is classified as a coldwater regime and most likely contains non-sensitive fish species such as Creek Chub (*Semotilus atromaculatus*) and White Sucker (*Catostomus commersonii*).

Both tributaries are protected under the Fisheries Act as administered by DFO and are considered fish habitat. As such, these tributaries are also considered Key Natural Heritage Features of the Township of King's Natural Heritage System. There are no development plans regarding the tributary. Measures to mitigate potential impacts to the west tributary are detailed under Section 5.2.1 of this report.

4.2.2. *Significant Areas of Natural Scientific Interest*

Significant Areas of Natural and Scientific Interest (ANSI) are defined as areas of land and water containing natural landscapes or features that have been identified as having life science or earth science values related to protection, scientific study or education.

The Natural Heritage Information Centre (NHIC) database (OMNR, 2021a) was searched for the presence of ANSIs on or within 120 m of the Site. No ANSIs were identified on or within 120 m of the Site.



4.2.3. Significant Habitat of Endangered, Rare or Threatened Species

The PPS (OMMAH, 2020) defines the significant habitat of Endangered or Threatened species as the habitat, as approved by the Ontario Ministry of Natural Resources (OMNR), that is necessary for the maintenance, survival and/or the recovery of a naturally occurring or reintroduced population of Endangered or Threatened species, and where those areas of occurrences are occupied or habitually occupied by the species during all or part(s) of their life cycle. The OMNR is mandated to ensure accurate database information for the identification, listing and conduct of ongoing assessments for significant Endangered species and their related habitats.

Endangered, Rare, or Threatened species as defined above refer to species that are provincially rare and are designated as S1 to S3 under ranking protocols used by the OMNRF Natural Heritage Information Centre (NHIC). It also includes those groups identified as Special Concern, Threatened or Endangered by the Committee on the Status of Species at Risk in Ontario (COSSARO), and the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and listed under the *Endangered Species Act, 2007*.

The Natural Heritage Areas online mapping tool (MNRF, 2022) was reviewed to determine if there are known rare, Threatened or Endangered species on or within 120 m of the Site. Two (2) square kilometers (km²) quadrats (17PJ0761 and 17PJ0861) encompassing the Site were searched to ensure potential species at risk with the potential to be in the general area were accounted for in the search. Redside Dace (*Clinostomus elongatus*) (END), Black Ash (*Fraxinus nigra*) (END), Eastern Meadowlark (*Sturnella magna*) (THR), and Bobolink (*Dolichonyx oryzivorus*) (THR) were identified within the quadrats.

In addition to the NHIC database, the Ontario Breeding Bird Atlas (OBBA) (Bird Studies Canada et al., 2006) was consulted to determine if there were endangered, rare or threatened species known to be present within the vicinity of the Site. The OBBA uses 100 km by 100 km blocks, further subdivided into 10 km by 10 km squares to compartmentalize geographical areas. The Site lies in the square identified as 17PJ06. Species with breeding evidence values within square 17PJ06 as identified by the OBBA include Wood Thrush (*Hylocichla mustelina*) (SC), Bobolink (THR), and Eastern Meadowlark (THR).

A review of aerial photographs was also conducted to determine if there is suitable habitat for other Threatened or Endangered species on or adjacent to the Site. Based on this review it is reasonable to expect that structures within the study area may provide habitat for Chimney Swift (*Chaetura pelagica*). Based on the site visit, Chimney Swift are unlikely to occur at the Site as there were no suitable chimneys present.

An assessment of the habitat potential for the above-mentioned endangered, rare or threatened species on the Site is provided in *Table 4-1*, below. Special consideration was given to these species and their habitat during the site reconnaissance.



Table 4-1 Endangered, Rare or Threatened Species Habitat Potential Assessment

SPECIES NAME	SARO ¹	COSEWIC ²	HABITAT DESCRIPTION ³	HABITAT POTENTIAL	FIELD OBSERVATIONS
BOBOLINK	THR	THR	Bobolink breed in a variety of natural grassland habitat types, including remnant prairies, savannahs and alvar grasslands. They also nest commonly in grassland habitat restoration sites and primarily in hayfields and pastures. Bobolinks will also nest in low densities in large grassy bogs, fens and beaver meadows (MNR, 2013).	Low	Open field habitat was identified within 120 m of the Site however they are manicured grass or agricultural fields separated from the site by roads and development. No potential impact to this species or its habitat anticipated.
BLACK ASH	END	THR	Black Ash is predominantly a wetland species found in swamps, floodplains and fens. Black Ash occurs throughout most of Ontario, except the Far North, ranging from southern Ontario east to the Quebec border, west to the Manitoba border and north to approximately 51° latitude. Approximately 25% of the global range of Black Ash occurs in Ontario (MECP, 2022).	Low	Black Ash was not observed on the Site. It may be found within the 120 m study area; however, upgrades to the existing well facility on the Site are not anticipated to impact the surrounding study area.
CHIMNEY SWIFT	THR	THR	Chimney Swift are more likely to be found in and around urban settlements where they nest and roost (rest or sleep) in chimneys and other manmade structures. In Ontario, it is most widely distributed in the Carolinian zone in the south and southwest of the province (MNR, 2014).	Low	Suitable chimneys are not present within the Site. Chimney Swifts may utilize the Site as foraging grounds. There is potential for suitable chimneys to exist within the surrounding study area; however, the proposed well facility upgrades are not anticipated to impact these areas.
EASTERN MEADOWLARK	THR	THR	Eastern Meadowlark breed primarily in moderately tall grasslands, such as pastures and hayfields, but are also found in alfalfa fields, weedy borders of croplands, roadsides, orchards, airports, shrubby overgrown fields, or other open areas. Small trees, shrubs or fence posts are used as elevated song perches (MNR, 2014).	Low	Open field habitat was identified within 120 m of the Site, however they are manicured grass or agricultural fields separated from the site by roads and development. No potential impact to this species or its habitat anticipated.



