

February 3, 2014
Our Ref: EM13-0758

Mr. Andrew Pearce
Director of Development/Transportation Engineering
The Corporation of the City of Vaughan
2141 Major Mackenzie Drive
Vaughan, ON L6A 1T1

Dear Mr. Pearce:

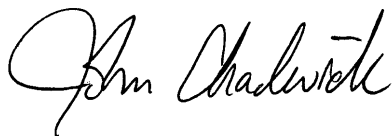
**Re: Project File Report
Municipal Services for the Vaughan Healthcare Centre Precinct Class
Environmental Assessment Study**

Cole Engineering Group Ltd. (CEG) is pleased to submit our Draft Project File Report for the Municipal Services for the Vaughan Healthcare Centre Precinct Class Environmental Assessment (EA) Study. Completed as a Schedule "B" Class EA, this report documents Phase I and II of the Municipal Engineers Association's (MEA) Municipal Class EA process, including a description of the problem/opportunity, identification of alternative solutions, inventory of the natural, socio-economic and cultural environment, consultation with the public and stakeholders, and evaluation of alternative solutions resulting in a preferred solution with identified impacts and mitigation measures.

Should you have any questions or comments, please do not hesitate to contact the undersigned.

Yours truly,

COLE ENGINEERING GROUP LTD.



John Chadwick, P.Geo.
Project Manager

/bs/pb

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1.0 Introduction

The Corporation of the City of Vaughan (City) has undertaken a Class Environmental Assessment (EA) study to consider servicing infrastructure, stormwater management ponds, drainage channel re-alignment, and roadways for the Vaughan Healthcare Centre Precinct (VHCP). At this time a potential Highway 400 ramp extension, which is subject to a future study involving the Regional Municipality of York (York Region) and the Ministry of Transportation of Ontario (MTO), is excluded from this Class EA study.

The City has completed a *Vaughan Healthcare Centre Precinct Plan (VHCPP)* to illustrate and guide development, and is in the process of completing a Draft Plan of Subdivision in fulfillment of *Planning Act* approval requirements. The Class EA study will therefore be conducted generally following the Integrated Approach (with the *Planning Act*) outlined in the *Municipal Engineers Association Class EA (October 2000, as amended October 2007 & 2011)*.

This report describes the planning process followed and conforms to the Municipal Class EA process by:

- Identifying the need for the project with associated problem and opportunity (Phase I); and
- Describing existing conditions within the study area, defining and evaluating alternative solutions (while considering impacts and mitigation measures), and summarizing public and agency consultation; ultimately leading to the selection of a preferred solution (Phase II).

1.1 Purpose of the Project

The purpose of the project is to transform underutilized lands into a vibrant healthcare Precinct with a primary focus of delivering a new healthcare facility with a range of health care related uses. The VHCP is intended to develop at higher densities to support existing and planned transit along arterial roads and within the Precinct with a network of streets, stormwater management controls, and water and wastewater servicing.

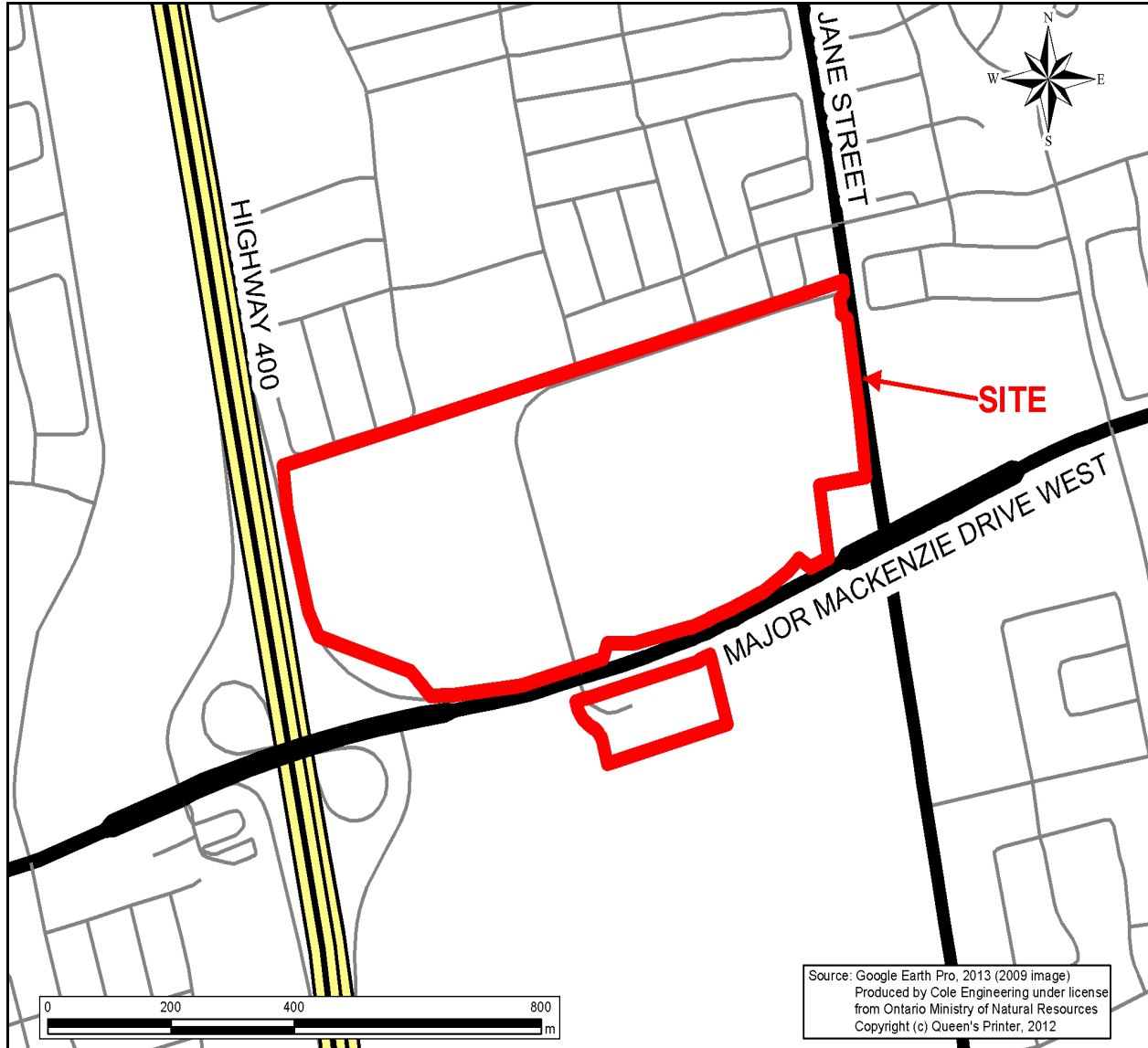
1.2 Description of the Study Area

The City has acquired a 33.2 ha (82 acre) parcel of land on the northwest quadrant of Major Mackenzie Drive and Jane Street for the VHCP, along with a 2 ha (5 acre) parcel on the south side of Major Mackenzie Drive as a potential future transit hub. The site is contained entirely within the boundaries of the City of Vaughan, which itself is within York Region. **Figure 1-1** illustrates the extent of the site boundaries.

The VHCP is bounded by Highway 400 to the west, Major Mackenzie Drive to the south, Jane Street to the east and an existing residential neighbourhood to the north. The lands were previously owned by Cedar Fair (Canada's Wonderland) and contain a network of service roads that provide access to Canada's Wonderland (south of Major Mackenzie Drive, west of Jane Street). The Precinct has significant frontage on two arterial roads, Major Mackenzie Drive and Jane Street, and direct visibility from Highway 400.

The Precinct is generally flat but does slope downward from north-east to south-west. The west part of the Precinct is lower than Major Mackenzie Drive. Combined with the existing underpass to Canada's Wonderland, the grade difference in some parts is as much as 6.0 metres.

Figure 1-1 Study Area



2.0 Needs Assessment and Justification

Concurrent with the Planning applications, the following additional works, which are external to the Draft Plan, have been identified as being subject to the Municipal Class EA process:

- Servicing Infrastructure;
- Stormwater Management Ponds;
- Drainage Channel Re-alignment; and
- Roadways.

Official Plan Amendment 715 (as amended) outlines five guiding principles that provide justification for the Precinct's development. The guiding principles represent the fundamental needs that must be met in planning the municipal services for the VHCP.

2.1 Municipal Services and Stormwater Management

Municipal services and utilities should be provided efficiently within the Precinct with an emphasis on increased sustainability by reducing energy and water consumption and through increased use of renewable resources.

Development may be phased to ensure that municipal services are in place or will be available in time to serve proposed levels of development.

Stormwater management should be designed to minimize runoff, enhance water quality and to provide infiltration in a manner that is sensitive to the environment and supports natural heritage features and functions. Best management practices including Low Impact Development Standards and source controls should be investigated to best achieve this objective.

Where feasible, watercourses and stormwater ponds should provide for and enhance the ecological functions and the visual amenity of the Precinct. They should be designed and located to best support its higher order function while not impeding the intensification potential of key sites, potential access locations, or prime connections to transit.

2.2 Problem/Opportunity Statement

The need has been identified to transform underutilized lands into a vibrant healthcare Precinct with a primary focus on delivering a new healthcare facility with a range of health care related uses. The Vaughan Healthcare Centre Precinct is intended to develop at higher densities to support existing and planned transit along arterial roads and within the Precinct with a network of streets, stormwater management controls, and water and wastewater servicing.

These needs result in the following **Problem/Opportunity Statement**:

How to provide municipal services and transportation infrastructure to accommodate a hospital and related development and uses, as part of the Vaughan Healthcare Centre Precinct Plan.

3.0 Overview of the Municipal Class EA Planning Process

This Class EA planning process, which follows the Municipal Engineers Association's (MEA) Municipal Class Environmental Assessment document, takes into consideration the protection of all aspects of the natural, social and economic environment as well as long-term planning for the mitigation of any adverse effects during both construction and commissioning. The Class EA process also includes consultation with the Public, Aboriginal Communities, Government Agencies, local interest groups and review bodies to obtain input and feedback and to ultimately attain general acceptance for the preferred alternative.

The proposed additional works identified are tightly interconnected with the *Planning Act* applications. The Municipal Class EA process allows for an **Integrated Approach** to fulfill the requirements of both the Class EA and *Planning Act* review processes concurrently, as a streamlined and efficient means of disseminating information to the public, stakeholders and agencies.

There are five (5) assessment phases depicted in the Municipal Class EA Planning and Design Process, which include:

- **Phase 1:** Definition of the problem(s) and opportunities related to the project. This includes discretionary public consultation to review the problem/opportunity/need for the project.
- **Phase 2:** Identification of alternative solutions and selection of a preferred solution based on a thorough evaluation of the options against a rigorous set of criteria. Phase 2 includes a detailed inventory of the natural, social and economic environment as well as the identification of any adverse impacts/effects and associated mitigating measures. Public consultation is held to review the problem/opportunity as well as all alternative solutions in an attempt to gain feedback leading to the selection of the preferred solution.
- **Phase 3:** Identification and assessment of alternative design concepts for the preferred solution. The preferred solution selected in Phase 2 is expanded on in Phase 3 to include detailed design concepts. A second public consultation event is held to review the alternative design concepts in an attempt to gain further feedback leading to the selection of the preferred design.
- **Phase 4:** Preparation of an Environmental Study Report (ESR) documenting all phases and components of the Class EA process. The ESR is placed on public record and a notice of completion is filed.
- **Phase 5:** Implementation of the project works, including complete contract drawings and tender documents followed by construction and commissioning.

The complete Municipal Class EA Planning and Design Process is shown in **Figure 3-1**.

Figure 3-1 Municipal Class EA Planning and Design Process

3.1 Municipal Class EA Schedules

The Class EA document categorizes projects into one of three possible schedules depending on the project's complexity and the nature and significance of potential adverse effects on the environment. The schedule under which a particular project falls determines the specific planning and design phases that must be adhered to. The three (3) types of schedules are:

- **Schedule “A/A+”** projects are generally limited in scale and usually consist of minor operational/upgrade works. These projects usually have minimal adverse impacts on the environment and may go ahead without further assessment once the problem is reviewed and a solution is confirmed (i.e. after the completion of Phase 1). Schedule “A+” projects require the extra step of notifying stakeholders prior to proceeding with the implementation of the project.
- **Schedule “B”** projects have the potential for some adverse environment effects and must accordingly proceed through Phase 1 and Phase 2 of the planning and design process. Alternative solutions to the problem must be identified, all impacts to the natural, social and/or economic environment must be inventoried and a preferred solution selected through consultation with the Public and government review agencies. The project file must be completed and put on public record for a 30-day public review period prior to proceeding to implementation.
- **Schedule “C”** projects are the most complex and require a more detailed study, public and agency consultation and documentation. These projects have the potential for significant environment effects. A Schedule “C” project must pass through all five (5) Phases of the planning and design process. An ESR must be completed and put on public record for a 30-day public review period prior to proceeding to implementation.

3.1.1 Schedule B Classification

The scope of work for assessing municipal services for the VHCP consists of the potential for new roadways, sanitary sewers, watermains, stormwater management ponds, and drainage channels, all of which are characterized as Schedule “B” projects or lower within the MEA's Municipal Class Environmental Assessment document. Per *Appendix 1 – Project Schedules* of the document, these are characterized below in Table 3.1

Table 3.1 Infrastructure Projects Requiring Class Environmental Assessments

Infrastructure Item #	Work Description	Project Description # in Municipal Class EA Document	Class EA Project Description	Applicable Cost Limit for Project Approved Under Schedule	Preliminary Estimate of Cost	Schedule
1	Improvements to existing 3-way intersection (Street C/Jane)	Road Projects #12a	Construction of localized operational improvements at specific locations (e.g. the addition of a ramp to an existing interchange; turning lanes at an intersection, but not a continuous centre left turning lane)	NL		A+
2	Conversion of existing 3-way intersection to 4-way signalized intersection (Street A/Jane)	Road Projects #13	Installation, construction or reconstruction of traffic control devices (e.g. signing, signalization)	<\$9.5m A >\$9.5m B	\$375,000	A
3	Removal of existing driveway ramps (CW)	Road Projects #40	Retirement of existing roads and road related facilities	NL		A+
4	Removal of existing driveway and bridge (CW East underpass)	Road Projects #40	Retirement of existing roads and road related facilities	NL		A+
5	New 4-way signalized intersection including new turning lanes (Street D/Major Mackenzie)	Road Projects #13	Installation, construction or reconstruction of traffic control devices (e.g. signing, signalization)	<\$9.5m A >\$9.5m B	\$380,000	A
		Road Projects #20	Reconstruction or widening where the reconstructed road or other linear paved facilities (e.g. HOV lanes) will not be for the same purpose, use, capacity or at the same location as the facility being reconstructed (e.g. additional lanes, continuous centre	<\$2.4m B >\$2.4m C	\$170,000	B
6	New exit ramp from Canada's Wonderland	Road Projects #21	Construction of new roads or other linear paved facilities (e.g. HOV lanes)	<\$2.4m B >\$2.4m C	\$279,000	B
7	Extend Highway 400 off ramp into precinct plan including lowering existing Ramp E-N and constructing new bridge over existing Ramp E-N				\$4,930,000	
8	New culverts under Major Mackenzie	Road Projects #18	Construction of a new culvert or increase culvert size due to change in the drainage area	NL		A+
9	SWM Ponds (2)	Wastewater Management Projects #11	Establish new stormwater retention/detention ponds and appurtenances or infiltration systems including outfall to receiving water body where additional property is required		\$2,000,000	B
10	Channelization of watercourse	Wastewater Management Projects #17	Works undertaken in a watercourse for purposes of flood control or erosion control including relocation, realignment or channelization of watercourse	NL	\$3,270,000	B
11	All internal collector roads (excl. earthworks)	Road Projects #23	Construction of local roads which are required as condition of approval of site plan, plan of subdivision which will come into effect under the Planning Act prior to construction of the road	NL	\$1,251,000	A
	Another option for internal collector roads	Road Projects #20	Construction of new roads or other linear paved facilities (e.g. HOV lanes)	<\$2.4m B >\$2.4m C	\$1,251,000	B
12	Sewage pumping station & forcemain	Wastewater Management Projects #7	Construction of new pumping station where new equipment is located in an new building or structure	NL	\$904,000	B
13	Water servicing with connection to existing watermains	Water Projects #6	Extension of water distribution system with infrastructure connecting to existing system where it is required as part of a condition of approval of site plan, plan of subdivision which will come into effect under the Planning Act prior to the construction of the extension of the collection system	NL	\$342,500	A
14	Site access modifications on Canada's Wonderland	Road Projects #20	Construction of new roads or other linear paved facilities (e.g. HOV lanes) = Schedule is dependent on cost	<\$2.4m B >\$2.4m C	\$302,500	B

As such, this study is being conducted in accordance with the approved requirements for a Schedule “B” Municipal Class EA, which requires the completion of Phase 1 and Phase 2 of the planning and design process.

Consultation between the proponent and affected or interested stakeholders early in and throughout the process is a key feature of EA planning, which provides opportunities for the exchange of information by which decision-making may be influenced. In addition, one of the primary goals in effectively consulting stakeholders is to resolve issues proactively to avoid controversy, which could ultimately lead to a Part II Order request (discussed below). In a Schedule B Class EA there exists two mandatory points of contact with the public and review agencies. The first point of contact follows the proponent’s identification of the problem or opportunity, identification and evaluation of alternative solutions to the problem, and general inventory of the natural, social, and economic environments to determine possible impacts of each alternative solution. It is at this point, through invitation for public comment and input that an opportunity for stakeholders to assist in the selection of a preferred solution exists. The second point of contact constitutes the advisement of completion of the planning process (e.g. Notice of Completion), which completes the screening requirements for Schedule B projects. Once completed, the final Project File Report will be available for the mandatory 30-day public review period by interested members of the public and agency groups.

3.1.2 Part II Order

In the event that an affected agency or other interested party has a concern that cannot be resolved through discussions with York Region upon completion of the Final Report, individuals may request the Minister of the Environment or delegate to issue a Part II Order under the *Environmental Assessment Act*. A Part II Order is a mechanism by which the Minister or delegate is requested to render a decision regarding the elevation of the EA (prior to proceeding with the proposed undertaking) to an individual EA. All Part II Order requests must be submitted to the Minister or delegate within the 30 calendar day review period and copied by the requester to the proponent at the same time that they are submitted. Once a Part II Order is received, the proponent is advised of the receipt of the request by the Minister or Environmental Assessment and Approvals (EAA) Branch, whereby the proponent may make a submission to the EAA Branch addressing the issues raised in the request. Following the request, the EAA Branch must carry out a review, consider both sides of the argument, and make a recommendation to the Minister or delegate. The Minister reviews the request and study information and makes one of the following decisions:

- Deny the request;
- Refer the matter to mediation; or
- Grant the request and require the proponent to comply with Part II of the *EA Act* (complete an Individual EA)

Members of the public having concerns about the potential environmental effects of a project or the planning process being followed, have a responsibility to bring their concerns to the attention of the proponent early in the planning process, when the proponent has greater flexibility to accommodate changes in the project development and the process.

4.0 Planning and Legislative Considerations

4.1 Provincial Policy Statement (2005)

The current *Provincial Policy Statement (PPS)* was introduced in March 2005 and aims to guide appropriate development while protecting resources of provincial interest, public health and safety, and the quality of the natural environment. Policies regarding Building Strong Communities focus on the orderly development of land including works necessary to meet the current and projected need for infrastructure.

The *PPS* encourages the planning of infrastructure to be integrated with the planning for growth to meet the current and projected needs of the area. It also encourages the improvement of existing infrastructure prior to the development of any new infrastructure within a municipality/region.

Policy 2.3 of the *PPS* provides direction to regional and local municipalities regarding planning policies for the protection and management of natural heritage features and resources. The *PPS* defines seven natural heritage features, providing planning policies for each. The *Natural Heritage Reference Manual*, which is currently under review, is a technical document used to help assess the natural heritage features listed below:

- a) significant wetlands;
- b) significant habitat of endangered and threatened species;
- c) fish habitat;
- d) significant woodlands;
- e) significant valleylands;
- f) significant Areas of Natural and Scientific Interest; and
- g) significant wildlife habitat.

As this project is being carried out to meet the projected needs in the area for infrastructure, it is meeting the objective of the *PPS*. The EA has been carried out with consideration given to the suggestions of the *PPS*. The *PPS* further requires that the necessary infrastructure and public service facilities are available or will be available to meet current and projected needs (Section 1.1.1(g); strategically located to support the effective and efficient delivery of emergency medical services (Section 1.6).

The VHCP can fulfill these policies by:

- Providing opportunities for a mix of high intensity uses generating a variety of employment opportunities within a compact urban area;
- Providing necessary public service facilities, specifically a hospital and associated medical and healthcare related uses;
- Providing opportunities for increased densities and efficiency for services and infrastructure by optimizing the use of municipal services and public transit; and
- The Precinct is centrally located and provides opportunity for the location of a wide range of healthcare and health related uses.

4.2 Places to Grow Act

Places to Grow focuses on the Greater Golden Horseshoe's need to manage growth and development while supporting economic prosperity, protection of the environment and a high quality of life within its communities. The plan laid out by the Ontario government provides the framework for infrastructure investment, so that existing and future investments are optimized to serve growth up to and beyond the year 2031. The *Act* provides future population and employment targets for York Region and requires accommodation of this growth through intensification of existing settlement areas, like those within the study area.

The VHCP can assist in achieving the goals of the *Act* in the following ways:

- It accommodates new employment growth within the built up area and along Major Mackenzie Drive and Jane Street, both Intensification Corridors;
- It facilitates the delivery of community infrastructure by providing healthcare services; and
- It is located along existing and planned transit corridors (Major Mackenzie Drive and Jane Street), creating efficiency for existing and future infrastructure and services.

4.3 York Region Official Plan (2010)

In December 2009, York Region adopted an updated *Official Plan* which was approved by the Province of Ontario on September 7, 2010. The *Official Plan*, as approved by the province, is currently under appeal to the Ontario Municipal Board. Consisting of a set of policies that help guide economic, environmental and community-building decisions affecting the use of land, the *Official Plan* helps provide protection to the environment in York Region. The policies of the *Official Plan* provide a balanced approach to growth that help ensure York Region remains an attractive place to live and work. It is also used as a tool to manage growth, while helping to coordinate and provide a framework for more detailed planning by Municipalities within York Region.

The Region's Greenlands System takes a natural heritage system approach to preserving natural heritage features. This approach reflects current practice in conservation ecology and is supported by the *Provincial Policy Statement*. The Regional Greenlands System preserves and enhances natural features within a connected natural heritage system. The primary function of the Regional Greenlands System is the protection of natural heritage features in a system of cores connected by corridors and linkages.

Key natural heritage and hydrologic features within York Region include:

- significant habitat for endangered, threatened and special concern species;
- fish habitat;
- wetlands;
- Life Science Areas of Natural and Scientific Interest;
- Environmentally Significant Areas;
- significant valleylands;

- significant woodlands;
- significant wildlife habitat;
- sand barrens, savannahs and tall grass prairies;
- lakes and their littoral zones;
- permanent and intermittent streams;
- kettle lakes;
- seepage areas and springs; and
- the Lake Simcoe shoreline.

Development or site alteration is not permitted within these features unless it can be demonstrated through a Natural Heritage Evaluation that no negative impacts will be had on the feature or its functions.

The VHCP will comply with the *Official Plan* in the following ways:

- It is expected to provide healthcare related uses including a hospital and associated uses in keeping with the policies of the Urban Area designation.
- It will develop at higher densities in keeping with the principles of the Regional Rapid Transit Corridors to support existing and planned transit infrastructure.
- The development of the Precinct will assist Vaughan in meeting its employment target as established in the Regional *Official Plan* and the Council-adopted and York Region endorsed *Vaughan Official Plan, 2010* (estimated at a minimum of 3,000 jobs).

4.4 City of Vaughan Official Plan Amendment 715 (as amended by Official Plan Amendment 725)

Official Plan Amendment (OPA) 715 (as amended) provides the parent framework for the future development of these lands. *OPA 715* was approved by York Region on September 2, 2010. *OPA 715* was subsequently amended to bring all lands under the “Hospital Precinct Plan” designation through *OPA 725* and approved by the Region on April 16, 2013. *OPA 715* (as amended) provides policies to guide development of the Precinct into an urban centre focused on delivering a hospital and related healthcare uses to serve Vaughan and the broader region.

Schedule A of *OPA 715* (as amended) identifies the lands as requiring a “Hospital Precinct Plan”. The lands are subject to the “Major Institutional” and “Natural Area” designations which permit the following uses:

1. Major Institutional Designation

Permitted uses include:

- A hospital with a full range of care;
- Rehabilitation facilities and long term care and other forms of residential uses related to healthcare;

- Research and development facilities;
- Medical and dental offices of all types;
- Laboratories;
- Facilities that construct or repair medical devices;
- Education, training, meeting or conference facilities related to healthcare;
- Business of health facilities that promote wellness; and
- Ancillary uses, which may include: Child or adult daycare, retail facilities, a chapel or small place of worship, accommodation facilities, parking areas or structures, utilities and maintenance operations, a district energy plant, and recreational uses associated with a healthcare use.

2. Natural Area Designation

Permitted uses include:

- Limited pedestrian or cycling pathways;
- Passive recreation; and
- Environmental management activities (if feasible).

The land uses for the VHCP should conform to the Council approved *Vaughan Official Plan 2010*.

4.5 Green Directions Vaughan

Green Directions, the City's first Community Sustainability and Environmental Master Plan, contains a framework of initiatives to improve the City's operational and regulatory functions. The Plan is designed to guide the community towards a more sustainable future by addressing environment, cultural, social and economic issues.

The plan identifies goals and objectives and a series of actions which describe how each of the goals can be achieved. The categories and goals include:

Goal 1: What We Use

- To significantly reduce our use of natural resources and the amount of waste we generate.

Goal 2: How and Where we Grow

- To ensure sustainable development and redevelopment.

Goal 3: How We Get Around

- To ensure that Vaughan is a city that is easy to get around with low environmental impact.

Goal 4: How We Live

- To create a vibrant community where citizens, businesses and visitors thrive.

Goal 5: How we Lead

- To be leaders in advocacy and education on sustainability issues.

Goal 6: How we Operate

- To ensure a supportive system for the implementation of Green Directions.

The plan establishes the principles of sustainability, which will then be used in the development of other plans and master plans to achieve a healthy natural environment, vibrant communities and a strong economy. Action 4.1.8 in *Green Directions Vaughan* references the City's continuing support for the development of a future hospital.

Green Directions builds upon and complements existing sustainability measures in Vaughan's current policies and plans. The goals, objectives and action items of *Green Directions* will be considered as the project moves forward.

4.6 City of Vaughan Official Plan (2010)

The *Vaughan Official Plan* (2010) identifies the VHCP as a "Primary Centre". The VHCP is intended to develop as a healthcare centre anchored by the new Mackenzie Vaughan Hospital with associated medical related community facilities and business uses.

Primary Centres are locations that will accommodate intensification at a level that supports public transit with tall buildings as well as lower ones to facilitate an appropriate transition to neighbouring areas.

The *Official Plan* supports the creation of a significant medical health cluster and the development of a new hospital in the northwest quadrant of Jane Street and Major Mackenzie Drive. The policies encourage healthcare and related uses to form a cluster of medical health industries and a wide variety of jobs in healthcare, health research, health education, medical laboratory and other related industries.

The policies further encourage the early implementation of the planned Jane Street and Major Mackenzie Drive rapid transit services such that they can be operational at the time of occupancy of the hospital.

The *City of Vaughan Official Plan* designates the VHCP "Major Institutional" and "Natural Area" which is consistent with the land use policies of *OPA 715* (as amended).

It is intended that the policies of *OPA 715* (as amended) be carried forward into Volume 2 of the *Vaughan Official Plan*. In accordance with the *Vaughan Official Plan*, these policies will prevail over policies provided in Volume 1 in the event of conflicts.

The *Vaughan Official Plan* further supports active forms of transportation and infrastructure such as sidewalks, trails and bicycle lanes. Facilities and infrastructure should be planned for universal accessibility, meaning buildings, public space and environments should be designed such that they may be used by all people. The VHCP will comply with Vaughan's *Accessibility Policy* (2013) to implement the *Accessibility for Ontarians with Disability Act* (2005).

The *Vaughan Official Plan* is currently under appeal at the Ontario Municipal Board (OMB) and is partially approved. An OMB order was issued to approve those sections of the document not under appeal. All sections relating to the hospital are in full force and effect.

4.7 City of Vaughan Zoning By-law

The VHCP is currently zoned “Theme Park Commercial” in *Zoning By-law 1-88* and is subject to a site specific exception related to permitted uses, height and built form setbacks.

The current zone permissions and standards reflect those of a theme park, which are no longer appropriate for the VHCP, nor are they reflective of the urban environment envisioned for these lands.

Following Council’s endorsement of the Precinct Plan, the City intends to initiate a Zoning By-law Amendment process to bring the zoning into conformity with the *Official Plan* and to establish appropriate zone standards.

4.8 Ministry of Transportation Regulations and Guidelines

The development of lands adjacent to Provincial Highways is subject to MTO policies. Construction on or adjacent to a provincial highway (within 800 metres) requires a permit from MTO under the *Public Transportation and Highways Improvement Act*. MTO does not permit any structures or features which are essential to the operation of a site to be within a 14.0 metre non structural setback adjacent to its highway corridors. Some elements can be located within the setback area provided they are not essential to the overall viability of the development and can be removed or relocated in the future.

The VHCP should reflect MTO’s requirements including the 14 metre non-structural setback, which are depicted in all illustrations and plan configurations. Future site specific applications will be required to demonstrate compliance with MTO’s restrictions.

4.9 Toronto and Region Conservation Authority Regulations and Guidelines

Development proposals adjacent to regulated natural areas or that are greater than five hectares in size are subject to review and approval by the Toronto and Region Conservation Authority (TRCA) to ensure protection and regeneration of natural systems, and to prevent, eliminate or reduce the risk to life and property from flooding, erosion of riverbanks, and slope instability. The TRCA will be involved in the review and approval of the stormwater management system and the proposed re-configuration of the drainage channel running north-south on the western part of the site.

4.10 The Big Move – Transforming Transportation in the Greater Toronto and Hamilton Area, 2008

The *Big Move* is the Regional Transportation Plan for the Greater Toronto and Hamilton Area for the next 25 years. It identifies a series of transit and rapid transit initiatives designed to meet the current and projected transportation challenges that will be faced over the next planning horizon. The *Big Move* initiatives are projected to be in place at the 15-year and 25-year horizons and beyond.

On January 29, 2013 Vaughan Council approved a resolution to request Metrolinx to “consider the inclusion of the following transit projects and initiatives in the *Big Move*”:

- Extension of the Spadina subway northwards from Vaughan Metropolitan Station along Jane Street to Major Mackenzie Drive;
- Rapid transit along Major Mackenzie Drive; and
- A designated gateway hub at Major Mackenzie Drive and Jane Street.

The City’s request will be considered by Metrolinx in their 2016 review of the *Big Move*.

The VHCP will follow principles and guidelines that support transit and encourage the use of existing, planned and future transit initiatives. A number of Mobility Hub guidelines are also reflected in the Precinct Plan and associated design guidelines.

4.11 Region of York Transportation Master Plan (2009)

An update to the *York Region Transportation Master Plan (YRTMP)* was adopted by York Region Council on November 19, 2009. The *YRTMP* serves as the blueprint for all major transportation initiatives in the Region up to the year 2031.

Jane Street and Major Mackenzie Drive are identified as “Rapid Transit Corridors”. A significant increase in ridership is expected along the Major Mackenzie Drive corridor as a result of considerable employment and population growth. The *YRTMP* recommends that rapid transit service along Major Mackenzie Drive should be considered by 2021. In addition, rapid transit along the Jane Street corridor by 2031 is recommended to provide a direct connection to the Spadina subway extension at the Vaughan Metropolitan Centre.

The intersection of Jane Street and Major Mackenzie Drive is also conceptually identified as a “Local Gateway to Transit Network”. These locations are major entry points to York Region and the York Region Transit system and should be the focus of transit oriented development.

York Region supports the development of a transit terminal at Major Mackenzie Drive and Jane Street and has identified the City-owned five acre parcel on the south side of Major Mackenzie Drive as a potential location.

The *YRTMP* further supports enhancements to the pedestrian and cycling network. Bicycle lanes along Major Mackenzie Drive and Jane Street and a sidewalk along one side of Major Mackenzie Drive are recommended to be in place by 2031.

5.0 Identification of Alternative Solutions

The City has identified the need to transform underutilized lands into a vibrant healthcare Precinct with a primary focus on delivering a new healthcare facility (the Mackenzie Vaughan Hospital) and a range of health care related uses.

5.1 Description of Alternative Solutions

The need for the VHCP within Vaughan was confirmed through the Vaughan Healthcare Precinct Plan which outlined the need for new roadways, sanitary sewers, watermain, stormwater management ponds and drainage channels. The Precinct Plan and the planning legislation has determined that the alternative solution of “do nothing” will not address the problem statement. However it will provide a base case to understand the existing environment.

5.1.1 New Roadways – Alternative Routes

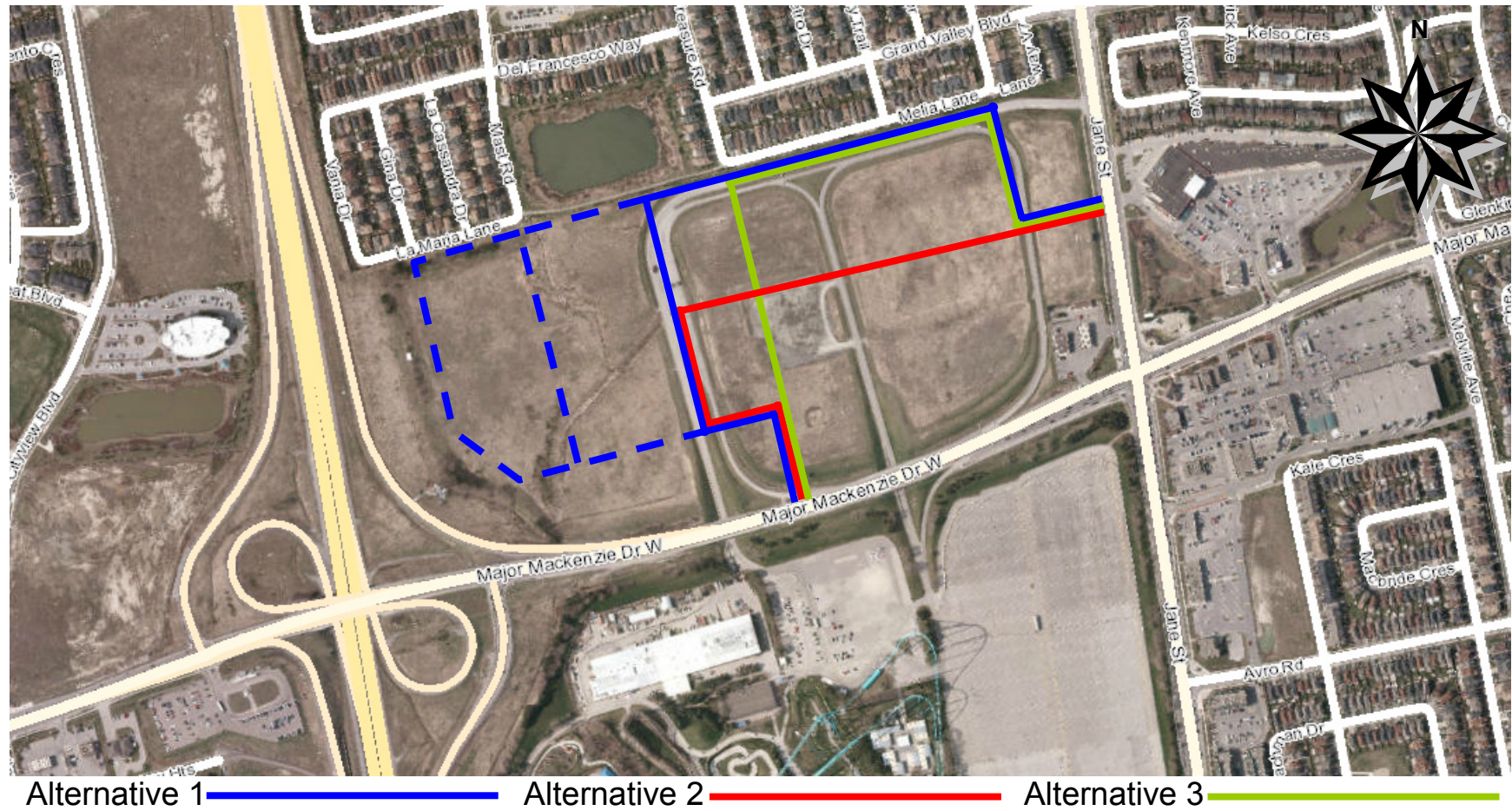
Based on the VHCP layout and the current surrounding road structure, the following three (3) alternative roadway layouts listed in **Table 5.1** are proposed to best direct traffic throughout the site.

Table 5.1 Alternative Roadway Routes

Alternative Routes	Alternative 1	Alternative 2	Alternative 3
Description	Street D to Street F (or E or G) to Street C to Street A to Jane St	Street through middle of site to connect with Street A at Jane St	Street D to Street C to Street A to Jane St

The alternative roadway routes are shown below in **Figure 5-1**.

Figure 5-1 Alternative Roadway Routes



5.1.2 Sanitary Sewers – Alternative Layouts

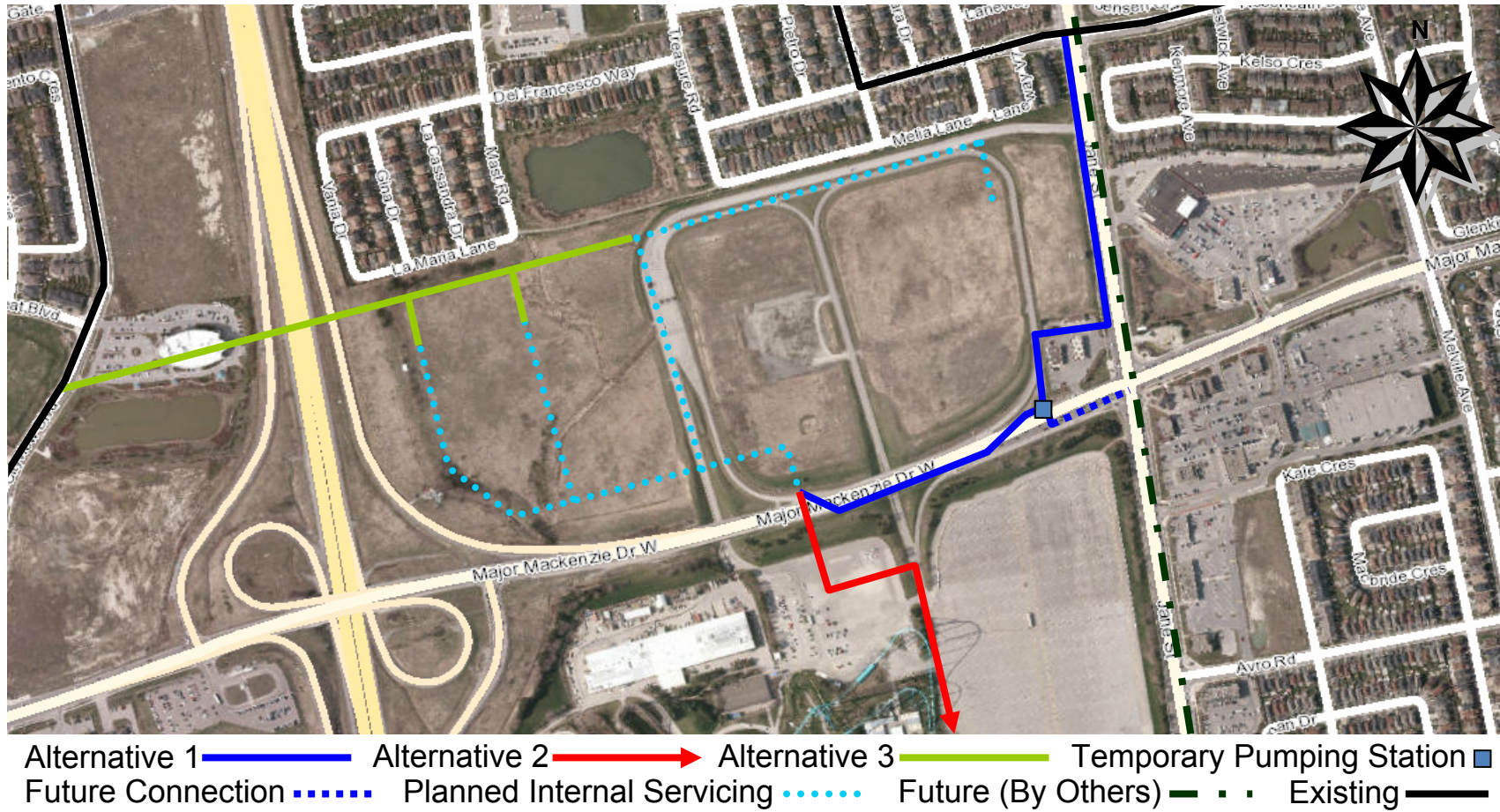
Following determination that interim sanitary sewers will be required until connection to the future North East Vaughan collector sewer is constructed by York Region in the Jane Street corridor; the following three (3) alternative layouts listed in **Table 5.2** were identified:

Table 5.2 Alternative Layouts for Sanitary Sewers

Alternative Layouts	Alternative 1	Alternative 2	Alternative 3
Description	Connect to existing sanitary sewer located at Jane St and Grand Valley Blvd	Connect to existing pumping station located at southeast end of Canada's Wonderland site	Extend to the west under Highway 400 and connect to existing system on Cityview Blvd

The alternative sanitary sewer layouts are shown below in **Figure 5-2**.

Figure 5-2 Alternative Sanitary Sewer Layouts



5.1.3 Watermains – Alternative Layouts

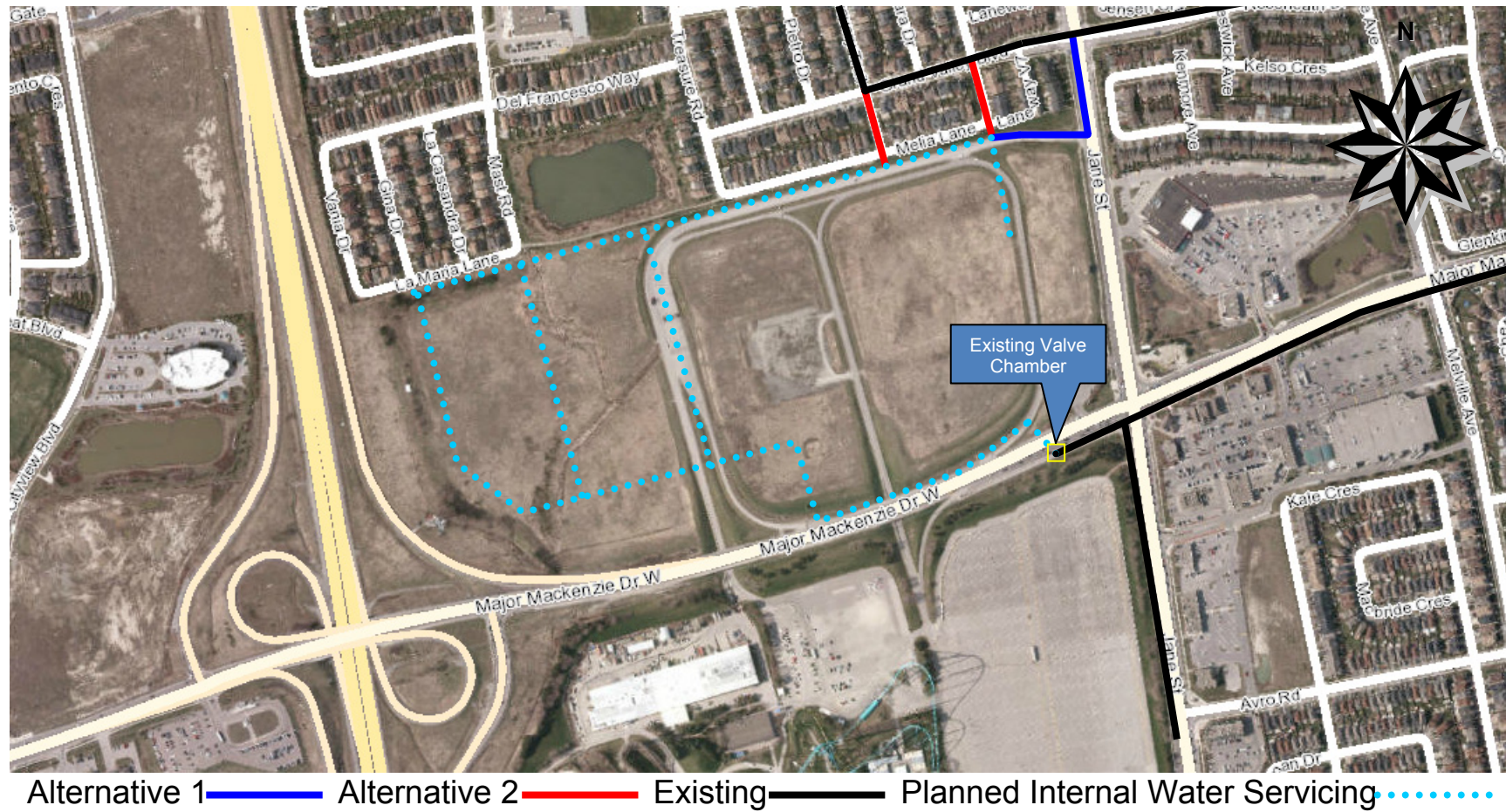
It was determined that new watermains would be required to ensure consistent and reliable water supply to the VHCP site. Existing watermains in the vicinity of the Precinct are capable of providing adequate flows and pressures for development. The following two (2) alternative layouts shown in **Table 5.3** were identified:

Table 5.3 Alternative Layouts for Watermains

Alternative Layouts	Alternative 1	Alternative 2
Description	Watermain on Jane St to connect at Grand Valley Blvd	Watermain from Street C along Discovery Trail or Melia Lane to Grand Valley Blvd

The watermain alternatives are shown below in **Figure 5-3**.

Figure 5-3 Alternative Watermain Layouts



5.1.4 Stormwater Management Ponds – Alternative Locations

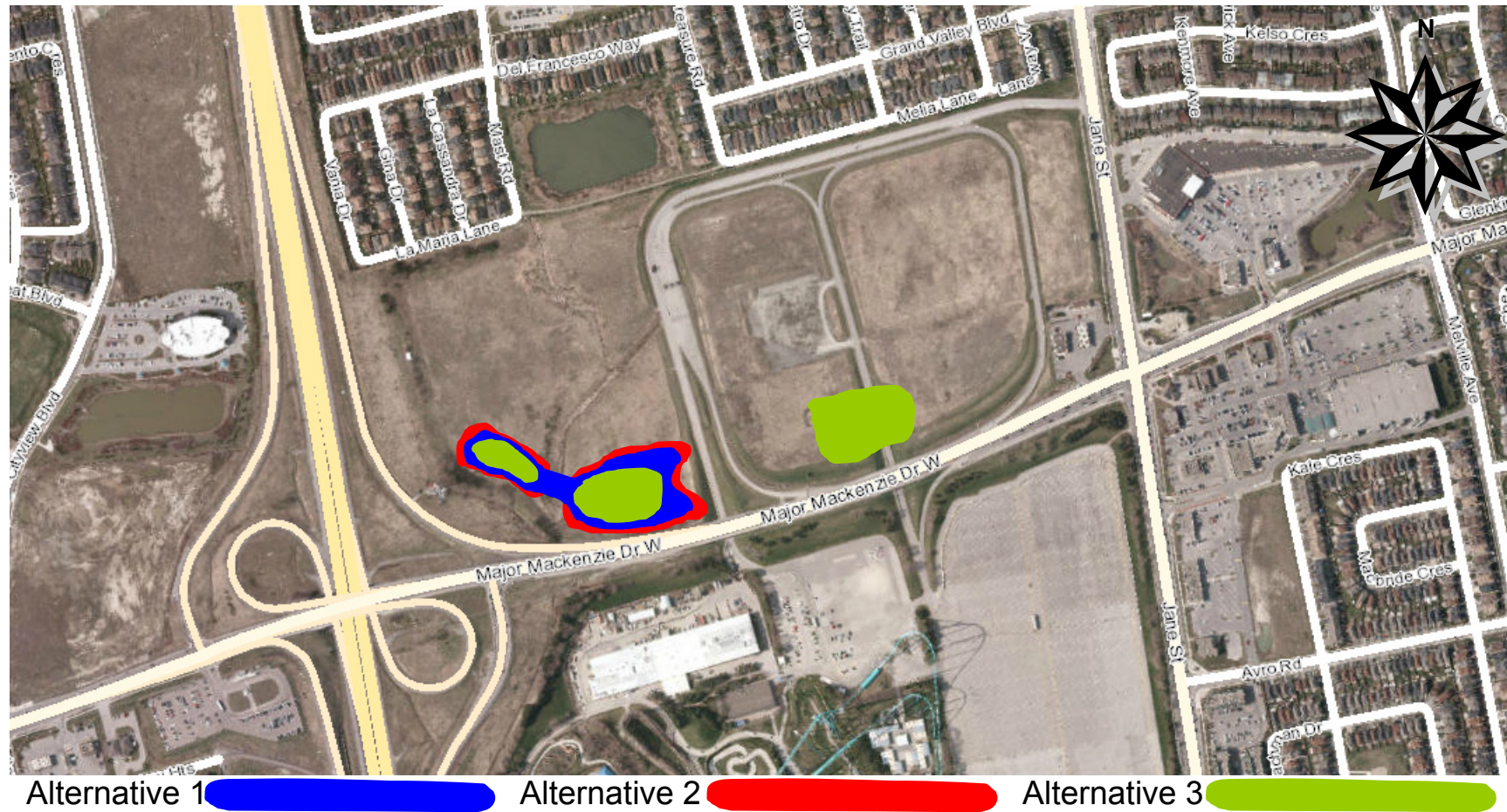
It was determined that new stormwater management ponds would be required to provide enhanced level of water quality protection combined with Low Impact Development (LID) to the VHCP site. The following three (3) alternative layouts shown in **Table 5.4** were identified:

Table 5.4 Alternative Locations for Stormwater Management Ponds

Alternative Locations	Alternative 1	Alternative 2	Alternative 3
Description	1 large stormwater pond at southwest end of site	2 stormwater ponds at southwest end of site	3 stormwater ponds (same as Alternative 2 plus includes 1 pond for hospital)

The stormwater management pond alternatives are shown below in **Figure 5-4**.

Figure 5-4 Alternative Stormwater Management Ponds Locations



5.1.5 Drainage Channels – Alternative Layouts

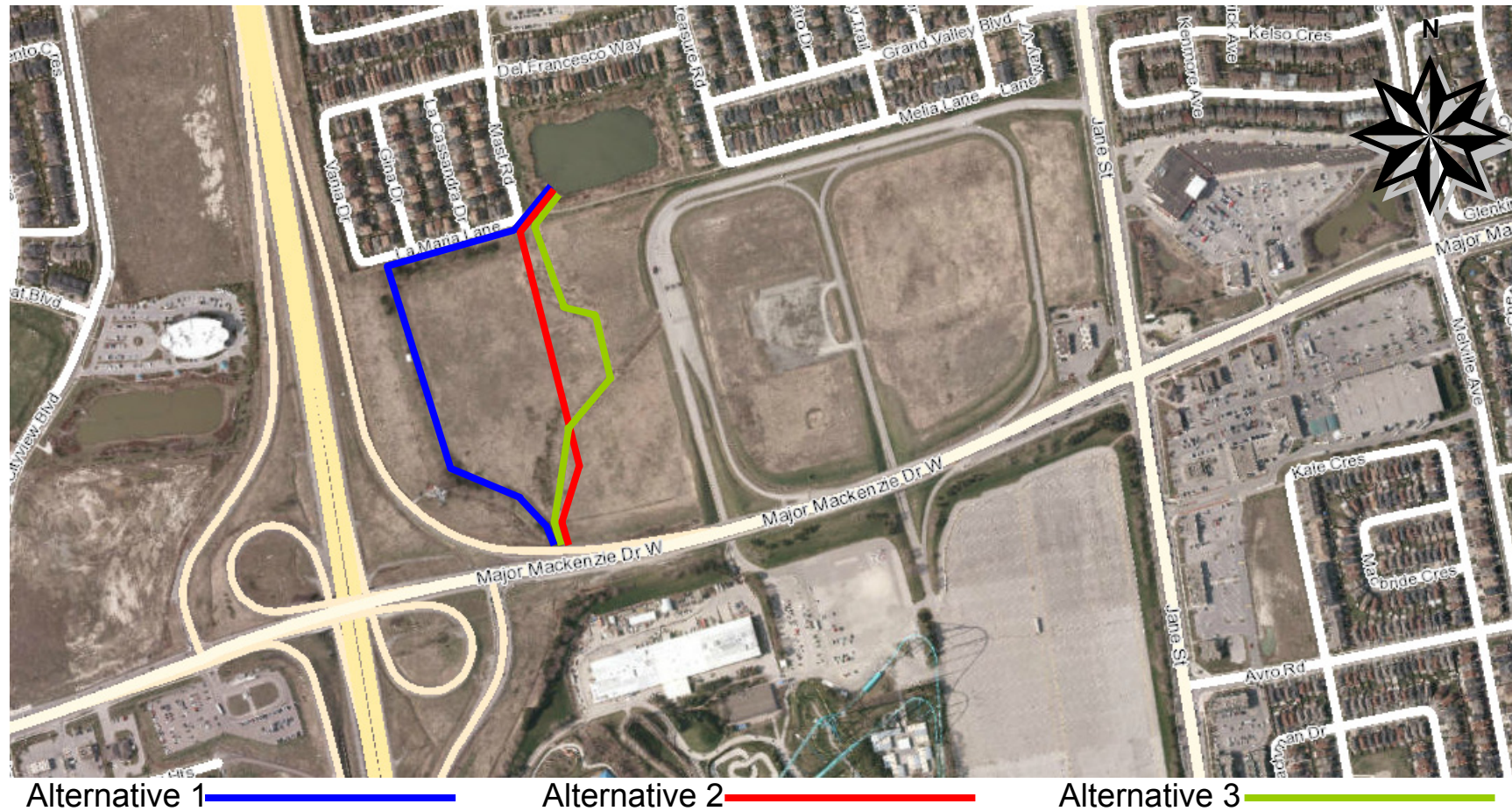
It was determined that new drainage channels may be required to help convey runoff from the site to the West Don River. Currently, a naturalized channel exists on the west side of the site that conveys runoff from the stormwater pond on the residential site to the north. The following three (3) alternative layouts shown in **Table 5.5** were identified:

Table 5.5 Alternative Layouts for Drainage Channels

Alternative Layouts	Alternative 1	Alternative 2	Alternative 3
Description	Follows tree berm on west side of site	North-south channel located west of existing channel	Channel in existing location

The drainage channels alternatives are shown below in **Figure 5-5**.

Figure 5-5 Alternative Drainage Channels Layouts



6.0 Existing Conditions

6.1 Natural Environment

The study area's natural environment was characterized through identifying and conducting inventories of vegetation and vegetation communities, aquatic features, wildlife, groundwater and designated areas. The following background information pertaining to the natural and physical setting of the study area was gathered and reviewed:

- Ministry of Natural Resources (MNR) and TRCA resource information (e.g., evaluated wetlands, forest cover, fisheries data);
- Land Information Ontario (LIO) database for Provincially Significant Wetland (PSW) mapping;
- MNRs' Natural Heritage Information Centre (NHIC) rare species database; and
- Provisional Ontario Breeding Bird Atlas (OBBA) data for 2000-2005.

Field investigations were undertaken by Beacon Environmental on October 21, 2009 and October 11, 2013 to assess aquatic and terrestrial resources on the subject property.

6.1.1 Aquatic Environment

The site is currently vacant and is bounded by a residential subdivision and stormwater management pond to the north. The stormwater management pond outlets to a channel (comprised of two intersecting, unnamed tributaries that are part of the West Don River system) that crosses the western portion of site from north to south before entering a large corrugated steel culvert under Major Mackenzie Drive.

Tributary A originates just west of the service road and continues in a southwesterly direction prior to exiting the property via the culvert at Major Mackenzie Drive. Tributary B originates at the north end of the property via a cement culvert that outlets from a stormwater management pond that services the residential subdivision to the north. Tributary B flows south through the site until its confluence with Tributary A. The wetland community located along both tributaries is dominated by cattails and grasses and is important for flood attenuation and erosion control. This area also provides low functioning habitat for a few warmwater fish species that have been found, which likely originated from the stormwater management pond.

6.1.2 Terrestrial Environment

On October 22, 2013, Beacon Environmental conducted a vegetation assessment of the property for the purposes of documenting fall vegetation cover and classifying vegetation communities according to the Ecological Classification System (ELC) for Southern Ontario. A total of nine (9) discrete vegetation polygons were identified on the property and classified into four (4) ELC types. The vegetation communities identified on site include: Mineral Cultural Meadow, Cattail Mineral Shallow Marsh, Reed Canary Grass Mineral Meadow Marsh and Redtop Mineral Meadow Marsh. No Species at Risk or species ranked as rare in the Greater Toronto Area were found to be present.

6.2 Geology and Hydrogeology

6.2.1 Regional Geology and Hydrogeology

The study area is within the “Peel Plain” physiographic region, which extends across the central portions of York, Peel and Halton Regions, and is described as having a level-to-undulating tract of clay soils. The underlying geological material of the plain is a till containing large amounts of shale and limestone. In much of the Peel plain this has been modified by a veneer of clay, which is heavy in texture and more calcareous than the underlying shaley till, having presumably been brought by meltwater from the limestone regions to the east and north, and deposited in a temporary lake impounded between the higher land and the ice lobe in the Ontario basin.

The water supply of the plain is hindered by thin overburden, dense till and a few thick beds of sand to serve as aquifers. The high degree of evaporation from the deforested clay surface also weighs heavily on the adequate recharge of underground water supplies. Further difficulties arise from the fact that the underlying shales are not good aquifers; even when water is obtained by deep boring it is often found to contain salt. This results in Lake Ontario being the predominant water supply source for the area (Chapman and Putnam, 1984).

6.3 Social and Economic Environment

The Precinct is located in an existing urban environment. There is a mix of land uses present with the main feature being Canada’s Wonderland located to the south of the site. The site was previously owned by Cedar Fair, containing a network of service roads that provided access to Canada’s Wonderland (south of Major Mackenzie Drive). Aside from the service roads, the remainder of the site is vacant.

There are two (2) existing underpasses that connect Canada’s Wonderland to Jane Street and to Major Mackenzie Drive.

Along the north and east sides of the lands are existing residential developments as well as commercial developments to the east. A high board-on-board and chain link fence provide a buffer between the Precinct and the residential community. Jane Street separates the existing residential and commercial development east of the site. There is a signalized intersection located on Jane Street and aligned with the existing access to the commercial plaza across Jane Street, east of the site.

Highway 400 provides the western boundary of the lands. West of Highway 400 the area consists of commercial lands and a residential community.

6.4 Land Use

Land Use is based on the Official Plans for both York Region and the City. The location provides opportunities to create active frontages along the Jane Street and Major Mackenzie Drive. Visual exposure to Highway 400 also presents opportunities to create high profile development parcels.

The City is committed to maintaining access for Canada's Wonderland to Major Mackenzie Drive through instruments including land use regulations and easements. The Precinct Plan illustrates the road network to fulfill this commitment. This enables removal of the existing large loop access roads for Canada's Wonderland on the property.

The Precinct is generally flat but does slope downward from north-east to south-west. The western part of the Precinct is lower than Major Mackenzie Drive. Combined with the existing underpass to Canada's Wonderland, the grade difference in some parts is as much as 6.0 metres.

A drainage channel traverses the Precinct generally north to south and conveys runoff from the Precinct and the stormwater management pond north of the Precinct to a culvert under Major Mackenzie Drive. The drainage channel function must be retained for stormwater management purposes; however it can be re-aligned.

Two existing underpasses connect Canada's Wonderland to the Precinct Plan area. The eastern most underpass provides westbound access to Major Mackenzie Drive. The westbound underpass provides access north and east to Jane Street.

North of the loop is green space and a high board-on-board and chain link fence which provides a buffer between the Precinct and the residential community. A berm is located along the northwest edge of the Precinct and along the west edge adjacent to the highway. The berm is approximately 3 metres high. A grouping of trees is located on the north edge of the berm and along the western portion of the property. Land use features are illustrated below in **Figure 6-1**.

Figure 6-1 Land Use Features



6.4.1 Site Contamination

A Phase I Environmental Site Assessment (ESA) was conducted for the Precinct by CEG in December 2013 to determine the potential for on-site contamination, to support the application for draft plan approval, and for the filing of a Record of Site Condition (RSC).

The Phase I ESA was conducted in accordance with the guidelines and procedures established in the *Canadian Standards Association (CSA) document Z768-01* and incorporated the requirements of *Ontario Regulation (O.Reg.) 153/04* as amended by *O.Reg. 269/11*. The scope of the Phase I ESA for the subject property included the following activities:

- A records review for the Site and adjacent properties;
- Interviews and Site visit;
- An evaluation of the information gathered;
- The preparation of a Phase I ESA Report; and
- The submission of the Phase I ESA Report.

Information gathered through available databases, the site visit and interviews indicates that potentially contaminating activities (PCAs) have been conducted on the subject site and are related to the importation of fill material of unknown quality. PCAs that have been conducted on adjacent sites within the study area include gasoline and associated product storage in fixed tanks at properties located to the southeast of the site. The Phase I ESA is included as **Appendix E**.

Based on these findings, areas of potential environmental concern (APECs) were identified and further investigation through the completion of a Phase II ESA is warranted. This study is to take place as part of the draft plan approval process.

6.5 Archaeological Assessment

A Stage 1 and 2 archaeological assessment was undertaken by Archaeological Service Inc. (July, 2009) to assess the study area's archaeological potential (**Appendix D**). The assessment comprised of a background study to provide detailed research on the archaeological and land use history of the study area as well as its present condition. A Stage 1 field assessment was also carried out to confirm the assessment of archaeological site potential and to determine the degree to which development and landscape alteration may have affected that potential. This was followed by a Stage 2 field assessment to inventory, identify and describe any archaeological resources extant on the subject property.

16 archaeological sites exist within 1 km of the study area, while a review of historical mapping indicated the presence of a homestead within the study area. The assessment concluded that the study area had three parcels, located within the westernmost portions of the study area, which had archaeological potential. These three (3) areas were subject to a Stage 2 survey, conducted by means of a judgmental test pit strategy. No archaeological resources were encountered during this investigation. In the event that deeply buried or otherwise discovered archaeological or human remains are encountered during future development of the site, the appropriate authorities must be contacted.

6.6 Technical Environment

The site is currently void of Municipal services and utilities, which will be provided efficiently within the Precinct with an emphasis on increased sustainability by reducing energy and water consumption and through increased use of renewable resources. Development may be phased to ensure that municipal services are in place or will be available in time to serve proposed levels of development.

6.7 Other Environmental Issues

To develop the lands to create an urban Vaughan Healthcare Centre Precinct the City requires Planning Act approval through the site plan process. As part of site plan development process additional site-specific studies are required for the entire lands in order to fully develop the site. Since the Class EA components of the project only affect a small portion of the site (the site is currently vacant, urban lands) and some of the studies were not required to comparatively evaluate the alternative solutions, it was determined that these site specific studies would be undertaken as part of the site plan process and not the Class EA process. These site specific studies included noise, vibration, air quality, geotechnical, hydrogeology, Phase II Environmental Site Assessment and cultural heritage.

7.0 Evaluation of Alternative Solutions

This section documents the decision-making process used by the CEG and the City Project Team to evaluate the three (3) roadway alternative routes, the three (3) sanitary sewer alternatives, the two (2) watermain layouts, the three (3) stormwater management pond locations and the three (3) drainage channel alternatives. The evaluation criteria and rationale for relative ranking are included.

Each alternative was identified based on technical feasibility and compliance with applicable regulations and land use policies of the TRCA and the York Region and City of Vaughan Official Plans. All alternative solutions were discussed with City and Region staff to obtain “buy-in” prior to their consideration.

Taking the existing environment into consideration, the alternative solutions (described in Section 5.0) were comparatively evaluated using a descriptive or qualitative assessment based on criteria developed within the following categories (representing the broad definition of the environment as described in the *EA Act*):

Natural Environment – having regard for protecting the natural and physical components of the environment (e.g. air, land, water and biota) including natural and/or ESAs.

Socio-Cultural Environment – having regard for residents, neighbourhoods, businesses, community character, social cohesion, community features, historical/archaeological remains, and heritage features.

Technical Environment – having regard for the technical suitability/longevity and other engineering aspects associated with the alternative solutions.

Financial Environment – having regard for the cost implicating items associated with the alternative solutions.

7.1 Evaluation Criteria

Evaluation criteria were developed to assess the alternatives, to identify the potential environmental effects and distinguish the advantages and disadvantages between alternatives. The criteria reflect all components of the environment in the study area, the alternative solutions being considered, the problem/opportunity being addressed, and the Class EA requirements. The criteria include the social, cultural, and natural environments, planning policies and technical and cost considerations.

The criteria are described below in **Table 7.1** for the roadway alternative routes, sanitary sewer alternatives, watermain layouts, stormwater management pond locations and drainage channel alternatives, respectively. Once developed, the evaluation criteria were used to comparatively evaluate the alternative solutions and identify a recommended solution. The evaluation for each alternative solution is completed in **Table 7.2** to **Table 7.6**.

Table 7.1 Roadway Alternatives – Evaluation Criteria

Criteria	Description
Natural Environmental Impacts	
Wetlands	Provincially significant wetlands or other wetlands located adjacent to or directly intersected
ESAs/ANSIs	The area of land classified by MNR as an Environmentally Sensitive Area (ESA) or Area of Natural and Scientific Interest (ANSI) adjacent to or directly intersected
Woodlands	Woodlands located adjacent to or directly intersected
Groundwater/Aquifer Vulnerability	Proximity to areas of high aquifer vulnerability
Floodplains	Located adjacent to or within floodplain
Regional Greenlands System	Located within the identified York Region Greenlands System
Watercourse Crossings	The number of watercourses that are crossed
Socio-Cultural Environments	
Traffic, Community and Business Impacts	Potential for impacts to traffic as well as public and private properties (including Businesses) during construction
Dust and Noise Issues	Potential for dust and noise issues stemming from construction activities within close proximity to nearby communities
Archaeological and Cultural Heritage	Construction activities within undisturbed areas with proximity to heritage or archaeological sites
Aesthetics	Visual impacts/Viewshed (if applicable) Nature of the existing surrounding landscape
Technical Considerations	
Geotechnical/Ease of Construction	Potential for encountering problems with construction of alternative (i.e. soil stability, ease of excavation)
Utilities	Relocation or special construction techniques required as a result of existing buried utilities
Property Acquisition	Potential for property acquisition requirements
Capacity and System Operation	Ability to convey max. day design flow and provide reliable service (e.g. watermain, sanitary, drainage channel)
Financial Considerations	
Operation and Maintenance Efforts/ Costs	Total operation and maintenance efforts/costs
Capital Costs	Total capital costs determined by length of roads, construction method and land acquisition (if applicable)

7.2 Evaluation Methodology

In order to evaluate the proposed alternative solutions, each of the criteria presented in **Table 7.1** were assessed as applicable in a descriptive manner rather than a quantitative manner. Rather than a numerical or weighted ranking system, the evaluation concentrates instead on the strengths and weaknesses of each alternative to identify the best possible solution. Set weightings of criteria were not specifically assigned, however, all evaluation criteria are not necessarily created equal.

For each criterion and for each possible alternative, the potential effects on the environment (natural, social, etc.) were identified. The evaluation is based on the relative advantages and disadvantages of the potential environmental effects for each alternative based on the natural and socio-cultural environments as well as technical and financial considerations.

Reasonable mitigation measures were then identified to avoid or minimize any potential negative effects. The selection of the preferred alternative is based on the relative advantages and disadvantages of the net environmental effects, including the results of applying mitigating measures.

The ranking of each alternative solution relative to the specific evaluation criteria was conducted using a colour coding system comprised of green, yellow and red, designed to be indicative of most (green) to least (red) preferred. The comparison of each criterion was made horizontally between the alternatives and then vertically to derive the recommended solution. The alternative solution which demonstrated the greatest number of “most” preferred boxes and/or the fewest “least” preferred boxes relative to their potential environmental effects resulted in the recommended solution. The comparative evaluations for each set of alternatives are provided in **Table 7.2** to **Table 7.6**.

Table 7.2 Comparative Evaluation of Alternative Solutions for Proposed Roadways

ROADWAYS	Alternative 1	Alternative 2	Alternative 3
<i>Description of Alternatives</i>	<i>Street D to Street F (or E or G) to Street C to Street A to Jane St</i>	<i>Street through middle of site to connect with Street A at Jane St</i>	<i>Street D to Street C to Street A to Jane St</i>
Natural Environment	- Minimal impact on existing conditions and matches preferred channel alternative	- Potential to impact existing channel if continues through Streets E & G	- Minimal impact on existing conditions - Accommodates proposed channel location
Social-Cultural Environment	- Noise impacts from vehicles on residential development to the north	- Minimal noise impacts on residential development to the north	- Noise impacts from vehicles on residential development to the north
Technical Environment	- Roadway layout most compatible with development blocks for hospital	- Bisects hospital site leaving too small an area for development of hospital	- Limits expansion of hospital to additional west block
Financial Environment	- Similar construction and maintenance costs to other alternatives	- Similar construction and maintenance costs to other alternatives	- Similar construction and maintenance costs to other alternatives
OVERALL RATING	- Provides flexibility in phasing in of construction of all development blocks	- Reduced flexibility in phased construction of all development blocks	- Most costly (construction and maintenance) and limits hospital block development

Rating:	Preferred		Less Preferred		Least Preferred	
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NOTE: Do Nothing was not evaluated further since it would not address problem statement.

Table 7.3 Comparative Evaluation of Alternative Solutions for Proposed Sanitary Sewers

SANITARY	Alternative 1	Alternative 2	Alternative 3
<i>Description of Alternatives</i>	<i>Connect to existing sanitary sewer located at Jane St and Grand Valley Blvd</i>	<i>Connect to existing pumping station located at southeast end of Canada's Wonderland site</i>	<i>Extend to the west under Highway 400 and connect to existing system on Cityview Blvd</i>
Natural Environment	- Minimal impact with forcemain construction in road allowances	- Minimal impact with sewer construction through parking area	- Not evaluated due to technical and financial issues
Social-Cultural Environment	- Traffic disruption from construction on Jane St but can be combined with watermain construction	- No traffic disruption with sewer on private property - Impact on Canada's Wonderland users during construction	- Not evaluated due to technical and financial issues
Technical Environment	- Temporary pumping station required - Temporary forcemain constructed on Jane St from pumping station to Grand Valley Boulevard - Easy to add gravity connection at Jane St to NE Vaughan Collector for long term connection	- Gravity sewer constructed to Canada's Wonderland pumping station (S end of site) - Sewers to be disconnected for long term connection to NE Vaughan Collector	- Requires crossing underneath Highway 400 which is difficult to obtain approvals and to construct - Existing sanitary system on west side of Highway 400 does not have sufficient capacity to handle flows from site
Financial Environment	- Permanent easements required for sewer and pumping station - Temporary forcemains (shorter length of forcemain) and pumping station	- Permanent easements required for sewer - Temporary sewers (longest length of sewer to south end of Wonderland site)	- Costly (length and approvals) to cross underneath Highway 400 to connect to existing system on Cityview Blvd
OVERALL RATING	- Shortest forcemain requirements and easiest connection to address long term solution	- Financial limitation for cost of length of sewers required and easements - Costly to connect to long term solution	- Too difficult and costly to cross Highway 400 to reach existing sanitary services and insufficient capacity in existing system
Rating:	Preferred	Less Preferred	Least Preferred

NOTE: Do Nothing was not evaluated further since it would not address problem statement.

Table 7.4 Comparative Evaluation of Alternative Solutions for Proposed Watermains

WATER	Alternative 1	Alternative 2
<i>Description of Alternatives</i>	<i>Watermain on Jane St to connect at Grand Valley Blvd</i>	<i>Watermain from Street C along Discovery Trail or Melia Lane to Grand Valley Blvd</i>
Natural Environment	- Minimal impact due to construction within road right-of-ways	- Minimal impact due to construction within road right-of-ways
Social-Cultural Environment	- Disruption to traffic on Jane St but can be minimized by combining with sewer construction	- Disruption to residential development with road closure
Technical Environment	- Ability to combine with sewer construction - Medium timeline for construction - Provides secure looped system	- Disruption to residences in residential development in addition to disruption on Jane St for sewer - Short timeline for construction - Provides secure looped system
Financial Environment	- Longer watermain length than for Alternative 2 but reduced cost when combined with sewer	- Shorter watermain but requires construction costs for watermain and sewer separately
OVERALL RATING	- Ability to combine construction of watermain with sewer on Jane St - Provides secure looped system	- Disruption from both watermain and sewer construction - Provides secure looped system

Rating:	Preferred		Less Preferred		Least Preferred	
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NOTE: Do Nothing was not evaluated further since it would not address problem statement.

Table 7.5 Comparative Evaluation of Alternative Solutions for Stormwater Management Ponds

STORMWATER	Alternative 1	Alternative 2	Alternative 3
<i>Description of Alternatives</i>	<i>1 large stormwater pond in southwest end of site</i>	<i>2 stormwater ponds in southwest end of site</i>	<i>3 stormwater ponds (same as Alternative 2 but includes 1 pond for hospital)</i>
Natural Environment	<ul style="list-style-type: none"> - Site slopes northeast to southwest, thus will capture most of runoff - Least impact with construction of 1 pond 	<ul style="list-style-type: none"> - Site slopes northeast to southwest, thus will capture most of runoff - Medium impact with construction of 2 ponds 	<ul style="list-style-type: none"> - Greatest impact with construction of 3 man-made ponds
Social-Cultural Environment	<ul style="list-style-type: none"> - Requires relocation of channel 	<ul style="list-style-type: none"> - Accommodates proposed channel location 	<ul style="list-style-type: none"> - Accommodates proposed channel location
Technical Environment	<ul style="list-style-type: none"> - No phasing of development; requires construction of full sized pond at start - Permits low impact development strategies 	<ul style="list-style-type: none"> - Allows phasing/flexibility in construction of ponds with block development - Pond 1 receives runoff from lands west of channel - Pond 2 receives runoff from lands east of channel - Permits low impact development strategies 	<ul style="list-style-type: none"> - Allows phasing in construction of ponds with development - Requires additional pond to be maintained - Limits development of hospital block
Financial Environment	<ul style="list-style-type: none"> - Less expensive to construct - Lowest maintenance costs 	<ul style="list-style-type: none"> - Offset construction costs by only constructing Pond #2 until all development blocks constructed - Medium maintenance costs once both ponds constructed 	<ul style="list-style-type: none"> - Most expensive to construct - Expensive maintenance costs
OVERALL RATING	<ul style="list-style-type: none"> - Reduces flexibility in phasing in of construction of all development blocks 	<ul style="list-style-type: none"> - Provides flexibility in phasing in of construction of all development blocks 	<ul style="list-style-type: none"> - Most costly (construction and maintenance) and limits hospital block development
Rating:	Preferred	Less Preferred	Least Preferred

NOTE: Do Nothing was not evaluated further since it would not address problem statement.

Table 7.6 Comparative Evaluation of Alternative Solutions for Drainage Channels

DRAINAGE CHANNEL	Alternative 1	Alternative 2	Alternative 3
<i>Description of Alternatives</i>	<i>Follows tree berm on west side of site</i>	<i>North-south channel located west of existing channel</i>	<i>Channel in existing location</i>
Natural Environment	-Greatest impact with full re-construction of channel	-Partial use of existing channel	-Minimizes impact by maintaining existing channel
Social-Cultural Environment	-Limited walkways due to land required for channel to provide flow capacity	-Provides for development of walkways along channel	-Walkways somewhat limited by design shape and loss of development land
Technical Environment	-More gradual grade change requires wider channel to accommodate flows causing land loss -Limits development blocks	-Maximizes development blocks (minimal land loss) -Provides down gradient flow and greatest flow capacity -Compatible with proposed internal road layout	-Awkward shape limits block development and results in unusable land
Financial Environment	-Most expensive to construct	-Cost to develop portion of new channel -Minimal land loss for development	-Low construction cost but loss of land for development
OVERALL RATING	-Results in land loss and limits development block	-Maximizes development of blocks and increases channel capacity	-Limits development blocks
Rating:	Preferred	Less Preferred	Least Preferred

NOTE: Do Nothing was not evaluated further since it would not address problem statement.

7.3 Impact Assessment Summary

7.3.1 Roadways Alternative Routes

Existing roadways within the VHCP include large loop access roads for Canada's Wonderland. As part of the site's development new roadways allowing functional movement throughout the site and access to the hospital and associated buildings are required.

The second alternative, with streets traversing west to east across the site to connect with Street A at Jane Street reduced flexibility in the phasing of construction and all development blocks. The third alternative, with Street D traversing the site from south to north (Major Mackenzie to Street C) was deemed to be the most costly option (construction and maintenance) and limits hospital block development. Therefore the roadway layout provided in the first alternative, Street D to Street F (or E or G) to Street C to Street A to Jane Street, is preferred as it provides the greatest flexibility in phasing and construction of all development blocks.

7.3.1.1 Intersections

Jane Street and Major Mackenzie Drive are arterial roads located outside of the development site. Existing underpasses are in place, connecting the development site to Canada's Wonderland. The proposed future Highway 400 ramp extension is not considered part of the project (this may be constructed in later phases of the Precinct development and would be subject to an MTO Class EA process).

Based on site size and development uses for the site, two (2) signalized intersections are needed on arterial roads.

Jane Street

Entrance to the site from Jane Street requires a full intersection for connectivity, traffic flow and safety, but the existing entrance is only a partial intersection. The new intersection that is identified is the only alternative that provides a full intersection and is set back sufficiently from Major Mackenzie Drive.

Major Mackenzie Drive

Highway 400 abuts the west side of the site and the ramp on Major Mackenzie Drive meets the MTO setbacks requirement of 14 m for intersections. York Region requires new intersections to be setback sufficiently from Jane Street. Only one alternative (Alternative 1) existed that met both setback requirements for the intersection on Major Mackenzie Drive.

7.3.2 Sanitary Sewer Alternatives

The VHCP site currently has no sanitary services; as a result sanitary sewers will be required to connect to the future North East Vaughan collector sewer to be constructed by York Region in the Jane Street corridor. The Region is undertaking a sewer Municipal Class EA process in 2013-2014, with construction expected to take place between 2017 and 2021.

In the interim, one of the three alternatives considered will have to be in place. The third alternative, extending the sanitary sewer underneath Highway 400 to connect to the existing sanitary sewer on Cityview Boulevard, is considered too difficult (from a technical perspective) and costly. The second alternative, connecting to the existing pumping station on Canada's

Wonderland Property (south end of site), is a poor option financially, as it would be costly to connect to the future North East Vaughan collector sewer. The first alternative, connecting to the existing sanitary sewer at Jane Street and Grand Valley Boulevard, is therefore the preferred alternative, as it has the shortest forcemain requirements and is the easiest solution for future connectivity to the North East Vaughan collector sewer.

7.3.3 Watermain Alternatives

The VHCP site currently has no water services, but the existing watermains in the vicinity of the Precinct are capable of providing adequate flows and pressures for development. The existing watermain on the south side of Major Mackenzie Drive terminates 100 m west of Jane Street (the last accessible connection point to the municipal distribution system). Other existing watermains are located at Jane Street and Grand Valley Boulevard, as well as the private watermain system located in Canada's Wonderland.

Of the two alternatives, Alternative 1 is considered superior as it allows for construction of the watermain to be combined with the construction of the sewer on Jane Street, while providing a secure looped system.

7.3.4 Stormwater Management Pond Alternatives

No stormwater management ponds currently exist on the site, as all runoff from the site is currently conveyed to the West Don River. The topography of the site generally slopes from the northeast to the southwest. Four (4) drainage outlets currently exist for the site:

- Water exits to the south under Major Mackenzie Drive through two (2) road underpasses and two (2) existing culverts.
- Runoff directed through underpasses and runoff that outlets through the east culvert both enter Canada's Wonderland storm sewer system.
- Runoff entering the west culvert travels south in the drainage channels.

New stormwater ponds will be sized to provide an enhanced level of water quality protection combined with Low Impact Development. Alternative 3 is considered to be the least feasible, as it is the most costly, and limits the development of the hospital block. Alternative 2, though more affordable, reduces flexibility in the phasing in of construction of all development blocks. As a result, Alternative 1 is preferred, due to its greater flexibility in phasing in of construction of all development blocks.

7.3.5 Drainage Channel Alternatives

Currently a naturalized channel exists on the west side of the site that conveys runoff from the stormwater pond on the residential site to the north. Keeping the naturalized channel was considered as an alternative, but as this option would limit development blocks, it was not considered the preferred alternative. Alternative 1 was also considered a poor option, as it would result in land loss while also limiting development blocks. As a result, Alternative 2 was selected as the preferred alternative, because it maximizes development of blocks and increases channel capacity.

7.3.6 Preferred Alternative Solutions

The Preferred Alternative Solutions are as follows:

- A roadway layout consisting of Streets A through F connecting to Jane Street and Major Mackenzie Drive (Alternative 1, **Figure 7-1**).
- Sanitary sewers connecting to the existing sanitary sewer located at Jane Street and Grand Valley Boulevard (Alternative 1, **Figure 7-2**).
- A watermain connecting at Grand Valley Boulevard (Alternative 1, **Figure 7-3**).
- Two stormwater management ponds located at the southwest corner of the site (Alternative 2, **Figure 7-4**).
- A north-south drainage channel located west of the existing channel (Alternative 2, **Figure 7-5**).

Figure 7-1 Preferred Roadway Layout

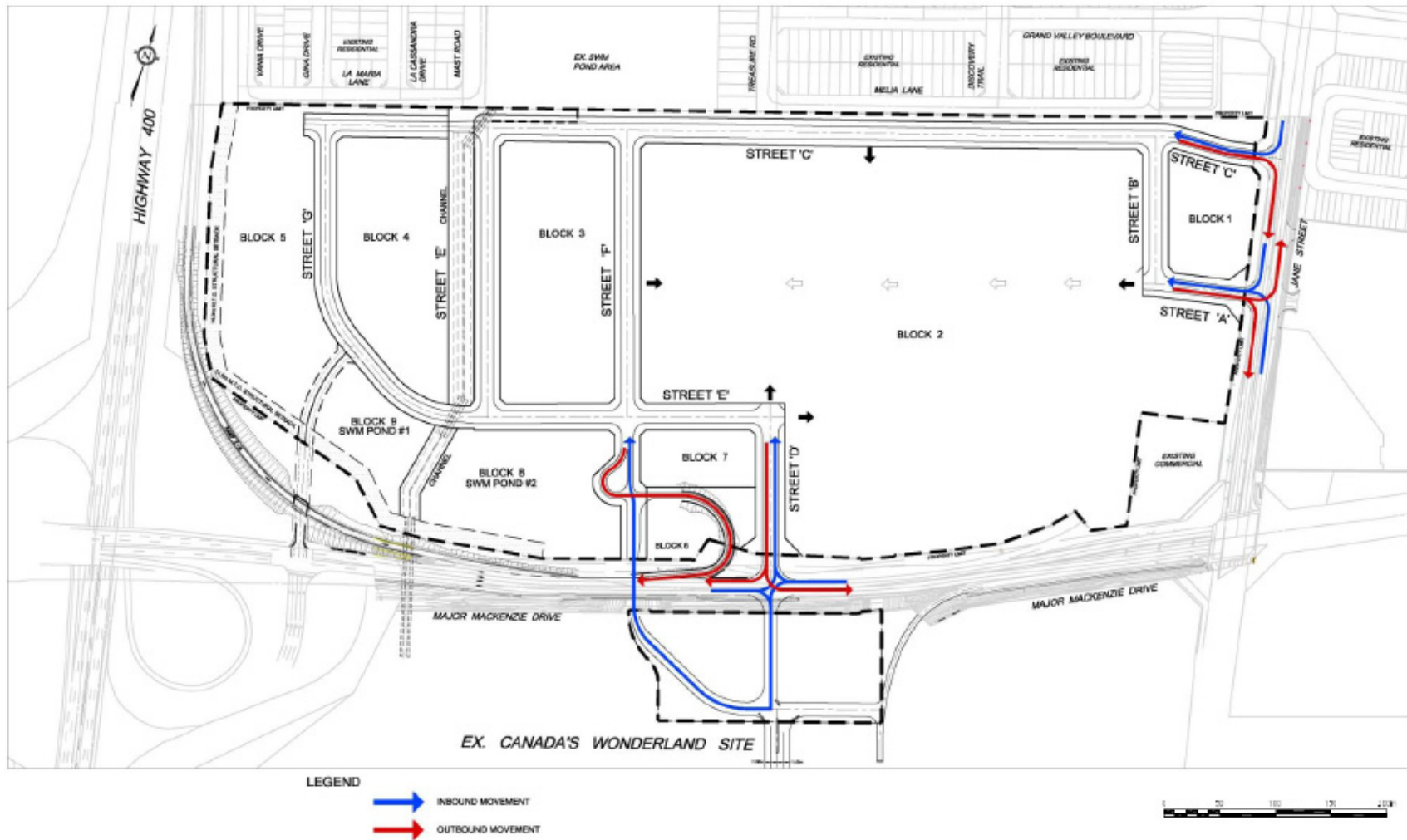


Figure 7-2 Preferred Sanitary Sewer Layout

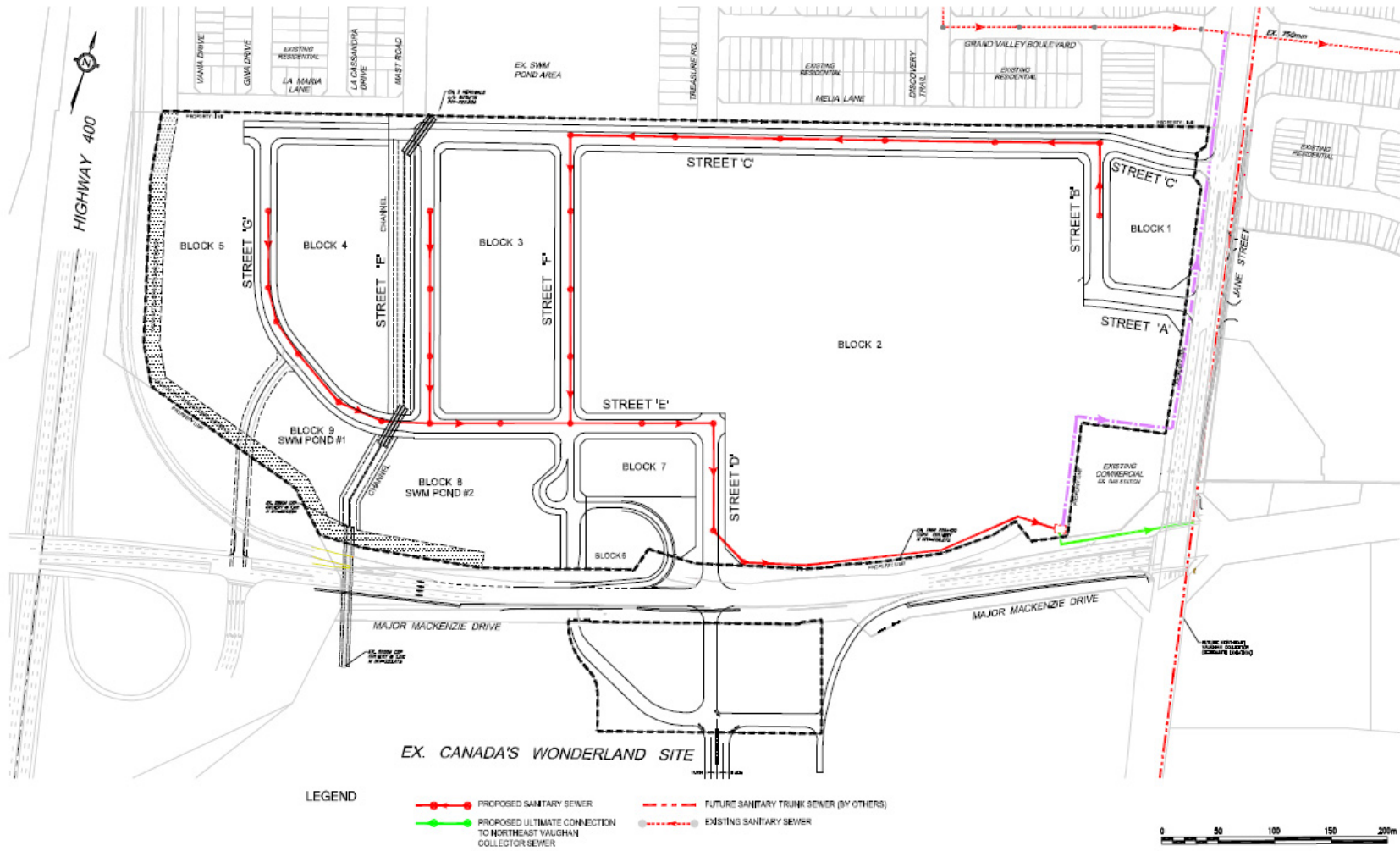


Figure 7-3 Preferred Watermain Layout

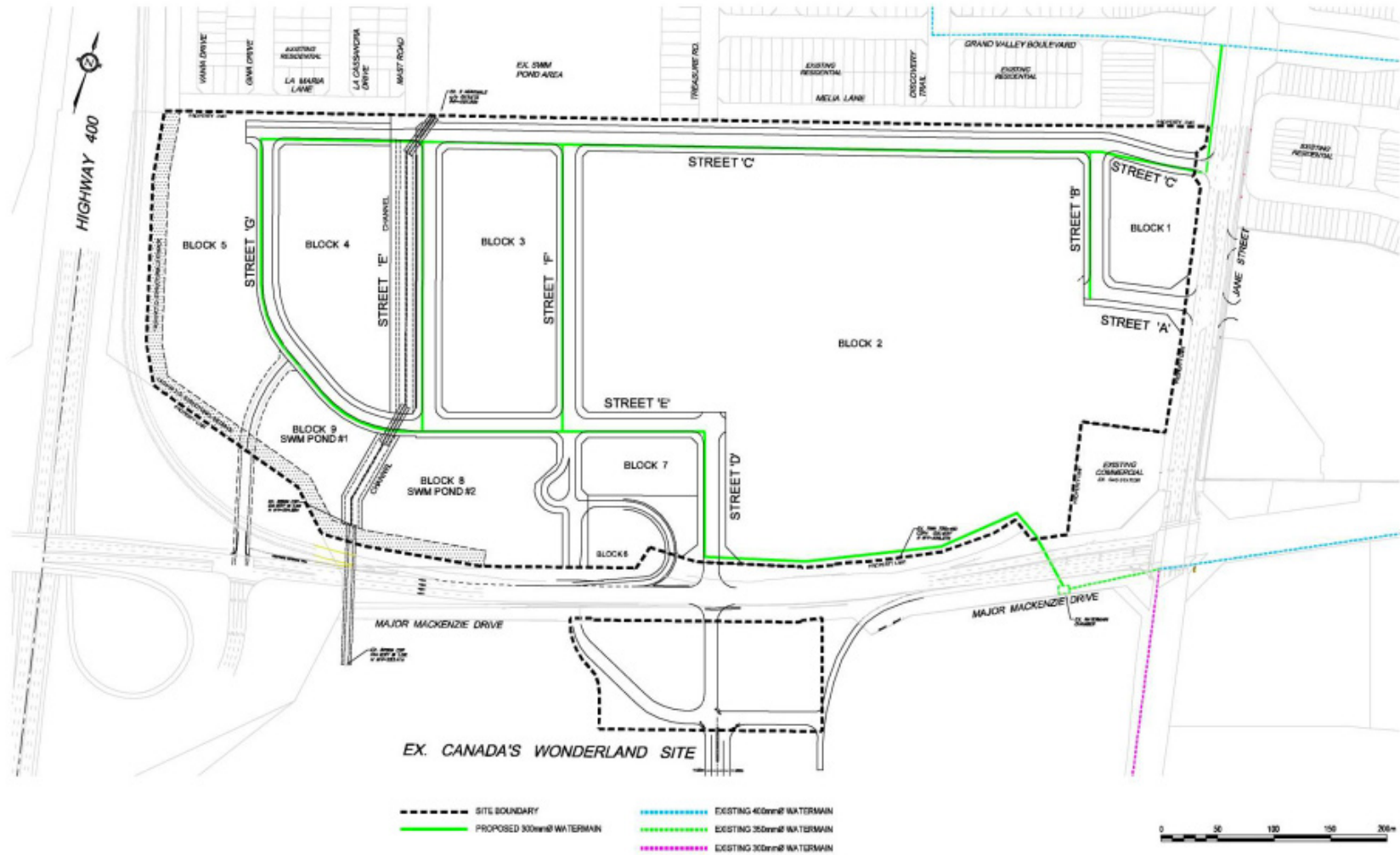


Figure 7-4 Preferred Stormwater Management Pond Locations

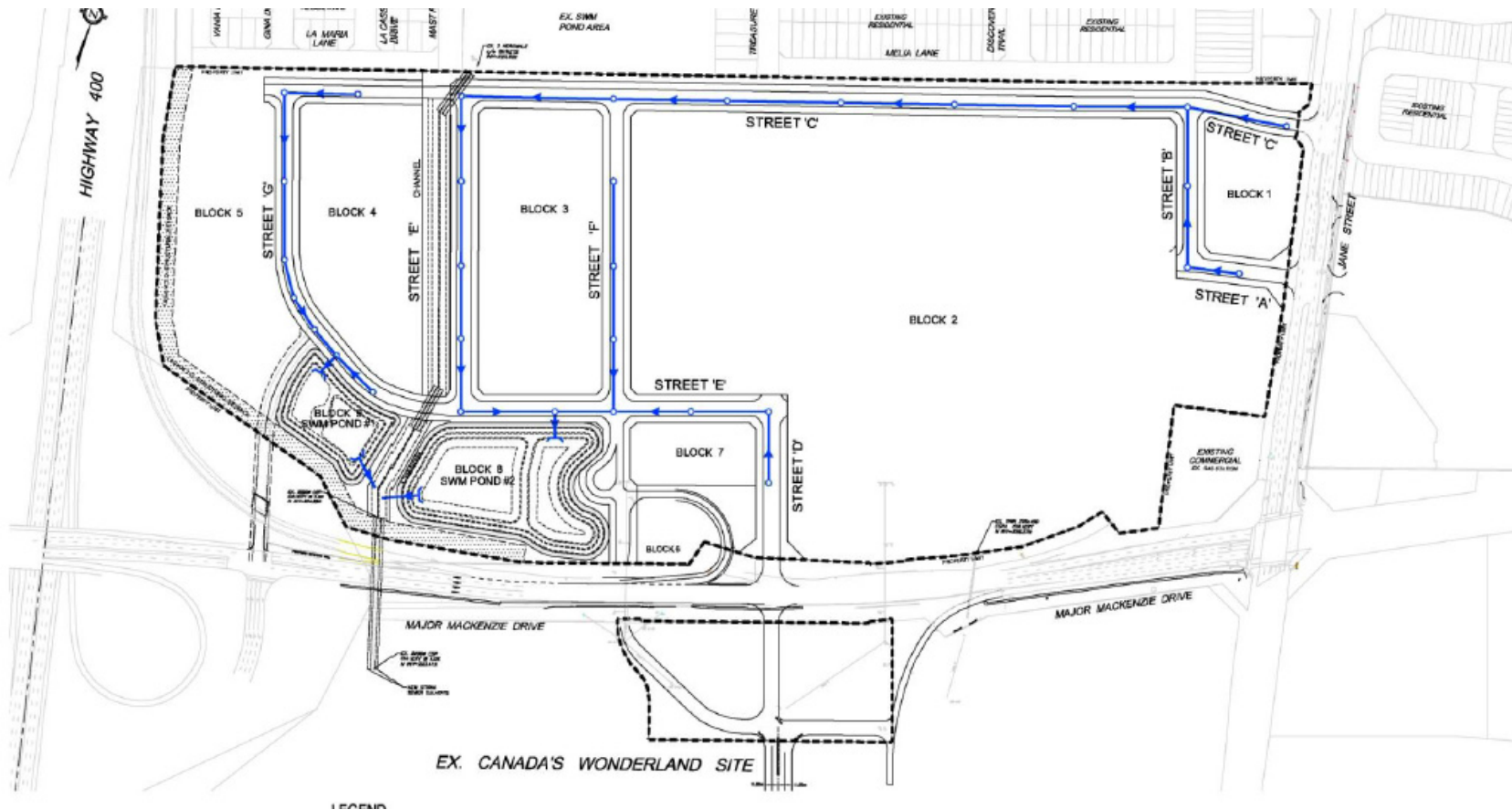
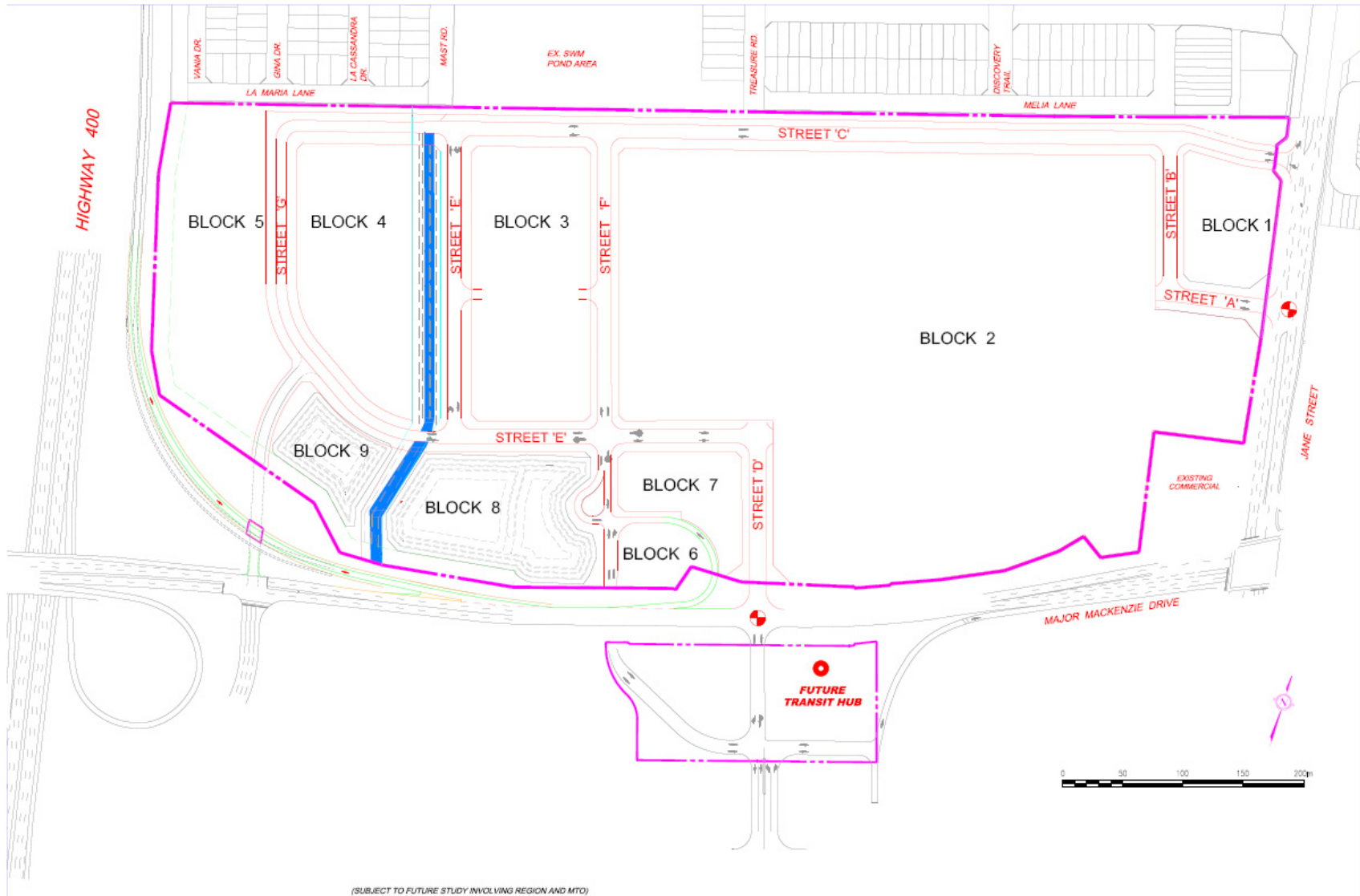


Figure 7-5 Preferred Drainage Channel Layout



8.0 Identification of Impacts and Mitigation Measures

Based on the results of the alternatives evaluations, the preferred roadway, sanitary sewer, watermain, stormwater management pond and drainage channel layouts/locations may result in some negative impacts that are considered manageable with the appropriate mitigation techniques. The impacts and mitigation measures for each are discussed in the sections below. In most cases, impacts will be limited to the period of construction and during periodic future maintenance.