SPECIES NAME	SARO ¹	COSEWIC ²	HABITAT DESCRIPTION ³	HABITAT POTENTIAL	FIELD OBSERVATIONS
REDSIDE DACE	END	END	Redside Dace are found in pools and slow-moving areas of small streams and headwaters with a gravel bottom. They are generally found in areas with overhanging grasses and shrubs and can leap up to 10 cm out of the water to catch insects. Redside Dace are found in a few tributaries of Lake Huron, in streams flowing into western Lake Ontario, the Holland River (which flows into Lake Simcoe), and Irvine Creek of the Grand River system (which flows into Lake Erie) (MNRF, 2014).	Low	No tributaries are found on Site. Additionally, based on mapping tools and background research, Redside Dace habitat was not identified in the immediate vicinity of the nearby tributaries. This is consistent with our field observations of the South Tributary and Northeast Tributary which did not appear to provide the preferred habitat for this species. There is a low probability of Redside Dace being found within the nearby tributaries.
WOOD THRUSH	SC	THR	The Wood Thrush lives in mature deciduous and mixed (conifer-deciduous) forests. They seek moist stands of trees with well-developed undergrowth and tall trees for singing perches. These birds prefer large forests but will also use smaller stands of trees. They build their nests in living saplings, trees or shrubs, usually in Sugar Maple or American Beech. (MNRF, 2014).	Low	Forested area containing a thick understory was not identified on or within 120 m of the Site.

¹ Committee on the Status of Endangered Wildlife in Canada; and ² Species at Risk in Ontario Status; END – Endangered, THR – Threatened, SC – Special concern, ‘-’ – Not Listed. ³ Nature Conservancy conservation concern rankings (NHIC, 2010): G - Global Level, S - Sub-national Rank (Ontario), 1 - Critically Imperiled, 2 - Imperiled, 3 - Vulnerable, 4 - Apparently Secure, 5 – Secure, GNA – Not Applicable.



4.2.4. Significant Wetlands

Wetlands are defined in the PPS (OMMAH, 2020) as lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. There are four major wetland types; which are classified as swamps, marshes, bogs, and fens. A significant wetland is defined as an area identified as provincially significant by the Ministry of Natural Resources using evaluation procedures established by the Province, as amended from time to time (OMMAH, 2020). Accordingly, it is the responsibility of the OMNR to both identify and classify wetlands as significant in Ontario.

Based on a review of the NHIC online mapping tool (MNRF, 2022) no Provincially Significant Wetlands (PSW) were identified on or within 120 m of the Site. One (1) unevaluated wetland was mapped to the south of the Site, along the tributary of the East Humber River (**Figure 1**).

4.2.5. Significant Wildlife Habitat

Wildlife habitat is defined as areas where plants, animals, and other organisms live and find adequate amounts of food, water, shelter, and space needed to sustain their populations. Specific wildlife habitats of concern may include areas where species concentrate at a vulnerable point in their annual life cycle; and areas which are important to migratory or non-migratory species (OMMAH, 2020).

Wildlife habitat is referred to as significant if it is ecologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area or Natural Heritage System (OMMAH, 2020).

Guidelines and criteria for the identification of SWH are detailed in the Significant Wildlife Habitat: Technical Guide (OMNR, 2000) and the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (OMNRF, 2015). Significant wildlife habitat is described under four main categories:

- Seasonal concentrations of animals;
- Rare vegetation communities or specialized habitats for wildlife;
- Habitat for species of conservation concern; and,
- Animal movement corridors.

SWH on or adjacent to the Site was not identified in the York Region OP (2022), the Township of King OP (2016), or other background sources reviewed in the preparation of this report.



4.2.6. *Significant Woodlands*

Significant woodlands are defined as treed areas that provide environmental and economic benefits such as erosion prevention, water retention, and provision of habitat, recreation and the sustainable harvest of woodland products (OMMAH, 2020). Woodlands include treed areas, woodlots or forested areas and vary in their level of significance. The identification and assessment of significant woodlands is the responsibility of the local planning bodies, in this case York Region, and should be identified using criteria established by the OMNRF. Woodland significance is typically determined by evaluating key criteria which relate to woodland size, ecological function, uncommon woodland species, and economic and social value.

Significant woodlands were not identified on either the York Region OP (2022) nor the Township of King OP (2016).

4.2.7. *Significant Valleylands*

The PPS (OMMAH, 2020) refers to a significant valleyland as a natural area that occurs in a valley or other landform depression that has water flowing through or standing for some period of the year and is ecologically important in terms of features, functions, representation, or amount, and contributes to the quality or diversity of an identifiable geographic region or natural heritage system. The local planning authority is responsible for identifying and evaluating significant valleylands. Significant valleylands were not identified within the York Region (2022) and Township of King (2016) Official Plans.

4.2.8. *Sand Barrens, Savannahs and Tall Grass Prairies*

An assessment of sand barrens, savannahs, and tall grass prairies was not relevant to this Site. These habitats areas are not present on or within 120 m of the Site.

4.2.9. *Significant Feature Summary*

The results of the assessment of Key Natural Heritage Features identified on or adjacent to the Site are provided in *Table 4-2* below.



Table 4-2 Summary of Key Natural Heritage Features

CRITERION	PRESENT	RECORDS REVIEW RESULTS
FISH HABITAT AND HYDROLOGICALLY SENSITIVE FEATURES	Yes	<p>No watercourses are present on the Site. However, there are two (2) nearby tributaries which contain fish habitat. Refer to Section 4.2.1 of this report for a detailed description and further information regarding these nearby tributaries. Both nearby tributaries are considered to contain fish habitat and are therefore protected under the Fisheries Act as administered by DFO.</p> <p>The proposed development does not directly impact either tributary. Measures to mitigate potential indirect impacts are detailed in Section 5.2.1 of the report.</p>
SIGNIFICANT ANSI	No	There are no ANSIs on or within 120 m of the Site.
RARE, THREATENED OR ENDANGERED SPECIES HABITAT	No	Based on the screening exercise presented above, no rare, Threatened or Endangered species were detected, and no suitable habitat is present on Site. There are agricultural fields and manicured lawns within 120 m of the Site that have some limited potential to support Bobolink and Eastern Meadowlark, however these features are isolated from the Site by existing road infrastructure and development and therefore no potential impacts to these potential habitat features are anticipated.
SIGNIFICANT WETLANDS	No	There were no significant wetlands identified on or within 120 m of the Site. A small unevaluated or non-significant wetland is associated with the tributary to the south but will not be impacted by the proposed works
SIGNIFICANT WILDLIFE HABITAT	No	Significant Wildlife Habitat was not identified on or within 120 m of the Site.
SIGNIFICANT WOODLAND	No	Significant Woodland was not identified on or within 120 m of the Site.
SIGNIFICANT VALLEYLANDS	No	There were no significant valleylands identified on or within 120 m of the Site.
SAND BARRENS, SAVANNAHS AND TALL GRASS PRAIRIES	No	There were no sand barrens, savannahs and tall grass prairies on or within 120 m of the Site.



5. POTENTIAL IMPACTS AND PROPOSED MITIGATION

5.1. PROPOSED DEVELOPMENT

It is understood that approval is sought by the Client to complete upgrades to the existing well facility. The upgrades are anticipated to occur to the west of the existing building and on the northeastern portion of the Site, as shown on **Figure 2**. The proposed upgrades are anticipated to affect only the areas already occupied by manicured lawn and asphalt driveway, with some potential removal of trees/shrubs and old field vegetation for the new well at the northwest corner of the site. No works are proposed proximal to either of the watercourse features.

5.2. IMPACTS AND MITIGATION

Potential impacts and recommended mitigation measures for Natural heritage features/functions identified for the Site, as summarized in *Table 4-2* above, are provided below. Items not identified in *Table 4-2* are deemed not to be present, and therefore no further discussion of those features is provided.

5.2.1. *Fish Habitat/KNHF/KHF of the NHS*

The nearby tributary located approximately 20 m south of the Site (i.e., South Tributary) is considered to be fish habitat. Fish habitat is recognized as a Key Natural Heritage Feature of the Township of King Official Plan. Table 3 in Section 4.2.3.5 of the Township of King OP specifies minimum setbacks to development and site alteration the township specifies a minimum 30 m vegetation protection zone from fish habitat. Section 4.2.2.8c allows for development or site alteration in a KNHF and KHF or its required vegetation protection zone, for *Infrastructure*, provided it is demonstrated through a Natural Heritage Evaluation or Hydrologic Evaluation that there will be no negative impact on the feature or its functions or if it is authorized through an Environmental Assessment, and in accordance with the policies of this Plan and any applicable Provincial Plan.

The proposed works will be located approximately 30 m from the nearby South Tributary, and as such the 30 m vegetation protection zone will generally be maintained. Works will be restricted to within the disturbance envelope associated with the existing building/structure on the Site, and construction will not change waterbalances for the tributary. Therefore, no direct or indirect impacts to Fish Habitat (or KNHF/KHF) are anticipated as long as general mitigation measures for sediment and erosion control, outlined below, are implemented.



5.2.2. General Site Mitigation

The following general recommendations are proposed to reduce impacts to local wildlife and key natural heritage features on and within 120 m of the Site:

- Maintenance, cleaning, or refuelling of construction equipment and machinery should be completed offsite or at a designated onsite location away from natural features and grassed areas, with the use of contractor provided containment systems, to prevent potential fouling of natural features adjacent to work areas.
- Temporarily store, handle, and dispose of materials used or generated (e.g., organics, soils, woody debris, temporary stockpiles) during site preparation and construction in a manner that prevents their entry into naturalized areas. It is recommended that materials temporarily stored onsite are to be stockpiled on the existing driveway, as far away from the tributary as possible, in an attempt to mitigate negative impacts. Only if the existing driveway is not feasible, should the material be stockpiled on a manicured area away from the tributary.
- Sediment and erosion control fencing should be designed and installed to isolate the construction zone associated with the proposed works, including any soil stockpiling areas, to prevent any sediment migration into the tributary that could negatively impact fish habitat. Erosion control fencing should be inspected and maintained for the duration of the construction project, until all disturbed areas are fully revegetated.
- Any exposed soil areas resulting from the construction works should be revegetated as soon as possible using an appropriate seed mix.
- It is recommended that warranty conditions of the trees and planting material be discussed between the source nursery, the proponent/developer and the contracted qualified gardener/tree planter. The planter is to abide by those conditions to guarantee the warranty.
- Wildlife incidentally encountered during construction shall not be knowingly harmed and shall be allowed to move away from construction on its own.
- In the event wildlife encountered during construction does not move from the construction zone, the contractor shall contact MNR Aurora District Office to move the animal to a safe area.
- If a Species at Risk is encountered within or adjacent to the construction site, the MECP SAR Branch is to be contacted immediately.
- The contractor shall not destroy an active nest or wound or kills birds of species protected under the Migratory Birds Convention Act, 1994 and/or Regulations under that Act. Any required tree clearing activities should be completed outside of the breeding bird nesting window, which extends from April 1st to August 31st in Ontario. If active nests are encountered, the contractor shall contact a qualified biologist and/or the MNR Aurora District for direction.
- To protect trees on Site and within the nearby proximity, the York Region NHF – 402: Standard Tree Protection Notes (2022) should be added to the construction drawing package with all works completed in accordance with the note.