8.1.1 Property Requirements

It is not anticipated that any property acquisitions will be required for the implementation of the preferred alternatives as all work is anticipated to be completed within the site boundaries. Eventual intersection improvement work will take place in existing roadways (Jane Street and Major Mackenzie) and will require assessment at the detailed design stage whether any easements are required to accommodate the new intersections.

8.1.2 Utilities

The preferred roadway, stormwater management pond, and drainage channel alternatives exist entirely within the undeveloped site boundaries and will not require the relocation of existing utilities.

Regarding preferred intersections, and sanitary and watermain connections, utilities within the location/alignment of the associated connecting infrastructure will be verified via subsurface investigations and coordination with existing utility providers during the detailed design stage. Through an initial review of the infrastructure in the area a suitable alignment has been identified that will not require the relocation of existing utilities.

8.1.3 Social Environment

Traffic

Minor traffic flow disruptions on local roads near the site are expected as a result of the transport of material and equipment to the site during construction. No road/lane closures are anticipated for preferred roadways, stormwater management pond or drainage channel alternatives as works are not being conducted within the roadways. Any disruptions to local traffic resulting from the ingress or egress of transport trucks to and from the site should be mitigated by the use of flag persons, as necessary. Emergency vehicles must be allowed access through to the construction site at all times.

Intersection improvement work will require traffic management procedures (in accordance with MTO Book 7) to ensure minimal disruption to users of Jane Street and Major Mackenzie Drive. The need for lane closures is unknown at this time, however will be determined at the detailed design stage. The installation of watermain and sanitary connections is expected to be able to be completed with minimal, short term disruptions to existing roadways.

All residential access should be maintained at all times. Coordination of the timing of work within the VHCP should minimize any external impacts.

Public Notification

Public notification should occur in advance of construction to ensure that area residents are informed. Adjacent businesses, residents, and community services should be notified directly of impending works.

Temporary Access to Private Property

Impacts on adjacent private properties should be minimized to the extent possible by confining all construction activities to the working area, and the Contractor would not be allowed to enter or occupy any private property, unless prior written permission from the landowner has been obtained and provided to the City. Should access to private property be granted, the property will be restored to its original condition or better following the completion of construction operations.

Work Area Aesthetics

During construction, the work area should be maintained in a tidy condition, free from the accumulation of debris, waste, rubble, etc. to minimize the visual impact of the work area. In addition, construction sheds, site offices, other temporary structures and storage areas for materials and equipment should be grouped in a compact manner to the extent possible and maintained in a neat and orderly condition.

Generation of Excess Materials

The proposed works are likely to require excavation and filling. Various types of materials, including asphalt and soil may be generated during these project activities which will require appropriate management (e.g., the potential for wind erosion on soil stock piles). Material identification and management measures should be used both inside and outside the construction area. All excess and unsuitable materials generated during construction should be managed appropriately.

Any contaminated wastes should be taken to an approved waste disposal site and transported by a licensed waste disposal carrier as per the operational constraint for the management of contaminated materials. The Contractor should be required to manage all waste materials generated by construction activities in accordance with all provincial and federal regulations and approval requirements.

Noise and Dust Control

There may be temporary impacts to nearby residential and commercial areas during the installation of the preferred alternatives. Noise disturbance will be limited by ensuring that construction takes place during normal working hours and complies with the local noise by-law.

Material handling, such as excavation, loading and hauling presents the most significant sources of dust during construction. Dust will be controlled through construction contract obligations.

To prevent air quality impacts associated with construction vehicle exhaust fumes, emission control devices on equipment should be functional and effective and new or well-maintained heavy equipment and machinery, preferably fitted with muffler/exhaust system baffles and engine covers, should be used.

Encountering of Unknown Archaeology Remains

In the unlikely event that unknown archaeological remains are encountered during construction, the Ministry of Tourism, Culture and Sport (MTCS) and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Consumer and Business Services shall be contacted immediately.

8.1.4 Vegetation and Vegetation Communities

Tree Removal and Disturbances to Terrestrial Features

In the event that the design will result in the loss of vegetation and tree removal, this loss should be quantified. Any trees identified for removal should be mitigated through the implementation of a compensation plan. This will involve replacement of all impacted plantings. The compensation will provide a long-term net benefit to the terrestrial resources with improved diversity of native species. Tree protection fencing should be installed as necessary and buffer setbacks established during consultation with a TRCA, York Region Forestry staff or qualified biologist, as deemed necessary, prior to any tree removal or start-up of construction.

Breeding Birds

Vegetation clearing should be completed within an allotted time period as to not interfere with breeding bird activity and shall adhere to the *Migratory Birds Convention Act*. Breeding generally occurs in southern Ontario between May 1st and July 31st, but may differ at the site level. Clearing outside of this timing window is acceptable. For vegetation clearing in small areas between May 1st and July 31st, a qualified ecologist should survey the area for breeding bird activity and advise whether vegetation clearing may proceed at that time.

8.1.5 Erosion and Sediment Control

Mitigation measures will be used for erosion and sediment control (ESC) to prohibit sediment from entering adjacent vegetation communities or storm sewers/infrastructure with connection to natural receivers like the West Don River. To address these principles, the following mitigation measures are proposed:

- According to Ontario Provincial Standard Specifications, silt fencing (OPSD 219.130) is required along all construction areas.
- All surfaces susceptible to erosion should be re-vegetated through the placement of native seeding, upon completion of construction activities in order to stabilize exposed or disturbed soils.

These measures should be incorporated into the initial detailed design drawings and contract specifications. An erosion and sedimentation control plan should be implemented to mitigate potential disturbances from construction activities. This plan should illustrate the location and details of all ESC measures proposed. A maintenance and inspection schedule should also be included in the ESC Plan with a preference of inspections completed by a Certified Inspector of Sediment and Erosion Control (CISEC). The Erosion and Sediment Control Guideline for Urban Construction (December 2006) is available at www.sustainabletechnologies.ca for additional ESC requirements.

8.1.6 Dewatering

Limited dewatering may be required for the construction of the watermains and sanitary sewers. If dewatering requirements surpass 50,000 L/day a PTTW will be required from the MOE. Zone of Influences should be evaluated to predict any impacts to nearby well users (though few expected) while assessing the potential need for potable water provisions during dewatering.

Prior to dewatering operations, a point of discharge must be identified. It may be possible to direct some or all of the groundwater discharge to a sanitary sewer system or other discharge receivers will have to be evaluated. During this evaluation, erosion and sedimentation impacts associated with dewatering discharge should be evaluated based on the receiver.

Anticipated discharge rates and estimated ZOIs should also be evaluated in relation to associated watercourses to ensure that volumes will not impact stream corridor function or baseflow. Typical dewatering mitigation requirements will include consideration of the following, as applicable:

- Water quality;
- Receiving stream temperature;
- Receiving stream erosion and sedimentation; and
- Stream baseflow loss.

8.2 Permitting Requirements

Error! Reference source not found. summarizes the identified agencies and permitting requirements associated with the construction of the roadways, sanitary sewers, watermains, stormwater management ponds and drainage channels. Should additional permitting requirements be identified, they should be sought during the applicable project phase (e.g. detailed design).

Table 8.1 Table of Permitting Requirements

Agency/ Municipality	Requirements
Ministry of the Environment	<p>If the total groundwater taking is determined to exceed the MOE specified limit of 50,000 L/day, a Permit to Take Water will be needed for the project.</p> <p>The VHCP drinking water system must be licensed under the municipal drinking water licensing program.</p> <p>A drinking water works permit will be required to establish and alter the drinking water system.</p> <p>An Environmental Compliance Approval will be required to address all of the VHCP's emissions, discharges and wastes.</p>
City of Vaughan	<p>Local permits (e.g. Building Permit) will be required from the City during construction for structural aspects of the installed works.</p> <p>A Road Occupancy Permit is needed to do work or other activities on or beside a Regional road (Jane Street and Major Mackenzie Drive) as well as the shoulder.</p> <p>To develop the lands to create an urban VHCP, the City requires Planning Act approval, currently underway.</p>
TRCA	<p>Stormwater management ponds and the proposed channel will meet the requirements of TRCA and permits obtained prior to construction (e.g., O. Regulation 166/06).</p>
MTO	<p>The development of lands adjacent to Highway 400 (not part of this Class EA) will be</p>

	<p>subject to MTO policies. Construction on or adjacent to a provincial highway (within 800 metres) requires a permit from MTO under the <i>Public Transportation and Highways Improvement Act</i>. MTO does not permit any structures or features which are essential to the operation of a site to be within a 14.0 metre non structural setback adjacent to its highway corridors.</p>
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9.0 Public and Agency Consultation

A key feature of the Class EA process is to ensure effective communication with the general public, agencies and other stakeholders throughout the project. To meet the Class EA consultation requirements for this Schedule B study, steps were taken to ensure effective communication throughout the project with the public, agencies and other stakeholders. The overall strategy has been to entertain any and all reasonable forms of communication received from the public, government agencies and other stakeholders and to review, consider, integrate (as appropriate), file, and respond in a reasonable timeframe. Copies of notifications and letters distributed, as well as the list of regulatory agencies and project stakeholders are provided in **Appendix A**. Selected correspondence between the project team and stakeholders concerning the project are provided in **Appendix B**. Summaries of the Public Information Centre (PIC), along with the display boards from the event are provided in **Appendix C**.

9.1 Notice of Study Commencement and Public Information Centre

Initial communication with stakeholders started with the Notice of Study Commencement and PIC, which was sent to all agencies and previously identified stakeholders, along with adjacent residents, businesses and property owners on November 20, 2013. 96 notices were sent out to Agencies, First Nations and other stakeholders. The Notices were attached to a letter explaining the nature of the event and a comment sheet to provide an opportunity to request inclusion in the project mailing list. In addition, 240 Notices were distributed by hand delivery to residences adjacent to the study area (within 120 m).

The Notice was advertised in the Vaughan Citizen and Thornhill Liberal on November 21, 2013 with a modified notice appearing again on November 28, 2013. In addition, the Notice was posted on the City's webpage in the Business Services section under Engineering Planning and Studies.

9.2 Public Information Centre

The Public Information Centre (PIC) for the project was held on:

Tuesday, November 26, 2013, from 5:30 p.m. to 8:30 p.m.
in Vaughan City Hall's Multi Purpose Room
2141 Major Mackenzie Drive, Vaughan, Ontario

This PIC was held to present engineering and environmental information from the study, including existing conditions, an evaluation of alternatives and a recommended solution, while engaging residents and stakeholders regarding key issues. Those attending the PIC were invited to view display material, discuss the project with the study team, ask questions, and provide input and comments. The following is a summary of the PIC.

The following individuals were present at the PIC to answer questions and explain details about the project.

Andrew Pearce	Director of Development/Transportation Engineering, City of Vaughan
Tom Plamondon	President, TJGP Consulting
John Chadwick, P.Geo., QP	Project Manager, CEG
Patricia Becker, M.E.S.	Lead Consultation Facilitator and Class EA Expert, CEG
Ben Sheardown, B.A.Sc.	Environmental Scientist, CEG

Additional individuals possessing knowledge of the project, who attended the PIC include:

Paul Jankowski, P.Eng.	Commissioner of Engineering & Public Works, City of Vaughan
Peter Meffe	Ontario PC Candidate for Vaughan
Jack Graziosi, P.Eng.	Director of Engineering Services, City of Vaughan
Paolo Masaro, P.Eng.	Manager (Acting), Design Services, City of Vaughan
Gerry Lynch, P.Eng.	Senior Project Manager, CEG
Kim Nystrom, C.E.T.	Transportation Planning Business Unit Leader, CEG
Mark Bassingthwaite, P.Eng.	Water Resources Service Sector Leader, CEG

The PIC was held using an informal open house format whereby numbered (1-33), high-quality 24" x 36" presentation boards were posted around the Centre. The format provided visitors an opportunity to move about, review information and ask questions of the project team. Those who were unable to attend the PIC were advised in the Notice of Study Commencement and PIC to contact the City for more information or to provide their comments. One guest, dealing with time constraints, stopped in to pick up a comment sheet and provide his contact information.

Comment sheets and a comment box were available for attendees to provide written comments for incorporation into the EA record for the project. In addition, all visitors were encouraged to sign in. A total of six people signed in, while some individuals in attendance did not sign in. Notes as well as photographs were recorded by members of the project team throughout the PIC to ensure that all comments and concerns were appropriated documented. The presentation boards from the PIC have been posted on the Region's website and are provided in **Appendix C**.

No comment sheets were filled out and submitted during the PIC. Verbal comments made by attendees were generally positive and focused on wanting to ensure minimal environmental impacts resulting from development. One specific concern was expressed during the PIC from a resident who lives directly north of the development regarding the potential for hospital site visitors to park along residential side streets (to the north) to take advantage of free parking and then walk to the site. Specifically, the concern related to conceptual pedestrian pathways shown connecting the site and the community to the north. The project team took note of the issue and advised that it would be considered in future decisions. In response, the overriding benefit of

having pedestrian connections to the north for residents was identified, while aiming to situate pathways in a way to minimize this potential from outside visitors. It was advised that at this stage of the project the use of parking enforcement tools had not been explored, however would be considered as development progresses.

No comment sheets have been received to date from those in attendance.

9.3 Notice of Study Completion

The Notice of Study Completion will be sent out to stakeholders on February 13, 2014. Recipients will include all agencies and previously identified stakeholders, along with all residents, businesses and property owners adjacent to the study area. Notices will be placed in the Vaughan Citizen and Thornhill Liberal on February 13 and February 20, 2014.

10.0 References

- Malone Given Parsons Ltd., Cole Engineering Group Ltd., The Ventin Group Ltd., Stephen Popovich and Associates. August 2013. Vaughan Healthcare Centre Precinct Plan, Draft Report
- Chapman, L.J. and Putnam, D.F. 1984. The Physiography of Southern Ontario, Third Edition. Ontario Geological Survey, Ontario Ministry of Natural Resources.
- Ministry of Municipal Affairs and Housing. 2005. Provincial Policy Statement.
- Ministry of the Environment. 2007. Bill 198 - Safeguarding and Sustaining Ontario's Water Act.
- Municipal Engineers Association. 2007. Municipal Class Environmental Assessment.
- Regional Municipality of York. 2011. Sewer Use Bylaw No. 2011-56.
- Regional Municipality of York. 2012. Modified York Region Official Plan – 2010.
- R.S.C. 1985. c. F-14 – Fisheries Act.
- R.S.C. 1985. c. N-22 – Navigable Waters Protection Act.
- R.S.O. 1990a. Chapter C.27: Conservation Authorities Act.
- R.S.O. 1990b. Chapter E.18 – Environmental Assessment Act.
- R.S.O. 1990c. Chapter E.19 – Environmental Protection Act.
- R.S.O. 1990d. Chapter L.3 – Lakes and Rivers Improvement Act.
- R.S.O. 1990e. Chapter O.40 – Ontario Water Resources Act.
- S.C. 1992. c. 37 – Canadian Environmental Assessment Act.
- S.O. 2002. Chapter 32 – Safe Drinking Water Act.
- S.O. 2004. Chapter 9 – Greenbelt Protection Act.
- S.O. 2005. Chapter 13 – Places to Grow Act.
- S.O. 2006. Chapter 22 – Clean Water Act.
- S.O. 2007. Chapter 6 – Endangered Species Act.
- S.O. 2010. Chapter 19 – Water Opportunities Act.

Appendix A

Notifications and Contact List

Municipal Services for the Vaughan Healthcare Centre Precinct Class Environmental Assessment Study Stakeholders List

Organization	First Name	Last Name	Position	Address	City, Province, Postal Code	Special Notes
Ministry of Natural Resources	Jason	Borwick	Senior Fisheries Biologist	50 Bloomington Rd. West	Aurora, ON L4G 3G8	Received response from Jackie Burkart Nov 29, stating MNR has "no concerns with the EA. If, however, during the course of your study you come across any species at risk on the property, MNR should be advised."
Ministry of the Environment	Daniel	Delaquis	EA Coordinator	5775 Yonge Street, 8th Floor	North York ON M2M 4J1	
Ministry of the Environment	Chunmei	Liu	EA and Planning Coordinator Central Region	5775 Yonge Street, 8th Floor	North York ON M2M 4J1	Removal requested Nov. 21. Dan Delaquis handles York Region.
Ministry of Transportation Ontario	Gary	Todd	Manager, Design and Contract Standards-Office	301 St. Paul Street, 2nd Floor, North	St. Catharines, ON L2R 7R4	Removal of all other MTO stakeholders requested by Margaret Mikolajczak, Nov 25.
Ministry of Transportation Ontario	Peter	Verok	Manager, Engineering Office	1201 Wilson Avenue, 5th Floor, Bldg D	Downsview ON M3M 1J8	Removal of all other MTO stakeholders requested by Margaret Mikolajczak, Nov 25.
Ministry of Transportation Ontario	Margaret	Mikolajczak		4th Floor, Building 'D', 1201 Wilson Avenue	Downsview ON M3M 1J8	
Ministry of Culture	Winston	Wong	Heritage Planner, Culture Services Unit	400 University Ave	Toronto, ON M7A2R9	
Minsitry of Tourism and Culture			EA Coordinator	9th Floor, 900 Bay Street	Toronto, ON M7A 2E1	
Minsitry of Tourism and Culture	Rosi	Zirger	A/Heritage Planner	401 Bay Street, 17th Floor	Toronto, ON M7A 0A7	
Ministry of Agriculture, Food and Rural Affairs	David	Cooper	Manager, Environmental and Land Use Policy	Ontario Government Building 3rd floor, 1 St	Guelph, ON N1G 4Y2	
Ministry of Municipal Affairs and Housing	Barbara	Konyi	Manager, Greater Horseshoe Greenbelt Section	College Park, 14th Floor, 777 Bay Street	Toronto, ON M5G 2E5	
Ministry of Municipal Affairs and Housing			EA Coordinator	College Park, 17th Floor, 777 Bay Street	Toronto, ON M5G 2E5	
Ministry of Municipal Affairs and Housing	Michelle	Moretti	Planner, Municipal Services Office - Central Ontario	777 Bay Street, 2nd Floor	Toronto, ON M5G 2E5	No longer with Ministry; Now works for Peel Region.
Ministry of Public Infrastructure	Tija	Dirks	Manager, Planning and Analysis	777 Bay Street, 16th Floor	Toronto, ON M5G 2E5	
Infrastructure Ontario	Lisa	Myslicki	Environmental Advisor, Environmental Management	1 Dundas Street West, Suite 2000	Toronto, ON M5G 2L5	
York Region District School Board	Ken	Thurston	Director of Education	The Education Centre - Aurora 60 Wellington Street West, Box 40	Aurora, ON L4G 3H2	Removal requested Nov. 26.
York Catholic District School Board	Susan	LaRosa	Director of Education	320 Bloomington Rd. W.,	Aurora, ON L4G 0M1	
York Region Police				17250 Yonge Street	Newmarket, ON L3Y 4W5	
Vaughan Fire and Rescue Service	Sabrina	Sacchetti	Office of the Fire Chief	City Hall 2141 Major Mackenzie Drive	Vaughan, ON L6A 1T1	Removal requested Dec. 6.
St. John Ambulance - York Region Branch				13025 Yonge Street Ste 202	Richmond Hill ON L4E 1A4	

Municipal Services for the Vaughan Healthcare Centre Precinct Class Environmental Assessment Study Stakeholders List

Organization	First Name	Last Name	Position	Address	City, Province, Postal Code	Special Notes
Environment Canada	Rob	Dobos	Manager, Environmental Assessment Section	Box 5050: 867 Lakeshore Road	Burlington, ON L7R 4A6	
Environment Canada	Sheila	Allan	Senior EA Officer	Box 5050: 867 Lakeshore Road	Burlington, ON L7R 4A6	Removal requested Nov. 21.
Environment Canada - Ontario Region	Robert	Gilmore		4905 Dufferin Street	Downsview, ON M3H 5T4	
DFO/Coast Guard	Colleen	O'Meara	Communications Manager - Central and Arctic Region	Box 5050: 867 Lakeshore Road	Burlington, Ontario L7R 4A6	
Department of Fisheries and Oceans			EA Coordinator Habitat Management and Enhancement Division	200 Kent Street, 13th Floor, Station-13E228	Ottawa, ON K1A 0E6	Removal Requested Nov. 25.
Aboriginal Affairs and Northern Development Canada	Shafiul	Alam	Environmental Officer	25 St. Clair Ave E., 8th Floor	Toronto, ON M4T 1M2	
The Chiefs of Ontario	Sue	Chiblow	Environmental Coordinator	111 Peter Street, Suite 804	Toronto, ON M5V 2H1	
The Métis Nation of Ontario	Melanie	Paradis	Director	75 Sherbourne Street, Suite 222	Toronto, ON M5A 2P9	
Ministry of Aboriginal Affairs	David	Pickles	Team Lead for Eas	9 th Floor, 160 Bloor Street East	Toronto ON M7A 2E61	
Ministry of Aboriginal Affairs	Lorena	Weesit	Correspondence Coordinator Communications Branch	160 Bloor Street East, 4th Floor	Toronto ON M7A 2E6	
York Region	Dan	Kostopoulos	Director, Capital Planning	17250 Yonge Street	Newmarket, ON L3Y 6Z1	
York Region	Stephen	Fung	Manager, Capital Planning	17250 Yonge Street	Newmarket, ON L3Y 6Z1	
York Region	Brett	Bloxam	Manager, Operations and Maintenance	17250 Yonge Street	Newmarket, ON L3Y 6Z1	
York Region	Shu	He		17250 Yonge Street	Newmarket, ON L3Y 6Z1	Requested removal, replaced with Tammy Silverstone Nov 25.
York Region	Tammy	Silverstone		17250 Yonge Street	Newmarket, ON L3Y 6Z1	Added Nov 25.
York Region	Umair	Iqbal		17250 Yonge Street	Newmarket, ON L3Y 6Z1	Has left York Region; replaced with Shu He (who was replaced with Tammy Silverstone) Dec 2.
York Region	Richard	Hui	Manager, Transportation Planning Infrastructure Planning	17250 Yonge Street	Newmarket, ON L3Y 6Z1	
York Region	Daniel	Bertolo	Project Manager, Capital Planning & Delivery, Environmental Services Department	17250 Yonge Street	Newmarket, ON L3Y 6Z1	Inclusion requested Dec. 17.
York Region	Shahid	Matloob		17250 Yonge Street	Newmarket, ON L3Y 6Z1	Requested copy of PIC presentation; Sent Dec. 4.
Toronto and Region Conservation	Carolyn	Woodland	Director, Planning	5 Shoreham Drive	Downsview ON M3N 1S4	
Toronto and Region Conservation	June	Murphy	Planning	5 Shoreham Drive	Downsview ON M3N 1S4	
Toronto and Region Conservation	Beth	Wilson	Planning	5 Shoreham Drive	Downsview ON M3N 1S4	

Municipal Services for the Vaughan Healthcare Centre Precinct Class Environmental Assessment Study Stakeholders List

Organization	First Name	Last Name	Position	Address	City, Province, Postal Code	Special Notes
City of Vaughan	Gino	Rosati	Regional Councillor	2141 Major Mackenzie Drive	Vaughan, ON L6A 1T1	
City of Vaughan	Michael	Di Biase	Regional Councillor	2141 Major Mackenzie Drive	Vaughan, ON L6A 1T1	
City of Vaughan	Deb	Schulte	Regional Councillor	2141 Major Mackenzie Drive	Vaughan, ON L6A 1T1	
Kleinburg and Area Ratepayers' Association	Ken	Schwenger	President	P.O. Box 202	Kleinburg, ON L0J 1C0	
Maple-Sherwood Ratepayers' Association	Angelo	DiNardo	President	182 Greenock Drive	Maple, ON L6A 1V1	
Millwood Woodend Ratepayers' Association	Tim	Sorochinsky	President	275 Millwood Parkway	Woodbridge, ON L4L 1A6	
Rimwood Estates Homeowners' Association	Frank	Alaimo	President	8050 Islington Ave. Unit 19	Woodbridge, ON L4L 1W5q	905-832-8510 (work number for Susan) She is no longer associated with Rimwood so will need to contact Frank Alaimo (clerks 905-832-2281 ratepayers list)
Carrying Place Ratepayers' Association	Tony	Alati	President	12 Golden Gate Circle	Woodbridge, ON L4H 1N4	
Vaughanwood Ratepayers' Association	Clara	Astolfo	President	15 Francis Street	Woodbridge ON L4L 1P7	
West Woodbridge Homeowners' Association	Nick	Pinto	President	57 Maples Avenue	Woodbridge , ON L4L 8R4	
Woodbridge Core Ratepayers' Association	Joanne	Mauti	President	128 Wallace Street	Woodbridge, ON L4L 2P4	
East Woodbridge Community Association	Carlo	DeFrancesca	President	87 Michelle Drive	Woodbridge, ON L4L 9B9	
Pinewood Estates Ratepayers' Association	Pia	Famiglietti		210 Fenyrose Crescent	Vaughan, ON L4L 7B1	
Vellore Woods Ratepayers' association	Elvira	Caria	Co-Chair	15 Bunting Drive	Woodbridge, ON L4H 2E7	
Concord West Ratepayers' Association	Maria	Bacchin	President	7777 Keele Street P.O. Box 79001	Concord, ON L4K 1Y0	
Thornhill Woods Community Association	Maya	Goldenberg	President	101 Thornhill Woods Drive	Thornhill, ON L4J 8R5	
Beverley Glen Ratepayers' Association	Gila	Martow	President	70 Coldwater Court	Thornhill, ON L4J 7S4	
Brownridge Ratepayers' Association	Mario	G. Racco	President	21 Checker Court	Thornhill, ON L4J 5X4	
Crestwood Road Ratepayers Association	Silvano	Novacco	President	83 Crestwood Road	Thornhill, ON L4J 1A4	
Glen Shields Ratepayers' Association	Pauline	Durso	President	6 Oakmount Crescent	Concord, ON L4K 2C3	
Lakeview Estates Ratepayers' Association	James	Ebidia	President	524 Conley Street	Thornhill, ON L4J 6T8	
Maison Parc Ratepayers' Association	Alroy	Vaz	President	107-2 Maison Park Court	Thornhill, ON L4J 9K4	
Field Gate Developments	Rick	Mangotich		5400 Yonge Street, Suite 501	Toronto, ON M2N 5R5	

Municipal Services for the Vaughan Healthcare Centre Precinct Class Environmental Assessment Study Stakeholders List

	Organization	First Name	Last Name	Position	Address	City, Province, Postal Code	Special Notes
	Powerstream			EA Coordinator	161 Cityview Boulevard	Vaughan, ON L4H 0A9	
	Enbridge Gas	Jim	Arnott	Municipal Coordination Advisor	500 Consumers Road	North York ON M2J 1P8	To be sent by email
	Bell Canada	Leanne	DeMarco	Executive Office of Customer Relations	P.O. Box 593 Station A	Toronto, ON M5W 1E4	Customer relations: 905-282-3366 or 905-625-6689
	Rogers Cable	Roger	Patton	Director of Technical Operations	301 Marwood Drive	Oshawa, ON L1H 1J4	
	Hydro One	Tony	Ierullo		483 Bay Street, North Tower, 15th Floor Reception	Toronto, ON M5G 2P5	
	Hydro One	Jenny	Mui		483 Bay Street, North Tower, 15th Floor Reception	Toronto, ON M5G 2P5	
	Hydro One	Paul	Dockrill		483 Bay Street, North Tower, 15th Floor Reception	Toronto, ON M5G 2P5	
	York Region Transit	Kyle	Catney	Facilities Supervisor	50 High Tech, 5th Floor	Richmond Hill, ON L4B 4N7	Contact updated Dec. 12.
	GO Transit	Michael S.	Wolczyk	Manager, Marketing and Planning	20 Bay Street, Ste 600	Toronto, ON M5J 2W3	
	Toronto Transit Commission			EA Coordinator	1900 Yonge Street	Toronto, ON M4S 1Z2	
	Mackenzie Health	Rosemarie	Crisante	Director of Redevelopment	Mackenzie Richmond Hill Hospital 10 Trench Street	Richmond Hill, ON L4C 4Z3	
	Canada's Wonderland	Norm	Pirtovshek	Vice President and General Manager	9580 Jane Street	Vaughan, ON L6A 1S6	
	eHealth Ontario	Nancy	Van Kessel	Patient Advisory Panel	415 Yonge Street	Toronto, Ontario M5G 2C8	
	Cedar Fair	Peter	Switzer		9580 Jane Street	Vaughan, ON L6A 1S6	
	Cedar Fair	Theodore	Bosch		9580 Jane Street	Vaughan, ON L6A 1S6	
	Ministry of Transportation Ontario	Jason	White	Head, Planning and Design	Building 'D', 1201 Wilson Avenue	Downsview ON M3M 1J8	Removal of all other MTO stakeholders requested by Margaret Mikolajczak, Nov 25.
	Ministry of Transportation Ontario	Martin	Michalek	Head (Acting), Highway Engineering - Hamilton and Niagara	Building 'D', 1201 Wilson Avenue	Downsview ON M3M 1J8	Removal of all other MTO stakeholders requested by Margaret Mikolajczak, Nov 25.
	Ministry of Transportation Ontario	Shawn	Aurini	Supervisor, Simcoe & York, Area 1 - Toronto, York, Durham, Simcoe Section	Building 'D', 1201 Wilson Avenue	Downsview ON M3M 1J8	Removal of all other MTO stakeholders requested by Margaret Mikolajczak, Nov 25.
	Toronto and Region Conservation	Dan	Hipple		5 Shoreham Drive	Downsview, ON M3N 1S4	
	Toronto and Region Conservation	Dena	Lewis	Manager, Terrestrial and Aquatic Ecology	5 Shoreham Drive	Downsview, ON M3N 1S4	
	Toronto and Region Conservation	June	Little		5 Shoreham Drive	Downsview, ON M3N 1S4	
	Toronto and Region Conservation	Leslie	Piercey	Acting Supervisor, Planning Ecology (Don/Highland/Humber in Toronto)	5 Shoreham Drive	Downsview, ON M3N 1S4	
	Toronto and Region Conservation	Sameer	Dhalla	Manager, Water Resources (Highland/Don/Duffins/Carruthers)	5 Shoreham Drive	Downsview, ON M3N 1S4	

Municipal Services for the Vaughan Healthcare Centre Precinct Class Environmental Assessment Study Stakeholders List

	Organization	First Name	Last Name	Position	Address	City, Province, Postal Code	Special Notes
	York Region	Steven	Kemp		17250 Yonge Street	Newmarket ON L3Y 6Z1	
	York Region	Loy	Cheah		17250 Yonge Street	Newmarket ON L3Y 6Z1	
	York Region	Calvin	Mollett		17250 Yonge Street	Newmarket ON L3Y 6Z1	Inclusion requested Nov 25; Will be directly involved with the later subdivision and site plan approval processes.
	York Region	Nelson	Costa		17250 Yonge Street	Newmarket ON L3Y 6Z1	
	York Region Public Health Services Department	Karim	Kurji	Medical Officer of Health	17250 Yonge Street, Box 147	Newmarket ON L3Y 6Z1	
	Ministry of Community and Social Services	Claudine	Cousins	Regional Director - Central Office	465 Davis Drive, 4th Floor	Newmarket Ontario L3Y 8T2	
	Ministry of Economic Development and Trade	John	Langley	Director Investment Branch	900 Bay St., 7th Floor, Hearst Block	Toronto ON M7A 2E1	
	Canadian Heritage			EA Coordinator	150 John Street, Suite 400	Toronto, ON M5V 3T6	Removal requested Nov. 26.
	Indian and Northern Affairs Canada	Jeffrey	Betker	Senior Policy Analyst, Office of the Federal Interlocutor for Métis and Non-Status Indians	66 Slater Street, Room 1225	Ottawa ON K1A 0H4	
	Canadian Environmental Assessment Agency, Ontario Region	Jim	Chan	Project Manager	55 St. Clair Avenue East, Suite 907	Toronto ON M4T 1M2	



The Corporation of the City of Vaughan

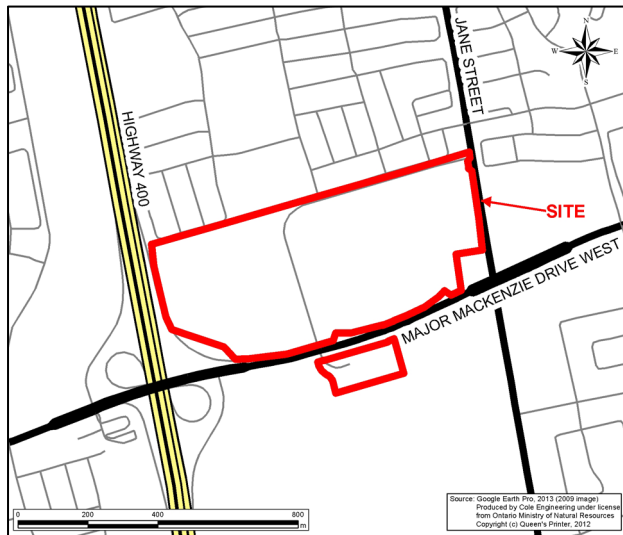
NOTICE OF STUDY COMMENCEMENT AND PUBLIC INFORMATION CENTRE

Municipal Services for the Vaughan Healthcare Centre Precinct

The Corporation of the City of Vaughan (City) has acquired an 82 acre parcel of land in the northwest quadrant of Major Mackenzie Drive and Jane Street to create an urban Vaughan Healthcare Centre Precinct (VHCP) anchored by a new healthcare hospital, known as the Mackenzie Vaughan Hospital. The City has completed a *Vaughan Healthcare Centre Precinct Plan (VHCPP)* to illustrate and guide development, and is in the process of completing a Draft Plan of Subdivision in fulfillment of *Planning Act* approval requirements.

In addition to the *Planning Act* approval process, the City has identified the need to initiate a Schedule B, Class Environmental Assessment (Class EA) study, which will be conducted generally following the Integrated Approach (with the *Planning Act*) as outlined in the *Municipal Engineers Association Class EA (October 2000, as amended October 2007 & 2011)*. Components of the VHCP requiring consideration include servicing infrastructure, stormwater management ponds, drainage channel re-alignment, and roadways (excluding a potential Hwy 400 ramp extension, which is subject to future study involving York Region and MTO).

A Schedule B Class EA ensures fulfillment of Phase I (Definition of Problem or Opportunity) and Phase II (Identification and Evaluation of Alternative Solutions following consideration of existing conditions and appropriate mitigation measures toward selection of a Preferred Solution) of the process. The *VHCPP* will be used to support the preparation of the Class EA. The respective approval processes will be integrated where possible to ensure comprehensive consideration of the issues, avoidance of duplication, and thorough public consultation.



Consultation with, and input from the public and government review agencies is a vital component of the Class EA process. Members of the public and review agencies are invited to provide comments for incorporation into the overall planning of the project.

As part of the Class EA process, the City will be hosting a Public Information Centre on the project to present engineering and environmental information from the study, including existing conditions, an evaluation of alternatives and a recommended solution, while engaging residents and stakeholders regarding key issues. All interested individuals are encouraged to attend.

The Public Information Centre will be held on:

Tuesday, November 26, 2013

5:30 p.m. to 8:30 p.m.

**Vaughan City Hall, 2141 Major Mackenzie Drive, Vaughan
Multi Purpose Room (Ground Floor, North of Main Entrance)**



This event is being held in conjunction with the Statutory Public Meeting for the VHCP Draft Plan and Zoning applications. Written comments are also invited for further consideration and for incorporation into the project record. If you wish to receive further information about this project, submit a comment or be added to the mailing list, please contact either of the following individuals:

Mr. John Chadwick, P.Geo.
Consultant Project Manager
Cole Engineering Group Ltd.
70 Valleywood Drive
Markham, ON L3R 4T5
P: 905-940-6161 x445
F: 905-940-2064
E: JChadwick@ColeEngineering.ca

Mr. Andrew Pearce
Director of Development /
Transportation Engineering
Corporation of the City of Vaughan
2141 Major Mackenzie Drive
Vaughan, ON L6A 1T1
P: 905-832-8585 x8255
F: 905-832-6145
E: Andrew.Pearce@Vaughan.ca

Thank you for your participation in this study

Comments and information regarding this project are being collected in accordance with the requirements of the Environmental Assessment Act. With the exception of personal information, all other information received may be included in project documentation and become part of the public record.



November 20, 2013

«HONORIFIC» «FIRST_NM» «LAST_NM»
«POSITION»
«COMPANY_NAME»
«ADDRESS_LINE»
«CT_PR_POST_CODE»

Dear «HONORIFIC» «LAST_NM»:

**Re: Class Environmental Assessment Study for Vaughan Healthcare Centre Precinct
Municipal Services - Notice of Study Commencement and Public Information Centre**

The Corporation of the City of Vaughan (City) has acquired an 82 acre parcel of land in the northwest quadrant of Major Mackenzie Drive and Jane Street to create an urban Vaughan Healthcare Centre Precinct (VHCP) anchored by a new healthcare hospital, known as the Mackenzie Vaughan Hospital. The City has completed a *Vaughan Healthcare Centre Precinct Plan (VHCPP)* to illustrate and guide development, and is in the process of completing a Draft Plan of Subdivision in fulfillment of *Planning Act* approval requirements.

In addition, the City has commenced a Schedule B, Class Environmental Assessment (Class EA) study, which will be conducted generally following the Integrated Approach (with the *Planning Act*) outlined in the *Municipal Engineers Association Class EA (October 2000, as amended October 2007 & 2011)*.

The City will be hosting a Public Information Centre (PIC) for the Class EA on Tuesday, November 26, 2013 between 5:30 p.m. and 8:30 p.m. at Vaughan City Hall. You are invited to attend the event to learn more about the project and to provide input on the Class EA. At the PIC, project information will be presented including existing conditions, an evaluation of alternative solutions and a recommended solution. Comments received at this PIC will be incorporated in the Class EA study.

For additional information, please refer to the attached Notice of Study Commencement and Public Information Centre, which also will appear in the Vaughan Citizen and Thornhill Liberal on Thursday November 21, 2013.

If your agency/office has any comments or input regarding this project, we invite you to complete and return the attached Response Form by **December 20, 2013**. If your agency/office has no comments or interest in this project, we would appreciate you advising us either by letter or by signing the space provided at the end of this letter and returning it to us by **December 20, 2013**.

Comments and information regarding this project are being collected to assist the City in arriving at the preferred solution and to meet the requirements of the Ontario *Environmental Assessment Act*. Input received will be used in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*.

Should you have any questions or require further information please contact John Chadwick of Cole Engineering Group Ltd. at 905-940-6161 ext. 445 or myself at 905-832-8585 ext. 8255.

Sincerely,

A handwritten signature in blue ink, appearing to read "Andrew Pearce".

Andrew Pearce
Director of Development / Transportation Engineering

Attachments: Response Form and Notice of Study Commencement and Public Information Centre



RESPONSE FORM

Name: _____

Agency/Office: _____

Address: _____

Please provide comments/input in the space provided (or check the box below) and return the signed form on or before **December 20, 2013** to Cole Engineering or the City of Vaughan per the contact information provided on the attached Notice.

This Agency/Office will not be providing input to or participating in the Vaughan Healthcare Centre Precinct Class EA study.

Date

Per



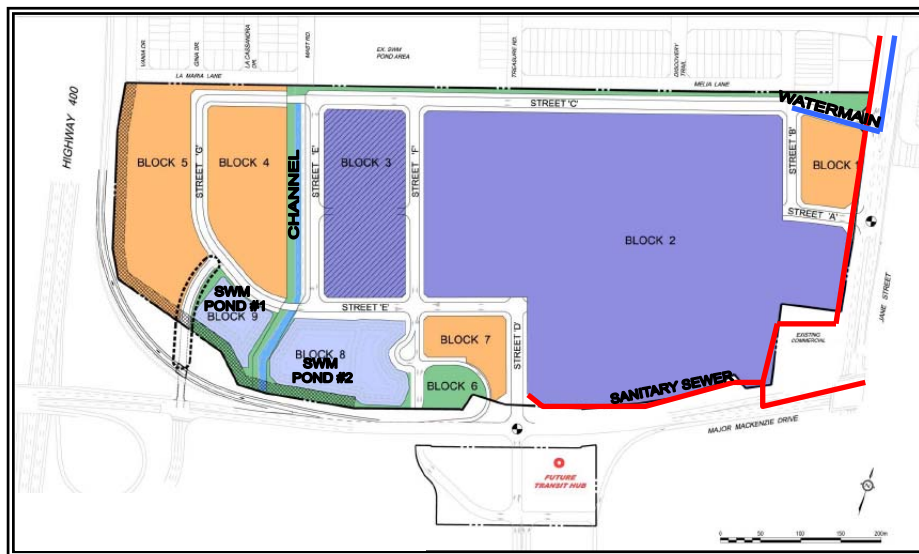
The Corporation of the City of Vaughan

NOTICE OF STUDY COMPLETION

Municipal Services for the Vaughan Healthcare Centre Precinct

The Corporation of the City of Vaughan has completed a Schedule B, Class Environmental Assessment (Class EA) study for an 87 acre parcel of land in the northwest quadrant of Major Mackenzie Drive and Jane Street, to be used for the urban Vaughan Healthcare Centre Precinct (VHCP) anchored by a new healthcare hospital, known as the Mackenzie Vaughan Hospital.

The Class EA study has been conducted generally following the Integrated Approach (with the *Planning Act*) as outlined in the *Municipal Engineers Association Class EA (October 2000, as amended October 2007 & 2011)*. The identified preferred solutions include a roadway layout consisting of Streets A through F connecting to Jane Street and Major Mackenzie Drive; sanitary sewers connecting to the existing sanitary sewer located at Jane Street and Grand Valley Blvd; a watermain connecting at Grand Valley Blvd; two stormwater ponds located in the southwest corner of the site; and a north-south drainage channel located west of the existing channel (see map below).



A Project File Report has been prepared for the Class EA Study, which describes the problem, identifies and evaluates alternative solutions, describes existing conditions and appropriate mitigation measures, and selects preferred solutions, as well as the public and agency consultation during the Class EA study.

This Notice places the Project File Report on the public record. The Project File Report is available for public review for thirty (30) calendar days from February 7 to March 10, 2014 at the following locations during business hours noted below:

City of Vaughan
Engineering Department
2141 Major Mackenzie Drive
Vaughan, ON L6A 1T1
Open: Mon to Fri,
8:30 a.m. to 4:30 p.m.

The Regional Municipality of York
Clerk's Department
17250 Yonge Street, 4th Floor
Newmarket, ON L3Y 4W5
Open: Mon to Fri,
8:30 a.m. to 4:30 p.m.

Maple Library
10190 Keele Street
Maple, ON L6A 1G3
Open: Mon and Wed, 1:00 p.m. to 9:00 p.m.; Tue and Thu, 10:00 a.m. to 9:00 p.m.; Fri, 10:00 a.m. to 6:00 p.m.; Sat, 10:00 a.m. to 5:00 p.m.; Sun, 1:00 p.m. to 5:00 p.m.

Interested persons should provide written comments to the City of Vaughan representative listed below within the review period.

Mr. Andrew Pearce
Director of Development/Transportation Engineering
Corporation of the City of Vaughan
2141 Major Mackenzie Drive
Vaughan, ON L6A 1T1
P: 905-832-8585 x8255
F: 905-832-6145
E: Andrew.Pearce@Vaughan.ca

If concerns cannot be resolved through discussions with The City of Vaughan, a person may request the Minister of the Environment issue a Part II Order requesting this project comply with Part II of the *Environmental Assessment Act*. **A Part II Order Request must be received by the Minister at the address below and copied to The City of Vaughan no later than March 10, 2014. If there are no Part II Order requests received, the proposed works will proceed to the design and construction phases as outlined in the Project File Report.**

Honourable Jim Bradley
Minister of the Environment
77 Wellesley Street West, 11th Floor, Ferguson Block
Toronto, ON M7A 2T5

Thank you for your participation in this study.

This Notice issued February 13, 2014.

Comments and information regarding the Project are being collected in accordance with the requirements of the Environmental Assessment Act. Other than personal information, all information received may be included in the project documentation, which will become part of the public record.

Appendix B

Public and Agency Correspondence

Ministry of Aboriginal Affairs

160 Bloor St. East, 9th Floor
Toronto, ON M7A 2E6
Tel: (416) 326-4740
Fax: (416) 325-1066
www.aboriginalaffairs.gov.on.ca

Ministère des Affaires Autochtones

160, rue Bloor Est, 9^e étage
Toronto ON M7A 2E6
Tél. : (416) 326-4740
Télec. : (416) 325-1066
www.aboriginalaffairs.gov.on.ca



Reference: EA # P21
2013-12-03

Mr. John Chadwich, P. Geo.
Consultant Project Manager
Cole Engineering Group Ltd.
70 Valleywood Drive
Markham, ON L3R 4T5

**Re: Class Environmental Assessment Study for Vaughan Healthcare Centre
Precinct Municipal Services – Notice of Study Commencement and Public
Information Centre**

Dear Mr. Chadwich:

Thank you for informing the Ministry of Aboriginal Affairs (MAA) of your project. Please note that MAA treats all letters, emails, general notices, etc. about a project as a request for information about which Aboriginal communities may have rights or interests in the project area.

As a member of the government review team, the Ministry of Aboriginal Affairs (MAA) identifies First Nation and Métis communities who may have the following interests in the area of your project:

- reserves;
- land claims or claims in litigation against Ontario;
- existing or asserted Aboriginal or treaty rights, such as harvesting rights; or
- an interest in the area of the project.

MAA is not the approval or regulatory authority for your project, and receives very limited information about projects in the early stages of their development. In circumstances where a Crown-approved project may negatively impact a claimed Aboriginal or treaty right, the Crown may have a duty to consult the Aboriginal community advancing the claim. The Crown often delegates procedural aspects of its duty to consult to proponents. Please note that the information in this letter should not be relied on as advice about whether the Crown owes a duty to consult in respect of your project, or what consultation may be appropriate. Should you have any questions about your consultation obligations, please contact the appropriate ministry.

You should be aware that many First Nations either have or assert rights to hunt and fish in their traditional territories; these territories typically include lands and waters outside of their reserves.

RECEIVED

In some instances, project work may impact aboriginal archaeological resources. If any Aboriginal archaeological resources could be impacted by your project, you should contact your regulating or approving Ministry to inquire about whether any additional Aboriginal communities should be contacted. Aboriginal communities with an interest in archaeological resources may include communities who are not presently located in the vicinity of the proposed project.

With respect to your project, and based on the brief materials you have provided, we can advise that the project appears to be located in an area where First Nations may have existing or asserted rights or claims in Ontario's land claims process or litigation, that could be impacted by your project. Contact information is below:

Mississaugas of the New Credit First Nation 2789 Mississauga Rd., R.R. #6 HAGERSVILLE, Ontario N0A 1H0	Chief Bryan LaForme (905) 768-1133 (Fax) 768-1225 bryanlaforme@newcreditfirstnation.com
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The information upon which the above comments are based is subject to change. First Nation or Métis communities can make claims at any time, and other developments can occur that could result in additional communities being affected by or interested in your undertaking.

Through Aboriginal Affairs and Northern Development (AANDC), the Government of Canada sometimes receives claims that Ontario does not receive, or with which Ontario does not become involved. AANDC's Consultation and Accommodation Unit (CAU) established a "single window" to respond to requests for baseline information held by AANDC on established or potential Aboriginal Treaty and rights. To request information from the Ontario Subject Matter Expert send an email to: UCA-CAU@aadnc-aandc.gc.ca

Additional details about your project or changes to it that suggest impacts beyond what you have provided to date may necessitate further consideration of which Aboriginal communities may be affected by or interested in your undertaking. If you think that further consideration may be required, please bring your inquiry to whatever government body oversees the regulatory process for your project. MAA does not wish to be kept informed of the progress of the project; please be sure to remove MAA from the mailing list.

Yours truly,



Heather Levecque
Manager, Consultation Unit
Aboriginal Relations and Ministry Partnerships Division

From: John Chadwick
Sent: Wednesday, December 11, 2013 2:26 PM
To: Catney, Kyle
Cc: Andrew.Pearce@Vaughan.ca; Ben Sheardown
Subject: RE: Class EA Study- Vaughan Health Care Centre

Thank you Kyle for your email.

The project team will be sure to maintain communications and coordination with York Region Transit and Infrastructure Planning throughout the course of the project.

Best Regards,
John Chadwick, P.Geo., CISEC
Business Unit Leader
Environmental Assessment & Approvals

Cole Engineering Group Ltd.
70 Valleywood Drive, Markham, ON L3R 4T5
T: 905.940.6161 Ext. 445, F: 905.940.2064
C: 416.802.3723
Email: jchadwick@coleengineering.ca
Website: www.coleengineering.ca

CONFIDENTIALITY NOTE

This transmission is intended only for the use of the individual(s) or the entity to which it is addressed. It may contain Confidential / Privileged information belonging to the sender which is protected by personal and copyright privilege. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution or taking of any action in reliance on the contents of this information is prohibited. If you have received this transmission in error, please immediately notify us by telephone or e-mail.
Thank you

From: Catney, Kyle [mailto:Kyle.Catney@york.ca]
Sent: Wednesday, December 11, 2013 2:16 PM
To: John Chadwick
Subject: RE: Class EA Study- Vaughan Health Care Centre

Response form attached.

Kyle Catney

From: Catney, Kyle
Sent: Wednesday, December 11, 2013 1:40 PM
To: 'jchadwick@coleengineering.ca'
Subject: Class EA Study- Vaughan Health Care Centre

John,

Please find the attached response form regarding the Class EA study for the Vaughan Health Care Centre. It is my understanding that the Region has already been consulted regarding transit and parking for this project. As noted in the response, it is anticipated that we will continue to be involved throughout the

various phases of the project.

Feel free to contact me if you need any additional information.

Regards,

Kyle Catney, C.E.T.

Facilities Supervisor

York Region Transit (YRT)

50 High Tech, 5th Floor

Richmond Hill, Ontario L4B 4N7

Tel: [\(905\) 762-1282](tel:(905)762-1282) ext. 5637

Toll Free: [1-866-758-0749](tel:1-866-758-0749)

Fax: [\(905\) 762-2113](tel:(905)762-2113)

Email: kyle.catney@york.ca • www.yrt.ca

OUR MISSION:

To provide quality public transit services which support the economic vitality, environmental sustainability, and health of the Regional community.

Please note that on January 2, 2014, telephone extensions at York Region will change to five digits by adding 7 as the first digit. My extension will become 75637.



RESPONSE FORM

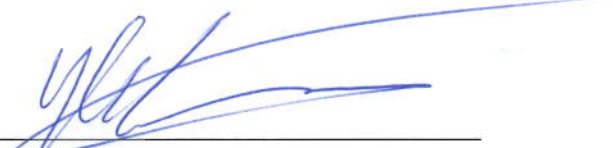
Name: Kyle Catney
Agency/Office: York Region Transit
Address: 50 High Tech, 5th Floor
Richmond Hill, Ontario
L4B 4W7

Please provide comments/input in the space provided (or check the box below) and return the signed form on or before **December 20, 2013** to Cole Engineering or the City of Vaughan per the contact information provided on the attached Notice.

Ongoing Consultation & Coordination
with York Region Transit & Infrastructure
Planning is required for the duration
of the project.

This Agency/Office will not be providing input to or participating in the Vaughan Healthcare Centre Precinct Class EA study.

Dec. 11. 2013
Date


Per

From: Bedford, Cynthia [cynthia.bedford@yrdsb.edu.on.ca]
Sent: Tuesday, November 26, 2013 4:00 PM
To: Ben Sheardown
Cc: Director; Gray, Andrea; Ross, Jane
Subject: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Attachments: Vaughan Health Centre November 26, 2013.pdf

Dear Mr. Sheardown,

Attached please find signed copy of the Notice regarding the Vaughan Healthcare Centre Study.

Best regards,

Cynthia Bedford

Administrative Assistant
Planning and Property Development Services
York Region District School Board
Phone: 905-727-0022 ext: 2424
Fax: 905-727-0775
Email: cynthia.bedford@yrdsb.edu.on.ca



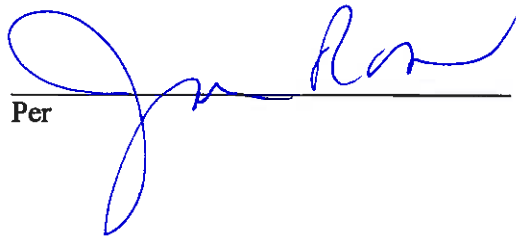
RESPONSE FORM

Name: Jane Ross
Agency/Office: Senior Manager, Planning & Property Development
Address: 60 Wellington Street West, Box 40
Aurora, Ontario L4G 3H2

Please provide comments/input in the space provided (or check the box below) and return the signed form on or before **December 20, 2013** to Cole Engineering or the City of Vaughan per the contact information provided on the attached Notice.

This Agency/Office will not be providing input to or participating in the Vaughan Healthcare Centre Precinct Class EA study; as the proposed residential units will be associated with long-term or palliative care.

November 26, 2013
Date


Per

From: Pearce, Andrew [Andrew.Pearce@vaughan.ca]
Sent: Tuesday, December 03, 2013 9:19 AM
To: 'Silverstone, Tammy'
Cc: Marchetti, Lara; Ben Sheardown; John Chadwick
Subject: RE: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA
Hi Tammy,

Thanks for your interest in this project. The PIC went well. The PIC boards are on our website; here is the link.. http://www.vaughan.ca/services/business/engineering_planning_and_studies/Pages/default.aspx

Andrew D. Pearce
Director, Development & Transportation Engineering
City of Vaughan
905.832.8585 ext.8255

Please consider the environment before printing this email.

From: Silverstone, Tammy [mailto:Tammy.Silverstone@york.ca]
Sent: Friday, November 29, 2013 11:04 AM
To: Pearce, Andrew
Cc: Marchetti, Lara; 'Ben Sheardown'
Subject: RE: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Hi Andrew,

Thank you for adding me to your stakeholder list. Unfortunately I was unable to attend the public meeting on Tuesday night, but I was hoping you could kindly forward me and Lara an e-copy of the boards/material presented at the meeting. How did the meeting go?

We met with Mike and Jennifer a couple of months ago at your offices to discuss our East Vaughan Water and Wastewater Servicing EA, but unfortunately you were only available to peak your head into the room J . We will be in touch with you all again shortly regarding that project, as we are currently awarding it.

Regards,

Tammy Silverstone, M.Eng., P.Eng.
Senior Project Manager

Capital Planning and Delivery Branch
Environmental Services Department

Regional Municipality of York
17250 Yonge Street, Newmarket, ON L3Y 6Z1
T: 905-830-4444 x5027 | Toll Free: 1-877-464-YORK
F: 905-830-6927 | tammy.silverstone@york.ca

From: He, Shu
Sent: November 25, 2013 11:34 AM
To: 'Ben Sheardown'
Cc: Silverstone, Tammy; Lachhman, Adam; Pearce, Andrew (Andrew.Pearce@vaughan.ca)
Subject: FW: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Good day Ben,

The Region is currently undertaking a Schedule C EA study for East Vaughan Water and Wastewater Servicing that might need/provide inputs from/to your current study.
By this email I forward your letter to Tammy, the Region's project manager for the East Vaughan EA project for her to provide appropriate response.

Please also change the Region's contact from myself to Tammy for future project communication.

Regards,

Shu He, P.Eng.,PMP
Senior Project Manager
Environmental Services Department
The Regional Municipality of York
17250 Yonge Street
Newmarket, Ontario L3Y 6Z1
(905) 830-4444 x 5124
1-877-464-9675 x 5124
Fax: (905) 830-6927
Email: shu.he@york.ca

From: Ben Sheardown [<mailto:BSheardown@coleengineering.ca>]
Sent: November 22, 2013 12:07 PM
To: He, Shu
Subject: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Dear Shu,

Please find attached the Notice of Study Commencement and Public Information Centre relating to Municipal Services for the Vaughan Healthcare Centre Precinct. Included here is also a letter and response form concerning the project, which your agency/office can fill out and return to myself or either of the contacts listed on the Notice. If your agency/office does not wish to provide

input to or participate in this Class EA study, please feel free to respond to this e-mail with the word remove in the subject line. Please note that a physical copy of this letter and Notice have been mailed out to the address listed on the letter, however due to tight timelines, we are also sending it by email.

As an identified stakeholder for this project, the City of Vaughan values your continued involvement and input. Comments and information regarding this project are being collected to assist the City in the selection of our preferred solution and to meet the requirements of the MEA Class EA process, and hence the *Ontario Environmental Assessment Act*. Comments, input and information received will be used in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*.

Should you have any questions or require further information please contact either John Chadwick (Cole Engineering) or Andrew Pearce (City of Vaughan) as listed on the Notice.

Thank you for your co-operation.

Sincerely,

Ben Sheardown, B.A.Sc.
Environmental Scientist

Cole Engineering Group Ltd.
70 Valleywood Dr., Markham, ON L3R 4T5
Tor. Line: 416-987-6161, Ext 281 Phone: 905-940-6161
Fax: 905-940-2064
Email: bsheardown@coleengineering.ca
Website: www.ColeEngineering.ca

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From: Ben Sheardown
Sent: Monday, November 25, 2013 4:37 PM
To: 'Mollett, Calvin'
Subject: RE: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA
Hi Calvin,
Thank you for the response. I have updated the project's stakeholder list to reflect your request.
Regards,

Ben Sheardown, B.A.Sc.
Environmental Scientist

Cole Engineering Group Ltd.

From: Mollett, Calvin [mailto:Calvin.Mollett@york.ca]
Sent: Monday, November 25, 2013 3:14 PM
To: Alexandra Chan
Cc: Ben Sheardown
Subject: RE: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Alexandra,

Due to prior commitments I will not be able to attend the PIC. However, please keep me on the mailing list. I will be directly involved with the later subdivision and site plan approval processes.

Calvin J. Mollett P.Eng
Development Approvals Engineer
Tel: (905) 830 4444 ext. 5755

From: Alexandra Chan [mailto:achan@coleengineering.ca]
Sent: Friday, November 22, 2013 6:11 PM
To: Mollett, Calvin
Cc: Ben Sheardown
Subject: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Dear Calvin,

Please find attached the Notice of Study Commencement and Public Information Centre relating to Municipal Services for the Vaughan Healthcare Centre Precinct. Included here is also a letter and response form concerning the project, which your agency/office can fill out and return to myself or either of the contacts listed on the Notice. If your agency/office does not wish to provide input to or participate in this Class EA study, please feel free to respond to this e-mail with the word **remove** in the subject line. Please note that a physical copy of this letter and Notice have been mailed out to the address listed on the letter, however due to tight timelines, we are also sending it by email.

As an identified stakeholder for this project, the City of Vaughan values your continued involvement and input. Comments and

information regarding this project are being collected to assist the City in the selection of our preferred solution and to meet the requirements of the MEA Class EA process, and hence the *Ontario Environmental Assessment Act*. Comments, input and information received will be used in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*.

Should you have any questions or require further information please contact either John Chadwick (Cole Engineering) or Andrew Pearce (City of Vaughan) as listed on the Notice.

Thank you for your co-operation.

Sincerely,

Ben Sheardown, B.A.Sc.
Environmental Scientist

Cole Engineering Group Ltd.
70 Valleywood Dr., Markham, ON L3R 4T5
Tor. Line: 416-987-6161, Ext 281 Phone: 905-940-6161
Fax: 905-940-2064
Email: bsheardown@coleengineering.ca
Website: www.ColeEngineering.ca

From: John Chadwick

Sent: Wednesday, December 04, 2013 5:05 PM

To: shahid.matloob@york.ca

Cc: Pearce, Andrew

Subject: Vaughan Healthcare Centre Precinct Municipal Services Class EA PIC Boards

Good afternoon Mr. Matloob,

Thank you for attending our Public Information Centre regarding the Vaughan Healthcare Centre Precinct Class EA on November 26, 2013. During your visit, I believe you requested a copy of the PIC boards. The boards can be found on the City's website at: https://www.vaughan.ca/services/business/engineering_planning_and_studies/Pages/default.aspx (bottom right hand side).

Please do not hesitate to contact me or Andrew Pearce with any questions or comments that you may have.

Thanks again.

Best Regards,

John Chadwick, P.Geo., CISEC

Business Unit Leader

Environmental Assessment & Approvals

Cole Engineering Group Ltd.

70 Valleywood Drive, Markham, ON L3R 4T5

T: 905.940.6161 Ext. 445, F: 905.940.2064

C: 416.802.3723

Email: jchadwick@coleengineering.ca

Website: www.coleengineering.ca

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From: John Chadwick
Sent: Monday, December 09, 2013 2:51 PM
To: Wang, William
Cc: Andrew.Pearce@Vaughan.ca; He, Shu; Lachhman, Adam; Ben Sheardown
Subject: RE: status update about Umair Iqbal

Hello,
Further to my previous email, we also acknowledge Shu He's request to have Tammy Silverstone be the contact for this project.

Best Regards,
John Chadwick, P.Ge., CISEC
Business Unit Leader
Environmental Assessment & Approvals

Cole Engineering Group Ltd.
70 Valleywood Drive, Markham, ON L3R 4T5
T: 905.940.6161 Ext. 445, F: 905.940.2064
C: 416.802.3723
Email: jchadwick@coleengineering.ca
Website: www.coleengineering.ca

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Thank you

From: John Chadwick
Sent: Monday, December 09, 2013 2:42 PM
To: 'Wang, William'
Cc: Andrew.Pearce@Vaughan.ca; He, Shu; Lachhman, Adam; Ben Sheardown
Subject: RE: status update about Umair Iqbal

Good Day Mr. Wang,
Thank you for your email. We have removed Mr. Umair Iqbal from the Stakeholder List and will be sure to contact Shu He or Adam Lachman per your direction should we have any questions.

Best Regards,
John Chadwick, P.Ge., CISEC
Business Unit Leader
Environmental Assessment & Approvals

Cole Engineering Group Ltd.
70 Valleywood Drive, Markham, ON L3R 4T5
T: 905.940.6161 Ext. 445, F: 905.940.2064
C: 416.802.3723
Email: jchadwick@coleengineering.ca
Website: www.coleengineering.ca

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From: Wang, William [mailto:William.Wang@york.ca]
Sent: Monday, December 02, 2013 2:04 PM
To: John Chadwick
Cc: Andrew.Pearce@Vaughan.ca; He, Shu; Lachhman, Adam
Subject: status update about Umair Iqbal

Hi,

The purpose of this email is to inform you that Mr. Umair Iqbal no longer works for York Region. If you have any questions please feel free to contact me, Shu He or Adam Lachhman.

Thank you,

*William Wang
Design Technician
Capital Planning and Delivery
Environmental Services Department
The Regional Municipality of York
w) 905 830-4444 Ext. 76038
c) 647 861-9188
William.wang@york.ca*

From: Ben Sheardown

Sent: Monday, November 25, 2013 4:13 PM

To: 'He, Shu'

Cc: Silverstone, Tammy; Lachhman, Adam; Pearce, Andrew (Andrew.Pearce@vaughan.ca)

Subject: RE: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Thank you for the response, Shu. I have updated the project's stakeholder list to reflect this change.

Ben Sheardown, B.A.Sc.
Environmental Scientist

Cole Engineering Group Ltd.

From: He, Shu [mailto:Shu.He@york.ca]

Sent: Monday, November 25, 2013 11:34 AM

To: Ben Sheardown

Cc: Silverstone, Tammy; Lachhman, Adam; Pearce, Andrew (Andrew.Pearce@vaughan.ca)

Subject: FW: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Good day Ben,

The Region is currently undertaking a Schedule C EA study for East Vaughan Water and Wastewater Servicing that might need/provide inputs from/to your current study.

By this email I forward your letter to Tammy, the Region's project manager for the East Vaughan EA project for her to provide appropriate response.

Please also change the Region's contact from myself to Tammy for future project communication.

Regards,

Shu He, P.Eng.,PMP

Senior Project Manager

Environmental Services Department

The Regional Municipality of York

17250 Yonge Street

Newmarket, Ontario L3Y 6Z1

(905) 830-4444 x 5124

1-877-464-9675 x 5124

Fax: (905) 830-6927

Email: shu.he@york.ca

From: Ben Sheardown [mailto:BSheardown@coleengineering.ca]

Sent: November 22, 2013 12:07 PM

To: He, Shu

Subject: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Dear Shu,

Please find attached the Notice of Study Commencement and Public Information Centre relating to Municipal Services for the Vaughan Healthcare Centre Precinct. Included here is also a letter and response form concerning the project, which your agency/office can fill out and return to myself or either of the contacts listed on the Notice. If your agency/office does not wish to provide input to or participate in this Class EA study, please feel free to respond to this e-mail with the word *remove* in the subject line. Please note that a physical copy of this letter and Notice have been mailed out to the address listed on the letter, however due to tight timelines, we are also sending it by email.

As an identified stakeholder for this project, the City of Vaughan values your continued involvement and input. Comments and information regarding this project are being collected to assist the City in the selection of our preferred solution and to meet the requirements of the MEA Class EA process, and hence the *Ontario Environmental Assessment Act*. Comments, input and information received will be used in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*.

Should you have any questions or require further information please contact either John Chadwick (Cole Engineering) or Andrew Pearce (City of Vaughan) as listed on the Notice.

Thank you for your co-operation.

Sincerely,

Ben Sheardown, B.A.Sc.
Environmental Scientist

Cole Engineering Group Ltd.
70 Valleywood Dr., Markham, ON L3R 4T5
Tor. Line: 416-987-6161, Ext 281 Phone: 905-940-6161
Fax: 905-940-2064
Email: bsheardown@coleengineering.ca
Website: www.ColeEngineering.ca

From: John Chadwick
Sent: Tuesday, December 17, 2013 2:47 PM
To: Ben Sheardown
Subject: FW: Class EA - Vaughan Healthcare Centre Precinct
Please add Ben - thanks

Best Regards,
John Chadwick, P.Geo., CISEC
Business Unit Leader
Environmental Assessment & Approvals

Cole Engineering Group Ltd.
70 Valleywood Drive, Markham, ON L3R 4T5
T: 905.940.6161 Ext. 445, F: 905.940.2064
C: 416.802.3723
Email: jchadwick@coleengineering.ca
Website: www.coleengineering.ca

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Thank you

From: Bertolo, Daniel [mailto:Daniel.Bertolo@york.ca]
Sent: Tuesday, December 17, 2013 2:44 PM
To: John Chadwick
Subject: RE: Class EA - Vaughan Healthcare Centre Precinct

Thank-you.

From: John Chadwick [mailto:JChadwick@coleengineering.ca]
Sent: Tuesday, December 17, 2013 2:04 PM
To: Pearce, Andrew; Bertolo, Daniel
Cc: Ben Sheardown
Subject: RE: Class EA - Vaughan Healthcare Centre Precinct

Hi Daniel,
We have added you to the project contact list.
Thank you,

Best Regards,
John Chadwick, P.Geo., CISEC
Business Unit Leader
Environmental Assessment & Approvals

Cole Engineering Group Ltd.

70 Valleywood Drive, Markham, ON L3R 4T5
T: 905.940.6161 Ext. 445, F: 905.940.2064
C: 416.802.3723
Email: jchadwick@coleengineering.ca
Website: www.coleengineering.ca

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Thank you

From: Pearce, Andrew [<mailto:Andrew.Pearce@vaughan.ca>]
Sent: Tuesday, December 17, 2013 11:44 AM
To: 'Bertolo, Daniel'
Cc: John Chadwick
Subject: RE: Class EA - Vaughan Healthcare Centre Precinct

Daniel,

Thanks for your interest in the study. The PIC presentation material can be found on our website through the following link:

http://www.vaughan.ca/services/business/engineering_planning_and_studies/Pages/default.aspx

By copy to John Chadwick, I am asking him to add you to the project contact list.

Regards,

Andrew D. Pearce
Director, Development & Transportation Engineering
City of Vaughan
905.832.8585 ext.8255

Please consider the environment before printing this email.

From: Bertolo, Daniel [<mailto:Daniel.Bertolo@york.ca>]
Sent: Tuesday, December 17, 2013 11:26 AM
To: Pearce, Andrew
Subject: Class EA - Vaughan Healthcare Centre Precinct

Hello Andrew.

I've recently been advised that I will be the Region representative participating in the EA from a water/wastewater servicing perspective going forward. As such I'd appreciate it if I could be added to the circulation list and kept apprised of any relevant correspondence, PIC dates etc.

I understand there was a PIC held in November. Would it be possible to get a copy of the display/presentation materials?

If you have any questions for me, please do not hesitate to call.

Regards,

Daniel Bertolo, P.Eng. | Project Manager, Capital Planning & Delivery, Environmental Services Department

The Regional Municipality of York | 17250 Yonge Street | Newmarket, ON L3Y 6Z1

O: 905-830-4444 ext. 1597 | daniel.bertolo@york.ca | www.york.ca

Our Values: Integrity, Commitment, Accountability, Respect, Excellence



Please note: as of January 2, 2014 our telephone extensions will change to five digits by adding 7 as the first digit. My extension will become 71597.

Please consider the environment before printing this email.

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From: John Chadwick
Sent: Monday, December 09, 2013 4:44 PM
To: ACAD3@urbacon.net
Cc: Andrew.Pearce@Vaughan.ca; Ben Sheardown
Subject: VHCP Class EA

Attachments: VHCP Class EA PIC Boards Roadways Recommended Solution.pdf; hospital-ea-comments.pdf

Good Day Mr. Harvey,

Thank you for your correspondence regarding the VHCP Class EA. We have reviewed your comment and offer the following response from information contained within the Public Information Centre boards as well as the Vaughan Healthcare Centre Precinct Plan (VHCPP).

Inquiry:

Your question relates to “quick and unhindered access of emergency vehicles to the site from the 400 HWY access ramps” given the fact that this location has been the scene of a recent fatality involving an emergency vehicle. Furthermore you asked whether ramps will be altered to align with the hospital site for northbound access (and note potential impacts to existing N.B. HWY ramp. Lastly you inquired about an emergency tunnel to direct southbound highway emergencies to the hospital.

Response:

Attached for your reference is the recommended solution of roadway inbound and outbound access points as presented at the PIC and in the VHCPP. You will note that there are four proposed points of both inbound and outbound movement (2 on Jane Street and 2 on Major Mackenzie Drive) planned with the intent of promoting safe and direct access to the site. You will also note the drawing shows a future (potential) northbound HWY 400 ramp extension from the existing ramp. This extension will provide direct access from HWY 400 northbound and possibly a single-lane southbound right turn access onto Major Mackenzie Drive. This extension may be constructed in the later phases of the precinct development and will be subject to a detailed Environmental Assessment Study following the Ontario Ministry of Transportation’s Class EA process (i.e., it is outside of the scope of the current EA). The logistics of this ramp (e.g. configuration) would be determined at a later stage. Currently there is no plan for an “emergency tunnel” for directing emergency vehicles heading southbound on HWY 400 to the hospital, but rather these vehicles would follow existing southbound off-ramps from the 400 and enter at one of the proposed inbound access points to the site.

We will note on our Stakeholder tracking that the Vellore Woods Ratepayers Association wishes to remain involved in the study and notified of any additional correspondence.

Thank you again for your interest in the study

Best Regards,
John Chadwick, P.Geo., CISEC
Business Unit Leader
Environmental Assessment & Approvals

Cole Engineering Group Ltd.
70 Valleywood Drive, Markham, ON L3R 4T5
T: 905.940.6161 Ext. 445, F: 905.940.2064
C: 416.802.3723
Email: jchadwick@coleengineering.ca

Website: www.coleengineering.ca

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From: John Harvey [mailto:ACAD3@urbacon.net]
Sent: Friday, November 29, 2013 4:42 PM
To: Ben Sheardown
Subject: response

Responding on behalf of Vellore Woods Ratepayers Association. Please see attached.

Thank you.

John Harvey

Drafting / CAD Operator

750 Lake Shore Blvd. East

Toronto, ON M4M 3M3

T/F: (416) 342-1226

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November 20, 2013

Elvira Caria
Co-Chair
Vellore Woods Ratepayers' association
15 Bunting Drive
Woodbridge, ON L4H 2E7

Dear Sir/Madam:

**Re: Class Environmental Assessment Study for Vaughan Healthcare Centre Precinct
Municipal Services - Notice of Study Commencement and Public Information Centre**

The Corporation of the City of Vaughan (City) has acquired an 82 acre parcel of land in the northwest quadrant of Major Mackenzie Drive and Jane Street to create an urban Vaughan Healthcare Centre Precinct (VHCP) anchored by a new healthcare hospital, known as the Mackenzie Vaughan Hospital. The City has completed a *Vaughan Healthcare Centre Precinct Plan (VHCPP)* to illustrate and guide development, and is in the process of completing a Draft Plan of Subdivision in fulfillment of *Planning Act* approval requirements.

In addition, the City has commenced a Schedule B, Class Environmental Assessment (Class EA) study, which will be conducted generally following the Integrated Approach (with the *Planning Act*) outlined in the *Municipal Engineers Association Class EA (October 2000, as amended October 2007 & 2011)*.

The City will be hosting a Public Information Centre (PIC) for the Class EA on Tuesday, November 26, 2013 between 5:30 p.m. and 8:30 p.m. at Vaughan City Hall. You are invited to attend the event to learn more about the project and to provide input on the Class EA. At the PIC, project information will be presented including existing conditions, an evaluation of alternative solutions and a recommended solution. Comments received at this PIC will be incorporated in the Class EA study.

For additional information, please refer to the attached Notice of Study Commencement and Public Information Centre, which also will appear in the Vaughan Citizen and Thornhill Liberal on Thursday November 21, 2013.

If your agency/office has any comments or input regarding this project, we invite you to complete and return the attached Response Form by **December 20, 2013**. If your agency/office has no comments or interest in this project, we would appreciate you advising us either by letter or by signing the space provided at the end of this letter and returning it to us by **December 20, 2013**.

Comments and information regarding this project are being collected to assist the City in arriving at the preferred solution and to meet the requirements of the Ontario *Environmental Assessment Act*. Input received will be used in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*.

Should you have any questions or require further information please contact John Chadwick of Cole Engineering Group Ltd. at 905-940-6161 ext. 445 or myself at 905-832-8585 ext. 8255.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andrew Pearce', written over a light blue horizontal line.

Andrew Pearce
Director of Development / Transportation Engineering

Attachments: Response Form and Notice of Study Commencement and Public Information Centre



RESPONSE FORM

Name: JOHN HARVEY ON BEHALF OF
Agency/Office: VERMORE WOODS RATEPAYERS ASSOC.
Address: AT 15 BUNTING DRIVE WOODBRIDGE ONT.
L4H 2E7

Please provide comments/input in the space provided (or check the box below) and return the signed form on or before **December 20, 2013** to Cole Engineering or the City of Vaughan per the contact information provided on the attached Notice.

OUR MAIN CONCERN IS THE QUICK AND
UNHINDERED ACCESS OF EMERGENCY VEHICLES
TO THE SITE FROM THE 400 HWY ACCESS RAMPS.
THIS LOCATION HAS BEEN A SCENE OF A
FATALITY WITH AN EMERGENCY VEHICLE IN
THE RECENT PAST. WILL RAMPS BE
ADJUSTED TO ALIGN WITH HOSPITAL SITE
FOR NORTHBOUND ACCESS? THIS WILL AFFECT
ACCESS TO N.B. HWY RAMP. WILL AN
EMERGENCY TUNNEL BE CONSIDERED TO
DIRECT SOUTHBOUND HIGHWAY EMERGENCIES
TO THE HOSPITAL?

This Agency/Office will not be providing input to or participating in the Vaughan Healthcare Centre Precinct Class EA study.

NOV. 29 2013
Date

John Harvey
Per



RESPONSE FORM

Name: _____
Agency/Office: _____
Address: _____

Please provide comments/input in the space provided (or check the box below) and return the signed form on or before **December 20, 2013** to Cole Engineering or the City of Vaughan per the contact information provided on the attached Notice.

This Agency/Office will not be providing input to or participating in the Vaughan Healthcare Centre Precinct Class EA study.

Dec. 5, 2013
Date

Fire Chief Bentley (VFRS)
Per

From: Aurini, Shawn (MTO) [Shawn.Aurini@ontario.ca]
Sent: Monday, November 25, 2013 9:07 AM
To: Alexandra Chan; Hewitt, Tom (MTO); Garces, Olga (MTO)
Cc: Ben Sheardown; Munro, Janice (MTO)
Subject: FW: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Attachments: Vaughan Healthcare Centre Notice of Commencement & PIC.pdf; Mr. Shawn Aurini - Vaughan Healthcare Centre Notice.pdf
Hi Alexandra,

I am currently on a temporary assignment with a different branch of MTO. I am forwarding your request to Tom and Olga of MTO Central Region who may be able to assist you.

Best regards,

Shawn

From: Alexandra Chan [mailto:achan@coleengineering.ca]
Sent: November 22, 2013 6:06 PM
To: Aurini, Shawn (MTO)
Cc: Ben Sheardown
Subject: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Dear Shawn,

Please find attached the Notice of Study Commencement and Public Information Centre relating to Municipal Services for the Vaughan Healthcare Centre Precinct. Included here is also a letter and response form concerning the project, which your agency/office can fill out and return to myself or either of the contacts listed on the Notice. If your agency/office does not wish to provide input to or participate in this Class EA study, please feel free to respond to this e-mail with the word *remove* in the subject line. Please note that a physical copy of this letter and Notice have been mailed out to the address listed on the letter, however due to tight timelines, we are also sending it by email.

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Should you have any questions or require further information please contact either John Chadwick (Cole Engineering) or Andrew Pearce (City of Vaughan) as listed on the Notice.

Thank you for your co-operation.

Sincerely,

Ben Sheardown, B.A.Sc.

Environmental Scientist

Cole Engineering Group Ltd.
70 Valleywood Dr., Markham, ON L3R 4T5
Tor. Line: 416-987-6161, Ext 281 Phone: 905-940-6161
Fax: 905-940-2064
Email: bsheardown@coleengineering.ca
Website: www.ColeEngineering.ca

From: Liu, Chunmei (ENE) [Chunmei.Liu@ontario.ca]
Sent: Friday, November 22, 2013 8:40 AM
To: Ben Sheardown
Cc: Delaquis, Dan (ENE)
Subject: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Attachments: Vaughan Healthcare Centre Notice of Commencement & PIC.pdf; Mr. Chunmei Liu - Vaughan Healthcare Centre Notice.pdf

Ben, thank you forwarding the notice to my attention. My colleague Dan Delaquis is in charge of projects within York Region. You may contact him directly via an email or phone him at 416-326-4839.

Best regards,

Chunmei Liu | EA and Planning Coordinator | Central Region | [Ontario Ministry of the Environment](#) | 5775 Yonge St., 8th Flr., Toronto ON M2M4J1 | T: 416-326-4886 F: 416-325-6347 E: Chunmei.Liu@ontario.ca

From: Ben Sheardown [mailto:BSheardown@coleengineering.ca]
Sent: November-21-13 4:57 PM
To: Liu, Chunmei (ENE)
Subject: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Dear [Chunmei](#),

Please find attached the Notice of Study Commencement and Public Information Centre relating to Municipal Services for the Vaughan Healthcare Centre Precinct. Included here is also a letter and response form concerning the project, which your agency/office can fill out and return to myself or either of the contacts listed on the Notice. If your agency/office does not wish to provide input to or participate in this Class EA study, please feel free to respond to this e-mail with the word *remove* in the subject line. Please note that a physical copy of this letter and Notice have been mailed out to the address listed on the letter, however due to tight timelines, we are also sending it by email.

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Thank you for your co-operation.

Sincerely,

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Environmental Scientist

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Tor. Line: 416-987-6161, Ext 281 Phone: 905-940-6161

Fax: 905-940-2064

Email: bsheardown@coleengineering.ca

Website: www.ColeEngineering.ca

From: John Chadwick
Sent: Monday, December 09, 2013 2:41 PM
To: Ben Sheardown
Subject: FW: Vaughan Healthcare Centre Precinct EA
Please add to tracking

Best Regards,
John Chadwick, P.Ge., CISEC
Business Unit Leader
Environmental Assessment & Approvals

Cole Engineering Group Ltd.
70 Valleywood Drive, Markham, ON L3R 4T5
T: 905.940.6161 Ext. 445, F: 905.940.2064
C: 416.802.3723
Email: jchadwick@coleengineering.ca
Website: www.coleengineering.ca

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Thank you

From: John Chadwick
Sent: Monday, December 09, 2013 2:40 PM
To: 'Burkart, Jackie (MNR)'; Andrew.Pearce@Vaughan.ca
Subject: RE: Vaughan Healthcare Centre Precinct EA

Hi Jackie,
Thank you for your correspondence,
We will be sure to advise the MNR should any species at risk be identified on the property.

Best Regards,
John Chadwick, P.Ge., CISEC
Business Unit Leader
Environmental Assessment & Approvals

Cole Engineering Group Ltd.
70 Valleywood Drive, Markham, ON L3R 4T5
T: 905.940.6161 Ext. 445, F: 905.940.2064
C: 416.802.3723
Email: jchadwick@coleengineering.ca
Website: www.coleengineering.ca

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of any action in reliance on the contents of this information is prohibited. If you have received this transmission in error, please immediately notify us by telephone or e-mail.
Thank you

From: Burkart, Jackie (MNR) [mailto:Jackie.Burkart@ontario.ca]
Sent: Friday, November 29, 2013 2:22 PM
To: Andrew.Pearce@Vaughan.ca
Cc: John Chadwick
Subject: Vaughan Healthcare Centre Precinct EA

Good afternoon Andrew,

MNR has had the opportunity to screen the subject EA. At this point we have no concerns with the EA. If, however, during the course of your study you come across any species at risk on the property, MNR should be advised.

Sincerely,

Jackie Burkart

District Planner

Ministry of Natural Resources | 50 Bloomington Road, Aurora, ON L4G 0L8 | Phone: 905-713-7368 | Fax: 905-713-7360 | Email: jackie.burkart@ontario.ca |



Mackenzie
Health

10 Trench Street
Richmond Hill, ON
Canada L4C 4Z3

T: (905) 883-1212
F: (905) 883-2455
www.mackenziehealth.ca

November 26, 2013

Mr. John Mackenzie
Commissioner of Planning
Planning Department
City of Vaughan
2141 Major Mackenzie Drive
Vaughan, ON L6A 1T1

Dear Mr. Mackenzie:

**RE: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA
and Statutory Public Meeting for the VHCP Draft Plan and Zoning
Applications**

We understand that the City of Vaughan is holding a public meeting and hearing tonight in reference to the above. Today we received several reports for the draft plan and zoning application and we understand that additional reports may become available.

These reports will need to be reviewed by our planning team and we intend to provide comments within the next few weeks.

Sincerely,

David Stolte
Vice President
Strategy & Redevelopment

c: Mr. John Chadwick, Consultant Project Manager, Cole Engineering Group Ltd
Mr. Andrew Pearce, Director of Development /Transportation Engineering,
Corporation of the City of Vaughan

From: Bissett Nicole [Nicole.Bissett@mackenziehealth.ca]
Sent: Thursday, November 21, 2013 5:45 PM
To: Ben Sheardown; PublicAffairs
Cc: Crisante Rosemarie
Subject: RE: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Hello, I have directed this email to our Director of Redevelopment, Rosemarie Crisante.

Best
Nicole Bissett
Communications Coordinator
Mackenzie Health

-----Original Message-----

From: Ben Sheardown [<mailto:BSheardown@coleengineering.ca>]
Sent: Thu 11/21/2013 5:29 PM
To: PublicAffairs
Subject: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Dear Sir/Madam,

Please find attached the Notice of Study Commencement and Public Information Centre relating to Municipal Services for the Vaughan Healthcare Centre Precinct. Included here is also a letter and response form concerning the project, which your agency/office can fill out and return to myself or either of the contacts listed on the Notice. If your agency/office does not wish to provide input to or participate in this Class EA study, please feel free to respond to this e-mail with the word remove in the subject line. Please note that a physical copy of this letter and Notice have been mailed out to the address listed on the letter, however due to tight timelines, we are also sending it by email.

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Thank you for your co-operation.

Sincerely,

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Environmental Scientist

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Fax: 905-940-2064
Email: bsheardown@coleengineering.ca<<mailto:bsheardown@coleengineering.ca>>
Website: www.ColeEngineering.com

RE: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

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00000000762F98A6F862554A8560E0826A5F3F66070070239E0A1E487C449CD964A773AEDCB400000058236F00008BAB55CA24BC5F41BEE6973FACEDDE10000082E76D120000/

www.ColeEngineering.ca>

From: John Chadwick
Sent: Monday, November 25, 2013 7:51 PM
To: nicole.bissett@mackenziehealth.ca
Cc: Ben Sheardown; 'tjgplamondon@yahoo.ca'; Pearce, Andrew
Subject: RE: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Hi Nicole,
All such requests (regarding documentation) are being managed through the City. As such, I am forwarding your email to Andrew Pearce at the City as well as Tom Plamondon.

Best Regards,
John Chadwick, P.Ge., CISEC
Business Unit Leader
Environmental Assessment & Approvals

Cole Engineering Group Ltd.
70 Valleywood Drive, Markham, ON L3R 4T5
T: 905.940.6161 Ext. 445, F: 905.940.2064
C: 416.802.3723
Email: jchadwick@coleengineering.ca
Website: www.coleengineering.ca

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Thank you

From: Bissett Nicole [mailto:Nicole.Bissett@mackenziehealth.ca]
Sent: Monday, November 25, 2013 1:46 PM
To: Ben Sheardown
Cc: Crisante Rosemarie
Subject: RE: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Hi Ben

Please do send us any technical reports or documents related to this meeting tomorrow at your earliest convenience.

Thanks
Nicole

From: Ben Sheardown [mailto:BSheardown@coleengineering.ca]
Sent: Thursday, November 21, 2013 5:29 PM
To: PublicAffairs
Subject: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Dear Sir/Madam,

Please find attached the Notice of Study Commencement and Public Information Centre relating to Municipal Services for the Vaughan Healthcare Centre Precinct. Included here is also a letter and response form concerning the project, which your agency/office can fill out and return to myself or either of the contacts listed on the Notice. If your agency/office does not wish to provide input to or participate in this Class EA study, please feel free to respond to this e-mail with the word *remove* in the subject line. Please note that a physical copy of this letter and Notice have been mailed out to the address listed on the letter, however due to tight timelines, we are also sending it by email.

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Thank you for your co-operation.

Sincerely,

Ben Sheardown, B.A.Sc.
Environmental Scientist

Cole Engineering Group Ltd.
70 Valleywood Dr., Markham, ON L3R 4T5
Tor. Line: 416-987-6161, Ext 281 Phone: 905-940-6161
Fax: 905-940-2064
Email: bsheardown@coleengineering.ca
Website: www.ColeEngineering.ca

From: Ben Sheardown

Sent: Monday, November 25, 2013 3:15 PM

To: 'Gilmore,Robert [Ontario]'

Subject: RE: NOT FEDERAL - REDIRECT: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Thank you for the update Rob, we have removed your name from the project's stakeholder list.

Ben Sheardown, B.A.Sc.
Environmental Scientist

Cole Engineering Group Ltd.

From: Gilmore,Robert [Ontario] [mailto:Robert.Gilmore@ec.gc.ca]

Sent: Friday, November 22, 2013 11:53 AM

To: Ben Sheardown

Cc: Dobos,Rob [Burlington]

Subject: NOT FEDERAL - REDIRECT: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Hello Ben:

I'm a Warehouse Technician and union officer at Environment Canada in Downsview – if my reading of the material is correct this is not in federal jurisdiction under the Canadian EA Act, but is under provincial jurisdiction of the Ontario EA Act.

Both as a courtesy, and in case I'm incorrect, I'm forwarding this to Rob Dobos the manager of EPOD Ontario region Environmental Assessment Section at Environment Canada, and deleting from my records.

Please remove my information from your contacts database.

Thanks,
Rob

Robert Gilmore

Warehouse Technician | Technicien d'entrepôt

National Warehousing Operations | National opérations d'entreposage

Assets, Real Property and Security Directorate ARPSD | Direction générale des actifs, des biens immobiliers et de la sécurité DABIS

Environment Canada | Environnement Canada

4905 Dufferin Street | 4905, rue Dufferin

Toronto (Ontario) M3H 5T4

Robert.Gilmore@ec.gc.ca

WarehouseServices.Ontario@ec.gc.ca

Warehouse telephone | Téléphone d'entrepôt 416-739-4510

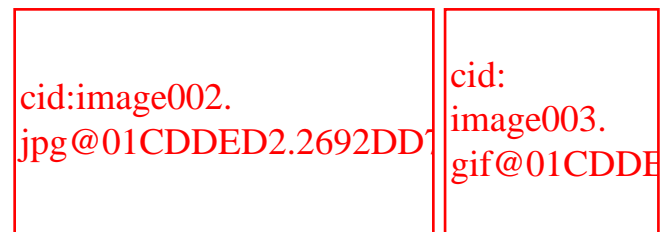
Receiving telephone | Téléphone de réception 416-739-4518

Mailroom telephone | Téléphone de service des expéditions 416-739-4519

Fax / Télécopieur 416-739-5811
Government of Canada | Gouvernement du Canada
Website | Site Web www.ec.gc.ca

Do you know what CSB can do for you? Browse our [Service Catalogue](#)

Robert Gilmore
President, Local 00709
(Department of Environment–Ontario Region–Downsview)
Alternate Regional Vice-President (Ontario-DFO/NRCaN-CFS/DOE)
Union of Environment Workers (UEW)
Public Service Alliance of Canada (PSAC)
Email: Robert.Gilmore@ec.gc.ca
storydaddy@sympatico.ca
Office: 416-739-4510
Mobile: 416-357-9443
Web site: <http://www.uew-ste.ca>



“Kono kuni wa mada, hontô no hero wo shiranai.”

THIS E-MAIL IS CONFIDENTIAL AND INTENDED FOR THE ADDRESSEE ONLY.

Do not forward or copy this e-mail to any other person or organization without the expressed written consent of the sender.

CE COURRIEL EST CONFIDENTIEL ET DESTINÉ AU DESTINATAIRE SEULEMENT.

Toute utilisation ou divulgation non autorisée de ce document est interdite sans le consentement écrit de l'expéditeur.