6. CONCLUSION AND RECOMMENDATIONS

EnVision Consultants Ltd. (EnVision) was retained by ETO Engineering (the 'Client') to conduct a Natural Heritage Evaluation (NHE) for the property described as Nobleton Well 5. The Client is proposing capacity and treatment upgrades to the current well facility, primarily within the western and northern portions of the Site. Although the Site is located within a mature residential neighborhood and the works will not affect natural self-sustaining vegetation communities, a Natural Heritage Evaluation was undertaken due to proximity of a stream that transects the property which is designated as a key feature in the local and regional Natural Heritage Systems as outlined in the Township of King and York Region Official plans respectively, and is within the TRCA Regulated Area.

The background information review, agency consultation, reconnaissance field visit, and natural heritage feature/function screening exercise completed by EnVision identified the presence of a nearby permanent stream (i.e., South Tributary) that supports a tolerant cold water fish community, and is a designated Key Natural Heritage Feature and Key Hydrologic Feature of the Township of King Natural Heritage System. A small unevaluated wetland feature is also found within the floodplain of this feature. No other protected natural heritage features or functions were identified.

The South Tributary and associated wetland and fish habitat will be protected with a 30 m vegetation protection zone, in accordance with requirements of the Township of King Official Plan. Based on the maintenance of the 30 m vegetation protection zone, location of the proposed works being contained within existing manicured vegetation on the Site, and with implementation of general mitigation measures to control potential impacts associated with erosion and sediment deposition within fish habitat, no negative impacts to these features or their functions are anticipated.

This report satisfies the Natural Heritage Evaluation requirements of the Township of King Official Plan and was completed in accordance with the York Region official plan, Provincial Greenbelt Plan, and all applicable conservation and planning authority policies.

6.1. SIGNATURES

Prepared by

Tiffany Waters, M.E.S., ISA Cert. Arb.
Environmental Scientist
twaters@envisionconsultants.ca

Reviewed by

Stephen Dinka, B.Sc., M.Env.Sc.
Project Manager- Ecologist
sdinka@envisionconsultants.ca



6.2. QUALIFIER

EnVision prepared this report solely for the use of the intended recipient in accordance with the professional services agreement. In the event a contract has not been executed, the parties agree that the EnVision General Terms and Conditions, which were provided prior to the preparation of this report, shall govern their business relationship.

The report is intended to be used in its entirety. No excerpts may be taken to be representative of the findings in the assessment. The conclusions presented in this report are based on work performed by trained, professional and technical staff, in accordance with their reasonable interpretation of current and accepted engineering and scientific practices at the time the work was performed.

The content and opinions contained in the report are based on the observations and/or information available to EnVision at the time of preparation, using investigation techniques and engineering analysis methods consistent with those ordinarily exercised by EnVision and other engineering/scientific practitioners working under similar conditions, and subject to the same time, financial and physical constraints applicable to this project.

EnVision disclaims any obligation to update this report if, after the date of this report, any conditions appear to differ significantly from those presented in this report; however, EnVision reserves the right to amend or supplement this report based on additional information, documentation or evidence.

EnVision makes no other representations whatsoever concerning the legal significance of its findings. The intended recipient is solely responsible for the disclosure of any information contained in this report. If a third party makes use of, relies on, or makes decisions in accordance with this report, said third party is solely responsible for such use, reliance or decisions. EnVision does not accept responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken by said third party based on this report.

EnVision has provided services to the intended recipient in accordance with the professional services agreement between the parties and in a manner consistent with that degree of care, skill and diligence normally provided by members of the same profession performing the same or comparable services in respect of projects of a similar nature in similar circumstances. It is understood and agreed by EnVision and the recipient of this report that EnVision provides no warranty, express or implied, of any kind. Without limiting the generality of the foregoing, it is agreed and understood by EnVision and the recipient of this report that EnVision makes no representation or warranty whatsoever as to the sufficiency of its scope of work for the purpose sought by the recipient of this report.

In preparing this report, EnVision has relied in good faith on information provided by others, as noted in the report. EnVision has reasonably assumed that the information provided is correct and EnVision is not responsible for the accuracy or completeness of such information.

Unless otherwise agreed in writing by EnVision, the Report shall not be used to express or imply warranty as to the suitability of the site for a particular purpose. EnVision disclaims any responsibility for consequential financial effects on transactions or property values, or requirements for follow-up actions /or costs.

This limitations statement is considered an integral part of this report.



7. REFERENCES

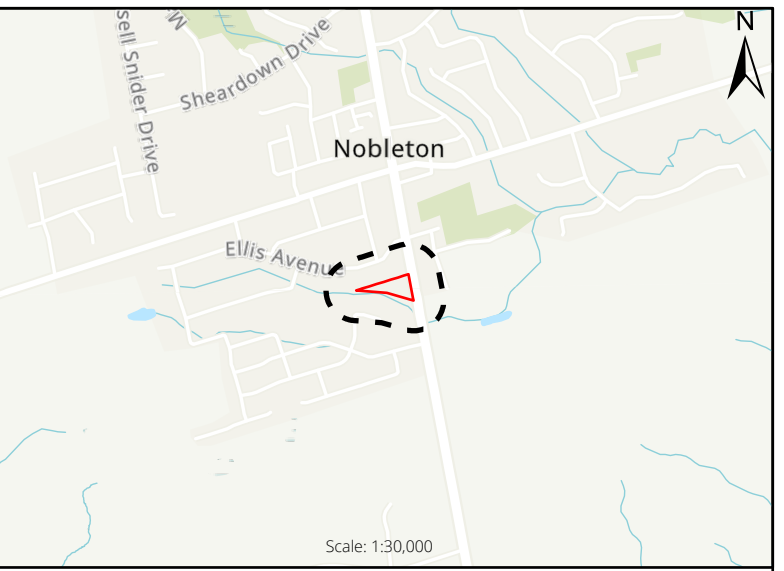
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- Township of King. 2016. Township of King Zoning By-Law for the Nobleton Urban Area 2016-71.





FIGURES

Prepared By: Tanya Peterson
 C:\Users\TanyaPeterson\OneDrive - Envivision Consultants\Documents\17_GIS\Projects\2023\23-0358\Well 5\APPROX\HE02-0358\Figure 1_Site Location.aprx
 Data Source: Open Data Ontario, York Region, TRCA



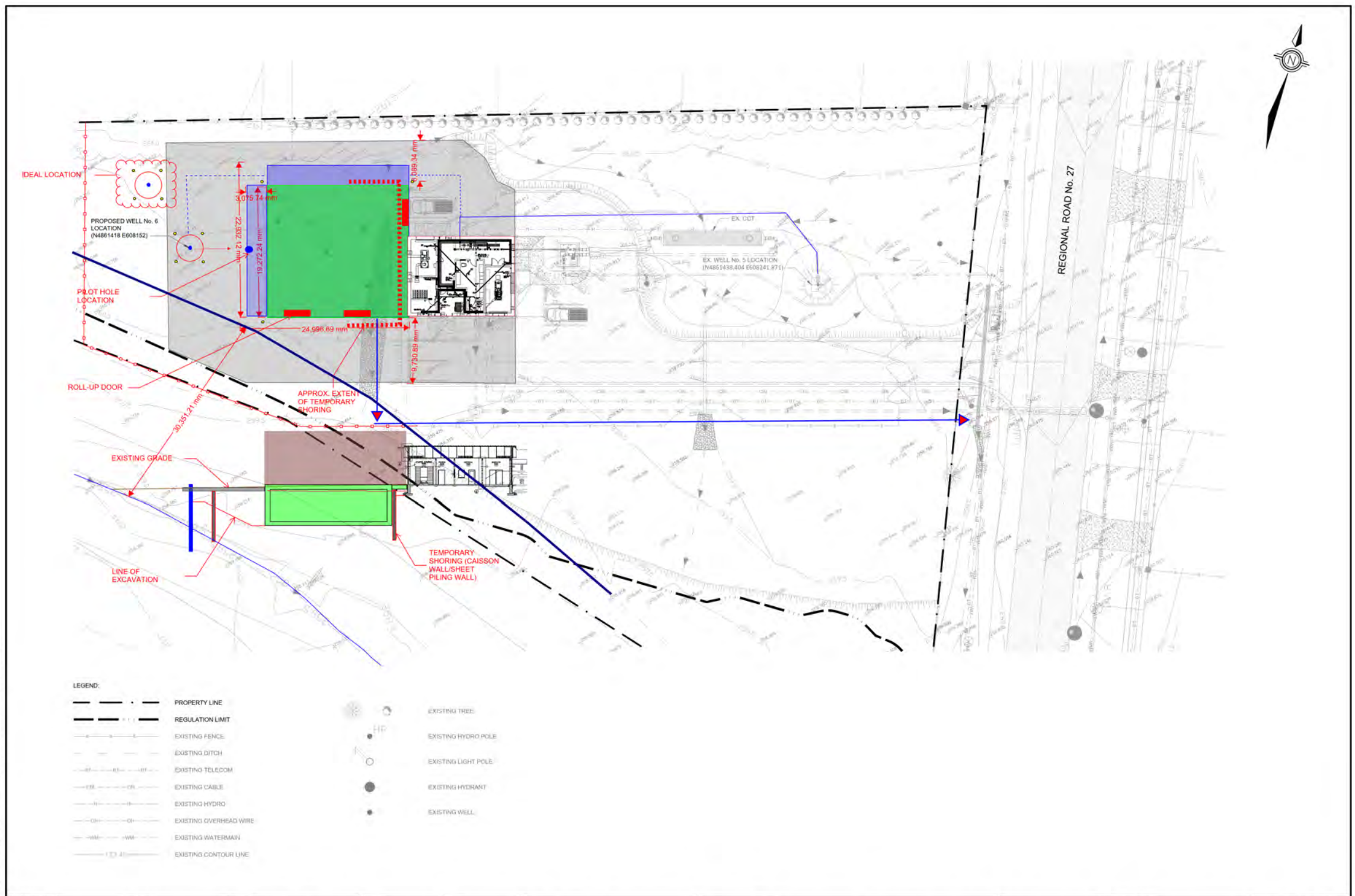
LEGEND

- SITE LOCATION
- 120 m STUDY AREA
- WATERCOURSE
- UNEVALUATED WETLAND
- TRCA REGULATED AREA

Scale: 1:2,000


TITLE SITE LOCATION PLAN				
PROJECT NATURAL HERITAGE EVALUATION WELL 5, 12860 HIGHWAY 27 NOBLETON, ONTARIO				
CLIENT ETO ENGINEERING				
PROJECT NO. 23-0358	DATE JUNE 2023	PREPARED BY TP	APPROVED BY MC	FIGURE 1