From: Ben Sheardown [mailto:BSheardown@coleengineering.ca]
Sent: November 22, 2013 11:16 AM
To: Gilmore,Robert [Ontario]
Subject: FW: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Dear Robert,

Please find attached the Notice of Study Commencement and Public Information Centre relating to Municipal Services for the Vaughan Healthcare Centre Precinct. Included here is also a letter and response form concerning the project, which your agency/

office can fill out and return to myself or either of the contacts listed on the Notice. If your agency/office does not wish to provide input to or participate in this Class EA study, please feel free to respond to this e-mail with the word **remove** in the subject line. Please note that a physical copy of this letter and Notice have been mailed out to the address listed on the letter, however due to tight timelines, we are also sending it by email.

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Thank you for your co-operation.

Sincerely,

Ben Sheardown, B.A.Sc.
Environmental Scientist

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Fax: 905-940-2064
Email: bsheardown@coleengineering.ca
Website: www.ColeEngineering.ca

From: Allan,Sheila [Burlington] [Sheila.Allan@ec.gc.ca]
Sent: Friday, November 22, 2013 8:42 AM
To: Ben Sheardown
Subject: Remove RE: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

From: Ben Sheardown [mailto:BSheardown@coleengineering.ca]
Sent: November 21, 2013 5:50 PM
To: Allan,Sheila [Burlington]
Subject: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Dear [Sheila](#),

Please find attached the Notice of Study Commencement and Public Information Centre relating to Municipal Services for the Vaughan Healthcare Centre Precinct. Included here is also a letter and response form concerning the project, which your agency/office can fill out and return to myself or either of the contacts listed on the Notice. If your agency/office does not wish to provide input to or participate in this Class EA study, please feel free to respond to this e-mail with the word *remove* in the subject line. Please note that a physical copy of this letter and Notice have been mailed out to the address listed on the letter, however due to tight timelines, we are also sending it by email.

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Sincerely,

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Environmental Scientist

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Fax: 905-940-2064
Email: bsheardown@coleengineering.ca
Website: www.ColeEngineering.ca

From: Allison, Tracy [Tracy.Allison@dfo-mpo.gc.ca] on behalf of Fisheries Protection
[fisheriesprotection@dfo-mpo.gc.ca]
Sent: Friday, November 22, 2013 2:41 PM
To: Ben Sheardown
Subject: Remove

DFO's mandate pertains to fish and fish habitat. Based on information provided, it appears there are not potential impacts under our mandate. Should the consultant determine potential impacts to fish and fish habitat, please follow advice below.

Cheers,
Tracy

Tracy Allison
Fisheries and Oceans Canada | Peches et Oceans Canada
102-501 Towerhill Road | 501rue Towerhill, Unite 102
Peterborough, ON K9H 7S3
tel: (705) 750-4010
fax: (705) 750-4016
email: tracy.allison@dfo-mpo.gc.ca

Fisheries and Oceans Canada has changed the way new project proposals (referrals), reports of potential *Fisheries Act* violations (occurrences) and information requests are managed in Central and Arctic Region (Alberta, Saskatchewan, Manitoba, Ontario, Nunavut and the Northwest Territories). Please be advised that general information regarding the management of impacts to fish and fish habitat and self-assessment tools (e.g. Operational Statements) that enable you to determine *Fisheries Act* requirements are available at DFO's "Working Near Water" website at www.dfo-mpo.gc.ca/habitat. For all occurrence reports, or project proposals where you have determined, following self-assessment, that you cannot avoid impacts to fish and fish habitat, please submit to fisheriesprotection@dfo-mpo.gc.ca. For general inquiries you can also call 1 855 852-8320.

From: Ben Sheardown [mailto:BSheardown@coleengineering.ca]
Sent: 2013–November-22 11:52 AM
To: Fisheries Protection
Subject: FW: Municipal Services for the Vaughan Healthcare Centre Precinct Class EA

Dear Sir/Madam

Please find attached the Notice of Study Commencement and Public Information Centre relating to Municipal Services for the Vaughan Healthcare Centre Precinct. Included here is also a letter and response form concerning the project, which your agency/

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Thank you for your co-operation.

Sincerely,

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Email: bsheardown@coleengineering.ca
Website: www.ColeEngineering.ca

Appendix C

Public Information Centre Summary Reports and Display Boards

January 10, 2013
Our Ref: EM13-0758

Mr. Andrew Pearce
The Corporation of the City of Vaughan
2141 Major Mackenzie Drive
Vaughan, ON L6A 1T1

Dear Mr. Pearce:

**Re: Municipal Services for the Vaughan Healthcare Centre Precinct Class Environmental Assessment
Public Information Centre (PIC) Summary Report**

Cole Engineering Group Ltd. (CEG) in conjunction with the Corporation of the City of Vaughan (the City) held a public information centre for the above-noted project on:

Tuesday, November 26, 2013, from 5:30 p.m. to 8:30 p.m.
in Vaughan City Hall's Multi Purpose Room
2141 Major Mackenzie Drive, Vaughan, Ontario

The Notice of Study Commencement and Public Information Centre was posted on the City's webpage in the Business Services section under Engineering Planning and Studies as well as being mailed out to stakeholders for the project. In addition, 240 Notices were distributed by hand delivery to residences and businesses located adjacent to the study area prior to the PIC (within 120 m radius). Furthermore, the Notice was advertised in the Vaughan Citizen and Thornhill Liberal on November 21, 2013 with a modified Notice of Study Commencement appearing again on November 28, 2013 with reference to PIC boards posted on the City's website. Ninety-six (96) Notices were sent out to agencies, First Nations and other stakeholders attached to a letter explaining more specifically the nature of the event. A list of these stakeholders is included in Attachment D.

This PIC was held to present engineering and environmental information from the study, including existing conditions, an evaluation of alternatives and a recommended solution, while engaging residents and stakeholders regarding key issues. Those attending the PIC were invited to view display material, discuss the project with the study team, ask questions, and provide input and comments.

The following individuals were present at the PIC to answer questions and explain details about the project.

Andrew Pearce	Director of Development/Transportation Engineering, City of Vaughan
Tom Plamondon	President, TJGP Consulting
John Chadwick, P.Geo., CISEC, QP	Project Manager, CEG

Patricia Becker, M.E.S.	Lead Consultation Facilitator and Class EA Expert, CEG
Ben Sheardown, B.A.Sc.	Environmental Scientist, CEG

Additional individuals possessing knowledge of the project, who attended the PIC include:

Paul Jankowski, P.Eng.	Commissioner of Engineering & Public Works, City of Vaughan
Peter Meffe	Ontario PC Candidate for Vaughan
Jack Graziosi, P.Eng.	Director of Engineering Services, City of Vaughan
Paolo Masaro, P.Eng.	Manager (Acting), Design Services, City of Vaughan
Gerry Lynch, P.Eng.	Senior Project Manager, CEG
Kim Nystrom, C.E.T.	Transportation Planning Business Unit Leader, CEG
Mark Bassingthwaite, P.Eng.	Water Resources Service Sector Leader, CEG

The PIC was held using an informal open house format whereby numbered (1-33), high-quality 24" x 36" presentation boards were posted around the Centre. The format provided visitors an opportunity to move about, review information and ask questions of the project team. Those who were unable to attend the PIC were advised in the Notice of Study Commencement and Public Information Centre to contact the City for more information or to provide their comments. One guest, dealing with time constraints, stopped in to pick up a comment sheet and provide his contact information.

Comment sheets and a comment box were available for attendees to provide written comments for incorporation into the EA record for the project. In addition, all visitors were encouraged to sign in. A total of six people signed in (included as Attachment A), while some individuals in attendance did not sign in. Notes as well as photographs were recorded by members of the project team throughout the PIC to ensure that the event and any comments or concerns were appropriately documented. Photos from the PIC are included in Attachment B. The presentation boards from the PIC have been posted on the Region's website and are attached to this report as Attachment C.

No comment sheets were filled out and submitted during the PIC. Verbal comments made by attendees were generally positive and focused on wanting to ensure minimal environmental impacts resulting from development. One specific concern was expressed during the PIC from a resident who lives directly north of the development regarding the potential for hospital site visitors to park along residential side streets (to the north) to take advantage of free parking and then walk to the site. Specifically, the concern related to conceptual pedestrian pathways shown connecting the site and the community to the north. The project team took note of the issue and advised that it would be considered in future decisions. In response, the overriding benefit of having pedestrian connections to the north for residents was identified, while aiming to situate pathways in a way to minimize this potential from outside visitors. It was advised that at this stage of the project the use of parking enforcement tools had not been explored, however would be considered as development progresses.

No comment sheets have been received to date from those in attendance. All future PIC comments received will be addressed and incorporated into the project record.

Should you have any further questions regarding the Vaughan Healthcare Precinct PIC, please contact the undersigned.

Yours truly,

COLE ENGINEERING GROUP LTD.

A handwritten signature in black ink, appearing to read "John Chadwick". The signature is fluid and cursive, written in a professional style.

John Chadwick, P.Geo., CISEC, QP
Project Manager

/bs

Attachments: A – Sign in Sheet, B – Photo Log, C – Presentation Boards, and D – List of Stakeholders who Received Letters with Notice of PIC

Attachment A

Sign in Sheet



Class Environmental Assessment
Municipal Services for the Vaughan Healthcare Centre Precinct
Public Information Centre
November 26, 2013
PLEASE SIGN IN

PLEASE PRINT

Name	Mailing Address	Postal Code	Telephone/Email

Attachment B

Photo Log

PIC Photos





Attachment C

Presentation Boards

November 26, 2013

PUBLIC INFORMATION CENTRE

MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT SCHEDULE “B”

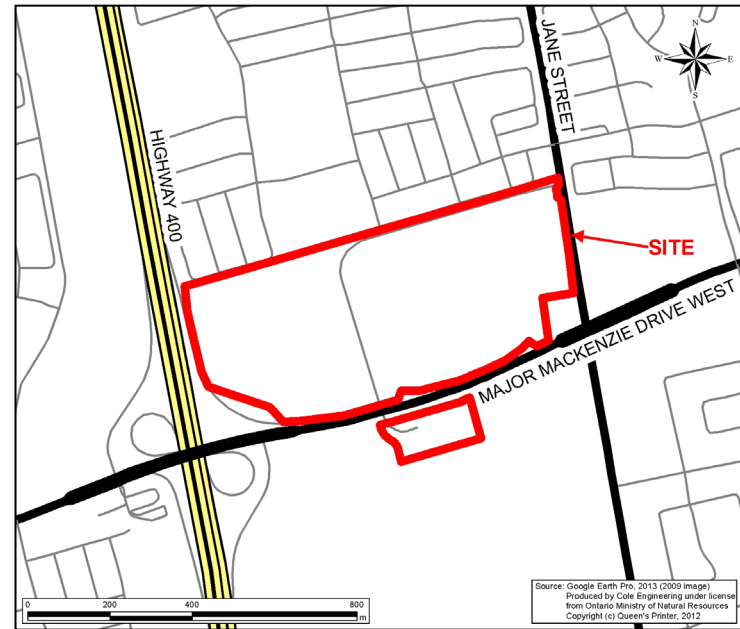
MUNICIPAL SERVICES FOR
VAUGHAN HEALTHCARE CENTRE PRECINCT

Welcome : Please sign in and fill out a comment sheet



PROJECT DESCRIPTION & STUDY AREA

- City of Vaughan acquired a 33.2 ha (82 acre) parcel of land on the northwest quadrant of Major Mackenzie Drive and Jane Street (Study Area) for an urban Vaughan Healthcare Centre Precinct (VHCP) + a 2 ha (5 acre) parcel south of Major Mackenzie Drive as a potential future transit hub.
- VHCP will be anchored by new healthcare hospital referred to as the Mackenzie Vaughan Hospital.
- City has approved the Vaughan Healthcare Centre Precinct Plan (VHCPP) to illustrate and guide development of the site.
- City is in the process of completing a Draft Plan of Subdivision to fulfill *Planning Act* approval requirements.
- VHCP site requires servicing infrastructure, stormwater management ponds, drainage channel re-alignment and roadways.



PLANNING CONTEXT & STATUS

- City of Vaughan approved VHCPP on November 19, 2013.
- Next phase of planning approvals includes Draft Plan of Subdivision and Zoning By-law Amendment for the lands.
- The City is holding a statutory Public Meeting for Draft Plan and Zoning applications on November 26, 2013.
- Concurrent with the Planning applications, works which are external to the Draft Plan have been identified as being subject to the Municipal Class Environmental Assessment (Class EA) process.
- These additional works include: servicing infrastructure, stormwater management ponds, drainage channel re-alignment and roadways.



INTEGRATED APPROACH & CLASS EA PROCESS

- The proposed additional works identified are tightly interconnected with the *Planning Act* applications.
- The Municipal Class EA process allows for an **Integrated Approach** to fulfill the requirements of both the Class EA and *Planning Act* review processes concurrently, as a streamlined and efficient means of disseminating information to the public, stakeholders and agencies.

Municipal Class EA Planning Process

- The Ontario Environmental Assessment Act, R.S.O., 1990 (the EA Act) requires that projects corresponding to a given class of undertakings (e.g. municipal road, transit, water and wastewater projects) follow an approved Class Environmental Assessment (Class EA) process. The Class EA planning process as documented in the MEA Municipal Class EA document (October 2000, amended in 2007 & 2011) includes the following five phases:

Phase 1 – Problem or Opportunity

Phase 2 – Alternative Solution

Phase 3 – Alternative Design Concepts for Preferred Solution

Phase 4 – Environmental Study Report

Phase 5 – Implementation



MUNICIPAL CLASS EA SCHEDULE

→ Depending on their environmental impact, municipal projects are classified in the Municipal Class EA in terms of schedules:

- Schedule A or A+
 - Schedule B
 - Schedule C
- ↓ *Increasing Potential for Impacts*

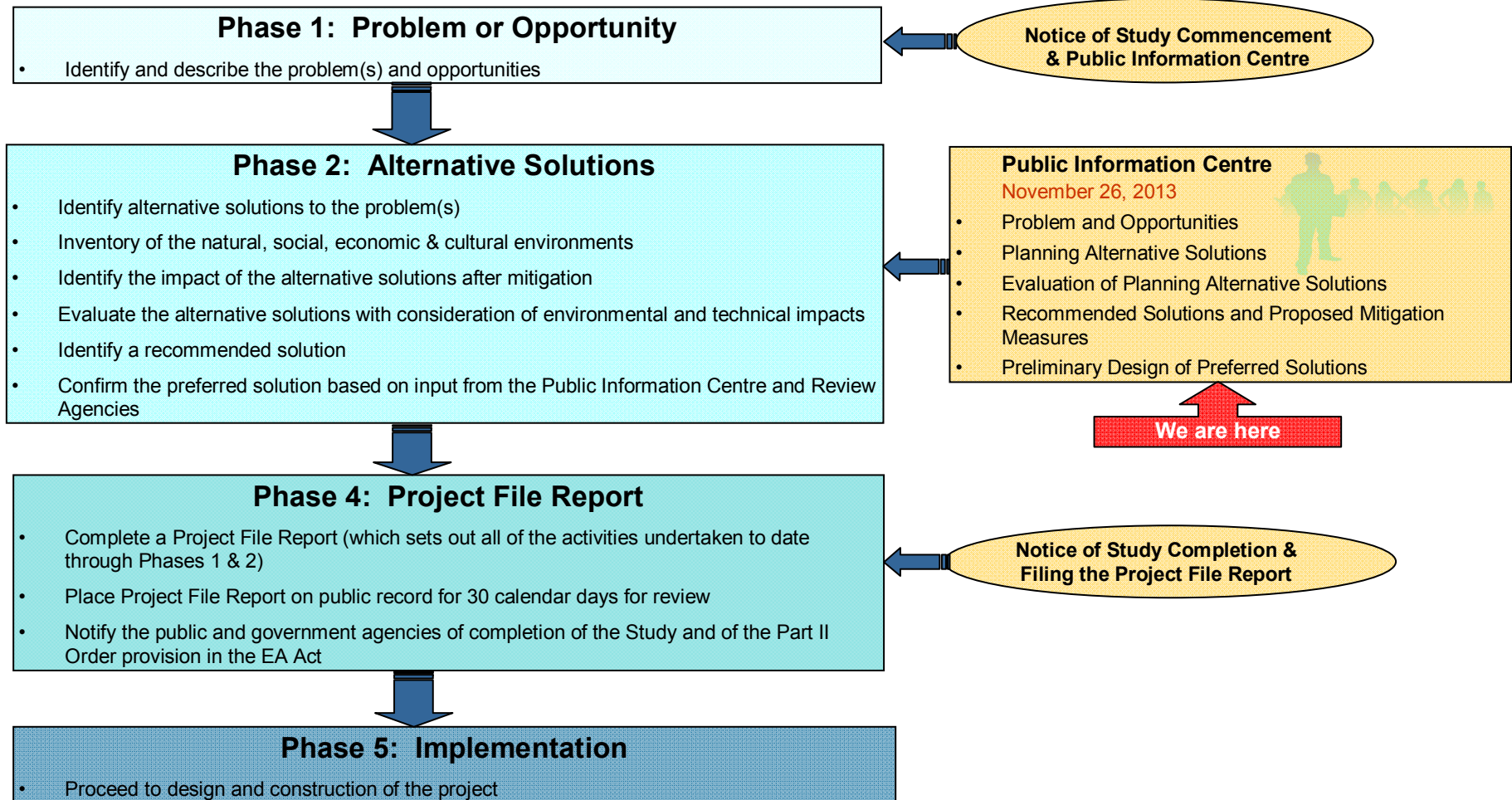
→ This study was designated as Schedule “B” under the MEA Class EA process which includes reviews with the public and relevant agencies prior to implementation.

→ The Class EA will satisfy the requirements and procedures of Phases 1 and 2 of the Municipal Class Environmental Assessment Planning and Design Process as well as providing additional public consultation.

→ A Schedule “B” Class EA concludes with the Notice of Completion and placing of the Project File in a location accessible to the public for a minimum 30-day review period to allow review by the public and agencies which may have an interest in this project.



SCHEDULE B – MUNICIPAL CLASS EA



PURPOSE AND PROBLEM / OPPORTUNITY

PURPOSE

- Transform under utilized lands into a vibrant healthcare Precinct with primary focus to deliver a new healthcare facility and a range of health care related uses.
- Vaughan Healthcare Centre Precinct is intended to develop at higher densities to support existing and planned transit along arterial roads and within Precinct with network of streets, stormwater and water and wastewater servicing.

PROBLEM / OPPORTUNITY

- How to provide municipal services and transportation infrastructure to accommodate a hospital and related development and uses, as part of the Vaughan Healthcare Centre Precinct Plan.



KEY NATURAL ENVIRONMENT EXISTING CONDITIONS

Aquatic Environment

- Site is currently vacant and is bounded by residential subdivision and stormwater management (SWM) pond to the north.
- SWM pond outlets to a channel (comprised of two unnamed tributaries that are part of West Don River system) that crosses western portion of site from north to south before entering culvert at Major Mackenzie Drive.
- Wetland community located along both tributaries is dominated by cattails and grasses and is important for flood attenuation and erosion control.
- Provide low functioning habitat for a few warmwater fish species found that likely originated from SWM pond.

Terrestrial Environment

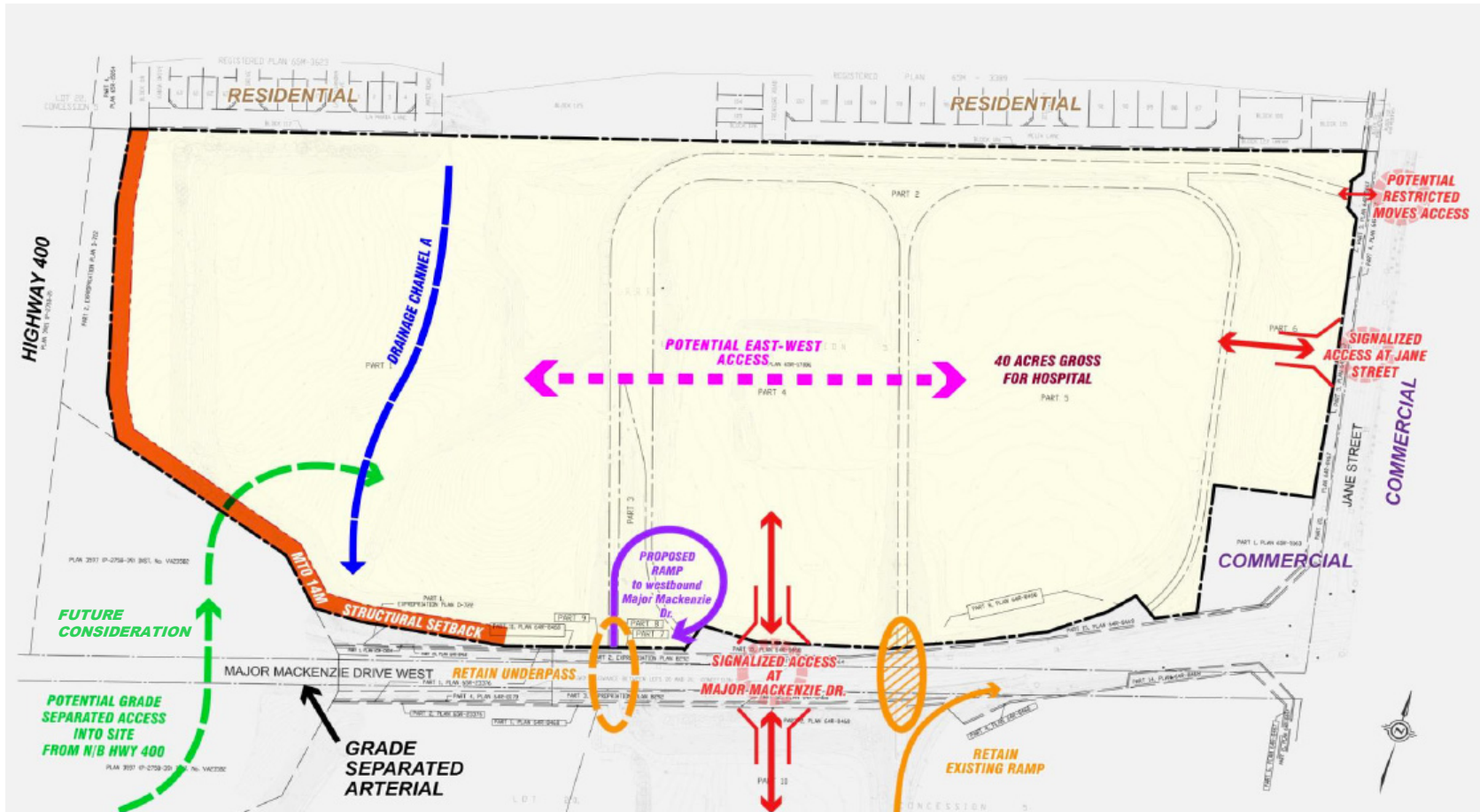
- Vegetation communities present are: Mineral Cultural Meadow, Cattail Mineral Shallow Marsh, Reed Canary Grass Mineral Meadow Marsh and Redtop Mineral Meadow Marsh.
- No Species at Risk or species ranked as rare in the GTA are present.



LAND USE FEATURES MAP



CONSTRAINTS AND OPPORTUNITIES



INTERSECTIONS

Key Roadway Intersections

- Based on site size and development uses for the site - two (2) signalized intersections are needed on arterial roads.

→ Jane Street

- Entrance to site from Jane Street requires full intersection for connectivity, traffic flow and safety but existing entrance is only a partial intersection.
- New intersection identified is only alternative that provides full intersection and is setback sufficiently from Major Mackenzie Drive.

→ Major Mackenzie Drive

- Highway 400 abuts west side of site and ramp on Major Mackenzie Drive has MTO setbacks requirement of 14 m for intersections.
- York Region requires new intersection to be setback sufficiently from Jane Street.
- Only one alternative existed that met both setback requirements for the intersection on Major Mackenzie Drive.

ROADWAYS & TRANSIT – EXISTING CONDITIONS

Roadways

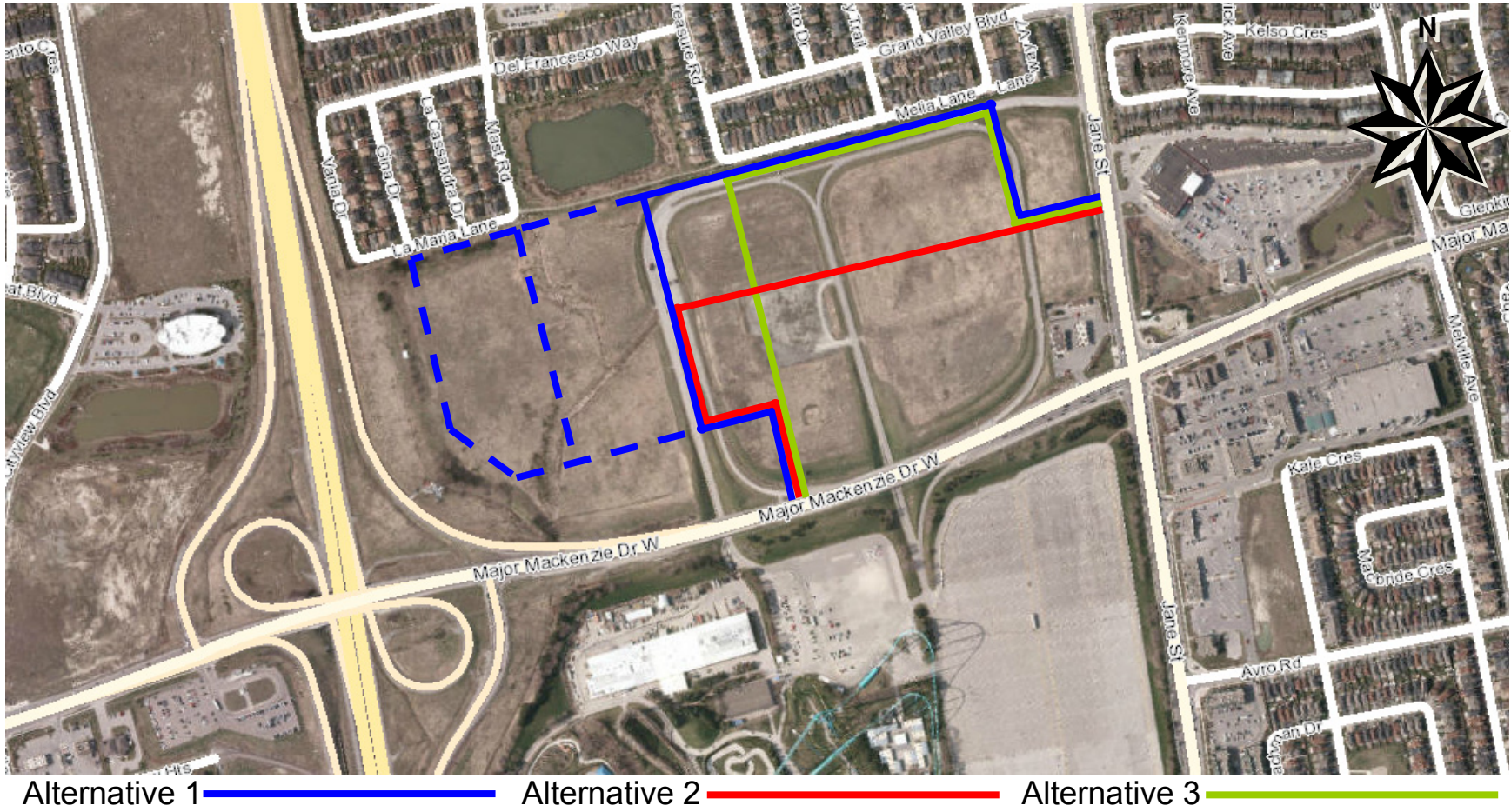
- Jane Street and Major Mackenzie Drive are arterial roads but outside of development site.
- Existing underpasses from development site to Canada's Wonderland.
- Proposed future Highway 400 ramp extension is not considered part of project (may be constructed in later phases of precinct development and would be subject to MTO Class EA process).

Transit

- Transit options were not evaluated since the only location available is on the south side of Major MacKenzie Drive.
- Location would provide transit opportunities for Canada's Wonderland and Vaughan Healthcare Centre Precinct and connections between GO, York Region and Vaughan transit systems.
- Location of entrance between Highway 400 setbacks and Jane Street setbacks limits location of transit facility.



ROADWAYS – ALTERNATIVE SOLUTIONS



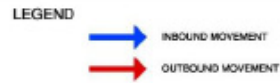
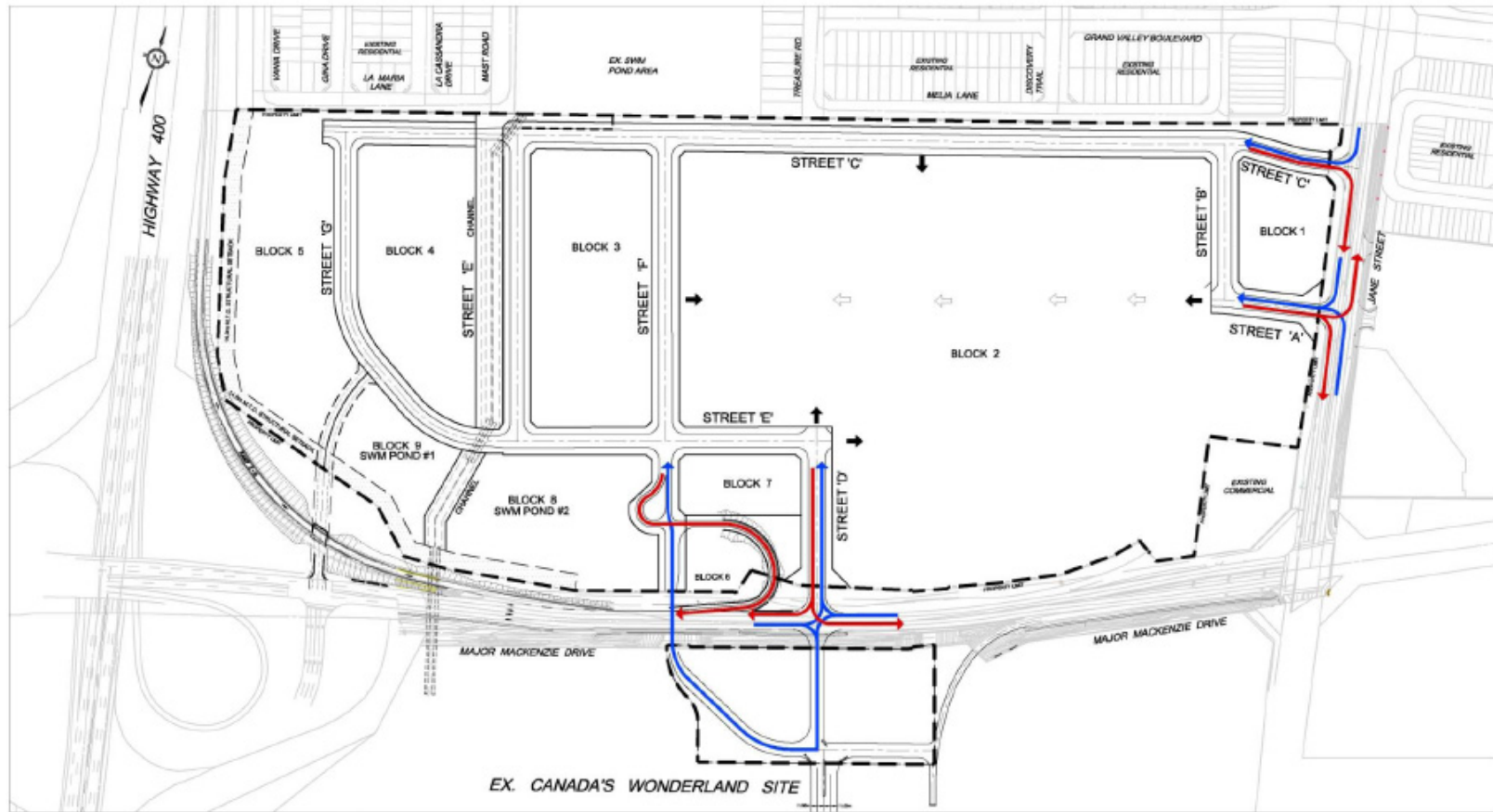
ROADWAYS – EVALUATION OF ALTERNATIVE SOLUTIONS

ROADWAYS	Alternative 1	Alternative 2	Alternative 3
<i>Description of Alternatives</i>	<i>Street D to Street F (or E or G) to Street C to Street A to Jane St</i>	<i>Street through middle of site to connect with Street A at Jane St</i>	<i>Street D to Street C to Street A to Jane St</i>
Natural Environment	- Minimal impact on existing conditions and matches preferred channel alternative	- Potential to impact existing channel if continues through Streets E&G	- Minimal impact on existing conditions - Accommodates proposed channel location
Social-Cultural Environment	- Noise impacts from vehicles on residential development to the north	- Minimal noise impacts on residential development to the north	- Noise impacts from vehicles on residential development to the north
Technical Environment	- Roadway layout most compatible with development blocks for hospital	- Bisected hospital site leaving too small area for development of hospital	- Limits expansion of hospital to additional block to west
Financial Environment	- Similar construction and maintenance costs to other alternatives	- Similar construction and maintenance costs to other alternatives	- Similar construction and maintenance costs to other alternatives
OVERALL RATING	- Provides flexibility in phasing in of construction of all development blocks	- Reduced flexibility in phasing in of construction of all development blocks	- Most costly (construction and maintenance) and limits hospital block development

Rating:	Preferred 	Less Preferred 	Least Preferred 
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NOTE: Do Nothing was not evaluated further since it would not address problem statement

ROADWAYS – RECOMMENDED SOLUTION (ALTERNATIVE 1)



SANITARY – EXISTING AND PROPOSED

Existing and Proposed Sanitary Conditions:

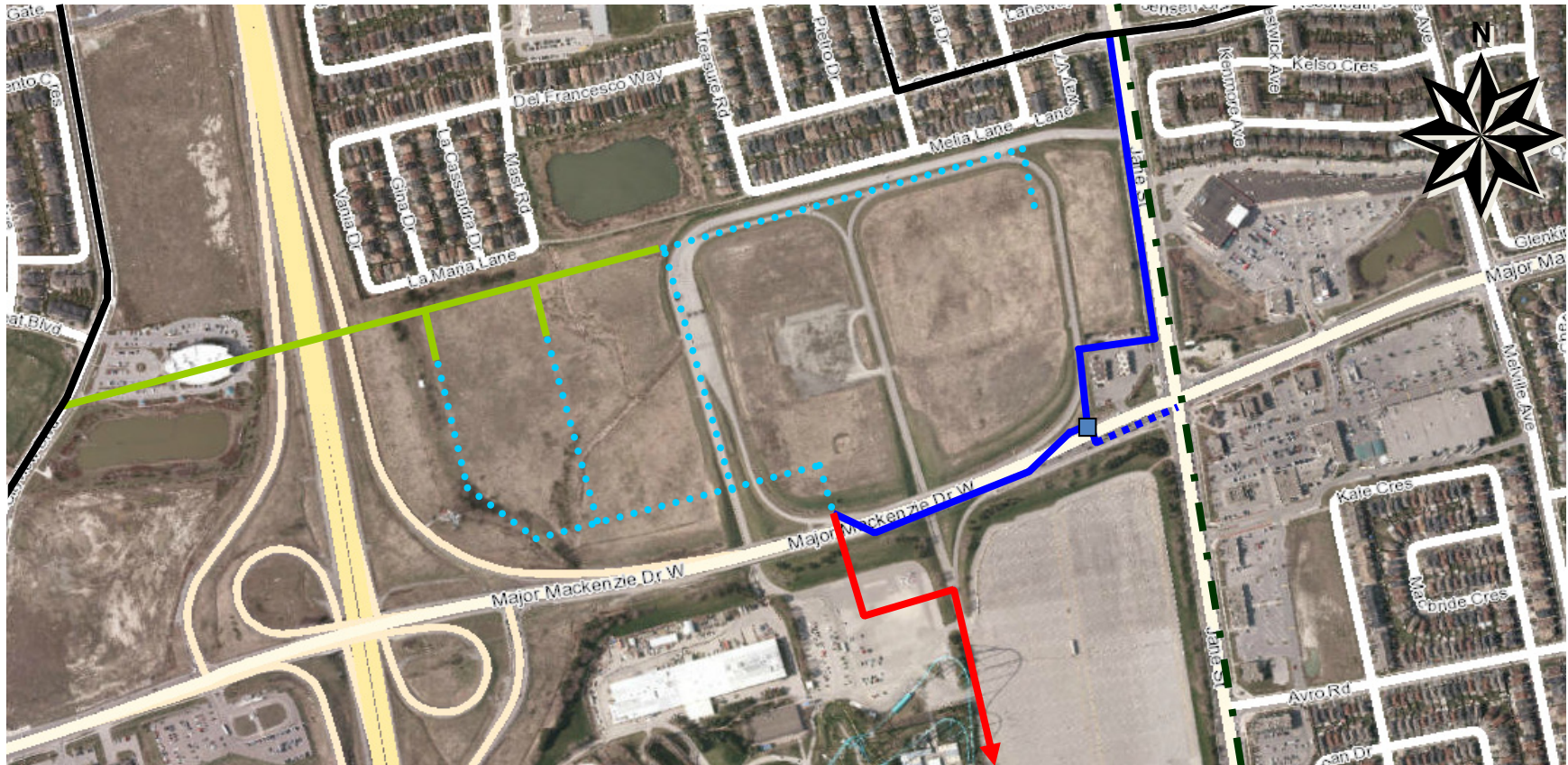
- Site currently has no sanitary services.
- Sanitary sewers will connect to future North East Vaughan collector sewer to be construction by York Region in the Jane Street corridor.
- Region will begin sewer EA at beginning of 2013.
- Construction is expected to take place between 2017-2021.

Interim alternative solutions:

1. Connect to Existing Sanitary Sewer at Jane St / Grand Valley Blvd.
2. Connect to Existing Pumping Station on Canada's Wonderland Property (south end of site).
3. Extend sanitary sewer underneath Highway 400 to connect to existing sanitary sewer on Cityview Blvd.



SANITARY – ALTERNATIVE SOLUTIONS



Alternative 1 ——— Alternative 2 ———> Alternative 3 ——— Temporary Pumping Station ■
 Future Connection - - - - - Planned Internal Servicing Future (By Others) - . - . Existing ———



SANITARY – EVALUATION OF ALTERNATIVE SOLUTIONS

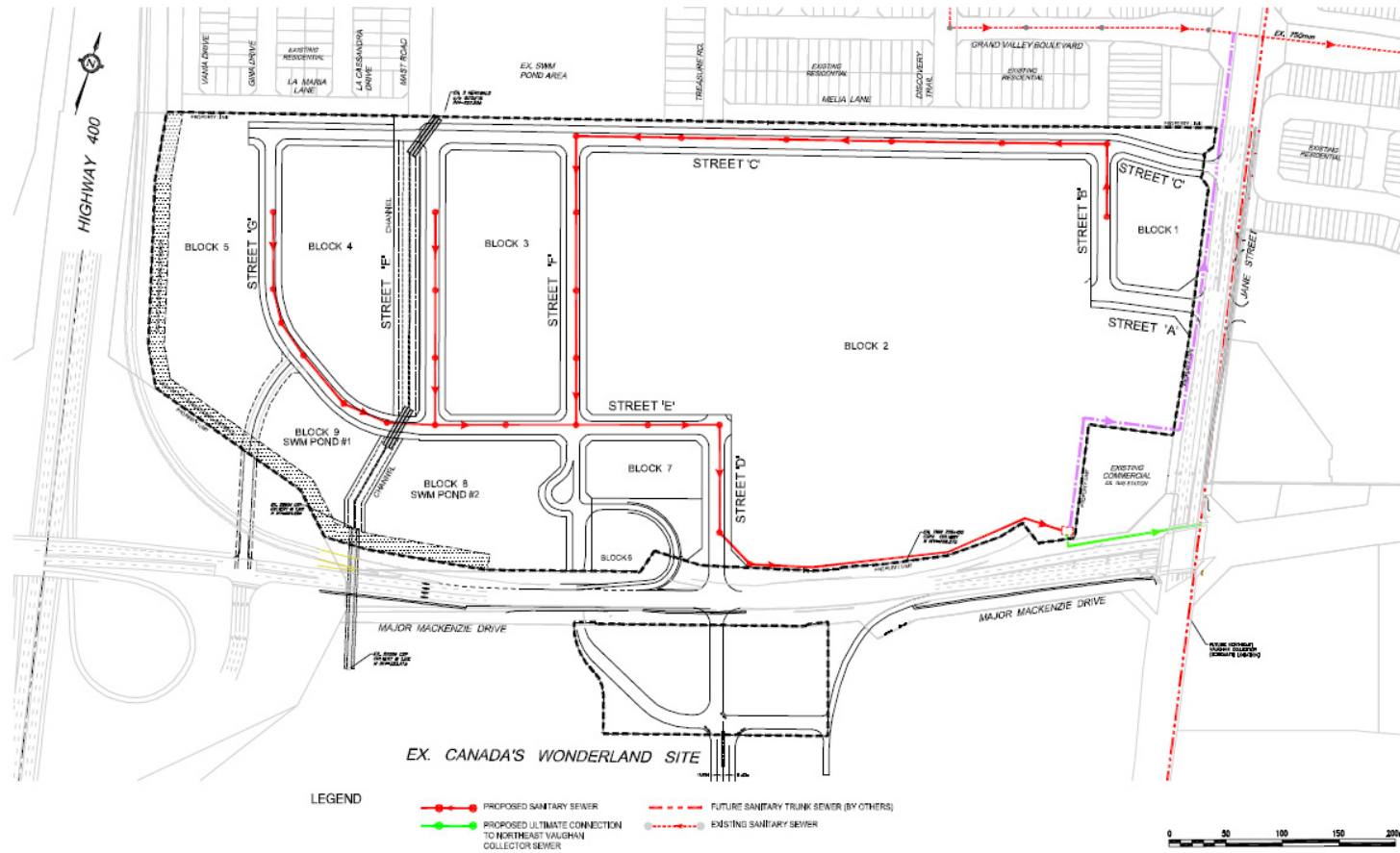
SANITARY	Alternative 1	Alternative 2	Alternative 3
<i>Description of Alternatives</i>	<i>Connect to existing sanitary sewer located at Jane St and Grand Valley Blvd</i>	<i>Connect to existing pumping station located at southeast end of Canada's Wonderland site</i>	<i>Extend to the west under Highway 400 and connect to existing system on Cityview Blvd</i>
Natural Environment	- Minimal impact with forcemain construction in road allowances	- Minimal impact with sewer construction through parking area	- Not evaluated due to technical and financial issues
Social-Cultural Environment	- Traffic disruption from construction on Jane St but can be combined with watermain construction	- No traffic disruption with sewer on private property - Impact on Canada's Wonderland users during construction	- Not evaluated due to technical and financial issues
Technical Environment	- Temporary pumping station required - Temporary forcemain constructed on Jane St from pumping station to Grand Valley Boulevard - Easy to add gravity connection at Jane St to NE Vaughan Collector for long term connection	- Gravity sewer constructed to Canada's Wonderland pumping station (S end of site) - Sewers to be disconnected for long term connection to NE Vaughan Collector	- Requires crossing underneath Highway 400 which is difficult to obtain approvals for and to construct - Existing sanitary system on west side of Highway 400 does not have sufficient capacity to handle flows from site
Financial Environment	- Permanent easements required for sewer and pumping station - Temporary forcemains (shorter length of forcemain) and pumping station	- Permanent easements required for sewer - Temporary sewers (longest length of sewer to south end of Wonderland site)	- Costly (length and approvals) to cross underneath Highway 400 to connect to existing system on Cityview Blvd
OVERALL RATING	- Shortest forcemain requirements and easiest connection to address long term solution	- Financial limitation for cost of length of sewers required and easements - Costly to connect to long term solution	- Too difficult and costly to cross Highway 400 to reach existing sanitary services and insufficient capacity in existing system

Rating:	Preferred	Less Preferred	Least Preferred
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NOTE: Do Nothing was not evaluated further since it would not address problem statement



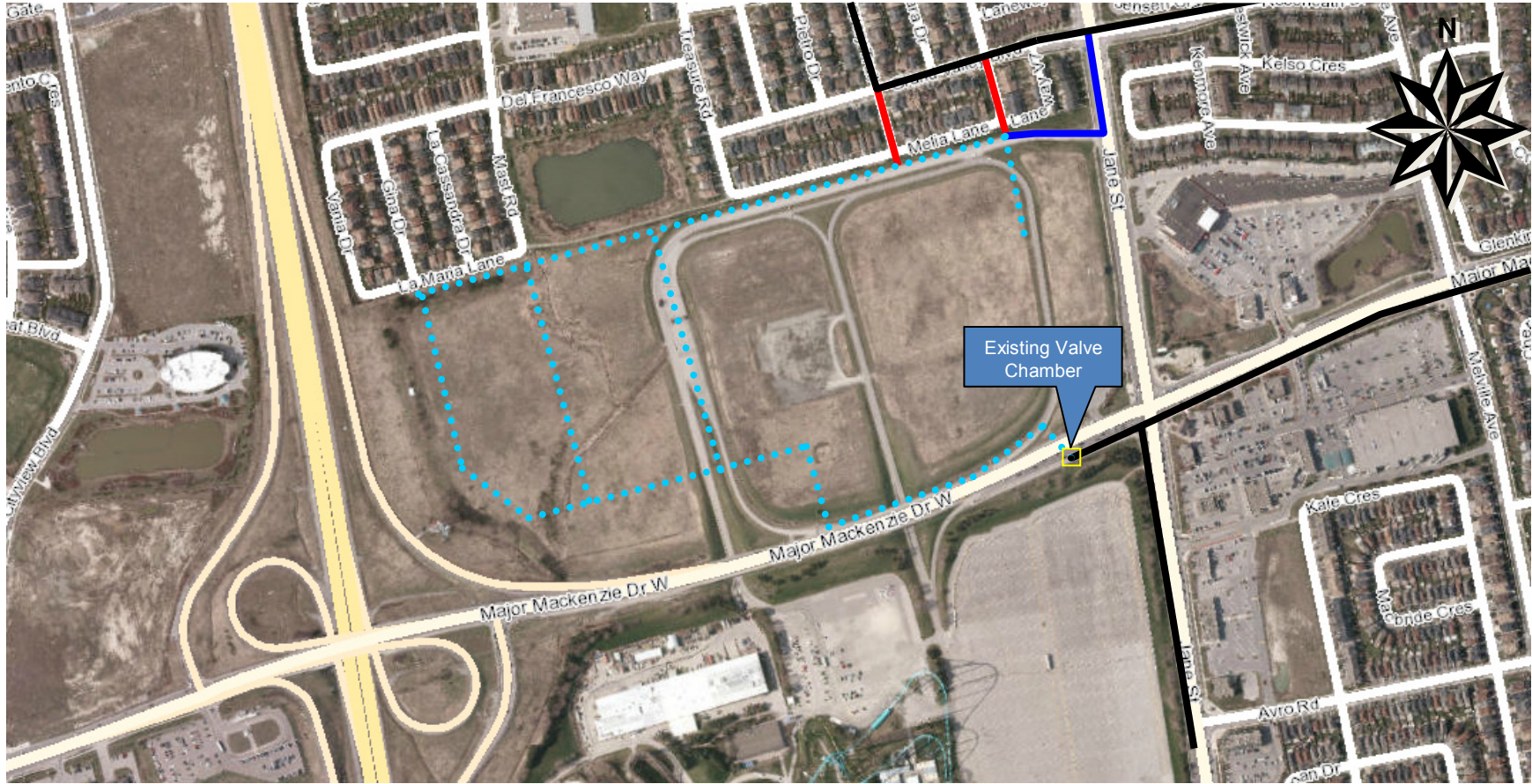
SANITARY – RECOMMENDED SOLUTION (ALTERNATIVE 1)



WATER – EXISTING CONDITIONS

- Site currently has no water services.
- Existing watermains in vicinity of Precinct are capable of providing adequate flows and pressures for development.
- Existing watermain on south side of Major Mackenzie Drive which terminates 100 m west of Jane Street (last accessible connection point to municipal distribution system).
- Existing watermain at Jane Street and Grand Valley Boulevard.
- Existing private watermain system located in Canada's Wonderland.

WATER – ALTERNATIVE SOLUTIONS



Alternative 1 — Alternative 2 — Existing — Planned Internal Water Servicing.....



WATER – EVALUATION OF ALTERNATIVE SOLUTIONS

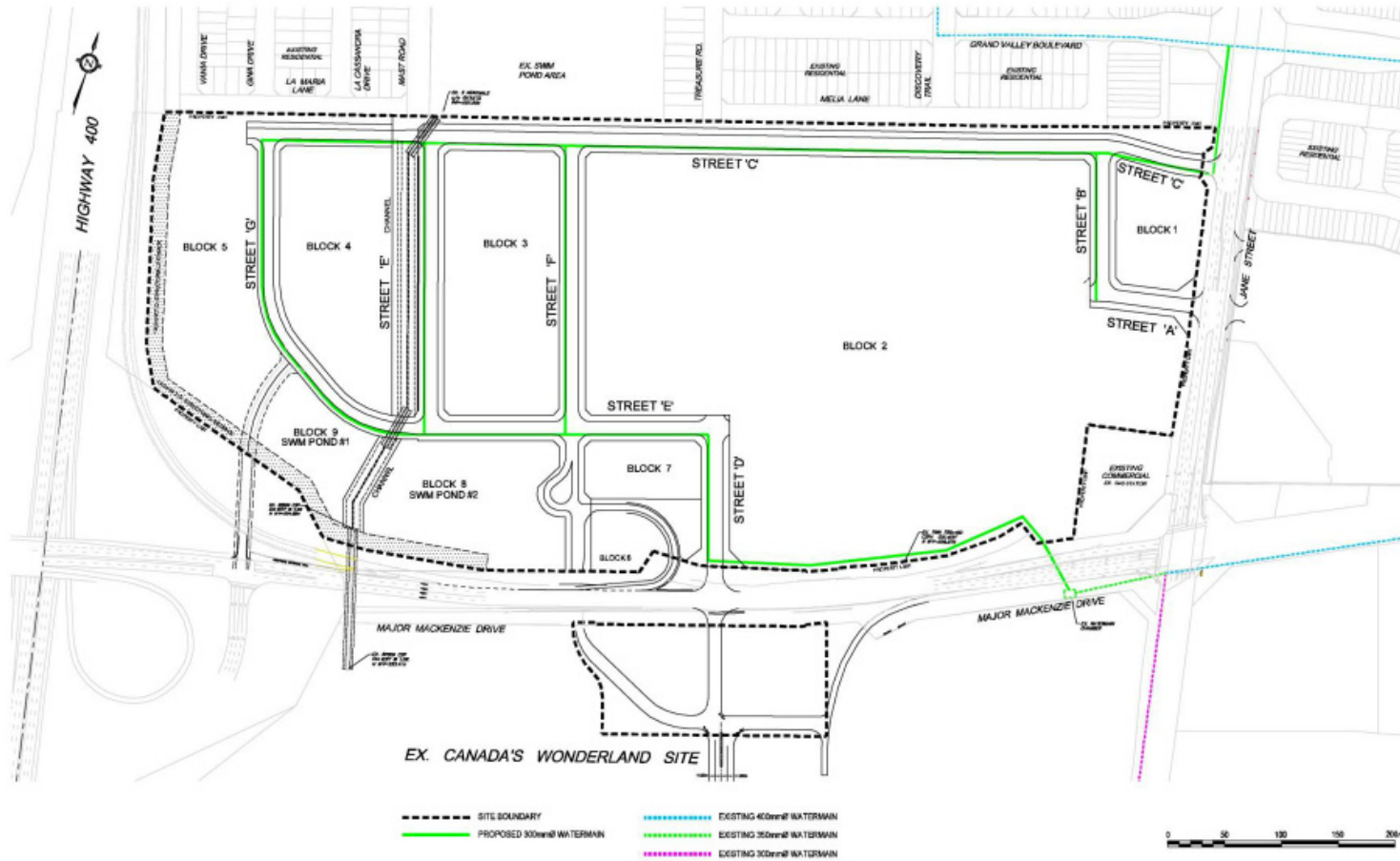
WATER	Alternative 1	Alternative 2
<i>Description of Alternatives</i>	<i>Watermain on Jane St to connect at Grand Valley Blvd</i>	<i>Watermain from Street C along Discovery Trail or Melia Lane to Grand Valley Blvd</i>
Natural Environment	- Minimal impact due to construction with road right-of-ways	- Minimal impact due to construction with road right-of-ways
Social-Cultural Environment	- Disruption to traffic on Jane St but can be minimized by combining with sewer construction	- Disruption to residential development with road closure
Technical Environment	- Ability to combine with sewer construction - Medium timeline for construction - Provides secure looped system	- Disruption to residences on in residential development in addition to disruption on Jane St for sewer - Short timeline for construction - Provides secure looped system
Financial Environment	- Longer watermain length than for Alternative 2 but reduced cost when combined with sewer	- Shorter watermain but requires construction costs for watermain and sewer separately
OVERALL RATING	- Ability to combine construction of watermain with sewer on Jane St - Provides secure looped system	- Disruption from both watermain and sewer construction - Provides secure looped system

Rating:	Preferred	Less Preferred	Least Preferred
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NOTE: Do Nothing was not evaluated further since it would not address problem statement



WATER – RECOMMENDED SOLUTION (ALTERNATIVE 1)

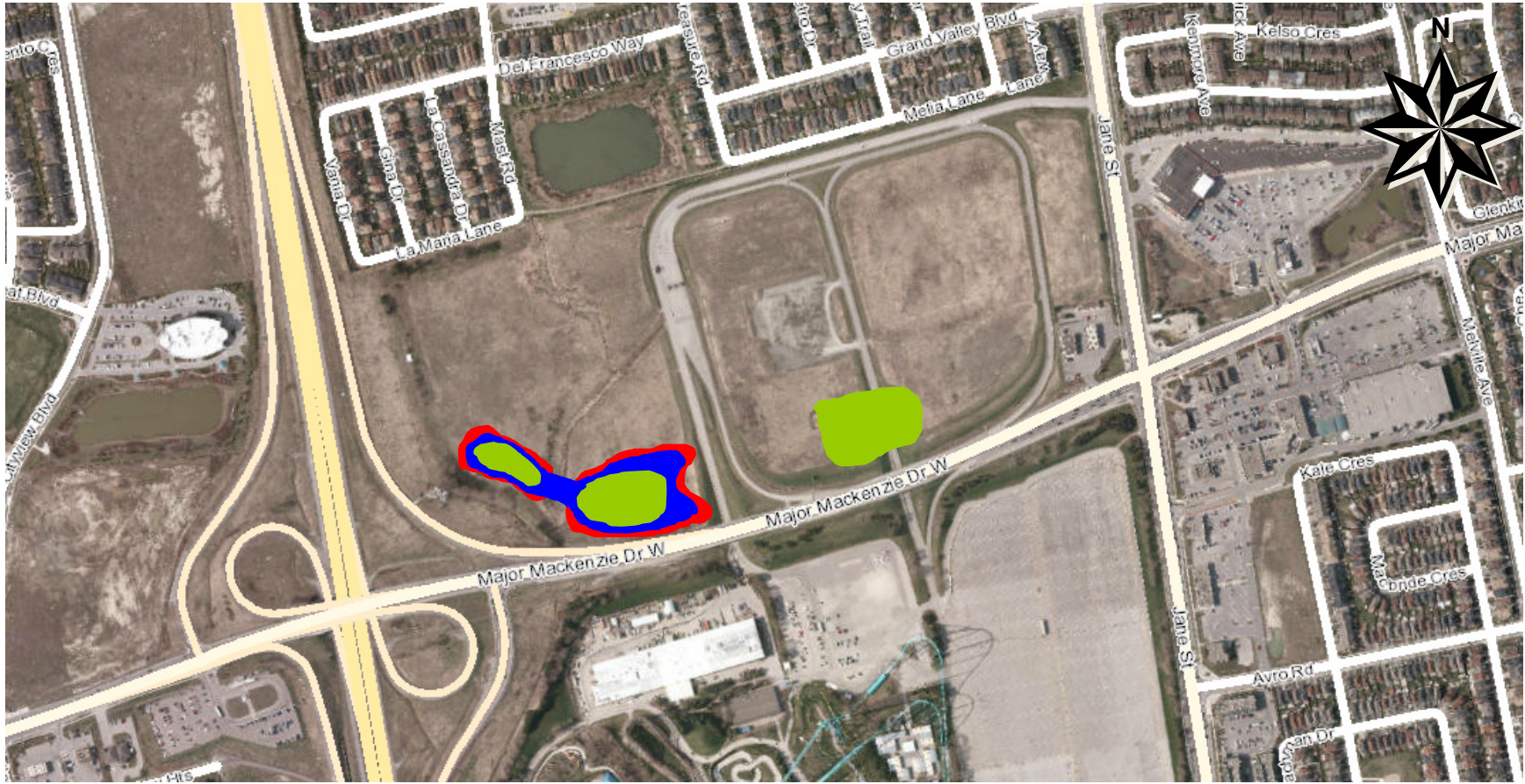





STORMWATER – EXISTING CONDITIONS

- No stormwater management ponds currently exist on the site.
- Topography of site generally slopes from northeast to southwest.
- Four (4) drainage outlets for the site:
 - Water exits to the south under Major Mackenzie Drive through two (2) road underpasses and two (2) existing culverts.
 - Runoff directed through underpasses and runoff that outlets through east culvert both enter Canada's Wonderland storm sewer system.
 - Runoff entering west culvert travels south in drainage channels.
- All runoff from site is conveyed to West Don River.
- Naturalized channel exists on west side that conveys runoff from stormwater pond on residential site to the north.
- New stormwater ponds will be sized to provide Enhanced Level of Water Quality Protection combined with Low Impact Development (LID).



STORMWATER – ALTERNATIVE SOLUTIONS



Alternative 1  Alternative 2  Alternative 3 



STORMWATER – EVALUATION OF ALTERNATIVE SOLUTIONS

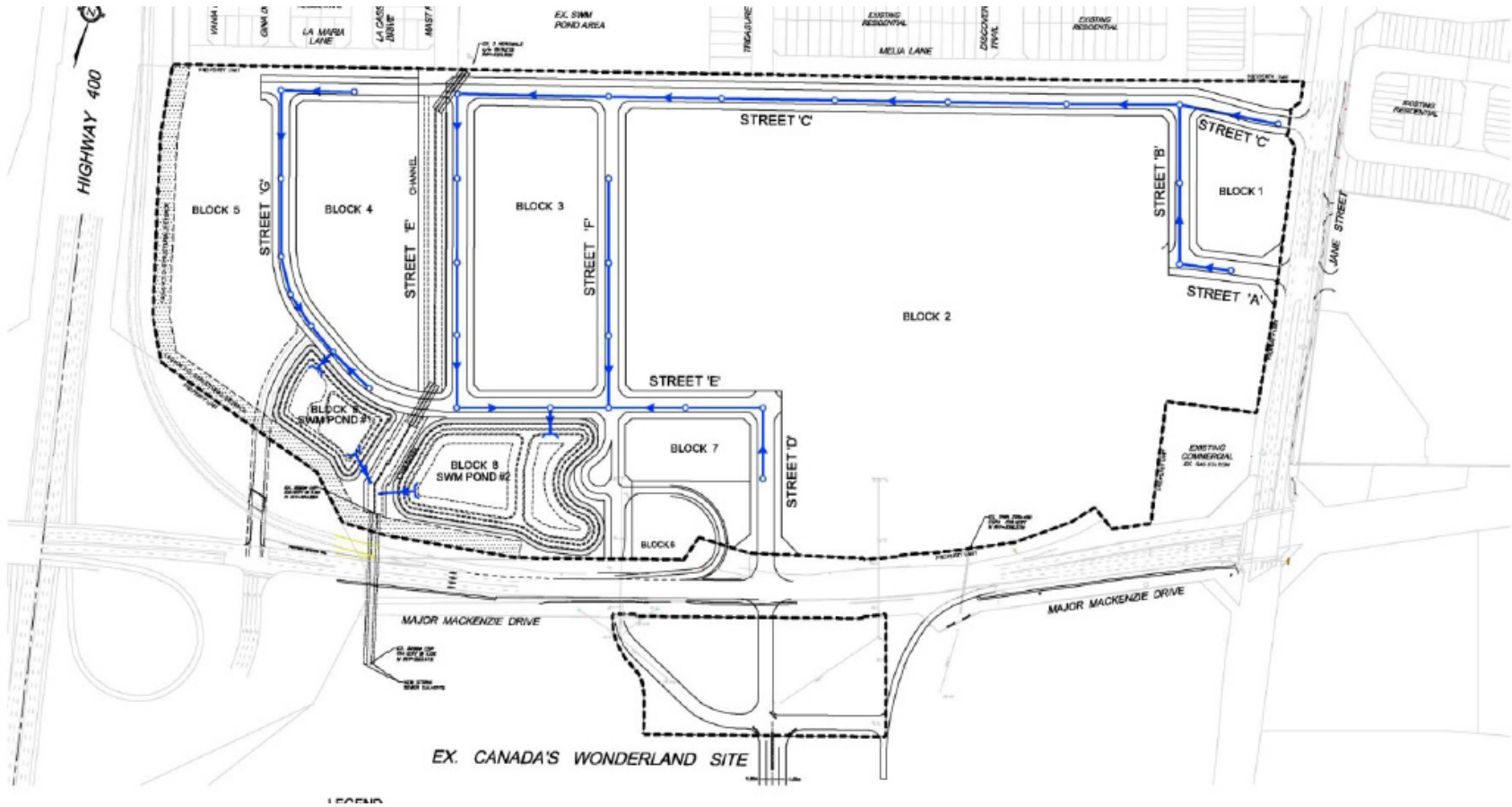
STORMWATER	Alternative 1	Alternative 2	Alternative 3
<i>Description of Alternatives</i>	<i>1 large stormwater pond in southwest end of site</i>	<i>2 stormwater ponds in southwest end of site</i>	<i>3 stormwater ponds (same as Alternative 2 but includes 1 pond for hospital)</i>
Natural Environment	<ul style="list-style-type: none"> - Site slopes northeast to southwest will capture most of runoff - Least impact with construction of 1 pond 	<ul style="list-style-type: none"> - Site slopes northeast to southwest will capture most of runoff - Medium impact with construction of 2 ponds 	<ul style="list-style-type: none"> - Greatest impact with construction of 3 man-made ponds
Social-Cultural Environment	<ul style="list-style-type: none"> - Requires relocation of channel 	<ul style="list-style-type: none"> - Accommodates proposed channel location 	<ul style="list-style-type: none"> - Accommodates proposed channel location
Technical Environment	<ul style="list-style-type: none"> - No phasing of development requires construction of full sized pond at start - Permits low impact development strategies 	<ul style="list-style-type: none"> - Allows phasing/flexibility in construction of ponds with block development - Pond 1 receives runoff from lands west of channel - Pond 2 receives runoff from lands east of channel - Permits low impact development strategies 	<ul style="list-style-type: none"> - Allows phasing in construction of ponds with development - Requires additional pond to be maintained - Limits development of hospital block
Financial Environment	<ul style="list-style-type: none"> - Less expensive to construct - Lowest maintenance costs 	<ul style="list-style-type: none"> - Offset construction costs by only constructing Pond #2 until all development blocks constructed - Medium maintenance costs once both ponds constructed 	<ul style="list-style-type: none"> - Most expensive to construct - Expensive maintenance costs
OVERALL RATING	<ul style="list-style-type: none"> - Reduces flexibility in phasing in of construction of all development blocks 	<ul style="list-style-type: none"> - Provides flexibility in phasing in of construction of all development blocks 	<ul style="list-style-type: none"> - Most costly (construction and maintenance) and limits hospital block development

Rating:	Preferred	Less Preferred	Least Preferred
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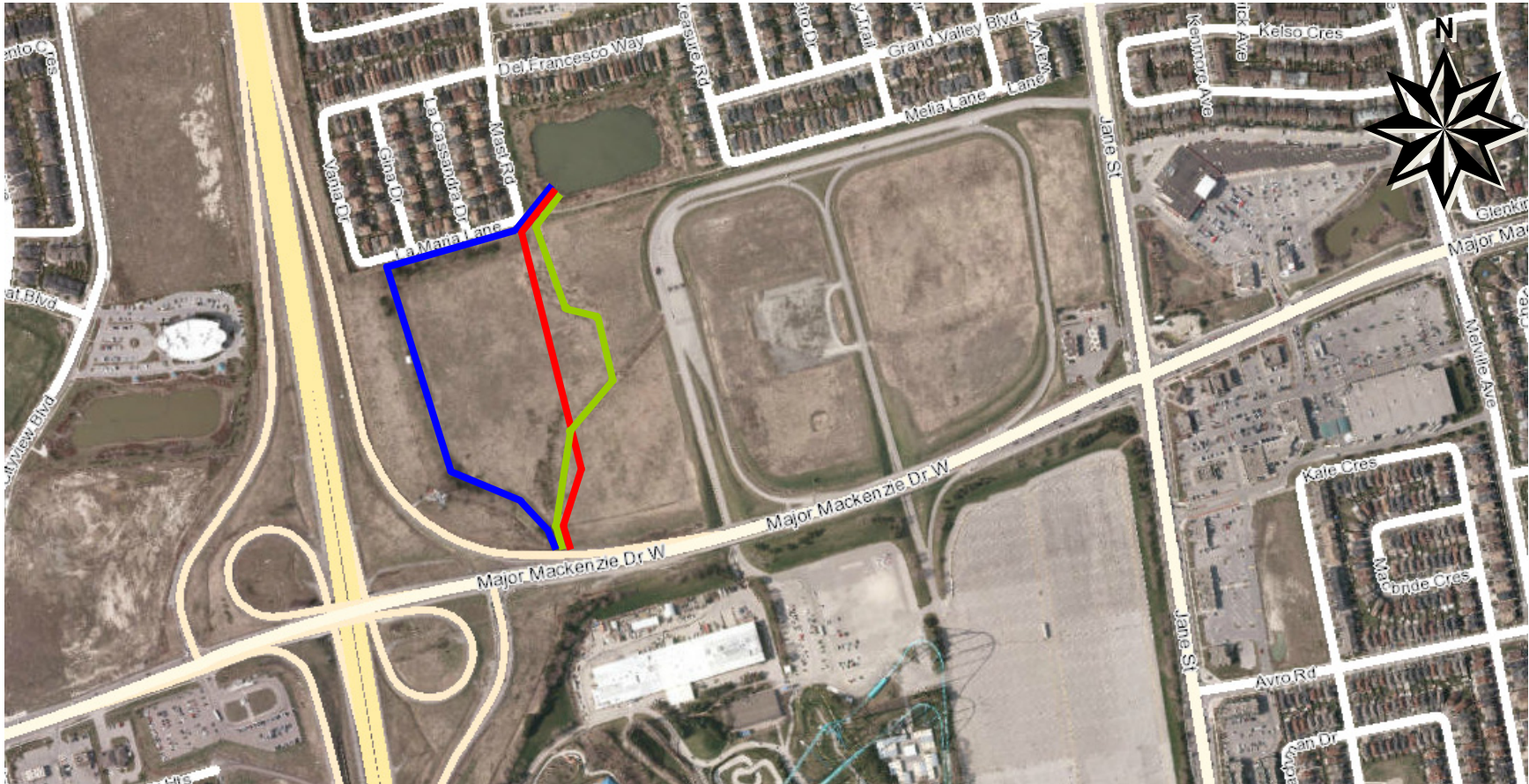
NOTE: Do Nothing was not evaluated further since it would not address problem statement




STORMWATER – RECOMMENDED SOLUTION (ALTERNATIVE 2)



DRAINAGE CHANNEL – ALTERNATIVE SOLUTIONS



Alternative 1 

Alternative 2 

Alternative 3 



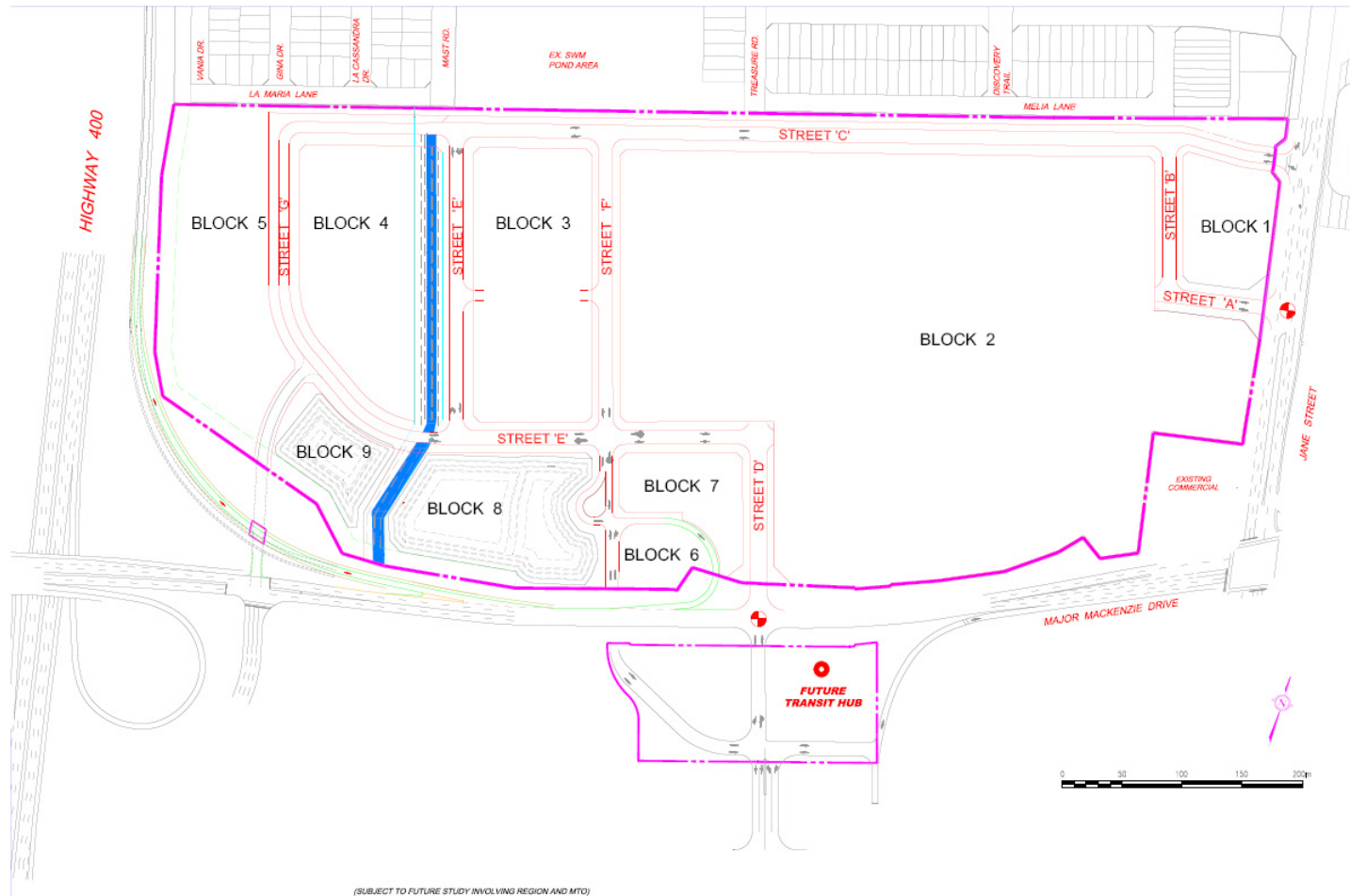
DRAINAGE CHANNEL – EVALUATION OF ALTERNATIVE SOLUTIONS

DRAINAGE CHANNEL	Alternative 1	Alternative 2	Alternative 3
<i>Description of Alternatives</i>	<i>Follows tree berm on west side of site</i>	<i>North-south channel located west of existing channel</i>	<i>Channel in existing location</i>
Natural Environment	-Greatest impact with full re-construction of channel	-Partial use of existing channel	-Minimizes impact by maintaining existing channel
Social-Cultural Environment	-Limited walkways due to land required for channel to provide flow capacity	-Provides for development of walkways along channel	-Walkways somewhat limited by design shape and loss of development land
Technical Environment	-More gradual grade change requires wider channel to accommodate flows causing land loss -Limits development blocks	-Maximizes development blocks (minimal land loss) -Provides downgradient flow and greatest flow capacity -Compatible with proposed internal road layout	-Awkward shape limits block development and results in unusable land
Financial Environment	-Most expensive to construct	-Cost to develop portion of new channel -Minimal land loss for development	-Low construction cost but loss of land for development
OVERALL RATING	-Results in land loss and limits development block	-Maximizes development of blocks and increases channel capacity	-Limits development blocks
Rating:	Preferred	Less Preferred	Least Preferred

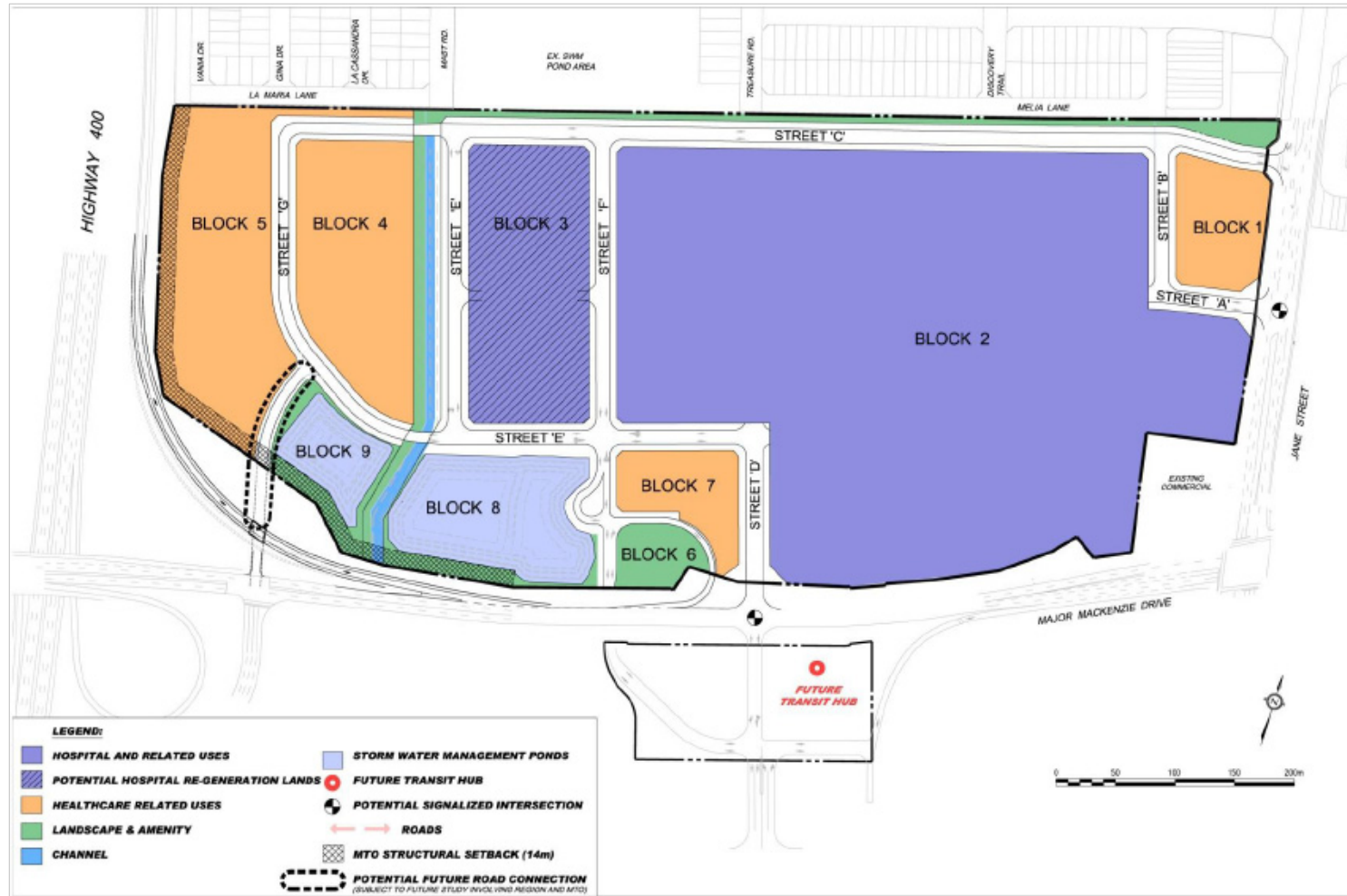
NOTE: Do Nothing was not evaluated further since it would not address problem statement



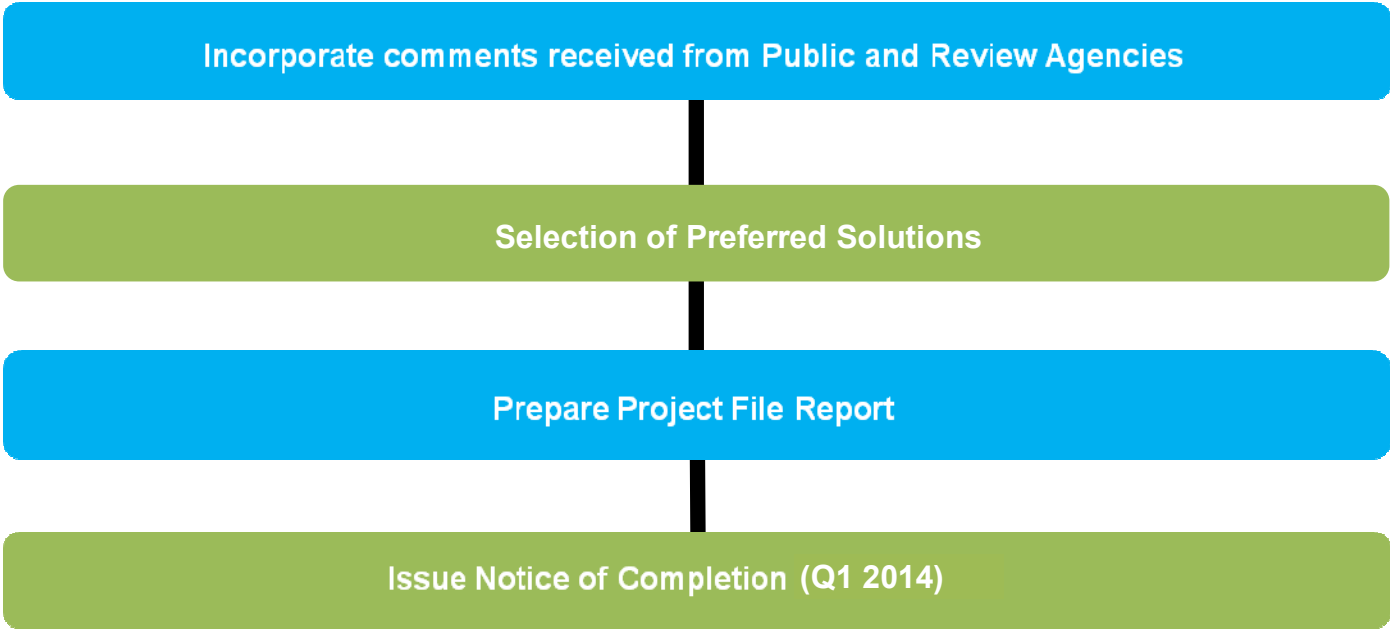
DRAINAGE CHANNEL – RECOMMENDED SOLUTION (ALTERNATIVE 2)



VHCPP – LAND USE & ROAD NETWORK



NEXT STEPS



REMAIN INVOLVED IN THE STUDY

Your comments are important as they will be reviewed and considered as part of the Study. Please indicate your interest to remain involved with the Study by submitting your completed comment sheet or by contacting one of the following team members:

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Mr. Andrew Pearce
Director of Development /
Transportation Engineering
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F: 905-832-6145
E: Andrew.Pearce@Vaughan.ca

Thank you for attending and providing your input



Attachment D

List of Stakeholders who Received Letters with Notice of PCC #2

List of Stakeholders who Received Letters with Notice of PIC

- Aboriginal Affairs and Northern Development Canada
- Bell Canada
- Beverley Glen Ratepayers' Association
- Brownridge Ratepayers' Association
- Canada's Wonderland
- Canadian Environmental Assessment Agency, Ontario Region
- Canadian Heritage
- Carrying Place Ratepayers' Association
- Cedar Fair
- City of Vaughan
- City of Vaughan Fire Rescue & Service Department
- Concord West Ratepayers' Association
- Crestwood Road Ratepayers Association
- Department of Fisheries and Oceans
- DFO/Coast Guard
- East Woodbridge Community Association
- eHealth Ontario
- Enbridge Gas
- Environment Canada
- Field Gate Developments
- Glen Shields Ratepayers' Association
- GO Transit
- Hydro One
- Indian and Northern Affairs Canada
- Infrastructure Ontario
- Kleinburg and Area Ratepayers' Association
- Lakeview Estates Ratepayers' Association
- Mackenzie Health
- Maison Parc Ratepayers' Association
- Maple-Sherwood Ratepayers' Association
- Millwood Woodend Ratepayers' Association
- Ministry of Aboriginal Affairs
- Ministry of Agriculture, Food and Rural Affairs
- Ministry of Community and Social Services
- Ministry of Culture
- Ministry of Economic Development and Trade
- Ministry of Municipal Affairs and Housing
- Ministry of Natural Resources
- Ministry of Public Infrastructure
- Ministry of the Environment
- Ministry of Transportation Ontario

- Ministry of Tourism and Culture
- Pinewood Estates Ratepayers' Association
- Powerstream
- Rimwood Estates Homeowners' Association
- Rogers Cable
- St. John Ambulance - York Region Branch
- The Chiefs of Ontario
- The Métis Nation of Ontario
- Thornhill Woods Community Association
- Toronto and Region Conservation
- Toronto Transit Commission
- Vaughanwood Ratepayers' Association
- Vellore Woods Ratepayers' association
- West Woodbridge Homeowners' Association
- Woodbridge Core Ratepayers' Association
- York Catholic District School Board
- York Region
- York Region District School Board
- York Region Police
- York Region Public Health Services Department
- York Region Transit

Appendix D

Natural Heritage Assessment



GUIDING SOLUTIONS IN THE
NATURAL ENVIRONMENT

Natural Heritage Assessment Addendum Vaughan Civic Hospital Site

Prepared For:

Cole Engineering

Prepared By:

Beacon Environmental

Date: Project:

November 2013 209184

Table of Contents

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3.2 Terrestrial Environment.....	2
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4. Constraints & Opportunities	6

Figures

Figure 1. Existing Conditions.....	after page 2
Figure 2. Storm Sewer and SWM Pond Layout.....	after page 6

Appendices

- A. List of Vascular Plants Observed on the Subject Property
-

1. Introduction

Beacon Environmental was retained by Cole Engineering to provide an update of the natural heritage conditions on a 33.2 ha property located at the northeast corner of Highway 400 and Major Mackenzie Drive in the City of Vaughan, Regional Municipality of York. The property, which is currently vacant with the exception of an internal service road that provides vehicular access to Canada's Wonderland amusement park (situated on the south side of Major Mackenzie Drive), extends east to Jane Street. It is bounded to the north by a residential subdivision and a stormwater management (SWM) pond. The SWM pond outlets to an unnamed, man-made watercourse (a tributary of the West Don River system) that crosses the western portion of the subject property from north to south before entering a culvert at Major Mackenzie Drive.

The City of Vaughan has initiated an Official Plan Amendment to permit a hospital use on the subject property. Cole Engineering is addressing the servicing needs of the facility (sewer, water and stormwater management) and Beacon Environmental is assessing whether there are any natural heritage features associated with the site that pose a potential constraint to its development.

A preliminary natural heritage assessment of the property was originally carried out by Beacon Environmental on behalf of the Vaughan Hospital Campus of Care (VHCC), with field data collected in 2009. The results of that study are documented in the report entitled *Preliminary Natural Heritage Assessment - Vaughan Civic Hospital Site* (Beacon Environmental, March 2010). The March 2010 report was submitted to the Toronto and Region Conservation Authority (TRCA) and is a public document. The current (November 2013) document is an addendum to the 2010 report that provides updated information regarding the natural heritage conditions on the western portion of the subject property. The field investigations conducted in 2013 focussed on characterizing the vegetation communities associated with the wetlands and watercourses that occur within this area.

The general purpose of this addendum was to identify whether vegetation conditions had changed over the past four years and if so, whether they posed constraints to development of the property for a hospital campus.

2. Applicable Policies and Regulations

2.1 TRCA Ontario Regulation 166/06

The watercourse and associated wetland within the western portion of the property are features regulated by TRCA under Ont. Reg. 166/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation). A permit from TRCA will be required under Ont. Reg. 166/06 to allow "straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse, or for changing or interfering in any way with a wetland."

3. Existing Conditions

Field investigations to map and update the aquatic and terrestrial resources within the western portion of the subject property were undertaken by Beacon Environmental on October 11, 2013. The data collection methods and findings are described below.

3.1 Aquatic Environment

Two intersecting, unnamed tributaries of the West Don River traverse the western portion of the subject property (see **Figure 1**). Tributary A originates just west of the service road and continues in a southwesterly direction prior to exiting the property via a large corrugated steel culvert under Major Mackenzie Drive. Tributary B originates at the north end of the property via a cement culvert which outlets from a storm water management pond that services the residential subdivision to the north. Tributary B flows south through the site until its confluence with Tributary A.

3.2 Terrestrial Environment

On October 11, 2013 a vegetation assessment of the property was undertaken for the purposes of documenting fall vegetation cover and classifying vegetation communities according to the Ecological Land Classification System (ELC) for Southern Ontario. The entire site west of the service road was walked and a checklist of observed plant species compiled (**Appendix A**).

The boundaries of individual vegetation communities were confirmed in the field and delineated onto an aerial photograph of the property. A total of nine discrete vegetation polygons were identified on the property and classified into four ELC types (see **Figure 1**). A description of the individual vegetation communities is provided below.

3.2.1 Vegetation Communities

Unit 1: Cattail Mineral Shallow Marsh (MAS2-1)

This wetland community type is associated with the riparian environments of Tributary A and B (see **Photo 1**). The community is dominated almost entirely by Narrow-leaved Cattail (*Typha angustifolia*) and supports few other wetland plant species. However, two of these are the highly invasive Common Reed (*Phragmites australis*) and Reed Canary Grass (*Phalaris arundinacea*).

Unit 2: Reed Canary Grass Mineral Meadow Marsh (MAM2-2)

This wetland community is associated with the riparian area along Tributaries A and B (see **Photos 2 and 3**). Unit 2a is dominated by Reed Canary Grass and contains few other associates. Unit 2b is comprised largely of Reed Canary Grass, intermixed with other species such as Panicked Aster



Existing Conditions


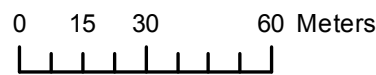
Figure 1

Vaughan Hospital

Legend

- Subject Property
- ELC Communities
- Watercourses

Unit	ELC Vegetation Type	ELC Code
1	Cattail Mineral Shallow Marsh	MAS2-1
2	Reed Canary Grass Mineral Meadow Marsh	MAM2-2
3	Dry-Moist Old Field Meadow	CUM1-1
4	Hedgerow	H

First Base Solutions Web Mapping Service 2012	
UTM Zone 17 N, NAD 83	
	1:1,800

	Project 209184 October 2013
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(*Symphotrichum lanceolatum*), Red Top (*Agrostis gigantea*), and New England Aster (*Symphotrichum nova-angliae*), among others.



Photo 1. ELC Unit 1b – Cattail Mineral Shallow Marsh



Photo 2. ELC Unit 2a – Reed Canary Grass Mineral Meadow Marsh



Photo 3. ELC Unit 2b – Reed Canary Grass Mineral Meadow Marsh



Photo 4. ELC Unit 3a – Cultural Meadow



Photo 5. ELC Unit 3b – Cultural Meadow

Unit 3: Cultural Meadow (CUM1-1)

Much of the western portion of the property consists of old field meadow. ELC unit 3a is dominated by non-native pasture grasses (see **Photo 4**) intermixed with other common field species such as Tall Goldenrod (*Solidagocanadensis* var. *scabra*), Creeping Thistle (*Cirsium canadensis*), and asters (*Symphotrichum* spp.). Unit 3b corresponds with a more recently disturbed area on the northeastern portion of the site. This section of the property is approximately 2.0 m higher than the surrounding terrain. The field in this area is dominated by Tall Goldenrod, in association with grasses and other old field forbs (see **Photo 5**).

Unit 4: Hedgerow (H)

Hedgerows consisting of mid-aged planted Austrian Pine (*Pinus nigra*) and Norway Maple (*Acer platanoides*) are situated on large berm on the north and west side of the property. As their names imply, both of these tree species are non-native and Norway Maple is particularly undesirable because it aggressively outcompetes and supplants native trees.

3.2.2 Floristics

A total of 50 species of vascular plant were observed from the western portion of the property. A checklist of observed species is provided in **Appendix A**. Thirty-five of these species (70%) are not native to Ontario. None of the species are species at risk or ranked as rare in the GTA. All of the

species, with the exception of a single L4 species (Broad-leaved Cattail), are ranked as L+ or L5, indicating that they are common and secure within TRCA jurisdiction. The floristic composition of the site is reflective of the land use history and setting within an urban matrix.

4. Constraints & Opportunities

This natural heritage update assessment confirms the findings of the 2010 assessment. There are no known species at risk or regionally rare species associated with the western portion of the site that would present a constraint to future development of the property.

While the watercourses and associated wetlands provide basic functions in terms of conveying runoff, the habitat value of the site for terrestrial and aquatic organisms is limited. As noted, much of the wetland areas, particularly units 2a and 2b, are dominated by dense stands of invasive grasses and exhibit low biodiversity.

Cole Engineering has determined that the present watercourse could be relocated within an 18 m-wide naturalized corridor extending across the site and would still maintain its hydrologic function. The proposed realignment is highlighted on **Figure 2**. This realignment will require a permit from the TRCA and ongoing discussions are being held between TRCA and the City of Vaughan, Cole and Beacon regarding the engineering and ecological aspects of the design.

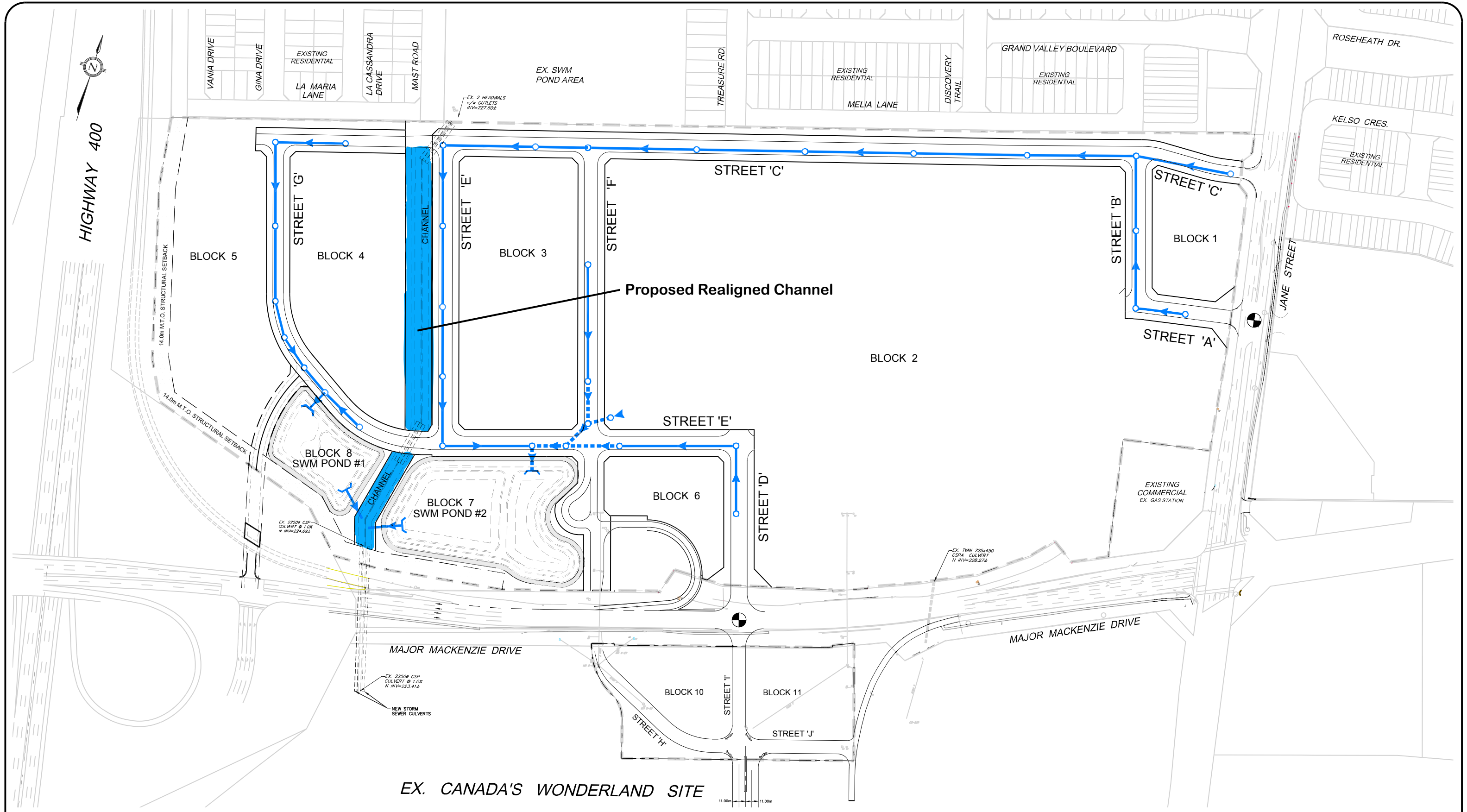
Opportunities exist to enhance the condition of the existing watercourses and associated wetlands through natural channel design and wetland creation as part of the proposed realignment of the watercourses. These should be considered as part of the development design.

Principles of Natural Channel and Wetland Corridor Design

The proposed realignment of the on-site watercourse within an 18 m-wide channel provides an excellent opportunity to improve aquatic habitat conditions through the implementation of natural channel design principles and the replication of run channel typology mixed with linear wetland and wet meadows. These features are typically well connected to the floodplain and experience both seasonal freshet and periodic inundation as a result of major rain events. These events provide important sediment transport and shallow flooding conditions that help maintain moist habitats while functionally attenuating flows. Linear wetland and wet meadow features created within the corridor will be designed to take advantage of these seasonal flood conditions and provide a diverse range of terrestrial and aquatic habitat functions.

Examples of habitat features that could be incorporated into the new corridor include a central channel and a number of connected features (e.g., backwater pool and linked wet meadow).

The corridor will be seeded/planted to create a connected, natural corridor through the site. The enhancement of these features with more diverse vegetation will provide a range of fish, amphibian, bird and mammal habitat opportunities.