Prepared By: Tanya Peterson
 C:\Users\TanyaPeterson\OneDrive - Envivision Consultants\Documents\12_GIS\Projects\2023\23-0358\Well 5\APPROX Well 5\APPROX Well 5\Figure 2_Expansion Plan.aprx



LEGEND:

	PROPERTY LINE		EXISTING TREE
	REGULATION LIMIT		EXISTING HYDRO POLE
	EXISTING FENCE		EXISTING LIGHT POLE
	EXISTING DITCH		EXISTING HYDRANT
	EXISTING TELECOM		EXISTING WELL
	EXISTING CABLE		
	EXISTING HYDRO		
	EXISTING OVERHEAD WIRE		
	EXISTING WATERMAIN		
	EXISTING CONTOUR LINE		

TITLE				
PROPOSED WELL FACILITY UPGRADE PLAN				
PROJECT				
NATURAL HERITAGE EVALUATION WELL 5, 12860 HIGHWAY 27 NOBLETON, ONTARIO				
CLIENT		ETO ENGINEERING		
PROJECT NO.	DATE	PREPARED BY	APPROVED BY	FIGURE
23-0358	JUNE 2023	TP	MC	2

Scale: NTS





APPENDIX A:

Terms of Reference

April 18, 2023

Project #: 23-0358

The Township of King
2585 King Road
King City, Ontario L7B 1A1

Attention: Kristen Harrison, MCIP, RPP, Policy Planner, Planning Division

Sent via email: kharrison@king.ca

SUBJECT: TERMS OF REFERENCE, NOBLETON WELLS 2 AND 5 UPGRADES

EnVision Consultants Ltd. (EnVision) was retained by ETO Engineering (the 'Client') to conduct a Natural Heritage Evaluation (NHE) to support the capacity and treatment upgrades proposed for the Nobleton Wells 2 and 5 Upgrades (the 'Site'). This document proposes the Terms of Reference for the NHE.

The Sites are located near King Road and Highway 27, Nobleton, Ontario. Well 2 occupies an approximate area of 0.16 hectares (0.38 acres), while Well 5 occupies an approximate area of 0.91 hectares (2.26 acres) and are currently Well Facilities located primarily within an urban residential area. Well 2 includes a small section of a watercourse feature along the southwest border of the Site. No natural heritage features were shown to be within the vicinity of Well 5, however, there is a naturalized area with an associated watercourse adjacent to Well 5 located approximately 25 m south of the Site. Both watercourses are regulated by the Toronto and Region Conservation Authority (TRCA).

REVIEW OF BACKGROUND INFORMATION

Relevant information resources will be reviewed in order to provide information related to Significant Wildlife Habitat (SWH) and Species at Risk (SAR) that have potential to occur on the Site or within the surrounding area (within 120 m of the Site). The resources to be reviewed are listed below:

- Aerial Photographs and Satellite Imagery;
- Atlas of the Breeding Birds of Ontario internet site (Bird Studies Canada, 2006);
- Conservation Authorities Act, Ontario Regulation 166/06 Toronto and Region Conservation Authority;
- Correspondence with TRCA, MNRF, and MECP staff;
- Fisheries and Oceans Canada Aquatic Species at Risk Mapping Tool (2022);
- Environmental Study Report (ERS) (Black & Veatch, 2021);



-
- Natural Heritage Areas Mapping, including Natural Heritage Information Centre (NHIC) data (MNRF, 2022);
 - Nobleton Community Plan OPA No. 57 (2005);
 - Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015b);
 - Significant Wildlife Habitat: Technical Guide (MNRF, 2000);
 - Species at Risk in Ontario (SARO) List, Ontario Regulation 230/08 (Government of Ontario, 2018);
 - Species at Risk Public Registry (Government of Canada, 2015);
 - Township of King Official Plan (2019); and,
 - York Region Official Plan (2022).

FIELD PROGRAM

VEGETATION COMMUNITY DESCRIPTION AND MAPPING

The vegetation on the Site will be inspected during a single site reconnaissance and details pertaining to the species and frequency of occurrence on the Site will be recorded. Additionally, details including the presence of any SAR plants, surficial soil types, and indication of human disturbance will be noted. Vegetation communities on the Site will be recorded, mapped, and classified based on the Ecological Land Classification (ELC) for Southern Ontario (Lee et al. 1998)

VEGETATION INVENTORY

The Site will be visited on one (1) occasion, once in the spring, to conduct vegetation inventories. All species at the Site will be recorded, and the location of any SAR plants will be documented with a handheld GPS unit. This information will be used in the classification of ELC polygons on the Site.

SIGNIFICANT HABITAT ASSESSMENT AND WILDLIFE DOCUMENTATION

The Site will be assessed for SWH and presence of or habitat for SAR, and any pertinent findings will be documented, photographed, and the location will be georeferenced using a handheld GPS unit. All incidental wildlife observations or evidence of wildlife will be recorded during each visit to the Site.

REPORTING

The findings from the field program will be included in a NHE report, along with relevant figures and regulatory communications. An assessment of the potential impacts of the proposed development to the natural heritage features and other communities on the Site will be conducted and included in the report. The report will also include recommendations for mitigation of impacts and the monitoring of these mitigations, and list enhancement opportunities on the Site. The report will be submitted to the Growth Management Services Department at The Town of King for review.



CLOSING

This Terms of Reference, was prepared for the account of ETO Engineering. EnVision has completed this assessment in accordance with generally accepted professional practises and procedures applicable at the time of preparation. These services are not subject to any express or implied warranties, and none should be inferred. The material in this memo reflects EnVision's judgement in light of the information available at the time of preparation. Any use, which a Third Party not noted above makes of this report, or nay reliance on decisions to be made based on it, are the responsibility of such Third Parties. EnVision accepts no responsibility for damages, if any, suffered by a Third Party as a result of decisions made or actions based on this report.