EX. CANADA'S WONDERLAND SITE



LEGEND

- PROPOSED MINOR STORM SEWER
- PROPOSED STORM SEWER - 100-yr CONVEYANCE
- SITE BOUNDARY

STORM SEWER & SWM POND LAYOUT VAUGHAN HEALTHCARE CENTRE PRECINCT PLAN CITY OF VAUGHAN REGIONAL MUNICIPALITY OF YORK	
DATE: OCTOBER, 2013	PROJECT No.: LD12-519
SCALE: 1:3000 (11x17)	FIGURE No.: STM-01

Appendix A

Checklist of Vascular Plants Observed on the Subject Property

Appendix 1

List of Vascular Plants Observed on the Subject Property

Family Name	Scientific Name	Common Name	S-Rank	L-Rank
Aceraceae	<i>Acer ginnala</i>	Amur Maple	SE1	L+
Aceraceae	<i>Acer platanoides</i>	Norway Maple	SE5	L+
Anacardiaceae	<i>Rhus hirta</i>	Staghorn Sumac	S5	L5
Apiaceae	<i>Daucus carota</i>	Queen Anne's Lace	SE5	L+
Asclepiadaceae	<i>Asclepias syriaca</i>	Common Milkweed	S5	L5
Asteraceae	<i>Achillea millefolium</i> var. <i>occidentalis</i>	Woolly Yarrow	S5	L5
Asteraceae	<i>Cichorium intybus</i>	Chicory	SE5	L+
Asteraceae	<i>Cirsium arvense</i>	Creeping Thistle	SE5	L+
Asteraceae	<i>Cirsium vulgare</i>	Bull Thistle	SE5	L+
Asteraceae	<i>Euthamia graminifolia</i>	Grass-leaved Goldenrod	S5	L5
Asteraceae	<i>Inula helenium</i>	Elecampane	SE5	L+
Asteraceae	<i>Lactuca serriola</i>	Prickly Lettuce	SE5	L+
Asteraceae	<i>Solidago canadensis</i> var. <i>scabra</i>	Tall Goldenrod	S5	L5
Asteraceae	<i>Sonchus arvensis</i> ssp. <i>arvensis</i>	Field Sowthistle	SE5	L+
Asteraceae	<i>Symphotrichum ericoides</i> var. <i>ericoides</i>	Heath Aster	S5	L5
Asteraceae	<i>Symphotrichum lanceolatum</i> ssp. <i>lanceolatum</i>	Panicked Aster	S5	L5
Asteraceae	<i>Symphotrichum novae-angliae</i>	New England Aster	S5	L5
Asteraceae	<i>Taraxacum officinale</i>	Common Dandelion	SE5	L+
Caprifoliaceae	<i>Viburnum lentago</i>	Nannyberry	S5	L5
Cornaceae	<i>Cornussericea</i> ssp. <i>sericea</i>	Red-osier Dogwood	S5	L5
Elaeagnaceae	<i>Elaeagnus angustifolia</i>	Russian Olive	SE3	L+
Fabaceae	<i>Lotus corniculatus</i>	Bird's-foot Trefoil	SE5	L+
Fabaceae	<i>Medicago lupulina</i>	Black Medic	SE5	L+
Fabaceae	<i>Melilotus alba</i>	White Sweet Clover	SE5	L+
Fabaceae	<i>Robinia pseudo-acacia</i>	Black Locust	SE5	L+
Fabaceae	<i>Trifolium pratense</i>	Red Clover	SE5	L+
Fabaceae	<i>Vicia cracca</i>	Tufted Vetch	SE5	L+
Lemnaceae	<i>Lemna minor</i>	Lesser Duckweed	S5	L5
Lythraceae	<i>Lythrum salicaria</i>	Slender-spike Loosestrife	SE5	L+
Oleaceae	<i>Fraxinus pennsylvanica</i>	Green Ash	S5	L5
Pinaceae	<i>Pinus nigra</i>	Black Pine	SE2	L+
Plantaginaceae	<i>Plantago major</i>	Nipple-seed Plantain	SE5	L+

Family Name	Scientific Name	Common Name	S-Rank	L-Rank
Poaceae	<i>Agrostis gigantea</i>	Redtop	SE5	L+
Poaceae	<i>Bromus inermis</i> ssp. <i>inermis</i>	Smooth Brome	SE5	L+
Poaceae	<i>Elymus repens</i>	Quack Grass	SE5	L+
Poaceae	<i>Phalaris arundinacea</i>	Reed Canary Grass	S5	L+?
Poaceae	<i>Phleum pratense</i>	Timothy	SE5	L+
Poaceae	<i>Phragmites australis</i>	Common Reed	S5	L+?
Poaceae	<i>Poa compressa</i>	Canada Bluegrass	S5	L+
Poaceae	<i>Poa pratensis</i> ssp. <i>pratensis</i>	Kentucky Bluegrass	S5	L+
Rhamnaceae	<i>Rhamnus cathartica</i>	Buckthorn	SE5	L+
Rosaceae	<i>Rubus idaeus</i> ssp. <i>strigosus</i>	Wild Red Raspberry	S5	L5
Salicaceae	<i>Populus deltoids</i> ssp. <i>deltoides</i>	Eastern Cottonwood	SU	L5
Salicaceae	<i>Salix exigua</i>	Sandbar Willow	S5	L5
Salicaceae	<i>Salix fragilis</i>	Crack Willow	SE5	L+
Scrophulariaceae	<i>Linaria vulgaris</i>	Butter-and-eggs	SE5	L+
Solanaceae	<i>Solanum dulcamara</i>	Climbing Nightshade	SE5	L+
Typhaceae	<i>Typha angustifolia</i>	Narrow-leaved Cattail	S5	L+
Typhaceae	<i>Typha latifolia</i>	Broad-leaf Cattail	S5	L4



GUIDING SOLUTIONS IN THE
NATURAL ENVIRONMENT

Preliminary Natural Heritage Assessment Vaughan Civic Hospital Site

Prepared For:

Vaughan Health Campus of Care

Prepared By:

Beacon Environmental

Date: Project:

March 2010 209184

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Appendices

1. List of Vascular Plants Observed on the Subject Property

1. Introduction

In October 2009 Beacon Environmental was retained by Vaughan Health Campus of Care (VHCC) to complete a preliminary natural heritage assessment of a 33.2 ha property located at the northeast corner of Highway 400 and Major Mackenzie Drive in the City of Vaughan, Regional Municipality of York. The property, which is currently vacant with the exception of an internal service road that provides vehicular access to Canada's Wonderland amusement park (situated on the south side of Major Mackenzie Drive) extends east to Jane Street. It is bounded to the north by a residential subdivision and a stormwater management (SWM) pond. The SWM pond outlets to a watercourse (part of the West Don River system) that crosses the western portion of the subject property from north to south before entering a culvert at Major Mackenzie Drive.

The City of Vaughan has initiated an Official Plan Amendment to permit a hospital use on the subject property. VHCC has retained the services of Weston Consulting Group Inc. (WCGI) to monitor this process on its behalf and to prepare a development concept for the new hospital campus. Cole Engineering is addressing the servicing needs of the facility (sewer, water and stormwater management) and Beacon Environmental is assessing whether there are any natural heritage features associated with the site that pose a potential constraint to its development.

A pre-consultation meeting was held on-site on October 15, 2009 with representatives of VHCC and its consulting team, the City of Vaughan and its consultants, and the Toronto and Region Conservation Authority. At that time TRCA planning and ecology staff identified potential concerns related to the presence of the watercourse and associated wetland features on that portion of property west of the service road and requested that their significance be assessed. It was agreed that the field investigations would be focussed on characterizing the vegetation communities occupying this area and on determining what role the watercourse played in providing fish habitat.

The purpose of this assessment therefore, was to identify, on a preliminary level, environmental opportunities and constraints to future development within the western portion of the subject property. No constraints were identified on the remaining portion of the site.

2. Applicable Policies and Regulations

2.1 TRCA Ontario Regulation 166/06

The watercourse and associated wetland are features regulated by TRCA under Ont. Reg. 166/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation). A permit from TRCA will be required under Ont. Reg. 166/06 to allow "straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse, or for changing or interfering in any way with a wetland." Cole Engineering has determined that the present watercourse could be relocated within a 25 m-wide naturalized corridor extending across the site and would still maintain its hydrologic function. The proposed realignment is shown on the development concept prepared for the site by WCGI (Dwg. C3, February 28, 2010). This will require a permit under the regulation.

3. Existing Conditions

An assessment of aquatic and terrestrial resources on the subject property was undertaken by Beacon Environmental biologists on October 21, 2009. The data collection methods and findings are described below.

3.1 Aquatic Environment

Two intersecting, unnamed tributaries of the West Don River traverse the western portion of the subject property. Tributary A originates just west of the service road and continues in a south western direction prior to exiting the property via a large corrugated steel culvert under Major Mackenzie Drive (**Figure 1**). Tributary B originates at the north end of the property via a cement culvert which outlets from a SWM pond that services the residential subdivision to the north (**Photograph 1**). Tributary B flows south through the site until its confluence with Tributary A (**Figure 1**).

3.1.1 Fisheries

On October 21, 2009 a fish sampling event was conducted throughout tributaries A and B. Sampling was undertaken by staff from Beacon Environmental and Ecometrix. A backpack electrofishing unit was utilized to capture fish present.

The survey began at the downstream portion of Tributary A at the large corrugated steel culvert which is located underneath Major Mackenzie Drive (**Photograph 2**) and ended at the confluence with Tributary B. Although this section of Tributary A is over 200 m in length, only 30m of was sampled due to lack of flows and dense stands of cattails. Only one fish, a young of the year (YOY) Goldfish (*Carassius auratus*), was captured from Tributary A. This fish was a brassy olive-green colour, a characteristic which is typical of “naturalized” Goldfish (Scott and Crossman 2003).

Tributary B was sampled from the pool immediately downstream of the small corrugated steel culvert (**Photograph 3**), upstream to the northern property boundary. An effort was made to sample wherever the channel was accessible despite the presence of thick grasses and cattails which dominated this portion of the watercourse. Five fish were captured representing four species: two Goldfish, one Pumpkinseed (*Lepomis gibbosus*), one Black Crappie (*Pomoxis nigromaculatus*) and one Fathead Minnow (*Pimephales promelas*). With the exception of one adult Goldfish, all the fish captured were YOY.

All the species are considered to be warmwater generalist species, which can survive in a range of habitat conditions and are resilient to changes in their environment. It is likely that all the fish captured in both tributary A and B originated from the SWM pond located north of the subject property.



ELC Communities
Vaughan Hospital

Figure 1

Client

Legend

- Watercourses
- ELC Communities

Unit #	ELC Code	Description
1	CUM 1-1	Mineral Cultural Meadow
2	MAS 2-1	Cattail Mineral Shallow Marsh
2a	MAM 2-3	Redtop Mineral Meadow Marsh
3	MAM 2-2	Reed Canary Grass Mineral Meadow Marsh
3a	MAS 2-1	Cattail Mineral Shallow Marsh
3b	MAS 2-1	Cattail Mineral Shallow Marsh
4	CUM 1-1	Mineral Cultural Meadow
5	CUM 1-1	Mineral Cultural Meadow

Google Earth Image 2010

UTM Zone 17 N, NAD 83



1:2,000

3.1.2 Habitat Assessment

A subsequent assessment of fish habitat was undertaken by Beacon Environmental staff on November 18, 2009. The habitat assessment was completed following the standardized methods of the Ontario Stream Assessment Protocol (OSAP). Given the relatively small size of the tributaries and the highly disturbed surrounding landscape, a screening level assessment of fish habitat conditions using the Rapid Assessment Methodology outlined by Section 4. Module 1 of the OSAP manual was utilized.

The substrate in Tributary A is predominantly silt. In several areas the substrate was iron stained, however no groundwater discharge was observed. The channel morphology was flat, with a straightened channel form indicating past channelization (**Photograph 4**), likely to accommodate agricultural uses on the site. In-stream cover was dominated by cattails and grasses. The average wetted channel widths ranged from 1.5 m to 5.5 m. Standing water was present in pools ranging in depth from 0.1 m to 0.2 m. No flowing water was observed in Tributary A during the time of the assessment and the section of A upstream of the confluence with Tributary B was not sampled as this section was dry.

The substrate through Tributary B varied from hard clay, to silt, gravel/sand and one small area of cobble at the upstream end. The channel morphology varied through Tributary B with many riffle, run sequences and one large pool immediately downstream of the small corrugated steel culvert. Upstream of the small corrugated steel culvert the channel was overgrown with terrestrial grasses for approximately 100 m and then for 50 m upstream there was a dense cattail stand with the channel becoming braided (**Photograph 5**). Upstream of the cattails the channel becomes clear of vegetation until it exits the property through a cement culvert. Average wetted channel width throughout Tributary B varied from less than 1.0 m to 7.0 m. Wetted depth ranged from 0.03 m in the shallow riffle areas to 0.44 m in the deep pool. No flowing water was observed in Tributary B during the time of the assessment.

Current and historic land use surrounding Tributary A and B have influenced the function and quality of aquatic habitat. The upstream SWM pond is considered an ongoing source of potential contamination and sedimentation, as well as a nutrient source. There is evidence of historic channel realignment, likely carried out for agricultural purposes. Both Tributary A and B provide low functioning habitat which serves to support a population of tolerant, warmwater generalist fish species which likely originated from an introduced population in the upstream SWM pond.

3.2 Terrestrial Environment

On October 21, 2009 a vegetation assessment of the property was also undertaken for the purposes of documenting fall vegetation cover and classifying vegetation communities according to the Ecological Land Classification System (ELC) for Southern Ontario. The entire site was walked and a checklist of observed plant species compiled (**Appendix 1**).

The boundaries of individual vegetation communities were confirmed in the field and mapped onto aerial photography. A total of eight discrete vegetation polygons were identified and classified into four ELC types (see **Figure 1**). A description of the individual vegetation communities is provided below.

3.2.1 Vegetation Communities

Mineral Cultural Meadow (CUM1-1) – Units 1, 4 & 5

Units 1 and 4 correspond with former agricultural fields that are succeeding into old field. These open communities are dominated by pasture grasses and agricultural weeds (**Photograph 6**). The fields are comprised primarily of non-native grasses and herbs and exhibit low levels of biological diversity. Ecological functions are limited primarily to erosion control. Unit 5 corresponds with a recently filled area on the northeastern portion of the site. This section of the property is approximately 2.0 m higher than the surrounding terrain. It is sparsely vegetated, but supports a higher diversity of predominantly non-native species. This is likely attributable to the imported soil seed bank and its varied origins.

Cattail Mineral Shallow Marsh (MAS2-1) - Units 2, 3a & 3b

This wetland community type is associated with the riparian and floodplain environments of Tributaries A and B. This community is dominated almost entirely by cattails and supports few other wetland plant species, including Common Reed, a highly invasive wetland species (**Photograph 7**). Tributary A is highly altered and functions are generally limited to erosion control and flow attenuation.

Reed Canary Grass Mineral Meadow Marsh (MAM2-2) - Unit 3

This wetland community is associated with the floodplain of Tributary B. It is dominated by Reed Canary Grass and contains few other associates (**Photograph 8**). From a functional perspective, it is important for flood attenuation and erosion control.

Redtop Mineral Meadow Marsh (MAM2-3) – Unit 2a

This wetland community corresponds with the floodplain of Tributary A. It is dominated by Redtop, a grass species, but also contains a higher diversity of native wetland species such as sedges, and rushes. From a functional perspective, it provides flood attenuation, erosion control and contributes to native biodiversity. While none of the species are significant, they are representative of less disturbed meadow marsh habitats in Ontario.

3.2.2 Floristics

A total of 63 species of vascular plant were observed from the property. A checklist of observed species is provided in **Appendix 1**. Approximately half of the species documented are native to Ontario. None of the species are species at risk or ranked as rare in the GTA. All of the species, except one L4, are ranked as L+ or L5, indicating that they are common and secure within TRCA jurisdiction. The floristic composition of the site is reflective of the land use history and setting within an urban matrix. The highest species richness was observed in unit 5 and is likely attributable to the mixture of imported fill and associated weedy soil seed bank. The highest proportion of native species is associated with unit 2a and likely reflects that this community is the least disturbed.

4. Constraints & Opportunities

This preliminary assessment has not identified any significant natural heritage constraints associated with the subject property. While the watercourses and associated wetland provide basic functions in terms of conveying runoff, flood attenuation, and erosion control, the habitat value of the site for terrestrial and aquatic organism is limited. There are no species at risk or regionally rare species associated with the site that would present a constraint to future development of the property. Some features, such as unit 2a, support higher quality native species.

Opportunities exist to enhance the condition of the existing watercourses and associated wetlands through natural channel design and wetland recreation as part of the proposed realignment of the watercourses. These should be considered as part of the development design.

4.1 Principles of Natural Channel and Wetland Corridor Design

The proposed realignment of the on-site watercourse within a 25 m-wide channel provides an excellent opportunity to improve fish habitat conditions through the implementation of natural channel design principles and the replication of run channel typology mixed with linear wetland and wet meadows. These features are typically well connected to the floodplain and experience both seasonal freshet and periodic inundation as a result of major rain events. These events provide important sediment transport and shallow flooding conditions that help maintain moist habitats while functionally attenuating flows. Linear wetland and wet meadow features created within the corridor will be designed to take advantage of these seasonal flood conditions and provide a diverse range of terrestrial and aquatic habitat functions.

Examples of habitat features that could be incorporated into the new corridor include a central channel and a number of connected features (e.g., backwater pool and linked wet meadow).

4.2 Fish Habitat Integration

Characterization of the existing watercourse has confirmed the lack of connected fish habitat through the subject property, particularly in Tributary A downstream of its confluence with Tributary B. This lack of connectivity results in poor on-site productivity. The target fish community for this area of the East Don River watershed would include typical small stream warmwater species. Fish habitat design improvements could consist of a well defined run channel typology with longitudinal sequencing of interconnected off-line wet features of variable depth and shape. The target low flow run depth will be designed to mimic pools in the existing system and satisfy channel performance criteria for typical assemblages of small stream warmwater fish species in headwater areas.

The corridor will be seeded/planted to create a connected, natural corridor through the site. The enhancement of these features with more diverse vegetation will provide a range of fish, amphibian, bird and mammal habitat opportunities. Given the present lack fish habitat productivity and connectivity within the existing system, the proposed channel corridor works can be viewed as self-compensating in terms of direct and contributing fish habitat.



Photo 1. Outlet of SWM pond into Tributary B



Photo 2. Culvert at Major Mackenzie Drive – Tributary A



Photo 3. Confluence of Tributaries A & B



Photo 4. Straightened channel Form in Tributary A



Photo 5. Braided drainage in Tributary B



Photo 6. Cultural meadow communities



Photo 7. Cattail Marsh community



Photo 8. Reed Canary Grass Marsh community

Appendix 1

Checklist of Vascular Plants Observed on the Subject Property

Appendix 1

List of Vascular Plants Observed on the Subject Property

Scientific Name	Common Name	Unit 2/5	Unit 2a	Unit 3	Unit 3b	Unit 4	Unit 5	TRCA STATUS
<i>Agrostis gigantea</i>	Redtop	x	x				x	L+
<i>Agrostis stolonifera</i>	Spreading Bentgrass		x				x	L+?
<i>Amaranthus</i> sp.	Amaranth Species						x	
<i>Ambrosia artemisiifolia</i>	Annual Ragweed						x	L5
<i>Arctium minus</i>	Lesser Burdock	x						L+
<i>Asclepias syriaca</i>	Common Milkweed				x			L5
<i>Aster lanceolatus</i> ssp. <i>Lanceolatus</i>	Panicked Aster		x					L5
<i>Bromus inermis</i> ssp. <i>Inermis</i>	Smooth Brome	x	x	X				L+
<i>Carduus nutans</i> ssp. <i>Leiophyllus</i>	Musk Thistle	x						
<i>Carex bebbii</i>	Bebb's Sedge						x	L5
<i>Carex vulpinoidea</i>	Fox Sedge		x					L5
<i>Cichorium intybus</i>	Chicory						x	L+
<i>Cirsium arvense</i>	Creeping Thistle	x		X	x		x	L+
<i>Cirsium vulgare</i>	Bull Thistle					x		L+
<i>Conyza canadensis</i>	Fleabane					x	x	L5
<i>Cornus sericea</i> ssp. <i>sericea</i>	Red-osier Dogwood	x			x			L5
<i>Daucus carota</i>	Queen Anne's Lace			X				L+
<i>Echinochloa crusgalli</i>	Barnyard Grass						x	L+
<i>Elaeagnus angustifolia</i>	Russian Olive			X				L+
<i>Eleocharis erythropoda</i>	Bald Spikerush	x	x					L5
<i>Elymus repens</i>	Quack Grass						x	L+
<i>Epilobium hirsutum</i>	Great-hairy Willow-herb		x					L+
<i>Galium palustre</i>	Marsh Bedstraw		x					L5
<i>Galium</i> sp.	Bedstraw Species	x						
<i>Inula helenium</i>	Elecampane		x					L+
<i>Juncus dudleyi</i>	Dudley's Rush		x					L5
<i>Juncus tenuis</i>	Slender Rush		x					L5
<i>Lemna minor</i>	Lesser Duckweed	x						L5
<i>Linaria vulgaris</i>	Butter-and-eggs					x	x	L+
<i>Medicago lupulina</i>	Black Medic						x	L+
<i>Melilotus alba</i>	White Sweet Clover	x		X				L+
<i>Oenothera biennis</i>	Common Evening-primrose						x	L5
<i>Panicum miliaceum</i>	Proso						x	L+
<i>Phalaris arundinacea</i>	Reed Canary Grass	x			x			L+?
<i>Phleum pratense</i>	Timothy						x	L+
<i>Phragmites australis</i>	Common Reed	x						L+?
<i>Plantago major</i>	Nipple-seed Plantain						x	L+
<i>Poa compressa</i>	Canada Bluegrass		x		x		x	L+

Scientific Name	Common Name	Unit 2/5	Unit 2a	Unit 3	Unit 3b	Unit 4	Unit 5	TRCA STATUS
<i>Poa pratensis</i> ssp. <i>pratensis</i>	Kentucky Bluegrass		x					L+
<i>Polygonum</i> sp.	Smartweed Species	x						
<i>Populus tremuloides</i>	Quaking Aspen						x	L5
<i>Portulaca oleracea</i>	Common Purslane						x	L+
<i>Potentilla recta</i>	Sulphur Cinquefoil	x					x	L+
<i>Robinia pseudo-acacia</i>	Black Locust						x	L+
<i>Rumex crispus</i>	Curly Dock					x	x	L+
<i>Salix eriocephala</i>	Heart-leaved Willow	x						L5
<i>Schoenoplectus tabernaemontani</i>	Soft-stemmed Bulrush	x						L4
<i>Scirpus atrovirens</i>	Woolgrass Bulrush	x						L5
<i>Solanum dulcamara</i>	Climbing Nightshade	x					x	L+
<i>Solidago canadensis</i>	Canada Goldenrod	x				x		L5
<i>Sonchus arvensis</i> ssp. <i>arvensis</i>	Field Sowthistle	x	x					L+
<i>Symphyotrichum novae-angliae</i>	New England Aster	x	x	X				L5
<i>Taraxacum officinale</i>	Common Dandelion						x	L+
<i>Tragopogon</i> sp.	Goat's-beard Species					x		
<i>Trifolium pratense</i>	Red Clover	x	x	X				L+
<i>Trifolium repens</i>	White Clover	x					x	L+
<i>Tussilago farfara</i>	Colt's Foot						x	L+
<i>Typha angustifolia</i>	Narrow-leaved Cattail	x			x			L+
<i>Typha latifolia</i>	Broad-leaf Cattail	x			x			L4
<i>Typha X glauca</i>	Blue Cattail				x			L+
<i>Verbascum thapsus</i>	Common Mullein						x	L+
<i>Verbena hastata</i>	Blue Vervain						x	L5
<i>Vicia cracca</i>	Tufted Vetch	x	x	X			x	L+

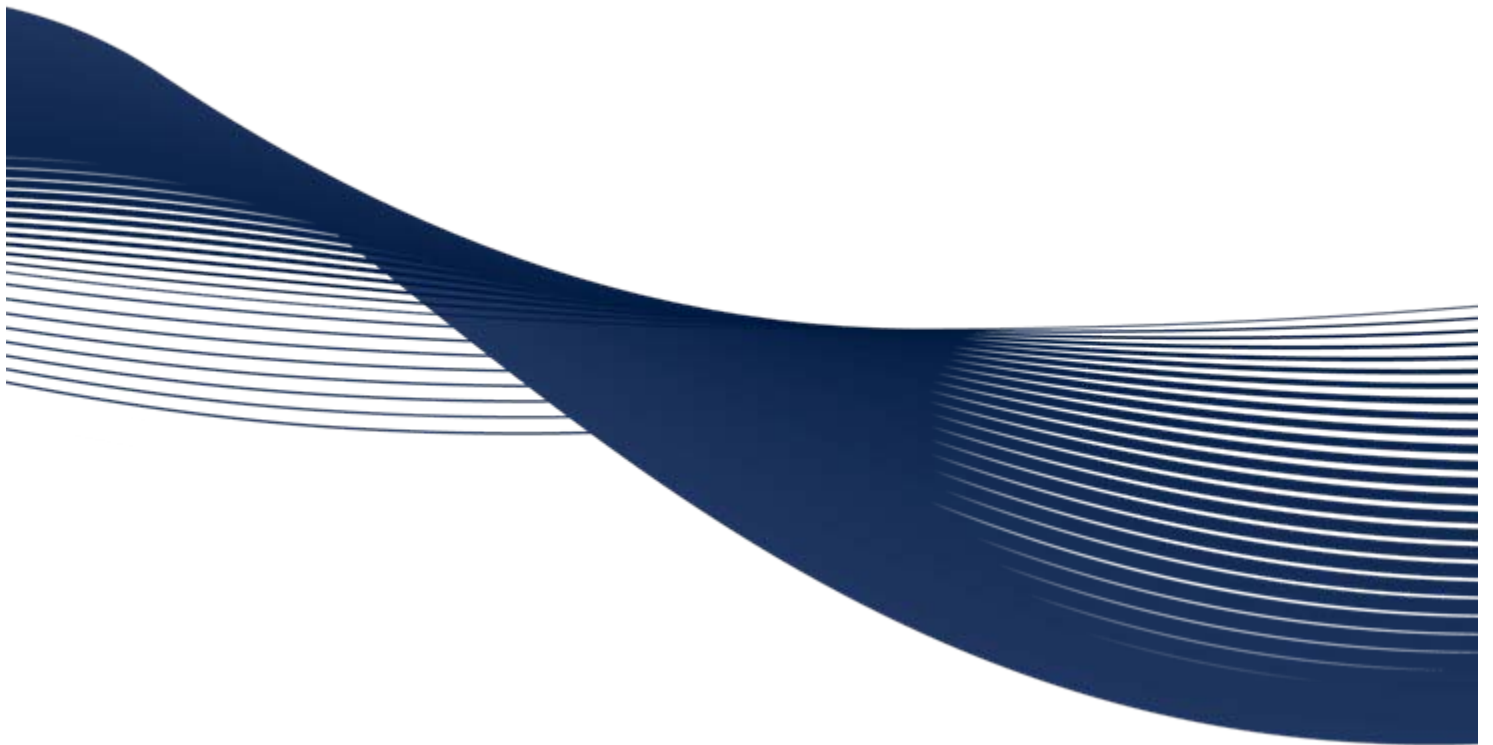
Appendix E

Phase I Environmental Site Assessment

CITY OF VAUGHAN

Phase I Environmental Site Assessment

Future Vaughan Healthcare Centre



JANUARY 2014

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January 7, 2014
Our Ref: EM13-0747

Mr. Paul Jankowski
Corporation of the City of Vaughan
2141 Major Mackenzie Drive West
Vaughan, ON L6A 1T1

Dear Mr. Jankowski:

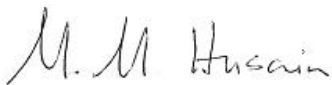
**Re: Phase I Environmental Site Assessment
Future Vaughan Healthcare Centre
Part Lots 20 & 21, Concession 5, Vaughan, ON**

Cole Engineering Group Ltd. has completed the Phase I Environmental Site Assessment at the above mentioned property. A summary of the search results and all work undertaken are documented in the accompanying report.

We thank you for the opportunity to undertake this work on your behalf. If you have any questions, please do not hesitate to call our office.

Yours truly,

COLE ENGINEERING GROUP LTD.



Muin Husain, Ph.D., P.Geo.
Vice President, Environmental Management

/ao



Andre Lyn, B.E.S. P.Geo. (Ltd.)
Project Manager

1.0 Executive Summary

Cole Engineering Group Ltd. (CEG) was retained by the Corporation of the City of Vaughan (City of Vaughan) to conduct a Phase I Environmental Site Assessment (ESA) for the future Healthcare Centre property located on the north side of Major Mackenzie Drive West between Jane Street and Highway 400 as well as an area at the north end of the Canada's Wonderland property (south side of Major Mackenzie Drive West) currently utilized for a parking lot in Vaughan, Ontario (herein referred to as the Site).

Phase I ESAs may assist in reducing uncertainty related to potential environmental liabilities and may be used as justification for further investigations of a property. It is our understanding that the Phase I ESA is required in support of an application for draft plan approval on the Site and for the filing of a Record of Site Condition (RSC).

The Phase I ESA was conducted in accordance with the guidelines and procedures established in the *Canadian Standards Association (CSA) document Z768-01* and incorporates the requirements of *Ontario Regulation (O.Reg.) 153/04* as amended by *O.Reg. 269/11*. The scope of the Phase I ESA for the subject property includes the following activities:

- A records review for the Site and adjacent properties;
- Interviews and Site visit;
- An evaluation of the information gathered;
- The preparation of a Phase I ESA Report; and
- The submission of the Phase I ESA Report.

It is our understanding that the Site was historically used for agricultural purposes until the late 1970s and as a recreational parkland and vacant overflow parking for Canada's Wonderland to the present. There are no building structures on-site.

The land uses surrounding the Site consist of a residential subdivision to the north, commercial and residential to the east, commercial retail operations to the southeast, an amusement park to the south and the 400 Highway to the west. According to the City of Vaughan Official Plan, the land use surrounding the Site is listed as 'roads' to the west, 'low-rise residential' to the north, 'low-rise residential and mid-rise mixed use' to the east and 'theme park and entertainment' to the south. The Site was defined as 'major institutional' land use.

The information gathered through available databases, the Site visit and interviews indicates that potentially contaminating activities (PCAs) have been conducted on the subject Site and are related to importation of fill material of unknown quality. PCAs that have been conducted on adjacent Sites within the Study Area include gasoline and associated products storage in fixed tanks at properties located to the southeast of the Site.

Based on the findings of the Phase I ESA which included a thorough records review, Site visit and interview process, areas of potential environmental concern (APECs) exist and therefore further investigation through the completion of a Phase II ESA is warranted.

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	MOE Freedom of Information
	NHIC Search Results
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Appendix B	Field Investigation
	Site Photographs
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2.0 Introduction

2.1 Phase One Property Information

CEG was retained by the City of Vaughan to conduct a Phase I ESA for the future Healthcare Centre property located on the north side of Major Mackenzie Drive West between Jane Street and Highway 400 as well as an area at the north end of the Canada’s Wonderland property (south side of Major Mackenzie Drive West) currently utilized for a parking lot in Vaughan, Ontario (herein referred to as the Site). The Site is currently owned by The City of Vaughan. The legal descriptions and Property Identification Numbers (PINs) for the parcels of land which make of the Site are listed in Table 2-1 below:

Table 2-1 Legal Property Descriptions

Part	Part of Lot	Concession	PIN	Legal Description
1	21	5	All of 03327-0150 (LT)	PCL 18-4 SEC V5; PT LT 21 CON 5 (VGN) PT 5 65R12731 EXCEPT PTS 1 & 2 D-722; T/W PT LT 17 CON 5, PTS 6 & 7, 65R4147 AS IN VA83883; VAUGHAN. RESERVING AN EASEMENT OVER PART 2, PLAN 65R-31845, FOR INGRESS AND EGRESS OVER, ALONG AND UPON THE SAID PART 2, PLAN 65R-31845 AND IN FAVOUR OF THOSE LANDS STILL OWNED BY THE TRANSFEROR, BEING THE LANDS DESCRIBED IN PIN 03329-4191 (LT), PIN 03329-0025 (LT), PIN 03329-0029 (LT) AND PIN 03329-1067 (LT), EXCEPT FOR PART 10, PLAN 65R-31845
2				
3				
4				
5			All of 03327-0842 (LT)	PT W PT OF E1/2 OF LOT 21 CON 5 VAUGHAN PT 22 64R8468; VAUGHAN. RESERVING AN EASEMENT OVER PART 8, PLAN 65R-31845, FOR INGRESS AND EGRESS OVER, ALONG AND UPON THE SAID PART 8, PLAN 65R-31845 AND IN FAVOUR OF THOSE LANDS STILL OWNED BY THE TRANSFEROR, BEING THE LANDS DESCRIBED IN PIN 03329-4191 (LT), PIN 03329-0025 (LT), PIN 03329-0029 (LT) AND PIN 03329-1067 (LT), EXCEPT FOR PART 10, PLAN 65R-31845
6				
7				
8				
9	20	5	Part of 03329-4207 (LT)	PART OF LOT 20, CONCESSION 5 VAUGHAN, DESIGNATED AS PART 10, PLAN 65R-31845, CITY OF VAUGHAN. RESERVING AN EASEMENT OVER THE SAID LANDS FOR INGRESS AND EGRESS OVER, ALONG AND UPON THE SAID LANDS IN FAVOUR OF THOSE LANDS STILL OWNED BY THE TRANSFEROR, BEING THE LANDS DESCRIBED IN PIN 03329-4191 (LT), PIN 03329-0025 (LT) and PIN 03329-0029 (LT) AND THE REMAINDER OF THOSE LANDS IN PIN 03329-1067 (LT)
10				

The owner/client contact information is listed below:

Owner/Client Contact Information

Mr. Paul Jawkowski
 Corporation of the City of Vaughan
 2141 Major Mackenzie Drive West
 Vaughan, ON L6A 1T1

2.2 Objective

The purpose of the Phase I ESA is to identify potential or actual environmental concerns associated with the Site due to current and historical uses. Phase I ESAs may assist in reducing uncertainty related to

potential environmental liabilities and may be used as justification for further investigations of a property. It is our understanding that the Phase I ESA is required in support of an application for draft plan approval on the Site and for the filing of an RSC.

2.3 Site Description

The Site is made up of two irregularly-shaped plots of land. The portion of the Site located in the northwest quadrant of the intersection of Jane Street and Major Mackenzie Drive West is approximately 33 hectares (ha) and the smaller plot of land located to the south of Major Mackenzie Drive West is approximately 2 ha in area. The northern portion of the Site consists of vacant and undeveloped land with roadways, with overgrown grass, brush and some trees. The southern portion of the Site is developed as a parking lot, with its northern extent being covered with manicured grasses and immature trees. The land uses surrounding the Site consist of a residential subdivision to the north, commercial and residential to the east, commercial retail operations to the southeast, an amusement park to the south and the 400 Highway to the west. According to the City of Vaughan Official Plan, the land use surrounding the Site is listed as 'roads' to the west, 'low-rise residential' to the north, 'low-rise residential and mid-rise mixed use' to the east and 'theme park and entertainment' to the south. The Site was defined as 'major institutional' land use.

3.0 Scope of Investigation

The Phase I ESA was carried out by CEG's team of professional and technical personnel trained in site assessment, under the supervision of qualified person, Dr. Muin Husain, Ph.D., P.Geo.

The Phase I ESA was conducted in accordance with the guidelines and procedures established in the CSA document Z768-01 and incorporated the requirements of *O.Reg. 153/04* as amended by *O.Reg. 269/11*. The scope of the Phase I ESA of the subject property includes the following activities:

- A records review for the Site and adjacent properties;
- Interviews and Site visit;
- An evaluation of the information gathered;
- The preparation of a Phase I ESA Report; and
- The submission of the Phase I ESA Report.

3.1 Background and Records Review

As part of the background and records review, the following searches were conducted for the Site:

- Fire Insurance Plans (FIP);
- Chain of Title;
- City Directory for the Site and surrounding properties;
- Environmental Reports;
- EcoLog ERIS Report for a radius of 250 metres (m) around the Site;
- Ministry of the Environment (MOE) Freedom of Information search; and
- Technical Standards and Safety Authority (TSSA) Fuel Tanks Search.

The following items relating to the physical setting of the Site were included in the investigation:

- Aerial photos ranging from 1946 to the present;
- Geology including topography, physiography, bedrock and surficial geology;

- Areas of Natural Significance including water bodies, vegetation communities and rare species for a 1 kilometre (km) radius; and
- Water well records for a 1 km radius.

3.2 Interview

An Interview was conducted via telephone with Mr. Theo Bosch, Director of Safety and Loss Prevention at Canada's Wonderland on November 7, 2013. Mr. Bosch is familiar with the Site as it was previously owned by Canada's Wonderland. Details of the interview are provided in Section 5.0.

3.3 Site Visit

A Site visit was conducted by CEG staff trained in site assessment to assess the actual Site conditions. The Site visit encompassed the subject property and surrounding areas. At the Site, observations were made with respect to:

- The physical and environmental characteristics of the Site including topography, surface water drainage and vegetation;
- Structures and improvements at the Site;
- Materials stored, used or discarded at the Site; and
- Signs of potential environmental impacts (i.e. areas of stressed vegetation, former structures, staining and presence of fill and/or debris materials).

Adjoining properties were also identified and visually assessed from the property boundaries or other publicly accessible areas. Any indicators of potential environmental concern relating to the subject property were carefully documented. Site photographs are included in **Appendix B**.

3.4 Evaluation and Interpretation of Information

Information collected through the records review process, the interview and the Site visit was used to establish the current and past uses of the Site and surrounding properties. PCAs were flagged and used to identify APECs.

A Conceptual Site Model was developed based on our understanding of the Site features, pathways and receptors for potential impacts. The findings from the investigation were then used to comment on the environmental condition of the Site. Recommendations are provided and identify applicable best management practices and the need for further environmental investigation.

4.0 Records Review

The records review includes the review of historical database searches, information pertaining to the physical setting of the Site such as geology, aerial photography, areas of natural significance and well records.

A 250 m radius around the Site was investigated for PCAs as well as environmentally significant features. A larger radius of 1 km was used for the investigation related to groundwater, areas of natural significance and rare or threatened species.

The Phase I ESA Site would not be considered an enhanced property since it has not been historically used in whole or in part for industrial purposes.

Information obtained and reviewed as part of the database searches for the Site and adjacent properties are listed in Table 4-1. The complete records are provided in **Appendix A**.

Table 4-1 Summary of Records Search

Record Searched	Date of Record(s) Found	Source
FIP	No records found	EcoLog ERIS
City Directories	1962-1999	
Complete ERIS Report	Refer to Section 4.2.1	
Freedom of Information	Refer to Section 4.2.2	MOE
Registered Fuel Storage Tanks	Refer to Section 4.2.3	TSSA
Chain of Title	1802-Present	Domson's Title Search

4.1 General

4.1.1 Phase I Study Area Determination

The Study Area for this Phase I ESA consists of all lands within a 250 m radius of the property boundary as defined in O.Reg 153/04. The lands in the local area of the Site consist mostly of commercial or residential land uses. For the purposes of the Phase I ESA, the Study Area includes all properties located wholly or partly, 250 m from the boundary of the Site.

4.1.2 First Developed Use Determination

According to the Chain of Title search, the first documented developed use of the Site was in 1802 when the southern parcel of land was transferred from the Crown to John McDonald. The northern parcel of land was transferred from the Crown to Joseph Mathewson in 1854. Based on available information, it is likely that the property was used for agricultural purposes until 1975 when the land was transferred to Family Leisure Centres of Canada Limited, which became Canada's Wonderland Limited in 1980.

4.1.3 Fire Insurance Plans

A request was made to EcoLog ERIS to conduct a search of available FIP for the Site and surrounding properties. The report, shown in **Appendix A**, revealed no FIP records for the Site and surrounding area were recovered.

4.1.4 Chain of Title

A request was made to Domson's Title Search to conduct a chain of title search for the Site. The complete chain of title search is shown in **Appendix A**. The search for the Site revealed that it is divided into two (2) separate parcels. Complete records date back to 1802 (first developed use). The records indicated that the Site had primarily been transferred to and from private individuals until 1975. Table 4-2 and Table 4-3 list the transactions (1802-present).

Table 4-2 Chain of Title from 1854 – Part Lot 21 Concession 5

Date	Document Type	Party From	Party To
Sep 1854	Patent	Crown	Joseph Mathewson
Mar 1936	Deed	Joseph Mathewson – estate	Anthony Bowes
Apr 1947	Deed	Anthony Bowes	Norman Lewis

Table 4-2 Chain of Title from 1854 – Part Lot 21 Concession 5

Date	Document Type	Party From	Party To
May 1948	Deed (Root 1)	Norman Lewis	Arthur & Elmer McKinnon
May 1948	Deed	Arthur & Elmer McKinnon	Benjamin Bromley
Oct 1948	Deed (Root 2)	Norman Lewis	George Bishop
Jul 1951	Deed	Benjamin Bromley	Kenneth Tilley
Apr 1962	Deed	George Bishop	Findlay Dairy Limited
Nov 1973	Deed	Kenneth Tilley – estate	Mildred Tilley
Jun 1975	Deed	Mildred Tilley	Moffat Dunlop, in trust
Sep 1975	Deed	Moffat Dunlop, in trust	Family Leisure Centres of Canada Limited
Jan 1976	Deed	Findlay Dairy Farms Limited	Family Leisure Centres of Canada Limited
Oct 1989	Deed	Canada’s Wonderland Limited (formerly Family Leisure Centres)	J.D.S. (Northeast) Limited
Jun 1991	Deed	J.D.S. (Northeast) Limited	308326 Ontario Limited
Jun 1991	Deed	308326 Ontario Limited	J.D.S. (Northeast) Limited
Jun 1995	Deed (Power of Sale)	The Toronto-Dominion Bank (J.D.S. (Northeast) Limited defaulted)	809623 Ontario Limited
Sep 1998	Name Change	809623 Ontario Limited	Viacom Entertainment Canada Inc.
May 2006	Name Change	Viacom Entertainment Canada Inc.	CBS Canada Holdings Inc.
Jun 2006	Deed	CBS Canada Holdings Inc.	3147012 Nova Scotia Company
Jun 2006	Name Change	3147012 Nova Scotia Company	3147193 Nova Scotia Company
Aug 2006	Name Change	3147193 Nova Scotia Company	Canada’s Wonderland Company
Aug 2009	Deed	Canada’s Wonderland Company	The Corporation of The City of Vaughan

Table 4-3 Chain of Title from 1802 – Part Lot 20 Concession 5

Date	Document Type	Party From	Party To
Dec 1802	Patent	Crown	John McDonald
Nov 1843	Deed	John McDonald – estate	John Langstaff
May 1851	Deed	John Langstaff	Donald McKinnon
Sep 1867	Deed	Donald McKinnon	Joseph Mathewson
Mar 1936	Deed	Joseph Mathewson – estate	Anthony Bowes
Apr 1947	Deed	Anthony Bowes	Norman Lewis
Apr 1947	Deed	Norman Lewis	Elmer & Arthur McKinnon
Apr 1962	Deed	Elmer & Arthur McKinnon	Findlay Dairy Limited
Sep 1975	Deed	Findlay Dairy Farms Limited	Family Leisure Centres of Canada Limited
Mar 1980	Name Change	Family Leisure Centres of Canada Limited	Canada’s Wonderland Limited
Jan 1989	Deed	Canada’s Wonderland Limited	Viacom Entertainment Canada Inc.
May 2006	Name Change	Viacom Entertainment Canada Inc.	CBS Canada Holdings Inc.

Table 4-3 Chain of Title from 1802 – Part Lot 20 Concession 5

Date	Document Type	Party From	Party To
Jun 2006	Deed	CBS Canada Holdings Inc.	3147012 Nova Scotia Company
Jun 2006	Name Change	3147012 Nova Scotia Company	3147193 Nova Scotia Company
Aug 2006	Name Change	3147193 Nova Scotia Company	Canada's Wonderland Company
Aug 2009	Deed	Canada's Wonderland Company	The Corporation of The City of Vaughan

The Chain of Title indicated that the Site was owned by individual land owners until 1962 when it was transferred to Findlay Dairy Limited. It is expected that agricultural activities continued on-site until approximately 1975-1980, after which the property was owned by Canada's Wonderland Limited and used mostly for overflow parking space. The remainder of the Site was left vacant. The most recent transaction was in 2009 when the Site was transferred from Canada's Wonderland Company to the current owner, The Corporation of The City of Vaughan. Environmental concerns related to ownership of the property are not anticipated to exist based on the available information provided.

4.1.5 City Directory

A request was made to EcoLog ERIS to conduct a city directory search of available records for the Site and adjacent properties. The search included the timeframe between 1962 and 1999. The complete city directory search is shown in **Appendix A**. Table 4-4 summarizes the findings from the directory search.

Table 4-4 City Directory Search Results

Property	Year	Occupancy Description
Part Lot 20 & 21, Concession 5 (the Site)	1962-1999	Address Not Listed
2937 Major Mackenzie Drive West (southeast of the Site)	1962-1999	Address Not Listed
2953 Major Mackenzie Drive West (southeast of the Site)	1962-1999	Address Not Listed
2963 Major Mackenzie Drive West (southeast of the Site)	1962-1999	Address Not Listed
3000 Major Mackenzie Drive West (southeast of the Site)	1962-1999	Address Not Listed
3100 Major Mackenzie Drive West (southeast of the Site)	1962-1999	Address Not Listed
9580 Jane Street (south of the Site)	1999	-Hartwell Electrical -Janda Products -Wonderland Canada's Inc.
	1989-1994	-Wonderland Canada's Inc.
	1984	-Wonderland Canada's Inc. -TD Bank -Kingswood Music Theatre
	1962-1979	Address Not Listed
9855 Jane Street (southeast of the Site)	1962-1999	Address Not Listed
161 Cityview Boulevard (west of the Site)	1962-1999	Address Not Listed

Potential historic environmental concerns stemming from the usage of the Site were not identified. The city directory records included information related to the adjacent property to the south for the years 1984-1999. This property was occupied by a number of named companies including Hartwell Electrical, Janda Products, TD Bank, Kingswood Music Theatre and Wonderland Canada's Inc. None of the other adjacent properties were listed in the city directories. PCAs were not identified on or off-site as a result of the city directory search.

4.1.6 Survey Plan

The Plan of Survey provided and dated August 19, 2009 indicated that the Site is composed of ten (10) parts. Parts 1-9 make up the northern portion of the Site with an area of approximately 33 ha and are a part of Lot 20 Concession 5. Parts 1-6 have the PIN # of 03327-0150 (LT) and Parts 7-9 have the PIN # of 03327-0842 (LT). Part 10 makes up the southern portion of the Site and is a part of Lot 21, Concession 5 and has the PIN # of 03329-1067 (LT) with an area of approximately 2 ha.

The Survey Plan indicated that there is a one-storey concrete building located to the southeast corner of the Site, residential single family dwellings to the north as well as an easement and a cell phone communications tower located to the southwest of the Site.

No other details of environmental significance were identified.

It was discovered during the Phase I ESA process that PIN 03329-1067 (LT) is an inactive PIN and has been replaced by PIN 03329-4207 (LT).

4.1.7 Environmental Reports

Previously completed Environmental reports were not available for the Site.

4.2 Environmental Source Information

4.2.1 EcoLog ERIS Report

A request was made to EcoLog ERIS to conduct a search of their available federal, provincial and public data for a 250 m radius around the Site boundaries. A search radius of at least 250 m around the Site is required by *O.Reg. 153/04*. The following data inventories were discovered to contain relevant data for the Site and the Study Area:

- Borehole (1875-2011)
- Certificates of Approval (1985-2011)
- ERIS Historical Searches (1999-2013)
- List of TSSA Expired Facilities (Current to 2012)
- Fuel Storage Tank (Current to 2011)
- Ontario Regulation 347 Waste Generators Summary (1986-2012)
- Pesticide Register (1988-2013)
- Private and Retail Fuel Storage Tanks (1989-1996)
- Retail Fuel Storage Tanks (1999-2010)
- Ontario Spills (1988-2012)
- Water Well Information System (1955-2013)

The complete EcoLog ERIS Report can be found in **Appendix A**. Table 4-5 summarizes the findings of the report.

Table 4-5 EcoLog ERIS Search Results

Property	Location in Relation to Site	Record Found	Number of Records	Abridged Description of Records
Part Lots 20 & 21, Concession 5, Vaughan	Site	Water Well Information System (WWIS)	3	1. Water supply well (livestock), 50.6 m deep, static water level at 18.3 m 2. Water supply well (domestic), 50.3 m deep, static water level at 18.3 m 3. Water supply well (livestock), 48.8 m deep, static water level at 5.5 m
		ERIS Historical Searches (EHS)	1	2006 – Custom report
		Borehole (BORE)	1	Total depth = 0.9 m
No address	Southeast	WWIS	1	Abandoned well, 61 m deep, no static water level recorded
Intersection of Pietro Drive and Grand Valley Boulevard	North	Ontario Spills (SPL)	1	2000 – Oil on construction site from oil changes done by workers, amount unknown. Environmental impact possible.
No address	North	WWIS	1	Water supply well (livestock), 16.8 m deep, static water level at 7.6 m
90 Mast Road	North	Ontario Regulation 347 Waste Generators Summary (GEN)	1	Inorganic laboratory chemicals Organic laboratory chemicals Waste compressed gases
268 Treasure Road	North	Pesticide Register (PES)	2	Operator
No address	Southeast	WWIS	1	Water supply well, 42 m deep, static water level at 18.3 m
No address	Southeast	WWIS	1	Abandoned well, 30.5 m deep, no static water level recorded
No address	North	WWIS	1	Water supply well (livestock), 12.5 m deep, static water level at 7.6 m
No address	Southeast	BORE	1	Total depth = 0.8 m

Table 4-5 EcoLog ERI Search Results

Property	Location in Relation to Site	Record Found	Number of Records	Abridged Description of Records
3100 Major Mackenzie Drive West	Southeast	Certificate of Approval (CA)	2	2009 – Industrial sewage works (Approved) 2001 – Municipal and private sewage (Approved)
		EHS	1	2001 – Basic report
		List of TSSA Expired Facilities (EXP)	10	6 x FS Liquid fuel tank 4 x FS Piping
		Fuel Storage Tank (FST)	5	1 x 22,730 L double wall UST – diesel (installed 2001) 3 x 45,400 L double wall UST – gasoline (installed 2001) 3 x 22,700 L liquid fuel single wall UST – gasoline (installed 1992) 2 x 13,600 L liquid fuel single wall UST – gasoline (installed 1992) 1 x 22,700 L liquid fuel single wall UST – diesel (installed 1992)
		GEN	1	No information
		Private and Retail Fuel Storage Tanks (PRT)	1	145,200 L retail tank
		Retail Fuel Storage Tanks (RST)	4	Service stations – gasoline, oil and natural gas
		SPL	2	1989 – 25 L of diesel fuel to concrete, cleaned up. 2010 – 20 L gasoline to ground, cleaned up. Environmental impact not anticipated.
296 Discovery Trail	North	CA	1	2007 – Waste management systems (Approved)
10150 Jane Street	East	EXP	3	2 x FS Propane tank 1 x FS Propane refill centre
		PRT	1	4,000 L retail tank
No address	North	WWIS	1	Abandoned well, 88.7 m deep, no static water level recorded
No address	Southeast	BORE	1	Total depth = 2.4 m, static water level at 0.2 m
No address	Southeast	BORE	1	Total depth = 2.4 m
Intersection of Jane Street and Major Mackenzie Drive West	Southeast	CA	1	1999 – Municipal sewage (Approved)
		SPL	1	2005 – Unknown material from hole in the ground. Environmental impact possible.
No address	South	WWIS	1	Water supply well (livestock), 86.9 m deep, static water level at 19.8 m
No address	Southeast	WWIS	1	No information
No address	Southeast	WWIS	1	No information

Table 4-5 EcoLog ERI Search Results

Property	Location in Relation to Site	Record Found	Number of Records	Abridged Description of Records
No address	West	WWIS	1	Abandoned well – no other information
No address	North	WWIS	1	Water supply well (livestock), 14.6 m deep, static water level at 4.6 m
3000 Major Mackenzie Drive West	Southeast	EHS	3	2001 – Site report 2010 – Standard report 2013 – Standard select report
		EXP	1	FS Cylinder exchange
		FST	5	2 x 22,700 L single wall UST – gasoline (installed 1989) 2 x 36,000 L single wall UST – gasoline (installed 1989) 1 x 46,000 L single wall UST – gasoline (installed 1989)
		GEN	1	Light fuels
		PRT	1	163,656 L retail tank
		RST	3	Service stations – gasoline, oil and natural gas
No address	Southeast	WWIS	1	Test hole (monitoring), 6.1 m deep, static water level not recorded
North side of Major Mackenzie Drive West, just east of Jane Street	Southeast	SPL	1	2009 – 20 L oil/gasoline/coolant to road. Environmental impact possible.
Major Mackenzie Drive West and Highway 400	Southwest	EHS	1	2005 – Custom report
		SPL	3	1994 – 450 L diesel fuel to Highway 400 from saddle tank. Environmental impact possible. 2000 – Transport truck diesel runoff onto Highway 400 shoulder, cleaned up. Environmental impact confirmed. 2001 – 80-90 L diesel fuel to highway, cleaned up. Environmental impact not anticipated.
Intersection of Roseheath Drive and Jane Street	North	CA	1	1994 – Municipal water (Approved)
2943 Major Mackenzie Drive West	Southeast	PES	3	Vendor, limited vendor
No address	Southeast	WWIS	1	No information
No address	Southeast	WWIS	1	Water supply well (domestic), 53.3 m deep, static water level at 30.5 m
2810 Major Mackenzie Drive West	Southeast	EHS	1	2012 – Standard report
		GEN	3	Pathological wastes
		PES	2	Vendor, limited vendor
Intersection of Kelso Crescent and Kenmore Avenue West	Northeast	CA	2	1995 – Municipal water, municipal sewage (Approved)
No address	Southeast	WWIS	1	Abandoned well (not used), 39.6 m deep, static water level not recorded

Table 4-5 EcoLog ERIS Search Results

Property	Location in Relation to Site	Record Found	Number of Records	Abridged Description of Records
No address	Southeast	WWIS	1	Water supply well (domestic), 24.4 m deep, static water level at 11.3 m
Block 60, Cityview Boulevard	Northwest	EHS	1	2012 – Custom report

The EcoLog ERIS report identified five (5) results relating to the Site including three (3) water wells located on-site, a borehole and a previous ERIS search conducted for the Site. No other records were found for the Site. No environmental concerns were identified for the Site through the EcoLog ERIS report.

Environmental concerns were identified through the EcoLog ERIS search for four (4) nearby locations including a reported spill of oil to the north of the Site, two (2) gasoline service stations with underground fuel storage tanks to the southeast of the Site and reported spills of various liquids at the intersection of Major Mackenzie Drive West and Highway 400 to the southwest of the Site. Based on the proximity of these activities, the locations identified may present a potential concern for soil and/or groundwater impacts on-site.

4.2.2 Freedom of Information

A request was made to the MOE - Freedom of Information and Protection of Privacy office on October 24, 2013 for information regarding all incidents or activities of environmental significance which have occurred on the subject Site.

A response was received from the MOE on November 1, 2013 indicating that no records were found for the Site. Correspondence with the MOE is attached in **Appendix A**.

4.2.3 Fuel Storage Tanks

A request was made on October 10, 2013 to the TSSA regarding records of storage tanks present on the Site. The TSSA acknowledged that there were no fuel storage tanks registered for the Site. The associated correspondence is attached in **Appendix A**.

4.3 Physical Setting Sources

The data obtained and reviewed in order to describe the physical setting for the Site are listed in Table 4-6. Figures located at the end of this report correspond to these findings.

Table 4-6 Physical Setting Resources

Record Searched	Date of Record(s) Found	Source
Aerial Photography	1946, 1960, 1974, 1988	National Airphoto Library, 2013
	2009	Google Earth, 2013.
Topography	-	Ministry of Natural Resources
Physiography	2008	Chapman, L.J. and Putnam, D.F. 2007. Physiography of Southern Ontario; Ontario Geological Survey, Miscellaneous Release-Data 228.
Bedrock Geology	2005	Ontario Geological Survey. 2005. Bedrock Geology of Ontario Seamless Coverage Data Set 6.

Record Searched	Date of Record(s) Found	Source
Aerial Photography	1946, 1960, 1974, 1988	National Airphoto Library, 2013
	2009	Google Earth, 2013.
Surficial Geology	1997	Ontario Geological Survey, 1997. Quaternary Geology, seamless coverage of the province of Ontario: Ontario Geological Survey, Data Set 14.
Areas of Natural Significance	-	Land Information Ontario & National Heritage Information System. Ministry of Natural Resources, 2013.
Well Records	-	MOE (Water Well Data), 2013.

4.3.1 Aerial Photographs

Aerial photographs are used to provide a visual chronology of previous land uses on the subject Site and on the neighbouring properties. The earliest aerial photo available was dated 1946 from the National Airphoto Library. Other aerial photographs ordered included those available from the National Airphoto Library dated 1960, 1974 and 1988 and Google Earth Pro, dated 2012 (attached as **Figures 8A to 8E**). Observations from these photographs are summarized in **Error! Reference source not found.:**

Table 4-7 Aerial Photography Findings

Property	Observations
Subject Site	1946, 1960, and 1974 – The Site is used for rural residential and agricultural purposes. The central portion of the Site contains what appears to be building structures used for farming purposes. The remainder of the Site contains agricultural land. No items of environmental concern are apparent from these aerial photographs.
	1988 – The Site is vacant with what appear to be roads under construction. No building structures are located on-site.
	2012 – The Site appears to be in similar configuration as observed during the Site visit.
East of the Site	1946 – The area to the east of the Site appears to be used for agricultural purposes.
	1960 and 1974 – The area to the east of the Site still appears to be used for agricultural purposes. An aviation runway is visible to the east of the Site. A watercourse is also visible to the east of the aviation runway.
	1988 – The area immediately to the east of the Site remains similar to previous aerial photos; however a residential development has been constructed further to the east.
	2012 – The majority of the area to the east of the Site has been developed with residential buildings. A commercial plaza is located directly east of Jane Street. A gasoline service station is also located adjacent to the southeast of the Site.
West of the Site	1946 – The area to the west of the Site appears to be used for agricultural purposes.
	1960, 1974, and 1988 – The area to the west of the Site still appears to be used for agricultural purposes. However, Highway 400 has been constructed and travels in a north-south direction immediately adjacent to the west of the Site.
	2012 – The area to the west of the Site has been developed with residential dwellings.
North of the Site	1946, 1960, 1974 and 1988 – The lands to the north of the Site are used for agricultural purposes. Building structures are visible on the property directly to the north of the Site and appear to be used for agricultural or rural residential purposes.
	2012 – The area to the north of the Site has been developed with residential dwellings. Two stormwater management ponds are visible north of the Site. A property, which appears to be a school or other institutional building, is located approximately 200 m to the north of the Site.

Table 4-7 Aerial Photography Findings

Property	Observations
South of the Site	1946, 1960 and 1974 – The lands to the south of the Site are used for agricultural purposes. A woodlot is located to the southwest of the Site. Two properties to the south of the Site contain building structures which appear to be used for agricultural or rural residential purposes.
	1988 and 2012 – The area to the south of the Site is occupied by the Canada’s Wonderland amusement park as well as a large parking lot.

4.3.2 Topography

An Ontario Base Map containing topographic data of the area around the Site suggests that there is a general on-site slope down towards the central portion of the Site. There is a general downward slope on a local scale towards the south and southwest direction and on a regional scale to the south towards Lake Ontario as seen in **Figure 2**.

4.3.3 Physiography

Information obtained from the Ontario Geological Survey indicated that the Site is located within the Peel Plain Physiographic Region. According to Chapman and Putnam, 1984, the Peel Plain Physiographic Region in this area is composed primarily of a veneer of clay through which the Credit, Humber, Don and Rouge Rivers have cut deep valleys (Chapman and Putnam, 1984). A Physiography map is presented as **Figure 3**.

4.3.4 Bedrock Geology

The bedrock underlying the Site is composed of the Georgian Bay Formation, Blue Mountain Formation, Billings Formation, Collingwood Member and Eastview Member. The bedrock geology was formed in the Upper Ordovician epoch and consists of shale, limestone, dolostone and siltstone (Ontario Geological Survey, 1991). A Bedrock Geology map is presented as **Figure 4**.

The subsurface information obtained from EcoLog ERIS’s Water Well Information System search and the MOE Well Records search was used to estimate that the bedrock at the Site is located at about 100 mbgs.

4.3.5 Surficial Geology

The surficial geology of the Site consists of glaciolacustrine-derived silty to clayey till and interbedded flow till, rainout deposits and silt and clay. The majority of the surficial soils on-site are composed of silt loam, silty clay loam, clay deposits. A map indicating the surficial geology of the Site is presented in **Figure 5**.

Surficial geology information obtained from EcoLog ERIS’s Water Well Information System search and the MOE Well Records search indicated that the surficial soils in the vicinity of the Site consist mostly of silt and clay with hard clay and gravel at deeper depths.

4.3.6 Fill Materials

Areas of fill may be recognized by unusual surface formations or unnatural topography. Fill material from construction or demolition activities often differs in colour, texture and drainage properties from

native materials and may include such things as construction debris, municipal solid waste, or industrial waste products such as slag, cinders or ash.

The indication from the EcoLog ERIS MOE well searches is that there are no fill materials located on-site. However, it is possible that fill materials may exist on-site as evidenced through the presence of the soil berms located on the eastern and southern portions of the Site located to the north of Major Mackenzie Drive West. A similar feature was observed on the northern portion of the southern portion of the Site south of Major Mackenzie Drive West.

4.3.7 Groundwater Flow Direction

Regional groundwater flow in the area typically flows in a southerly direction towards Lake Ontario. Local shallow groundwater likely reflects the topography and flows in a south and southwest direction towards tributaries of the West Don River.

4.3.8 Water Bodies and Areas of Natural Significance

The Site is located within the Don River Watershed, under the jurisdiction of the Toronto and Region Conservation Authority (TRCA). A small watercourse was identified at the western portion of the Site and tributaries of the Don River flow within a 1 km radius of the Site. A map of the water bodies located within a 1 km radius of the study area is shown in **Figure 6**.

The National Heritage Information Centre (NHIC) was queried for areas of natural significance and for species of concern for a 1 km radius around the Study Area. The search results did not identify any areas of natural significance within this buffer; however the search identified the following species of concern:

- Blanding's Turtle (*Emydoidea blandingii*)
- Jefferson X Blue-spotted Salamander, Jefferson genome dominates (*Ambystoma hybrid pop. 1*)
- Redside Dace (*Clinostomus elongatus*)
- Painted Skimmer (*Libellula semifasciata*)
- Scarlet Beebalm (*Monarda didyma*)

In addition, the Species at Risk in Ontario identified the Blanding's Turtle as a 'threatened species' and the Redside Dace as an 'endangered species'. As the Site is located within an urban setting, it is unlikely that the habitat is suitable for either of these species. The search results are included in **Appendix A**.

4.3.9 Well Records

A search request for water wells was made to the MOE for a 1 km radius around the Site. The search results returned 56 water wells in the area. A summary of well records from the search is presented in **Appendix A**. A location map for all wells in the area is presented in **Figure 7**. The following is a summary of well use, as reflected in the search:

Table 4-8 Well Records

Well Use	Total within 1 km	Total Wells on Site
Abandoned/Not Used	13	0
Commercial	1	0
Domestic	14	1
Livestock	8	2

Table 4-8 Well Records

Well Use	Total within 1 km	Total Wells on Site
Monitoring/ Test Hole	11	1
Public	1	0
Unknown	8	0
Total	56	4

Of the 56 wells within a 1 km radius of the Site, four (4) wells were located on-site. The soils encountered at these wells generally consisted of loam to an approximate depth of 4.5 m followed by clay deposits. The depth to groundwater was referenced at depths ranging from 5.5 to 18.5 mbgs.

A review of the MOE water well records indicates that there is one (1) public well within a 1 km radius of the Site. According to the City of Vaughan website, the city gets its water primarily from Lake Ontario.

A well summary detailing each well identification, easting and northing, the city the well is located in, contractor identification, type of well and use of well is attached in **Appendix A**.

4.3.10 Site Operating Records

As the Site has never been developed, no Site Operating Records were available for review.

5.0 Interviews

An interview regarding the historical and present uses of the Site was conducted via telephone on November 7, 2013 with Mr. Theo Bosch, Director of Safety and Loss Prevention at Canada's Wonderland. All responsible efforts were made to interview Site personnel with detailed knowledge of the Site. Below is a summary of the interview.

- The Site was utilized as agricultural land prior to being acquired by Canada's Wonderland and has since been used mainly for overflow parking for the park. It was used as a baseball diamond from 1980 to 2003/04.
- Vehicle and/or equipment maintenance has not taken place on-site.
- Manufacturing and processing activities have not been carried out on-site.
- There have not been any above-ground or underground fuel storage tanks on the property.

Based on the interview conducted with Site personnel, environmental concerns were not identified on-site. Any new information pertaining to the Site will be included in the final submission of the Phase I ESA report.

Relevant information provided to CEG through the interview process has also been summarized in the following sections.

6.0 Site Reconnaissance

6.1 General Requirements

The Phase I ESA Site visit was conducted on October 17, 2013 from 10:00 am to 12:00 pm under sunny weather conditions by Andre Lyn, B.E.S, P.Geo (Ltd.), Environmental Specialist, under the supervision of

Qualified Person, Muin Husain, Ph.D., P.Geo. Assessor qualifications are included in Section 9 of this report. On the day of the Site visit, CEG personnel were unaccompanied.

The Site was inspected for items of environmental concern. Photographs and field notes of various points of interest were also taken during the Site visit and are presented in **Appendix B**.

At the time of the Site visit, the northern portion of the Site (north of Major Mackenzie Drive West) was vacant undeveloped lands and was not being used for industrial purposes. The southern portion of the Site (south of Major Mackenzie Drive West) was utilized as a parking lot which was primarily covered with asphalt. The northern portion of this area was covered with manicured grass and trees.

6.1.1 Site Description

The Site is made up of two irregularly-shaped plots of land. The portion of the Site located in the northwest quadrant of the intersection of Jane Street and Major Mackenzie Drive West is approximately 33 ha and the smaller plot of land located to the south of Major Mackenzie Drive West is approximately 2 ha in area. The northern portion of the Site consists of vacant and undeveloped land with roadways, with overgrown grass, brush and some trees. The southern portion of the Site is developed as a parking lot, with its northern extent being covered with manicured grasses and immature trees. The land uses surrounding the Site consist of a residential subdivision to the north, commercial and residential to the east, commercial retail operations to the southeast, an amusement park to the south and the 400 Highway to the west. According to the City of Vaughan Official Plan the land use surrounding the Site is listed as 'roads' to the west, 'low-rise residential' to the north, 'low-rise residential and midrise mixed use' to the east and 'theme park and entertainment' to the south. The Site was defined as 'major institutional' land use.

6.1.2 Adjacent Lands

The properties adjacent to the Site are described in Table 6-1 below:

Table 6-1 Adjacent Properties

Property	Description
North	Predominantly residential and a stormwater management pond.
South 9580 Jane Street	Canada's Wonderland Amusement park
East	Residential single family subdivision and retail commercial
West	Highway 400
Southeast	ESSO Gasoline service station and Tim Horton's

6.2 Specific Observations at Phase One Property

6.2.1 Structures

No structures were present on the Site at the time of the Site visit with the exception of three (3) small parking lot attendant booths (vacant) constructed of wood and a baseball diamond back stop made up of metal fencing and posts.

6.2.2 Below-ground Structures

No below-ground structures were noted.

6.2.3 Storage Tanks

No storage tanks were observed to be present on the Site.

6.2.4 Water Supply

Since the Site is not developed, it is not serviced with municipal water supply.

6.2.5 Servicing

Based on the presence of numerous light standards, the Site is anticipated to be serviced with electricity. No other utilities were observed to be present.

6.2.6 Underground Utilities

Based on the presence of numerous light standards, the Site is anticipated to be serviced with electricity. No other underground utilities were observed to be present.

6.2.7 Exit and Entry Points

The Site is undeveloped and is accessible via driveway approximately 150 m north of the intersection of Jane Street and Major Mackenzie Drive West.

6.2.8 Heating and Cooling Systems

Heating and cooling systems were not observed on the Site at the time of the Site visit.

6.2.9 Drains and Sumps

Drains and sumps were not observed on the Site.

6.2.10 Water Bodies

No water bodies were observed on-site during the Site investigation.

6.2.11 Wells

Wells were not observed on the Site during the Site visit.

6.2.12 Sanitary Servicing

The Site is not municipally supplied for sanitary services by the City of Vaughan.

6.2.13 Hazardous Materials and Designated Substances

Designated substances are substances which are specifically regulated under the *Ontario Occupational Health and Safety Act* and have special requirements with respect to their handling and management. These substances are asbestos, lead, acrylonitrile, arsenic, benzene, coke oven emissions, ethylene oxide, isocyanates, mercury, silica and vinyl chloride. As the Site is not developed with building structures, designated substances are not anticipated to be present.

Asbestos Containing Materials

Asbestos-containing materials (ACMs) were commonly used in the construction industry for their strength and ability to withstand high temperatures between the 1930s to the mid 1970s. Materials that

may contain asbestos include drywall joint compound, mechanical insulation, roofing materials, floor and ceiling tiles and fire doors.

As the Site is not developed with building structures, ACMS were not observed and are not anticipated to be present.

Lead

Lead is potentially present in buildings as an integral component of plumbing materials as well as within older painted surfaces.

As the Site is not developed with building structures, lead-containing substances were not observed and are not anticipated to be present.

Ozone Depleting Substances

Ozone depleting substances (ODSs) are typically used as coolants in refrigerants and air-conditioning equipment and as blowing agents in foam-product manufacturing. The release from cooling equipment can be caused by leaks as well as during installation and servicing.

As the Site is not developed with building structures, ozone depleting substances were not observed and are not anticipated to be present.

Silica

Silica is a designated substance that occurs naturally in the environment. Construction materials such as sand, sandstone, granite, clay and concrete and masonry products contain silica. Disturbance of silica in the form of dust would only be a health and safety issue for workers during future construction and demolition activities. Construction/demolition related activities that disturb silica include grinding, cutting, drilling, scraping or crushing of silica-containing materials.

Silica in the form of concrete was observed on the Site. Precautions shall be taken in accordance to *O.Reg. 845/90* (amended by *O.Reg. 391/00*) and the Ministry of Labour Guideline Silica on Construction Projects September 2004, to prevent inhalation of silica dust during its removal.

Mercury

Mercury is toxic, persistent and has a tendency to bioaccumulate in the environment. Therefore, it is listed in Schedule I of the Canadian Environmental Protection Act, 1999 (CEPA), the List of Toxic Substances. Mercury is regulated by *O.Reg. 844/90* (amended by *O.Reg. 390/00*) to protect the health and safety of workers who will come into contact with mercury. In addition, the disposal of mercury is regulated by *O.Reg. 347/90* General Waste Management, as amended by *O.Reg. 558/00*.

As the Site is not developed with building structures, mercury-containing equipment was not observed and are not anticipated to be present.

Polychlorinated Biphenyls

PCBs may refer to one, or any combination of 209 specific chemicals that are similar in structure. They are extremely persistent, do not break down easily on their own and they are difficult to destroy. PCBs were first manufactured in 1929. For many decades, they were used widely as ingredients in many industrial materials such as sealing and caulking compounds, inks and paint additives. PCBs were also used to make coolants and lubricants for certain kinds of electrical equipment, such as transformers, ballasts and capacitors. With high levels of exposure, PCBs can accumulate in the human body and remain there for many years.

As the Site is not developed with building structures, PCBs were not observed and are not anticipated to be present.

Urea Formaldehyde Foam Insulation

Between 1970 and 1980 urea formaldehyde foam insulation (UFFI) was sold and used as alternative foam insulation for a variety of construction projects. It was typically applied by injecting foam into areas such as behind walls, where it expanded. It was often injected through small holes uniformly spaced in the exterior wall cavity. The use of UFFI was banned in 1980 by the federal *Hazardous Products Act* (1976) due to noxious gases released during its use/breakdown.

No UFFI was observed during the Site investigation.

Mould

Mould is considered a health concern and therefore indicators of the presence of mould were also investigated during the Site visit.

As the Site is not developed with building structures, mould was not observed are not anticipated to be present.

Radon

The decay of uranium to radium and radon gas can be found in areas of bedrock containing black shale and/or granite. The accumulation of radon gas can be harmful when collected in confined spaces such as basements. Based on the Site geology available, there is no black shale and/or granite in the subsurface geology. Therefore there are no environmental concerns relating to radon gas emissions from these rocks.

6.2.14 Unidentified Substances

No unidentified substances were observed during the Site investigation.

6.2.15 Hazardous Materials

Hazardous materials were not observed on-site.

6.2.16 Ground Surface

The ground cover at the Site consisted of grass, brush, trees, driveways and a parking lot.

6.2.17 Surface Stains and Stressed Vegetation

The presence of surface stains and stressed vegetation was not observed.

6.2.18 Railway Lines

Railway lines were not observed at the Site.

6.2.19 Fill and Debris

It is possible that fill materials exist in the Site as evidenced through the presence of the soil berms located on the eastern and southern portions of the Site located to the north of Major Mackenzie Drive West. A similar feature was observed on the northern portion of the southern portion of the Site south of Major Mackenzie Drive West.

6.2.20 Noise and Odour

Noise originating from vehicular traffic was noticeable. Odours were not encountered on the Site during the Site visit.

7.0 Review and Evaluation of Information

7.1 Current and Past Uses

Table 7-1 summarizes the review of information from the Chain of Title, City Directories and Aerial Photographs and suggests that the current and past uses of the subject Site are as follows:

Table 7-1 Current and Past Uses

Year (approx)	Name of Owner(s)	Description of Property Use	Property Use	Other Observations from Aerial Photographs, Fire Insurance Plans, Etc.
Prior to 1802	Crown	Crown Land (Part Lots 20 & 21, Concession 5)	Agriculture or other use	
1802-1854	John McDonald, John Langstaff & Donald McKinnon (Part Lot 20, Concession 5) Crown (Part Lot 21, Concession 5)	Part Lot 21, Concession 5) remained under ownership of the Crown until 1854, while Part Lot 20, Concession 5 was under the ownership of John McDonald, John Langstaff & Donald McKinnon and was likely used for agricultural purposes.	Agriculture or other use	
1854-1936	Joseph Mathewson	Likely remained agricultural	Agriculture or other use	
1936	Anthony Bowes	Based on the Title search, it appears that the two parcels of land were combined under one owner, Anthony Bowes, in 1936. It is likely that the property remained agricultural	Agriculture or other use	
1936-1975	Numerous individual land owners	Based on the Title search and aerial photos, the Site was owner by various individual owners and likely used for agricultural purposes.	Agriculture or other use	
1975-2009	Numerous holdings companies related to the amusement park to the south of the Site	It is likely that the property was used for agricultural purposes until the late 1970s, when development of the amusement park began to the south of the Site. Since this time, the property has been used as vacant parkland and overflow parking space for the amusement park.	Agriculture or other use followed by parkland use	At the time of submission of this draft Phase I ESA report, the aerial photographs were not yet made available by the National Airphoto Library. The Site has historically been used for agricultural purposes from the time it was first developed until the current use and as such, it is not anticipated that the aerial photographs will provide any information that would change any recommendations provided in this report.
2009-present	The Corporation of the City of Vaughan		Parkland use	

7.2 Potentially Contaminating Activities

Background searches for the Site suggest that the property was used historically for agricultural purposes until the late 1970s and as recreational parkland and vacant overflow parking for Canada's Wonderland to the present. There are no building structures on-site other than the three (3) small parking lot attendant booths (vacant). Based on the records reviewed, Site visit and interviews, potential environmental concerns are present on the Site relating to importation of fill material of unknown quality.

There are potential off-site environmental concerns relating to historical and current gasoline service stations located to the southeast of the Site and historical spills located to the southwest of the Site.

PCAs associated with the Site are summarized in Table 7-2 below:

Table 7-2 Potential Contaminating Activities Associated with the Site

Location	PCA
On-Site	30. Importation of fill material of unknown quality

PCAs associated with adjacent properties are summarized in Table 7-3 below.

Table 7-3 Potential Contaminating Activities Associated with Properties in the Study Area

Location	PCA
Southeast of the Site (3100 Major Mackenzie Drive West)	28. Gasoline and associated products storage in fixed tanks
Southeast of the Site (3000 Major Mackenzie Drive West)	28. Gasoline and associated products storage in fixed tanks
Southwest of the Site (Major Mackenzie Drive West and Highway 400)	28. Gasoline and associated products storage in fixed tanks

7.3 Areas of Potential Environmental Concern

The following APECs were identified for the subject Site and are summarized in Table 7-4 and **Figure 9**:

Table 7-4 Areas of Potential Environmental Concern

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground water, soil and/or sediment)
APEC-1	Entire Site	30. Importation of fill material of unknown quality	On-Site	PHCs, VOCs, Metals & Inorganics, PAHs	Soil & groundwater
APEC-2	Southeast portion of the Site	28. Gasoline and associated products storage in fixed tanks	Off-Site (3000 and 3100 Major Mackenzie Drive West)	PHCs, VOCs	Soil & groundwater

Locations identified within the Study Area with PCAs not resulting in on-site APECs are downgradient of the Site (southwest of the Site - Major Mackenzie Drive West and Highway 400). PCAs conducted at this location are unlikely to have an environmental impact on the Site.

7.4 Phase One Conceptual Site Model

The Site is made up of two irregularly-shaped plots of land. The portion of the Site located in the northwest quadrant of the intersection of Jane Street and Major Mackenzie Drive West is approximately 33 ha and the smaller plot of land located to the south of Major Mackenzie Drive West is approximately 2 ha in area. The northern portion of the Site consists of vacant and undeveloped land with roadways which is overgrown with grass, brush and some trees. The southern portion of the Site is developed as a parking lot, with its northern extent being covered with manicured grasses and immature trees. The land uses surrounding the Site consist of a residential subdivision to the north, commercial and residential to the east, commercial retail operations to the southeast, an amusement park to the south and the 400 Highway to the west. According to the City of Vaughan Official Plan the land use surrounding the Site is listed as 'roads' to the west, 'low-rise residential' to the north, 'low-rise residential and midrise mixed use' to the east and 'theme park and entertainment' to the south. The Site was defined as 'major institutional' land use.

An intermittent watercourse was identified at the western portion of the Site and tributaries of the Don River flow within a 1 km radius of the Site. There is a general on-site slope down towards the central portion of the Site. There is a general downward slope on a local scale towards the south and southwest direction and on a regional scale to the south towards Lake Ontario.

The bedrock underlying the Site is composed of the Georgian Bay Formation, Blue Mountain Formation, Billings Formation, Collingwood Member and Eastview Member. The bedrock geology was formed in the Upper Ordovician epoch and consists of shale, limestone, dolostone and siltstone (Ontario Geological Survey, 1991).

The surficial geology of the Site consists of glaciolacustrine-derived silty to clayey till and interbedded flow till, rainout deposits and silt and clay. The majority of the surficial soils on-site are composed of silt loam, silty clay loam, clay deposits.

Regional groundwater flow in the area typically flows in a southerly direction towards Lake Simcoe. Local shallow groundwater likely reflects the topography and flows in a south and southwest direction towards tributaries of the West Don River.

Potential contaminants may be introduced to the Site via historical activities on the subject Site. PCAs such as importation of fill material of unknown quality conducted on-site may have resulted in soil or groundwater contamination. Adjacent, off-site current and historical land uses involving gasoline service stations resulting in PCAs such as gasoline and associated products storage in fixed tanks may have also resulted in soil and groundwater contamination which could have migrated onto the Site.

The potential contaminants of concern (COCs) are: petroleum hydrocarbons (PHCs), volatile organic compounds (VOCs), metals and inorganics and polycyclic aromatic hydrocarbons (PAHs). It is possible for the lighter COCs to travel downward until intercepted by the water table and be transported on the surface of the groundwater interface in the direction of groundwater flow or also to become dissolved and migrate as a dissolved phase plume in the groundwater. For heavier COCs, contaminants would continue sinking until intercepted by an underlying fine-grained unit and move in the direction as dictated by geology or also become dissolved in the groundwater and travel as a dissolved phase plume

in the groundwater. It is possible for the subsurface soils have some coarse units present, which may create the potential for preferential pathways for the migration of contaminants. The coarse grained beds commonly found in utility corridors also present a preferential pathway. The potential therefore exists for off-site migration of the COCs.

The APECs identified are based on our observations of current Site conditions and understanding of historical uses though various searches and as such, some level of uncertainty is inherent. The key factors which contribute to the uncertainty would be the extent of Site knowledge of persons selected for interview and the timing of the Site visit, which provides a snapshot of the conditions of the Site at the time of the visit when evidence of historic Site activities may not be visible. Aerial photographs were not reviewed as part of this investigation as they had not been released by the National Airphoto Library by the date of submission of the draft report. Findings from aerial photograph review will be included in the final version of the Phase I ESA report for the Site.

8.0 Conclusions

Background searches for the Site suggest that the property was used historically for agricultural purposes until the late 1970s and as recreational parkland and vacant overflow parking for Canada's Wonderland to the present. There are no building structures on-site other than the three (3) small parking lot attendant booths (vacant). Based on the records reviewed, Site visit and interviews, potential environmental concerns are present on the Site relating to importation of fill material of unknown quality and gasoline and associated products storage in fixed tanks.

The land uses surrounding the Site consist of a residential subdivision to the north, commercial and residential to the east, commercial retail operations to the southeast, an amusement park to the south and the 400 Highway to the west. According to the City of Vaughan Official Plan the land use surrounding the Site is listed as 'roads' to the west, 'low-rise residential' to the north, 'low-rise residential and midrise mixed use' to the east and 'theme park and entertainment' to the south. The Site was defined as 'major institutional' land use. There is a general on-site slope down towards the central portion of the Site. There is a general downward slope on a local scale towards the south and southwest direction and on a regional scale to the south towards Lake Ontario.

The information gathered through available databases, the Site visit and interviews indicates that PCAs have been conducted on the subject Site and are related to importation of fill material of unknown quality. PCAs that have been conducted on adjacent Sites within the Study Area include gasoline and associated products storage in fixed tanks at properties located to the southeast of the Site.

Locations identified within the Study Area with PCAs not resulting in on-site APECs are downgradient of the Site (southwest of the Site - Major Mackenzie Drive West and Highway 400). PCAs conducted at this location are unlikely to have an environmental impact on the Site.

Two (2) APECs were identified for the Site and relate to on-site and off-site concerns resulting from on-site importation of fill materials of unknown quality and historical and current gasoline service stations located to the southeast of the Site.

8.1 Whether Phase II ESA Required Before RSC Submitted

It is our understanding that the Phase I ESA is required in support of an application for draft plan approval on the Site and for the filing of an RSC. Based on the findings of the Phase I ESA which included

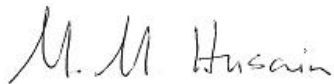
a thorough records review, Site visit and interview process, APECs exist and therefore further investigation through the completion of a Phase II ESA is warranted prior to the submission of an RSC.

8.2 Signatures

The findings contained herein have been produced in accordance with generally accepted environmental site assessment protocol by a Qualified Person, as per O.Reg. 153/04. CEG believes that the data presented in this report concerning the subject Site is reliable at the time it was collected.

Prepared by,

COLE ENGINEERING GROUP LTD.



Muin Husain, Ph.D., P.Geo.
Vice President, Environmental Management



Andre Lyn, B.E.S. P.Geo. (Ltd.)
Project Manager

/ao

9.0 References

- Canadian Standards Association. Publication Z768-01 Phase I Environmental Site Assessment. Nov 2001.
- Chapman, L. J. and Putnam, D.F. The Physiography of Southern Ontario. 3rd ed. Ontario Geological Survey. Toronto. Ontario Ministry of Natural Resources. 1984.
- Chapman, L.J. and Putnam, D.F. Physiography of Southern Ontario; Ontario Geological Survey, Miscellaneous Release-Data 228. 2007.
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- GeoGratis. Natural Resources Canada. 2010.
- Google Earth Pro. 2013.
- Ministry of Natural Resources. Land Information Ontario & National Heritage Information System. 2013.
- National Airphoto Library, 2013.
- Natural Resources Canada, Centre for Topographic Information. 2002.
- Ontario Basic Mapping, Geography Network, 2013.
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- Ontario Ministry of Natural Resources. Geographic Query Report. Natural Heritage Information Centre. Queen’s Printer for Ontario. 2013.
- The Regional Municipality of York, yrGeoView Regional Base Map. 2013.

10.0 Assessor Qualifications

The Site visit for this assessment was completed by Andre Lyn, B.E.S., P.Geo (Ltd.) who has over thirteen (13) years of experience in Phase I and II ESAs, remedial action plans, site remediation, site audits, environmental monitoring for construction projects, hazardous materials management and industrial site decommissioning. Responsibilities have included field surveys and obtaining groundwater, soil, sediment, lead and asbestos samples and preparing closure reports and tender documents and specifications.

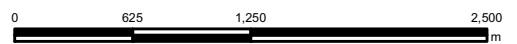
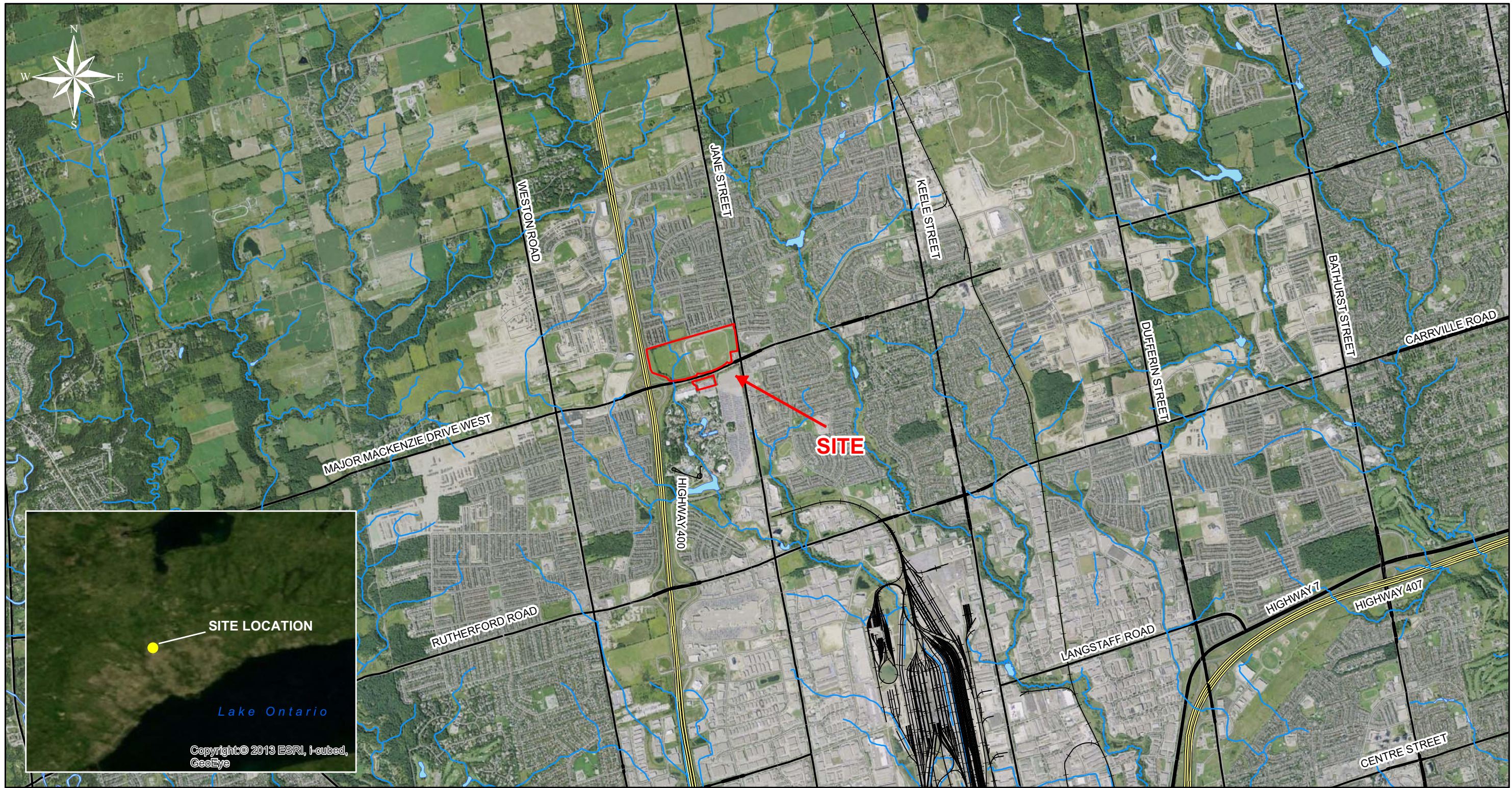
Dr. Husain, Vice President of Environmental Management, has 20 years of research, consulting and regulatory experience in Environmental Sciences. Muin obtained his Ph.D. in Hydrogeology from the University of Waterloo in 1996 and has been involved as a Project Manager and Senior Hydrogeologist for several Major Projects both in Canada and overseas. Muin has been involved in Water and Waste Water Master Plan Studies both in Canada and overseas, Environmental Assessments (EAs)/Environmental Feasibility Studies, Natural Heritage Studies and Value Engineering Exercises (VEE).

Dr. Husain has also been extensively involved with both compliance driven and voluntary site assessment and remediation of contaminated sites. Part of his experience comes through his work as a Contaminated Sites Specialist in the Central Audit Team of the MOE. Muin has worked in contaminated sites associated with petroleum dispensing operations, oil field sites and industrial sites. He has investigated soil and groundwater contamination from industrial solvents (LNAPLs and DNAPLs) and metals. Muin has testified as an expert witness in Courts and in public meetings regarding groundwater contamination issues. Dr. Husain has conducted audits of major landfills in Ontario and Michigan for clients looking for waste disposal options and has extensive experience in public and regulatory consultation. Through this experience, Muin has helped developing contaminated sites responsibility agreements between Municipalities and other land users. Dr. Husain has acted as an Advisor to Toronto Hydro Electric Systems on Contaminated Sites, independent third party peer reviewer for Ontario Power Generation and the Town of Markham. Muin was selected as the interim Chair for the Brownfield Group for the Association of Professional Geoscientists of Ontario (APGO) and currently serves as a member in their Environmental Committee and has worked with major clients both in the Public and Private Sector.

11.0 Limiting Conditions

This report was prepared solely for use by The Corporation of the City of Vaughan. The findings contained herein have been produced in accordance with generally accepted environmental site assessment protocol. CEG believes that the data presented in this report concerning the subject Site is reliable at the time it was collected. CEG does not guarantee that the information provided is absolutely accurate beyond current accepted environmental site assessment standards. There is a possibility that items of environmental concern could not be identified within the scope of the assessment or were not apparent during the Site visit.