We thank you for allowing us to take part in your project. Should you have any questions or wish to review the contents of this letter in more detail, please do not hesitate to contact the undersigned.

Yours sincerely,

EnVision Consultants Ltd.

Anne Ha, B.Sc.
Junior Ecologist
aha@envisionconsultants.ca

Mark Cece, B.Sc.
Director - Ecology
mcece@envisionconsultants.ca



APPENDIX B:

Agency Consultation

Anne Ha

Subject: Nobleton Wells: TOR Submission + Request for Information Follow-up - TRCA Response July 5, 2023


From: George Tsourounis <george.tsourounis@trca.ca>

Sent: Wednesday, July 5, 2023 1:18 PM

To: Anne Ha <aha@envisionconsultants.ca>

Subject: RE: Nobleton Wells: TOR Submission + Request for Information Follow-up - TRCA Response July 5, 2023

Hi Anne,

Please find attached link with the requested data:  [Nobelton Well Upgrades](#).

Regards,

George Tsourounis, MES Pl.

Planner I

Infrastructure Planning & Permits | Development and Engineering Services

T: [437-880-2472](tel:437-880-2472)

E: george.tsourounis@trca.ca

A: [101 Exchange Avenue, Vaughan, ON, L4K 5R6](#) | trca.ca



From: George Tsourounis <george.tsourounis@trca.ca>

Sent: Tuesday, June 27, 2023 9:29 AM

To: Anne Ha <aha@envisionconsultants.ca>

Cc: Mark Cece <mcece@envisionconsultants.ca>; Tiffany Waters <twaters@envisionconsultants.ca>; Johnny Pang <johnny.pang@etoengineering.ca>

Subject: RE: Nobleton Wells: TOR Submission + Request for Information Follow-up - TRCA Response June 27, 2023

Some people who received this message don't often get email from george.tsourounis@trca.ca. [Learn why this is important](#)

Hi Anne,

Please be advised that TRCA staff are completing the data request.

Also, please note that fish data can be found in our open data portal: [Datasets - TRCA Open Data](#).

Please let me know if you have any questions.

Regards,

George Tsourounis, MES Pl.

Planner I

Infrastructure Planning & Permits | Development and Engineering Services



From: Anne Ha <aha@envisionconsultants.ca>

Sent: Tuesday, June 20, 2023 3:19 PM

To: George Tsourounis <george.tsourounis@trca.ca>

Cc: Mark Cece <mcece@envisionconsultants.ca>; Tiffany Waters <twaters@envisionconsultants.ca>; Johnny Pang <johnny.pang@etoengineering.ca>

Subject: RE: Nobleton Wells: TOR Submission + Request for Information Follow-up - TRCA Response June 20, 2023

Hi George,

Thank you for the review of our TOR. As for the data request, we would like to request any available Natural Heritage Information for the Sites and general vicinity including any available fish community data for the nearby tributaries to our two Well sites would be greatly appreciated.

I believe both are part of the East Humber River watershed with an unnamed tributary runs along our Well 2 Site and another branch of the East Humber River runs nearby our Well 5 Site.

Please let me know if any additional information is needed.

Thank you,



Anne Ha, B.Sc.

Junior Ecologist

Cell / 647-997-5650

Email / aha@envisionconsultants.ca

From: George Tsourounis <george.tsourounis@trca.ca>

Sent: Tuesday, June 20, 2023 2:49 PM

To: Anne Ha <aha@envisionconsultants.ca>

Cc: Mark Cece <mcece@envisionconsultants.ca>; Tiffany Waters <twaters@envisionconsultants.ca>; Johnny Pang <johnny.pang@etoengineering.ca>

Subject: RE: Nobleton Wells: TOR Submission + Request for Information Follow-up - TRCA Response June 20, 2023

Some people who received this message don't often get email from george.tsourounis@trca.ca. [Learn why this is important](#)

Hi Anne,

Thank you for your email and your patience.

Please note that TRCA has reviewed the ToR and has no comments.

TRCA staff are working on the data request for these two locations. Can you please confirm what specific data you are requesting?

Thank you,

George Tsourounis, MES Pl.

Planner I

Infrastructure Planning & Permits | Development and Engineering Services



From: Anne Ha <aha@envisionconsultants.ca>
Sent: Thursday, June 8, 2023 12:27 PM
To: Nida Mirza <Nida.Mirza@trca.ca>
Cc: Mark Cece <mcece@envisionconsultants.ca>; Tiffany Waters <twaters@envisionconsultants.ca>;
johnny.pang@etoengineering.ca
Subject: Nobleton Wells: TOR Submission + Request for Information Follow-up

Hi Nida,

I wanted to send a follow-up to my previous email regarding the Nobleton Wells Sites and the request for natural heritage information and fish community data on April 24th, as it has been a few weeks and I have not heard back.

Additionally, a Terms of Reference (TOR) was originally submitted to the Town of King's Planning Department on April 18th, and they have indicated as the lands are regulated by the TRCA, we should confirm the TOR with the TRCA.

Thus, attached to this email is the submission of the TOR for your review.

Please let me know if you have any questions or concerns.

Thank you,

Anne Ha, B.Sc.
Junior Ecologist



6415 Northwest Drive U37-40,
Mississauga, ON, L4V1X1
Cell / 647-997-5650
Office/ 905-677-0202
Email / aha@envisionconsultants.ca
Website / www.envisionconsultants.ca

Anne Ha

From: Kristen Harrison <kharrison@king.ca>
Sent: June 8, 2023 11:49 AM
To: Anne Ha
Cc: Mark Cece; Mandy Paglia; johnny.pang@etoengineering.ca; Gaspare Ritacca; Kyle Snell
Subject: RE: Nobleton Wells TOR Submission

Hi Anne,

My apologies for not getting back to you sooner on this. The lands appear to be regulated by the Toronto and Region Conservation Authority. The TOR should be confirmed with the CA.

Thank you,

Kristen Harrison, MCIP, RPP

Manager of Policy Planning
Planning Division, Growth Management Services
King Township
905-833-4065

[ATTENTION – KING TOWNSHIP SERVICES DURING COVID-19](#)

King Township is pleased to welcome you in person to our Township facilities, programs and services, with Provincial COVID-19 safety protocols in place.

Many services are also available online by visiting www.king.ca. All staff can be contacted directly by email or phone. Your health and safety is our top priority. For COVID-19 information, visit York Region's website at www.York.ca/covid19 and the Ontario Health website at www.Ontario.ca/covid19

From: Anne Ha <aha@envisionconsultants.ca>
Sent: Tuesday, April 18, 2023 1:10 PM
To: Kristen Harrison <kharrison@king.ca>
Cc: Mark Cece <mcece@envisionconsultants.ca>; johnny.pang@etoengineering.ca
Subject: Nobleton Wells TOR Submission

You don't often get email from aha@envisionconsultants.ca. [Learn why this is important](#)

CAUTION! This email originated from **outside your organization**. Verify the sender's email address and carefully examine any links or attachments before clicking. If you believe this may be a phishing email, please use the **Report a Phish** Outlook add-in. If you think you may have clicked on a phishing link, please mention that when reporting the phishing email.

Hello Kristen,

EnVision Consultants Ltd (EnVision) has been retained to complete a Natural Heritage Evaluation (NHE) report for two wells located near King Rd. and Hwy 27, Nobleton, Ontario (please see the attached .jpeg for the study area).

Additionally, attached to this email is the submission of the Terms of Reference (TOR) for your review.

Please let me know if you have any questions or concerns.

Thank you,

Anne Ha, B.Sc
Junior Ecologist

Anne Ha

From: Andersen, Jeff (MECP) <Jeff.Andersen@ontario.ca>
Sent: March 27, 2023 8:44 AM
To: Anne Ha
Subject: RE: Request for Information: Nobleton, ON

Anne;

MECP staff cannot confirm there are no other records at the site but have nothing further to add save consideration for species at risk Bats and their habitat.

Regards;

JJA

JEFF J. ANDERSEN

**MANAGEMENT BIOLOGIST
PERMISSIONS SECTION, SPECIES AT RISK BRANCH
LAND AND WATER DIVISION
ONTARIO MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS**

50 Bloomington Road, Aurora ON L4G 0L8 | jeff.andersen@ontario.ca | 289-221-1705



From: Anne Ha <aha@envisionconsultants.ca>
Sent: March 24, 2023 2:19 PM
To: Andersen, Jeff (MECP) <Jeff.Andersen@ontario.ca>
Subject: Request for Information: Nobleton, ON

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Hi Jeff,

EnVision Consultants Ltd (EnVision) has been retained to complete a Natural Heritage Evaluation (NHE) report for two wells located near King Rd. and Hwy 27, Nobleton, Ontario. Well 2: 608007 E 4861744 N and Well 5: 608218 E 4861430 N (see attached .jpeg). The purpose of this email is to request any available information regarding species at risk (SAR).

A review of background information including the Natural Heritage Information Center (NHIC) data available through the Ministry of Natural Resources and Forestry Make a Map: Natural Heritage Areas application, ebird, and iNaturalist indicate the following SAR have been documented within the vicinity of the Site:

- Bobolink (*Dolichonyx oryzivorus*);
- Eastern Meadowlark (*Sturnella magna*);
- Wood Thrush (*Hylocichla mustelina*); and,
- Redside Dace (*Clinostomus elongatus*).

Based on aeriels potential habitat for:

- Chimney Swift (*Chaetura pelagica*);

If possible, please confirm:

- That there are no other records of SAR or species of conservation concern on or within the vicinity of the Site.

Any other details or information that you can provide to help our natural heritage inventory would be greatly appreciated.

Thank you,

Anne Ha, B.Sc
Junior Ecologist

ENVISION
CONSULTANTS LTD

6415 Northwest Drive U37-40,
Mississauga, ON, L4V1X1
Cell / 647-997-5650
Office/ 905-677-0202
Email / aha@envisionconsultants.ca
Website / www.envisionconsultants.ca



APPENDIX C:

Photo Page



PHOTO 1: View of the east exterior of the well facility, facing west.

PHOTO 2: View of the south exterior of the well facility, facing northwest.



PHOTO 3: View of the north and west exteriors of the well facility, facing southeast.

PHOTO 4: View of the gravel extension of the driveway and well equipment to the west of the well facility, facing west.



PHOTO 5: View of well equipment on the eastern portion of the Site, facing north.

PHOTO 6: View of well equipment on the eastern portion of the Site, facing west.



PHOTO 7: View of a culvert on the eastern portion of the Site, facing south.



PHOTO 8: View of the southern portion of the Site, facing northwest.



PHOTO 9: View of a culvert on the southeastern portion of the Site, to the south of the previously identified culvert, facing northeast.



PHOTO 10: View of culverts to the east of the Site, at Highway 27, facing east.



PHOTO 11: View of the tributary to the south of the Site, facing southeast.



PHOTO 12: View of the tributary to the northeast of the Site, at the corner of Ellis Avenue and Highway 27, facing southeast.