Figures



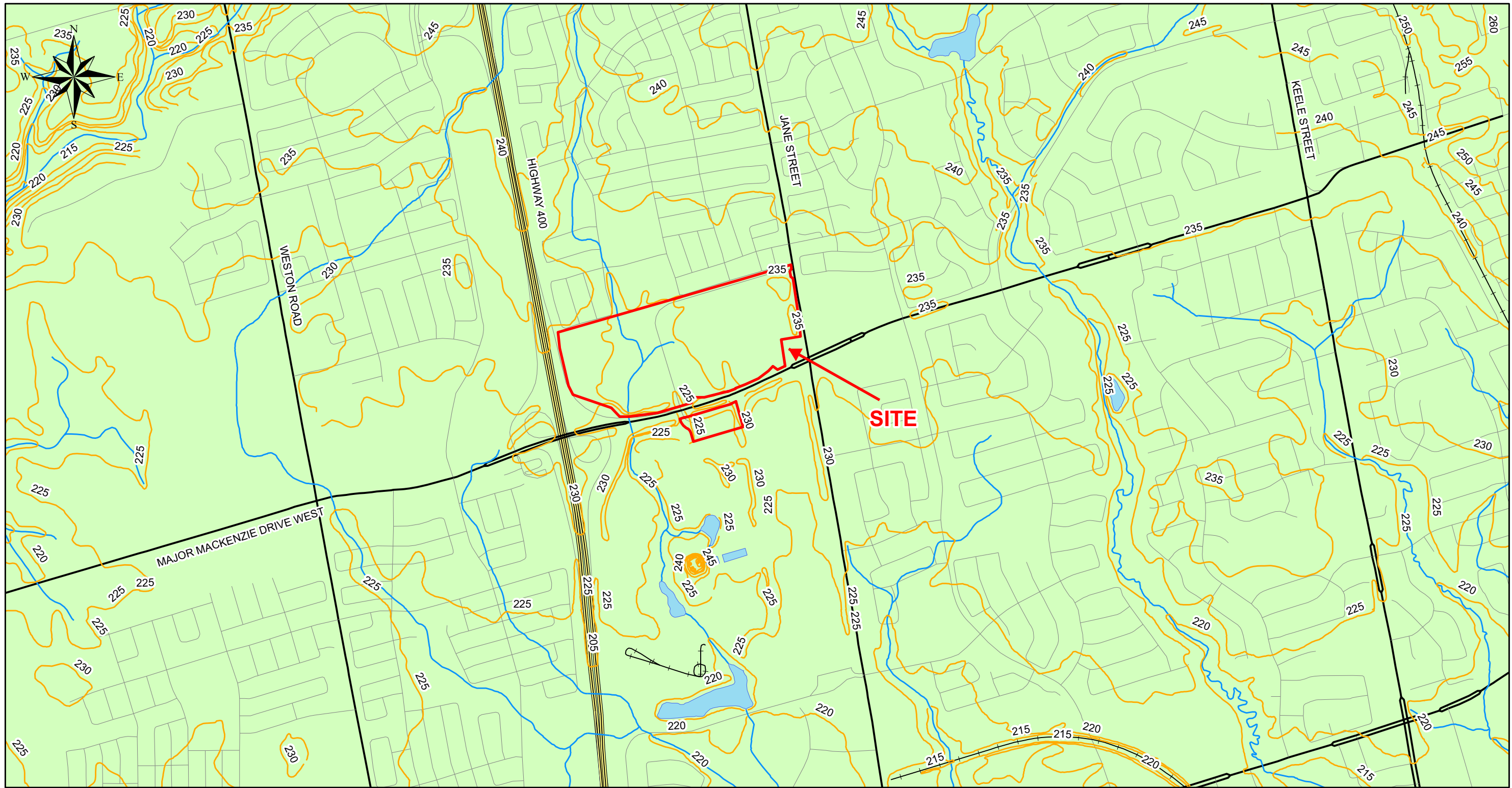
Source: Google Earth Pro, 2013 (2009 image)
 Produced by Cole Engineering under license
 from Ontario Ministry of Natural Resources
 Copyright (c) Queen's Printer, 2012

LEGEND	
 Site	Road
Railway	Freeway
Waterbody	Arterial
Watercourse	Collector

Site Location Map

Phase I Environmental Site Assessment Future Vaughan Healthcare Centre Part of Lot 20 & 21, Concession 5, Vaughan, ON

 Figure No. 1	Project No: EM13-0747
	Drawn By: AO
	Checked by: AL
	Date: November 2013



Source: Produced by Cole Engineering under license from Ontario Ministry of Natural Resources
 Copyright (c) Queen's Printer, 2010
 Natural Resources Canada, Centre for Topographic Information, 2002

LEGEND	
	Site
	Elevation
	Railway
	Waterbody
	Watercourse
	Freeway
	Arterial
	Collector

Local Topography

Phase I Environmental Site Assessment

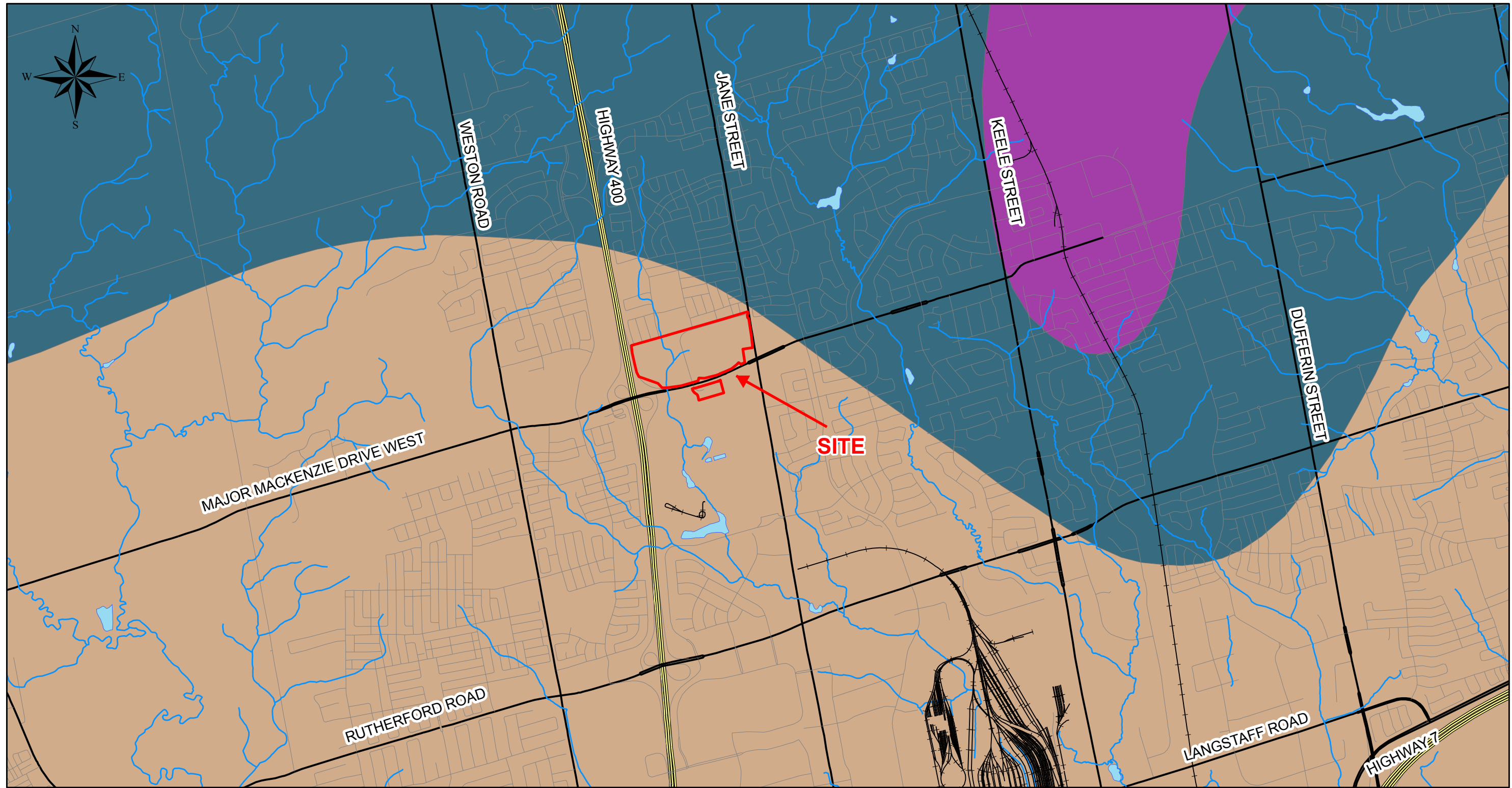
Future Vaughan Healthcare Centre

Part of Lot 20 & 21, Concession 5, Vaughan, ON



Project No:	EM13-0747
Drawn By:	AO
Checked by:	AL
Date:	November 2013

Figure No.
2



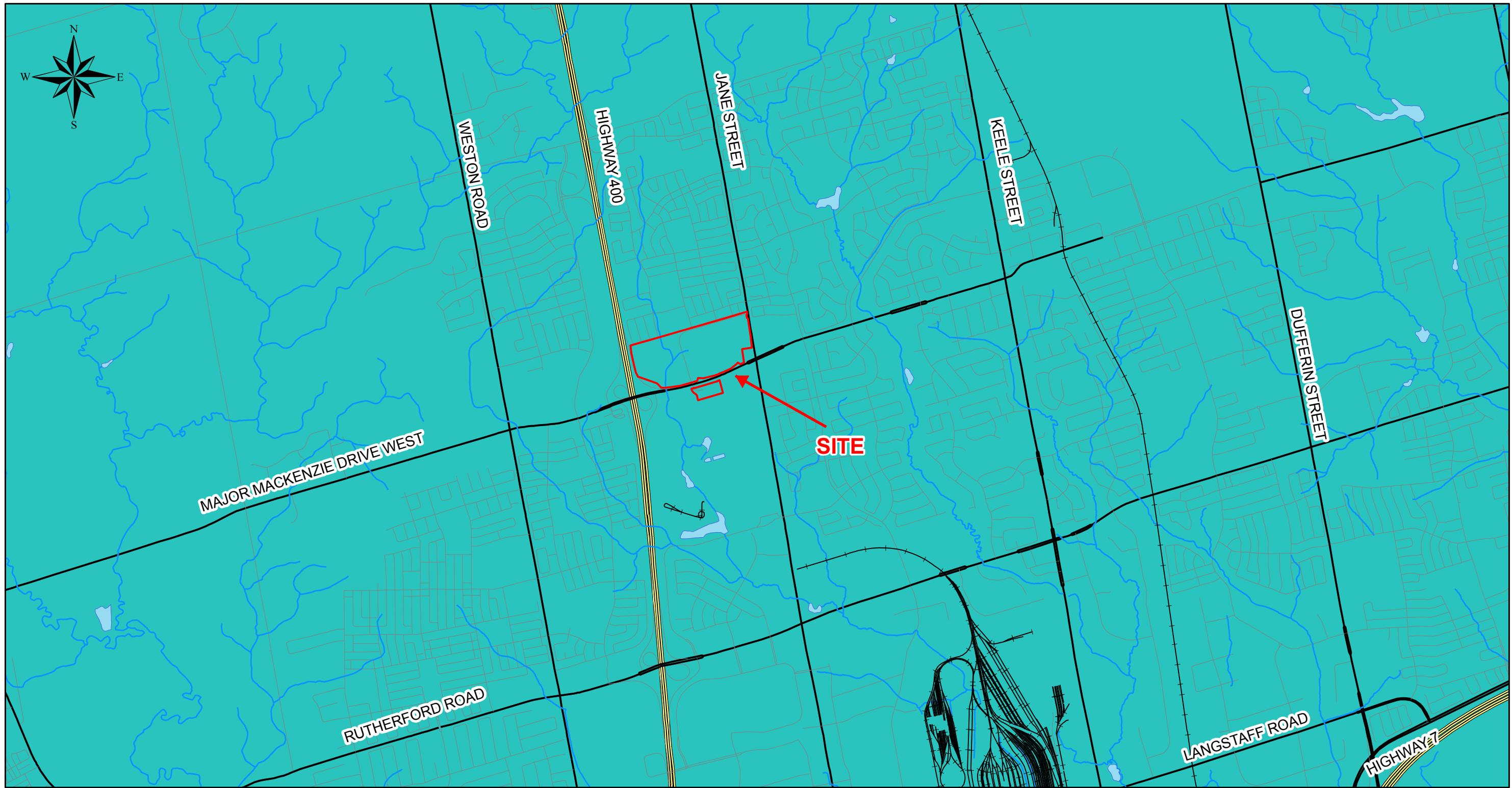
Source: Produced by Cole Engineering under license from Ontario Ministry of Natural Resources Copyright (c) Queen's Printer, 2010 Physiography of Southern Ontario, Ontario Geological Survey, MRD 228.

LEGEND		
 Site	Road	Physiography
Railway	Freeway	30, Oak Ridges Moraine
Waterbody	Arterial	32, South Slope
Watercourse	Collector	33, Peel Plain

Physiography

Phase I Environmental Site Assessment Future Vaughan Healthcare Centre Part of Lot 20 & 21, Concession 5, Vaughan, ON

 Figure No. 3	Project No: EM13-0747
	Drawn By: AO
	Checked by: AL
	Date: November 2013

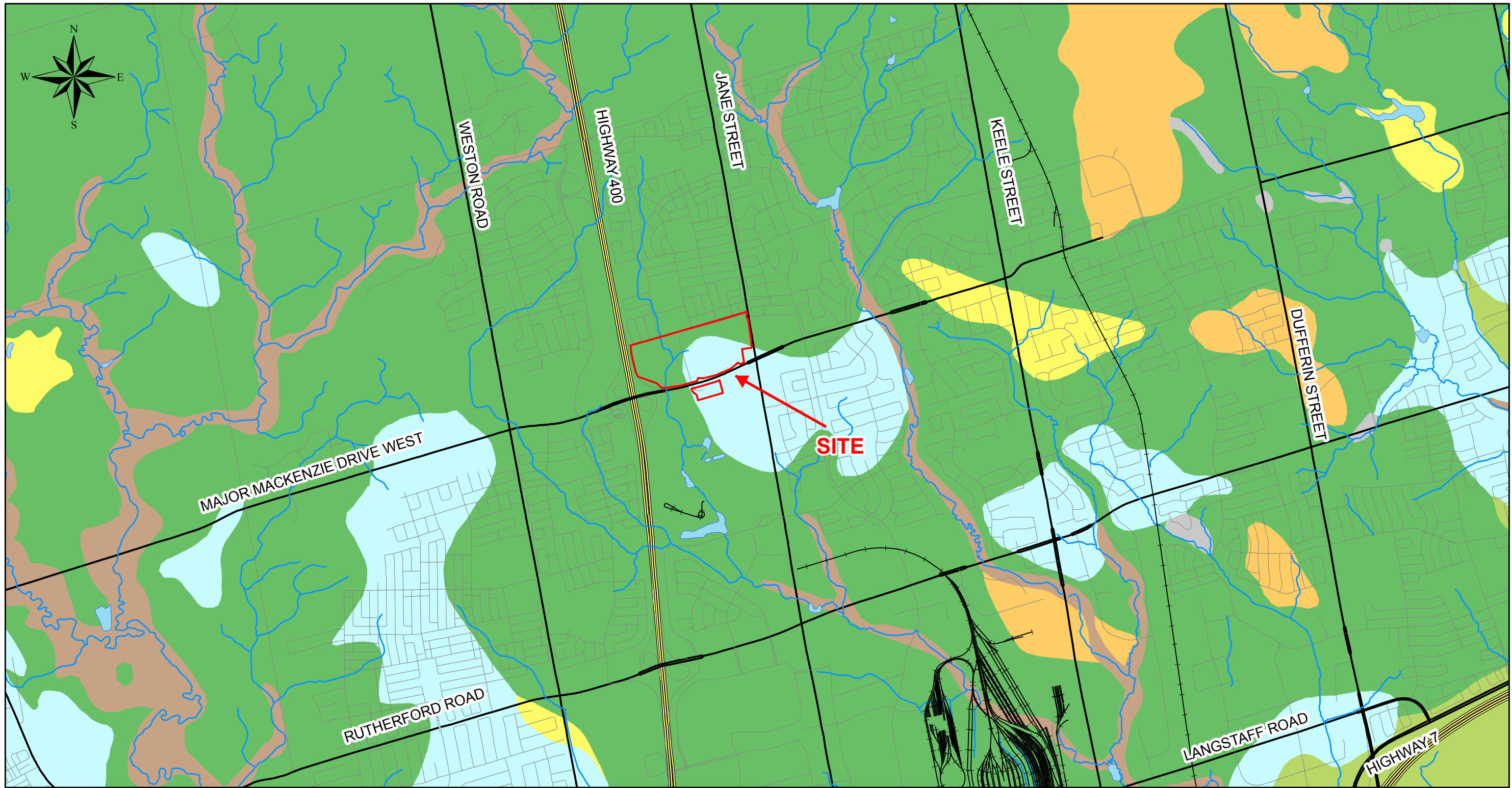


Source: Produced by Cole Engineering under license from Ontario Ministry of Natural Resources
 Copyright (c) Queen's Printer, 2010
 Bedrock Geology of Ontario, Seamless Coverage
 Data Set 6, Ontario Geological Survey, 2005.

LEGEND	
Site	Road
Railway	Freeway
Waterbody	Arterial
Watercourse	Collector
Bedrock Geology	
Georgian bay Fm.; Blue Mountain Fm.; Billings Fm.; Collingwood Mb.; Eastview Mb.	

Bedrock Geology
Phase I Environmental Site Assessment
Future Vaughan Healthcare Centre
Part of Lot 20 & 21, Concession 5, Vaughan, ON

 Figure No. 4	Project No: EM13-0747
	Drawn By: AO
	Checked by: AL
	Date: November 2013



Source: Produced by Cole Engineering under license from Ontario Ministry of Natural Resources
 Copyright (c) Queen's Printer, 2010
 Surficial Geology of Southern Ontario, Ontario Geological Survey, 2003.

Legend		
	Site	
	Railway	
	Waterbody	
	Watercourse	
	Road	
	Freeway	
	Arterial	
	Collector	
Surficial Geology		
	5b: Stone-poor, carbonate-derived silty to sandy till	
	5d: Glaciolacustrine-derived silty to clayey till	
	6: Ice-contact stratified deposits	
	8a: Massive-well laminated	
	8b: Interbedded flow till, rainout deposits and silt and clay	
	9c: Foreshore-basinal deposits	
	12: Older alluvial deposits	
	19: Modern alluvial deposits	
	20: Organic deposits	

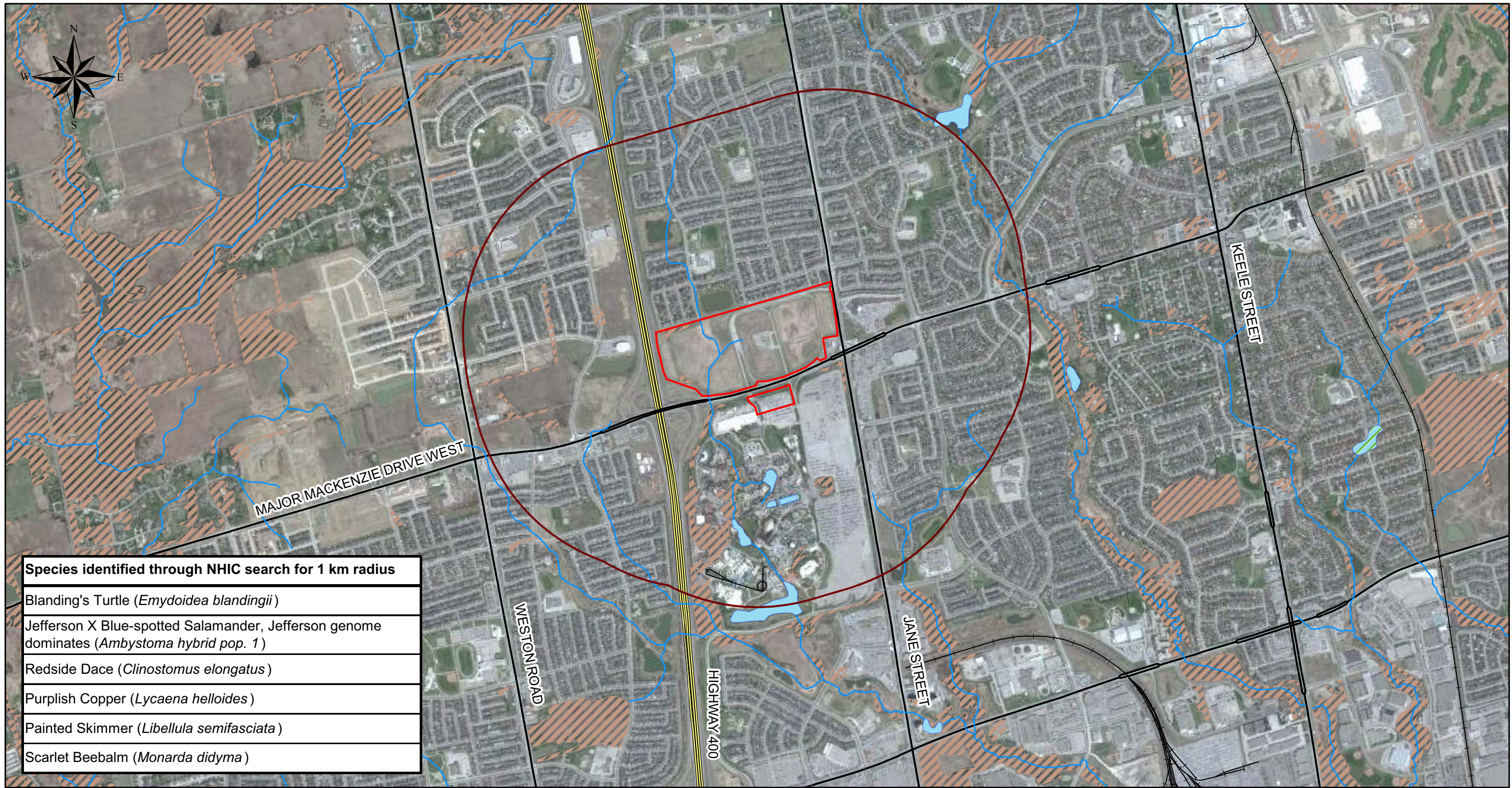
Surficial Geology

Phase I Environmental Site Assessment

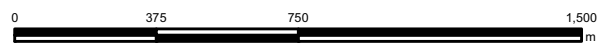
Future Vaughan Healthcare Centre

Part of Lot 20 & 21, Concession 5, Vaughan, ON

	Project No:	EM13-0747
	Drawn By:	AO
Figure No.	Checked by:	AL
5	Date:	November 2013



Species identified through NHIC search for 1 km radius
Blanding's Turtle (<i>Emydoidea blandingii</i>)
Jefferson X Blue-spotted Salamander, Jefferson genome dominates (<i>Ambystoma hybrid pop. 1</i>)
Redside Dace (<i>Clinostomus elongatus</i>)
Purplish Copper (<i>Lycaena helloides</i>)
Painted Skimmer (<i>Libellula semifasciata</i>)
Scarlet Beebalm (<i>Monarda didyma</i>)

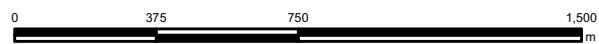
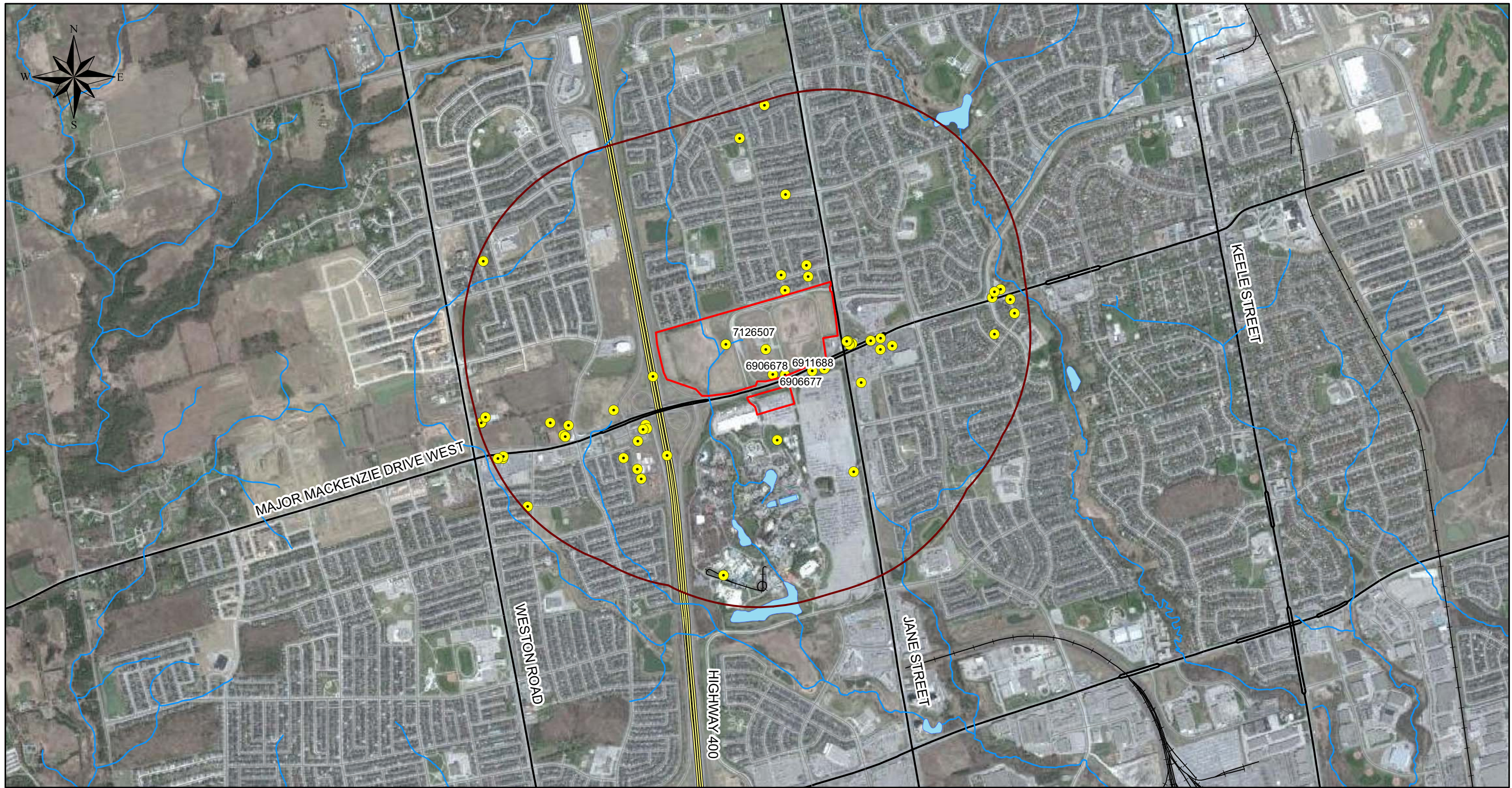


Source: Bing Maps, 2013 (2012 image)
 Produced by Cole Engineering under license from Ontario Ministry of Natural Resources Copyright (c) Queen's Printer, 2010, Ministry of Natural Resources, Natural Heritage Information Centre, 2013

Legend		
Site	Watercourse	Road
1 km Buffer of Site	Wetlands	Freeway
Railway	Wooded Area	Arterial
Waterbody		Collector

Areas of Natural Significance
Phase I Environmental Site Assessment
Future Vaughan Healthcare Centre
Part of Lot 20 & 21, Concession 5, Vaughan, ON

 Figure No. 6	Project No: EM13-0747
	Drawn By: AO
	Checked by: AL
	Date: November 2013



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 Ministry of the Environment, Well Records Copyright (c) Queen's Printer, 2010

Legend		
 Site	Railway	Road
 1 km Buffer of Site	Waterbody	Freeway
MOE Wells	Watercourse	Arterial
		Collector

Ministry of the Environment Wells
Phase I Environmental Site Assessment
Future Vaughan Healthcare Centre
Part of Lot 20 & 21, Concession 5, Vaughan, ON

 Figure No. 7	Project No: EM13-0747
	Drawn By: AO
	Checked by: AL
	Date: November 2013



Source: Bing Maps, 2013 (2012 image)

Legend

 Site

2012 Aerial Photograph
Phase I Environmental Site Assessment
Future Vaughan Healthcare Centre
Part of Lot 20 & 21, Concession 5, Vaughan, ON



Project No: EM13-0747

Drawn By: AO

Figure No.
8A

Checked by: AL

Date: November 2013



Source: National Airphoto Library, 2013 (1988 image)

LEGEND

 Site

**1988 Aerial Photograph
Phase I Environmental Site Assessment
Future Vaughan Healthcare Centre
Part of Lot 20 & 21, Concession 5, Vaughan, ON**



Project No: EM13-0747

Drawn By: AO

Figure No.
8B

Checked by: AL

Date: January 2014



Source: National Airphoto Library, 2013 (1974 image)

LEGEND

 Site

**1974 Aerial Photograph
Phase I Environmental Site Assessment
Future Vaughan Healthcare Centre
Part of Lot 20 & 21, Concession 5, Vaughan, ON**



Project No: EM13-0747

Drawn By: AO

Figure No.

Checked by: AL

8C

Date: January 2014



Source: National Airphoto Library, 2013 (1960 image)

LEGEND

 Site

**1960 Aerial Photograph
Phase I Environmental Site Assessment
Future Vaughan Healthcare Centre
Part of Lot 20 & 21, Concession 5, Vaughan, ON**



Project No: EM13-0747

Drawn By: AO

Figure No.

Checked by: AL

8D

Date: January 2014



Source: National Airphoto Library, 2013 (1946 image)

LEGEND

 Site

1946 Aerial Photograph
Phase I Environmental Site Assessment
Future Vaughan Healthcare Centre
Part of Lot 20 & 21, Concession 5, Vaughan, ON



Project No: EM13-0747

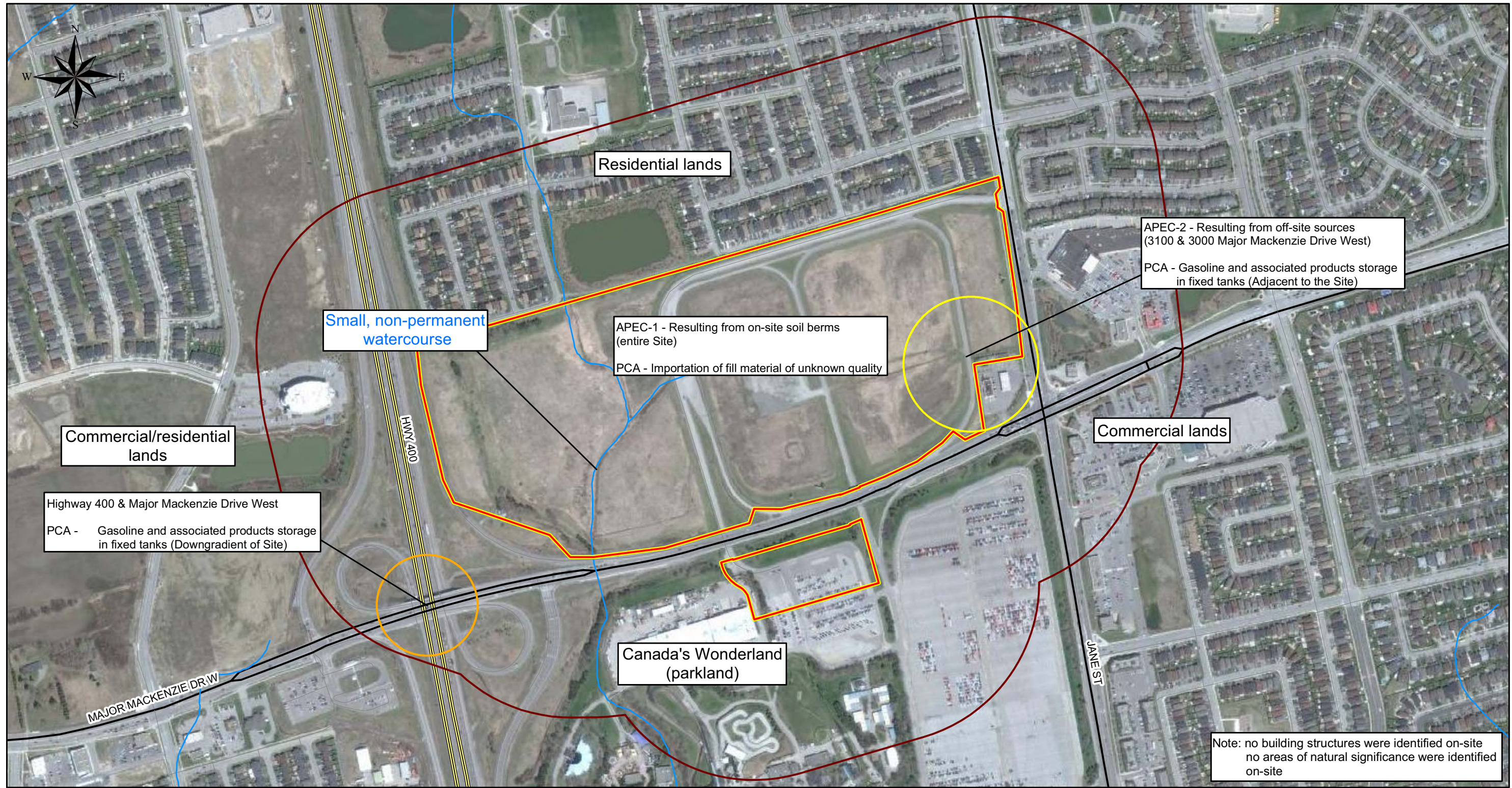
Drawn By: AO

Figure No.

Checked by: AL

8E

Date: January 2014



Note: no building structures were identified on-site
no areas of natural significance were identified on-site

Source: Bing Maps, 2013 (2012 image)


Legend	
 Site	Road
 Study Area	 Freeway
 APEC	 Arterial
 Waterbody	 Collector
 Watercourse	

Conceptual Site Model

Phase I Environmental Site Assessment

Future Vaughan Healthcare Centre

Part of Lot 20 & 21, Concession 5, Vaughan, ON

 Figure No. 9	Project No: EM13-0747
	Drawn By: AO
	Checked by: AL
	Date: November 2013

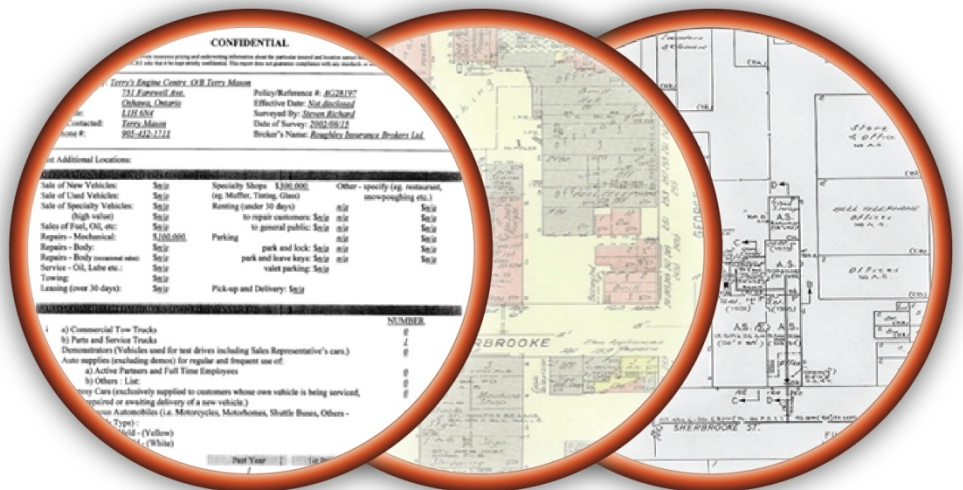
Appendix A

Database Search Results

Fire Insurance Plans

HEIRS™

Historical Environmental Information Reporting System



An **SCM** Company

150 Commerce Valley Drive W
8th Floor
Markham, Ontario L3T 7Z3
T: 905-882-6300
www.optaintel.ca

Report Completed By:
Devon Mallay

Site Address:

Major Mackenzie Drive & Jane Street,
Vaughan, ON

Project No:

20131024016

Opta Order ID:

20131024016

Requested by:

Eleanor Goolab
Ecolog Eris

Date Completed:

November 1, 2013

Opta Environmental Services
Historical Environmental Information Reporting System (HEIRS™)

November 1, 2013

Ms. Eleanor Goolab
 EcoLog ERIS
 80 Valleybrook Drive
 North York, Ontario
 M3B 2S9

Dear Eleanor,

Re: **Your Site Address: “Major Mackenzie Drive & Jane Street, Vaughan”**
Your Project No.: 20131024016

As requested, we have searched our records regarding the above site and the following information was found:

Information	Date(s)	Comment	Cost
Research Fee per street address		\$50.00 flat fee per street address.	\$50.00
Fire Insurance Plans	No Records Found	\$100.00 for each Fire Insurance Plan.	
Reports: All Risk/Multi-Risk: Inspection: COPE: Other:	No Records Found	\$55.00 for each Inspection/Survey report	
Site Plan(s)	No Records Found	\$70.00 for each Site plan	
Subtotal			\$50.00
Minimum order fee of \$155.00			N/A
2 (two)/4 (four) Day Rush Service			N/A
Total			\$50.00

NRF: No Records Found. NO: Not Ordered.

The total cost for this report is \$50.00 plus courier charges (if applicable) and HST. Please see the Terms and Conditions for our search on page two of this report.

Thank you for employing the services of Opta Information Intelligence.

Devon Mallay
 Opta Environmental Services



150 Commerce Valley Drive W
 Markham, Ontario
 L3T 7Z3

T: 905.882.6300
Toll Free: 1.800.268.8080
F: 905.695.6543

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www.optaintel.ca

Opta Environmental Services Historical Environmental Information Reporting System (HEIRS™) Terms and Conditions

Report

The documents (hereinafter referred to as the "Documents") to be released as part of the report (hereinafter referred to as the "Report") to be delivered to the purchaser as set out above are documents in Opta's records relating to the described property (hereinafter referred to as the "Property"). Opta makes no representations or warranties respecting the Documents whatsoever, including, without limitation, with respect to the completeness, accuracy or usefulness of the Documents, and does not represent or warrant that these are the only plans and reports prepared in association with the Property. The Documents are current as of the date(s) indicated on them. Interpretation of the Documents, if any, is by inference based upon the information which is apparent and obvious on the face of the Documents only. Opta does not represent, warrant or guarantee that interpretations other than those referred to do not exist from other sources. The Report will be prepared for use by the purchaser of the services as shown above hereof only.

Disclaimer

Opta disclaims responsibility for any losses or damages of any kind whatsoever, whether consequential or other, however caused, incurred or suffered, arising directly or indirectly as a result of the services (which services include, but are not limited to, the preparation of the Report provided hereunder), including but not limited to, any losses or damages arising directly or indirectly from any breach of contract, fundamental or otherwise, from reliance on Opta Reports or from any tortious acts or omissions of Opta's agents, employees or representatives.

Entire Agreement

The parties hereto acknowledge and agree to be bound by the terms and conditions hereof. The request form constitutes the entire agreement between the parties pertaining to the subject matter hereof and supersedes all prior and contemporaneous agreements, negotiations and discussions, whether oral or written, and there are no representations or warranties, or other agreements between the parties in connection with the subject matter hereof except as specifically set forth herein. No supplement, modification, waiver, or termination of the request shall be binding, unless confirmed in writing by the parties hereto.

Governing Document

In the event of any conflicts or inconsistencies between the provisions hereof and the Reports, the rights and obligations of the parties shall be deemed to be governed by the request form, which shall be the paramount document.

Law

This agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein.

Chain of Title

CHAIN OF TITLE REPORT

Project #: EM13-0747
 Address: n/s Major MacKenzie Drive, Vaughan
 Legal: Part Lot 21, Con 5 (VGN)
 Description: Pt 5, 65R12731 now Pts 1-9, 65R31845
 PIN #: Part of PIN 03327-0150(LT)

Searched at:
 LRO #:

Aurora
65

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
17196	Patent	05 09 1854	Crown	Joseph MATHEWSON
22128	Deed	01 04 1947	Anthony Bowes	Norman LEWIS
23176	Deed (Root 1)	01 05 1948	Norman Lewis	Arthur MCKINNON and Elmer MCKINNON
23177	Deed	01 05 1948	Arthur & Elmer McKinnon	Benjamin BROMLEY
23797	Deed (Root 2)	29 10 1948	Norman Lewis	George BISHOP
27009	Deed	31 07 1951	Benjamin Bromley	Kenneth TILLEY
48830	Deed	24 04 1962	George Bishop	Findlay Dairy Limited

CHAIN OF TITLE REPORT

Project #: EM13-0747
 Address: n/s Major MacKenzie Drive, Vaughan
 Legal: Part Lot 21, Con 5 (VGN)
 Description: Part 5, 65R12731 now Pts 1-9, 65R31845
 PIN #: Part of PIN 03327-0150(LT)

Searched at:
 LRO #:

Aurora
65

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
73170	Deed	07 11 1973	Kenneth Tilley - estate	Mildred TILLEY
75979	Deed	30 06 1975	Mildred Tilley	Moffat DUNLOP, in trust
76303	Deed	11 09 1975	Moffat Dunlop, in trust	Family Leisure Centres of Canada Limited
76901	Deed	15 01 1976	Findlay Dairy Farms Limited	Family Leisure Centres of Canada Limited
LT621890	Deed	06 10 1989	Canada's Wonderland Limited (formerly Family Leisure Centres)	J.D.S. (Northeast) Limited
LT760413	Deed	17 06 1991	J.D.S. (Northeast) Limited	308326 Ontario Limited

Cont'd on page 3

CHAIN OF TITLE REPORT

Project #: EM13-0747
 Address: n/s Major MacKenzie Drive, Vaughan
 Legal: Part Lot 21, Con 5 (VGN)
 Description: Pt 5, 65R12731 now Pts 1-9, 65R31845
 PIN #: Part of PIN 03327-0150(LT)

Searched at:
 LRO #:

Aurora
65

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
LT760414	Deed	17 06 1991	308326 Ontario Limited	J.D.S. (Northeast) Limited
LT1041263	Deed (Power of Sale)	08 06 1995	The Toronto-Dominion Bank (J.D.S. (Northeast) Limited, defaulted)	809623 Ontario Ltd.
LT1300461	Name Change	21 09 1998	809623 Ontario Ltd	Viacom Entertainment Canada Inc
YR811236	Name Change	01 05 2006	Viacom Entertainment Canada Inc	CBS Canada Holdings Inc.
YR842108	Deed	29 06 2006	CBS Canada Holdings Inc.	3147012 Nova Scotia Company
YR843151	Name Change	30 06 2006	3147012 Nova Scotia Company	3147193 Nova Scotia Company
YR864297	Name Change	10 08 2006	3147193 Nova Scotia Company	Canada's Wonderland Company
YR1361794	Deed	20 08 2009	Canada's Wonderland Company	The Corporation of The City of Vaughan

Properties

PIN	03327 - 0150 LT	<i>Interest/Estate</i>	Fee Simple with New Easement	<input checked="" type="checkbox"/> Add Easement
Description	PCL 18-4 SEC V5; PT LT 21 CON 5 (VGN) PT 5 65R12731 EXCEPT PTS 1 & 2 D-722; TW PT LT 17 CON 5, PTS 6 & 7, 65R4147 AS IN VA83883 ; VAUGHAN. RESERVING AN EASEMENT OVER PART 2, PLAN 65R-31845, FOR INGRESS AND EGRESS OVER, ALONG AND UPON THE SAID PART 2, PLAN 65R-31845 AND IN FAVOUR OF THOSE LANDS STILL OWNED BY THE TRANSFEROR, BEING THE LANDS DESCRIBED IN PIN 03329-4191(LT), PIN 03329-0025(LT), PIN 03329-0029(LT) AND PIN 03329-1067(LT), EXCEPT FOR PART 10, PLAN 65R-31845.			
Address	VAUGHAN			
PIN	03327 - 0842 LT	<i>Interest/Estate</i>	Fee Simple with New Easement	<input checked="" type="checkbox"/> Add Easement
Description	PT W PT OF E1/2 OF LOT 21 CON 5 VAUGHAN PT 22 64R8468 ; VAUGHAN. RESERVING AN EASEMENT OVER PART 8, PLAN 65R-31845, FOR INGRESS AND EGRESS OVER, ALONG AND UPON THE SAID PART 8, PLAN 65R-31845 AND IN FAVOUR OF THOSE LANDS STILL OWNED BY THE TRANSFEROR, BEING THE LANDS DESCRIBED IN PIN 03329-4191(LT), PIN 03329-0025(LT), PIN 03329-0029(LT) AND PIN 03329-1067(LT), EXCEPT FOR PART 10, PLAN 65R-31845.			
Address	VAUGHAN			
PIN	03329 - 1067 LT	<i>Interest/Estate</i>	Fee Simple with New Easement	<input checked="" type="checkbox"/> Split
Description	PART OF LOT 20, CONCESSION 5 VAUGHAN, DESIGNATED AS PART 10, PLAN 65R-31845, CITY OF VAUGHAN. RESERVING AN EASEMENT OVER THE SAID LANDS FOR INGRESS AND EGRESS OVER, ALONG AND UPON THE SAID LANDS IN FAVOUR OF THOSE LANDS STILL OWNED BY THE TRANSFEROR, BEING THE LANDS DESCRIBED IN PIN 03329-4191(LT), PIN 03329-0025(LT) AND PIN 03329-0029(LT) AND THE REMAINDER OF THOSE LANDS IN PIN 03329-1067(LT)			
Address	VAUGHAN			

Consideration

Consideration \$59,450,000.00

Transferor(s)

The transferor(s) hereby transfers the land to the transferee(s).

Name CANADA'S WONDERLAND COMPANY
Address for Service 9580 Jane Street
 Vaughan, Ontario
 L6A 3Y6

I, Richard Kinzel, President and Peter Crage, Secretary, have the authority to bind the corporation.
 This document is not authorized under Power of Attorney by this party.

Transferee(s)**Capacity****Share**

Name THE CORPORATION OF THE CITY OF VAUGHAN
Address for Service 2141 Major Mackenzie Drive
 Vaughan, Ontario
 L6A 1T1

Signed By

Paul Robert King P.O. Box 20, TD Bank Tower acting for Signed 2009 08 20
 Toronto Transferor(s)
 M5K 1N6

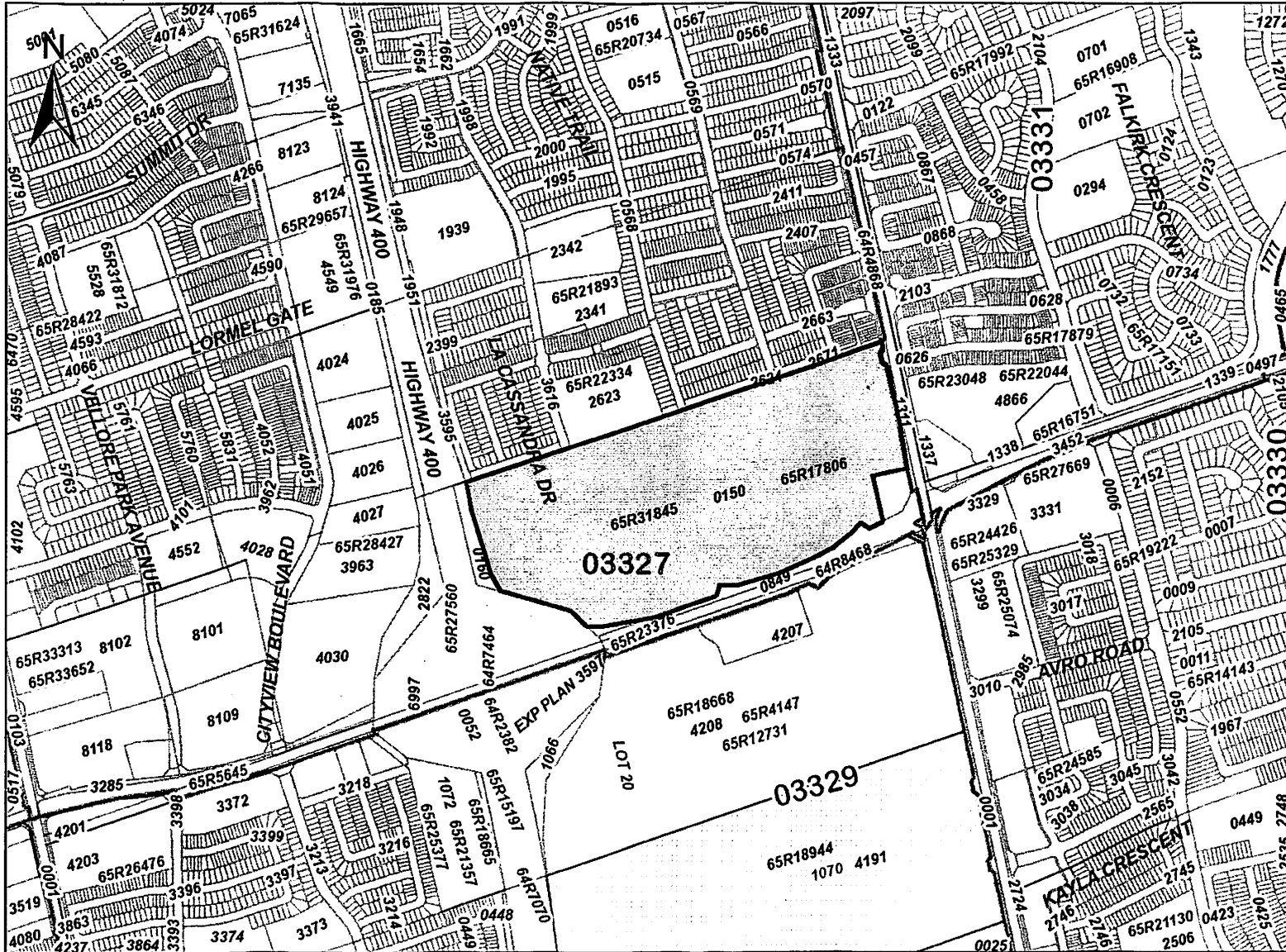
Tel 4163668381
 Fax 4163647813

I am the solicitor for the transferor(s) and I am not one and the same as the solicitor for the transferee(s).

I have the authority to sign and register the document on behalf of the Transferor(s).

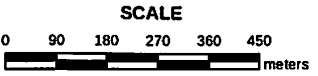
John Robert Hall 135 Queens Plate Drive Suite 600 acting for Signed 2009 08 20
 Etobicoke Transferee(s)
 M9W 6V7

Tel 416-746-4710
 Fax 4167468319



ServiceOntario

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FOR BRUNO



PROPERTY INDEX MAP YORKREGION(No. 65)

LEGEND

FREEHOLD PROPERTY		
LEASEHOLD PROPERTY		
LIMITED INTEREST PROPERTY		
CONDOMINIUM PROPERTY		
RETIRED PIN (MAP UPDATE PENDING)		
PROPERTY NUMBER		0449
BLOCK NUMBER		08050
GEOGRAPHIC FABRIC		
EASEMENT		

THIS IS NOT A PLAN OF SURVEY

NOTES

- REVIEW THE TITLE RECORDS FOR COMPLETE PROPERTY INFORMATION AS THIS MAP MAY NOT REFLECT RECENT REGISTRATIONS
- THIS MAP WAS COMPILED FROM PLANS AND DOCUMENTS RECORDED IN THE LAND REGISTRATION SYSTEM AND HAS BEEN PREPARED FOR PROPERTY INDEXING PURPOSES ONLY
- FOR DIMENSIONS OF PROPERTIES BOUNDARIES SEE RECORDED PLANS AND DOCUMENTS
- ONLY MAJOR EASEMENTS ARE SHOWN
- REFERENCE PLANS UNDERLYING MORE RECENT REFERENCE PLANS ARE NOT ILLUSTRATED



CHAIN OF TITLE REPORT

Project #: EM13-0747
 Address: s/s Major MacKenzie Drive, Vaughan
 Legal: Pt Lot 20, Con 5 (VGN)
 Description: desig. As Part 10, Plan 65R31845
 PIN #: 03329-4207(LT)

Searched at: Aurora
 LRO #: 65

INSTR #	PIN #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
		Patent	31 12 1802	Crown	John MCDONALD
21726		Deed	09 11 1843	John McDonald - estate	John LANGSTAFF
40491		Deed	09 05 1851	John Langstaff	Donald MCKINNON
90512		Deed	25 09 1867	Donald McKinnon	Joseph MATHEWSON
17196		Deed	31 03 1936	Joseph Mathewson- estate	Anthony BOWES
22128		Deed	01 04 1947	Anthony Bowes	Norman LEWIS
22129		Deed	01 04 1947	Norman Lewis	Elmer MCKINNON & Arthur MCKINNON
48776		Deed	10 04 1962	Elmer & Arthur McKinnon	Findlay Dairy Ltd.

Cont'd on page 2

CHAIN OF TITLE REPORT

Project #: EM13-0747
 Address: s/s Major MacKenzie Drive, Vaughan
 Legal: Pt Lot 20, Con 5 (VGN)
 Description: desig. As Part 10, Plan 65R31845
 PIN #: 03329-4207(LT)

Searched at:
 LRO #:

Aurora
65

INSTR #	PIN #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
76336		Deed	17 09 1975	Findlay Dairy Farms Limited	Family Leisure Centres of Canada Limited
122385		Name Change	25 03 1980	Family Leisure Centres of Canada Limited	Canada's Wonderland Limited
LT550737		Deed	31 01 1989	Canada's Wonderland Limited	Viacom Entertainment Canada Inc.
YR811236		Name Change	01 05 2006	Viacom Entertainment Canada Inc.	CBS Canada Holdings Inc.
YR842108		Deed	29 06 2006	CBS Canada Holdings Inc.	3147012 Nova Scotia Company
YR843151		Name Change	30 06 2006	3147012 Nova Scotia Company	3147193 Nova Scotia Company
YR864297		Name Change	10 08 2006	3147193 Nova Scotia Company	Canada's Wonderland Company
YR1361794		Deed	20 08 2009	Canada's Wonderland Company	The Corporation of The City of Vaughan

City Directory



ENVIRONMENTAL RISK INFORMATION SERVICE

City Directory Information Source
Polk's York Region, ON Criss-Cross

PROJECT NUMBER: 20131024016	
Site Address:	Major Mackenzie Dr. & Jane St. Vaughan, ON
Year: 1999	
Site Listing:	-No Site Identified
Adjacent Properties:	
2937 Major Mackenzie Drive West	-Address Not Listed
2953 Major Mackenzie Drive West	-Address Not Listed
2963 Major Mackenzie Drive West	-Address Not Listed
3000 Major Mackenzie Drive West	-Address Not Listed
3100 Major Mackenzie Drive West	-Address Not Listed
9580 Jane Street	-Hartwell Electrical -Janda Products -Wonderland Canada's Inc.
9585 Jane Street	-Address Not Listed
161 Cityview Boulevard	-Address Not Listed

PROJECT NUMBER: 20131024016	
Site Address:	Major Mackenzie Dr. & Jane St. Vaughan, ON
Year: 1994	
Site Listing:	-No Site Identified
Adjacent Properties:	

2937 Major Mackenzie Drive West	-Address Not Listed
2953 Major Mackenzie Drive West	-Address Not Listed
2963 Major Mackenzie Drive West	-Address Not Listed
3000 Major Mackenzie Drive West	-Address Not Listed
3100 Major Mackenzie Drive West	-Address Not Listed
9580 Jane Street	-Wonderland Canada's Inc.
9585 Jane Street	-Address Not Listed
161 Cityview Boulevard	-Address Not Listed

PROJECT NUMBER: 20131024016	
Site Address:	Major Mackenzie Dr. & Jane St. Vaughan, ON
Year: 1989	
Site Listing:	-No Site Identified
Adjacent Properties:	
2937 Major Mackenzie Drive West	-Address Not Listed
2953 Major Mackenzie Drive West	-Address Not Listed
2963 Major Mackenzie Drive West	-Address Not Listed
3000 Major Mackenzie Drive West	-Address Not Listed
3100 Major Mackenzie Drive West	-Address Not Listed
9580 Jane Street	-Wonderland Canada's Inc.
9585 Jane Street	-Address Not Listed
161 Cityview Boulevard	-Address Not Listed

PROJECT NUMBER: 20131024016	
Site Address:	Major Mackenzie Dr. & Jane St.Vaughan, ON
Year: 1984	
Site Listing:	-No Site Identified
Adjacent Properties:	
2937 Major Mackenzie Drive West	-Address Not Listed
2953 Major Mackenzie Drive West	-Address Not Listed
2963 Major Mackenzie Drive West	-Address Not Listed
3000 Major Mackenzie Drive West	-Address Not Listed
3100 Major Mackenzie Drive West	-Address Not Listed
9580 Jane Street	-Wonderland Canada's Inc. -TD Bank -Kingswood Music Theatre
9585 Jane Street	-Address Not Listed
161 Cityview Boulevard	-Address Not Listed

PROJECT NUMBER: 20131024016	
Site Address:	Major Mackenzie Dr. & Jane St.Vaughan, ON
Year: 1979	
Site Listing:	-No Site Identified
Adjacent Properties:	
2937 Major Mackenzie Drive West	-Address Not Listed
2953 Major Mackenzie Drive West	-Address Not Listed
2963 Major Mackenzie Drive West	-Address Not Listed
3000 Major Mackenzie Drive West	-Address Not Listed
3100 Major Mackenzie Drive West	-Address Not Listed

9580 Jane Street	-Address Not Listed
9585 Jane Street	-Address Not Listed
161 Cityview Boulevard	-Address Not Listed

PROJECT NUMBER: 20131024016	
Site Address:	Major Mackenzie Dr. & Jane St. Vaughan, ON
Year: 1975	
Site Listing:	-No Site Identified
Adjacent Properties:	
2937 Major Mackenzie Drive West	-Address Not Listed
2953 Major Mackenzie Drive West	-Address Not Listed
2963 Major Mackenzie Drive West	-Address Not Listed
3000 Major Mackenzie Drive West	-Address Not Listed
3100 Major Mackenzie Drive West	-Address Not Listed
9580 Jane Street	-Address Not Listed
9585 Jane Street	-Address Not Listed
161 Cityview Boulevard	-Address Not Listed

PROJECT NUMBER: 20131024016	
Site Address:	Major Mackenzie Dr. & Jane St. Vaughan, ON
Year: 1970/71	
Site Listing:	-No Site Identified
Adjacent Properties:	
2937 Major Mackenzie Drive West	-Address Not Listed

2953 Major Mackenzie Drive West	-Address Not Listed
2963 Major Mackenzie Drive West	-Address Not Listed
3000 Major Mackenzie Drive West	-Address Not Listed
3100 Major Mackenzie Drive West	-Address Not Listed
9580 Jane Street	-Address Not Listed
9585 Jane Street	-Address Not Listed
161 Cityview Boulevard	-Address Not Listed

PROJECT NUMBER: 20131024016	
Site Address:	Major Mackenzie Dr. & Jane St. Vaughan, ON
Year: 1962	
Site Listing:	-No Site Identified
Adjacent Properties:	
2937 Major Mackenzie Drive West	-Address Not Listed
2953 Major Mackenzie Drive West	-Address Not Listed
2963 Major Mackenzie Drive West	-Address Not Listed
3000 Major Mackenzie Drive West	-Address Not Listed
3100 Major Mackenzie Drive West	-Address Not Listed
9580 Jane Street	-Address Not Listed
9585 Jane Street	-Address Not Listed
161 Cityview Boulevard	-Address Not Listed

-All listings for businesses were listed as they are in the city directory.
 -Listings that are residential are listed as “residential” with the number of tenants. The name of the residential tenant is not listed in the above city directory

EcoLog ERIS Report



REPORT



Project Property: *Phase I ESA
Major Mackenzie Dr Jane St
Vaughan ON*

Report Type: *Custom-Build Your Own Report*

Order #: *20131024016*

Date: *November 1, 2013*

EcoLog ERIS Ltd.
Environmental Risk
Information Service Ltd. (ERIS)
A division of Glacier Media Inc.
P: 1.866.517.5204
E: info@erisinfo.com

www.erisinfo.com

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Executive Summary

Property Information:

Project Property: *Phase I ESA
Major Mackenzie Dr Jane St Vaughan ON*

Order Information:

Order No.: *20131024016*
Date Requested: *01/11/2013*
Requested by: *Cole Engineering Group Ltd*
Report Type: *Custom-Build Your Own Report*

Additional Products:

City Directory Search *Subject Site plus 8 Adjacent Properties*
Insurance Products *Fire Insurance Plans*

Executive Summary: Report Summary

Database	Name	Selected	On Site	Boundary to 0.25KM	Total
AAGR	Abandoned Aggregate Inventory	Y	0	0	0
AGR	Aggregate Inventory	Y	0	0	0
AMIS	Abandoned Mine Information System	Y	0	0	0
ANDR	Anderson's Waste Disposal Sites	Y	0	0	0
AUWR	Automobile Wrecking & Supplies	Y	0	0	0
BORE	Borehole	Y	1	3	4
CA	Certificates of Approval	Y	0	7	7
CFOT	Commercial Fuel Oil Tanks	Y	0	0	0
CHEM	Chemical Register	Y	0	0	0
COAL	Inventory of Coal Gasification Plants and Coal Tar Sites	Y	0	0	0
CONV	Compliance and Convictions	Y	0	0	0
CPU	Certificates of Property Use	Y	0	0	0
DRL	Drill Hole Database	Y	0	0	0
EASR	Environmental Activity and Sector Registry	Y	0	0	0
EBR	Environmental Registry	Y	0	0	0
ECA	Environmental Compliance Approval	Y	0	0	0
EEM	Environmental Effects Monitoring	Y	0	0	0
EHS	ERIS Historical Searches	Y	1	7	8
EIS	Environmental Issues Inventory System	Y	0	0	0
EXP	List of TSSA Expired Facilities	Y	0	14	14
FCON	Federal Convictions	Y	0	0	0
FCS	Contaminated Sites on Federal Land	Y	0	0	0
FOFT	Fisheries & Oceans Fuel Tanks	Y	0	0	0
FST	Fuel Storage Tank	Y	0	10	10
GEN	Ontario Regulation 347 Waste Generators Summary	Y	0	6	6
HINC	TSSA Historic Incidents	Y	0	0	0
IAFT	Indian & Northern Affairs Fuel Tanks	Y	0	0	0
INC	TSSA Incidents	Y	0	0	0
LIMO	Landfill Inventory Management Ontario	Y	0	0	0
MINE	Canadian Mine Locations	Y	0	0	0
MNR	Mineral Occurrences	Y	0	0	0
NATE	National Analysis of Trends in Emergencies System (NATES)	Y	0	0	0
NCPL	Non-Compliance Reports	Y	0	0	0
NDFT	National Defence & Canadian Forces Fuel Tanks	Y	0	0	0
NDSP	National Defence & Canadian Forces Spills	Y	0	0	0
NDWD	National Defence & Canadian Forces Waste Disposal Sites	Y	0	0	0
NEES	National Environmental Emergencies System (NEES)	Y	0	0	0

Database	Name	Selected	On Site	Boundary to 0.25KM	Total
NPCB	National PCB Inventory	Y	0	0	0
NPRI	National Pollutant Release Inventory	Y	0	0	0
OGW	Oil and Gas Wells	Y	0	0	0
OOGW	Ontario Oil and Gas Wells	Y	0	0	0
OPCB	Inventory of PCB Storage Sites	Y	0	0	0
ORD	Orders	Y	0	0	0
PAP	Canadian Pulp and Paper	Y	0	0	0
PCFT	Parks Canada Fuel Storage Tanks	Y	0	0	0
PES	Pesticide Register	Y	0	7	7
PINC	TSSA Pipeline Incidents	Y	0	0	0
PRT	Private and Retail Fuel Storage Tanks	Y	0	3	3
PTIW	Permit to Take Water	Y	0	0	0
REC	Ontario Regulation 347 Waste Receivers Summary	Y	0	0	0
RSC	Record of Site Condition	Y	0	0	0
RST	Retail Fuel Storage Tanks	Y	0	7	7
SCT	Scott's Manufacturing Directory	Y	0	0	0
SPL	Ontario Spills	Y	0	8	8
SRDS	Wastewater Discharger Registration Database	Y	0	0	0
TANK	Anderson's Storage Tanks	Y	0	0	0
TCFT	Transport Canada Fuel Storage Tanks	Y	0	0	0
VAR	TSSA Variances for Abandonment of Underground Storage Tanks	Y	0	0	0
WDS	Waste Disposal Sites - MOE CA Inventory	Y	0	0	0
WDSH	Waste Disposal Sites - MOE 1991 Historical Approval Inventory	Y	0	0	0
WWIS	Water Well Information System	Y	3	16	19
Total:			5	88	93

Executive Summary: Site Report Summary – Project Property

Map Key	DB	Company/Site Name	Address	Page Number
1	WWIS		ON	12
2	WWIS		ON	12
3	EHS		9740, 9580 & 9770 Jane Street Maple ON L6A 1S6	13
4	BORE		ON	13
5	WWIS		ON	13

Executive Summary: Site Report Summary – Surrounding Properties

Map Key	DB	Company/Site Name	Address	Page Number
6	WWIS		ON	14
7	SPL	VAUGHAN CITY	CROSSROADS OF GRAND VALLY BLVD AND PIETRO ROAD IN MAPLE.(UNASSUMED ROADS) VAUGHAN CITY ON	15
8	WWIS		ON	15
9	GEN	Home Alone Property Management Ltd.	90 Mast Rd. Vaughan ON L6A 3X1	16
10	PES	PESTOKILL INC	268 TREASURE RD MAPLE ON L6A 3K8	16
10	PES	QUICK PEST CONTROL	268 TREASURE RD MAPLE ON L6A 3K8	16
11	WWIS		ON	16
12	WWIS		ON	17
13	WWIS		ON	18
14	BORE		ON	18
15	CA	Imperial Oil Limited	3100 Major Mackenzie Dr W Vaughan ON	18
15	CA	Jane Street and Major Mackenzie Esso External Sanitary Sewer	3100 Major Mackenzie Drive Vaughan ON L6A 1S1	19
15	EHS		3100 Major Mackenzie Dr. Maple ON L6A 1S1	19
15	EXP	GLOBAL PRESTIGE INC	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	19
15	EXP	GLOBAL PRESTIGE INC	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	20
15	EXP	GLOBAL PRESTIGE INC	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	20
15	EXP	GLOBAL PRESTIGE INC	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	20
15	EXP	GLOBAL PRESTIGE INC	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	21
15	EXP	GLOBAL PRESTIGE INC	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	21
15	EXP	GLOBAL PRESTIGE INC	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	21
15	EXP	GLOBAL PRESTIGE INC	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	22
15	EXP	GLOBAL PRESTIGE INC	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	22
15	EXP	GLOBAL PRESTIGE INC	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	22

Map Key	DB	Company/Site Name	Address	Page Number
15	FST	GLOBAL PRESTIGE INC	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	23
15	FST	GLOBAL PRESTIGE INC	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	23
15	FST	GLOBAL PRESTIGE INC	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	23
15	FST	GLOBAL PRESTIGE INC	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	24
15	FST	NYMAN ENTERPRISES LTD O/A GAS STATION	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	24
15	GEN	P D MCLaren	3100 Major Mackenzie Ave. Maple ON	25
15	PRT	851025 ONTARIO INC	3100 MAJOR MACKENZIE DR MAPLE ON L6A1S1	25
15	RST	MAPLE ESSO	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	26
15	RST	WONDERLAND ESSO	3100 MAJOR MACKENZIE DR MAPLE ON L6A1S1	26
15	RST	GLOBAL PRESTIGE INC	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	26
15	RST	NYMAN'S ESSO	3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	26
15	SPL	IMPERIAL OIL	3100 MAJOR MACKENZIE ESSO SERVICE STATION VAUGHAN CITY ON L6A 1S1	26
15	SPL	Esso Service Station	3100 Major Mackenzie Dr W Vaughan ON	26
16	CA	Helena Maria Borges	296 Discovery Trail Vaughan ON L6A 3K4	27
17	EXP	DAMAR FARMS	10150 JANE ST N OF MAJOR MACKENZIE MAPLE ON	27
17	EXP	DAMAR FARMS	10150 JANE ST N OF MAJOR MACKENZIE MAPLE ON	27
17	EXP	DAMAR FARMS	10150 JANE ST N OF MAJOR MACKENZIE MAPLE ON	28
17	PRT	DAMAR FARMS	10150 JANE ST N OF MAJOR MACKENZIE MAPLE ON	28
18	WWIS		ON	28
19	BORE		ON	29
20	BORE		ON	29
21	CA	VENTURON DEV.(MAPLE) CORP./VENTURON DEV.	JANE ST./MAJ. MACKENZIE DR,SWM VAUGHAN CITY ON	30
21	SPL		Grand Valley subdivision at Jane St. and Major Mackenzie<UNOFFICIAL> Vaughan ON	30
22	WWIS		ON	31
23	WWIS		ON	31
24	WWIS		ON	32
25	WWIS		ON	32

Map Key	DB	Company/Site Name	Address	Page Number
26	WWIS		ON	32
27	EHS		3000 Major Mackenzie Dr. Vaughan ON L6A 1R8	33
27	EHS		3000 Major Mackenzie Drive Vaughan ON	33
27	EXP	CANGO INC A & T SERVICES	3000 MAJOR MACKENZIE DR MAPLE ON L6A 3Z5	33
27	FST	CANGO INC	3000 MAJOR MACKENZIE DR & JANE ST MAPLE ON L6A 3Z5	33
27	FST	CANGO INC	3000 MAJOR MACKENZIE DR & JANE ST MAPLE ON L6A 3Z5	34
27	FST	CANGO INC	3000 MAJOR MACKENZIE DR & JANE ST LOT 20 MAPLE ON L6A 3Z5	35
27	FST	CANGO INC	3000 MAJOR MACKENZIE DR & JANE ST MAPLE ON L6A 3Z5	35
27	FST	CANGO INC	3000 MAJOR MACKENZIE DR & JANE ST MAPLE ON L6A 3Z5	36
27	GEN	Shell Canada Products	3000 Major McKenzie Drive Vaughan ON L6A 3Z5	36
27	PRT	GASRITE INTERNATIONAL CORP	MAJOR MACKENZIE & JANE ST LOT 20 VAUGHAN ON L6A1T1	36
27	RST	GAS RITE	3000 MAJOR MACKENZIE DR MAPLE ON L6A 1R8	37
27	RST	CANGO	3000 MAJOR MACKENZIE DR MAPLE ON L6A1R8	37
27	RST	CANGO INC	3000 MAJOR MACKENZIE DR RICHMOND HILL ON L6A 1R8	37
28	WWIS		ON	37
29	SPL		MVA Spill Site, North side of Major Mackenzie just East of Jane St. Vaughan ON	38
30	EHS		Major Mackenzie Dr && Hwy 400 Vaughan ON	38
30	SPL	TRANSPORT TRUCK	HWY 400, SOUTH OF MAJOR MACKENZIE (JUST SOUTH OF THE WEIGH SCALES) MOTOR VEHICLE (OPERATING FLUID) VAUGHAN CITY ON	38
30	SPL	TRANSPORT TRUCK	HWY # 400 && MAJOR MACKENZIE MOTOR VEHICLE (OPERATING FLUID) VAUGHAN ON	38
30	SPL	DUFFERIN CONSTRUCTION	HWY. 400 AND MAJOR MACKENZIE VAUGHAN CITY ON	39
31	EHS		3000 Major Mackenzie Drive West Vaughan ON	39
32	CA	MAPLE LEAF FOODS INC.	ROSEHEATH DR./JANE ST. VAUGHAN TOWN ON	39
33	PES	SHOPPERS DRUG MART #0913 (JANE & MAJOR MACKENZIE)	2943 MAJOR MACKENZIE DR MAPLE ON L6A3N9	39
33	PES	SHOPPERS DRUG MART #0913 (JANE & MAJOR MACKENZIE)	2943 MAJOR MACKENZIE DR MAPLE ON L6A3N9	40
33	PES	SHOPPERS DRUG MART #0913 (JANE & MAJOR MACKENZIE)	2943 MAJOR MACKENZIE DR MAPLE ON L6A 3N9	40
34	WWIS		ON	40
35	WWIS		ON	40

<i>Map Key</i>	<i>DB</i>	<i>Company/Site Name</i>	<i>Address</i>	<i>Page Number</i>
36	EHS		2810 Major Mackenzie Drive West Maple ON L6A 1Z5	41
36	GEN	The Health Centre of Maple	2810 major mackenzie dr maple ON L6A 3L2	41
36	GEN	The Health Centre of Maple	2810 major mackenzie dr maple ON L6A 3L2	41
36	GEN	The Health Centre of Maple	2810 major mackenzie dr maple ON L6A 3L2	41
36	PES	MAPLE LONGO'S	2810 MAJOR MACKENZIE MAPLE ON L6A 3L2	42
36	PES	MAPLE LONGO'S	2810 MAJOR MACKENZIE MAPLE ON L6A 3L2	42
37	CA	ARISTA HOMES LIMITED	KELSO CRES./KENMORE AVE.W VAUGHAN CITY ON	42
37	CA	ARISTA HOMES LIMITED	KELSO CRES./KENMORE AVE.W. VAUGHAN CITY ON	42
38	WWIS		ON	43
39	WWIS		ON	43
40	EHS		Block 60, Cityview Blvd. Vaughan ON	44



Map

Order No: 20131024016

Address: Major Mackenzie Dr Jane St, Vaughan, ON

Project Property	Expressway	Industrial and Resource - Regions	National Park
Buffer Outline	Principal Highway	Main Line	Provincial or Territorial Park
Eris Sites with Higher Elevation	Secondary Highway	Sidetrack	Other Park
Eris Sites with Same Elevation	Major Road	Transit Line	Golf Course or Driving Range
Eris Sites with Lower Elevation	Local road	Abandoned Line	Park or Sports Field
Eris Sites with Unknown Elevation	Trail	Proposed Road	Other Recreation Area
	Proposed Road		
	Ferry Route/Ice Road		



Aerial

Order No: 20131024016

Address: Major Mackenzie Dr Jane St, Vaughan, ON

Detail Report

Map Key	Number of Records	Elevation m	Site	DB		
1	1 of 1	227.8	ON	<u>WWIS</u>		
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><i>Well Id:</i> 6906678 <i>Concession:</i> 05 <i>County:</i> YORK <i>Easting Nad83:</i> 617214.7 <i>Zone:</i> 17 <i>Primary Water Use:</i> Livestock <i>Sec. Water Use:</i> Domestic <i>Pump Rate:</i> 9 GPM <i>Flow Rate:</i> <i>Specific Capacity:</i> <i>Construction Method:</i> Cable Tool <i>Elevation (m):</i> 230.49 <i>Depth to Bedrock:</i> <i>Water Type:</i> FRESH</p> </td> <td style="width: 50%; vertical-align: top;"> <p><i>Lot:</i> 021 <i>Concession Name:</i> CON <i>Municipality:</i> VAUGHAN TOWN (VAUGHAN TWP) <i>Northing Nad83:</i> 4856217 <i>Utm Reliability:</i> margin of error : 100 m - 300 m <i>Construction Date:</i> 11-MAY-62 <i>Well Depth:</i> 58 ft <i>Static Water Level:</i> 60 ft <i>Clear/Cloudy:</i> CLEAR <i>Final Well Status:</i> Water Supply <i>Flowing (y/n):</i> N <i>Elevation Reliability:</i> <i>Overburden/Bedrock:</i> Overburden <i>Casing Material:</i> STEEL</p> </td> </tr> </table>					<p><i>Well Id:</i> 6906678 <i>Concession:</i> 05 <i>County:</i> YORK <i>Easting Nad83:</i> 617214.7 <i>Zone:</i> 17 <i>Primary Water Use:</i> Livestock <i>Sec. Water Use:</i> Domestic <i>Pump Rate:</i> 9 GPM <i>Flow Rate:</i> <i>Specific Capacity:</i> <i>Construction Method:</i> Cable Tool <i>Elevation (m):</i> 230.49 <i>Depth to Bedrock:</i> <i>Water Type:</i> FRESH</p>	<p><i>Lot:</i> 021 <i>Concession Name:</i> CON <i>Municipality:</i> VAUGHAN TOWN (VAUGHAN TWP) <i>Northing Nad83:</i> 4856217 <i>Utm Reliability:</i> margin of error : 100 m - 300 m <i>Construction Date:</i> 11-MAY-62 <i>Well Depth:</i> 58 ft <i>Static Water Level:</i> 60 ft <i>Clear/Cloudy:</i> CLEAR <i>Final Well Status:</i> Water Supply <i>Flowing (y/n):</i> N <i>Elevation Reliability:</i> <i>Overburden/Bedrock:</i> Overburden <i>Casing Material:</i> STEEL</p>
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<p>--- Details ---</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><i>Thickness:</i> 1 ft <i>Material Colour:</i> + <i>Thickness:</i> 26 ft <i>Material Colour:</i> YELLOW + <i>Thickness:</i> 31 ft <i>Material Colour:</i> + <i>Thickness:</i> 70 ft <i>Material Colour:</i> + <i>Thickness:</i> 32 ft <i>Material Colour:</i> BLUE + <i>Thickness:</i> 6 ft <i>Material Colour:</i></p> </td> <td style="width: 50%; vertical-align: top;"> <p><i>Original Depth:</i> 1 ft <i>Material:</i> TOPSOIL <i>Original Depth:</i> 27 ft <i>Material:</i> CLAY <i>Original Depth:</i> 58 ft <i>Material:</i> SILT, CLAY <i>Original Depth:</i> 128 ft <i>Material:</i> GRAVEL, HARDPAN <i>Original Depth:</i> 160 ft <i>Material:</i> CLAY <i>Original Depth:</i> 166 ft <i>Material:</i> GRAVEL</p> </td> </tr> </table>					<p><i>Thickness:</i> 1 ft <i>Material Colour:</i> + <i>Thickness:</i> 26 ft <i>Material Colour:</i> YELLOW + <i>Thickness:</i> 31 ft <i>Material Colour:</i> + <i>Thickness:</i> 70 ft <i>Material Colour:</i> + <i>Thickness:</i> 32 ft <i>Material Colour:</i> BLUE + <i>Thickness:</i> 6 ft <i>Material Colour:</i></p>	<p><i>Original Depth:</i> 1 ft <i>Material:</i> TOPSOIL <i>Original Depth:</i> 27 ft <i>Material:</i> CLAY <i>Original Depth:</i> 58 ft <i>Material:</i> SILT, CLAY <i>Original Depth:</i> 128 ft <i>Material:</i> GRAVEL, HARDPAN <i>Original Depth:</i> 160 ft <i>Material:</i> CLAY <i>Original Depth:</i> 166 ft <i>Material:</i> GRAVEL</p>
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2	1 of 1	227.8	ON	<u>WWIS</u>		
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Map Key	Number of Records	Elevation m	Site	DB
Depth to Bedrock: Water Type:	FRESH			Overburden/Bedrock: Overburden Casing Material: STEEL
--- Details ---				
Thickness:	2 ft			Original Depth: 2 ft
Material Colour:				Material: TOPSOIL
+				
Thickness:	68 ft			Original Depth: 70 ft
Material Colour:	BLUE			Material: CLAY
+				
Thickness:	10 ft			Original Depth: 80 ft
Material Colour:	BLUE			Material: FINE SAND
+				
Thickness:	78 ft			Original Depth: 158 ft
Material Colour:	BLUE			Material: CLAY
+				
Thickness:	7 ft			Original Depth: 165 ft
Material Colour:				Material: COARSE SAND

3 **1 of 1** **227.8** **9740, 9580 & 9770 Jane Street** **EHS**
Maple ON L6A 1S6

Order No.: 20060606046
Report Date: 6/15/2006
Report Type: Custom Report
Search Radius (km): 0.25
Addit. Info Ordered:

4 **1 of 1** **227.8** **ON** **BORE**

Borehole ID:	589993	Type:	Outcrop
Use:		Status:	Unknown
Drill Method:		UTM Zone:	17
Easting:	617312.000	Northing:	4856123.000
Location Accuracy:		Orig. Ground Elev m:	230
Elev. Reliability Note:		DEM Ground Elev m:	230
Total Depth m:	0.900000	Primary Name:	OGS-OLW-62-261
Township:		Concession:	
Lot:		Municipality:	
Completion Date:		Static Water Level:	
Primary Water Use:		Sec. Water Use:	
Location Description:			

--- Details ---

Stratum ID:	218339721	Top Depth m:	0
Bottom Depth m:	0.900000	Stratum Desc:	si cl

5 **1 of 1** **227.8** **ON** **WWIS**

Well Id:	6911688	Lot:	021
Concession:	05	Concession Name:	CON
County:	YORK	Municipality:	VAUGHAN TOWN (VAUGHAN TWP)
Easting Nad83:	617314.7	Northing Nad83:	4856083
Zone:	17	Utm Reliability:	margin of error : 300 m - 1 km
Primary Water Use:	Livestock	Construction Date:	14-JUN-73
Sec. Water Use:	Domestic	Well Depth:	92 ft

Map Key	Number of Records	Elevation m	Site	DB
Pump Rate:	5 GPM			Static Water Level: 18 ft
Flow Rate:				Clear/Cloudy: CLEAR
Specific Capacity:				Final Well Status: Water Supply
Construction Method:	Rotary (Convent.)			Flowing (y/n): N
Elevation (m):	230.62			Elevation Reliability:
Depth to Bedrock:				Overburden/Bedrock: Overburden
Water Type:	FRESH			Casing Material: STEEL
--- Details ---				
Thickness:	1 ft			Original Depth: 1 ft
Material Colour:	BROWN			Material: TOPSOIL
+				
Thickness:	15 ft			Original Depth: 16 ft
Material Colour:	YELLOW			Material: CLAY
+				
Thickness:	19 ft			Original Depth: 35 ft
Material Colour:	BLUE			Material: CLAY, SAND
+				
Thickness:	16 ft			Original Depth: 51 ft
Material Colour:	GREY			Material: SAND
+				
Thickness:	41 ft			Original Depth: 92 ft
Material Colour:	BLUE			Material: CLAY, SAND
+				
Thickness:	68 ft			Original Depth: 160 ft
Material Colour:	BLUE			Material: CLAY

6 **1 of 1** **227.8** **ON** [WWIS](#)

Well Id:	6906670	Lot:	020
Concession:	05	Concession Name:	CON
County:	YORK	Municipality:	VAUGHAN TOWN (VAUGHAN TWP)
Easting Nad83:	617455.7	Northing Nad83:	4856105
Zone:	17	Utm Reliability:	margin of error : 100 m - 300 m
Primary Water Use:		Construction Date:	28-JUL-62
Sec. Water Use:		Well Depth:	97 ft
Pump Rate:		Static Water Level:	
Flow Rate:		Clear/Cloudy:	
Specific Capacity:		Final Well Status:	Abandoned-Supply
Construction Method:	Cable Tool	Flowing (y/n):	
Elevation (m):	230.03	Elevation Reliability:	
Depth to Bedrock:		Overburden/Bedrock:	Overburden
Water Type:		Casing Material:	

--- Details ---

Thickness:	22 ft	Original Depth:	22 ft
Material Colour:		Material:	PREVIOUSLY DUG
+			
Thickness:	25 ft	Original Depth:	47 ft
Material Colour:	BLUE	Material:	CLAY
+			
Thickness:	2 ft	Original Depth:	49 ft
Material Colour:		Material:	HARDPAN
+			
Thickness:	13 ft	Original Depth:	62 ft
Material Colour:	BLUE	Material:	CLAY
+			

Map Key	Number of Records	Elevation m	Site	DB
Thickness:	35 ft		Original Depth:	97 ft
Material Colour:			Material:	FINE SAND, CLAY
+				
Thickness:	103 ft		Original Depth:	200 ft
Material Colour:	BLUE		Material:	CLAY

7 **1 of 1** **229.1** **VAUGHAN CITY** **SPL**
CROSSROADS OF GRAND VALLY BLVD AND PIETRO
ROAD IN MAPLE.(UNASSUMED ROADS)
VAUGHAN CITY ON

Ref No.: 180593
Incident Dt: 5/9/2000
MOE Reported Dt: 5/10/2000
Contaminant Name:
Contaminant Quantity:
Incident Summary: OIL ON CONSTRUCTION SITE FROM OIL CHANGES DONE BY WORKERS. AMOUNT UNKNOWN
Incident Cause: UNKNOWN
Incident Reason: OTHER
Nature of Impact: Other
Receiving Medium: LAND
Environmental Impact: POSSIBLE

8 **1 of 1** **227.8** **ON** **WWIS**

Well Id:	6911250	Lot:	022
Concession:	05	Concession Name:	CON
County:	YORK	Municipality:	VAUGHAN TOWN (VAUGHAN TWP)
Easting Nad83:	617314.7	Northing Nad83:	4856523
Zone:	17	Utm Reliability:	margin of error : 300 m - 1 km
Primary Water Use:	Livestock	Construction Date:	05-OCT-72
Sec. Water Use:	Domestic	Well Depth:	55 ft
Pump Rate:	3 GPM	Static Water Level:	25 ft
Flow Rate:		Clear/Cloudy:	CLEAR
Specific Capacity:		Final Well Status:	Water Supply
Construction Method:	Cable Tool	Flowing (y/n):	N
Elevation (m):	232.16	Elevation Reliability:	
Depth to Bedrock:		Overburden/Bedrock:	Overburden
Water Type:	FRESH	Casing Material:	STEEL

--- Details ---

Thickness:	1 ft	Original Depth:	1 ft
Material Colour:	BROWN	Material:	TOPSOIL
+			
Thickness:	11 ft	Original Depth:	12 ft
Material Colour:	BROWN	Material:	SAND, CLAY
+			
Thickness:	10 ft	Original Depth:	22 ft
Material Colour:	BLUE	Material:	CLAY
+			
Thickness:	21 ft	Original Depth:	43 ft
Material Colour:	BLUE	Material:	CLAY, SAND
+			
Thickness:	4 ft	Original Depth:	47 ft

Map Key	Number of Records	Elevation m	Site	DB
Material Colour:	BLUE		Material:	CLAY, GRAVEL
+				
Thickness:	6 ft		Original Depth:	53 ft
Material Colour:	GREY		Material:	SAND
+				
Thickness:	2 ft		Original Depth:	55 ft
Material Colour:	BLUE		Material:	CLAY, GRAVEL
9	1 of 1	227.8	Home Alone Property Management Ltd. 90 Mast Rd. Vaughan ON L6A 3X1	GEN
SIC Code:	531310			
SIC Description:	Real Estate Property Managers			
Generator #:	ON9880898			
Approval Yrs:	2009			
--- Details ---				
Waste Code:	148			
Waste Description:	INORGANIC LABORATORY CHEMICALS			
+				
Waste Code:	263			
Waste Description:	ORGANIC LABORATORY CHEMICALS			
+				
Waste Code:	331			
Waste Description:	WASTE COMPRESSED GASES			
10	1 of 2	229.6	PESTOKILL INC 268 TREASURE RD MAPLE ON L6A 3K8	PES
Licence No.:	02-01-05081-0			
Licence Type:	Operator			
10	2 of 2	229.6	QUICK PEST CONTROL 268 TREASURE RD MAPLE ON L6A 3K8	PES
Licence No.:				
Licence Type:	Operator			
11	1 of 1	227.8	ON	WWIS
Well Id:	6906669		Lot:	020
Concession:	05		Concession Name:	CON
County:	YORK		Municipality:	VAUGHAN TOWN (VAUGHAN TWP)
Easting Nad83:	617517.7		Northing Nad83:	4856116
Zone:	17		Utm Reliability:	margin of error : 100 m - 300 m
Primary Water Use:	Domestic		Construction Date:	16-OCT-62
Sec. Water Use:			Well Depth:	60 ft
Pump Rate:	7 GPM		Static Water Level:	60 ft
Flow Rate:			Clear/Cloudy:	CLEAR
Specific Capacity:			Final Well Status:	Water Supply
Construction Method:	Cable Tool		Flowing (y/n):	N
Elevation (m):	230		Elevation Reliability:	

Map Key	Number of Records	Elevation m	Site	DB
Depth to Bedrock: Water Type:	FRESH		Overburden/Bedrock: Casing Material:	Overburden STEEL
--- Details ---				
Thickness:	30 ft		Original Depth:	30 ft
Material Colour:	BLUE		Material:	CLAY
+				
Thickness:	30 ft		Original Depth:	60 ft
Material Colour:			Material:	FINE SAND
+				
Thickness:	74 ft		Original Depth:	134 ft
Material Colour:	BLUE		Material:	CLAY
+				
Thickness:	4 ft		Original Depth:	138 ft
Material Colour:			Material:	FINE SAND

12 **1 of 1** **227.8** **ON** [WWIS](#)

Well Id:	6906668	Lot:	020
Concession:	05	Concession Name:	CON
County:	YORK	Municipality:	VAUGHAN TOWN (VAUGHAN TWP)
Easting Nad83:	617525.7	Northing Nad83:	4856124
Zone:	17	Utm Reliability:	margin of error : 100 m - 300 m
Primary Water Use:		Construction Date:	01-AUG-62
Sec. Water Use:		Well Depth:	85 ft
Pump Rate:		Static Water Level:	
Flow Rate:		Clear/Cloudy:	
Specific Capacity:		Final Well Status:	Abandoned-Supply
Construction Method:	Cable Tool	Flowing (y/n):	
Elevation (m):	230.04	Elevation Reliability:	
Depth to Bedrock:		Overburden/Bedrock:	Overburden
Water Type:		Casing Material:	

--- Details ---			
Thickness:	1 ft	Original Depth:	1 ft
Material Colour:		Material:	TOPSOIL
+			
Thickness:	19 ft	Original Depth:	20 ft
Material Colour:		Material:	MEDIUM SAND, GRAVEL
+			
Thickness:	20 ft	Original Depth:	40 ft
Material Colour:	BLUE	Material:	CLAY, MEDIUM SAND
+			
Thickness:	24 ft	Original Depth:	64 ft
Material Colour:		Material:	QUICKSAND
+			
Thickness:	21 ft	Original Depth:	85 ft
Material Colour:	BLUE	Material:	CLAY
+			
Thickness:	15 ft	Original Depth:	100 ft
Material Colour:	BLUE	Material:	CLAY, QUICKSAND

Map Key	Number of Records	Elevation m	Site	DB
13	1 of 1	228.6	ON	WWIS
Well Id: 6909401		Lot: 022		
Concession: 05		Concession Name: CON		
County: YORK		Municipality: VAUGHAN TOWN (VAUGHAN TWP)		
Easting Nad83: 617294.7		Northing Nad83: 4856603		
Zone: 17		Utm Reliability: margin of error : 30 m - 100 m		
Primary Water Use: Livestock		Construction Date: 08-SEP-69		
Sec. Water Use: Domestic		Well Depth: 41 ft		
Pump Rate:		Static Water Level: 25 ft		
Flow Rate:		Clear/Cloudy: CLOUDY		
Specific Capacity:		Final Well Status: Water Supply		
Construction Method: Boring		Flowing (y/n): N		
Elevation (m): 233.2		Elevation Reliability:		
Depth to Bedrock:		Overburden/Bedrock: Overburden		
Water Type: FRESH		Casing Material: GALVANIZED		
--- Details ---				
Thickness: 16 ft		Original Depth: 16 ft		
Material Colour: BROWN		Material: CLAY, MEDIUM SAND		
+				
Thickness: 19 ft		Original Depth: 35 ft		
Material Colour: GREY		Material: CLAY		
+				
Thickness: 6 ft		Original Depth: 41 ft		
Material Colour: GREY		Material: FINE SAND		
14	1 of 1	227.8	ON	BORE
Borehole ID: 590236		Type: Outcrop		
Use:		Status: Unknown		
Drill Method:		UTM Zone: 17		
Easting: 617562.000		Northing: 4856223.000		
Location Accuracy:		Orig. Ground Elev m: 231.800003		
Elev. Reliability Note:		DEM Ground Elev m: 232.600006		
Total Depth m: 0.800000		Primary Name: OGS-OLW-62-250		
Township:		Concession:		
Lot:		Municipality:		
Completion Date:		Static Water Level:		
Primary Water Use:		Sec. Water Use:		
Location Description:				
--- Details ---				
Stratum ID: 218339710		Top Depth m: 0		
Bottom Depth m: 0.800000		Stratum Desc: Di sa		
15	1 of 26	227.8	Imperial Oil Limited 3100 Major Mackenzie Dr W Vaughan ON	CA
Certificate #: 1405-7SVPDH				
Application Year: 2009				
Issue Date: 6/10/2009				
Approval Type: Industrial Sewage Works				
Status: Approved				
Application Type:				

Map Key	Number of Records	Elevation m	Site	DB
<p>Client Name: Client Address: Client City: Client Postal Code: Project Description: Contaminants: Emission Control:</p>				
15	2 of 26	227.8	Jane Street and Major Mackenzie Esso External Sanitary Sewer 3100 Major Mackenzie Drive Vaughan ON L6A 1S1	CA
<p>Certificate #: 5340-52RL33 Application Year: 01 Issue Date: 9/21/01 Approval Type: Municipal & Private sewage Status: Approved Application Type: New Certificate of Approval Client Name: Imperial Oil Limited Client Address: 90 Wynford Drive Client City: Toronto Client Postal Code: M3C 1K5 Project Description: This application is for the construction of a sanitary sewer to service the proposed new Esso station on Jane Street and Major Mackenzie Drive. Contaminants: Emission Control:</p>				
15	3 of 26	227.8	3100 Major Mackenzie Dr. Maple ON L6A 1S1	EHS
<p>Order No.: 20010117004 Report Date: 1/26/01 Report Type: Basic Report Search Radius (km): 0.25 Addit. Info Ordered:</p>				
15	4 of 26	227.8	GLOBAL PRESTIGE INC 3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	EXP
<p>TSSA Program Area: Maximum Hazard Rank: Federal Device: Type: Capacity: Corrosion Protection: Tank Material: Tank Type: Expire Date: Instance ID: 44139 Instance Number: 10837919 Instance Type: FS Liquid Fuel Tank Status: EXPIRED Description: FS Liquid Fuel Tank</p>				

Map Key	Number of Records	Elevation m	Site	DB
15	5 of 26	227.8	GLOBAL PRESTIGE INC 3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	EXP
<p>TSSA Program Area: Maximum Hazard Rank: Federal Device: Type: Capacity: Corrosion Protection: Tank Material: Tank Type: Expire Date: Instance ID: 44798 Instance Number: 10837949 Instance Type: FS Liquid Fuel Tank Status: EXPIRED Description: FS Liquid Fuel Tank</p>				
15	6 of 26	227.8	GLOBAL PRESTIGE INC 3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	EXP
<p>TSSA Program Area: Maximum Hazard Rank: Federal Device: Type: Capacity: Corrosion Protection: Tank Material: Tank Type: Expire Date: Instance ID: 45744 Instance Number: 10837928 Instance Type: FS Liquid Fuel Tank Status: EXPIRED Description: FS Liquid Fuel Tank</p>				
15	7 of 26	227.8	GLOBAL PRESTIGE INC 3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	EXP
<p>TSSA Program Area: Maximum Hazard Rank: Federal Device: Type: Capacity: Corrosion Protection: Tank Material: Tank Type: Expire Date: Instance ID: 44119 Instance Number: 10837936 Instance Type: FS Liquid Fuel Tank Status: EXPIRED Description: FS Liquid Fuel Tank</p>				

Map Key	Number of Records	Elevation m	Site	DB
15	8 of 26	227.8	GLOBAL PRESTIGE INC 3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	EXP
<p>TSSA Program Area: Maximum Hazard Rank: Federal Device: Type: Capacity: Corrosion Protection: Tank Material: Tank Type: Expire Date: Instance ID: 44710 Instance Number: 10837911 Instance Type: FS Liquid Fuel Tank Status: EXPIRED Description: FS Liquid Fuel Tank</p>				
15	9 of 26	227.8	GLOBAL PRESTIGE INC 3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	EXP
<p>TSSA Program Area: Maximum Hazard Rank: Federal Device: Type: Capacity: Corrosion Protection: Tank Material: Tank Type: Expire Date: Instance ID: 352409 Instance Number: 64100522 Instance Type: FS Piping Status: EXPIRED Description: FS Piping</p>				
15	10 of 26	227.8	GLOBAL PRESTIGE INC 3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	EXP
<p>TSSA Program Area: Maximum Hazard Rank: Federal Device: Type: Capacity: Corrosion Protection: Tank Material: Tank Type: Expire Date: Instance ID: 351246 Instance Number: 64100523 Instance Type: FS Piping Status: EXPIRED Description: FS Piping</p>				

Map Key	Number of Records	Elevation m	Site	DB
15	11 of 26	227.8	GLOBAL PRESTIGE INC 3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	EXP
<p>TSSA Program Area: Maximum Hazard Rank: Federal Device: Type: Capacity: Corrosion Protection: Tank Material: Tank Type: Expire Date: Instance ID: 44677 Instance Number: 10837901 Instance Type: FS Liquid Fuel Tank Status: EXPIRED Description: FS Liquid Fuel Tank</p>				
15	12 of 26	227.8	GLOBAL PRESTIGE INC 3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	EXP
<p>TSSA Program Area: Maximum Hazard Rank: Federal Device: Type: Capacity: Corrosion Protection: Tank Material: Tank Type: Expire Date: Instance ID: 43533 Instance Number: 10837943 Instance Type: FS Piping Status: EXPIRED Description: FS Piping</p>				
15	13 of 26	227.8	GLOBAL PRESTIGE INC 3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	EXP
<p>TSSA Program Area: Maximum Hazard Rank: Federal Device: Type: Capacity: Corrosion Protection: Tank Material: Tank Type: Expire Date: Instance ID: 44940 Instance Number: 10837955 Instance Type: FS Piping Status: EXPIRED Description: FS Piping</p>				

Map Key	Number of Records	Elevation m	Site	DB
15	14 of 26	227.8	GLOBAL PRESTIGE INC 3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	FST
<i>License Issue Date:</i>		<i>Tank Status:</i>		
<i>Tank Status As Of:</i> June 2010		<i>Operation Type:</i> Retail Fuel Outlet		
<i>Facility Type:</i> FS GASOLINE STATION - SELF SERVE				
--- Details ---				
<i>Status:</i> Active				
<i>Capacity (L):</i> 22730				
<i>Year of Installation:</i> 2001				
<i>Corrosion Protection:</i> Fiberglass				
<i>Tank Fuel Type:</i> Double Wall UST - Diesel				
+				
<i>Status:</i> Active				
<i>Capacity (L):</i> 45400				
<i>Year of Installation:</i> 2001				
<i>Corrosion Protection:</i> Fiberglass				
<i>Tank Fuel Type:</i> Double Wall UST - Gasoline				
15	15 of 26	227.8	GLOBAL PRESTIGE INC 3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	FST
<i>License Issue Date:</i>		<i>Tank Status:</i>		
<i>Tank Status As Of:</i> June 2011		<i>Operation Type:</i> Retail Fuel Outlet		
<i>Facility Type:</i> FS GASOLINE STATION - SELF SERVE				
--- Details ---				
<i>Status:</i> Active				
<i>Capacity (L):</i> 45400				
<i>Year of Installation:</i> 2001				
<i>Corrosion Protection:</i> Fiberglass				
<i>Tank Fuel Type:</i> Double Wall UST - Gasoline				
+				
<i>Status:</i> Active				
<i>Capacity (L):</i> 45400				
<i>Year of Installation:</i> 2001				
<i>Corrosion Protection:</i> Fiberglass				
<i>Tank Fuel Type:</i> Double Wall UST - Gasoline				
+				
<i>Status:</i> Active				
<i>Capacity (L):</i> 45400				
<i>Year of Installation:</i> 2001				
<i>Corrosion Protection:</i> Fiberglass				
<i>Tank Fuel Type:</i> Double Wall UST - Gasoline				
+				
<i>Status:</i> Active				
<i>Capacity (L):</i> 22730				
<i>Year of Installation:</i> 2001				
<i>Corrosion Protection:</i> Fiberglass				
<i>Tank Fuel Type:</i> Double Wall UST - Diesel				
15	16 of 26	227.8	GLOBAL PRESTIGE INC 3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	FST
<i>License Issue Date:</i>		<i>Tank Status:</i>		
<i>Tank Status As Of:</i> January 2010		<i>Operation Type:</i> Retail Fuel Outlet		
<i>Facility Type:</i> FS GASOLINE STATION - SELF SERVE				

Map Key	Number of Records	Elevation m	Site	DB
--- Details ---				
Status:		Active		
Capacity (L):		22730		
Year of Installation:		2001		
Corrosion Protection:		Fiberglass		
Tank Fuel Type:		Double Wall UST - Diesel		
+				
Status:		Active		
Capacity (L):		45400		
Year of Installation:		2001		
Corrosion Protection:		Fiberglass		
Tank Fuel Type:		Double Wall UST - Gasoline		

15 17 of 26 227.8 **GLOBAL PRESTIGE INC** [FST](#)
3100 MAJOR MACKENZIE DR
MAPLE ON L6A 1S1

License Issue Date: 6/17/2008 10:06:00 AM Tank Status: Licensed
Tank Status As Of: December 2008 Operation Type: Retail Fuel Outlet
Facility Type: Gasoline Station - Self Serve

--- Details ---				
Status:		Active		
Capacity (L):		22700		
Year of Installation:		1992		
Corrosion Protection:				
Tank Fuel Type:		Liquid Fuel Single Wall UST - Gasoline		
+				
Status:		Active		
Capacity (L):		13600		
Year of Installation:		1992		
Corrosion Protection:				
Tank Fuel Type:		Liquid Fuel Single Wall UST - Gasoline		
+				
Status:		Active		
Capacity (L):		22700		
Year of Installation:		1992		
Corrosion Protection:				
Tank Fuel Type:		Liquid Fuel Single Wall UST - Gasoline		
+				
Status:		Active		
Capacity (L):		13600		
Year of Installation:		1992		
Corrosion Protection:				
Tank Fuel Type:		Liquid Fuel Single Wall UST - Gasoline		
+				
Status:		Active		
Capacity (L):		22700		
Year of Installation:		1992		
Corrosion Protection:				
Tank Fuel Type:		Liquid Fuel Single Wall UST - Diesel		

15 18 of 26 227.8 **NYMAN ENTERPRISES LTD O/A GAS STATION** [FST](#)
3100 MAJOR MACKENZIE DR

Map Key	Number of Records	Elevation m	Site	DB
MAPLE ON L6A 1S1				
License Issue Date:	5/13/2005		Tank Status:	Licensed
Tank Status As Of:	August 2007		Operation Type:	Retail Fuel Outlet
Facility Type:	Gasoline Station - Self Serve			
--- Details ---				
Status:	Active			
Capacity (L):	22700			
Year of Installation:	1992			
Corrosion Protection:				
Tank Fuel Type:	Liquid Fuel Single Wall UST - Gasoline			
+				
Status:	Active			
Capacity (L):	13600			
Year of Installation:	1992			
Corrosion Protection:				
Tank Fuel Type:	Liquid Fuel Single Wall UST - Gasoline			
+				
Status:	Active			
Capacity (L):	22700			
Year of Installation:	1992			
Corrosion Protection:				
Tank Fuel Type:	Liquid Fuel Single Wall UST - Gasoline			
+				
Status:	Active			
Capacity (L):	13600			
Year of Installation:	1992			
Corrosion Protection:				
Tank Fuel Type:	Liquid Fuel Single Wall UST - Gasoline			
+				
Status:	Active			
Capacity (L):	22700			
Year of Installation:	1992			
Corrosion Protection:				
Tank Fuel Type:	Liquid Fuel Single Wall UST - Diesel			

15	19 of 26	227.8	P D McLaren 3100 Major Mackenzie Ave. Maple ON	GEN
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SIC Code: 238299
SIC Description:
Generator #: ON2570480
Approval Yrs: 2011

15	20 of 26	227.8	851025 ONTARIO INC 3100 MAJOR MACKENZIE DR MAPLE ON L6A1S1	PRT
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Location ID: 8363
Type: retail
Expiry Date: 1995-12-31

Map Key	Number of Records	Elevation m	Site	DB
Capacity (L): Licence #:		145200 0030190001		
15	21 of 26	227.8	MAPLE ESSO 3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	<u>RST</u>
Facility: Description:		Service Stations-Gasoline, Oil & Natural Gas		
15	22 of 26	227.8	WONDERLAND ESSO 3100 MAJOR MACKENZIE DR MAPLE ON L6A1S1	<u>RST</u>
Facility: Description:		Service Stations-Gasoline, Oil & Natural Gas		
15	23 of 26	227.8	GLOBAL PRESTIGE INC 3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	<u>RST</u>
Facility: Description:		SERVICE STATIONS-GASOLINE, OIL & NATURAL GAS		
15	24 of 26	227.8	NYMAN'S ESSO 3100 MAJOR MACKENZIE DR MAPLE ON L6A 1S1	<u>RST</u>
Facility: Description:		Service Stations-Gasoline, Oil & Natural Gas Gasoline Service Stations		
15	25 of 26	227.8	IMPERIAL OIL 3100 MAJOR MACKENZIE ESSO SERVICE STATION VAUGHAN CITY ON L6A 1S1	<u>SPL</u>
Ref No.:		23961		
Incident Dt:		8/20/1989		
MOE Reported Dt:		8/20/1989		
Contaminant Name:				
Contaminant Quantity:				
Incident Summary:		IMPERIAL OIL - 25L DIESELFUEL TO CONCRETE, CLEANEDUP.		
Incident Cause:		VALVE/FITTING LEAK OR FAILURE		
Incident Reason:		EQUIPMENT FAILURE		
Nature of Impact:				
Receiving Medium:		LAND		
Environmental Impact:				
15	26 of 26	227.8	Esso Service Station 3100 Major Mackenzie Dr W Vaughan ON	<u>SPL</u>
Ref No.:		4160-888LVF		

Map Key	Number of Records	Elevation m	Site	DB
<i>Incident Dt:</i> MOE Reported Dt: 8/11/2010 Contaminant Name: GASOLINE Contaminant Quantity: 20 L Incident Summary: Esso Stn: 20L gas to grnd cln Incident Cause: Other Discharges Incident Reason: Equipment Failure - Malfunction of system components Nature of Impact: Air Pollution Receiving Medium: Environmental Impact: Not Anticipated				

16	1 of 1	229.5	Helena Maria Borges 296 Discovery Trail Vaughan ON L6A 3K4	CA
<i>Certificate #:</i> 1648-72LL4Y <i>Application Year:</i> 2007 <i>Issue Date:</i> 5/4/2007 <i>Approval Type:</i> Waste Management Systems <i>Status:</i> Approved <i>Application Type:</i> <i>Client Name:</i> <i>Client Address:</i> <i>Client City:</i> <i>Client Postal Code:</i> <i>Project Description:</i> <i>Contaminants:</i> <i>Emission Control:</i>				

17	1 of 4	227.8	DAMAR FARMS 10150 JANE ST N OF MAJOR MACKENZIE MAPLE ON	EXP
<i>TSSA Program Area:</i> <i>Maximum Hazard Rank:</i> <i>Federal Device:</i> <i>Type:</i> <i>Capacity:</i> <i>Corrosion Protection:</i> <i>Tank Material:</i> <i>Tank Type:</i> <i>Expire Date:</i> <i>Instance ID:</i> 68013 <i>Instance Number:</i> 11094213 <i>Instance Type:</i> FS Propane Tank <i>Status:</i> EXPIRED <i>Description:</i> FS Propane Tank				

17	2 of 4	227.8	DAMAR FARMS 10150 JANE ST N OF MAJOR MACKENZIE MAPLE ON	EXP
<i>TSSA Program Area:</i> <i>Maximum Hazard Rank:</i> <i>Federal Device:</i> <i>Type:</i> <i>Capacity:</i>				

Map Key	Number of Records	Elevation m	Site	DB
<p>Corrosion Protection: Tank Material: Tank Type: Expire Date: Instance ID: 68474 Instance Number: 11094229 Instance Type: FS Propane Tank Status: EXPIRED Description: FS Propane Tank</p>				
17	3 of 4	227.8	DAMAR FARMS 10150 JANE ST N OF MAJOR MACKENZIE MAPLE ON	EXP
<p>TSSA Program Area: Maximum Hazard Rank: Federal Device: Type: Capacity: Corrosion Protection: Tank Material: Tank Type: Expire Date: Instance ID: 394014 Instance Number: 9910546 Instance Type: FS Facility Status: EXPIRED Description: FS Propane Refill Cntr - Cylr Fill</p>				
17	4 of 4	227.8	DAMAR FARMS 10150 JANE ST N OF MAJOR MACKENZIE MAPLE ON	PRT
<p>Location ID: 18857 Type: retail Expiry Date: 1993-01-31 Capacity (L): 4000 Licence #: 0076354893</p>				
18	1 of 1	228.2	ON	WWIS
<p>Well Id: 6909352 Concession: 05 County: YORK Easting Nad83: 617434.7 Zone: 17 Primary Water Use: Not Used Sec. Water Use: Pump Rate: Flow Rate: Specific Capacity: Construction Method: Cable Tool Elevation (m): 233.95 Depth to Bedrock: 280 Water Type: Not stated</p> <p>Lot: 022 Concession Name: CON Municipality: VAUGHAN TOWN (VAUGHAN TWP) Northing Nad83: 4856593 Utm Reliability: margin of error : 30 m - 100 m Construction Date: 26-JUN-69 Well Depth: 88 ft Static Water Level: Clear/Cloudy: Final Well Status: Abandoned-Supply Flowing (y/n): Elevation Reliability: Overburden/Bedrock: Bedrock Casing Material: STEEL</p>				

Map Key	Number of Records	Elevation m	Site	DB
--- Details ---				
Thickness:	1 ft		Original Depth:	1 ft
Material Colour:			Material:	TOPSOIL
+				
Thickness:	34 ft		Original Depth:	35 ft
Material Colour:	GREY		Material:	CLAY
+				
Thickness:	7 ft		Original Depth:	42 ft
Material Colour:			Material:	CLAY, SILT
+				
Thickness:	43 ft		Original Depth:	85 ft
Material Colour:			Material:	CLAY
+				
Thickness:	3 ft		Original Depth:	88 ft
Material Colour:			Material:	CLAY, GRAVEL
+				
Thickness:	192 ft		Original Depth:	280 ft
Material Colour:	GREY		Material:	CLAY
+				
Thickness:	11 ft		Original Depth:	291 ft
Material Colour:			Material:	SHALE

19	1 of 1	227.8	ON	<u>BORE</u>
Borehole ID:	653125		Type:	Borehole
Use:	Geotechnical/Geological Investigation		Status:	
Drill Method:	Power auger		UTM Zone:	17
Easting:	617615.000		Northing:	4856223.000
Location Accuracy:			Orig. Ground Elev m:	230.399994
Elev. Reliability Note:			DEM Ground Elev m:	231.899994
Total Depth m:	2.400000		Primary Name:	
Township:			Concession:	
Lot:			Municipality:	
Completion Date:	1965-FEB		Static Water Level:	0.200000
Primary Water Use:	Not Used		Sec. Water Use:	
Location Description:				
--- Details ---				
Stratum ID:	218538115		Top Depth m:	0
Bottom Depth m:	0.400000		Stratum Desc:	SAND. AGE QUATERNARY.
+				
Stratum ID:	218538116		Top Depth m:	0.400000
Bottom Depth m:	0.800000		Stratum Desc:	SILT,CLAY,ORGANIC. AGE QUATERNARY, WATER STABLE AT 755.5 FEET.
+				
Stratum ID:	218538117		Top Depth m:	0.800000
Bottom Depth m:	2.400000		Stratum Desc:	SILT,CLAY. BROWN,AGE QUATERNARY. 000250

20	1 of 1	227.8	ON	<u>BORE</u>
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Map Key	Number of Records	Elevation m	Site	DB
Borehole ID:	641515		Type:	Borehole
Use:	Geotechnical/Geological Investigation		Status:	
Drill Method:	Power auger		UTM Zone:	17
Easting:	617615.000		Northing:	4856178.000
Location Accuracy:			Orig. Ground Elev m:	230.300003
Elev. Reliability Note:			DEM Ground Elev m:	230.600006
Total Depth m:	2.400000		Primary Name:	
Township:			Concession:	
Lot:			Municipality:	
Completion Date:	1965-JAN		Static Water Level:	
Primary Water Use:	Not Used		Sec. Water Use:	
Location Description:				
--- Details ---				
Stratum ID:	218496369		Top Depth m:	0
Bottom Depth m:	0.400000		Stratum Desc:	FILL,SAND.
+				
Stratum ID:	218496370		Top Depth m:	0.400000
Bottom Depth m:	0.800000		Stratum Desc:	SILT,CLAY,ORGANIC. LACUSTRINE,AGE GLACIAL.
+				
Stratum ID:	218496371		Top Depth m:	0.800000
Bottom Depth m:	2.400000		Stratum Desc:	SILT,CLAY. BROWN,LACUSTRINE,AGE GLACIAL. 019

21 **1 of 2** **227.8** **VENTURON DEV.(MAPLE) CORP./VENTURON DEV.
JANE ST./MAJ. MACKENZIE DR,SWM
VAUGHAN CITY ON** [CA](#)

Certificate #: 3-0302-99-
Application Year: 99
Issue Date: 4/12/1999
Approval Type: Municipal sewage
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

21 **2 of 2** **227.8** **Grand Valley subdivision at Jane St. and Major
Mackenzie<UNOFFICIAL>
Vaughan ON** [SPL](#)

Ref No.: 5042-6BCLPZ
Incident Dt: 4/11/2005
MOE Reported Dt: 4/11/2005
Contaminant Name:
Contaminant Quantity:
Incident Summary: Grand Valley sub,ukn material fr hole in gnd,City
Incident Cause: Pipe Or Hose Leak
Incident Reason: Other - Reason not otherwise defined
Nature of Impact: Soil Contamination; Surface Water Pollution
Receiving Medium: Land & Water

Map Key	Number of Records	Elevation m	Site	DB
Environmental Impact:		Possible		
22	1 of 1	225.5	ON	<u>WWIS</u>
Well Id:	6906666	Lot:	020	
Concession:	05	Concession Name:	CON	
County:	YORK	Municipality:	VAUGHAN TOWN (VAUGHAN TWP)	
Easting Nad83:	617273.7	Northing Nad83:	4855747	
Zone:	17	Utm Reliability:	unknown UTM	
Primary Water Use:	Livestock	Construction Date:	16-JUN-53	
Sec. Water Use:	Domestic	Well Depth:	78 ft	
Pump Rate:	10 GPM	Static Water Level:	65 ft	
Flow Rate:		Clear/Cloudy:	CLEAR	
Specific Capacity:		Final Well Status:	Water Supply	
Construction Method:	Cable Tool	Flowing (y/n):	N	
Elevation (m):	229.99	Elevation Reliability:		
Depth to Bedrock:		Overburden/Bedrock:	Overburden	
Water Type:	FRESH	Casing Material:	STEEL	
--- Details ---				
Thickness:	2 ft	Original Depth:	2 ft	
Material Colour:		Material:	TOPSOIL, CLAY	
+				
Thickness:	38 ft	Original Depth:	40 ft	
Material Colour:	BLUE	Material:	CLAY	
+				
Thickness:	38 ft	Original Depth:	78 ft	
Material Colour:	YELLOW	Material:	MEDIUM SAND	
+				
Thickness:	157 ft	Original Depth:	235 ft	
Material Colour:	BROWN	Material:	CLAY, STONES	
+				
Thickness:	42 ft	Original Depth:	277 ft	
Material Colour:	GREY	Material:	CLAY, STONES	
+				
Thickness:	8 ft	Original Depth:	285 ft	
Material Colour:	BLUE	Material:	COARSE SAND	

23	1 of 1	227.8	ON	<u>WWIS</u>
Well Id:	7188795	Lot:		
Concession:		Concession Name:		
County:	YORK	Municipality:	VAUGHAN TOWN (VAUGHAN TWP)	
Easting Nad83:	617635	Northing Nad83:	4856258	
Zone:	17	Utm Reliability:	margin of error : 30 m - 100 m	
Primary Water Use:		Construction Date:		
Sec. Water Use:		Well Depth:		
Pump Rate:		Static Water Level:		
Flow Rate:		Clear/Cloudy:		
Specific Capacity:		Final Well Status:		
Construction Method:		Flowing (y/n):		
Elevation (m):		Elevation Reliability:		
Depth to Bedrock:		Overburden/Bedrock:		

Map Key	Number of Records	Elevation m	Site	DB
<i>Water Type:</i>		<i>Casing Material:</i>		
24	1 of 1	227.8	ON	<u>WWIS</u>
<i>Well Id:</i>	7164062	<i>Lot:</i>		
<i>Concession:</i>		<i>Concession Name:</i>		
<i>County:</i>	YORK	<i>Municipality:</i>	VAUGHAN TOWN (VAUGHAN TWP)	
<i>Easting Nad83:</i>	617640	<i>Northing Nad83:</i>	4856261	
<i>Zone:</i>	17	<i>Utm Reliability:</i>	margin of error : 10 - 30 m	
<i>Primary Water Use:</i>		<i>Construction Date:</i>	28-APR-11	
<i>Sec. Water Use:</i>		<i>Well Depth:</i>		
<i>Pump Rate:</i>		<i>Static Water Level:</i>		
<i>Flow Rate:</i>		<i>Clear/Cloudy:</i>		
<i>Specific Capacity:</i>		<i>Final Well Status:</i>		
<i>Construction Method:</i>		<i>Flowing (y/n):</i>		
<i>Elevation (m):</i>		<i>Elevation Reliability:</i>		
<i>Depth to Bedrock:</i>		<i>Overburden/Bedrock:</i>		
<i>Water Type:</i>		<i>Casing Material:</i>		
25	1 of 1	227.8	ON	<u>WWIS</u>
<i>Well Id:</i>	6927447	<i>Lot:</i>	021	
<i>Concession:</i>	05	<i>Concession Name:</i>	CON	
<i>County:</i>	YORK	<i>Municipality:</i>	VAUGHAN TOWN (VAUGHAN TWP)	
<i>Easting Nad83:</i>	616629	<i>Northing Nad83:</i>	4856075	
<i>Zone:</i>	17	<i>Utm Reliability:</i>	unknown UTM	
<i>Primary Water Use:</i>	Not Used	<i>Construction Date:</i>	04-NOV-03	
<i>Sec. Water Use:</i>		<i>Well Depth:</i>		
<i>Pump Rate:</i>		<i>Static Water Level:</i>		
<i>Flow Rate:</i>		<i>Clear/Cloudy:</i>		
<i>Specific Capacity:</i>		<i>Final Well Status:</i>	Abandoned-Other	
<i>Construction Method:</i>	Other Method	<i>Flowing (y/n):</i>		
<i>Elevation (m):</i>	231.95	<i>Elevation Reliability:</i>		
<i>Depth to Bedrock:</i>		<i>Overburden/Bedrock:</i>	No formation data	
<i>Water Type:</i>		<i>Casing Material:</i>		
26	1 of 1	229.0	ON	<u>WWIS</u>
<i>Well Id:</i>	6909543	<i>Lot:</i>	022	
<i>Concession:</i>	05	<i>Concession Name:</i>	CON	
<i>County:</i>	YORK	<i>Municipality:</i>	VAUGHAN TOWN (VAUGHAN TWP)	
<i>Easting Nad83:</i>	617424.7	<i>Northing Nad83:</i>	4856653	
<i>Zone:</i>	17	<i>Utm Reliability:</i>	margin of error : 30 m - 100 m	
<i>Primary Water Use:</i>	Livestock	<i>Construction Date:</i>	29-AUG-69	
<i>Sec. Water Use:</i>		<i>Well Depth:</i>	48 ft	
<i>Pump Rate:</i>	5 GPM	<i>Static Water Level:</i>	15 ft	
<i>Flow Rate:</i>		<i>Clear/Cloudy:</i>	CLEAR	
<i>Specific Capacity:</i>		<i>Final Well Status:</i>	Water Supply	
<i>Construction Method:</i>	Boring	<i>Flowing (y/n):</i>	N	
<i>Elevation (m):</i>	233.69	<i>Elevation Reliability:</i>		
<i>Depth to Bedrock:</i>		<i>Overburden/Bedrock:</i>	Overburden	
<i>Water Type:</i>	FRESH	<i>Casing Material:</i>	CONCRETE	

--- Details ---

Map Key	Number of Records	Elevation m	Site	DB
Thickness:	10 ft		Original Depth:	10 ft
Material Colour:	BROWN		Material:	CLAY
+				
Thickness:	25 ft		Original Depth:	35 ft
Material Colour:	BLUE		Material:	CLAY
+				
Thickness:	2 ft		Original Depth:	37 ft
Material Colour:			Material:	GRAVEL, MEDIUM SAND
+				
Thickness:	11 ft		Original Depth:	48 ft
Material Colour:	BLUE		Material:	CLAY

27 **1 of 13** **227.8** **3000 Major Mackenzie Dr.
Vaughan ON L6A 1R8** **EHS**

Order No.: 20010411002
 Report Date: 4/11/01
 Report Type: Site Report
 Search Radius (km): 0.25
 Addit. Info Ordered:

27 **2 of 13** **227.8** **3000 Major Mackenzie Drive
Vaughan ON** **EHS**

Order No.: 20100301027
 Report Date: 3/10/2010
 Report Type: Standard Report
 Search Radius (km): 0.25
 Addit. Info Ordered: Fire Insur. Maps and/or Site Plans; Aerial Photos; City Directory

27 **3 of 13** **227.8** **CANGO INC A & T SERVICES
3000 MAJOR MACKENZIE DR
MAPLE ON L6A 3Z5** **EXP**

TSSA Program Area:
 Maximum Hazard Rank:
 Federal Device:
 Type:
 Capacity:
 Corrosion Protection:
 Tank Material:
 Tank Type:
 Expire Date:
 Instance ID: 291767
 Instance Number: 30845825
 Instance Type: FS Facility
 Status: EXPIRED
 Description: FS Cylinder Exchange

27 **4 of 13** **227.8** **CANGO INC
3000 MAJOR MACKENZIE DR & JANE ST
MAPLE ON L6A 3Z5** **FST**

License Issue Date: Tank Status:

Map Key	Number of Records	Elevation m	Site	DB
Tank Status As Of: Facility Type:	June 2011 FS GASOLINE STATION - SELF SERVE		Operation Type: Retail Fuel Outlet	
--- Details ---				
Status:	Active			
Capacity (L):	22700			
Year of Installation:	1989			
Corrosion Protection:	Fiberglass			
Tank Fuel Type:	Single Wall UST - Gasoline			
+				
Status:	Active			
Capacity (L):	22700			
Year of Installation:	1989			
Corrosion Protection:	Fiberglass			
Tank Fuel Type:	Single Wall UST - Gasoline			
+				
Status:	Active			
Capacity (L):	46000			
Year of Installation:	1989			
Corrosion Protection:	Fiberglass			
Tank Fuel Type:	Single Wall UST - Gasoline			
+				
Status:	Active			
Capacity (L):	36000			
Year of Installation:	1989			
Corrosion Protection:	Fiberglass			
Tank Fuel Type:	Single Wall UST - Gasoline			

27 **5 of 13** **227.8** **CANGO INC** **FST**
3000 MAJOR MACKENZIE DR & JANE ST
MAPLE ON L6A 3Z5

License Issue Date: Tank Status:
Tank Status As Of: June 2010 Operation Type: Retail Fuel Outlet
Facility Type: FS GASOLINE STATION - SELF SERVE

--- Details ---

Status: Active
Capacity (L): 22700
Year of Installation: 1989
Corrosion Protection: Fiberglass
Tank Fuel Type: Single Wall UST - Gasoline

+

Status: Active
Capacity (L): 36000
Year of Installation: 1989
Corrosion Protection: Fiberglass
Tank Fuel Type: Single Wall UST - Gasoline

+

Status: Active
Capacity (L): 46000
Year of Installation: 1989
Corrosion Protection: Fiberglass
Tank Fuel Type: Single Wall UST - Gasoline

Map Key	Number of Records	Elevation m	Site	DB
27	6 of 13	227.8	CANGO INC 3000 MAJOR MACKENZIE DR & JANE ST LOT 20 MAPLE ON L6A 3Z5	FST
License Issue Date:	12/28/2006		Tank Status:	Licensed
Tank Status As Of:	August 2007		Operation Type:	Retail Fuel Outlet
Facility Type:	Gasoline Station - Self Serve			
--- Details ---				
Status:	Active			
Capacity (L):	46000			
Year of Installation:	1989			
Corrosion Protection:				
Tank Fuel Type:	Liquid Fuel Single Wall UST - Gasoline			
+				
Status:	Active			
Capacity (L):	36000			
Year of Installation:	1989			
Corrosion Protection:				
Tank Fuel Type:	Liquid Fuel Single Wall UST - Gasoline			
+				
Status:	Active			
Capacity (L):	36000			
Year of Installation:	1989			
Corrosion Protection:				
Tank Fuel Type:	Liquid Fuel Single Wall UST - Gasoline			
+				
Status:	Active			
Capacity (L):	22700			
Year of Installation:	1989			
Corrosion Protection:				
Tank Fuel Type:	Liquid Fuel Single Wall UST - Gasoline			
+				
Status:	Active			
Capacity (L):	22700			
Year of Installation:	1989			
Corrosion Protection:				
Tank Fuel Type:	Liquid Fuel Single Wall UST - Gasoline			

27	7 of 13	227.8	CANGO INC 3000 MAJOR MACKENZIE DR & JANE ST MAPLE ON L6A 3Z5	FST
License Issue Date:			Tank Status:	Retail Fuel Outlet
Tank Status As Of:	January 2010		Operation Type:	Retail Fuel Outlet
Facility Type:	FS GASOLINE STATION - SELF SERVE			
--- Details ---				
Status:	Active			
Capacity (L):	22700			
Year of Installation:	1989			
Corrosion Protection:	Fiberglass			
Tank Fuel Type:	Single Wall UST - Gasoline			
+				
Status:	Active			
Capacity (L):	36000			
Year of Installation:	1989			
Corrosion Protection:	Fiberglass			
Tank Fuel Type:	Single Wall UST - Gasoline			
+				
Status:	Active			
Capacity (L):	46000			

Map Key	Number of Records	Elevation m	Site	DB
Year of Installation: 1989 Corrosion Protection: Fiberglass Tank Fuel Type: Single Wall UST - Gasoline				
27	8 of 13	227.8	CANGO INC 3000 MAJOR MACKENZIE DR & JANE ST MAPLE ON L6A 3Z5	FST
License Issue Date: 12/28/2006 10:19:00 AM Tank Status As Of: December 2008 Facility Type: Gasoline Station - Self Serve			Tank Status: Licensed Operation Type: Retail Fuel Outlet	
--- Details ---				
Status:		Active		
Capacity (L):		46000		
Year of Installation:		1989		
Corrosion Protection:				
Tank Fuel Type:		Liquid Fuel Single Wall UST - Gasoline		
+				
Status:		Active		
Capacity (L):		36000		
Year of Installation:		1989		
Corrosion Protection:				
Tank Fuel Type:		Liquid Fuel Single Wall UST - Gasoline		
+				
Status:		Active		
Capacity (L):		36000		
Year of Installation:		1989		
Corrosion Protection:				
Tank Fuel Type:		Liquid Fuel Single Wall UST - Gasoline		
+				
Status:		Active		
Capacity (L):		22700		
Year of Installation:		1989		
Corrosion Protection:				
Tank Fuel Type:		Liquid Fuel Single Wall UST - Gasoline		
+				
Status:		Active		
Capacity (L):		22700		
Year of Installation:		1989		
Corrosion Protection:				
Tank Fuel Type:		Liquid Fuel Single Wall UST - Gasoline		
27	9 of 13	227.8	Shell Canada Products 3000 Major McKenzie Drive Vaughan ON L6A 3Z5	GEN
SIC Code:				
SIC Description:				
Generator #:		ON7891659		
Approval Yrs:		As of Apr 2012		
--- Details ---				
Waste Code:		221		
Waste Description:		Light fuels		
27	10 of 13	227.8	GASRITE INTERNATIONAL CORP MAJOR MACKENZIE & JANE ST LOT 20 VAUGHAN ON L6A1T1	PRT

Map Key	Number of Records	Elevation m	Site	DB
Location ID:		16199		
Type:		retail		
Expiry Date:		1995-10-31		
Capacity (L):		163656		
Licence #:		0055513001		
27	11 of 13	227.8	GAS RITE 3000 MAJOR MACKENZIE DR MAPLE ON L6A 1R8	RST
Facility:		Service Stations-Gasoline, Oil & Natural Gas		
Description:				
27	12 of 13	227.8	CANGO 3000 MAJOR MACKENZIE DR MAPLE ON L6A1R8	RST
Facility:		Service Stations-Gasoline, Oil & Natural Gas		
Description:				
27	13 of 13	227.8	CANGO INC 3000 MAJOR MACKENZIE DR RICHMOND HILL ON L6A 1R8	RST
Facility:		Service Stations-Gasoline, Oil & Natural Gas		
Description:				
28	1 of 1	227.8	ON	WWIS
Well Id:		7126507	Lot:	
Concession:			Concession Name:	
County:		YORK	Municipality:	
Easting Nad83:		617663	Northing Nad83:	
Zone:		17	Utm Reliability:	
Primary Water Use:		Test Hole	Construction Date:	
Sec. Water Use:		Monitoring	Well Depth:	
Pump Rate:			Static Water Level:	
Flow Rate:			Clear/Cloudy:	
Specific Capacity:			Final Well Status:	
Construction Method:		Driving	Flowing (y/n):	
Elevation (m):		232.49	Elevation Reliability:	
Depth to Bedrock:			Overburden/Bedrock:	
Water Type:			Casing Material:	
---			PLASTIC	
--- Details ---				
Thickness:		1.22 m	Original Depth:	
Material Colour:		BROWN	Material:	
+			SAND, GRAVEL, DENSE	
Thickness:		2.38 m	Original Depth:	
Material Colour:		BROWN	Material:	
+			SILT, CLAY, DENSE	
Thickness:		2.5 m	Original Depth:	
			6.1 m	

Map Key	Number of Records	Elevation m	Site	DB
<i>Material Colour:</i> GREY		<i>Material:</i> SILT, CLAY, DENSE		
29	1 of 1	227.8	MVA Spill Site, North side of Major Mackenzie just East of Jane St. Vaughan ON	SPL
<i>Ref No.:</i>		4065-7T9TCT		
<i>Incident Dt:</i>				
<i>MOE Reported Dt:</i>		6/22/2009		
<i>Contaminant Name:</i>		MOTOR OIL		
<i>Contaminant Quantity:</i>		20 L		
<i>Incident Summary:</i>		6 Cars Collision, Oil/Gas/Coolant to Rd.		
<i>Incident Cause:</i>		Other Transport Accident		
<i>Incident Reason:</i>		Unknown - Reason not determined		
<i>Nature of Impact:</i>		Soil Contamination		
<i>Receiving Medium:</i>				
<i>Environmental Impact:</i>		Possible		
30	1 of 4	227.8	Major Mackenzie Dr && Hwy 400 Vaughan ON	EHS
<i>Order No.:</i>		20051215006		
<i>Report Date:</i>		12/15/2005		
<i>Report Type:</i>		Custom Report		
<i>Search Radius (km):</i>		0.3		
<i>Addit. Info Ordered:</i>				
30	2 of 4	227.8	TRANSPORT TRUCK HWY 400, SOUTH OF MAJOR MACKENZIE (JUST SOUTH OF THE WEIGH SCALES) MOTOR VEHICLE (OPERATING FLUID) VAUGHAN CITY ON	SPL
<i>Ref No.:</i>		108127		
<i>Incident Dt:</i>		12/9/1994		
<i>MOE Reported Dt:</i>		12/9/1994		
<i>Contaminant Name:</i>				
<i>Contaminant Quantity:</i>				
<i>Incident Summary:</i>		DOMINION FARMS PRODUCE: 450 L DIESEL FUEL TO HWY 400 FROM SADDLE TANK.		
<i>Incident Cause:</i>		OTHER TRANSPORTATION ACCIDENT		
<i>Incident Reason:</i>		UNKNOWN		
<i>Nature of Impact:</i>		Water course or lake		
<i>Receiving Medium:</i>		LAND / WATER		
<i>Environmental Impact:</i>		POSSIBLE		
30	3 of 4	227.8	TRANSPORT TRUCK HWY # 400 && MAJOR MACKENZIE MOTOR VEHICLE (OPERATING FLUID) VAUGHAN ON	SPL
<i>Ref No.:</i>		190264		
<i>Incident Dt:</i>		11/11/2000		
<i>MOE Reported Dt:</i>		11/11/2000		
<i>Contaminant Name:</i>				
<i>Contaminant Quantity:</i>				
<i>Incident Summary:</i>		TELCO SERVICES TRANSPORT TRUCK-DIESEL/RUNOFF ONTO HWY		

Map Key	Number of Records	Elevation m	Site	DB	
Licence Type:		Vendor			
33	2 of 3	227.8	SHOPPERS DRUG MART #0913 (JANE & MAJOR MACKENZIE) 2943 MAJOR MACKENZIE DR MAPLE ON L6A3N9	<u>PES</u>	
Licence No.:		Limited Vendor			
Licence Type:					
33	3 of 3	227.8	SHOPPERS DRUG MART #0913 (JANE & MAJOR MACKENZIE) 2943 MAJOR MACKENZIE DR MAPLE ON L6A 3N9	<u>PES</u>	
Licence No.:		23-01-13110-0			
Licence Type:		LIMITED			
34	1 of 1	227.8	ON	<u>WWIS</u>	
Well Id:		7189720		Lot:	
Concession:				Concession Name:	
County:		YORK		Municipality:	VAUGHAN TOWN (VAUGHAN TWP)
Easting Nad83:		617710		Northing Nad83:	4856044
Zone:		17		Utm Reliability:	margin of error : 30 m - 100 m
Primary Water Use:				Construction Date:	20-SEP-12
Sec. Water Use:				Well Depth:	
Pump Rate:				Static Water Level:	
Flow Rate:				Clear/Cloudy:	
Specific Capacity:				Final Well Status:	
Construction Method:				Flowing (y/n):	
Elevation (m):				Elevation Reliability:	
Depth to Bedrock:				Overburden/Bedrock:	
Water Type:				Casing Material:	
35	1 of 1	227.8	ON	<u>WWIS</u>	
Well Id:		6906583		Lot:	020
Concession:		04		Concession Name:	CON
County:		YORK		Municipality:	VAUGHAN TOWN (VAUGHAN TWP)
Easting Nad83:		617759.7		Northing Nad83:	4856262
Zone:		17		Utm Reliability:	margin of error : 100 m - 300 m
Primary Water Use:		Domestic		Construction Date:	12-DEC-62
Sec. Water Use:		Livestock		Well Depth:	82 ft
Pump Rate:		4 GPM		Static Water Level:	100 ft
Flow Rate:				Clear/Cloudy:	CLEAR
Specific Capacity:				Final Well Status:	Water Supply
Construction Method:		Cable Tool		Flowing (y/n):	N
Elevation (m):		230.96		Elevation Reliability:	
Depth to Bedrock:				Overburden/Bedrock:	Overburden
Water Type:		FRESH		Casing Material:	STEEL

--- Details ---

Map Key	Number of Records	Elevation m	Site	DB
Thickness:	12 ft		Original Depth:	12 ft
Material Colour:	BROWN		Material:	MEDIUM SAND
+				
Thickness:	58 ft		Original Depth:	70 ft
Material Colour:	BLUE		Material:	CLAY
+				
Thickness:	12 ft		Original Depth:	82 ft
Material Colour:			Material:	COARSE SAND
+				
Thickness:	91 ft		Original Depth:	173 ft
Material Colour:	BLUE		Material:	CLAY
+				
Thickness:	2 ft		Original Depth:	175 ft
Material Colour:			Material:	COARSE SAND

36 **1 of 6** **227.8** **2810 Major Mackenzie Drive West** **EHS**
Maple ON L6A 1Z5

Order No.: 20120322050
Report Date: 4/2/2012 4:38:25 PM
Report Type: Standard Report
Search Radius (km): 0.25
Addit. Info Ordered: Aerial Photos

36 **2 of 6** **227.8** **The Health Centre of Maple** **GEN**
2810 major mackenzie dr
maple ON L6A 3L2

SIC Code: 621110
SIC Description: Offices of Physicians
Generator #: ON3350150
Approval Yrs: 2011

--- Details ---
Waste Code: 312
Waste Description: PATHOLOGICAL WASTES

36 **3 of 6** **227.8** **The Health Centre of Maple** **GEN**
2810 major mackenzie dr
maple ON L6A 3L2

SIC Code:
SIC Description:
Generator #: ON3350150
Approval Yrs: As of Apr 2012

--- Details ---
Waste Code: 312
Waste Description: Pathological wastes

36 **4 of 6** **227.8** **The Health Centre of Maple** **GEN**
2810 major mackenzie dr
maple ON L6A 3L2

SIC Code: 621110

Map Key	Number of Records	Elevation m	Site	DB
<i>SIC Description:</i>		Offices of Physicians		
<i>Generator #:</i>		ON3350150		
<i>Approval Yrs:</i>		2010		
<i>--- Details ---</i>				
<i>Waste Code:</i>		312		
<i>Waste Description:</i>		PATHOLOGICAL WASTES		
36	5 of 6	227.8	MAPLE LONGO'S 2810 MAJOR MACKENZIE MAPLE ON L6A 3L2	<u>PES</u>
<i>Licence No.:</i>				
<i>Licence Type:</i>		Vendor		
36	6 of 6	227.8	MAPLE LONGO'S 2810 MAJOR MACKENZIE MAPLE ON L6A 3L2	<u>PES</u>
<i>Licence No.:</i>				
<i>Licence Type:</i>		Limited Vendor		
37	1 of 2	227.8	ARISTA HOMES LIMITED KELSO CRES./KENMORE AVE.W VAUGHAN CITY ON	<u>CA</u>
<i>Certificate #:</i>		7-0776-95-		
<i>Application Year:</i>		95		
<i>Issue Date:</i>		8/3/1995		
<i>Approval Type:</i>		Municipal water		
<i>Status:</i>		Approved		
<i>Application Type:</i>				
<i>Client Name:</i>				
<i>Client Address:</i>				
<i>Client City:</i>				
<i>Client Postal Code:</i>				
<i>Project Description:</i>				
<i>Contaminants:</i>				
<i>Emission Control:</i>				
37	2 of 2	227.8	ARISTA HOMES LIMITED KELSO CRES./KENMORE AVE.W VAUGHAN CITY ON	<u>CA</u>
<i>Certificate #:</i>		3-1088-95-		
<i>Application Year:</i>		95		
<i>Issue Date:</i>		8/10/1995		
<i>Approval Type:</i>		Municipal sewage		
<i>Status:</i>		Approved		
<i>Application Type:</i>				
<i>Client Name:</i>				
<i>Client Address:</i>				
<i>Client City:</i>				
<i>Client Postal Code:</i>				
<i>Project Description:</i>				
<i>Contaminants:</i>				
<i>Emission Control:</i>				

Map Key	Number of Records	Elevation m	Site	DB
38	1 of 1	227.8	ON	WWIS
Well Id:	6906582	Lot:	020	
Concession:	04	Concession Name:	CON	
County:	YORK	Municipality:	VAUGHAN TOWN (VAUGHAN TWP)	
Easting Nad83:	617808.7	Northing Nad83:	4856216	
Zone:	17	Utm Reliability:	margin of error : 100 m - 300 m	
Primary Water Use:	Not Used	Construction Date:	01-MAR-59	
Sec. Water Use:		Well Depth:	25 ft	
Pump Rate:		Static Water Level:		
Flow Rate:		Clear/Cloudy:		
Specific Capacity:		Final Well Status:	Abandoned-Supply	
Construction Method:	Cable Tool	Flowing (y/n):		
Elevation (m):	231.42	Elevation Reliability:		
Depth to Bedrock:		Overburden/Bedrock:	Overburden	
Water Type:	FRESH	Casing Material:		
--- Details ---				
Thickness:	25 ft	Original Depth:	25 ft	
Material Colour:	BROWN	Material:	CLAY	
+				
Thickness:	100 ft	Original Depth:	125 ft	
Material Colour:	BLUE	Material:	CLAY	
+				
Thickness:	5 ft	Original Depth:	130 ft	
Material Colour:		Material:	FINE SAND	

39	1 of 1	227.8	ON	WWIS
Well Id:	6906563	Lot:	020	
Concession:	04	Concession Name:	CON	
County:	YORK	Municipality:	VAUGHAN TOWN (VAUGHAN TWP)	
Easting Nad83:	617809.7	Northing Nad83:	4856273	
Zone:	17	Utm Reliability:	unknown UTM	
Primary Water Use:	Domestic	Construction Date:	14-AUG-50	
Sec. Water Use:		Well Depth:	80 ft	
Pump Rate:	7 GPM	Static Water Level:	37 ft	
Flow Rate:		Clear/Cloudy:	CLEAR	
Specific Capacity:		Final Well Status:	Water Supply	
Construction Method:	Jetting	Flowing (y/n):	N	
Elevation (m):	231.45	Elevation Reliability:		
Depth to Bedrock:		Overburden/Bedrock:	Overburden	
Water Type:	FRESH	Casing Material:	STEEL	
--- Details ---				
Thickness:	1 ft	Original Depth:	1 ft	
Material Colour:		Material:	TOPSOIL	
+				
Thickness:	17 ft	Original Depth:	18 ft	
Material Colour:	BLUE	Material:	CLAY	
+				
Thickness:	17 ft	Original Depth:	35 ft	

Map Key	Number of Records	Elevation m	Site	DB
Material Colour:				Material: FINE SAND
+				
Thickness:	23 ft			Original Depth: 58 ft
Material Colour:	BLUE			Material: CLAY
+				
Thickness:	22 ft			Original Depth: 80 ft
Material Colour:				Material: MEDIUM SAND

40 **1 of 1** **227.8** **Block 60, Cityview Blvd.** **EHS**
Vaughan ON

Order No.: 20121017007
Report Date: 23-OCT-12
Report Type: Custom Report
Search Radius (km): .25
Addit. Info Ordered:

Unplottable Report

Site: S.G.F. DEVELOPMENTS LTD.
ROSEHEATH DR./MAJ.MCKENZIE DR. VAUGHAN TOWN ON

Database:
CA

Certificate #: 3-0722-93-
Application Year: 93
Issue Date: 7/5/1993
Approval Type: Municipal sewage
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: MACKENZIE GLEN DEVELOPMENTS LIMITED
LOTS 21&22,C.4/ROSEHEATH DR. VAUGHAN CITY ON

Database:
CA

Certificate #: 3-1493-97-
Application Year: 97
Issue Date: 10/14/1997
Approval Type: Municipal sewage
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: GRAND VALLEY DEVELOPMENTS (MAPLE) INC.
TREASURE RD/MAST ROAD VAUGHAN ON

Database:
CA

Certificate #: 3-1673-98-
Application Year: 98
Issue Date: 10/29/1998
Approval Type: Municipal sewage
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: MACKENZIE GLEN DEVELOPMENTS LIMITED
LOTS 21&22,C.4/ROSEHEATH DR. VAUGHAN CITY ON

Database:
CA

Certificate #: 7-1099-97-
Application Year: 97
Issue Date: 10/14/1997
Approval Type: Municipal water
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: VAUGHAN TOWN
MAJOR MACKENZIE DR. VAUGHAN TOWN ON

Database:
CA

Certificate #: 3-1823-86-
Application Year: 86
Issue Date: 1/19/1987
Approval Type: Municipal sewage
Status: Approved in 1987
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: YORK CITY
JANE STREET YORK CITY ON

Database:
CA

Certificate #: 3-0124-88-
Application Year: 88
Issue Date: 3/29/1988
Approval Type: Municipal sewage
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: Major Mackenzie Dr Vaughan ON

Database:
EHS

Order No.: 20130212028
Report Date: 20-FEB-13
Report Type: Custom Report
Search Radius (km): .25

Addit. Info Ordered:

Appendix: Database Descriptions

Ecolog Environmental Risk Information Services Ltd can search the following databases. The extent of Historical information varies with each database and current information is determined by what is publicly available to Ecolog ERIS at the time of update. **Note:** Databases denoted with " * " indicates that the database will no longer be updated. See the individual database description for more information.

Abandoned Aggregate Inventory: Up to Sept 2002 Provincial [AAGR](#)
The MAAP Program maintains a database of all abandoned pits and quarries. Please note that the database is only referenced by lot and concession and city/town location. The database provides information regarding the location, type, size, land use, status and general comments.

Aggregate Inventory: Up to Aug 2012 Provincial [AGR](#)
The Ontario Ministry of Natural Resources maintains a database of all active pits and quarries. Please note that the database is only referenced by lot\concession and city/town location. The database provides information regarding the registered owner/operator, location, status, licence type, and maximum tonnage.

Abandoned Mine Information System: 1800-Feb 2013 Provincial [AMIS](#)
The Abandoned Mines Information System contains data on known abandoned and inactive mines located on both Crown and privately held lands. The information was provided by the Ministry of Northern Development and Mines (MNDM), with the following disclaimer: "the database provided has been compiled from various sources, and the Ministry of Northern Development and Mines makes no representation and takes no responsibility that such information is accurate, current or complete". Reported information includes official mine name, status, background information, mine start/end date, primary commodity, mine features, hazards and remediation.

Anderson's Waste Disposal Sites: 1860s-Present Private [ANDR](#)
The information provided in this database was collected by examining various historical documents which aimed to characterize the likely position of former waste disposal sites from 1860 to present. The research initiative behind the creation of this database was to identify those sites that are missing from the Ontario MOE Waste Disposal Site Inventory, as well as to provide revisions and corrections to the positions and descriptions of sites currently listed in the MOE inventory. In addition to historic waste disposal facilities, the database also identifies certain auto wreckers and scrap yards that have been extrapolated from documentary sources. Please note that the data is not warranted to be complete, exhaustive or authoritative. The information was collected for research purposes only.

Automobile Wrecking & Supplies: 2001-Jun 2010 Private [AUWR](#)
This database provides an inventory of all known locations that are involved in the scrap metal, automobile wrecking/recycling, and automobile parts & supplies industry. Information is provided on the company name, location and business type.

Borehole: 1875-Aug 2011 Provincial [BORE](#)
A borehole is the generalized term for any narrow shaft drilled in the ground, either vertically or horizontally. The information here includes geotechnical investigations or environmental site assessments, mineral exploration, or as a pilot hole for installing piers or underground utilities. Information is from many sources such as the Ministry of Transportation (MTO) boreholes from engineering reports and projects from the 1950 to 1990's in Southern Ontario. Boreholes from the Ontario Geological Survey (OGS) including The Urban Geology Analysis Information System (UGAIS) and the York Peel Durham Toronto (YPDT) database of the Conservation Authority Moraine Coalition. This database will include fields such as location, stratigraphy, depth, elevation, year drilled, etc. For all water well data or oil and gas well data for Ontario please refer to WWIS and OOGW.

Certificates of Approval:

1985-Oct 30, 2011*

Provincial

[CA](#)

This database contains the following types of approvals: Air & Noise, Industrial Sewage, Municipal & Private Sewage, Waste Management Systems and Renewable Energy Approvals. The MOE in Ontario states that any facility that releases emissions to the atmosphere, discharges contaminants to ground or surface water, provides potable water supplies, or stores, transports or disposes of waste, must have a Certificate of Approval before it can operate lawfully. Fields include approval number, business name, address, approval date, approval type and status. This database will no longer be updated, as CoFA's have been replaced by either Environmental Activity and Sector Registry (EASR) or Environmental Compliance Approval (ECA). Please refer to those individual databases for any information after Oct.31, 2011.

Commercial Fuel Oil Tanks:

1948-Apr 2013

Provincial

[CFOT](#)

Since May 2002, Ontario developed a new act where it became mandatory for fuel oil tanks to be registered with Technical Standards & Safety Authority (TSSA). This data would include all commercial underground fuel oil tanks in Ontario with fields such as location, registration number, tank material, age of tank and tank size.

Chemical Register:

1992, 1999-Jun 2010

Private

[CHEM](#)

This database includes information from both a one time study conducted in 1992 and private source and is a listing of facilities that manufacture or distribute chemicals. The production of these chemical substances may involve one or more chemical reactions and/or chemical separation processes (i.e. fractionation, solvent extraction, crystallization, etc.).

Inventory of Coal Gasification Plants and Coal Tar

Apr 1987 and Nov 1988*

Provincial

[COAL](#)**Sites:**

This inventory includes both the "Inventory of Coal Gasification Plant Waste Sites in Ontario-April 1987" and the Inventory of Industrial Sites Producing or Using Coal Tar and Related Tars in Ontario-November 1988) collected by the MOE. It identifies industrial sites that produced and continue to produce or use coal tar and other related tars. Detailed information is available and includes: facility type, size, land use, information on adjoining properties, soil condition, site operators/occupants, site description, potential environmental impacts and historic maps available. This was a one-time inventory.*

Compliance and Convictions:

1989-Jun 2013

Provincial

[CONV](#)

This database summarizes the fines and convictions handed down by the Ontario courts beginning in 1989. Companies and individuals named here have been found guilty of environmental offenses in Ontario courts of law.

Certificates of Property Use:

1994-Jul 2013

Provincial

[CPU](#)

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all CPU's on the registry such as (EPA s. 168.6) - Certificate of Property Use.

Drill Hole Database:

1886-Jun 2013

Provincial

[DRL](#)

The Ontario Drill Hole Database contains information on more than 113,000 percussion, overburden, sonic and diamond drill holes from assessment files on record with the department of Mines and Minerals. Please note that limited data is available for southern Ontario, as it was the last area to be completed. The database was created when surveys submitted to the Ministry were converted in the Assessment File Research Image Database (AFRI) project. However, the degree of accuracy (coordinates) as to the exact location of drill holes is dependent upon the source document submitted to the MNM. Levels of accuracy used to locate holes are: centering on the mining claim; a sketch of the mining claim; a 1:50,000 map; a detailed company map; or from submitted a "Report of Work".

Environmental Activity and Sector Registry:

Oct 31, 2011-Jul 2013

Provincial

[EASR](#)

On October 31, 2011, a smarter, faster environmental approvals system came into effect in Ontario. The EASR allows businesses to register certain activities with the ministry, rather than apply for an approval. The registry is available for common systems and processes, to which preset rules of operation can be applied. The EASR is currently available for: heating systems, standby power systems and automotive refinishing. Businesses whose activities aren't subject to the EASR may apply for an ECA (Environmental Compliance Approval), Please see our ECA database.

Environmental Registry:

1994-Jul 2013

Provincial

[EBR](#)

The Environmental Registry lists proposals, decisions and exceptions regarding policies, Acts, instruments, or regulations that could significantly affect the environment. Through the Registry, thirteen provincial ministries notify the public of upcoming proposals and invite their comments. For example, if a local business is requesting a permit, license, or certificate of approval to release substances into the air or water; these are notified on the registry. Data includes: Approval for discharge into the natural environment other than water (i.e. Air) - EPA s. 9, Approval for sewage works - OWRA s. 53(1), and EPA s. 27 - Approval for a waste disposal site. For information regarding Permit to Take Water (PTTW), Certificate of Property Use (CPU) and (ORD) Orders please refer to those individual databases.

Environmental Compliance Approval:

Oct 31, 2011-Jul 2013

Provincial

[ECA](#)

On October 31, 2011, a smarter, faster environmental approvals system came into effect in Ontario. In the past, a business had to apply for multiple approvals (known as certificates of approval) for individual processes and pieces of equipment. Today, a business either registers itself, or applies for a single approval, depending on the types of activities it conducts. Businesses whose activities aren't subject to the EASR may apply for an ECA. A single ECA addresses all of a business's emissions, discharges and wastes. Separate approvals for air, noise and waste are no longer required. This database will also include Renewable Energy Approvals. For CofA's prior to Nov 1st, 2011, please refer to the CA database. For all Waste Disposal Sites please refer to the WDS database.

Environmental Effects Monitoring:

1992-2007*

Federal

[EEM](#)

The Environmental Effects Monitoring program assesses the effects of effluent from industrial or other sources on fish, fish habitat and human usage of fisheries resources. Since 1992, pulp and paper mills have been required to conduct EEM studies under the Pulp and Paper Effluent Regulations. This database provides information on the mill name, geographical location and sub-lethal toxicity data.

ERIS Historical Searches:

1999-Mar 2013

Private

[EHS](#)

EcoLog ERIS has compiled a database of all environmental risk reports completed since March 1999. Available fields for this database include: site location, date of report, type of report, and search radius. As per all other databases, the ERIS database can be referenced on both the map and "Statistical Profile" page.

Environmental Issues Inventory System:

1992-2001*

Federal

[EIS](#)

The Environmental Issues Inventory System was developed through the implementation of the Environmental Issues and Remediation Plan. This plan was established to determine the location and severity of contaminated sites on inhabited First Nation reserves, and where necessary, to remediate those that posed a risk to health and safety; and to prevent future environmental problems. The EIS provides information on the reserve under investigation, inventory number, name of site, environmental issue, site action (Remediation, Site Assessment), and date investigation completed.

List of TSSA Expired Facilities:

Current to Feb 2012

Provincial

[EXP](#)

This is a list of all expired facilities that fall under the TSSA (TSSA Act & Safety Regulations), including the six regulations that exist under the Fuels Safety Division. It will include facilities such as private fuel outlets, bulk plants, fuel oil tanks, gasoline stations, marinas, propane filling stations, liquid fuel tanks, piping systems, etc. These tanks have been removed and automatically fall under the expired facilities inventory held by TSSA.

Federal Convictions:

1988-Jun 2007*

Federal

[FCON](#)

Environment Canada maintains a database referred to as the "Environmental Registry" that details prosecutions under the Canadian Environmental Protection Act (CEPA) and the Fisheries Act (FA). Information is provided on the company name, location, charge date, offence and penalty.

Contaminated Sites on Federal Land:

June 2000-Jan 2013

Federal

[FCS](#)

The Federal Contaminated Sites Inventory includes information on all known federal contaminated sites under the custodianship of departments, agencies and consolidated Crown corporations as well as those that are being or have been investigated to determine whether they have contamination arising from past use that could pose a risk to human health or the environment. The inventory also includes non-federal contaminated sites for which the Government of Canada has accepted some or all financial responsibility. It does not include sites where contamination has been caused by, and which are under the control of, enterprise Crown corporations, private individuals, firms or other levels of government.

Fisheries & Oceans Fuel Tanks:

1964-Sept 2003

Federal

[FOFT](#)

Fisheries & Oceans Canada maintains an inventory of all aboveground & underground fuel storage tanks located on Fisheries & Oceans property or controlled by DFO. Our inventory provides information on the site name, location, tank owner, tank operator, facility type, storage tank location, tank contents & capacity, and date of tank installation.

Fuel Storage Tank:

Current to Jun 2011

Provincial

[FST](#)

The Technical Standards & Safety Authority (TSSA), under the Technical Standards & Safety Act of 2000 maintains a database of registered private and retail fuel storage tanks in Ontario with fields such as location, tank status, license date, tank type, tank capacity, fuel type, installation year and facility type.

Ontario Regulation 347 Waste Generators Summary:

1986-Apr 2012

Provincial

[GEN](#)

Regulation 347 of the Ontario EPA defines a waste generation site as any site, equipment and/or operation involved in the production, collection, handling and/or storage of regulated wastes. A generator of regulated waste is required to register the waste generation site and each waste produced, collected, handled, or stored at the site. This database contains the registration number, company name and address of registered generators including the types of hazardous wastes generated. It includes data on waste generating facilities such as: drycleaners, waste treatment and disposal facilities, machine shops, electric power distribution etc. This information is a summary of all years from 1986 including the most currently available data. Some records may contain, within the company name, the phrase "See & Use..." followed by a series of letters and numbers. This occurs when one company is amalgamated with or taken over by another registered company. The number listed as "See & Use", refers to the new ownership and the other identification number refers to the original ownership. This phrase serves as a link between the 2 companies until operations have been fully transferred.

TSSA Historic Incidents:

2006-June 2009

Provincial

[HINC](#)

This database will cover all incidences recorded by TSSA with their older system, before they moved to their new management system. TSSA's Fuels Safety Program administers the Technical Standards & Safety Act 2000, providing fuel-related safety services associated with the safe transportation, storage, handling and use of fuels such as gasoline, diesel, propane, natural gas and hydrogen. Under this Act, TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. The TSSA works to protect the public, the environment and property from fuel-related hazards such as spills, fires and explosions. This database will include spills and leaks from pipelines, diesel, fuel oil, gasoline, natural gas, propane and hydrogen recorded by the TSSA.

Indian & Northern Affairs Fuel Tanks:

1950-Aug 2003*

Federal

[IAFT](#)

The Department of Indian & Northern Affairs Canada (INAC) maintains an inventory of all aboveground & underground fuel storage tanks located on both federal and crown land. Our inventory provides information on the reserve name, location, facility type, site/facility name, tank type, material & ID number, tank contents & capacity, and date of tank installation.

TSSA Incidents:

June 2009-Apr 2013

Provincial

[INC](#)

TSSA's Fuels Safety Program administers the Technical Standards & Safety Act 2000, providing fuel-related safety services associated with the safe transportation, storage, handling and use of fuels such as gasoline, diesel, propane, natural gas and hydrogen. Under this Act, TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. Includes incidents from fuel-related hazards such as spills, fires and explosions. This database will include spills and leaks from diesel, fuel oil, gasoline, natural gas, propane and hydrogen recorded by the TSSA.

Landfill Inventory Management Ontario:

2012

Provincial

[LIMO](#)

The Landfill Inventory Management Ontario (LIMO) database is updated every year, as the ministry compiles new and updated information. The inventory will include small and large landfills. Additionally, each year the ministry will request operators of the larger landfills complete a landfill data collection form that will be used to update LIMO and will include the following information from the previous operating year. This will include additional information such as estimated amount of total waste received, landfill capacity, estimated total remaining landfill capacity, fill rates, engineering designs, reporting and monitoring details, size of location, service area, approved waste types, leachate of site treatment, contaminant attenuation zone and more. The small landfills will include information such as site owner, site location and certificate of approval # and status.

Canadian Mine Locations:

1998-2009

Private

[MINE](#)

This information is collected from the Canadian & American Mines Handbook. The Mines database is a national database that provides over 290 listings on mines (listed as public companies) dealing primarily with precious metals and hard rocks. Listed are mines that are currently in operation, closed, suspended, or are still being developed (advanced projects). Their locations are provided as geographic coordinates (x, y and/or longitude, latitude). As of 2002, data pertaining to Canadian smelters and refineries has been appended to this database.

Mineral Occurrences:

1846-Apr 2013

Provincial

[MNR](#)

In the early 70's, the Ministry of Northern Development and Mines created an inventory of approximately 19,000 mineral occurrences in Ontario, in regard to metallic and industrial minerals, as well as some information on building stones and aggregate deposits. Please note that the "Horizontal Positional Accuracy" is approximately +/- 200 m. Many reference elements for each record were derived from field sketches using pace or chain/tape measurements against claim posts or topographic features in the area. The primary limiting factor for the level of positional accuracy is the scale of the source material. The testing of horizontal accuracy of the source materials was accomplished by comparing the planimetric (X and Y) coordinates of that point with the coordinates of the same point as defined from a source of higher accuracy.

National Analysis of Trends in Emergencies System

1974-1994*

Federal

[NATE](#)**(NATES):**

In 1974 Environment Canada established the National Analysis of Trends in Emergencies System (NATES) database, for the voluntary reporting of significant spill incidents. The data was to be used to assist in directing the work of the emergencies program. NATES ran from 1974 to 1994. Extensive information is available within this database including company names, place where the spill occurred, date of spill, cause, reason and source of spill, damage incurred, and amount, concentration, and volume of materials released.

Non-Compliance Reports:

1992(water only), 1994-2010

Provincial

[NCPL](#)

The Ministry of the Environment provides information about non-compliant discharges of contaminants to air and water that exceed legal allowable limits, from regulated industrial and municipal facilities. A reported non-compliance failure may be in regard to a Control Order, Certificate of Approval, Sectoral Regulation or specific regulation/act.

<u>National Defence & Canadian Forces Fuel Tanks:</u>	Up to May 2001*	Federal	NDFT
The Department of National Defence and the Canadian Forces maintains an inventory of all aboveground & underground fuel storage tanks located on DND lands. Our inventory provides information on the base name, location, tank type & capacity, tank contents, tank class, date of tank installation, date tank last used, and status of tank as of May 2001. This database will no longer be updated due to the new National Security protocols which have prohibited any release of this database.			
<u>National Defence & Canadian Forces Spills:</u>	Mar 1999-Aug 2010	Federal	NDSP
The Department of National Defence and the Canadian Forces maintains an inventory of spills to land and water. All spill sites have been classified under the "Transportation of Dangerous Goods Act - 1992". Our inventory provides information on the facility name, location, spill ID #, spill date, type of spill, as well as the quantity of substance spilled & recovered.			
<u>National Defence & Canadian Forces Waste Disposal Sites:</u>	2001-Apr 2007*	Federal	NDWD
The Department of National Defence and the Canadian Forces maintains an inventory of waste disposal sites located on DND lands. Where available, our inventory provides information on the base name, location, type of waste received, area of site, depth of site, year site opened/closed and status.			
<u>National Environmental Emergencies System (NEES):</u>	1974-2003*	Federal	NEES
In 2000, the Emergencies program implemented NEES, a reporting system for spills of hazardous substances. For the most part, this system only captured data from the Atlantic Provinces, some from Quebec and Ontario and a portion from British Columbia. Data for Alberta, Saskatchewan, Manitoba and the Territories was not captured. However, NEES is also a repository for all previous Environment Canada spill datasets. NEES is composed of the historic datasets ' or Trends ' which dates from approximately 1974 to present. NEES Trends is a compilation of historic databases, which were merged and includes data from NATES (National Analysis of Trends in Emergencies System), ARTS (Atlantic Regional Trends System), and NEES. In 2001, the Emergencies Program determined that variations in reporting regimes and requirements between federal and provincial agencies made national spill reporting and trend analysis difficult to achieve. As a consequence, the department has focused efforts on capturing data on spills of substances which fall under its legislative authority only (CEPA and FA). As such, the NEES database will be decommissioned in December 2004.			
<u>National PCB Inventory:</u>	1988-2008*	Federal	NPCB
Environment Canada's National PCB inventory includes information on in-use PCB containing equipment in Canada including federal, provincial and private facilities. All federal out-of-service PCB containing equipment and all PCB waste owned by the federal government or by federally regulated industries such as airlines, railway companies, broadcasting companies, telephone and telecommunications companies, pipeline companies, etc. are also listed. Although it is not Environment Canada's mandate to collect data on non-federal PCB waste, the National PCB inventory includes some information on provincial and private PCB waste and storage sites.			
<u>National Pollutant Release Inventory:</u>	1993-2011	Federal	NPRI
Environment Canada has defined the National Pollutant Release Inventory ("NPRI") as a federal government initiative designed to collect comprehensive national data regarding releases to air, water, or land, and waste transfers for recycling for more than 300 listed substances.			
<u>Oil and Gas Wells:</u>	1988-Jun 2013	Private	OGW
The Nickle's Energy Group (publisher of the Daily Oil Bulletin) collects information on drilling activity including operator and well statistics. The well information database includes name, location, class, status and depth. The main Nickle's database is updated on a daily basis, however, this database is updated on a monthly basis. More information is available at www.nickles.com .			

Ontario Oil and Gas Wells: 1800-Jul 2013 Provincial [OOGW](#)
In 1998, the MNR handed over to the Ontario Oil, Gas and Salt Resources Corporation, the responsibility of maintaining a database of oil and gas wells drilled in Ontario. The OGSR Library has over 20,000+ wells in their database. Information available for all wells in the ERIS database include well owner/operator, location, permit issue date, well cap date, licence no., status, depth and the primary target (rock unit) of the well being drilled. All geology/stratigraphy table information, plus all water table information is also provide for each well record.

Inventory of PCB Storage Sites: 1987-Oct 2004 Provincial [OPCB](#)
The Ontario Ministry of Environment, Waste Management Branch, maintains an inventory of PCB storage sites within the province. Ontario Regulation 11/82 (Waste Management - PCB) and Regulation 347 (Generator Waste Management) under the Ontario EPA requires the registration of inactive PCB storage equipment and/or disposal sites of PCB waste with the Ontario Ministry of Environment. This database contains information on: 1) waste quantities; 2) major and minor sites storing liquid or solid waste; and 3) a waste storage inventory.

Orders: 1994-Jul 2013 Provincial [ORD](#)
This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all Orders on the registry such as (EPA s. 17) - Order for remedial work, (EPA s. 18) - Order for preventative measures, (EPA s. 43) - Order for removal of waste and restoration of site, (EPA s. 44) - Order for conformity with Act for waste disposal sites, (EPA s. 136) - Order for performance of environmental measures.

Canadian Pulp and Paper: 1999, 2002, 2004, 2005, Private [PAP](#)
2009
This information is part of the Pulp and Paper Canada Directory. The Directory provides a comprehensive listing of the locations of pulp and paper mills and the products that they produce.

Parks Canada Fuel Storage Tanks: 1920-Jan 2005* Federal [PCFT](#)
Canadian Heritage maintains an inventory of all known fuel storage tanks operated by Parks Canada, in both National Parks and at National Historic Sites. The database details information on site name, location, tank install/removal date, capacity, fuel type, facility type, tank design and owner/operator.

Pesticide Register: 1988-Jun 2013 Provincial [PES](#)
The Ontario Ministry of Environment maintains a database of all manufacturers and vendors of registered pesticides.

TSSA Pipeline Incidents: June 2009-Mar 2012 Provincial [PINC](#)
TSSA's Fuels Safety Program administers the Technical Standards & Safety Act 2000, providing fuel-related safety services associated with the safe transportation, storage, handling and use of fuels such as gasoline, diesel, propane, natural gas and hydrogen. Under this Act, TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. This database will include spills, strike and leaks from recorded by the TSSA.

Private and Retail Fuel Storage Tanks: 1989-1996* Provincial [PRT](#)
The Fuels Safety Branch of the Ontario Ministry of Consumer and Commercial Relations maintained a database of all registered private fuel storage tanks and licensed retail fuel outlets. This database includes an inventory of locations that have gasoline, oil, waste oil, natural gas and/or propane storage tanks on their property. The MCCR no longer collects this information. This information is now collected by the Technical Standards and Safety Authority (TSSA).

Permit to Take Water: 1994-Jul 2013 Provincial [PTTW](#)
This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all PTTW's on the registry such as OWRA s. 34 - Permit to take water.

Ontario Regulation 347 Waste Receivers Summary: 1986-2011 Provincial [REC](#)
Part V of the Ontario Environmental Protection Act ("EPA") regulates the disposal of regulated waste through an operating waste management system or a waste disposal site operated or used pursuant to the terms and conditions of a Certificate of Approval or a Provisional Certificate of Approval. Regulation 347 of the Ontario EPA defines a waste receiving site as any site or facility to which waste is transferred by a waste carrier. A receiver of regulated waste is required to register the waste receiving facility. This database represents registered receivers of regulated wastes, identified by registration number, company name and address, and includes receivers of waste such as: landfills, incinerators, transfer stations, PCB storage sites, sludge farms and water pollution control plants. This information is a summary of all years from 1986 including the most currently available data.

Record of Site Condition: 1997-Sept 2001, Oct 2004- Jun 2013 Provincial [RSC](#)
The Record of Site Condition (RSC) is part of the Ministry of the Environment's Brownfields Environmental Site Registry. Protection from environmental cleanup orders for property owners is contingent upon documentation known as a record of site condition (RSC) being filed in the Environmental Site Registry. In order to file an RSC, the property must have been properly assessed and shown to meet the soil, sediment and groundwater standards appropriate for the use (such as residential) proposed to take place on the property. The Record of Site Condition Regulation (O. Reg. 153/04) details requirements related to site assessment and clean up. RSCs filed after July 1, 2011 will also be included as part of the new (O.Reg. 511/09).

Retail Fuel Storage Tanks: 1999-Jun 2010 Private [RST](#)
This database includes an inventory of retail fuel outlet locations (including marinas) that have on their property gasoline, oil, waste oil, natural gas and / or propane storage tanks.

Scott's Manufacturing Directory: 1992-Mar 2011 Private [SCT](#)
Scott's Directories is a data bank containing information on over 200,000 manufacturers across Canada. Even though Scott's listings are voluntary, it is the most comprehensive database of Canadian manufacturers available. Information concerning a company's address, plant size, and main products are included in this database.

Ontario Spills: 1988-Aug 2012 Provincial [SPL](#)
This database identifies information such as location (approximate), type and quantity of contaminant, date of spill, environmental impact, cause, nature of impact, etc. Information from 1988-2002 was part of the ORIS (Occurrence Reporting Information System). The SAC (Spills Action Centre) handles all spills reported in Ontario. Regulations for spills in Ontario are part of the MOE's Environmental Protection Act, Part X.

Wastewater Discharger Registration Database: 1990-2011 Provincial [SRDS](#)
Information under this heading is combination of the following 2 programs. The Municipal/Industrial Strategy for Abatement (MISA) division of the Ontario Ministry of Environment maintained a database of all direct dischargers of toxic pollutants within nine sectors including: Electric Power Generation; Mining; Petroleum Refining; Organic Chemicals; Inorganic Chemicals; Pulp & Paper; Metal Casting; Iron & Steel; and Quarries. All sampling information is now collected and stored within the Sample Result Data Store (SRDS).

Anderson's Storage Tanks: 1915-1953* Private [TANK](#)
The information provided in this database was collected by examining various historical documents, which identified the location of former storage tanks, containing substances such as fuel, water, gas, oil, and other various types of miscellaneous products. Information is available in regard to business operating at tank site, tank location, permit year, permit & installation type, no. of tanks installed & configuration and tank capacity. Data contained within this database pertains only to the city of Toronto and is not warranted to be complete, exhaustive or authoritative. The information was collected for research purposes only.

Transport Canada Fuel Storage Tanks: 1970-Mar 2007 Federal [TCFT](#)
With the provinces of BC, MB, NB, NF, ON, PE, and QC; Transport Canada currently owns and operates 90 fuel storage tanks. Our inventory provides information on the site name, location, tank age, capacity and fuel type.

TSSA Variances for Abandonment of Underground

Current to Jun 2013

Provincial

[VAR](#)

Storage Tanks:

The TSSA, Under the Liquid Fuels Handling Code and the Fuel Oil Code, all underground storage tanks must be removed within two years of disuse. If removal of a tank is not feasible, you may apply to seek a variance from this code requirement. This is a list of all variances granted for abandoned tanks.

Waste Disposal Sites - MOE CA Inventory:

1970-Jul 2013

Provincial

[WDS](#)

The Ontario Ministry of Environment, Waste Management Branch, maintains an inventory of known open (active or inactive) and closed disposal sites in the Province of Ontario. Active sites maintain a Certificate of Approval, are approved to receive and are receiving waste. Inactive sites maintain Certificate(s) of Approval but are not receiving waste. Closed sites are not receiving waste. The data contained within this database was compiled from the MOE's Certificate of Approval database. Locations of these sites may be cross-referenced to the Anderson database described under ERIS's Private Source Database section, by the CA number. All new Environmental Compliance Approvals handed out after Oct 31, 2011 for Waste Disposal Sites will still be found in this database.

Waste Disposal Sites - MOE 1991 Historical Approval Inventory:

Up to Oct 1990*

Provincial

[WDSH](#)

In June 1991, the Ontario Ministry of Environment, Waste Management Branch, published the "June 1991 Waste Disposal Site Inventory", of all known active and closed waste disposal sites as of October 30st, 1990. For each "active" site as of October 31st 1990, information is provided on site location, site/CA number, waste type, site status and site classification. For each "closed" site as of October 31st 1990, information is provided on site location, site/CA number, closure date and site classification. Locations of these sites may be cross-referenced to the Anderson database described under ERIS's Private Source Database section, by the CA number.

Water Well Information System:

1955-May 2013

Provincial

[WWIS](#)

This database describes locations and characteristics of water wells found within Ontario in accordance with Regulation 903. It includes such information as coordinates, construction date, well depth, primary and secondary use, pump rate, static water level, well status, etc. Also included are detailed stratigraphy information, approximate depth to bedrock and the approximate depth to the water table.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries". All values are an approximation.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property, within the report search radius, and the surrounding area outside the search radius.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red upside down triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and were included as reference.

TSSA Search Results

Andrew O'Connell

From: squibell@tssa.org on behalf of Public Information Services [publicinformationservices@tssa.org]
Sent: Thursday, October 10, 2013 10:34 AM
To: Andrew O'Connell
Subject: Re: TSSA Search

Hi Andrew,

Thank you for your inquiry.

We have no record in our database of any fuel storage tanks at the subject address (addresses).

For a further search in our archives please submit your request in writing to Public Information Services via e-mail (publicinformationservices@tssa.org) or through mail along with a fee of \$56.50 (including HST) per location. The fee is payable with credit card (Visa or MasterCard) or with a Cheque made payable to TSSA.

Although TSSA believes the information provided pursuant to your request is accurate, please note that TSSA does not warrant this information in any way whatsoever.

Thank you and have a great day!

Regards,

Sarah Quibell

Public Information Services

TECHNICAL STANDARDS & SAFETY AUTHORITY
"Putting Public Safety First"
14th Floor, Centre Tower
3300 Bloor Street West
Toronto, ON M8X 2X4

www.tssa.org

Toll-Free: 1-877-682-8772

On Thu, Oct 10, 2013 at 10:26 AM, Andrew O'Connell <ao'connell@coleengineering.ca> wrote:

11/7/2013

Hello,

Cole Engineering will be conducting a Phase I Environmental Site Assessment at the following property:

Part of Lot 20 & 21, Concession 5, Geographic Township of Vaughan, County of York

As part of our assessment, we are contacting government officials to ascertain whether they have any knowledge of activities which have resulted, or may result in, environmental concerns.

Specifically, we are seeking information on the following:

- .. tank installation;
- .. fuel tank registration;
- .. records of spills;
- .. records of tank removal;
- .. records of environmental testing or removal of contaminated soil following tank removal;
- .. outstanding instructions;
- .. any other pertinent information.

Please provide a preliminary basic record for the sites in question.

Thanks again,

Andrew O'Connell, B.E.S.

Environmental Specialist

Brownfields - Environmental Management

Cole Engineering Group Ltd.

70 Valleywood Drive, Markham, ON Canada L3R 4T5

T: [905-940-6161 Ext. 272](tel:905-940-6161) Tor. Line: [416-987-6161](tel:416-987-6161)

F: [905-940-2064](tel:905-940-2064)

E: aoconnell@ColeEngineering.ca

www.ColeEngineering.ca

CONFIDENTIALITY NOTE

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Please consider the environment before printing this message.

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MOE Freedom of Information

**Ministry of
the Environment**

Freedom of Information and
Protection of Privacy Office

12th Floor
40 St. Clair Avenue West
Toronto ON M4V 1M2
Tel: (416) 314-4075
Fax: (416) 314-4285

**Ministère de
l'Environnement**

Bureau de l'accès à l'information
et de la protection de la vie privée

12^e étage
40, avenue St. Clair ouest
Toronto ON M4V 1M2
Tél. : (416) 314-4075
Télééc. : (416) 314-4285



Ontario



October 29, 2013

Andrew O'Connell
Cole Engineering
70 Valleywood Drive
Markham, ON L3R 4T5

Dear Andrew O'Connell:

**RE: *Freedom of Information and Protection of Privacy Act* Request
Our File # A-2013-06020, Your Reference EM13-0747**

This letter is in response to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* relating to Lot 20 & 21, Con 5, Geographic Township of Vaughan, County of York.

After a thorough search through the files of the Ministry's York-Durham District Office, Environmental Monitoring and Reporting Branch, Sector Compliance Branch and Safe Drinking Water Branch, no records were located responsive to your request. To provide you with this response and in accordance with Section 57 of the *Freedom of Information and Protection of Privacy Act*, the fee owed is \$30.00 for 1 hour of search time @ \$30.00 per hour. **We have applied the \$30.00 for this request from your initial payment. This file is now closed.**

You may request a review of my decision by contacting the Information and Privacy Commissioner/Ontario, 2 Bloor Street East, Suite 1400, Toronto, ON M4W 1A8 (800-387-0073 or 416-326-3333). Please note that there is a \$25.00 fee and you only have 30 days from receipt of this letter to request a review.

If you have any questions regarding this matter, please contact Ayesha Kapadia at 416-212-8912 or ayesha.kapadia@ontario.ca.

Yours truly,


Heidi Ritscher
FOI Manager

NHIC Search Results

Appendix A
NHIC Species at Risk Search Results

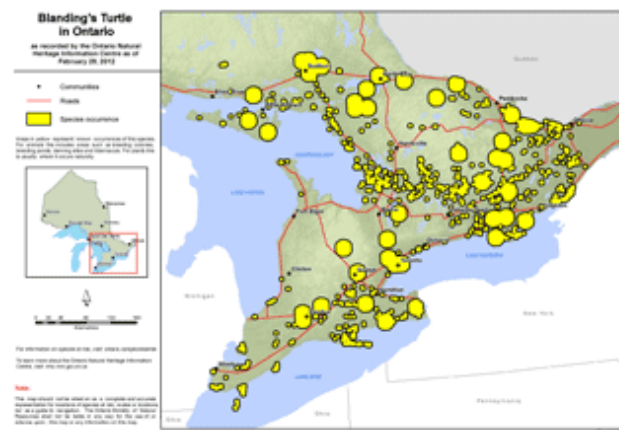
Unique Identifier (Element ID)	Taxonomic Group	Family	Scientific Name	English Name	G-rank	S-rank	Committee on the Status of Endangered Wildlife in Canada (COSEWIC) Status	Species At Risk in Ontario (SARO) Status	Canada General Status	Ontario General Status	Kingdom	Phylum	Class	Order
180752	Reptiles and Turtles	Emydidae	Emydoidea blandingii	Blanding's Turtle	G4	S3	THR	THR	May be at risk	At Risk	Animalia	Craniata	Chelonia	Cryptodeira
201116	Amphibians	Ambystomatidae	Ambystoma hybrid pop. 1	Jefferson X Blue-spotted Salamander, Jefferson genome dominates	GNA	S2					Animalia	Craniata	Amphibia	Caudata
180552	Fish	Cyprinidae	Clinostomus elongatus	Redside Dace	G3G4	S2	END	END	May be at risk	At Risk	Animalia	Craniata	Actinopterygii	Cypriniformes
181196	Dragonflies and Damselflies	Libellulidae	Libellula semifasciata	Painted Skimmer	G5	S2					Animalia	Mandibulata	Insecta	Odonata
151086	Dicotyledons	Lamiaceae	Monarda didyma	Scarlet Beebalm	G5	S3					Plantae	Anthophyta	Dicotyledoneae	Lamiales



Blanding's Turtle

(Emydoidea blandingii)

Threate



<http://www.mnr.gov.on.ca/stdprodconsume> <http://www.mnr.gov.on.ca/stdprodcon>

Description

The Blanding's Turtle is a medium-sized turtle easily identified by its bright yellow throat and chin. Unlike most Ontario turtles that have wide, flatter shells, the Blanding's Turtle has a domed shell that resembles an army helmet. Its shell is black to brown with yellow flecks and streaks and can reach centimetres long. Its head and limbs are black-grey and the bottom shell is rich yellow.

Action we are taking:

Threatened
06/30/2008

<http://www.i>

[How are species listed?](#)

[<http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/MNR_SAR_COSSARO_EN.html>](http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/MNR_SAR_COSSARO_EN.html)

Range

The Blanding's Turtle is found in and around the Great Lakes Basin, with isolated populations elsewhere in the United States and Canada. In Canada, the Blanding's Turtle is separated into the Great Lake Lawrence population and the Nova Scotia population. Blanding's Turtles can be found throughout southern, central and eastern Ontario.

Habitat

Blanding's Turtles live in shallow water, usually in large wetlands and shallow lakes with lots of water plants. It is not unusual, though, to find them hundreds of metres from the nearest water body, especially while they are searching for a mate or traveling to a nesting site. Blanding's Turtles hibernate in the mud at the bottom of permanent water bodies from late October until the end of April.

Threats

The most significant threats to the Blanding's Turtle are loss or fragmenting of habitat, motor vehicles, and raccoons and foxes that prey on eggs. Illegal collection for the pet trade is also a serious threat. Blanding's Turtles are slow breeders - they don't start to lay eggs until they are in their teens or twenties - so adult deaths of breeding age adults can have major impacts on the species.

Protection

The Blanding's Turtle is listed as threatened and protected under Ontario's *Endangered Species Act*.

What You Can Do to Help the Blanding's Turtle

- If you spot a Blanding's Turtle you can report your sighting to the [Natural Heritage Information Centre \(NHIC\)](#) [<http://nhic.mnr.gov.on.ca>](http://nhic.mnr.gov.on.ca) or to the Toronto Zoo's ["Ontario Turtle Tally"](#) [<http://www.torontozoo.com/Adoptapond/turtletally.asp>](http://www.torontozoo.com/Adoptapond/turtletally.asp) Sightings submitted to Ontario Turtle Tally are sent to the NHIC so you only have to make one report. Photographs with specific locations or mapping coordinates are always helpful!
- Never buy native species of turtles or any turtles that have been caught in the wild. If you see native species of turtles for sale in a pet store or food market, please contact the Ministry of Natural Resources.
- As with all wildlife, don't disturb nests, young or adults. Be respectful and observe from a distance.
- Report any illegal activity related to plants and wildlife to 1-877-TIPS-MNR (847-7667).

Did you know?

The size of the Great Lakes St. Lawrence Blanding's Turtle population is impossible to estimate accurately, as only limited data are available.

Did you know?

It can take a female Blanding's Turtle up to 25 years to mature. This long-lived species can survive in the wild for more than 75 years.

Did you know?

Unlike other Ontario turtles, the bottom shell is hinged that some Blanding's Turtles can completely close their shell after pulling in their head and feet.

Did you know?

The Blanding's Turtle is a poor swimmer and normally walks along the lake bottom in search of food - aquatic

- Private land owners have an important role to play in species recovery. You may be eligible for [stewardship programs](http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/MNR_SAR_IA) [insects, crustaceans, molluscs and vegetation.](http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/MNR_SAR_IA) that support the protection and recovery of species at risk and their habitats.
- As with many other rare plants and animals, the Blanding's Turtle is at risk due to the loss of wetland habitat. You can help by protecting any wetlands and surrounding natural vegetation on your property.
- Every year, turtles all over the province must cross busy roads to get to their nesting sites. Female Blanding's Turtles sometimes mistake gravel shoulders of roads as good nesting sites! Watch for turtles on the roads, especially between May and October.
- Volunteer with your local nature club or provincial park to participate in surveys or stewardship work focused on species at risk.
- Visit the [Toronto Zoo Adopt-a-Pond](http://www.torontozoo.com/Adoptapond/) [website](http://www.torontozoo.com/Adoptapond/) to learn more about Ontario's rare turtles, their habitat and related conservation initiatives.
- Register with the [Herpetofaunal Atlas](http://www.ontarionature.org/herpetofaunal_atlas.html), a program to improve our knowledge of Ontario's reptiles and amphibians, to receive e-mail newsletters, event notifications, and other updates.

The Endangered Species Act

Contact your local ministry office

[Learn the basics](http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/MNR_SAR_IA)

[Local information on](http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/MNR_SAR_IA)

Often the best source

of information on

species at risk is your

[nearest ministry office](http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/MNR_SAR_IA)

[Call with your question](http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/MNR_SAR_IA)

or concerns.

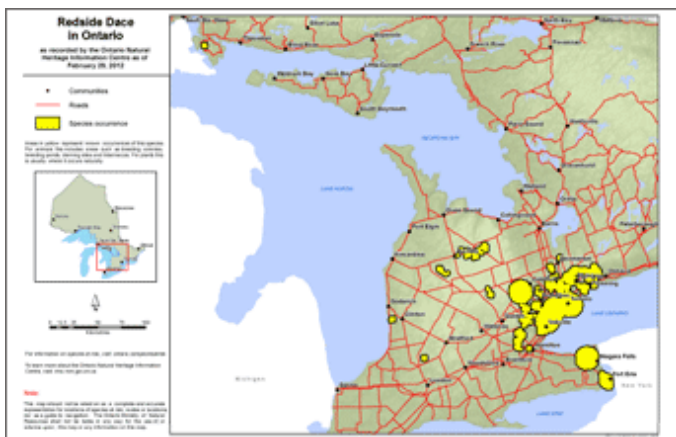


Redside Dace

(Clinostomus elongatus) Endangered



<http://www.mnr.gov.on.ca/stdprodconsume/groups/lr/@mnr/@species/documents/>



<http://www.mnr.gov.on.ca/stdprodconsume/groups/lr/@mnr/@species/documents/>

Description

The Redside Dace is a member of the minnow family and reaches up to 12 cm long. Adults are colourful with a red stripe along the front half of the body and a bright yellow stripe above that extends almost to the tail fin. The colours intensify during the spring spawning season (May to early June), especially in males. Redside Dace have a large mouth and protruding lower jaw that is well suited to feeding on insects hanging on vegetation over water.

Action we are taking:

<p style="text-align: center;">Endangered 02/18/09</p> <p style="text-align: center;">How are species listed?</p> <p>http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/MNR_SAR_COSSARO_EN.html</p>	<p>http://www.</p> <p>http://www.</p> <p>http://www.</p>
--	--

Range

Redside Dace are found in patches around the Great Lakes Basin, west to Minnesota, south to Kentucky and West Virginia, and east to New York State. In Canada, Redside Dace are found in a 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).

Habitat

The Redside Dace is 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. During spawning, they can be found in shallow parts of streams, which are also popular spawning areas for other minnow species.

Threats

Habitat loss and degradation caused by urban and agricultural development are the most significant threats to Redside Dace. Development can alter stream flow and shape, cause excessive amounts of sediment to enter the water, result in the removal of streamside vegetation which the species need for cover and food, and to moderate water temperature.

Protection

The Redside Dace and its habitat are protected under Ontario's Endangered Species Act.

What You Can Do to Help the Redside Dace

- The Ministry of Natural Resources tracks species at risk such as the Redside Dace. You can use a handy online form to report your sightings to the Natural Heritage Information Centre. Photographs with specific locations or mapping coordinates are always helpful.
nhic.mnr.gov.on.ca <http://nhic.mnr.gov.on.ca/>
- Contact your local Ministry of Natural Resources office to find out how you can become involved in hands-on fish and wildlife management activities.
- Report any illegal activity related to plants and wildlife to 1-877-TIPS-MNR (847-7667).

- Private land owners have a very important role to play in species at risk recovery. You may be eligible for stewardship programs that support the protection and recovery of species at risk at their habitats.
- Volunteer with a local nature club, provincial park or Ontario Streams to participate in surveys or stewardship work focused on species at risk. www.ontariostreams.on.ca/RSD/index.html
<<http://www.ontariostreams.on.ca/RSD/index.html>>.

Did you know?

Redside Dace often use nests built by other fish species and leave it up to the other species to guard the nest and eggs.

Did you know?

Redside dace are the only fish in Canada with the ability to jump out of the water to eat.

Did you know?

Redside Dace do not usually live more than four years. Females are typically larger than males.

Did you know?

Studies are underway to gain a better understanding of key habitat characteristics that are necessary to promote successful reproduction.

The Endangered Species Act**Contact your local ministry office**

[Learn the basics](http://www.mnr.gov.on.ca/en/Business/SpecialInformationSub)

<<http://www.mnr.gov.on.ca/en/Business/SpecialInformationSub>>

Often the best source of information on species at risk is your [nearest ministry office](#)

<<http://www.mnr>

Call with your questions or concerns.

MOE Well Record Search Results

Appendix A
MOE Well Records Search Results

Well ID	Easting	Northing	Concession	Lot	City	Contractor ID	Received	Final Status	Use 1	Use 2
6906563	617810	4856273	4	20		1622	5/25/1951	Water Supply	Domestic	
6906564	618484	4856477	4	20		4823	2/15/1954	Water Supply	Livestock	Domestic
6906581	617871	4856235	4	20		1622	2/2/1960	Abandoned-Supply	Not Used	
6906582	617809	4856216	4	20		1622	2/2/1960	Abandoned-Supply	Not Used	
6906583	617760	4856262	4	20		1622	2/1/1963	Water Supply	Domestic	Livestock
6906664	616550	4855740	5	20		1622	3/28/1950	Water Supply	Domestic	
6906665	616477	4855653	5	20		1622	12/2/1952	Water Supply	Livestock	Domestic
6906666	617274	4855747	5	20		1622	3/3/1954	Water Supply	Livestock	Domestic
6906667	616591	4855824	5	20		1622	2/3/1956	Water Supply	Domestic	
6906668	617526	4856124	5	20		1622	9/17/1962	Abandoned-Supply		
6906669	617518	4856116	5	20		1622	2/1/1963	Water Supply	Domestic	
6906670	617456	4856105	5	20		1622	9/17/1962	Abandoned-Supply		
6906671	616599	4855806	5	20		4610	1/17/1967	Abandoned-Supply		
6906672	616579	4855801	5	20		4610	1/17/1967	Water Supply	Domestic	
6906673	616426	4855902	5	21		4823	12/19/1955	Abandoned-Supply	Not Used	
6906675	616097	4855835	5	21		1622	10/31/1955	Water Supply	Domestic	
6906676	616166	4855771	5	21		1622	5/19/1959	Water Supply	Domestic	
6906677	617251	4856085	5	21		3108	7/20/1959	Water Supply	Domestic	
6906678	617215	4856217	5	21		4823	7/3/1962	Water Supply	Livestock	Domestic
6906683	617208	4857484	5	24		3108	2/2/1960	Water Supply	Domestic	Livestock
6909352	617435	4856593	5	22		3414	8/12/1969	Abandoned-Supply	Not Used	
6909401	617295	4856603	5	22		2519	9/25/1969	Water Supply	Livestock	Domestic
6909543	617425	4856653	5	22		4231	10/28/1969	Water Supply	Livestock	
6911250	617315	4856523	5	22		1663	1/15/1973	Water Supply	Livestock	Domestic
6911688	617315	4856083	5	21		1663	11/23/1973	Water Supply	Livestock	Domestic
6914395	618505	4856403	4	20		1663	3/3/1978	Water Supply	Commercial	
6914983	616175	4855763	5	21		1663	5/3/1979	Water Supply	Domestic	
6914995	616995	4855043	5	19		1663	5/3/1979	Water Supply	Domestic	
6917980	615850	4855650	5	20		1663	5/27/1986	Water Supply	Domestic	
6920415	615978	4855401	5	18		3108	6/20/1989	Water Supply	Public	
6924151	617317	4857020	5	23		3108	12/18/1997	Abandoned-Other	Not Used	
6924154	617079	4857312	5	24		3108	12/18/1997	Abandoned-Other	Not Used	
6925054	615853	4855661	5	20		1663	10/13/1999	Abandoned-Other	Not Used	
6925057	615825	4855650	5	20		1663	10/13/1999	Abandoned-Other	Not Used	
6927164	616703	4855665	5	20		5459	7/14/2003	Water Supply	Domestic	
6927447	616629	4856075	5	21		3108	11/24/2003	Abandoned-Other	Not Used	
7126507	617663	4856246			Vaughan	7241	7/29/2009	Test Hole	Test Hole	Monitoring
7126507	617645	4856251			Vaughan	7241	7/29/2009	Test Hole	Test Hole	Monitoring
7126507	617638	4856255			Vaughan	7241	7/29/2009	Test Hole	Test Hole	Monitoring
7126507	617649	4856241			Vaughan	7241	7/29/2009	Test Hole	Test Hole	Monitoring
7126507	617007	4856242			Vaughan	7241	7/29/2009	Test Hole	Test Hole	Monitoring
7146061	618433	4856528			VAUGHAN	7215	6/4/2010	Test Hole	Test Hole	
7149498	616568	4855545			VAUGHAN	7241	8/5/2010	Test Hole	Test Hole	Monitoring
7149499	616548	4855595			VAUGHAN	7241	8/5/2010	Test Hole	Test Hole	Monitoring
7164062	617640	4856261				6607	6/8/2011			
7169814	618389	4856486			Vaughan	7241	10/12/2011	Observation Wells	Monitoring	
7169815	618401	4856515			Vaughan	7241	10/12/2011	Observation Wells	Monitoring	
7169816	618401	4856295			Vaughan	7241	10/12/2011	Observation Wells	Monitoring	
7176498	616191	4855821	5	21		1663	2/10/2012	Abandoned-Other	Not Used	
7188786	617671	4855580				6607	7/18/2012			
7188795	617635	4856258				6607	7/18/2012			
7189720	617710	4856044				6607	10/17/2012			
7201516	615739	4855836				7215	5/14/2013			
7201517	615739	4855836				7215	5/14/2013			
7202226	615760	4855863				7215	5/29/2013			
7207881	615749	4856675				7147	9/12/2013			

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TOWNSHIP CONCESSION (LOT)	UTM ¹	DATE ² CNTR ³	CASING DIA ⁴	WATER ^{5,6} DETAIL	STAT LVL/PUMP LVL ⁷ RATE ⁸ /TIME HR:MIN	WATER USE ⁹	SCREEN INFO ¹⁰	WELL # (AUDIT#) WELL TAG # STATE ¹² DEPTHS TO WHICH FORMATIONS EXTEND ^{5,11}
KING TOWNSHIP 03(004)	17 619622 4856709 W	2008/07 5459	06	FR 0045	005 / / :0			7108990 (Z75700) A075073 BRWN SAND SOFT 0010 GREY CLAY SOFT 0034 GREY GRVL SAND LOOS 0040 GREY SAND LOOS 0045 GREY SILT LOOS 0055 GREY SAND GVLY 0061 GREY GRVL SAND 0075 GREY CLAY TILL 0078 GREY CLAY TILL DNSE 0095
MARKHAM TOWN (MARKHA CON 04(022)	17 619331 4857376 W	1994/12 1663	12 30	FR 0071	002 / 070 300 / 2:0		73 16	6923106 (159726) PRDR 0050 GREY FSND SAND 0071 GREY MSND CSND 0072 GREY CSND GRVL 0089 GREY SAND SILT 0094 GREY SAND SILT CLAY 0098
VAUGHAN TOWN (VAUGHA CON 02(026)	17 618755 4858820 W	1981/09 2801	06 02		035 / / :0	NU	35 31	6916545 () BRWN SILT CLAY FSND 0006 BRWN FSND FGVL 0013 BRWN SILT FSND SNDS 0015 BRWN FSND 0034 FSND SILTY 0044 GREY SILT CLAY STKY 0055 GREY SILT CLAY SOFT 0064 GREY SILT CLAY HARD 0067
VAUGHAN TOWN (VAUGHA CON 03(014)	17 620030 4854435 W	1967/06 2306	06	FR 0184	110 / 120 008 / 4:0	DO		6906436 () LOAM 0005 CLAY 0170 MSND 0180 GRVL 0184
VAUGHAN TOWN (VAUGHA CON 03(015)	17 619990 4854920 W	2013/08 3108						7209118 (Z162171) P
VAUGHAN TOWN (VAUGHA CON 03(016)	17 619975 4854968 W	1972/08 5459	30	FR 0020	006 / / :0	DO		6911362 () LOAM 0002 BRWN CLAY SAND 0020 BLUE CLAY 0028 BLUE HPAN 0035
VAUGHAN TOWN (VAUGHA CON 03(016)	17 620000 4854968 W	1972/09 1663						6911253 () A BRWN LOAM 0001 BRWN CLAY SAND 0030 HPAN STNS 0065 BLUE CLAY 0167 BLUE CLAY SAND 0170 HPAN 0185 BLUE CLAY 0190
VAUGHAN TOWN (VAUGHA CON 03(018)	17 619747 4856011 W	1956/10 1622	04	FR 0080	020 / 072 007 / 4:0	DO	76 4	6906445 () LOAM 0001 CLAY 0056 CLAY GRVL 0072 FSND 0080
VAUGHAN TOWN (VAUGHA CON 03(018)	17 619735 4856001 W	1953/07 1622	02	FR 0052	012 / 040 003 / 3:0	DO	57 5	6906444 () LOAM 0002 YLLW CLAY 0014 CSND 0048 BLUE CLAY 0055 GRVL 0062

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TOWNSHIP CONCESSION (LOT)	UTM ¹	DATE ² CNTR ³	CASING DIA ⁴	WATER ^{5,6} DETAIL	STAT LVL/PUMP LVL ⁷ RATE ⁸ /TIME HR:MIN	WATER USE ⁹	SCREEN INFO ¹⁰	WELL # (AUDIT#) WELL TAG # STATE ¹² DEPTHS TO WHICH FORMATIONS EXTEND ^{5,11}
VAUGHAN TOWN (VAUGHA CON 03(018)	17 619730 4856108 W	1951/04 1622	02	FR 0080	030 / 003 / 4:0	DO	78 5	6906443 () LOAM 0001 CLAY 0022 FSND 0079 GRVL 0084
VAUGHAN TOWN (VAUGHA CON 03(018)	17 619850 4855908 W	1961/12 4201	30	FR 0020	010 / 003 / :0	ST DO		6906447 () BLUE CLAY 0020 MSND 0028
VAUGHAN TOWN (VAUGHA CON 03(019)	17 619661 4856490 W	1953/10 1622	03	FR 0050	008 / 035 003 / 3:0	DO	57 5	6906448 () LOAM 0001 LOAM MSND 0015 BLUE CLAY 0037 FSND 0053 MSND 0062
VAUGHAN TOWN (VAUGHA CON 03(020)	17 619596 4856879 W	1954/08 1622	04	FR 0046		MN		6906449 () LOAM 0002 YLLW CLAY STNS 0020 BLUE CLAY STNS 0046
VAUGHAN TOWN (VAUGHA CON 03(020)	17 619592 4856733 W	1954/11 1622	04	FR 0060	/ 003 / :0	DO		6906450 () LOAM 0001 CLAY 0032 FSND 0060
VAUGHAN TOWN (VAUGHA CON 03(020)	17 619656 4856910 W	1954/11 1622	04	FR 0035	/ 001 / :0	DO		6906451 () LOAM 0001 CLAY 0018 FSND 0035
VAUGHAN TOWN (VAUGHA CON 03(020)	17 619785 4856938 W	1956/05 2801	04	FR 0048	/ 017 / 8:0	MN	48 2	6906452 () LOAM 0002 YLLW CLAY 0009 GREY CLAY BLDR 0018 BLDR 0020 GREY CLAY 0040 CLAY GRVL 0043 FSND GRVL BLDR 0051 BLDR 0052 BLUE CLAY 0057
VAUGHAN TOWN (VAUGHA CON 03(020)	17 619925 4856944 W	1956/04 2801	06					6906453 () LOAM 0002 MSND CLAY BLDR 0020 FSND 0082 BLUE CLAY 0089 MSND CLAY BLDR 0118 HPAN 0119 MSND CLAY 0159 GREY CLAY MSND 0197 GREY CLAY 0245 HPAN 0247 GREY CLAY 0295
VAUGHAN TOWN (VAUGHA CON 03(020)	17 619796 4856894 W	1956/04 2801	06					6906454 () LOAM 0002 YLLW CLAY BLDR 0006 GREY CLAY GRVL 0035 MSND GRVL CLAY 0040 CLAY MSND 0049 CLAY GRVL 0063 BLUE CLAY 0107
VAUGHAN TOWN (VAUGHA CON 03(021)	17 619683 4857036 W	1954/09 1622	04	FR 0030		DO		6906465 () LOAM 0001 CLAY 0009 CLAY GRVL 0024 CSND 0030

Well Computer Print Out Data as of October 15 2013

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VAUGHAN TOWN (VAUGHA CON 03(021))	17 619596 4857012 W	1954/11 1622	04	FR 0035		DO		6906466 () LOAM 0003 CLAY 0018 FSND 0035
VAUGHAN TOWN (VAUGHA CON 03(021))	17 619562 4856947 W	1999/09 1663				NU		6925063 (206295) A BRWN CLAY 0008 YLLW UNKN 0009 BRWN CLAY 0018 YLLW UNKN 0019
VAUGHAN TOWN (VAUGHA CON 03(021))	17 619814 4857014 W	1949/07 1622	02	FR 0010		DO		6906457 () LOAM 0001 MSND 0016 GRVL 0031
VAUGHAN TOWN (VAUGHA CON 03(021))	17 619560 4856928 W	1950/06 2636	05	FR 0045		CO		6906458 () YLLW CLAY 0006 BLUE CLAY 0044 GRVL 0045
VAUGHAN TOWN (VAUGHA CON 03(021))	17 619573 4856923 W	1950/06 2636	05	FR 0045	/ 020 / 6:0	CO		6906459 () CLAY STNS 0015 GRVL 0040 CLAY STNS BLDR 0044 GRVL 0045
VAUGHAN TOWN (VAUGHA CON 03(021))	17 619620 4857060 W	1952/10 1622	02	FR 0030		DO		6906461 () LOAM 0001 YLLW CLAY 0029 GREY MSND 0033
VAUGHAN TOWN (VAUGHA CON 03(021))	17 619804 4856994 W	1954/03 1622	03	FR 0030		DO		6906462 () LOAM 0001 MSND 0028 CSND 0030
VAUGHAN TOWN (VAUGHA CON 03(021))	17 619938 4857050 W	1954/04 1622	06					6906463 () LOAM 0001 FSND 0100
VAUGHAN TOWN (VAUGHA CON 03(021))	17 619896 4857141 W	1954/06 1622	04	FR 0011	001 / 011 010 / 1:0	NU		6906464 () BLUE CLAY STNS 0020 BLUE MSND CLAY 0040
VAUGHAN TOWN (VAUGHA CON 03(022))	17 620083 4857712 W	1960/04 1622	04	FR 0110	080 / 105 015 / 7:0	DO CO	110 8	6906473 () BRWN CLAY 0020 BRWN FSND 0110 FSND 0118
VAUGHAN TOWN (VAUGHA CON 03(022))	17 620039 4857633 W	1951/08 4841	08	FR 0146	042 / 065 083 / 72:0	DO IN	138 8	6906471 () LOAM MSND 0065 MSND CLAY 0120 MSND 0130 BLCK MSND 0139 MSND GRVL 0143 GRVL MSND CLAY 0146 CLAY 0147

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VAUGHAN TOWN (VAUGHAN CON 03(022))	17 619613 4857552 W	1995/08 1663	02	FR 0071	025 / 090 005 / 1:0	NU	97 5	6923514 (159743) BRWN SAND GRVLS 0008 BRWN CLAY 0017 BLUE CLAY 0023 GREY FSND 0027 BRWN MSND 0031 BRWN MSND 0036 GREY FSND 0044 GREY CLAY SILT 0047 BLUE CLAY 0055 GREY FSND 0071 GREY MSND 0103
VAUGHAN TOWN (VAUGHAN CON 03(023))	17 619382 4858101 W	1954/08 1622	02	FR 0045	020 / 003 / 7:0	DO	47 5	6906474 () YLLW CLAY STNS 0045 YLLW MSND 0052
VAUGHAN TOWN (VAUGHAN CON 03(023))	17 619459 4858140 W	1957/10 2314	04	FR 0070	010 / 100 008 / 6:0	IN	99 7	6906476 () CLAY 0070 CSND 0106
VAUGHAN TOWN (VAUGHAN CON 03(023))	17 620111 4858054 W	1992/01 6518	02	FR 0065		NU		6921855 (116582)
VAUGHAN TOWN (VAUGHAN CON 03(023))	17 619352 4857999 W	2004/11 7238	02	FR 0020			26 10	6928509 (Z19750) A020810 BRWN SILT CLAY SAND 0020 BRWN SILT TILL SAND 0030 GREY SAND SILT WBRG 0036
VAUGHAN TOWN (VAUGHAN CON 03(023))	17 619393 4857858 W	1954/09 1622	04	FR 0087	014 / 018 010 / 7:0	DO	82 5	6906475 () LOAM 0001 FSND 0011 BLUE CLAY GRVLS 0081 CSND 0087
VAUGHAN TOWN (VAUGHAN CON 03(024))	17 619813 4858486 W	1991/11 6518	02	FR 0071		NU	72 10	6921721 (116559) BRWN FILL 0003 BRWN FSND CLAY GRVLS 0014 BRWN FSND SILT CLAY 0014 BRWN FSND SILT DNSE 0055 BRWN FSND SILT 0080 GREY FSND SILT 0085
VAUGHAN TOWN (VAUGHAN CON 03(024))	17 620016 4858404 W	1964/10 1622	04	FR 0200	110 / 210 004 / 8:0	DO ST	228 4	6906477 () PRDG 0005 FSND 0232
VAUGHAN TOWN (VAUGHAN CON 03(024))	17 620005 4858685 W	1983/02 2801	02		001 / / :0	NU	26 20	6917134 () BRWN MSND 0008 BRWN FSND 0025 GREY FSND 0035 GREY FSND SLTY 0045 GREY SAND CLYY SILT 0060 GREY CLAY SILT 0076
VAUGHAN TOWN (VAUGHAN CON 03(024))	17 620075 4858683 W	1978/12 2801	02 01	FR 0006 FR 0186				6914956 () FSND PCKD 0010 FSND CLAY PCKD 0037 GREY SAND CLAY PCKD 0050 GREY SILT CLAY PCKD 0089 GREY SAND FGVL CLAY 0134 GREY SAND CLAY CLAY 0345

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VAUGHAN TOWN (VAUGHAN CON 03(024)	17 619415 4858523 W	1980/04 1663	05	FR 0160	031 / 165 050 / 0:45	CO	174 6	6915790 () BRWN CLAY SAND GRVL 0047 BLUE CLAY 0058 GREY FSND CLAY 0120 BLUE CLAY 0131 GREY FSND SILT 0162 GREY CSND MGRD 0182 GREY FSND 0187
VAUGHAN TOWN (VAUGHAN CON 03(024)	17 619512 4858354 W	1959/07 3108	04	FR 0100	020 / 040 022 / 3:0	CO	102 6	6906480 () LOAM 0002 BLUE CLAY 0100 CSND 0108
VAUGHAN TOWN (VAUGHAN CON 03(025)	17 619616 4858339 W	1991/11 6518	02	FR 0063		NU	132 10	6921732 (116553) BRWN CLAY SILT 0012 BRWN FSND MSND 0075 GREY SILT FGVL CLAY 0108 BRWN MSND 0117 GREY CLAY SILT 0128 BRWN MSND CSND 0143
VAUGHAN TOWN (VAUGHAN CON 03(025)	17 619665 4858873 W	1976/11 3108	06	UK 0106 FR 0205	057 / 216 025 / 5:0	IN	207 10	6913686 () BRWN CLAY STNS 0012 BRWN SAND 0075 BRWN SAND CLAY 0081 BLUE CLAY GRVL 0106 BLUE SAND 0115 BLUE CLAY GVLY 0144 BLUE CSND 0155 BLUE CLAY SNDY 0205 BLUE FSND 0217
VAUGHAN TOWN (VAUGHAN CON 03(025)	17 620014 4859048 W	1983/05 2801	02		005 / / :0	NU	82 16	6917151 () BRWN FSND SLTY 0057 GREY FSND 0060 GREY FSND SILT 0064 GREY SILT SNDY 0075 GREY SILT CLYY FSND 0085 GREY CLAY SLTY HARD 0097 GREY FSND SLTY 0100
VAUGHAN TOWN (VAUGHAN CON 03(025)	17 620090 4859128 W	1982/12 2801	02 02			NU	18 5	6917149 () SAND MGRD 0025
VAUGHAN TOWN (VAUGHAN CON 03(025)	17 619967 4859141 W	1982/12 2801	02 02			NU	77 5	6917147 () SAND 0074 SAND SLTY 0085
VAUGHAN TOWN (VAUGHAN CON 03(025)	17 620050 4859088 W	1983/05 2801	02		003 / / :0	NU	88 10	6917146 () BRWN FSND SILT 0015 BRWN SAND CGRD 0034 GREY FSND SILT 0044 BRWN MSND SILT 0056 BRWN FSND SILT 0067 CLAY FSND SLTY 0072 BRWN FSND SILT 0082 GREY SILT SAND 0092 GREY SILT CLAY SNDY 0097 FSND SILT 0100

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VAUGHAN TOWN (VAUGHA CON 03(025)	17 619999 4859075 W	1983/05 2801	02		006 / / :0	NU	85 10	6917145 () BRWN CLAY SILT CSND 0015 BRWN SILT CLAY SNDY 0025 BRWN SAND MGRD 0035 BRWN CLAY SILT FSND 0044 BRWN CLAY SILT FSND 0058 BRWN FSND SILT 0065 BRWN SILT FSND 0072 BRWN FSND SILT 0077 GREY FSND SILT 0082 CLAY SILT FSND 0089 GREY CLAY SILT FSND 0100
VAUGHAN TOWN (VAUGHA CON 03(025)	17 619999 4859075 W	1983/05 2801	02		004 / / :0	NU	49 5	6917144 () BRWN CLAY SAND CGRD 0015 BRWN SILT CLAY SNDY 0025 BRWN FSND 0035 BRWN SILT CLAY FSND 0048 GREY SILT FSND 0054 SILT FSND 0057
VAUGHAN TOWN (VAUGHA CON 03(025)	17 619949 4859159 W	1983/04 2801	12 02			NU	270 16	6917137 () FILL 0017 SAND SILT GRVL 0041 SAND SLTY 0051 FSND SILT 0135 FSND SLTY 0152 FSND SILT CLAY 0167 SILT CLYY FSND 0177 SAND FSND CLAY 0189 SILT CLYY MSND 0201 SILT FSND 0241 MSND SILT 0251 FSND SILT 0261 FSND SILT 0281 FSND STNS 0291 FSND SILT 0306 SILT CLYY 0329 FSND 0331 SILT CLYY STNS 0351 SILT CLYY MSND 0382 SILT CLAY SNDS 0401 SAND FSND 0441
VAUGHAN TOWN (VAUGHA CON 03(025)	17 620053 4858859 W	1983/02 2801	02			NU		6917135 () CLAY FSND LYRD 0010 SAND MGRD 0019 MSND 0030 FSND 0040 FSND SILT 0077 GREY CLAY FSND 0080 SAND GRVL FGRD 0082 BRWN CLAY SLTY 0090 SAND CGRD 0093 GREY CLAY FSND SLTY 0100 CSND FGVL 0116 GREY CLAY SLTY 0125 MSND GRVL LYRD 0138 CLAY SNDY LYRD 0140 GREY CLAY STKY 0143 GREY CLAY SAND SLTY 0161 FSND CLAY SILT 0166 GREY CLAY SNDY LYRD 0180
VAUGHAN TOWN (VAUGHA CON 03(025)	17 620055 4859168 W	1982/12 2801	02 02			NU	53 5	6917129 () FILL 0006 MSND 0075
VAUGHAN TOWN (VAUGHA CON 03(025)	17 619493 4858932 W	1964/06 1622	04	FR 0110	083 / 114 015 / 20:0	IN	118 8	6906485 () LOAM 0001 BRWN CLAY MSND 0080 QSND 0099 GREY FSND 0110 MSND CSND 0133

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VAUGHAN TOWN (VAUGHAN CON 03(025))	17 619584 4858794 W	1961/06 2314	05	FR 0131 FR 0167	110 / / :0	NU		6906484 () BRWN CLAY MSND 0075 BLUE CLAY 0100 HPAN 0122 FSND MUCK 0131 QSND 0138 MSND CLAY 0145 BLUE CLAY 0167 MSND 0173 FSND MUCK 0180
VAUGHAN TOWN (VAUGHAN CON 03(025))	17 619999 4859042 W	1953/02 1622	04	FR 0139	099 / 130 005 / 3:0	DO	134 5	6906481 () FSND 0010 MSND 0100 CSND 0139
VAUGHAN TOWN (VAUGHAN CON 03(025))	17 619616 4858333 W	1991/11 6518	02	FR 0062		NU	176 10	6921718 (116554) BRWN CLAY SILT 0012 BRWN FSND MSND 0075 BRWN SILT FGVL CLAY 0108 BRWN MSND 0117 GREY CLAY SILT 0128 BRWN MSND CSND 0187 GREY SILT 0220
VAUGHAN TOWN (VAUGHAN CON 03(025))	17 619842 4859087 W	1981/10 2801	06 02		033 / / :0	NU	39 6	6916550 () BRWN SILT FSND 0006 BRWN SAND CGRD 0012 BRWN MSND 0018 CSND GRVL 0024 BRWN MSND 0031 BRWN FSND 0034 GREY FSND 0036 BRWN FSND 0046 GREY SILT CLAY FSND 0046
VAUGHAN TOWN (VAUGHAN CON 03(025))	17 619839 4859093 W	1981/09 2801	06 02			NU	54 6	6916549 () BRWN SILT SAND 0006 BRWN SAND MGRD 0012 BRWN FSND 0018 SAND GRVL 0024 BRWN MSND 0031 BRWN FSND 0034 BRWN SAND 0036 BRWN FSND 0045 GREY CLAY SAND SILT 0054 GREY FSND 0059 BRWN SAND CGRD 0067
VAUGHAN TOWN (VAUGHAN CON 03(025))	17 619715 4858823 W	1979/09 1663	06	FR 0160	061 / 165 008 / 1:30	IN DO	169 3	6915402 () BRWN SAND CLAY 0008 BRWN FSND 0079 GREY CLAY 0130 GREY CLAY SAND GRVL 0168 GREY FSND 0187
VAUGHAN TOWN (VAUGHAN CON 03(025))	17 619665 4858723 W	1979/07 3108	06	UK 0179	/ 185 015 / 2:0	DO	185 3	6915150 () FILL 0006 BRWN CLAY SNDY 0025 BRWN FSND 0082 BLUE CLAY SNDY 0151 QSND 0179 GREY FSND 0188
VAUGHAN TOWN (VAUGHAN CON 03(025))	17 620015 4858923 W	1979/06 3108	06	UK 0194	080 / 195 035 / 2:0	IN	196 6	6915076 () BRWN SAND 0006 BRWN CLAY SNDY 0049 BRWN CLAY FSND GVLY 0148 BLUE CLAY SNDY 0192 BLUE FSND 0202

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VAUGHAN TOWN (VAUGHAN CON 03(025))	17 619615 4858783 W	1978/08 1663	05	FR 0150	062 / 150 007 / 2:0	CO	155 3	6914980 () BRWN CLAY SAND 0094 YLLW CLAY SAND GRVL 0120 GREY FSND 0125 BLUE CLAY 0132 GREY FSND MSND 0172
VAUGHAN TOWN (VAUGHAN CON 03(025))	17 619775 4858943 W	1978/11 3108	06	UK 0160	098 / 160 020 / 3:0	IN	166 3	6914789 () CLAY FILL 0005 YLLW CLAY 0022 YLLW GRVL CLAY SNDY 0040 YLLW SAND CLAY 0102 BRWN SAND 0151 BLUE SAND 0169
VAUGHAN TOWN (VAUGHAN CON 03(025))	17 619235 4858813 W	1978/11 3108	06	UK 0135	035 / 132 010 / 2:0	IN	137 3	6914766 () BLUE CLAY FILL 0007 YLLW CLAY 0022 YLLW CLAY SNDY 0055 YLLW SAND 0060 YLLW GRVL CLAY SNDY 0092 BRWN SAND 0105 BRWN SAND 0140
VAUGHAN TOWN (VAUGHAN CON 03(025))	17 619435 4858783 W	1977/07 3108	06	FR 0150	057 / 170 030 / 5:0	CO	170 8	6914110 () BRWN CLAY 0003 BRWN CLAY SNDY 0017 BRWN CLAY GVLV SNDY 0085 BLUE CLAY SNDY 0101 BRWN SAND CLAY LYRD 0145 BRWN CSND 0178
VAUGHAN TOWN (VAUGHAN CON 03(026))	17 620034 4859222 W	1982/08 2801	06 12		032 / 039 025 / 6:0	NU	33 17	6916555 () CSND FGVV 0013 MSND PCKD 0015 CSND 0024 FSND VERY 0042 FSND PCKD 0048 FSND SLTY 0051 FSND SLTY CLAY 0054
VAUGHAN TOWN (VAUGHAN CON 03(026))	17 619362 4859178 W	1949/05 1622	02	FR 0050 FR 0080	020 / 005 / 2:0	ST DO	95 5	6906486 () LOAM 0001 CLAY 0050 GRVL MSND CLAY 0080 GRVL MSND 0100
VAUGHAN TOWN (VAUGHAN CON 03(026))	17 619935 4859190 W	1981/12 2801	16 06 02		036 / 049 028 / 24:0	NU		6916538 () WDFR 0004 BRWN SAND MGRD 0012 BRWN FSND GRVL 0032 MSND SILT LYRD 0036 FSND SNDS SILT 0046 GREY FSND SLTY SNDS 0053 GREY SNDS SILT STKY 0057 GREY MSND SLTY 0062 GREY MSND SILT 0067
VAUGHAN TOWN (VAUGHAN CON 03(026))	17 619944 4859196 W	1981/12 2801	14 06		036 / 050 008 / 24:0	NU	38 19	6916539 () WDFR 0004 BRWN CSND GRVL 0010 BRWN MSND 0021 BRWN CSND GRVL WDFR 0028 BRWN FSND WDFR PCKD 0039 BRWN FSND WDFR 0054 GREY FSND SILT PCKD 0064
VAUGHAN TOWN (VAUGHAN CON 03(026))	17 620004 4859231 W	1982/08 2801	12 06		036 / 040 017 / 6:0	NU	36 14	6916554 () SAND 0010 CSND 0032 FSND PCKD 0038 CLAY FSND LYRD 0044 FSND 0047 CLAY FSND SILT 0052

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VAUGHAN TOWN (VAUGHAN CON 03(026)	17 619970 4859212 W	1982/07 2801	12 06		037 / / :0	NU	35 11	6916553 () SAND 0014 CSND 0021 BRWN CLAY SNDY SILT 0028 FSND 0038 SILT SNDY 0041 FSND SILT 0047 SAND PCKD 0050
VAUGHAN TOWN (VAUGHAN CON 03(026)	17 619883 4859178 W	1983/04 2801	12 02			NU		6917136 () TILL 0015 FSND GRVL SLTY 0051 CLAY CSND CGVL 0057 FSND CGVL SILT 0080 CSND FGVL SILT 0096 FSND SLTY FGVL 0125 CLAY FSND SLTY 0141 SILT SNDY CLAY 0153 SILT CLAY SAND 0168 SAND CLYY FSND 0182 SILT FSND GRVL 0191 FSND FGVL 0211 FSND SLTY 0221 FSND MGRD 0231 FSND 0251 FSND SILT 0261 FSND SLTY 0318 FSND CLAY SILT 0331 FSND SILT CLAY 0341 SILT CLYY MSND 0351 CLAY MSND SILT 0361 SILT CLAY SNDY 0382 SILT CLAY FSND 0401
VAUGHAN TOWN (VAUGHAN CON 03(026)	17 619992 4859229 W	1983/05 2801	12 02			NU		6917130 () UNKN 0031 SAND GRVL 0050 SAND 0100 FSND GRVL 0160 SILT FSND 0170 SILT CLYY CSND 0211 SILT FSND CLAY 0220 SAND SAND CGRD 0230 FSND SILT 0254 FSND SILT 0293 FSND SILT GRVL 0302 FSND SILT 0319 SILT CLYY FSND 0329 SAND SILT CLYY 0354 CLAY SAND SILT 0364 SAND SAND GRVL 0376 CLAY SAND SILT 0383 SAND SAND GRVL 0388 CLAY SAND SAND 0400
VAUGHAN TOWN (VAUGHAN CON 03(026)	17 619955 4859212 W	1974/10 5459	06	FR 0127	105 / 007 / 3:0	NU	129 10	6912326 () BRWN CLAY 0030 BRWN CLAY SAND 0060 BRWN SAND 0070 BRWN CSND 0074 GREY GRVL 0082 GREY SAND 0120 GREY SAND GRVL 0127 GREY MSND 0139
VAUGHAN TOWN (VAUGHAN CON 03(026)	17 620049 4859239 W	1982/08 2801	06 12		037 / / :0	NU	30 18	6916556 () CSND 0018 MSND 0027 FSND SLTY 0039 FSND 0048 FSND SILT 0052
VAUGHAN TOWN (VAUGHAN CON 03(026)	17 619883 4859179 W	1982/08 2801	12 06		005 / / :0	NU	35	6916552 () SAND 0003 BRWN CLAY SNDY 0011 MSND 0021 BRWN CLAY SNDY 0023 MSND 0032 FSND SILT 0039 FSND SLTY 0042 FSND SILT 0046 GREY CLAY FSND SLTY 0051 GREY CLAY SLTY 0053

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VAUGHAN TOWN (VAUGHAN CON 03(026)	17 619397 4858988 W	1992/01 6518	02	UK 0049		NU		6921857 (116575)
VAUGHAN TOWN (VAUGHAN CON 03(026)	17 619598 4859072 W	1992/01 6518	02	FR 0083		NU		6921856 (116576)
VAUGHAN TOWN (VAUGHAN CON 03(062)	17 619949 4859203 W	2801	02 06		036 / / :0	NU	38 9	6916543 (WDFR 0005 SAND SLTY DRTY 0007 GREY CLAY SLTY 0008 SAND SLTY PCKD 0011 CSND LOOS GRVL 0016 FSND PCKD 0027 BRWN FSND GRVL 0047
VAUGHAN TOWN (VAUGHAN CON 04(013)	17 618195 4853363 W	1969/11 1622						6909672 () A LOAM 0005 BLUE CLAY 0050 CLAY MSND 0075 BLUE CLAY 0185 HPAN 0228 BLUE CLAY 0289
VAUGHAN TOWN (VAUGHAN CON 04(013)	17 620015 4853573 W	1976/08 3108	07	UK 0023	004 / 019 009 / 4:0	DO	23 6	6913411 (BLCK LOAM 0002 YLLW CLAY SNDY 0016 GREY CLAY SNDY 0023 BLUE MSND 0029
VAUGHAN TOWN (VAUGHAN CON 04(014)	17 619991 4854364 W	1956/02 1622	04	FR 0182	110 / 170 009 / 8:0	DO	178 4	6906543 (LOAM 0001 CLAY 0020 FSND 0028 GRVL 0031 BLUE CLAY 0165 FSND 0172 BLUE CLAY 0178 CSND 0182
VAUGHAN TOWN (VAUGHAN CON 04(014)	17 619057 4854036 W	1960/02 4813	04	FR 0058	016 / 054 020 / 6:0	DO	60 4	6906544 (BLCK LOAM 0003 BRWN CLAY 0021 QSND 0044 BLUE CLAY 0058 MSND 0064
VAUGHAN TOWN (VAUGHAN CON 04(014)	17 619892 4854311 W	1963/09 4813	05	FR 0180	100 / 115 012 / 4:0	DO	219 8	6906545 (BRWN LOAM 0003 YLLW CLAY MSND 0040 GRVL CLAY 0055 BLUE CLAY 0180 FSND CLAY 0197 FSND 0227
VAUGHAN TOWN (VAUGHAN CON 04(014)	17 620013 4854170 W	2010/05 7147	02					7145960 (M08683) A092979 BLCK 0001 BRWN FILL 0010 BRWN TILL SNDY 0019
VAUGHAN TOWN (VAUGHAN CON 04(014)	17 619971 4854368 W	1951/09 4841	05	FR 0095	021 / 004 / 24:0	DO		6906542 (BLCK LOAM MSND 0002 RED QSND 0045 BLUE CLAY 0150 BLUE CLAY MSND 0155 WHIT FSND SILT 0165 BLCK MSND GRVL 0169

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VAUGHAN TOWN (VAUGHA CON 04(015)	17 618890 4854217 W	1961/12 4823	05	FR 0168	068 / 068 009 / 6:0	ST DO	188 4	6906549 () LOAM 0001 YLLW CLAY 0027 RED MSND 0033 YLLW CLAY SILT 0063 SILT GRVL 0067 YLLW CLAY SILT 0095 BLUE CLAY 0168 FSND 0172 CSND 0189 GRVL 0191 MSND 0192
VAUGHAN TOWN (VAUGHA CON 04(015)	17 618992 4854273 L	2003/12 6418				NU		6927485 (Z01445) A
VAUGHAN TOWN (VAUGHA CON 04(015)	17 618992 4854273 L	2003/12 6418				NU		6927486 (Z01444) A
VAUGHAN TOWN (VAUGHA CON 04(015)	17 619790 4854460 W	1999/03 1663				NU		6925061 (198193) A BRWN CLAY SAND 0008 YLLW UNKN 0009 BRWN CLAY SNDY 0025 YLLW UNKN 0026
VAUGHAN TOWN (VAUGHA CON 04(015)	17 618464 4853917 W	2000/02 1663				NU		6925426 (213476) A
VAUGHAN TOWN (VAUGHA CON 04(015)	17 618992 4854273 L	2000/02 1663				NU		6925427 (213479) A
VAUGHAN TOWN (VAUGHA CON 04(015)	17 619230 4854401 W	1974/09 1663	05	FR 0220	090 / 230 035 / 1:30	DO	228 3	6912552 () BRWN LOAM 0001 YLLW CLAY 0014 BRWN FSND 0040 BLUE CLAY 0130 BLUE CLAY 0180 BLUE FSND 0225 GREY FSND MSND CLAY 0232
VAUGHAN TOWN (VAUGHA CON 04(015)	17 618412 4854199 W	1956/03 1622	04	FR 0198	030 / 175 012 / 15:0	DO	194 4	6906546 () LOAM 0002 CLAY 0028 WHIT FSND 0055 CLAY 0190 CSND 0198
VAUGHAN TOWN (VAUGHA CON 04(015)	17 618464 4853917 W	1956/05 1622	04	FR 0202	044 / 190 003 / 16:0	DO	198 4	6906547 () LOAM 0002 MUCK 0023 FSND 0080 BLUE CLAY 0195 MSND 0202
VAUGHAN TOWN (VAUGHA CON 04(015)	17 618816 4854276 W	1957/09 1307	36	FR 0027	027 / 003 / :0	DO		6906548 () BRWN LOAM 0020 BRWN MSND 0027 QSND 0037 GREY CLAY 0039
VAUGHAN TOWN (VAUGHA CON 04(016)	17 619872 4854872 W	1958/07 1622	04	FR 0024	006 / 018 004 / 4:0	DO		6906550 () LOAM 0001 CLAY 0022 GRVL 0024
VAUGHAN TOWN (VAUGHA CON 04(016)	17 619299 4854635 W	1953/02 1622	04	FR 0185	100 / 120 010 / 10:0	DO	242 3	6906551 () LOAM 0001 YLLW CLAY 0017 FSND 0018 HPAN 0095 BLUE CLAY 0175 HPAN 0185 SILT 0241 MSND 0245

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VAUGHAN TOWN (VAUGHAN CON 04(016))	17 618265 4854473 W	1976/10 1307	30	FR 0035	012 / 033 007 / 1:0	DO		6913602 () BRWN LOAM 0015 GREY CLAY 0033 CSND WBRG 0035
VAUGHAN TOWN (VAUGHAN CON 04(016))	17 619684 4854758 W	1988/02 3108	06	FR 0192	076 / 212 002 / 5:0	DO	211 3	6919395 (13895) LOAM 0002 BRWN CLAY SAND GRVL 0013 BLUE CLAY 0092 BLUE CLAY SNDY 0096 BLUE CLAY 0188 BRWN CLAY SNDY 0192 BLUE SAND VERY FSND 0214
VAUGHAN TOWN (VAUGHAN CON 04(016))	17 619839 4855000 W	2010/07 7147	01	0009	009 / / :0			7148636 (M08695) A092971 BRWN LOAM 0001 SAND 0002 SILT CLAY 0011 SILT SAND 0014
VAUGHAN TOWN (VAUGHAN CON 04(016))	17 618090 4854446 W	2008/05 6926						7144992 (M06020) A066204 P
VAUGHAN TOWN (VAUGHAN CON 04(016))	17 618061 4854408 W	2008/04 6926	02	UK 0018				7104925 (M00379) A066202 BRWN LOAM SAND 0010 GREY SAND SLTY FGRD 0025 GREY CLAY TILL HARD 0030 GREY SILT GRVL SAND 0033
VAUGHAN TOWN (VAUGHAN CON 04(016))	17 618920 4854675 L	2003/05 3108				NU		6927019 (251026) A
VAUGHAN TOWN (VAUGHAN CON 04(016))	17 618920 4854675 L	2003/05 3108				NU		6927018 (251027) A
VAUGHAN TOWN (VAUGHAN CON 04(016))	17 619868 4854829 W	1967/05 1622	05					6906553 () A FILL 0003 GREY CLAY STNS 0075 CSND 0081 BLUE CLAY 0280 CLAY MSND 0314
VAUGHAN TOWN (VAUGHAN CON 04(016))	17 618315 4854720 W	1952/04 2908	06	FR 0075	070 / 070 005 / 8:0	DO		6906552 () CLAY 0075 GRVL STNS 0080
VAUGHAN TOWN (VAUGHAN CON 04(017))	17 618913 4855065 W	1958/12 2318	04	FR 0116	035 / 047 015 / 3:0	DO ST	128 10	6906556 () PRDG 0018 BLUE CLAY 0050 FSND 0053 BLUE CLAY 0116 BLUE MSND 0138
VAUGHAN TOWN (VAUGHAN CON 04(017))	17 618767 4854910 W	1997/11 1663						6924252 (186423) A
VAUGHAN TOWN (VAUGHAN CON 04(017))	17 618849 4855097 L	2002/07 4102				PS		6926509 (245448) A
VAUGHAN TOWN (VAUGHAN CON 04(017))	17 618849 4855097 L	2002/07 4102				NU		6926510 (245449) A

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VAUGHAN TOWN (VAUGHAN CON 04(017))	17 619075 4854983 W	1952/07 1622	02	FR 0018	020 / 020 003 / 2:0	DO	26 5	6906554 () LOAM 0001 YLLW CLAY 0006 FSND 0025 CSND 0031
VAUGHAN TOWN (VAUGHAN CON 04(017))	17 619064 4855158 W	1952/09 1622	04					6906555 () A LOAM 0001 CLAY 0013 MSND 0050 CSND 0072
VAUGHAN TOWN (VAUGHAN CON 04(017))	17 619265 4855073 W	1980/05 4919	30 30	UK 0015	016 / 028 / 0:30	DO		6915590 () BRWN LOAM HARD 0001 BRWN CLAY 0015 BRWN SAND PCKD 0018 GREY CLAY PCKD 0020 GREY GRVL PCKD 0033
VAUGHAN TOWN (VAUGHAN CON 04(017))	17 619040 4855208 W	1959/01 3108	04	FR 0116	035 / 047 015 / 3:0	DO ST	126 12	6906557 () PRDG 0018 BLUE CLAY 0050 BLCK FSND 0053 BLUE CLAY 0116 BLUE MSND 0138
VAUGHAN TOWN (VAUGHAN CON 04(018))	17 619800 4855797 W	1957/07 2105	02					6906446 () A BRWN CLAY QSNL 0015 BLUE CLAY 0042 FSND 0060 BLUE CLAY 0073 HPAN GRVL 0100
VAUGHAN TOWN (VAUGHAN CON 04(018))	17 619617 4855687 W	1955/08 4823	06	FR 0059	020 / 060 012 / 36:0	PS	64 5	6906558 () LOAM 0001 RED CLAY MSND 0004 CLAY MSND 0010 MSND 0015 CLAY BLDR 0030 HPAN 0031 CLAY BLDR 0059 CSND 0069
VAUGHAN TOWN (VAUGHAN CON 04(019))	17 619663 4856081 W	1956/09 1622	04	FR 0047	009 / 040 003 / 9:0	DO	43 4	6906560 () FILL 0007 CLAY 0020 MSND CLAY 0035 FSND 0040 CSND 0047
VAUGHAN TOWN (VAUGHAN CON 04(019))	17 618912 4855946 W	1960/03 3108	04					6906562 () A PRDG 0024 BLUE CLAY 0150 CLAY FSND 0160 BLUE CLAY 0269
VAUGHAN TOWN (VAUGHAN CON 04(019))	17 618893 4856003 W	1958/09 1622	04					6906561 () A LOAM 0002 BRWN MSND 0037 BLUE CLAY 0052 BLUE CLAY GRVL 0097
VAUGHAN TOWN (VAUGHAN CON 04(019))	17 618921 4855803 W	1948/12 2210	02	FR 0025	025 / / :0	DO	31 4	6906559 () PRDG 0027 MSND 0035
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 619106 4856634 W	1955/05 1307	24	FR 0018	006 / 010 / :0	DO		6906567 () BRWN LOAM 0018 BRWN GRVL 0022

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VAUGHAN TOWN (VAUGHAN CON 04(020))	17 619306 4856354 W	1956/09 1307	24	FR 0025	005 / 002 / :0	DO		6906578 () BRWN CLAY 0010 GREY CLAY 0025 CSND 0027
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 619422 4856401 W	1956/09 1307	36	FR 0027	005 / 003 / :0	DO		6906577 () BRWN CLAY 0010 GREY CLAY 0027 GRVL 0029
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 619341 4856570 W	1956/08 2105	02	FR 0044	/ 001 / 7:0	DO	40 5	6906576 () BRWN MSND 0020 BLUE CLAY STNS 0044 BRWN MSND 0045
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 619456 4856567 W	1956/05 1307	24	FR 0028	008 / 008 008 / :0	DO		6906575 () BRWN LOAM 0015 GREY CLAY STNS 0028 GREY MSND 0030
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 619276 4856358 W	1956/04 1622	04	FR 0060	012 / 012 015 / 4:0	DO		6906574 () LOAM 0001 YLLW CLAY 0036 CSND 0060
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 619117 4856512 W	1955/11 1622	04	FR 0025	012 / 022 002 / 12:0	DO	26 6	6906573 () LOAM 0002 BLUE CLAY 0010 CLAY STNS 0025 FSND 0032
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 619539 4856432 W	1955/10 1307	24	FR 0024	002 / 002 010 / :0	DO		6906572 () BRWN CLAY 0009 GREY CLAY STNS 0022 GREY FSND 0024
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 617760 4856262 W	1962/12 1622	04	FR 0173	100 / 175 004 / 32:0	DO ST	171 4	6906583 () BRWN MSND 0012 BLUE CLAY 0070 CSND 0082 BLUE CLAY 0173 CSND 0175
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 617809 4856216 W	1959/03 1622	04	FR 0125		NU		6906582 () A BRWN CLAY 0025 BLUE CLAY 0125 FSND 0130
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 617871 4856235 W	1958/12 1622	04	FR 0125		NU		6906581 () A BRWN CLAY 0025 BLUE CLAY 0125 FSND 0130
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 619264 4856423 W	1958/09 2105	02					6906580 () A BRWN CLAY 0020 GRVL STNS 0040 BLUE CLAY 0145
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 617810 4856273 W	1950/08 1622	02	FR 0077	037 / 037 007 / 2:0	DO	75 5	6906563 () LOAM 0001 BLUE CLAY 0018 FSND 0035 BLUE CLAY 0058 MSND 0080

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VAUGHAN TOWN (VAUGHAN CON 04(020))	17 618484 4856477 W	1953/12 4823	04	FR 0085	085 / 100 006 / 48:0	DO ST	193 4	6906564 () LOAM 0012 CLAY BLDR 0015 BLUE MSND GRVL 0077 BLUE MSND 0079 CSND 0085 BLUE CLAY GRVL 0098 MSND 0123 BLUE CLAY GRVL 0175 CSND 0185 MSND SILT 0191 MSND GRVL 0192 GRVL 0197
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 619566 4856570 W	1954/08 1622	04	FR 0039	002 / / :0	DO		6906565 () PRDG 0026 BLUE CLAY 0039 BLUE MSND 0040
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 619327 4856727 W	1954/09 1622	04					6906566 () A LOAM 0001 MSND 0022 BLUE CLAY 0250
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 619563 4856610 W	1958/03 1622	04	FR 0070	006 / 065 005 / 8:0	DO	66 4	6906579 () LOAM 0001 CLAY GRVL 0050 GRVL 0069 MSND 0070
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 619105 4856597 W	1955/05 1307	24	FR 0017	003 / 010 / :0	DO		6906568 () BRWN LOAM 0017 GRVL 0020
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 618505 4856403 W	1977/09 1663	05	FR 0193	090 / 180 020 / 2:0	CO	193 3	6914395 () BRWN LOAM 0001 YLLW CLAY 0014 BLUE CLAY GRVL 0038 GREY SAND SILT CLAY 0065 GREY SAND CLAY 0097 BLUE CLAY SAND GRVL 0193 GREY CSND GRVL 0196 BLUE CLAY GRVL 0247
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 619574 4856535 W	1955/05 1307	24	FR 0028	005 / 010 / :0	DO		6906569 () BRWN LOAM 0012 GREY CLAY STNS 0028 GRVL 0030
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 619470 4856518 W	1955/06 1307	24	FR 0028	005 / 005 010 / :0	DO		6906570 () BRWN CLAY STNS 0012 GREY CLAY STNS 0026 GREY MSND 0028
VAUGHAN TOWN (VAUGHAN CON 04(020))	17 619569 4856437 W	1955/10 1307	24	FR 0025	002 / 007 010 / :0	DO		6906571 () BRWN CLAY 0010 GREY CLAY STNS 0023 GREY FSND 0025
VAUGHAN TOWN (VAUGHAN CON 04(021))	17 619329 4857173 W	1958/10 2801	04	FR 0077		NU	77 12	6906590 () LOAM 0001 BRWN CLAY MSND 0010 BLUE CLAY MSND 0028 BLUE CLAY MSND SILT 0036 BLUE CLAY MSND GRVL 0046 BLUE CLAY MSND SILT 0077 BLDR GRVL MSND 0088 GRVL BLDR CLAY 0092 BLUE CLAY MSND GRVL 0103

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VAUGHAN TOWN (VAUGHAN CON 04(021))	17 619332 4857166 W	1958/10 2801	04	FR 0081		NU	83 12	6906591 () LOAM 0001 BRWN CLAY 0006 GREY CLAY GRVL BLDR 0009 BLUE CLAY MSND GRVL 0046 BLUE CLAY SILT 0081 GRVL MSND BLDR 0095 BLUE CLAY MSND 0097 CLAY SILT 0104 BLUE CLAY MSND GRVL 0105
VAUGHAN TOWN (VAUGHAN CON 04(021))	17 619524 4856862 W	1958/06 2105	02	FR 0055	/ 015 / :0	DO	54 5	6906584 () BRWN CLAY MSND 0012 BRWN MSND 0025 BLUE CLAY STNS 0055 MSND 0059
VAUGHAN TOWN (VAUGHAN CON 04(021))	17 619395 4857124 W	1956/12 2801	02	UK	-010 / -003 042 / 6:0	NU	82 10	6906585 () LOAM 0001 CLAY MSND BLDR 0039 CLAY MSND GRVL 0068 FSND 0080 MSND GRVL SILT 0092 CLAY MSND 0102
VAUGHAN TOWN (VAUGHAN CON 04(021))	17 619387 4857149 W	1957/01 2801	06					6906586 () LOAM 0001 CLAY 0012 GREY CLAY BLDR 0020 MSND CLAY GRVL 0023 CLAY MSND GRVL 0035 GREY CLAY 0040 CLAY BLDR 0071 GRVL CLAY MSND 0094 CLAY MSND 0111 BLUE CLAY 0147
VAUGHAN TOWN (VAUGHAN CON 04(021))	17 619364 4857179 W	1958/09 2801	02	FR 0076	/ 036 / 4:0	NU	77 16	6906587 () LOAM 0001 BRWN CLAY 0003 BLUE CLAY 0006 BLUE CLAY MSND GRVL 0046 BLUE CLAY SILT 0076 BLDR GRVL MSND 0093 CLAY MSND 0101 BLUE CLAY MSND 0103
VAUGHAN TOWN (VAUGHAN CON 04(021))	17 619369 4857176 W	1958/10 2801	05					6906588 () LOAM 0001 BRWN CLAY MSND 0008 BLUE CLAY GRVL BLDR 0026 BLUE CLAY MSND 0036 BLUE CLAY MSND GRVL 0047 BLUE CLAY SILT 0083 BLUE CLAY MSND 0086 GRVL MSND BLDR 0090 BLUE CLAY MSND GRVL 0099 BLUE CLAY MSND 0102 BLUE CLAY 0113
VAUGHAN TOWN (VAUGHAN CON 04(021))	17 619349 4857171 W	1958/10 2801	05					6906589 () LOAM 0001 BRWN CLAY MSND 0011 BLUE CLAY MSND 0016 BLUE CLAY MSND GRVL 0046 BLUE CLAY 0084 BLUE CLAY MSND GRVL 0087 GRVL MSND BLDR 0094 BLDR GRVL MSND 0099 BLUE CLAY MSND GRVL 0114 BLUE CLAY 0124

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VAUGHAN TOWN (VAUGHA CON 04(022))	17 619015 4857373 W	1975/04 2801	02		001 / 002 030 / 1:0	NU	70 11	6913515 () LOAM 0001 CLAY BLDR SNDY 0038 FSND 0047 CLAY 0051 SAND 0052 CLAY BLDR SNDY 0062 FSND 0070 SAND GRVL BLDR 0082 CLAY SLTY PCKD 0101
VAUGHAN TOWN (VAUGHA CON 04(022))	17 619115 4857323 W	1975/04 2801	02		003 / 007 030 / 2:0	NU	80 11	6913514 () LOAM 0001 CLAY STNS SNDY 0010 CLAY SNDY 0076 FSND MSND 0090 CLAY STNS SNDY 0120
VAUGHAN TOWN (VAUGHA CON 04(022))	17 619115 4857323 W	1975/04 2801	02		002 / 015 030 / 2:30	NU	80 11	6913513 () LOAM 0001 CLAY SNDY 0008 CLAY SAND GRVL 0046 FSND FGVL CLAY 0073 CLAY SAND SOFT 0076 FSND FGVL CLAY 0090 GREY CLAY SILT SAND 0120
VAUGHAN TOWN (VAUGHA CON 04(022))	17 619215 4857273 W	1975/04 2801	02		004 / 015 016 / 1:0	NU	79 11	6913512 () GREY FILL 0011 CLAY BLDR SLTY 0046 GREY CLAY FSND LYRD 0074 SAND FILL LYRD 0084 GREY SILT CLAY SAND 0089 GREY SILT CLAY 0097 GREY CLAY SLTY HARD 0117 GREY UNKN 0141
VAUGHAN TOWN (VAUGHA CON 04(022))	17 619378 4857392 W	1995/02 1663	12 24	FR 0070	/ 075 100 / 2:0		81 20	6923519 (159729) BRWN CLAY SAND GRVL 0014 BLUE CLAY SAND 0046 GREY FSND 0078 GREY MSND CSND 0088 GREY MSND SAND 0093 GREY CSND MSND 0101 GREY MSND FSND 0114 BLUE CLAY 0115
VAUGHAN TOWN (VAUGHA CON 04(022))	17 619269 4857325 W	1994/08 2801	02 01		017 / 023 033 / 2:0	NU		6923134 (123264) LOAM 0001 BRWN CLAY SLTY STNS 0010 GREY CLAY SLTY STNS 0037 SAND 0050 GREY CLAY SOFT 0052 SAND SOFT CLAY 0060 SAND 0070 GRVL SAND 0081 SAND 0083 GREY CLAY SOFT 0085 GREY CLAY STNS BLDR 0091
VAUGHAN TOWN (VAUGHA CON 04(022))	17 619263 4857432 W	1994/07 2801	02 01		034 / 011 / 0:30	NU		6923133 (58023) LOAM 0001 BRWN CLAY STNS 0017 GREY CLAY STNY 0032 TILL STNY SILT 0043 SAND GRVL 0044 GREY CLAY STNS SOFT 0061 SILT SLTY SAND 0072 SAND 0078 SAND SLTY CLAY 0082 MSND FGVL 0085 MSND FSND GRVL 0089 SAND SLTY 0093 TILL SILT STNY 0106

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VAUGHAN TOWN (VAUGHAN CON 04(022))	17 619265 4857418 W	1994/08 2801	01 02		031 / / :0	IR		6923132 (123249) LOAM 0001 BRWN CLAY STNS 0007 BRWN CLAY STNS 0016 GREY CLAY STNS 0024 TILL STNY SILT 0045 GREY CLAY SOFT 0048 SILT 0070 SAND 0076 SAND SLTY CLAY 0081 CLAY SAND STNS 0085 SAND GRVL 0086 SILT STNS HARD 0090 TILL SILT STNY 0096
VAUGHAN TOWN (VAUGHAN CON 04(022))	17 619292 4857332 W	1994/09 2801	24 12		006 / 070 400 / 72:0	IN	70 17	6923020 (123248) LOAM 0001 BRWN GRVL CLAY 0010 GREY SILT GRVL BLDR 0037 SAND SLTY 0050 GREY CLAY SOFT 0052 FSND VERY SLTY 0067 GRVL SAND LOOS 0074 SAND GRVL PCKD 0082 SILT GRVL 0087
VAUGHAN TOWN (VAUGHAN CON 04(022))	17 619400 4857337 W	1989/11 2801	16 08	FR 0088	/ 062 355 / 72:0	NU	76 20	6922515 (123228) FILL 0003 BRWN CLAY GRVL HARD 0011 GREY CLAY GRVL HARD 0020 GREY CLAY SNDY HARD 0035 GREY CLAY SOFT 0038 GREY CLAY SAND SLTY 0079 CLAY SLTY FSND 0088 SAND GRVL FSND 0099 CLAY SLTY FSND 0100
VAUGHAN TOWN (VAUGHAN CON 04(022))	17 619065 4857423 W	1975/04 2801	02		007 / 017 030 / 4:0	NU	70 11	6913516 (LOAM 0001 CLAY SNDY 0009 CLAY STNS SNDY 0038 SILT SNDY 0047 CLAY SLTY 0061 FSND MSND 0073 GRVL SAND 0081 CLAY SLTY SOFT 0101
VAUGHAN TOWN (VAUGHAN CON 04(022))	17 619388 4857312 W	1959/04 4623	12	FR 0082	-008 / 080 350 / 48:0	PS	83 12	6906594 (BRWN CLAY BLDR 0025 BLUE CLAY 0054 BLUE MSND CLAY 0059 BLUE CLAY 0082 MSND SILT CLAY 0096
VAUGHAN TOWN (VAUGHAN CON 04(022))	17 619444 4857278 W	1954/03 1622	04	FR 0034	/ 002 / :0	DO		6906592 (FILL 0003 CLAY 0018 FSND 0034
VAUGHAN TOWN (VAUGHAN CON 04(022))	17 619377 4857349 W	1956/11 2801	06					6906593 (LOAM 0002 CLAY GRVL 0039 CLAY MSND 0046 CLAY GRVL 0131 MSND GRVL CLAY 0249 CLAY 0310
VAUGHAN TOWN (VAUGHAN CON 04(023))	17 619318 4858065 W	1992/02 6518	02	FR 0048		NU	24 5	6921851 (116586)

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VAUGHAN TOWN (VAUGHAN CON 04(023))	17 618626 4857655 W	1957/09 1622	06					6906595 () A LOAM 0001 GRVL 0070 BLUE CLAY 0130 GRVL MSND 0215
VAUGHAN TOWN (VAUGHAN CON 04(024))	17 617328 4857881 W	1989/08 1663	06	FR 0063	041 / 069 012 / 1:45	DO	69 3	6921125 (26945) BRWN LOAM 0001 BRWN CLAY GRVL 0023 BRWN SAND 0063 GRVL 0077 BLUE CLAY GRVL 0095
VAUGHAN TOWN (VAUGHAN CON 04(024))	17 619105 4858426 W	1992/02 6518	02	FR 0015		NU		6921852 (116585)
VAUGHAN TOWN (VAUGHAN CON 04(024))	17 617640 4857723 W	1977/10 1663	05	FR 0045	032 / 042 003 / 1:30	ST DO	45 3	6914399 () BLCK LOAM 0001 YLLW CLAY GRVL 0017 BLUE CLAY 0030 BRWN MSND 0049 GREY FSND SILT 0052 GREY CLAY SAND GRVL 0115 BLUE CLAY 0127
VAUGHAN TOWN (VAUGHAN CON 04(024))	17 619120 4858305 W	1965/11 1622	04	FR 0286	028 / 240 008 / :0	ST DO	278 8	6906596 () BRWN CLAY MSND 0060 HPAN MSND GRVL 0286
VAUGHAN TOWN (VAUGHAN CON 04(024))	17 619075 4858171 W	1966/05 1622	04					6906597 () A LOAM 0001 BRWN CLAY 0020 BLUE CLAY GRVL 0135
VAUGHAN TOWN (VAUGHAN CON 04(025))	17 617214 4858506 W	1967/07 1622	05	FR 0078	-001 / 060 010 / 2:0	DO	92 4	6906601 () YLLW CLAY 0029 BLUE CLAY 0069 FSND 0078 GRVL MSND 0096
VAUGHAN TOWN (VAUGHAN CON 04(025))	17 617250 4858268 W	1954/12 1622	04	FR 0078	033 / 046 008 / 4:0	DO	73 5	6906599 () FILL 0003 CLAY 0042 FSND 0073 CSND 0078
VAUGHAN TOWN (VAUGHAN CON 04(025))	17 617304 4858282 W	1954/08 1622	04	FR 0055	020 / 040 005 / 4:0	DO	71 4	6906598 () YLLW CLAY 0045 YLLW MSND 0055 BLUE MSND 0075
VAUGHAN TOWN (VAUGHAN CON 04(025))	17 617362 4858220 W	1974/10 1663	05	FR 0060	045 / 070 003 / 2:0	DO	74 4	6912549 () BRWN SAND FILL 0006 GREY CLAY GRVL 0019 BLUE CLAY 0029 BLUE CLAY GRVL 0036 BRWN FSND 0064 GREY FSND MSND 0078 GREY FSND CLAY 0080
VAUGHAN TOWN (VAUGHAN CON 04(025))	17 618595 4858603 W	1972/11 3108	07	UK 0115	023 / 117 003 / 3:0	DO	116 3	6911183 () BLCK LOAM 0003 BRWN CLAY SAND 0022 BLUE CLAY GRVL 0069 BLUE CLAY SAND 0078 BLUE CLAY 0115 BLUE FSND 0119

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VAUGHAN TOWN (VAUGHAN CON 04(025))	17 617335 4858303 W	1978/07 1663	05	FR 0075	017 / 080 012 / 1:0	DO	84 3	6914984 () BRWN LOAM 0001 YLLW CLAY GRVL 0031 YLLW SAND CLAY 0047 GREY FSND 0057 BLUE CLAY 0061 GREY SAND CLAY LYRD 0073 GREY FSND 0087 BLUE CLAY SAND 0104 GREY FSND 0133 BLUE CLAY 0142
VAUGHAN TOWN (VAUGHAN CON 04(025))	17 617275 4858179 W	2004/02 3108				NU		6927664 (Z02637) A
VAUGHAN TOWN (VAUGHAN CON 04(025))	17 617315 4858073 W	1976/04 1663	05	FR 0070	046 / 068 003 / 1:30	DO	71 4	6913862 () BRWN SAND CLAY FILL 0003 YLLW CLAY 0017 BLUE CLAY 0026 YLLW CLAY GRVL 0031 BRWN FSND 0064 BRWN MSND 0068 GREY MSND 0075 BLUE CLAY 0081 GREY FSND 0086 BLUE CLAY 0091 GREY FSND 0097
VAUGHAN TOWN (VAUGHAN CON 04(025))	17 618885 4858745 W	1992/01 6518	02	FR 0023		NU		6921859 (116573)
VAUGHAN TOWN (VAUGHAN CON 04(025))	17 619166 4858852 W	1992/01 6518	02	FR 0035		NU		6921858 (116574)
VAUGHAN TOWN (VAUGHAN CON 04(025))	17 617611 4858035 W	2003/12 1663	06	FR 0089	-002 / 040 021 / 1:0	DO	88 5	6927548 (Z07467) A001428 BRWN CLAY 0012 GREY CLAY 0026 GREY FSND SILT 0088 GREY MSND CSND 0093 GREY FSND SILT 0104
VAUGHAN TOWN (VAUGHAN CON 04(025))	17 618885 4858730 W	1999/03 1663				NU		6925062 (198191) A BRWN CLAY 0005 YLLW UNKN 0020 BRWN CLAY SNDY 0109 YLLW UNKN 0118
VAUGHAN TOWN (VAUGHAN CON 04(025))	17 618650 4858650 W	1997/04 3108	30		010 / / :0	NU		6923907 (166681) A PRDG 0030
VAUGHAN TOWN (VAUGHAN CON 04(025))	17 617361 4857864 W	2009/09 3108				NU		7131756 (Z66970) A
VAUGHAN TOWN (VAUGHAN CON 04(025))	17 617638 4858258 W	1965/10 5420	30	FR 0020	014 / / :0	DO		6906600 () LOAM 0001 YLLW CLAY 0012 BLUE CLAY 0020 MSND 0032
VAUGHAN TOWN (VAUGHAN CON 04(026))	17 617965 4858823 W	1981/11 3108	06	UK 0090	003 / 010 020 / 0:30	DO	109 3	6916027 () BRWN CLAY GVLV 0018 BLUE CLAY GVLV 0038 BLUE SAND 0041 BLUE CLAY SNDY 0060 BLUE CLAY 0065 BLUE SILT 0083 BLUE SAND 0112

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VAUGHAN TOWN (VAUGHA CON 04(026)	17 619128 4858881 W	1960/07 1622	04	FR 0050	020 / 035 003 / 15:0	DO	51 4	6906602 () LOAM 0001 BRWN MSND 0022 GRVL 0026 BRWN MSND 0045 FSND 0055
VAUGHAN TOWN (VAUGHA CON 04(026)	17 617350 4858547 W	1975/08 4743	06	FR 0065	018 / 068 005 / 2:0	DO	67 8	6912786 () GREY LOAM 0001 BRWN CLAY 0015 GREY CLAY GRVL 0060 BRWN FSND 0078
VAUGHAN TOWN (VAUGHA CON 04(026)	17 618765 4858923 W	1976/05 1663	05	FR 0075	015 / 075 012 / 1:0	DO	75 3	6913864 () LOAM 0001 YLLW CLAY GRVL 0011 BLUE CLAY GRVL 0028 GREY MSND CLAY 0034 CLAY GRVL SNDY 0055 GREY MSND 0063 GREY MSND CSND 0087 GREY MSND FSND 0097
VAUGHAN TOWN (VAUGHA CON 04(026)	17 617219 4858634 W	1988/05 3108	06	FR 0051	011 / 067 010 / 2:0	DO	69 3	6919616 (26272) BRWN SAND 0005 BRWN CLAY SAND STNS 0012 BRWN SAND 0015 BRWN CLAY SAND 0020 BLUE CLAY 0039 BLUE CLAY SNDY 0045 BLUE CLAY GRVL 0051 BLUE SAND 0072
VAUGHAN TOWN (VAUGHA CON 04(026)	17 617245 4858460 W	1987/06 1663	06	FR 0083	007 / 082 020 / 1:0	DO	86 3	6919304 (09154) BLCK LOAM 0002 BRWN CLAY GRVL 0024 BRWN SAND 0032 BLUE CLAY 0048 GREY FSND 0058 GREY MSND 0081 BLUE CLAY 0083 GREY CSND 0095
VAUGHAN TOWN (VAUGHA CON 04(026)	17 618775 4858825 W	1985/12 1663	06	FR 0075	014 / 080 012 / 1:0	DO	82 3	6918107 () BRWN CLAY GRVL 0013 BLUE CLAY 0020 BLUE CLAY SAND GRVL 0023 GREY FSND 0029 BLUE CLAY SAND 0061 GREY CLAY FSND 0073 GREY MSND 0095
VAUGHAN TOWN (VAUGHA CON 04(026)	17 617315 4858523 W	1981/06 3903	06	FR 0070	011 / 070 020 / 4:0	DO	74 3	6915931 () BRWN CLAY STNS HARD 0049 BRWN SAND STNS LOOS 0077
VAUGHAN TOWN (VAUGHA CON 04(026)	17 617725 4858513 W	1975/11 3108	06	UK 0081	018 / 078 009 / 2:0	DO	81 3	6913007 () BLCK LOAM 0003 BRWN CLAY STNS 0031 GREY CLAY SAND 0067 BLUE CLAY FSND 0081 BLUE FSND 0084
VAUGHAN TOWN (VAUGHA CON 04(026)	17 617215 4858443 W	1978/10 3108	06	UK 0060	014 / 060 010 / 2:0	DO	67 3	6914763 () LOAM 0003 YLLW CLAY HARD STNY 0033 YLLW CLAY SNDY 0043 GREY CLAY SNDY 0059 GREY SAND 0070

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VAUGHAN TOWN (VAUGHAN CON 04(026))	17 617255 4858443 W	1978/06 3903	06	UK 0073	010 / 075 004 / 4:0	DO	73 6	6914590 () BRWN CLAY STNS HARD 0051 BRWN SAND STNS LOOS 0079
VAUGHAN TOWN (VAUGHAN CON 04(026))	17 617261 4858502 W	2011/09 6915	02		033 / 138 002 / 1:0	DO	246 13	7173160 (Z42910) A038444 BRWN CLAY STNS 0066 BLUE CLAY SILT CLAY 0197 BRWN SAND FSND 0262
VAUGHAN TOWN (VAUGHAN CON 04(026))	17 619129 4858884 W	2004/12 3108				NU		6928544 (Z05913) A 0005
VAUGHAN TOWN (VAUGHAN CON 04(026))	17 619129 4858884 W	2004/12 3108				NU		6928543 (Z05912) A
VAUGHAN TOWN (VAUGHAN CON 04(026))	17 617296 4858327 W	2004/09 3108				NU		6928359 (Z05904) A 0023 0018 0013 0010 0010
VAUGHAN TOWN (VAUGHAN CON 04(026))	17 617325 4858322 W	2004/11 1663	30		004 / / :0	NU		6928314 (Z19449) A YLLW 0009 BRWN SAND 0003 YLLW 0003 BRWN SAND CLAY 0000
VAUGHAN TOWN (VAUGHAN CON 04(026))	17 617267 4858303 W	2004/07 1663	06	FR 0105	011 / 015 / 1:0	DO	107 5	6928030 (Z13093) A007378 BLCK LOAM 0002 BRWN SAND CLAY 0013 GREY CLAY 0018 BRWN CSND GRVL 0024 BLUE CLAY 0039 BRWN FSND SILT 0102 BLUE CLAY 0105 GREY FSND 0113 GREY FSND CLAY SILT 0134
VAUGHAN TOWN (VAUGHAN CON 04(026))	17 618031 4858743 W	1974/08 3108	07	UK 0038	004 / 030 010 / 3:0	DO	44 6	6912139 () PRDG 0020 BLUE GRVL SAND CLAY 0038 BLUE MSND 0050
VAUGHAN TOWN (VAUGHAN CON 04(026))	17 617734 4858871 W	1961/07 1622	04	FR 0073	030 / 077 003 / 8:0	DO	73 4	6906603 () PRDG 0006 BRWN CLAY 0038 BLUE CLAY GRVL 0065 BLUE CLAY 0071 FSND 0077
VAUGHAN TOWN (VAUGHAN CON 04(027))	17 617767 4859059 W	1965/10 3108	04	FR 0059	012 / 040 008 / 2:0	DO	62 3	6906607 () PRDG 0023 BLUE CLAY 0026 MSND 0048 BLUE CLAY 0059 FSND 0065
VAUGHAN TOWN (VAUGHAN CON 04(027))	17 618094 4859188 L	2002/03 1663	06	FR 0058	012 / 020 020 / 1:0	DO	93 4	6926343 (240032) BRWN CLAY FILL 0002 BRWN CLAY 0017 GREY CLAY GRVL 0019 GREY CLAY 0026 BRWN CLAY 0028 GREY CLAY GRVL 0045 BRWN FSND CLAY LYRD 0058 BRWN MSND 0073 BRWN CSND 0093 BRWN MSND 0098

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VAUGHAN TOWN (VAUGHAN CON 04(027))	17 617215 4858823 W	1976/07 1663	05	FR 0070	012 / 080 020 / 1:0	DO	86 3	6913877 () BRWN CLAY SNDY 0006 YLLW CLAY GRVL 0012 YLLW CLAY 0018 BLUE CLAY SAND 0036 BLUE CLAY 0046 GREY FSND SILT 0047 BLUE CLAY SILT 0061 GREY MSND 0080 MSND CSND 0097
VAUGHAN TOWN (VAUGHAN CON 04(027))	17 617196 4858718 W	1953/12 1622	04	FR 0076	018 / 022 010 / 5:0	DO	87 5	6906604 () LOAM 0002 YLLW CLAY STNS 0025 BLUE CLAY MSND 0032 BLUE FSND 0036 BLUE CLAY 0076 BLUE MSND 0092
VAUGHAN TOWN (VAUGHAN CON 04(027))	17 617205 4858723 W	1956/10 1622	04	FR 0012	012 / 032 006 / 5:0	DO		6906605 () PRDG 0015 FSND 0040
VAUGHAN TOWN (VAUGHAN CON 04(028))	17 617068 4859051 W	1958/04 1622	04	FR 0155	085 / 110 004 / 48:0	DO	151 4	6906691 () PRDG 0044 CLAY MSND 0090 BLUE CLAY 0148 CSND 0155
VAUGHAN TOWN (VAUGHAN CON 05(013))	17 618107 4853242 W	1956/05 1622	04	FR 0044	010 / 030 003 / 10:0	DO	40 4	6906651 () LOAM 0001 BRWN CLAY 0006 MSND 0034 CSND 0044
VAUGHAN TOWN (VAUGHAN CON 05(014))	17 617935 4853503 W	1972/11 1307	30	FR 0015	016 / 040 004 / 1:0	DO		6911177 () BRWN OBDN SAND 0015 BRWN SAND 0020 GREY CLAY 0040 GREY SAND 0042
VAUGHAN TOWN (VAUGHAN CON 05(014))	17 617562 4853322 W	1960/07 4823	05	FR 0076	022 / 072 009 / 24:0	ST DO	96 4	6906652 () LOAM 0001 BRWN MSND 0018 GRVL 0019 CLAY MSND 0050 SILT CLAY 0060 SILT 0076 GRVL 0100 SILT 0101
VAUGHAN TOWN (VAUGHAN CON 05(014))	17 617935 4853503 W	2000/10 1663				NU		6925636 (220127) A
VAUGHAN TOWN (VAUGHAN CON 05(014))	17 618094 4853388 W	1975/04 1663	05	FR 0085	036 / 085 006 / 1:30	DO	89 3	6913183 () BRWN LOAM 0002 BRWN CLAY SAND 0009 BRWN FSND 0027 BLUE CLAY SAND 0066 GREY FSND 0070 BLUE CLAY GRVL 0078 GREY SAND GRVL 0093 BLUE CLAY 0094
VAUGHAN TOWN (VAUGHAN CON 05(014))	17 617562 4853322 W	2000/10 1663	05			NU		6925638 (220125) A
VAUGHAN TOWN (VAUGHAN CON 05(015))	17 616428 4853621 W	1955/07 1307	30	FR 0030	030 / 008 / :0	DO		6906654 () LOAM 0025 BRWN MSND 0030 GRVL 0033 BLUE CLAY 0040

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VAUGHAN TOWN (VAUGHAN CON 05(015))	17 616325 4853523 W	1973/10 1663	05	FR 0075	013 / 082 009 / 4:0	DO	81 4	6911885 () BRWN LOAM 0002 YLLW CLAY 0016 BLUE CLAY 0030 BRWN SAND 0033 BLUE CLAY 0039 BLUE CLAY GRVL SILT 0070 GREY MSND 0081 GREY GRVL CSND 0088 BLUE CLAY GRVL 0097
VAUGHAN TOWN (VAUGHAN CON 05(015))	17 617825 4853850 W	2000/10 1663				NU		6925634 (220134) A
VAUGHAN TOWN (VAUGHAN CON 05(015))	17 617903 4854019 W	1951/12 1622	05	UK 0020		NU		6906653 () A LOAM 0001 GREY CLAY 0018 FSND 0098 CSND 0100
VAUGHAN TOWN (VAUGHAN CON 05(015))	17 617015 4853423 W	1982/07 1663	06	FR 0060	024 / 088 080 / 1:30	DO	88 6	6916661 () BRWN LOAM 0001 BRWN CLAY 0012 BRWN FSND MGRD 0024 BLUE CLAY GRVL 0034 GREY FSND 0056 GREY CSND GRVL 0102
VAUGHAN TOWN (VAUGHAN CON 05(015))	17 616417 4853636 W	1955/12 1622	04	FR 0080	025 / 065 012 / 6:0	DO	76 4	6906655 () LOAM 0001 CLAY 0038 FSND 0074 CSND 0080
VAUGHAN TOWN (VAUGHAN CON 05(016))	17 617786 4854424 W	1962/09 1622	05	FR 0210	060 / 220 003 / 16:0	DO ST	231 8	6906657 () BRWN CLAY STNS 0015 SILT 0020 BLUE CLAY 0080 BLUE CLAY SILT 0210 FSND 0240
VAUGHAN TOWN (VAUGHAN CON 05(016))	17 616465 4853873 W	1976/12 1663	05	FR 0080	028 / 080 035 / 1:0	DO	89 3	6913827 () LOAM 0001 YLLW CLAY 0009 BRWN FSND 0019 BRWN CSND CGVL 0023 BLUE CLAY GRVL 0039 BLUE CLAY 0047 GREY MSND 0062 GREY FSND 0078 GREY CSND CGVL SILT 0092 SAND GRVL SILT 0097
VAUGHAN TOWN (VAUGHAN CON 05(016))	17 616492 4853660 W	1951/09 1622	02	FR 0075	035 / 065 005 / 2:0	DO	78 5	6906656 () LOAM 0001 GREY CLAY 0072 GREY MSND 0078 CSND 0083
VAUGHAN TOWN (VAUGHAN CON 05(017))	17 615983 4854222 W	1964/08 2801	05					6906658 () LOAM 0001 CLAY 0010 FSND CLAY 0035 FSND GRVL 0037 GREY CLAY GRVL 0056 CLAY SILT GRVL 0132 CLAY GRVL 0139 CLAY 0226 CLAY GRVL 0245 CLAY 0266 SHLE CLAY 0276 CLAY SHLE GRVL 0293 CLAY SHLE 0300 SHLE CLAY 0304
VAUGHAN TOWN (VAUGHAN CON 05(017))	17 616924 4854447 L	2001/06 1663				NU		6925899 (227422) A

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VAUGHAN TOWN (VAUGHAN CON 05(017))	17 616924 4854447 L	2001/06 1663				NU		6925898 (227421) A
VAUGHAN TOWN (VAUGHAN CON 05(017))	17 616924 4854446 L	2000/11 1663	06			NU		6925676 (220142) A
VAUGHAN TOWN (VAUGHAN CON 05(017))	17 616927 4854447 L	1999/12 1663				NU		6925261 (206297) A
VAUGHAN TOWN (VAUGHAN CON 05(017))	17 617614 4854846 W	1995/05 1663	06	FR 0266	050 / 051 015 / 1:0	DO	267 3	6923517 (159736) BRWN CLAY GRVL 0007 BLUE CLAY 0082 BLUE CLAY SAND SILT 0096 BLUE CLAY 0229 GREY SILT SAND 0244 GREY SILT CLAY 0266 GREY MSND GRVL 0272 BLUE CLAY GRVL 0287 BLUE CLAY 0300
VAUGHAN TOWN (VAUGHAN CON 05(017))	17 616088 4854146 W	1994/11 1663	06	FR 0094	026 / 100 007 / 1:30	DO	99 6	6923108 (159722) BRWN CLAY SAND 0016 BLUE CLAY 0062 BLUE CLAY GRVL SAND 0094 GREY FSND 0105 GREY FSND SILT 0109 BLUE CLAY GRVL 0118
VAUGHAN TOWN (VAUGHAN CON 05(017))	17 616065 4854363 W	1977/09 2214	30 24	UK 0020	020 / 030 006 / 0:30	DO		6914229 () BRWN CLAY PCKD 0020 BRWN SAND 0030 BLUE CLAY 0038
VAUGHAN TOWN (VAUGHAN CON 05(018))	17 615915 4854683 W	1977/10 1663	05	FR 0100	047 / 080 020 / 1:0	DO	106 3	6914396 () BLCK LOAM 0002 YLLW CLAY 0018 YLLW CLAY SAND 0023 BLUE CLAY GRVL 0068 GREY MSND 0078 BLUE CLAY GRVL 0082 GREY SAND CLAY 0094 GREY MSND 0105 GREY CSND 0113 BLUE CLAY 0116
VAUGHAN TOWN (VAUGHAN CON 05(018))	17 615912 4854545 W	1957/06 1622	04	FR 0100	040 / 060 003 / 24:0	DO	96 4	6906660 () LOAM 0001 MSND 0020 BLUE CLAY 0070 MSND 0090 GRVL MSND 0100
VAUGHAN TOWN (VAUGHAN CON 05(018))	17 615895 4854733 W	1977/11 1663	05	FR 0050	043 / 075 020 / 1:0	ST DO	74 3	6914407 () BLCK LOAM 0001 YLLW CLAY GRVL 0014 BLUE CLAY 0043 GREY MSND 0054 GREY CSND GRVL 0078 BLUE CLAY 0082
VAUGHAN TOWN (VAUGHAN CON 05(018))	17 615978 4855401 W	1989/06 3108	06	FR 0096 FR 0075	044 / 010 / 3:0	PS	96 9	6920415 (49050) LOAM 0002 BRWN CLAY STNS 0034 BLUE CLAY 0061 BLUE SILT 0074 BLUE SAND SILT CLAY 0084 BLUE CLAY SAND 0096 BLUE SAND 0106

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VAUGHAN TOWN (VAUGHAN CON 05(018))	17 615968 4854444 W	1990/04 1663	62	FR 0107	042 / 108 020 / 1:45	DO	108 3	6921482 (79162) BRWN LOAM 0001 BRWN CLAY GRVL SAND 0026 GRVL 0028 BLUE CLAY GRVL HARD 0052 BLUE CLAY SAND SOFT 0081 GREY SAND CLAY FSND 0097 GREY SAND FSND 0107 GREY SAND GRVL MGV L 0112 GREY SAND FSND 0119 BLUE CLAY HARD 0120
VAUGHAN TOWN (VAUGHAN CON 05(018))	17 615932 4854438 W	1960/05 4823	04	FR 0086	052 / 072 003 / 24:0	DO	86 4	6906659 () LOAM 0002 RED MSND 0030 BLUE CLAY 0080 SILT 0086 GRVL MSND 0090
VAUGHAN TOWN (VAUGHAN CON 05(018))	17 615978 4854301 W	2000/08 3108				NU		6925576 (210821) A
VAUGHAN TOWN (VAUGHAN CON 05(018))	17 616015 4854473 W	1976/10 1663	05	FR 0090	047 / 085 008 / 1:0	DO	89 3	6913822 () LOAM 0001 YLLW CLAY GRVL SNDY 0019 BLUE CLAY 0046 GREY MSND 0048 BLUE CLAY 0065 GREY FSND 0077 SAND CLAY 0090 GREY MSND 0095 GREY FSND 0107 GREY CSND 0109 CLAY GRVL 0122 GREY MSND 0135 FSND 0145 BLUE CLAY 0150
VAUGHAN TOWN (VAUGHAN CON 05(018))	17 616762 4854794 W	1973/11 2104	06	FR 0070	032 / 055 030 / 2:0	CO	76 4	6911739 () GREY FILL 0009 GREY CLAY 0070 GREY FSND 0080 GREY MSND 0085
VAUGHAN TOWN (VAUGHAN CON 05(018))	17 616856 4854855 L	1999/10 1663				NU		6925133 (213407) A BRWN CLAY SNDY 0008 YLLW UNKN 0018 BRWN CLAY SAND 0047 YLLW UNKN 0076
VAUGHAN TOWN (VAUGHAN CON 05(018))	17 616856 4854855 L	1999/10 1663				NU		6925134 (213406) A BRWN CLAY 0006 YLLW UNKN 0067
VAUGHAN TOWN (VAUGHAN CON 05(018))	17 617435 4854873 W	1968/04 1622						6908700 () A LOAM 0002 YLLW CLAY 0023 BLUE CLAY 0184 CLAY MSND 0187 BLUE CLAY 0400
VAUGHAN TOWN (VAUGHAN CON 05(019))	17 615999 4855023 W	1959/06 1622	04	FR 0064	038 / 068 003 / 8:0	DO	64 4	6906661 () PRDG 0035 CSND 0040 GRVL 0045 BLUE CLAY 0064 CSND 0068
VAUGHAN TOWN (VAUGHAN CON 05(019))	17 615880 4854931 W	1999/05 1663				NU		6925053 (206253) A UNKN 0005 YLLW UNKN 0018 BRWN SAND CLAY 0080 YLLW UNKN 0090
VAUGHAN TOWN (VAUGHAN CON 05(019))	17 615806 4855109 W	1965/05 1622	07	FR 0086	045 / 075 010 / 9:0	DO	86 4	6906662 () BRWN CLAY 0060 FSND 0082 CSND 0090

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VAUGHAN TOWN (VAUGHAN CON 05(019))	17 615914 4855199 W	1965/06 1622	04	FR 0068	022 / 068 006 / 8:0	DO	68 5	6906663 () BRWN CLAY 0022 BLUE CLAY MSND 0068 MSND 0073
VAUGHAN TOWN (VAUGHAN CON 05(019))	17 616995 4855043 W	1978/08 1663	05	FR 0058	037 / 060 018 / 3:0	DO	66 3	6914995 () BLCK LOAM 0001 YLLW CLAY GRVL 0017 BLUE CLAY GRVL 0058 GREY SAND FSND 0070 BLUE CLAY GRVL 0077
VAUGHAN TOWN (VAUGHAN CON 05(020))	17 616550 4855740 W	1949/06 1622	02	FR 0050	020 / 023 003 / 3:0	DO	76 5	6906664 () LOAM 0002 CLAY 0020 GRVL 0030 MSND 0060 GRVL 0081
VAUGHAN TOWN (VAUGHAN CON 05(020))	17 616477 4855653 W	1952/11 1622	04	FR 0050	030 / 065 010 / 3:0	ST DO	87 5	6906665 () LOAM 0001 YLLW CLAY 0010 CLAY FSND 0040 MSND CSND 0075 CSND 0095
VAUGHAN TOWN (VAUGHAN CON 05(020))	17 617274 4855747 W	1953/06 1622	04	FR 0285	065 / 085 010 / 3:0	DO ST	280 5	6906666 () LOAM CLAY 0002 BLUE CLAY 0040 YLLW MSND 0078 BRWN CLAY STNS 0235 GREY CLAY STNS 0277 BLUE CSND 0285
VAUGHAN TOWN (VAUGHAN CON 05(020))	17 616703 4855665 L	2003/05 5459	06	FR 0071	035 / 050 006 / 1:0	DO	71 6	6927164 (256700) BRWN CLAY SOFT 0025 GREY CLAY DNSE 0045 GREY SAND SILT SAND 0060 GREY CLAY STNS DNSE 0070 GREY MSND SILT LOOS 0071
VAUGHAN TOWN (VAUGHAN CON 05(020))	17 616579 4855801 W	1966/09 4610	05 04	FR 0081	026 / 080 002 / 6:0	DO	81 4	6906672 () BRWN CLAY 0020 BLUE CLAY 0081 BLUE FSND 0086
VAUGHAN TOWN (VAUGHAN CON 05(020))	17 616599 4855806 W	1966/09 4610	05					6906671 () A BRWN CLAY 0021 BLUE CLAY 0106 CSND 0107 BLUE CLAY 0165
VAUGHAN TOWN (VAUGHAN CON 05(020))	17 615853 4855661 W	1999/05 1663				NU		6925054 (206252) A UNKN 0006 YLLW UNKN 0016 BRWN CLAY SNDY 0050 YLLW UNKN 0064
VAUGHAN TOWN (VAUGHAN CON 05(020))	17 617518 4856116 W	1962/10 1622	04	FR 0134	060 / 138 007 / 32:0	DO	134 4	6906669 () BLUE CLAY 0030 FSND 0060 BLUE CLAY 0134 FSND 0138
VAUGHAN TOWN (VAUGHAN CON 05(020))	17 615850 4855650 W	1985/05 1663	06	FR 0065	039 / 070 035 / 1:0	DO	70 3	6917980 () BRWN LOAM 0001 BRWN CLAY GRVL 0016 BLUE CLAY 0029 BLUE CLAY SAND GRVL 0063 GREY MSND 0070 GREY CSND 0076 BLUE CLAY 0080

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VAUGHAN TOWN (VAUGHAN CON 05(020))	17 617526 4856124 W	1962/08 1622	04					6906668 () A LOAM 0001 MSND GRVL 0020 BLUE CLAY MSND 0040 QSNL 0064 BLUE CLAY 0085 BLUE CLAY QSNL 0100
VAUGHAN TOWN (VAUGHAN CON 05(020))	17 616591 4855824 W	1955/12 1622	04	FR 0076	032 / 062 012 / 8:0	DO	72 4	6906667 () PRDG 0040 CSND 0076
VAUGHAN TOWN (VAUGHAN CON 05(020))	17 615825 4855650 W	1999/05 1663				NU		6925057 (206251) A UNKN 0006
VAUGHAN TOWN (VAUGHAN CON 05(020))	17 617456 4856105 W	1962/07 1622	04					6906670 () A PRDG 0022 BLUE CLAY 0047 HPAN 0049 BLUE CLAY 0062 FSND CLAY 0097 BLUE CLAY 0200
VAUGHAN TOWN (VAUGHAN CON 05(021))	17 617315 4856083 W	1973/06 1663	05	FR 0046	018 / 043 005 / 2:0	ST DO	47 4	6911688 () BRWN LOAM 0001 YLLW CLAY 0016 BLUE CLAY SAND 0035 GREY SAND 0051 BLUE CLAY SAND 0092 BLUE CLAY 0160
VAUGHAN TOWN (VAUGHAN CON 05(021))	17 615695 4855863 W	1972/11 1663	05	FR 0070	048 / 076 004 / 3:30	DO	76 4	6911252 () BRWN CLAY 0015 BLUE CLAY 0066 GREY GRVL SAND 0080
VAUGHAN TOWN (VAUGHAN CON 05(021))	17 615715 4855848 W	1972/02 1663	05	FR 0090 FR 0081	048 / 075 007 / 4:0	DO	83 4	6911045 () BLCK LOAM 0002 BRWN SAND 0013 BLUE CLAY 0040 BLUE CLAY GRVL 0042 GREY SILT 0081 GREY SAND GRVL 0090 GREY CLAY SAND 0091
VAUGHAN TOWN (VAUGHAN CON 05(021))	17 617215 4856217 W	1962/05 4823	06	FR 0162	060 / 072 009 / 8:0	ST DO	162 4	6906678 () LOAM 0001 YLLW CLAY 0027 SILT CLAY 0058 GRVL HPAN 0128 BLUE CLAY 0160 GRVL 0166
VAUGHAN TOWN (VAUGHAN CON 05(021))	17 616191 4855821 W	2011/11 1663	02 48		056 / / :0	NU		7176498 (Z131443) A
VAUGHAN TOWN (VAUGHAN CON 05(021))	17 616629 4856075 L	2003/11 3108				NU		6927447 (262191) A
VAUGHAN TOWN (VAUGHAN CON 05(021))	17 616175 4855763 W	1978/07 1663	05	FR 0065	042 / 080 025 / 1:0	DO	82 3	6914983 () BRWN LOAM 0001 YLLW CLAY GRVL 0016 BLUE CLAY 0038 BRWN SAND FGRD 0055 BRWN MSND 0078 BRWN CSND CGVL 0088 BRWN GRVL CLAY 0090

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VAUGHAN TOWN (VAUGHAN CON 05(021))	17 617251 4856085 W	1959/07 3108	04	FR 0158	060 / 120 005 / 10:0	DO	159 6	6906677 () LOAM 0002 BLUE CLAY 0070 BLUE FSND 0080 BLUE CLAY 0158 CSND 0165
VAUGHAN TOWN (VAUGHAN CON 05(021))	17 616166 4855771 W	1959/05 1622	04	FR 0065	030 / 070 004 / 7:0	DO	66 4	6906676 () LOAM 0001 YLLW CLAY 0022 BRWN MSND 0026 BLUE CLAY 0065 FSND 0070
VAUGHAN TOWN (VAUGHAN CON 05(021))	17 616097 4855835 W	1955/10 1622	04	FR 0080	055 / 064 010 / 9:0	DO	76 4	6906675 () LOAM 0001 BRWN CLAY 0018 GRVL 0038 BLUE CLAY 0074 CSND 0080
VAUGHAN TOWN (VAUGHAN CON 05(021))	17 615635 4856017 W	1955/07 4823	06	FR 0060	047 / 051 040 / 24:0	DO ST	62 5	6906674 () LOAM 0001 YLLW CLAY MSND 0016 CLAY BLDR 0038 RED QSDN 0060 CSND GRVL 0067
VAUGHAN TOWN (VAUGHAN CON 05(021))	17 616426 4855902 W	1955/07 4823	06	FR 0008 FR 0065	038 / 068 007 / 36:0	NU		6906673 () A LOAM 0002 YLLW MSND CLAY 0008 RED MSND 0009 YLLW CLAY MSND 0015 BLUE CLAY MSND 0028 YLLW CLAY MSND 0048 GRVL 0053 CLAY BLDR 0065 CSND 0068 FSND 0072 CLAY 0073
VAUGHAN TOWN (VAUGHAN CON 05(022))	17 617315 4856523 W	1972/10 1663	05	FR 0047	025 / 052 003 / 8:0	ST DO	47 4	6911250 () BRWN LOAM 0001 BRWN SAND CLAY 0012 BLUE CLAY 0022 BLUE CLAY SAND 0043 BLUE CLAY GRVL 0047 GREY SAND 0053 BLUE CLAY GRVL 0055
VAUGHAN TOWN (VAUGHAN CON 05(022))	17 617295 4856603 W	1969/09 2519	30	FR 0035	025 / 041 / :0	DO ST		6909401 () BRWN CLAY MSND 0016 GREY CLAY 0035 GREY FSND 0041
VAUGHAN TOWN (VAUGHAN CON 05(022))	17 615589 4856258 W	1955/05 1307	24	FR 0015	010 / 002 / :0	DO		6906679 () BRWN LOAM 0015 BRWN CSND 0017 GREY CLAY 0035
VAUGHAN TOWN (VAUGHAN CON 05(022))	17 617435 4856593 W	1969/06 3414	06	UK 0042 UK 0088		NU		6909352 () A LOAM 0001 GREY CLAY 0035 CLAY SILT 0042 CLAY 0085 CLAY GRVL 0088 GREY CLAY 0280 SHLE 0291
VAUGHAN TOWN (VAUGHAN CON 05(022))	17 617425 4856653 W	1969/08 4231	30	FR 0035	015 / 045 005 / 1:0	ST		6909543 () BRWN CLAY 0010 BLUE CLAY 0035 GRVL MSND 0037 BLUE CLAY 0048

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VAUGHAN TOWN (VAUGHA CON 05(023)	17 615616 4856702 W	1962/07 1622	04	FR 0065	050 / 069 006 / 4:0	DO ST	65 4	6906681 () BRWN CLAY 0012 BRWN FSND 0069
VAUGHAN TOWN (VAUGHA CON 05(023)	17 617317 4857020 W	1997/12 3108				NU		6924151 (184895) A
VAUGHAN TOWN (VAUGHA CON 05(023)	17 615608 4856678 W	1999/10 1663	06	FR 0055	055 / 058 015 / 1:0	DO	70 5	6925256 (213452) BRWN LOAM 0001 BRWN FILL 0004 BRWN SAND CLAY 0016 BLUE CLAY SAND 0021 BRWN CLAY SAND 0034 BRWN MSND 0076 BLUE CLAY SAND 0093
VAUGHAN TOWN (VAUGHA CON 05(023)	17 615616 4856702 W	1961/03 1622	04					6906680 () A BRWN CLAY 0055 CSND 0090 BLUE CLAY 0120 FSND 0155 BLUE CLAY 0210
VAUGHAN TOWN (VAUGHA CON 05(024)	17 617215 4857623 W	1980/01 3108	06	UK 0060	039 / 061 024 / 2:0	DO	62 6	6915489 () BRWN CLAY 0033 BRWN SAND 0055 BLUE SAND 0068
VAUGHAN TOWN (VAUGHA CON 05(024)	17 617251 4857695 W	1966/03 3108	04					6906685 () A LOAM 0001 YLLW CLAY 0018 CLAY GRVL 0041 MSND 0052 BLUE CLAY 0058 CSND 0075 BLUE CLAY 0085 BLUE CLAY MSND 0126 MSND 0130 BLUE CLAY STNS 0150
VAUGHAN TOWN (VAUGHA CON 05(024)	17 617079 4857312 W	1997/01 3108				NU		6924154 (184898) A
VAUGHAN TOWN (VAUGHA CON 05(024)	17 617075 4857493 W	1973/11 3108	07	UK 0076	021 / 073 009 / 2:0	DO	79 3	6911704 () BLCK LOAM 0003 BRWN CLAY 0011 BLUE CLAY STNS 0069 BLUE FSND 0076 BRWN SAND 0083
VAUGHAN TOWN (VAUGHA CON 05(024)	17 615515 4857073 W	1972/05 3108	07	UK 0136	040 / 126 005 / 5:0	DO	137 3	6911141 () LOAM 0002 BRWN CLAY 0050 BRWN SAND 0078 BLUE CLAY 0098 BLUE CLAY GRVL 0106 BRWN FSND 0109 CSND CLAY 0136 FSND 0140
VAUGHAN TOWN (VAUGHA CON 05(024)	17 616410 4857307 L	1997/12 3108				NU		6924150 (184899) A
VAUGHAN TOWN (VAUGHA CON 05(024)	17 616410 4857307 L	1997/12 3108				NU		6924149 (184897) A
VAUGHAN TOWN (VAUGHA CON 05(024)	17 615479 4856846 W	2004/03 1663				NU		6927768 (Z07481) A

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VAUGHAN TOWN (VAUGHAN CON 05(024))	17 615484 4856867 W	2004/03 1663				NU		6927767 (Z07480) A
VAUGHAN TOWN (VAUGHAN CON 05(024))	17 617288 4857721 W	1966/03 3108	04	FR 0078	047 / 067 005 / 2:0	DO	79 3	6906684 (LOAM 0001 YLLW CLAY MSND 0028 MSND 0052 BLUE CLAY 0065 FSND 0076 CLAY GRVL 0078 CSND 0082
VAUGHAN TOWN (VAUGHAN CON 05(024))	17 617208 4857484 W	1959/09 3108	04	FR 0074	035 / 045 004 / 4:0	DO ST	80 4	6906683 (FSND 0028 BLUE CLAY 0035 FSND 0074 CSND 0084
VAUGHAN TOWN (VAUGHAN CON 05(024))	17 615437 4857086 W	1956/05 1622	04	FR 0080	062 / 072 004 / 3:0	DO	76 4	6906682 (LOAM 0001 CLAY 0025 FSND 0075 CSND 0080
VAUGHAN TOWN (VAUGHAN CON 05(025))	17 615633 4857551 W	2004/10 1663	05		065 / / :0	NU	92 3	6928235 (Z19425) A YLLW 0095 BRWN SAND 0085 YLLW 0065 BRWN SAND 0060 YLLW 0020 0050 BRWN CLAY SAND 0000 0000
VAUGHAN TOWN (VAUGHAN CON 05(025))	17 617190 4858037 W	2004/07 3108				NU		6928358 (Z05903) A
VAUGHAN TOWN (VAUGHAN CON 05(025))	17 615471 4857408 W	1990/05 1663	06	FR 0092	054 / 111 036 / 2:15	DO	111 6	6921496 (79174) LOAM 0001 BRWN CLAY GRVL 0014 BLUE CLAY GRVL 0018 BRWN CLAY GRVL 0020 BLUE CLAY 0025 BRWN CLAY 0031 BRWN SAND 0054 BRWN CLAY SAND 0058 BLUE CLAY GRVL 0092 GREY SAND MSND 0117 BLUE CLAY GRVL 0119
VAUGHAN TOWN (VAUGHAN CON 05(025))	17 615497 4857416 W	2004/10 1663	06		051 / / :0	NU	118	6928234 (Z19427) A
VAUGHAN TOWN (VAUGHAN CON 05(025))	17 615740 4857426 W	2004/10 1663	06		107 / / :0	NU	325	6928233 (Z19426) A YLLW 0318 BRWN SAND 0110 YLLW 0100 BRWN SAND 0020 YLLW 0050 0000 BRWN CLAY SAND 0000
VAUGHAN TOWN (VAUGHAN CON 05(025))	17 616553 4857986 W	1998/08 1663				NU		6924574 (190452) A
VAUGHAN TOWN (VAUGHAN CON 05(025))	17 617119 4857896 W	1992/08 3108	05 06	FR 0046	046 / 052 045 / 5:0	PS	53 15	6922017 (095327) FILL 0003 BRWN CLAY 0024 BLUE CLAY 0042 BRWN SAND 0051 BLUE SAND HARD 0070 BRWN SAND CLAY FSND 0082

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VAUGHAN TOWN (VAUGHAN CON 05(025))	17 615645 4857458 W	1990/05 1663	06 05	FR 0307	107 / 320 100 / 2:0	DO	320 5	6921497 (79173) BRWN LOAM 0001 BRWN CLAY GRVL 0036 BRWN SAND 0048 BLUE CLAY SAND 0114 GRVL 0116 BLUE CLAY SAND GRVL 0240 BLUE CLAY SAND FSND 0278 GREY SAND FSND 0307 GREY SAND MGVL 0328 CLAY GRVL 0330 BLUE CLAY HARD 0335
VAUGHAN TOWN (VAUGHAN CON 05(025))	17 617155 4857933 W	1969/06 3108	07	FR 0060	049 / 054 007 / 2:0	DO	62 7	6909267 () LOAM 0001 YLLW CLAY MSND 0050 YLLW MSND 0069
VAUGHAN TOWN (VAUGHAN CON 05(025))	17 617124 4857884 W	1989/06 3108	06	FR 0051	051 / 024 / 2:0	PS	53 6	6920414 (49054) LOAM 0002 BRWN CLAY 0015 BRWN SAND 0018 BRWN CLAY GRVL 0043 BRWN SAND 0053 BLUE SAND 0060
VAUGHAN TOWN (VAUGHAN CON 05(025))	17 616555 4857983 W	1976/10 3108	04	UK 0070	053 / 055 010 / 3:0	DO	74 3	6913690 () PRDG 0026 BRWN SAND 0077
VAUGHAN TOWN (VAUGHAN CON 05(025))	17 615655 4857563 W	1970/11 1622	05	FR 0086	065 / 075 010 / 3:0	ST DO	91 4	6910248 () LOAM 0002 BLUE CLAY 0023 YLLW CLAY 0064 CLAY MSND 0086 FSND 0095
VAUGHAN TOWN (VAUGHAN CON 05(025))	17 615466 4857868 W	1986/06 1663	06	FR 0090	034 / 091 012 / 1:0	DO	94 3	6918527 () BRWN CLAY 0019 BLUE CLAY 0038 BRWN FSND 0062 BLUE CLAY SAND GRVL 0089 GREY CSND GRVL 0098 GREY FSND 0112 BLUE CLAY 0124
VAUGHAN TOWN (VAUGHAN CON 05(026))	17 617205 4858260 W	1958/04 2318	04	FR 0060	018 / 024 005 / 18:0	PS	75 3	6906686 () LOAM 0001 BLUE CLAY 0060 FSND 0078
VAUGHAN TOWN (VAUGHAN CON 05(026))	17 615315 4858073 W	1971/09 1663	05	FR 0082	048 / 078 003 / 5:0	DO	83 4	6910568 () BRWN LOAM 0003 BRWN CLAY 0017 BLUE CLAY 0052 BLUE CLAY SAND 0082 GREY MSND CSND 0087 BLUE CLAY 0090
VAUGHAN TOWN (VAUGHAN CON 05(026))	17 616835 4858175 W	1975/06 1663	05	FR 0050	049 / 075 010 / 1:0	ST DO	78 3	6913167 () BLCK LOAM 0001 YLLW CLAY 0034 BRWN SAND CLAY 0054 GREY FSND 0063 GREY MSND 0082

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VAUGHAN TOWN (VAUGHAN CON 05(026)	17 615465 4858073 W	1976/11 1663	05	FR 0080	051 / 090 030 / 1:0	DO	90 3	6913824 () YLLW CLAY 0015 BLUE CLAY 0025 BRWN MSND 0056 BRWN CSND 0066 BLUE CLAY 0078 GREY MSND 0088 GREY CSND CGVL 0093 GREY SAND 0097
VAUGHAN TOWN (VAUGHAN CON 05(026)	17 615515 4858043 W	1976/11 1663	05	FR 0080	051 / 090 015 / 1:0	DO	89 3	6913825 () YLLW CLAY 0023 BRWN MSND FSND 0044 BRWN CSND 0056 BLUE CLAY GRVL 0063 BRWN SAND CLAY 0070 GREY SAND GRVL 0083 GREY MSND 0094 GREY FSND 0110 BLUE CLAY 0112
VAUGHAN TOWN (VAUGHAN CON 05(026)	17 615865 4857973 W	1976/04 1663	05	FR 0125	063 / 135 012 / 1:20	DO	135 3	6913852 () BLCK LOAM 0001 YLLW CLAY 0015 BLUE CLAY GRVL 0029 BRWN CLAY SAND 0055 BRWN FSND 0066 GREY FSND MSND 0095 GREY SAND SILT 0112 BLUE CLAY GRVL 0129 GREY FSND MSND 0142 BLUE CLAY 0157
VAUGHAN TOWN (VAUGHAN CON 05(026)	17 615515 4857873 W	1976/04 1663	05	FR 0090	054 / 110 020 / 1:0	DO	111 3	6913855 () BLCK LOAM 0001 YLLW CLAY 0023 BLUE CLAY 0026 YLLW CLAY 0032 BRWN FSND MSND 0061 BLUE CLAY 0082 GREY FSND MSND 0091 GREY MSND CSND 0114 BLUE CLAY 0125
VAUGHAN TOWN (VAUGHAN CON 05(026)	17 615369 4858088 W	1990/08 1663	06	FR 0084	045 / 085 015 / 2:0	DO	114 5	6921475 (79197) BRWN CLAY FILL STNS 0010 BRWN CLAY GRVL 0018 BLUE CLAY 0054 BRWN SAND FSND 0069 BRWN SAND MSND 0077 BLUE CLAY SAND 0084 GREY SAND FSND 0117 GREY SAND SILT FSND 0135 BLUE CLAY 0138
VAUGHAN TOWN (VAUGHAN CON 05(026)	17 615367 4857985 W	1990/08 1663	06	FR 0087	044 / 090 015 / 2:0	DO	102 3	6921476 (79198) BRWN CLAY FILL 0007 BRWN LOAM 0008 BRWN CLAY 0017 BLUE CLAY 0059 BRWN SAND MSND 0074 BLUE CLAY 0087 GREY SAND FSND 0101 GREY SAND GRVL MGVL 0107 GREY SAND FSND 0132 GREY SAND SILT CLAY 0138

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VAUGHAN TOWN (VAUGHAN CON 05(026))	17 615915 4858223 W	1976/04 1663	05	FR 0080	063 / 100 012 / 1:20	DO	101 3	6913856 (BLCK LOAM 0001 YLLW CLAY 0026 BRWN CLAY FSND 0035 YLLW CLAY SAND GRVL 0054 BRWN FSND MSND 0061 BLUE CLAY GRVL 0071 GREY FSND MSND 0084 GREY MSND CSND 0104 GREY SAND SILT 0118 BLUE CLAY 0122
VAUGHAN TOWN (VAUGHAN CON 05(026))	17 615565 4857823 W	1976/04 1663	05	FR 0090	060 / 100 012 / 1:45	DO	104 3	6913857 (BLCK LOAM 0001 YLLW CLAY SNDY 0008 YLLW CLAY 0031 BRWN FSND 0042 YLLW CLAY SAND GRVL 0059 BRWN FSND MSND 0084 GREY MSND FSND 0108 BLUE CLAY 0142
VAUGHAN TOWN (VAUGHAN CON 05(026))	17 615695 4858023 W	1976/04 1663	05	FR 0085	053 / 090 025 / 1:0	DO	92 3	6913859 (BRWN LOAM 0001 YLLW CLAY 0018 BLUE CLAY 0023 YLLW CLAY 0031 BRWN FSND 0063 BLUE CLAY GRVL 0076 GREY GRVL SAND CGRD 0095 GREY SAND CLAY 0101
VAUGHAN TOWN (VAUGHAN CON 05(026))	17 615665 4858123 W	1976/04 1663	05	FR 0080	059 / 090 020 / 1:0	DO	92 3	6913860 (BRWN LOAM 0001 YLLW CLAY 0029 BRWN FSND 0063 BLUE CLAY 0076 GREY CSND CGVL 0096 GREY FSND MSND 0111 BLUE CLAY 0112
VAUGHAN TOWN (VAUGHAN CON 05(026))	17 615615 4857983 W	1976/04 1663	05	FR 0080	056 / 090 025 / 1:0	DO	90 3	6913861 (YLLW CLAY 0026 BRWN FSND CLAY GRVL 0053 BRWN CSND GRVL 0063 BLUE CLAY HARD 0074 GREY MSND DRTY 0083 GREY CSND GRVL 0093 GREY MSND FSND SILT 0097
VAUGHAN TOWN (VAUGHAN CON 05(026))	17 615915 4857973 W	1976/05 1663	05	FR 0130	063 / 135 015 / 1:20	DO	137 3	6913865 (BLCK LOAM 0001 YLLW CLAY 0014 BLUE CLAY GRVL 0028 BRWN MSND 0038 BRWN CLAY SAND GRVL 0051 BRWN MSND 0071 GREY FSND MSND 0094 GREY FSND SILT 0114 BLUE CLAY 0129 GREY MSND 0142
VAUGHAN TOWN (VAUGHAN CON 05(026))	17 615895 4857943 W	1976/06 1663	05	FR 0080	064 / 090 010 / 1:30	DO	92 3	6913866 (BLCK LOAM 0001 BRWN CLAY 0031 BRWN SAND 0039 BRWN CLAY 0046 BRWN FSND GRVL CLAY 0064 GREY MSND 0095 GREY FSND SILT 0112

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VAUGHAN TOWN (VAUGHA CON 05(026)	17 615855 4858043 W	1976/06 1663	05	FR 0100	068 / 103 010 / 1:0	DO	104 3	6913867 () BRWN LOAM 0001 YLLW CLAY GRVL 0023 BRWN FSND 0051 BRWN MSND CSND 0056 BRWN CLAY GRVL 0065 BRWN FSND 0078 GREY MSND 0098 GREY CSND 0108 GREY FSND SILT 0112
VAUGHAN TOWN (VAUGHA CON 05(026)	17 615515 4858073 W	1976/04 1663	05	FR 0090	058 / 090 020 / 2:20	DO	91 3	6913868 () YLLW CLAY 0026 BRWN FSND CLAY 0048 BRWN CSND GRVL 0065 BLUE CLAY GRVL 0074 GREY MSND GRVL CLAY 0091 GREY CSND GRVL 0097
VAUGHAN TOWN (VAUGHA CON 05(026)	17 615915 4858123 W	1976/06 1663	05	FR 0100	059 / 115 020 / 1:0	DO	114 3	6913871 () BRWN LOAM 0001 YLLW CLAY GRVL 0010 BRWN GRVL CLAY 0013 BLUE CLAY 0027 BRWN CLAY SNDY 0038 BRWN FSND CLAY 0049 BRWN FSND 0064 BLUE CLAY SNDY 0083 GREY MSND FSND 0097 GREY CSND 0117 GREY SAND SILT FGRD 0127
VAUGHAN TOWN (VAUGHA CON 05(026)	17 616015 4858173 W	1976/06 1663	05	FR 0100	062 / 115 025 / 1:0	DO	117 3	6913872 () BLCK LOAM 0001 YLLW CLAY GRVL 0019 BLUE CLAY 0028 BRWN FSND CLAY 0041 BRWN CLAY GRVL 0048 BRWN FSND 0057 BLUE CLAY 0068 GREY FSND SILT 0079 GREY FSND MSND 0105 GREY MSND CSND 0123 BLUE CLAY 0125
VAUGHAN TOWN (VAUGHA CON 05(026)	17 615775 4858083 W	1976/06 1663	05	FR 0110	059 / 110 012 / 1:30	DO	116 4	6913873 () BLCK LOAM 0001 YLLW CLAY 0012 BLUE CLAY 0036 BRWN FSND CLAY 0044 BRWN MSND FSND 0063 BLUE CLAY GRVL 0074 GREY SAND DRTY 0087 GREY SAND SILT FGRD 0096 BLUE CLAY 0104 GREY MSND 0123 GREY SAND SILT FGRD 0127
VAUGHAN TOWN (VAUGHA CON 05(026)	17 615715 4858123 W	1976/06 1663	05	FR 0080	059 / 086 025 / 1:20	DO	87 3	6913874 () BLCK LOAM 0001 YLLW CLAY 0019 BLUE CLAY 0026 YLLW CLAY 0031 BRWN FSND 0055 BLUE CLAY 0066 GREY FSND CLAY 0071 GREY CSND CGVL 0091 BLUE CLAY 0097
VAUGHAN TOWN (VAUGHA CON 05(026)	17 615565 4857873 W	1976/08 1663	05	FR 0090	060 / 095 012 / 2:0	DO	98 3	6913880 () BLCK LOAM 0001 YLLW CLAY 0025 BRWN FSND 0042 BRWN FSND MSND CLAY 0055 BLUE CLAY 0064 GREY FSND 0077 GREY FSND MSND 0102 BLUE CLAY 0105

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VAUGHAN TOWN (VAUGHAN CON 05(026))	17 615915 4858083 W	1977/06 1663	05	FR 0100	068 / 130 030 / 1:0	DO	134 3	6914384 () YLLW CLAY FILL 0009 BLCK LOAM 0010 YLLW CLAY 0021 BLUE CLAY GRVL 0041 BRWN CLAY 0046 BRWN FSND 0056 BLUE CLAY SILT 0065 BRWN FSND SILT 0078 BLUE CLAY GRVL 0090 GREY FSND SILT 0109 GREY MSND CSND 0142
VAUGHAN TOWN (VAUGHAN CON 05(026))	17 615835 4857923 W	1977/06 1663	05	FR 0080	065 / 090 012 / 2:0	DO	91 3	6914385 () BLCK LOAM 0001 YLLW CLAY GRVL 0018 BLUE CLAY 0021 BRWN FSND CLAY 0040 BRWN MSND 0054 BRWN CLAY GRVL 0061 BRWN MSND 0076 GREY MSND CSND 0094 GREY FSND SILT 0110 BLUE CLAY 0125
VAUGHAN TOWN (VAUGHAN CON 05(026))	17 615815 4857983 W	1977/07 1663	05	FR 0080	064 / 090 012 / 1:15	DO	91 3	6914387 () YLLW CLAY GRVL 0031 BRWN CLAY FSND 0039 BRWN MSND 0050 BRWN GRVL SAND 0052 BRWN CLAY SNDY 0065 BRWN MSND 0077 GREY MSND 0095 GREY FSND 0108 BLUE CLAY 0112
VAUGHAN TOWN (VAUGHAN CON 05(026))	17 615825 4858063 W	1977/10 1663	05	FR 0090	063 / 090 012 / 1:15	DO	91 3	6914400 () YLLW CLAY 0033 BRWN FSND 0041 BRWN CLAY SAND GRVL 0063 BRWN MSND 0083 GREY MSND 0095 GREY SAND GRVL CLAY 0098 GREY FSND SILT 0106 BLUE CLAY 0112
VAUGHAN TOWN (VAUGHAN CON 05(026))	17 615735 4858083 W	1978/09 1663	05	FR	064 / 085 012 / 0:30	DO	88 3	6914994 () BLCK LOAM 0001 BRWN CLAY 0028 BRWN SAND CLAY 0047 YLLW CLAY GRVL 0064 BRWN MSND 0083 GREY MSND 0092 GREY FSND 0097
VAUGHAN TOWN (VAUGHAN CON 05(026))	17 615615 4857873 W	1980/07 1663	05	FR 0090	061 / 102 018 / 0:45	DO	105 3	6915784 () BLCK LOAM 0001 YLLW CLAY GRVL 0033 BRWN FSND 0055 BLUE CLAY 0066 GREY FSND 0078 GREY MSND 0109 GREY FSND 0112
VAUGHAN TOWN (VAUGHAN CON 05(026))	17 615565 4858023 W	1980/07 1663	05	FR 0086	053 / 085 018 / 1:0	DO	89 3	6915785 () YLLW CLAY 0023 BRWN FSND 0046 BRWN MSND 0057 BLUE CLAY 0067 GREY SAND GRVL 0084 BLUE CLAY 0086 GREY MSND 0101 BLUE CLAY 0105

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VAUGHAN TOWN (VAUGHA CON 05(026)	17 615915 4858173 W	1981/04 1663	05	FR 0098	066 / 104 016 / 1:10	DO	107 3	6916191 (BRWN CLAY GRVL 0019 BLUE CLAY 0022 YLLW CLAY 0034 BRWN FSND SAND GRVL 0060 BLUE CLAY 0071 GREY FSND SILT CLAY 0080 BRWN FSND MGRD 0098 GREY MSND 0112
VAUGHAN TOWN (VAUGHA CON 05(026)	17 615515 4857923 W	1981/04 1663	05	FR 0095	048 / 095 020 / 1:15	DO	101 3	6916202 (BRWN CLAY 0003 YLLW CLAY GRVL 0018 BLUE CLAY 0024 BRWN CLAY 0034 BRWN FSND MGRD 0070 BLUE CLAY GRVL 0081 GREY MSND 0093 GREY CSND GRVL 0108 GREY FSND MGRD 0112
VAUGHAN TOWN (VAUGHA CON 05(026)	17 615615 4857923 W	1981/04 1663	05	FR 0085	059 / 090 014 / 1:30	DO	93 3	6916203 (YLLW CLAY 0015 BLUE CLAY 0028 YLLW CLAY 0030 BRWN FSND 0053 BRWN CSND GRVL 0061 BLUE CLAY SAND GRVL 0069 GREY FSND 0082 GREY MSND 0097 GREY FSND 0103 BLUE CLAY 0112
VAUGHAN TOWN (VAUGHA CON 05(026)	17 615815 4858073 W	1981/03 1663	05	FR 0090	063 / 090 010 / 1:10	DO	92 3	6916205 (BLCK LOAM 0001 YLLW CLAY GRVL 0024 BRWN FSND 0035 BLUE CLAY GRVL 0039 BRWN SAND CLAY 0051 BRWN CSND 0065 GREY FSND MGRD 0097 GREY FSND SILT 0112
VAUGHAN TOWN (VAUGHA CON 05(026)	17 617179 4858211 W	2012/07 7215						7188934 (C18470) A118029 P
VAUGHAN TOWN (VAUGHA CON 05(026)	17 615428 4857999 W	1997/03 1663	06	FR 0097	039 / 053 022 / 1:0	DO	104 5	6924264 (179113) BRWN LOAM 0001 BRWN CLAY 0013 BLUE CLAY 0036 BRWN FSND 0047 BRWN CLAY SAND 0052 BRWN MSND 0074 BLUE CLAY 0081 BRWN FSND 0090 BRWN MSND 0097 GREY MSND 0109 GREY FSND 0109
VAUGHAN TOWN (VAUGHA CON 05(026)	17 615775 4858083 W	1984/06 1663	06	FR 0075	065 / 094 012 / 1:30	DO	98 3	6918308 (BRWN CLAY GRVL 0039 BRWN FSND MGRD 0045 BRWN CLAY SAND GRVL 0063 BRWN MSND 0074 GREY MSND 0102 GREY FSND SILT 0108 BLUE CLAY SILT 0112

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VAUGHAN TOWN (VAUGHA CON 05(026)	17 615384 4857882 W	1986/06 1663	06	FR 0106	034 / 109 010 / 1:30	DO	112 3	6918533 (BRWN CLAY GRVL FILL 0011 BLUE CLAY 0046 GREY FSND 0061 BRWN SAND 0074 BLUE CLAY GRVL 0081 BRWN SAND 0086 BLUE CLAY GRVL 0106 GREY MSND 0116 BLUE CLAY GRVL 0125
VAUGHAN TOWN (VAUGHA CON 05(026)	17 616802 4858168 W	1987/07 3108	06	FR 0049	049 / 075 020 / 1:0	DO	76 4	6918901 (13828) BRWN CLAY 0022 BLUE CLAY GVLV STNS 0040 BRWN SAND 0080
VAUGHAN TOWN (VAUGHA CON 05(027)	17 616018 4858342 W	1960/07 3108	04	FR 0051	010 / 018 040 / 2:0	PS	51 21	6906687 (LOAM 0002 BRWN MSND 0011 BLUE CLAY 0048 CSND 0051 MSND 0072
VAUGHAN TOWN (VAUGHA CON 05(027)	17 617086 4858793 W	1986/12 1663	06 05	FR 0081	008 / 082 035 / 1:30	DO	86 3	6918501 (07641) BLCK LOAM 0001 BRWN CLAY GRVL 0019 BLUE CLAY 0021 GREY CLAY SAND 0067 GREY FSND 0080 BLUE CLAY 0081 GREY MSND 0090 GREY FSND 0140
VAUGHAN TOWN (VAUGHA CON 05(027)	17 616038 4858358 W	1964/12 4305	08	FR 0056	010 / 032 072 / 48:0	PS	56 14	6906689 (BRWN LOAM 0002 YLLW CLAY 0006 GREY CLAY 0049 GREY SILT 0056 FSND 0070 GREY CLAY 0071
VAUGHAN TOWN (VAUGHA CON 05(027)	17 616022 4858377 W	1964/12 4305	08	FR 0056	010 / 031 072 / 72:0	PS	56 14	6906688 (BRWN LOAM 0002 YLLW CLAY 0006 GREY CLAY 0049 GREY SILT 0056 FSND 0070 GREY CLAY 0071
VAUGHAN TOWN (VAUGHA CON 05(027)	17 616174 4858553 L	2001/06 1663	06	UK 0080	061 / 063 016 / 3:0	DO	87 3	6926173 (227466) BRWN CLAY 0009 BLUE CLAY 0024 BRWN FSND 0056 BLUE CLAY 0063 BRWN SAND 0069 BLUE CLAY 0073 GREY MSND 0083 GREY GRVL SAND 0095
VAUGHAN TOWN (VAUGHA CON 05(027)	17 616174 4858553 L	2001/06 1663	06	UK 0090	052 / 076 011 / 3:0	DO	94 3	6926172 (227465) BRWN CLAY 0010 BLUE CLAY 0027 BRWN FSND 0056 BLUE CLAY 0065 GREY FSND 0069 BLUE CLAY 0076 GREY MSND 0105
VAUGHAN TOWN (VAUGHA CON 05(027)	17 616174 4858553 L	2001/06 1663	05 06	FR 0095	057 / 066 016 / 3:0	DO	97 3	6926170 (227463) BRWN CLAY 0010 BLUE CLAY SAND 0035 BRWN SAND 0065 BLUE CLAY 0072 GREY MSND 0098 GREY GRVL CSND 0110

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VAUGHAN TOWN (VAUGHAN CON 05(027))	17 616174 4858553 L	2001/06 1663	06	FR 0083	052 / 053 018 / 3:0	DO	90 3	6926168 (227459) BRWN CLAY 0010 BRWN FSND 0017 BLUE CLAY 0037 BRWN FSND MSND 0064 BLUE CLAY 0078 BRWN MSND 0083 GREY CSND 0105
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 616174 4858553 L	2001/05 1663	06	FR 0080	058 / 069 015 / 3:0	DO	99 3	6926166 (227454) BRWN CLAY 0013 BLUE CLAY 0033 BRWN FSND 0057 BLUE CLAY 0065 BRWN SAND 0074 BLUE CLAY GRVL 0080 GREY MSND 0102 GREY MSND 0110
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 616174 4858553 L	2001/06 1663	06	FR 0090	055 / 072 015 / 3:0	DO	100 4	6926165 (227461) BRWN CLAY 0011 BRWN FSND 0016 BLUE CLAY 0036 BRWN SAND 0063 BLUE CLAY 0078 BRWN MSND 0090 GREY SAND 0110
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 616174 4858553 L	2001/05 1663	06	FR 0079	057 / 070 015 / 3:0	DO	102 3	6926162 (227455) BRWN CLAY 0013 BLUE CLAY 0035 BRWN SAND 0058 BLUE CLAY 0065 BRWN FSND 0072 BLUE CLAY GRVL 0079 GREY MSND 0115
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 617055 4858743 W	1968/08 1622	05	FR 0080	008 / 058 010 / 3:0	DO	102 4	6908701 () LOAM 0002 YLLW CLAY 0018 BLUE CLAY 0065 CLAY MSND 0080 MSND 0106
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 616035 4858383 W	1976/11 2104	10 08	FR 0024	010 / 036 115 / 8:0	CO	18 20	6913605 () BLCK LOAM SOFT 0002 BRWN SAND GRVL CLAY 0014 GREY CLAY STNS DNSE 0024 GREY FSND LOOS WBRG 0034 GREY MSND FSND LOOS 0049 GREY GRVL SAND HARD 0063
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615238 4858429 W	1988/04 1663	06	FR 0068	056 / 080 020 / 2:0	DO	85 3	6920234 () BRWN LOAM 0001 BRWN CLAY 0024 BLUE CLAY 0032 BRWN SAND FSND 0057 BLUE CLAY 0068 GREY SAND FSND 0081 GREY SAND GRVL CSND 0089 BLUE CLAY GRVL SAND 0095
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615712 4858453 W	1991/06 1663	06	FR 0071	053 / 073 012 / 4:0	DO	103 3	6921810 (81241) BRWN LOAM 0002 BRWN CLAY 0014 BLUE CLAY GRVL 0028 BRWN CLAY 0032 BRWN SAND FSND 0049 BRWN SAND CSND 0056 GREY SAND FSND 0064 BLUE CLAY SAND 0071 GREY SAND CSND MSND 0086 GREY SAND FSND 0097 GREY SAND CSND 0106 BLUE CLAY GRVL SAND 0118

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VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615198 4858618 W	1991/11 1663	06	FR 0067	060 / 069 014 / 2:0	DO	83 3	6921812 (110094) BRWN LOAM 0001 BRWN CLAY 0018 BLUE CLAY GRVL 0032 BRWN CLAY GRVL 0048 BRWN SAND MSND 0055 BRWN CLAY GRVL 0057 BLUE CLAY 0067 GREY SAND GRVL CSND 0076 GREY SAND FSND MSND 0091 GREY SAND CLAY FSND 0098
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615657 4858505 W	1992/09 1663	06	FR 0074	050 / 076 015 / 3:0	DO	95 3	6922120 (110163) BRWN CLAY 0013 BLUE CLAY 0044 BRWN CLAY SAND 0052 BRWN SAND FSND 0061 GREY SAND FSND 0067 BLUE CLAY GRVL SAND 0074 GREY SAND MSND 0098 GREY SAND FSND 0114 GREY SAND CLAY 0118
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615601 4858488 W	1992/09 1663	06	FR 0081	042 / 090 012 / 2:0	DO	92 3	6922121 (110162) BRWN CLAY 0008 BLUE CLAY 0047 GREY SAND FSND 0064 BLCK CLAY 0081 GREY SAND FSND MSND 0096 BLUE CLAY 0118
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615539 4858522 W	1992/09 1663	06	FR 0076	042 / 082 015 / 2:30	DO	85 3	6922122 (110161) BRWN CLAY 0009 BLUE CLAY 0021 BRWN SAND 0057 BLUE CLAY 0076 GREY SAND MSND FSND 0081 GREY SAND GRVL 0090 BLUE CLAY GRVL SAND 0098
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615673 4858556 W	1992/09 1663	06	FR 0071	053 / 087 018 / 1:30	DO	88 3	6922123 (110160) BRWN CLAY 0006 BRWN SAND 0008 BRWN CLAY GRVL 0011 BLUE CLAY 0042 GREY SAND FSND 0046 BRWN SAND MSND 0060 BLUE CLAY SAND 0071 GREY SAND FSND 0079 GREY SAND MSND 0094
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615594 4858532 W	1992/09 1663	06	FR 0077	050 / 087 018 / 2:0	DO	88 3	6922124 (110159) BRWN CLAY 0004 BLUE CLAY 0007 BRWN SAND MSND 0008 BLUE CLAY 0041 GREY SAND SILT CLAY 0047 BRWN SAND FSND 0056 GREY SAND FSND 0068 BLUE CLAY SAND 0077 GREY SAND MSND CSND 0121 GREY SAND GRVL 0123
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615609 4858397 W	1992/10 1663	06	FR 0092	051 / 053 025 / 3:0	DO	92 3	6922125 (110125) BRWN CLAY 0009 BLUE CLAY 0039 BRWN SAND 0063 BLUE CLAY GRVL SAND 0076 GREY SAND CLAY 0092 GREY SAND MSND CSND 0098 BLUE CLAY SAND 0118

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VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615529 4858452 W	1992/09 1663	06	FR 0062	032 / 075 018 / 3:0	DO	100 3	6922126 (110124) BRWN CLAY 0014 BLUE CLAY 0021 BRWN CLAY 0028 BRWN SAND 0054 BLUE CLAY 0062 GREY SAND MSND FSND 0075 GREY SAND MSND CSND 0087 GREY SAND MSND FSND 0092 GREY SAND MSND CSND 0106 BLUE CLAY GRVL 0118
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615562 4858368 W	1992/09 1663	06	FR 0087	059 / 078 016 / 3:0	DO	92 3	6922127 (110123) BRWN CLAY 0026 BRWN SAND FSND 0062 BLUE CLAY 0067 GREY SAND GRVL 0072 GREY SAND FSND 0081 BLUE CLAY SAND LYRD 0087 GREY SAND GRVL CGVL 0098
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615697 4858535 W	1992/10 1663	06	FR 0077	053 / 078 020 / 3:0	DO	89 3	6922130 (110128) BRWN CLAY 0009 BLUE CLAY 0046 BRWN SAND FSND 0064 BLUE CLAY GRVL SAND 0077 GREY SAND MSND FSND 0084 GREY SAND MSND CSND 0092 GREY SAND FSND MSND 0098
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615581 4858260 W	1992/10 1663	06	FR 0075	053 / 057 018 / 3:0	DO	89 3	6922131 (110127) BRWN CLAY 0026 BRWN SAND 0053 BRWN SAND GRVL CSND 0057 BLUE CLAY GRVL SAND 0075 GREY SAND GRVL 0092 GREY SAND FSND 0098
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615669 4858327 W	1992/10 1663	06	FR 0087	059 / 077 018 / 3:0	DO	100 3	6922132 (110126) BRWN CLAY 0018 BLUE CLAY 0037 BRWN CLAY SAND 0043 BRWN SAND FSND 0062 BLUE CLAY GRVL SAND 0087 GREY SAND FSND 0104 GREY SAND SILT 0115 BLUE CLAY GRVL SAND 0130
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615854 4858334 W	1993/03 1663	06	FR 0067	064 / 090 012 / 2:0	DO	93 3	6922302 (110151) BRWN CLAY 0019 BLUE CLAY 0021 BRWN CLAY STNS 0024 BRWN CLAY SAND 0028 BRWN SAND CLAY 0061 BLUE CLAY GRVL 0067 GREY FSND 0086 GREY MSND 0112 GREY FSND SILT 0118
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615692 4858514 W	1993/06 1663	06	FR 0074	057 / 090 020 / 1:30	DO	92 3	6922305 (110152) BRWN CLAY 0009 BLUE CLAY 0039 BRWN CLAY 0045 BRWN SAND CLAY 0062 BLUE CLAY 0074 GREY MSND CSND 0098

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VAUGHAN TOWN (VAUGHA CON 05(027))	17 615542 4858476 W	1993/06 1663	06	FR 0085	040 / 093 007 / 2:30	DO	94 3	6922306 (110153) BRWN CLAY 0007 BLUE CLAY 0046 GREY SAND FSND 0071 BLUE CLAY 0081 GREY SAND FSND 0088 GREY SAND GRVL 0095 GREY SAND MSND 0098
VAUGHAN TOWN (VAUGHA CON 05(027))	17 615543 4858421 W	1993/06 1663	06	FR 0102	044 / 108 050 / 1:0	DO	109 3	6922307 (110154) BRWN CLAY 0009 BLUE CLAY 0037 BRWN CLAY 0043 BRWN SAND 0061 BLUE CLAY GRVL 0069 GREY FSND MSND 0089 GREY FSND 0100 BLUE CLAY 0102 GREY SAND GRVL 0112
VAUGHAN TOWN (VAUGHA CON 05(027))	17 615672 4858284 W	1993/03 1663	06	FR 0091	057 / 101 010 / 2:0	DO	104 3	6922308 (110142) BRWN CLAY GRVL 0016 BLUE CLAY GRVL SAND 0039 BRWN SAND CLAY 0051 BRWN SAND FSND 0066 BLUE CLAY GRVL SAND 0091 GREY SAND FSND 0102 GREY SAND MSND 0107 GREY SAND FSND 0116 BLUE CLAY 0118
VAUGHAN TOWN (VAUGHA CON 05(027))	17 615668 4858327 W	2004/10 7178	06	FR 0079	060 / 063 012 / 1:30	DO		6928299 (Z14043) A013974 BRWN CLAY 0011 BLUE CLAY HARD 0047 BRWN CLAY 0056 GREY CLAY SILT 0070 SAND CSND 0081 GREY CLAY 0097
VAUGHAN TOWN (VAUGHA CON 05(027))	17 615582 4858304 W	1993/03 1663	06	FR 0091	055 / 094 030 / 1:30	DO	97 3	6922309 (110147) BRWN CLAY GRVL SAND 0017 BLUE CLAY 0026 BRWN CLAY GRVL 0041 BRWN SAND FSND 0052 BRWN SAND MSND 0060 BLUE CLAY SAND 0084 GREY SAND CLAY 0091 GREY SAND GRVL 0103
VAUGHAN TOWN (VAUGHA CON 05(027))	17 615629 4858274 W	1993/03 1663	06	FR 0088	056 / 097 015 / 2:0	DO	100 3	6922310 (110148) BRWN CLAY 0012 BLUE CLAY 0026 BRWN CLAY 0034 BRWN FSND 0053 GREY CSND 0067 BLUE CLAY SAND 0088 GREY FSND MSND 0104 GREY FSND 0109 BLUE CLAY 0113
VAUGHAN TOWN (VAUGHA CON 05(027))	17 615816 4858310 W	1993/03 1663	18	FR 0096	059 / 100 015 / 1:30	DO	101 3	6922311 (110149) BRWN CLAY 0022 BLUE CLAY 0028 BRWN CLAY SAND 0041 BRWN CLAY GRVL 0059 BLUE CLAY GRVL 0074 GREY SAND MSND FSND 0096 GREY SAND MSND 0104 GREY SAND MSND FSND 0109 BLUE CLAY 0113

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VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615807 4858356 W	1993/03 1663	06	FR 0091	064 / 090 009 / 2:30	DO	91 3	6922312 (110150) BRWN CLAY 0016 BLUE CLAY GRVL 0021 BRWN CLAY SAND 0026 BLUE CLAY GRVL 0029 BRWN CLAY SAND 0034 BRWN SAND 0054 BRWN CLAY GRVL 0071 BLUE CLAY GRVL SAND 0079 GREY FSND 0082 GREY FSND MSND 0096 GREY FSND 0112 BLUE CLAY 0115
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615777 4858303 W	1993/02 1663	06	FR 0098	056 / 110 009 / 2:0	DO	110 3	6922313 (110139) BRWN CLAY FILL 0002 BLCK PEAT 0008 BLUE CLAY GRVL SAND 0056 GREY SAND CLAY 0068 GREY SAND FSND 0082 BLUE CLAY GRVL SAND 0098 GREY SAND FSND 0111 GREY SAND MSND FSND 0127 GREY SAND SILT CLAY 0138
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615742 4858298 W	1993/02 1663	06	FR 0087	057 / 113 020 / 2:0	DO	116 3	6922314 (110140) BLCK PEAT SAND 0006 BLUE CLAY 0047 GREY SAND FSND 0061 BLUE CLAY GRVL SAND 0064 GREY SAND SILT CLAY 0087 GREY SAND FSND 0111 GREY SAND MSND 0119 GREY SAND FSND 0123
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615708 4858294 W	1993/03 1663	06	FR 0078	/ 090 008 / 2:30	DO	95 3	6922315 (110141) BRWN CLAY 0036 BRWN SAND 0045 BLUE CLAY SAND 0078 GREY FSND MSND 0098 GREY SAND SILT 0104 BLUE CLAY 0113
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615740 4858344 W	1993/08 1663	06	FR 0096	056 / 071 015 / 4:0	DO	105 3	6922549 (140606) BRWN CLAY FILL 0003 BLCK PEAT 0012 BLUE CLAY 0055 GREY SAND FSND 0069 BLUE CLAY GRVL 0096 GREY SAND FSND 0102 GREY SAND MSND FSND 0109 GREY SAND FSND 0116 BLUE CLAY 0118
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615561 4858517 W	1998/12 1663	06	FR 0086	043 / 093 008 / 1:0	DO	92 3	6924793 (198183) BRWN LOAM 0002 BRWN FILL 0006 BRWN CLAY 0014 BLUE CLAY 0046 GREY FSND 0073 BLUE CLAY 0086 GREY SAND 0095 GREY CLAY SILT 0106 BLUE CLAY 0108
VAUGHAN TOWN (VAUGHAN CON 05(027))	17 615375 4858164 W	1999/11 1663	06	FR 0074	056 / 059 015 / 6:0	DO	102 4	6925262 (213462) BRWN LOAM 0001 BRWN CLAY SAND 0013 BLUE CLAY 0031 BRWN SILT CLAY 0039 BRWN MSND 0072 BRWN CLAY 0074 GREY FSND 0078 GREY MSND 0107 GREY FSND 0113

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VAUGHAN TOWN (VAUGHA CON 05(027)	17 615321 4858365 W	1999/12 1663	06	FR 0076	052 / 055 015 / 6:0	DO	93 4	6925263 (213461) BRWN LOAM 0001 BRWN CLAY 0012 BLUE CLAY 0037 BRWN SAND 0058 BLUE CLAY 0076 GREY MSND 0083 GREY FSND 0097 GREY FSND 0103
VAUGHAN TOWN (VAUGHA CON 05(027)	17 616174 4858552 L	2001/03 6409						6925800 (219874) A
VAUGHAN TOWN (VAUGHA CON 05(027)	17 616174 4858552 L	2001/04 6409						6925867 (233366) A
VAUGHAN TOWN (VAUGHA CON 05(027)	17 616174 4858553 L	2001/05 1663	06	FR 0078	054 / 091 014 / 3:0	DO	102 3	6926160 (227457) BRWN CLAY 0015 BLUE CLAY 0035 BRWN FSND 0058 BLUE CLAY 0064 BRWN FSND 0071 BLUE CLAY 0078 GREY MSND FSND 0120
VAUGHAN TOWN (VAUGHA CON 05(027)	17 616174 4858553 L	2001/05 1663	06	FR 0075	057 / 068 017 / 3:0	DO	102 4	6926161 (227456) BRWN CLAY 0011 BLUE CLAY 0033 BRWN FSND 0056 BLUE CLAY 0062 BRWN FSND 0070 BLUE CLAY GRVL 0075 GREY MSND 0110
VAUGHAN TOWN (VAUGHA CON 05(028)	17 615271 4858609 W	1989/04 3108	06 05	FR 0094	066 / 102 020 / 1:0	DO	102 6	6920393 (49032) BRWN CLAY SAND 0017 BLUE CLAY GRVL 0040 BLUE CLAY 0087 BLUE CLAY SNDY 0094 BRWN SAND 0104 BLUE SAND 0109
VAUGHAN TOWN (VAUGHA CON 05(028)	17 616815 4859123 W	1983/02 3108	06	FR 0070	003 / 084 007 / 2:0	DO	89 3	6916714 () BRWN CLAY 0016 BLUE GRVL CLAY SNDY 0042 BLUE GRVL CLAY STNS 0061 BLUE CLAY SNDY 0065 BLUE SAND 0092
VAUGHAN TOWN (VAUGHA CON 05(028)	17 615326 4858837 W	1975/03 3108	07	UK 0096	070 / 095 008 / 3:0	DO	97 3	6912563 () PRDG 0007 YLLW GRVL CLAY 0018 GREY GRVL CLAY 0044 BRWN CLAY SAND 0054 BRWN SAND 0072 GREY CLAY SAND 0082 GREY SAND 0088 BRWN CLAY SAND 0090 BLUE CLAY SAND 0096 BRWN SAND 0100
VAUGHAN TOWN (VAUGHA CON 05(028)	17 616715 4859048 W	1972/01 3108	04	UK 0067	011 / 067 004 / :0	DO	67 3	6910998 () PRDG 0005 GREY CLAY GRVL SAND 0063 GREY CLAY SAND 0067 BLUE FSND 0070

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VAUGHAN TOWN (VAUGHAN CON 05(028))	17 615975 4859051 W	1966/05 2104	08					6906692 () A FILL 0003 CLAY MSND 0019 CLAY 0036 CLAY STNS 0048 GREY FSND 0051 GREY CLAY MSND STNS 0125 GREY CLAY 0155 CLAY 0263
VAUGHAN TOWN (VAUGHAN CON 05(028))	17 615195 4858741 W	1950/04 4623	04	FR 0075	030 / 060 003 / 4:0	DO		6906690 () LOAM 0003 BRWN CLAY 0020 BLUE CLAY 0060 FSND 0075 CSND GRVL 0079 GRVL 0080
VAUGHAN TOWN (VAUGHAN CON 05(029))	17 616099 4859229 W	1993/03 1508						69222770 (144921)
VAUGHAN TOWN (VAUGHAN CON 05(029))	17 615155 4858933 W	1978/07 3108	06	UK 0095	060 / 105 020 / 1:0	DO	107 3	6914641 () YLLW CLAY 0014 BLUE GRVL CLAY 0033 BLUE GRVL CLAY HARD 0053 BLUE SAND 0059 BRWN CLAY SNDY 0063 BRWN SAND 0092 BLUE FSND 0105 BLUE FSND MSND 0110
VAUGHAN TOWN (VAUGHAN CON 06(004))	17 615316 4856999 W	2003/08 1663	06	FR 0325	098 / 109 018 / 1:0	DO	316 5	6927543 (Z01520) A001436 BRWN CLAY FILL 0004 BRWN CLAY GRVL STNS 0017 GREY CLAY STNS 0025 BRWN CLAY STNS 0040 BRWN MSND FSND 0078 GREY CLAY SILT 0278 GREY SILT FSND 0316 GREY MSND FSND 0325 BLUE CLAY SILT 0330
VAUGHAN TOWN (VAUGHAN CON 06(015))	17 615290 4853375 W	1997/10 1663						6924255 (186418) A
VAUGHAN TOWN (VAUGHAN CON 06(015))	17 615440 4853315 W	1997/10 1663						6924250 (186419) A
VAUGHAN TOWN (VAUGHAN CON 06(015))	17 615055 4853283 W	1985/04 4919	30 30	UK 0020 UK 0040 UK 0060	005 / 070 / 0:30	DO		6917838 () BRWN LOAM HARD 0001 BRWN CLAY HARD 0020 GREY CLAY SAND LYRD 0071
VAUGHAN TOWN (VAUGHAN CON 06(015))	17 615395 4853383 W	1967/06 1307	30	FR 0038	015 / 002 / :0	DO		6906774 () BRWN LOAM 0012 GREY CLAY 0036 MSND 0038
VAUGHAN TOWN (VAUGHAN CON 06(015))	17 615885 4853470 W	2000/11 1663				NU		6925675 (220143) A BRWN CLAY 0003 GREY FILL 0021

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VAUGHAN TOWN (VAUGHAN CON 06(015))	17 615465 4853373 W	1970/10 1307	30	FR 0030	020 / 048 001 / 1:0	DO		6910078 () BRWN LOAM MSND 0012 GREY CLAY 0030 MSND 0031 GREY CLAY 0050
VAUGHAN TOWN (VAUGHAN CON 06(015))	17 614965 4853273 W	1980/10 1663	05	FR 0190	095 / 195 002 / 1:15	DO		6915800 () BRWN LOAM 0001 YLLW CLAY SILT 0016 BLUE CLAY SILT 0052 BLUE CLAY 0172 GREY SHLE 0197
VAUGHAN TOWN (VAUGHAN CON 06(015))	17 615315 4853363 W	1966/07 1307	30	FR 0042	025 / 001 / :0	DO		6906771 () BRWN LOAM 0012 GREY CLAY 0040 GREY MSND 0042
VAUGHAN TOWN (VAUGHAN CON 06(015))	17 615100 4853243 W	1966/01 4813	05	FR 0200	065 / 194 003 / 7:0	DO		6906773 () BRWN CLAY 0014 BLUE CLAY 0071 GREY CLAY 0184 BLUE SHLE 0205
VAUGHAN TOWN (VAUGHAN CON 06(016))	17 615755 4853623 W	1952/09 1622	04 03	FR 0095	040 / 001 / 2:0	DO	183 5	6906775 () LOAM 0001 CLAY 0080 QSNL 0165 MSND 0188
VAUGHAN TOWN (VAUGHAN CON 06(016))	17 615860 4853740 W	1998/06 1663				NU		6924579 (190434) A
VAUGHAN TOWN (VAUGHAN CON 06(017))	17 614195 4853678 W	1957/05 1622	04	FR 0109	060 / 100 005 / 16:0	DO	105 4	6906776 () PRDG 0020 BLUE CLAY 0040 QSNL 0090 MSND 0097 GRVL MSND 0109
VAUGHAN TOWN (VAUGHAN CON 06(017))	17 615910 4854353 W	1967/08 1622	04	FR 0107	048 / 105 003 / 6:0	DO	111 4	6906777 () LOAM 0001 YLLW CLAY 0032 BLUE CLAY 0080 CLAY MSND 0107 CSND 0115
VAUGHAN TOWN (VAUGHAN CON 06(017))	17 615905 4854315 W	1989/01 1663	06	FR 0065	045 / 079 009 / 2:0	DO	82 3	6921136 (26990) BRWN GRVL FILL 0002 BRWN CLAY GRVL 0014 BLUE CLAY GRVL 0065 GREY SAND CSND 0086 BLUE CLAY GRVL 0093 BLUE CLAY GRVL SAND 0110
VAUGHAN TOWN (VAUGHAN CON 06(018))	17 615895 4854423 W	1948/05 1622	02	FR 0093	095 / 002 / 5:0	DO	103 5	6906780 () CLAY 0010 SILT 0030 MSND 0075 GRVL 0108
VAUGHAN TOWN (VAUGHAN CON 06(018))	17 615660 4854555 W	1999/07 1663				NU		6925055 (206285) A BRWN CLAY 0000 YLLW UNKN 0008 BRWN CLAY 0056
VAUGHAN TOWN (VAUGHAN CON 06(018))	17 615715 4854643 W	1958/10 1308	30	FR 0010	010 / / :0	DO		6906779 () BRWN MSND 0010 QSNL 0019

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VAUGHAN TOWN (VAUGHA CON 06(018)	17 615705 4854643 W	1969/12 1622	05 05	FR 0260	100 / 130 006 / 3:0	DO		6909406 () BRWN CLAY MSND 0018 BLUE CLAY 0090 CLAY SILT 0103 BLUE CLAY 0253 GREY SHLE 0266
VAUGHAN TOWN (VAUGHA CON 06(018)	17 615905 4854448 W	1962/10 2527	02	FR 0072	055 / 002 / 3:0	DO	72 5	6906778 () BRWN CLAY 0020 GREY CLAY 0064 GREY FSND 0072 CSND 0077
VAUGHAN TOWN (VAUGHA CON 06(018)	17 615775 4858485 W	1998/06 1663				NU		6924581 (190436) A
VAUGHAN TOWN (VAUGHA CON 06(019)	17 615560 4854700 W	1999/08 1663				NU		6925056 (206289) A BRWN CLAY SNDY 0008 YLLW UNKN 0009 BRWN CLAY SNDY 0027 YLLW UNKN 0028
VAUGHAN TOWN (VAUGHA CON 06(019)	17 614788 4854715 L	1998/11 1663				NU		6924792 (198181) A BRWN CLAY 0000 YLLW SAND 0005 BRWN SAND CLAY 0024 YLLW SAND 0062
VAUGHAN TOWN (VAUGHA CON 06(019)	17 614785 4854715 L	2003/10 3108				NU		6927448 (262189) A
VAUGHAN TOWN (VAUGHA CON 06(019)	17 615595 4855023 W	1973/09 1663	05	FR 0073	046 / 070 005 / 2:30	ST DO	74 4	6911888 () BLCK LOAM 0001 YLLW CLAY 0016 BLUE CLAY 0030 BLUE CLAY SILT 0055 GREY FSND SILT 0060 BLUE CLAY GRVL 0073 GREY SAND 0078
VAUGHAN TOWN (VAUGHA CON 06(020)	17 615100 4855160 W	1986/08 1663	06	FR 0072	048 / 074 020 / 1:0	DO	77 3	6918524 (07278) BLCK LOAM 0001 BRWN CLAY GRVL 0013 BLUE CLAY 0058 GREY FSND 0072 GREY MSND 0081 GREY FSND SILT CLAY 0089 BLUE CLAY 0095
VAUGHAN TOWN (VAUGHA CON 06(020)	17 615435 4855475 W	1989/09 1663	06	FR 0064	047 / 072 040 / 2:0	IR CO	74 5	6921137 (26967) BRWN FILL 0003 BRWN CLAY 0015 BLUE CLAY 0037 BLUE CLAY SAND 0043 GREY SAND FSND 0061 GREY SAND GRVL CSND 0080 BLUE CLAY GRVL 0085
VAUGHAN TOWN (VAUGHA CON 06(020)	17 614935 4855403 W	1949/06 1622	02	FR 0065	015 / 020 004 / 4:0	DO	75 5	6906782 () LOAM 0002 CLAY 0040 CSND 0070 GRVL 0080
VAUGHAN TOWN (VAUGHA CON 06(020)	17 615140 4855233 W	1948/12 1622	02	FR 0080	082 / 002 / 5:0	DO	92 5	6906783 () CLAY 0060 FSND 0085 CSND 0097

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VAUGHAN TOWN (VAUGHAN CON 06(020))	17 615455 4855463 W	1964/07 4305	06	FR 0072	047 / 051 025 / 12:0	PS	72 10	6906784 () YLLW CLAY BLDR 0012 GREY CLAY 0035 GREY CLAY FSND 0045 GREY CLAY GRVL 0048 GREY CLAY FSND 0072 MSND CLAY 0077 GRVL CLAY 0078 MSND 0083
VAUGHAN TOWN (VAUGHAN CON 06(020))	17 614716 4855294 W	2004/05 1663				NU		6927835 (Z13073) A
VAUGHAN TOWN (VAUGHAN CON 06(020))	17 615115 4855183 W	1970/07 1622	05 05	FR 0252	098 / 185 004 / 4:0	DO		6910243 () LOAM 0002 YLLW CLAY 0023 BLUE CLAY 0126 GRVL 0127 BLUE CLAY 0252 BLUE SHLE 0269
VAUGHAN TOWN (VAUGHAN CON 06(020))	17 614733 4855304 W	1974/09 1663	05	FR 0060	039 / 068 008 / 1:30	ST DO	67 3	6912546 () BRWN LOAM 0001 YLLW CLAY 0014 BLUE CLAY 0026 BLUE CLAY GRVL 0056 GREY SAND CLAY 0060 GREY GRVL SAND 0070 BLUE CLAY GRVL 0075
VAUGHAN TOWN (VAUGHAN CON 06(020))	17 615681 4855603 W	1974/09 1663	05	FR 0085	039 / 090 001 / 2:0	DO	88 3	6912551 () BRWN LOAM 0001 YLLW CLAY 0014 BLUE CLAY 0057 BLUE CLAY SAND GRVL 0085 GREY FSND MSND 0092 BLUE CLAY GRVL 0116
VAUGHAN TOWN (VAUGHAN CON 06(020))	17 615461 4855494 W	2010/06 1663	06		047 / / :0	NU	76 6	7166450 (Z122994) A
VAUGHAN TOWN (VAUGHAN CON 06(020))	17 614155 4854695 W	1999/02 3108	06 02			NU	155 5	6924843 (196137) LOAM 0001 BRWN CLAY SAND 0018 BLUE CLAY 0020 BRWN SAND 0038 BLUE SAND STNS 0070 GRVL 0072 BLUE CLAY STNS 0120 BLUE CLAY 0148 BLUE CLAY STNS LYRD 0165
VAUGHAN TOWN (VAUGHAN CON 06(020))	17 614185 4854983 W	1969/10 1622	05 05	FR 0224	070 / 130 008 / 5:0	DO		6909671 () LOAM 0001 YLLW CLAY 0019 BLUE CLAY STNS 0064 CLAY MSND 0073 BLUE CLAY 0213 BLUE SHLE 0225
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614637 4855547 L	1985/06 1663	06	FR 0065	039 / 070 018 / 1:0	DO	69 3	6917989 () BRWN CLAY SAND 0006 BRWN CLAY 0026 BRWN CLAY FSND 0033 BRWN GRVL 0044 GREY GRVL SAND 0074 BLUE CLAY GRVL 0080

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VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614167 4855567 W	1986/07 1663	06	FR 0065	036 / 065 005 / 1:30	DO	68 3	6918499 () BLCK LOAM 0002 BRWN CLAY GRVL 0012 BLUE CLAY SILT 0049 GREY SAND CLAY 0066 GREY SAND GRVL 0071 BLUE CLAY 0102 BLUE CLAY GRVL 0125
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614157 4855374 W	1986/09 1663	06	FR 0079	010 / 075 015 / 1:30	DO	82 4	6918514 (07285) BRWN CLAY 0012 BLUE CLAY SAND 0054 GREY FSND CLAY 0059 GREY SAND GRVL 0063 BLUE CLAY GRVL 0079 GREY CSND GRVL 0086
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614163 4855366 W	1986/05 1663	06	FR 0065	008 / 070 004 / 2:0	DO	71 3	6918526 () A BLCK LOAM MUCK 0002 BRWN CLAY 0011 BLUE CLAY 0026 BLUE CLAY GRVL SAND 0059 GREY MSND 0076 GREY GRVL CLAY 0080
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614840 4855440 W	1987/04 1663	06	FR 0088	046 / 095 050 / 1:30	DO	99 3	6919307 (09121) BLCK LOAM 0001 BRWN CLAY SAND 0014 BLUE CLAY 0036 GREY FSND 0053 BLUE CLAY SAND GRVL 0088 GREY FSND 0091 GREY CSND GRVL 0109
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614386 4855537 W	1988/06 1663	06	FR 0086	035 / 085 020 / 1:30	DO	91 3	6920220 () BRWN CLAY 0011 BLUE CLAY 0028 BRWN CLAY 0033 BRWN GRVL SAND 0056 BLUE CLAY GRVL 0086 GREY GRVL SAND CSND 0095
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614194 4855294 W	1988/08 1663	05			NU		6920225 () A BRWN FILL 0001 BRWN CLAY GRVL SAND 0029 BLUE CLAY SAND 0040 BRWN SAND GRVL CLAY 0051 BLUE CLAY GRVL 0064 GREY SAND CLAY LYRD 0072 BLUE CLAY GRVL 0090 GREY SAND CLAY FSND 0095 BLUE CLAY GRVL 0140
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614194 4855294 W	1988/03 1663	06	FR 0074	/ 077 002 / 2:0	DO	80 3	6920226 () BRWN CLAY 0007 BRWN SAND 0025 BRWN CLAY GRVL 0027 BLUE CLAY 0043 GREY SAND FSND 0054 BLUE CLAY GRVL 0062 GREY GRVL CLAY BLDR 0066 BRWN CLAY GRVL 0068 BLUE CLAY GRVL 0074 GREY SAND FSND 0085 BLUE CLAY GRVL SAND 0125

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VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614158 4855323 W	1988/08 1663	06	FR 0080	014 / 082 012 / 2:0	DO	85 4	6920233 () BRWN FILL 0004 BRWN CLAY CLAY 0026 BRWN SAND 0030 BRWN CLAY GRVL 0033 BRWN CSND CLAY 0040 BLUE CLAY GRVL 0050 GREY FSND CLAY 0055 GREY MSND 0080 GREY CSND GRVL 0095
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 615290 4855563 W	1949/11 1622	02	FR 0070	060 / 060 005 / 3:0	DO ST	88 5	6906787 () LOAM 0003 CLAY 0010 CSND 0085 GRVL 0093
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 615415 4855583 W	1959/06 1622	04	FR 0072	042 / 077 004 / 7:0	DO	73 4	6906788 () LOAM 0001 YLLW CLAY 0012 BLUE CLAY 0072 CSND 0077
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 615540 4856013 W	1959/05 1622	04	FR 0070	048 / 068 006 / 7:0	CO	66 4	6906789 () LOAM 0001 YLLW CLAY 0050 CSND 0070
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 615480 4855653 W	1959/07 1622	04	FR 0100	050 / 090 003 / 6:0	IR DO	114 4	6906790 () LOAM 0001 STNS GRVL 0020 BLUE CLAY 0080 MSND 0100 CSND 0118
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614830 4855543 W	1959/08 1622	06	FR 0095	045 / 095 005 / 6:0	IR	87 8	6906791 () LOAM 0001 YLLW CLAY 0035 CLAY MSND 0060 GRVL 0095
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 615060 4855513 W	1961/01 1622	05	FR 0118	076 / 126 005 / 72:0	CO	118 8	6906792 () LOAM 0001 BRWN CLAY 0055 BLUE CLAY MSND 0090 FSND 0126
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614355 4855363 W	1962/07 1622	04	FR 0098	050 / 090 010 / 4:0	DO	98 4	6906793 () YLLW CLAY 0010 BLUE CLAY 0080 CSND 0102
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 615535 4855703 W	1963/08 1622	04	FR 0062	048 / 068 010 / 8:0	IR	62 8	6906796 () LOAM 0001 YLLW CLAY 0013 CLAY MSND 0045 SILT CLAY 0057 GRVL 0070
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614525 4855383 W	1964/08 1622	04	FR 0096	060 / 100 006 / 6:0	DO	96 4	6906797 () BRWN CLAY 0030 BLUE CLAY 0087 CSND 0100
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 615595 4855963 W	1967/12 1622	07	FR 0070	050 / 060 010 / 3:0	DO	76 4	6906798 () FILL CLAY 0004 YLLW CLAY 0020 BLUE CLAY 0070 CSND 0080

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VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614329 4855401 W	1974/05 1663	05	FR 0080	026 / 090 010 / 2:30	DO	88 3	6912209 () BRWN CLAY SAND 0021 GREY CLAY SAND 0030 BLUE CLAY 0050 GREY FSND 0057 BLUE CLAY 0080 GREY GRVL CLAY 0092
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614346 4855329 W	1974/04 1663	05	FR 0078	037 / 090 030 / 2:0	DO	87 4	6912216 () BLCK LOAM 0001 YLLW CLAY 0022 BLUE CLAY 0052 BLUE CLAY SAND 0064 BLUE CLAY GRVL 0077 GREY CSND GRVL CLAY 0092
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 615458 4855663 W	1974/04 1663	05	FR 0080	045 / 035 / 2:0	DO	93 3	6912217 () BLCK LOAM 0001 YLLW CLAY GRVL 0014 BLUE CLAY GRVL 0032 BLUE CLAY 0050 GREY SAND CLAY 0070 GREY SAND GRVL CLAY 0097
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614211 4855288 W	1975/05 1663	05	FR 0095	043 / 100 035 / 1:15	DO	106 3	6913181 () BLCK LOAM 0001 YLLW CLAY SAND 0009 YLLW CLAY GRVL 0015 BLUE CLAY 0043 GREY SAND GRVL CLAY 0065 BLUE CLAY GRVL 0093 GREY CSND GRVL 0112
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614315 4855523 W	1976/06 1663	06	FR 0085	034 / 095 025 / 1:20	DO	96 3	6913875 () YLLW CLAY 0027 BLUE CLAY 0035 BRWN MSND 0043 GREY CSND DRTY 0059 BLUE CLAY GRVL 0081 GREY SAND GRVL 0102 BLUE CLAY 0105
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614155 4855463 W	1977/07 1663	05	FR 0070	024 / 080 050 / 1:20	DO	80 3	6914386 () YLLW CLAY SNDY 0005 YLLW CLAY GRVL 0015 BLUE CLAY 0029 GREY MSND 0042 BLUE CLAY SAND GRVL 0063 GREY CSND GRVL 0084 BLUE CLAY GRVL 0097
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614475 4855623 W	1978/04 1663	05	FR 0061	019 / 070 020 / 1:20	DO	77 3	6914990 () YLLW CLAY GRVL 0014 BLUE CLAY 0021 BLUE CLAY GRVL 0030 GREY SAND GRVL CLAY 0044 BLUE CLAY GRVL 0061 GREY SAND GRVL 0072 GREY CSND GRVL 0082
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614515 4855323 W	1980/06 1663	05	FR 0070	017 / 065 025 / 2:0	DO	71 3	6915797 () BLCK LOAM 0001 YLLW CLAY 0013 BLUE CLAY 0036 GREY SAND GRVL CLAY 0045 BLUE CLAY GRVL 0055 GREY CSND CGVL 0074 BLUE CLAY GRVL 0094 BLUE CLAY 0142

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VAUGHAN TOWN (VAUGHA CON 06(021)	17 615215 4855573 W	1981/09 1663	06	FR 0060	044 / 060 012 / 2:0	DO	64 4	6916198 () BRWN CLAY GRVL 0015 BLUE CLAY 0042 GREY FSND MGRD 0064 GREY CSND MGRD 0068 BLUE CLAY SAND GRVL 0130 GREY FSND CLAY 0138 BLUE CLAY 0157
VAUGHAN TOWN (VAUGHA CON 06(021)	17 614801 4855489 W	2010/08 1663	07		050 / / :0	NU		7151752 (Z116993) A
VAUGHAN TOWN (VAUGHA CON 06(021)	17 614851 4855446 W	2010/08 1663	06		049 / / :0	NU	99 3	7151753 (Z116994) A
VAUGHAN TOWN (VAUGHA CON 06(021)	17 614690 4855430 W	2010/08 7219	06		043 / / :0	NU		7152469 (Z121671) A107201 A
VAUGHAN TOWN (VAUGHA CON 06(021)	17 615136 4855538 W	2012/05 7219				NU		7190501 (Z144163) A127165 A
VAUGHAN TOWN (VAUGHA CON 06(021)	17 615078 4855499 W	2012/05 7219	06			NU		7190502 (Z144162) A127158 A
VAUGHAN TOWN (VAUGHA CON 06(021)	17 615114 4855496 W	2012/05 7219	06		042 / / :0	NU		7190503 (Z144161) A127133 A
VAUGHAN TOWN (VAUGHA CON 06(021)	17 615115 4855520 W	2012/05 7219	36			NU		7190504 (Z144160) A127134 A
VAUGHAN TOWN (VAUGHA CON 06(021)	17 615113 4855500 W	2012/05 7219	04		060 / / :0	NU		7190505 (Z144159) A127168 A
VAUGHAN TOWN (VAUGHA CON 06(021)	17 615179 4855661 W	2012/05 7219	02		082 / / :0	NU		7190506 (Z144157) A127144 A
VAUGHAN TOWN (VAUGHA CON 06(021)	17 615113 4855500 W	2012/05 7219	02		025 / / :0	NU		7190507 (Z144139) A127167 A
VAUGHAN TOWN (VAUGHA CON 06(021)	17 614325 4855625 W	1993/05 1663	06	FR 0046	022 / 082 050 / 1:30	DO	82 5	6922303 (110143) BRWN LOAM 0001 BRWN CLAY 0017 BLUE CLAY GRVL 0046 GREY SAND GRVL 0088
VAUGHAN TOWN (VAUGHA CON 06(021)	17 615460 4855620 W	1996/06 1663	06	FR 0051	041 / 044 020 / 1:0	DO	64 3	6923831 (168491) BRWN LOAM 0001 BRWN CLAY 0016 BLUE CLAY GRVL 0039 GREY SAND SILT 0051 GREY MSND 0054 GREY CSND SILT 0069 GREY SAND SILT 0075 BLUE CLAY 0078

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VAUGHAN TOWN (VAUGHAN CON 06(021))	17 615060 4855466 W	1998/06 1663	06	FR	054 / 061 020 / 1:0	IR	100 3	6924576 (190456) BRWN CLAY 0013 BLUE CLAY 0041 GREY FSND 0074 BLUE CLAY 0085 GREY MSND 0097 GREY CSND 0104 BLUE CLAY 0106
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614634 4855547 L	2000/12 1663	06	FR 0060	042 / 046 020 / 1:0	IR DO	69 3	6925731 (227399) BRWN CLAY FILL 0003 BRWN CLAY 0014 BLUE CLAY 0029 BRWN FSND 0051 BRWN MSND 0062 GREY CSND 0072 BLUE CLAY 0073
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614634 4855547 L	2001/09 1663	06			DO		6926159 (240058) BRWN CLAY FILL 0007 BRWN CLAY GRVL 0016 GREY CLAY FSND 0058 GREY CLAY GRVL 0083 GREY FSND 0091 BLUE CLAY SILT GRVL 0188 GREY SAND CLAY HARD 0213 BLUE CLAY 0233 BLUE SHLE 0240
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614634 4855547 L	2001/10 1663				NU		6926164 (213418) A
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614634 4855547 L	2001/06 1663	06	UK 0092	038 / 086 006 / 1:0	DO	94 8	6926171 (227464) BRWN CLAY FILL 0009 BRWN CLAY SNDY 0019 BLUE CLAY SILT 0063 BLUE CLAY SAND LYRD 0092 GREY MSND FSND 0103 BLUE CLAY 0108
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614634 4855547 L	2003/09 3108	06 05	FR 0235	063 / 162 004 / 16:0	DO	235 13	6927438 (262184) BRWN CLAY HARD 0018 BLUE CLAY GRVL 0061 CLAY SAND 0064 BLUE CLAY SILT DNSE 0217 BLUE SAND STNS 0248
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614229 4855595 W	2004/03 1663	02	FR 0056	034 / 036 016 / 1:0	DO	73 5	6928031 (Z07486) A007357 BRWN CLAY FILL 0004 BRWN CLAY GRVL 0014 BLUE CLAY GRVL 0028 GREY CLAY SILT 0031 BLUE CLAY GRVL SILT 0038 GREY FSND CLAY 0058 GREY CSND GRVL
VAUGHAN TOWN (VAUGHAN CON 06(021))	17 614415 4855323 W	1983/01 1663	06	FR 0090	036 / 090 015 / 1:30	DO	92 3	6917080 () BLCK LOAM 0001 YLLW CLAY 0024 BLUE CLAY 0046 GREY MSND CLAY 0063 BLUE CLAY GRVL 0076 GREY MSND GRVL 0097
VAUGHAN TOWN (VAUGHAN CON 06(022))	17 614560 4855953 L	2002/01 6300				NU		6926325 (230642) A GREY GRVL SAND HARD 0002 BRWN CLAY SAND SOFT 0010 BRWN SAND CLAY HARD 0040 BRWN SAND SOFT 0060 BLUE GRVL SAND HARD 0063

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VAUGHAN TOWN (VAUGHAN CON 06(022))	17 615595 4856068 W	1966/09 1622	04	FR 0068	048 / 055 010 / 7:0	DO	72 4	6906801 () LOAM 0001 BRWN CLAY 0039 BRWN MSND 0055 CSND 0076
VAUGHAN TOWN (VAUGHAN CON 06(022))	17 615390 4856200 W	1997/12 3108				NU		6924178 (184905) A
VAUGHAN TOWN (VAUGHAN CON 06(022))	17 615395 4859213 W	1997/12 3108				NU		6924177 (184904) A
VAUGHAN TOWN (VAUGHAN CON 06(022))	17 614560 4855953 L	2002/01 6300		FR 0181	/ 010 / 8:0	DO	173 6	6926326 (230644) GREY GRVL SAND HARD 0004 BRWN CLAY SAND SOFT 0060 BLUE SAND GRVL HARD 0064 BLUE CLAY SAND HARD 0170 GREY SAND HARD 0174 BLCK SAND 0185 BLUE SAND CLAY DRTY 0190
VAUGHAN TOWN (VAUGHAN CON 06(023))	17 615157 4857083 W	1997/06 1663	06	FR 0252	074 / 094 020 / 1:0	DO	285 3	6924260 (179136) BRWN CLAY 0013 BLUE CLAY 0022 BRWN CLAY SAND GRVL 0069 BLUE CLAY GRVL 0102 GREY CLAY SAND GRVL 0122 BLUE SAND GRVL 0230 GREY SAND SILT 0252 GREY MSND 0297 GREY SAND SILT 0303
VAUGHAN TOWN (VAUGHAN CON 06(023))	17 615491 4856725 W	1975/07 1663	05	FR 0060	056 / 075 003 / 2:30	ST DO	73 3	6913168 () BLCK LOAM 0001 YLLW CLAY 0018 YLLW CLAY SAND 0034 BRWN FSND CLAY 0045 BRWN MSND 0063 BRWN SAND CLAY 0071 GREY MSND CSND 0078 BLUE CLAY 0082
VAUGHAN TOWN (VAUGHAN CON 06(023))	17 614355 4856410 W	1989/03 1663	06	FR 0058	060 / 077 120 / 4:0	DO	80 5	6921139 (26992) BRWN LOAM 0001 BRWN CLAY 0016 BLUE CLAY 0046 BRWN GRVL SAND 0058 GREY GRVL SAND 0086 BLUE CLAY SAND 0095
VAUGHAN TOWN (VAUGHAN CON 06(023))	17 614280 4856415 W	1989/05 1663	06	FR 0100	057 / 109 030 / 1:30	DO	109 3	6921129 (26942) BRWN LOAM 0002 BRWN CLAY GRVL 0012 BLUE CLAY GRVL 0014 BRWN CLAY GRVL 0016 BLUE CLAY GRVL 0045 GRVL CGVL 0112
VAUGHAN TOWN (VAUGHAN CON 06(023))	17 615345 4856685 W	1992/06 1663	06	FR 0280	082 / 153 015 / 1:30	DO	301 5	6922128 (110120) BRWN CLAY 0016 BLUE CLAY 0022 BRWN CLAY 0033 BRWN MSND 0079 BLUE CLAY 0181 BLUE CLAY GRVL SAND 0252 GREY FSND SILT 0276 GREY FSND 0306 GREY SAND SILT CLAY 0315

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VAUGHAN TOWN (VAUGHA CON 06(024)	17 615385 4857138 W	1988/07 3108	06	FR 0268	066 / 160 030 / 1:0	DO	270 7	6919747 (26248) BRWN CLAY SAND 0037 BRWN SAND GRVL 0068 BLUE CLAY GRVL 0086 BLUE CLAY DNSE 0183 BLUE CLAY SOFT 0242 BLUE CLAY SNDY 0254 BLUE SAND 0278
VAUGHAN TOWN (VAUGHA CON 06(024)	17 615135 4857033 W	1988/11 3108	06	FR 0275	077 / 200 075 / 1:0	DO	290 6	6920054 (26202) BRWN CLAY 0009 BLUE CLAY 0032 BRWN SAND GRVL 0067 BLUE CLAY GRVL 0112 BLUE CLAY 0186 BRWN SAND 0191 BLUE CLAY 0271 BLUE CLAY SAND 0275 BLUE SAND SILT 0288 BLUE SAND FSND 0297
VAUGHAN TOWN (VAUGHA CON 06(024)	17 615360 4857093 W	1988/06 1663				NU		6920221 (26482) A BRWN FILL 0001 BRWN LOAM 0002 BRWN CLAY GRVL 0029 BRWN SAND 0045 BRWN CLAY SAND 0052 BRWN SAND 0065 BRWN GRVL 0080 BLUE CLAY GRVL 0124 GREY SAND GRVL CGVL 0141 BLUE CLAY GRVL 0155
VAUGHAN TOWN (VAUGHA CON 06(024)	17 615355 4857128 W	1988/06 1663	06	FR 0119	070 / 022 / 1:0	DO	130 5	6920222 (26463) A BRWN FILL 0001 BRWN LOAM 0002 BRWN CLAY GRVL 0029 BRWN SAND 0045 BRWN CLAY SAND 0052 BRWN SAND 0065 BRWN GRVL 0080 BLUE CLAY GRVL 0124 GREY SAND GRVL CGVL 0141 BLUE CLAY GRVL 0155
VAUGHAN TOWN (VAUGHA CON 06(024)	17 614665 4856733 W	1989/06 1663	06	FR 0150	069 / 170 050 / 1:30	DO	175 3	6921119 (26973) BRWN CLAY GRVL 0012 BLUE CLAY GRVL 0022 BRWN CLAY GRVL 0028 BRWN SAND GRVL 0052 GRVL 0079 BLUE CLAY GRVL HARD 0095 BLUE CLAY GRVL SAND 0105 GREY SAND GRVL MGVL 0212 GREY CLAY SAND GRVL 0215
VAUGHAN TOWN (VAUGHA CON 06(024)	17 615315 4857033 W	1976/10 1663	05	FR 0075	070 / 080 005 / 1:0	DO	78 3	6913821 () PRDG 0005 YLLW CLAY GRVL 0017 BLUE CLAY 0023 YLLW CLAY SNDY 0034 BRWN SAND CLAY 0050 BRWN MSND CSND 0065 BRWN CSND 0081 BLUE CLAY 0086

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VAUGHAN TOWN (VAUGHAN CON 06(024))	17 614805 4856923 W	1978/07 1663	05	FR 0265 FR 0080	078 / 126 016 / 6:30	DO	288 3	6914981 () BRWN LOAM 0001 BRWN CLAY STNS 0012 YLLW CLAY GRVL 0019 BLUE CLAY 0021 YLLW CLAY SAND 0034 BRWN SAND CLAY GRVL 0083 GREY BLDR 0085 BLUE CLAY GRVL SILT 0265 GREY SAND SILT CLAY 0307
VAUGHAN TOWN (VAUGHAN CON 06(024))	17 614515 4856743 W	1978/07 1663	05	FR 0080	065 / 068 018 / 6:30	DO	99 3	6914982 () BRWN LOAM 0001 BRWN CLAY 0006 YLLW CLAY GRVL 0034 BRWN FSND 0054 BRWN MSND 0058 BRWN CSND CGVL 0078 BRWN SAND CLAY 0082 BRWN CSND CGVL 0102 BRWN FSND 0110 BLUE CLAY GRVL 0112
VAUGHAN TOWN (VAUGHAN CON 06(024))	17 615018 4856942 W	2013/04 1663						7205675 (Z170206) A140603 P
VAUGHAN TOWN (VAUGHAN CON 06(024))	17 615015 4856880 W	2009/08 5459	06	FR 0298	080 / 081 005 / 1:0	DO	289 9	7130190 (Z101448) A075276 BRWN FILL HARD 0010 GREY CLAY STNS DNSE 0021 BRWN FSND SILT PCKD 0060 GREY GRVL SILT SAND 0070 GREY CLAY STNS DNSE 0215 GREY CLAY SAND SILT 0263 GREY FSND LOOS 0298
VAUGHAN TOWN (VAUGHAN CON 06(024))	17 615070 4857028 W	1990/01 1663	06	FR 0282	085 / 300 060 / 2:0	DO	303 5	6921486 (79160) BRWN LOAM 0001 BRWN CLAY 0014 BLUE CLAY 0028 BRWN CLAY 0036 BRWN SAND CLAY 0055 BRWN SAND GRVL CSND 0082 BLUE CLAY 0187 BLUE CLAY SAND LYRD 0256 GREY SAND SILT 0282 GREY SAND FSND 0309 GREY CLAY SAND SILT 0318
VAUGHAN TOWN (VAUGHAN CON 06(024))	17 615135 4857023 W	1997/03 1663	06	FR 0277	070 / 022 / 1:0	DO	279 5	6924251 (179115) BRWN CLAY 0014 BLUE CLAY 0018 BRWN CLAY GRVL 0022 BRWN SAND GRVL 0079 BLUE CLAY SAND GRVL 0117 GREY GRVL SAND 0142 BLUE CLAY SILT 0241 GREY SAND SILT 0277 GREY SAND FGRD 0286 GREY SAND SILT 0286
VAUGHAN TOWN (VAUGHAN CON 06(024))	17 615271 4857155 W	1997/10 1663	06	FR 0267	078 / 125 015 / 1:0	DO	294 3	6924259 (186439) BRWN CLAY 0021 BRWN FSND 0047 BRWN MSND GRVL 0061 BLUE CLAY GRVL 0080 BLUE CLAY SILT 0254 BRWN SAND SILT 0267 GREY FSND 0292 GREY MSND 0297 GREY FSND 0303

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VAUGHAN TOWN (VAUGHAN CON 06(024))	17 615292 4857197 W	1998/06 1663	06	FR 0292	092 / 182 012 / 1:0	DO	295 3	6924577 (190455) BRWN CLAY STNS 0002 BRWN CLAY 0021 BRWN SAND GRVL 0076 BLUE CLAY GRVL 0187 BLUE CLAY SILT 0259 GREY SILT SAND 0292 GREY FSND 0301 GREY FSND SILT 0305 BLUE CLAY SILT 0308
VAUGHAN TOWN (VAUGHAN CON 06(024))	17 614943 4856848 W	1998/10 3108	05 06	FR 0272	075 / 150 015 / 1:0	DO	274 12	6924680 (196113) BRWN CLAY 0008 BRWN SAND 0021 BLUE CLAY SOFT 0108 BLUE CLAY HARD 0176 SILT 0194 BLUE CLAY HARD 0272 BLUE SAND 0286
VAUGHAN TOWN (VAUGHAN CON 06(024))	17 614915 4856943 W	1984/04 1663	06	FR 0280	079 / 290 005 / 2:30	DO	294 3	6917558 () YLLW CLAY 0018 BLUE CLAY 0023 BRWN CLAY SAND SILT 0052 BRWN SAND GRVL 0075 BLUE CLAY GRVL 0238 GREY FSND SILT CLAY 0265 GREY FSND 0290 GREY MSND FSND 0303 GREY FSND SILT CLAY 0307
VAUGHAN TOWN (VAUGHAN CON 06(024))	17 614875 4856923 W	1985/12 3108	06	FR 0087	070 / 085 014 / 2:0	DO	89 6	6917811 () YLLW CLAY 0028 YLLW SAND CLAY 0045 BRWN CLAY 0058 GRVL SAND 0079 BLUE CLAY 0087 BLUE MSND 0093 BLUE FSND 0096
VAUGHAN TOWN (VAUGHAN CON 06(024))	17 615075 4857003 W	1986/02 5206	06	FR 0287	074 / 200 030 / 4:0	DO	292 3	6917933 () BRWN CLAY 0047 BLUE CLAY 0110 BLUE CLAY SILT 0112 BLUE CLAY 0269 GREY SAND SILT 0287 SAND CLN 0295
VAUGHAN TOWN (VAUGHAN CON 06(024))	17 614815 4856903 W	1984/05 1663	06	FR 0280	078 / 285 020 / 1:30	DO	292 3	6918303 () BRWN CLAY SILT 0028 BRWN CLAY SAND SILT 0064 BRWN GRVL SAND 0079 BLUE CLAY 0088 BRWN CLAY SAND GRVL 0099 BLUE CLAY HARD 0186 BLUE CLAY SILT 0274 GREY FSND SILT 0288 GREY MSND 0295 GREY FSND 0307
VAUGHAN TOWN (VAUGHAN CON 06(024))	17 615035 4856983 W	1984/06 1663	06	FR 0270	060 / 280 015 / 1:30	DO	287 3	6918306 () BRWN CLAY 0006 BLUE CLAY 0018 BRWN CLAY GRVL 0027 BRWN MSND 0039 BRWN GRVL SAND 0063 BLUE CLAY SILT GRVL 0266 GREY FSND SILT 0280 GREY FSND 0307 GREY FSND SILT 0337

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VAUGHAN TOWN (VAUGHA CON 06(024)	17 615199 4857039 W	1986/12 3108	06 05	FR 0253	074 / 225 010 / 3:0	DO	278 6	6918409 (05329) BRWN CLAY 0010 BRWN SAND CLAY 0069 SAND GRVL 0076 BLUE CLAY 0110 BLUE SILT CLAY 0138 BLUE CLAY 0196 BLUE CLAY GVLV 0253 BLUE FSND 0285
VAUGHAN TOWN (VAUGHA CON 06(024)	17 615154 4857167 W	1987/02 5206	06	FR 0260	074 / 100 120 / 6:0	DO	272 3	6918488 (02484) BRWN CLAY 0017 GRVL CLN BLDR 0035 FSND CLN 0053 BLUE CLAY HARD 0170 BLUE CLAY SLTY 0260 FSND CLN 0275
VAUGHAN TOWN (VAUGHA CON 06(024)	17 615199 4857034 W	1987/01 3108	06 05	FR 0265	078 / 105 010 / 1:30	DO	276 6	6918495 (05330) BRWN CLAY SAND 0048 SAND GRVL 0055 BLUE CLAY 0171 BLUE SILT CLAY 0212 BLUE CLAY 0253 BLUE SAND CLAY 0265 BLUE SAND 0283
VAUGHAN TOWN (VAUGHA CON 06(024)	17 614886 4856887 W	1986/10 1663	06	FR 0255 FR 0090	079 / 279 035 / 1:30	DO	293 5	6918516 (07288) BRWN CLAY GRVL 0032 BRWN MSND CLAY 0053 BRWN CSND 0076 BLUE CLAY 0086 BRWN CSND 0099 BRWN SAND CLAY 0123 BLUE CLAY GRVL SAND 0254 GREY FSND SILT 0289 GREY MSND 0301 GREY FSND SILT 0305
VAUGHAN TOWN (VAUGHA CON 06(024)	17 615213 4857177 W	1986/03 1663	06	FR 0258	056 / 260 020 / 1:0	DO	263 3	6918535 () BRWN CLAY 0018 BRWN SAND GRVL 0036 BLUE CLAY SAND 0050 GREY CLAY 0168 GREY FSND SILT 0258 GREY MSND FSND 0268 GREY FSND SILT 0320
VAUGHAN TOWN (VAUGHA CON 06(025)	17 614830 4857505 W	1988/06 3108	06	FR 0082	040 / 080 / 1:0	DO	87 6	6919694 (26262) BRWN CLAY 0019 BLUE CLAY 0040 BRWN SAND GRVL 0058 BLUE CLAY GRVL 0082 SAND GRVL 0085 SAND 0094
VAUGHAN TOWN (VAUGHA CON 06(025)	17 614744 4857425 W	2011/10 3108						7172162 (Z140008) A
VAUGHAN TOWN (VAUGHA CON 06(025)	17 614975 4857363 W	1962/10 1622	04	FR 0074	040 / 079 005 / 4:0	DO	75 4	6906805 () CLAY 0056 MSND 0079
VAUGHAN TOWN (VAUGHA CON 06(025)	17 614615 4857473 W	1982/06 1663	06	FR 0080	040 / 092 060 / 1:30	DO	96 4	6916678 () YLLW CLAY 0015 BLUE CLAY 0023 BRWN CLAY 0032 BRWN MSND 0049 GREY FSND 0058 BLUE CLAY 0070 GREY FSND SILT 0079 GREY MSND 0088 GREY CSND GRVL 0102 BLUE CLAY SILT 0127

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VAUGHAN TOWN (VAUGHAN CON 06(025))	17 614759 4857419 W	2011/09 6915			151 / 177 003 / :30	DO	299 26	7173164 (Z42909) A038449 BRWN CLAY SAND 0230 BRWN SAND SAND 0325
VAUGHAN TOWN (VAUGHAN CON 06(026))	17 615085 4857843 W	1963/02 1622	04	FR 0074	040 / 078 010 / 5:0	ST DO	74 4	6906807 () PRDG 0004 BLUE CLAY 0060 CSND 0078
VAUGHAN TOWN (VAUGHAN CON 06(026))	17 615065 4856880 W	1990/02 1663	06	FR 0248	078 / 286 100 / 2:0	DO	288 5	6921485 (79161) BRWN LOAM 0001 BRWN CLAY 0028 BRWN CLAY SAND GRVL 0044 BRWN GRVL SAND 0051 BRWN CLAY SAND 0073 BLUE CLAY 0082 GREY SAND FSND 0101 GREY GRVL SAND 0104 BLUE CLAY SAND LYRD 0242 GREY SAND SILT 0282 GREY SAND MSND FSND 0293 GREY SAND SILT 0303
VAUGHAN TOWN (VAUGHAN CON 06(026))	17 615095 4858025 W	1974/10 1663	05	FR 0065	030 / 070 035 / 1:30	DO	71 3	6912547 () YLLW CLAY 0019 BLUE CLAY 0033 BRWN FSND MSND 0068 BRWN CSND GRVL 0074 BLUE CLAY 0097
VAUGHAN TOWN (VAUGHAN CON 06(026))	17 614362 4857486 W	1986/10 1663	06	FR 0072	038 / 078 035 / 1:30	DO	81 3	6918512 () BLCK LOAM 0001 BRWN CLAY 0016 BLUE CLAY 0026 BRWN CLAY 0035 BRWN MSND 0057 GREY MSND CSND 0069 BLUE CLAY GRVL 0072 GREY CSND GRVL 0086 BLUE CLAY GRVL 0110
VAUGHAN TOWN (VAUGHAN CON 06(026))	17 615115 4857823 W	1981/04 2407						6916110 () A BLCK LOAM 0001 BRWN LOAM SNDY 0160
VAUGHAN TOWN (VAUGHAN CON 06(026))	17 615015 4857923 W	1976/02 2407	06	FR 0070	043 / 048 018 / 3:0	DO	66 4	6913742 () BLUE LOAM 0002 BRWN SAND 0026 BRWN SAND GRVL 0036 BRWN CSND 0073
VAUGHAN TOWN (VAUGHAN CON 06(027))	17 615065 4858223 W	1985/01 3108	06	FR 0061	047 / 060 008 / 1:0	DO	62 3	6917436 () LOAM 0002 BRWN CLAY 0030 BRWN SAND CLAY 0061 BRWN SAND 0065
VAUGHAN TOWN (VAUGHAN CON 06(028))	17 615145 4858572 W	1975/06 1663	05	FR 0060	045 / 068 015 / 1:30	ST DO	73 3	6913180 () BRWN CLAY 0016 BLUE CLAY STNS 0038 BLUE SAND CLAY 0044 BRWN MSND FSND 0063 GREY MSND GRVL 0076 BLUE CLAY GRVL 0081

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VAUGHAN TOWN (VAUGHAN CON 06(029))	17 614155 4858923 W	1959/06 2801	05	FR 0143				6906815 () LOAM 0001 BRWN CLAY MSND 0015 BLUE CLAY 0041 BRWN MSND CLAY 0065 BLUE CLAY MSND GRVL 0180 BLUE CLAY 0185
VAUGHAN TOWN (VAUGHAN CON 06(029))	17 614425 4858883 W	1959/06 2801	02	FR 0143	030 / 039 015 / 24:0	NU	160 10	6906817 () LOAM 0001 BRWN CLAY MSND 0017 BLUE CLAY MSND GRVL 0040 BRWN MSND GRVL 0070 BLUE CLAY MSND GRVL 0080 FSND GRVL 0095 BLUE CLAY MSND 0131 BLUE CLAY MSND BLDR 0132 BLUE CLAY 0143 BLUE CLAY MSND GRVL 0150 FSND SILT GRVL 0161 BLUE CLAY 0172
VAUGHAN TOWN (VAUGHAN CON 06(029))	17 614315 4859113 W	1959/06 2801	02	FR 0145	030 / 031 005 / :0	NU	152 10	6906816 () LOAM 0001 BRWN CLAY MSND 0022 BLUE CLAY MSND 0037 BRWN MSND GRVL 0072 BLUE CLAY MSND GRVL 0082 FSND CLAY GRVL 0095 BLUE CLAY MSND 0129 BLUE CLAY MSND GRVL 0145 FSND SILT GRVL 0162 BLUE CLAY 0172
VAUGHAN TOWN (VAUGHAN CON 06(029))	17 614375 4858803 W	1959/10 4623	08	FR 0150	032 / 046 025 / 24:0	CO	151 8	6906819 () LOAM 0001 BRWN CLAY 0048 BRWN MSND 0076 BLUE CLAY MSND 0082 BLUE CLAY STNS 0135 BLDR 0138 MSND CLAY GRVL 0150 MSND GRVL 0162
VAUGHAN TOWN (VAUGHAN CON 06(029))	17 614495 4858803 W	1959/10 4623	08	FR 0150	032 / 047 025 / 24:0	IN	152 11	6906818 () LOAM 0001 BRWN CLAY 0017 BLUE CLAY 0043 GRVL 0046 MSND CLAY 0100 BLUE CLAY 0143 MSND CLAY GRVL 0150 MSND GRVL 0163
VAUGHAN TOWN (VAUGHAN CON 06(029))	17 614752 4859020 W	1973/07 1663	05	FR 0070	065 / 075 005 / 2:30	ST DO	75 4	6911698 () BRWN GRVL SAND 0001 YLLW CLAY 0018 YLLW CLAY GRVL 0025 BLUE CLAY 0035 BLUE CLAY SAND 0058 GREY CSND 0080 BLUE CLAY 0081
VAUGHAN TOWN (VAUGHAN CON 08(031))	17 614163 4855366 W	1994/09 1663						6923107 (140667)
VAUGHAN TOWN (VAUGHAN ())	17 619203 4858673 W	2006/04 6926	02 02	FR 0023			18 5 61	6930162 (Z39597) A035733 5BRWN LOAM FILL 0005 GREY SAND SILT 0018 GREY SAND SILT 0028 GREY TILL SAND 0043 GREY SILT CLAY 0051 GREY SAND SAND 0066

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VAUGHAN TOWN (VAUGHAN ())	17 617986 4854249 W	2006/04 6926	02	FR		NU	46 3	6930167 (Z45881) A004173 A BRWN FILL LOAM 0002 GREY SAND CLAY 0010 GREY SAND CLAY TILL 0049
VAUGHAN TOWN (VAUGHAN ())	17 619203 4858511 W	2006/04 6926	02 02	FR 0023			18 5 61	6930164 (Z39596) A035732 5BRWN LOAM FILL 0005 GREY SAND SILT 0020 GREY SAND SILT 0026 GREY TILL 0041 GREY SAND SILT 0049 GREY CLAY 0066
VAUGHAN TOWN (VAUGHAN ())	17 619217 4856715 W	2006/03 7075	02	FR 0008			2 8	6930074 (Z41281) A039247 BRWN SAND SILT 0003 BRWN SAND SILT 0010
VAUGHAN TOWN (VAUGHAN 01(025))	17 619881 4858920 W	1983/12 4006	02 10		100 / / :0		200 28	6919997 ()
VAUGHAN TOWN (VAUGHAN 01(025))	17 619794 4858673 W	1983/12 4006	10 02		072 / / :0	NU	16	6919990 () BRWN FSND MSND GRVL 0060 BRWN FSND MSND SILT 0080 BRWN FSND CLAY SILT 0110 FSND SILT CLAY 0120 SILT FSND CLAY 0140 SILT CLAY FSND 0150 GREY FSND SILT CLAY 0170 FSND SILT CLAY 0180 GREY FSND SILT SAND 0188 CSND MSND FSND 0190 GREY FSND SILT 0210 GREY FSND SILT STNS 0250
VAUGHAN TOWN (VAUGHAN 01(048))	17 619841 4856425 W	2005/05 7219	34		005 / / :0	NU		6928926 (Z29085) A027041 A
VAUGHAN TOWN (VAUGHAN 03(018))	17 619786 4855712 W	2005/10 1663	36			NU		6929530 (Z36747) A YLLW 0015 BRWN SAND 0014 YLLW 0005 BRWN SAND CLAY 0004
VAUGHAN TOWN (VAUGHAN 03(020))	17 619948 4856939 W	2005/12 5459	06 05		002 / 035 015 / 1:0	CO	40 10	6929953 (Z35810) A032780 CLAY STNS SAND 0011 BRWN SAND STNS 0014 GREY CLAY STNS 0019 GREY SAND STNS 0022 GREY CLAY 0038 GREY FSND 0051 GREY CLAY SLTY 0054
VAUGHAN TOWN (VAUGHAN 03(020))	17 619948 4856939 W	2007/11 7341						7053210 (Z62723) A032780
VAUGHAN TOWN (VAUGHAN 03(024))	17 619841 4858427 W	1983/12 4006	10 02		079 / / :0		149 34	6919982 ()
VAUGHAN TOWN (VAUGHAN 03(024))	17 619841 4858427 W	1983/12 4006	10 02		082 / / :0		276 16	6919981 ()

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VAUGHAN TOWN (VAUGHAN 03(024))	17 619785 4858408 W	1984/01 4006	10 02		058 / / :0	NU	55 24	6919980 () BRWN SILT VERY FSND 0050 BRWN CLAY SILT FSND 0070 BRWN SAND SLTY FSND 0080 GREY SILT VERY FSND 0100 GREY CLAY SLTY FSND 0132 GREY MSND FSND CSND 0139 FSND VERY FSND 0175 CLAY SLTY FSND 0190 GREY FSND VERY SLTY 0205 SILT CLYY FSND 0240
VAUGHAN TOWN (VAUGHAN 03(024))	17 619785 4858408 W	1984/01 4006	10 02		059 / / :0		128 24	6919979 ()
VAUGHAN TOWN (VAUGHAN 03(024))	17 619841 4858427 W	1983/12 4006	10 02		075 / / :0		105 28	6919983 ()
VAUGHAN TOWN (VAUGHAN 03(024))	17 619785 4858408 W	1984/01 4006	02 10		054 / / :0		175 20	6919978 ()
VAUGHAN TOWN (VAUGHAN 03(024))	17 619841 4858427 W	1983/12 4006	02 10		074 / / :0	NU		6919985 () BRWN FSND SLTY HARD 0055 BRWN FSND MSND 0060 BRWN MSND CLYY SILT 0073 GREY SILT CLYY SAND 0100 GREY FSND SILT SAND 0110 GREY SILT VERY FSND 0152 GREY MSND CSND SILT 0165 GREY SILT VERY FSND 0175 GRVL FSND MSND 0182 GREY SILT VERY FSND 0220 GREY FSND SILT CLAY 0230 SILT VERY FSND 0240
VAUGHAN TOWN (VAUGHAN 03(024))	17 620003 4858358 W	1984/01 4006	10 02		093 / / :0		88 16	6919977 () BRWN SAND SLTY STNS 0065 BRWN CLAY SLTY SAND 0076 BRWN SAND GRVL 0090 BRWN FSND 0103 GREY FSND CLYY SILT 0130 GREY FSND CLYY SILT 0150 GREY CLAY SLTY FSND 0180 GREY CLAY SILT SAND 0210 GREY SAND SILT FSND 0243 GREY CLAY SILT 0260 GREY CLAY SILT SAND 0273
VAUGHAN TOWN (VAUGHAN 03(024))	17 620003 4858358 W	1984/01 4006	10 02		093 / / :0		162 33	6919976 ()
VAUGHAN TOWN (VAUGHAN 03(024))	17 620003 4858358 W	1984/01 4006	02 10		085 / / :0		216 24	6919975 ()

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VAUGHAN TOWN (VAUGHAN 03(024))	17 619841 4858427 W	1983/12 4006			074 / / :0			6919984 () GREY SILT CLAY FSND 0250 GREY SILT CLAY FSND 0260 GREY SILT VERY FSND 0270 GREY FSND FGVL 0280 GREY SILT VERY FSND 0297 GREY SILT CLAY FSND 0320
VAUGHAN TOWN (VAUGHAN 03(025))	17 619881 4858920 W	1983/12 4006	10 02		091 / / :0	NU	94	6919999 () BRWN FSND 0060 BRWN FSND 0110 BRWN FSND SILTY 0130 BRWN FSND SILT 0148 GREY SILT CLAY FSND 0170 GREY SILT CLAY SAND 0200 GREY FSND 0208 GREY FSND SAND MSND 0230 GREY MSND SLTY CSND 0238 GREY CSND MSND 0259 GREY CSND FSND MSND 0270 GREY FSND SILT 0297 GREY SILT FSND CLAY 0375
VAUGHAN TOWN (VAUGHAN 03(025))	17 619881 4858920 W	1983/12 4006	02 10		100 / / :0		121 24	6919998 ()
VAUGHAN TOWN (VAUGHAN 03(025))	17 619881 4858920 W	1983/12 4006	02 10		101 / / :0		240 20	6919996 ()
VAUGHAN TOWN (VAUGHAN 03(025))	17 619909 4858737 W	1983/12 4006	10 02		089 / / :0	IN		6919995 () BRWN FSND SILT 0050 BRWN FSND MSND 0060 BRWN FSND SAND SILT 0088 GREY FSND SILT LYRD 0110 GREY FSND SILT LYRD 0130 GREY SILT SNDY CLAY 0150 GREY SILT CLAY FSND 0165 GREY SILT CLAY SNDY 0180 GREY FSND SLTY SAND 0190 GREY FSND SILT 0200 GREY FSND SILT MSND 0210 GREY FSND SILT SNDS 0240
VAUGHAN TOWN (VAUGHAN 03(025))	17 619908 4858734 W	1983/12 4006	10 02			NU	87	6919994 () GREY FSND SAND GRNT 0260 GREY FSND SAND CLAY 0275 GREY FSND CLAY SILT 0300 GREY SILT FSND CLAY 0320
VAUGHAN TOWN (VAUGHAN 03(025))	17 619908 4858734 W	1983/12 4006	10 02		090 / / :0		114 16	6919993 ()
VAUGHAN TOWN (VAUGHAN 03(025))	17 619908 4858734 W	1983/12 4006	10 02		097 / / :0		244 28	6919991 ()
VAUGHAN TOWN (VAUGHAN 03(025))	17 619908 4858734 W	1983/12 4006	10 02		097 / / :0		198 28	6919992 ()

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VAUGHAN TOWN (VAUGHA 04(015))	17 618684 4853955 W	2008/11 7147				NU		7116510 (Z88590) A
VAUGHAN TOWN (VAUGHA 04(016))	17 618896 4854465 W	2007/06 1663						7049832 (Z64074) A
VAUGHAN TOWN (VAUGHA 04(016))	17 618090 4854446 W	2008/05 6926	02	UK 0018				7105979 (M00381) A066204 BRWN LOAM 0007 GREY SAND SLTY FGRD 0022 GREY CLAY SLTY HARD 0026 GREY SILT 0033
VAUGHAN TOWN (VAUGHA 04(016))	17 618375 4854444 W	2004/12 7147	36			NU		6928669 (Z19898) A
VAUGHAN TOWN (VAUGHA 04(016))	17 618403 4854425 W	2004/12 7147	02				10 5	6928675 (Z19899) A
VAUGHAN TOWN (VAUGHA 04(020))	17 619308 4856539 W	2007/05 3108				NU		7046323 (Z08351) A 0015
VAUGHAN TOWN (VAUGHA 04(021))	17 619206 4856729 W	2005/05 7075	02	FR 0006		NU	2 11	6929103 (Z25941) A027117 BRWN SAND GRVL LOOS 0002 GREY SILT SAND DNSE 0013
VAUGHAN TOWN (VAUGHA 04(025))	17 617423 4857936 W	2004/05 1663	14			NU		6929024 (Z24744) A YLLW 0035 BRWN SAND FILL SILT 0000
VAUGHAN TOWN (VAUGHA 04(025))	17 619094 4858600 W	2005/01 6875	04	FR 0050	023 / 043 001 / 24:0		40 20	6928726 (Z22815) A022556 BRWN SILT GRVL SAND 0015 GREY TILL CLAY 0050 GREY SAND SILT 0060
VAUGHAN TOWN (VAUGHA 04(025))	17 619093 4858603 W	2004/12 6875	01	FR 0050		NU	55 5 25	6928725 (Z16928) A022554 5BRWN SILT GRVL SAND 0015 GREY TILL 0050 GREY SAND SILT 0060
VAUGHAN TOWN (VAUGHA 04(025))	17 619090 4858612 W	2004/12 6875	01	FR 0013		NU	55 5	6928724 (Z22816) A022555 BRWN SILT GRVL SAND 0015 GREY TILL CLAY GRVL 0030
VAUGHAN TOWN (VAUGHA 05(016))	17 616360 4853705 W	2005/06 3108				NU		6929772 (Z02640) A 0094
VAUGHAN TOWN (VAUGHA 05(026))	17 615372 4857768 W	1987/06 1663	06	FR 0086	046 / 087 018 / 1:30		89 6	6919321 (09127) BRWN CLAY GRVL 0014 BLUE CLAY 0034 GREY FSND SILT 0047 BLUE CLAY GRVL 0051 GREY MSND GRVL 0056 GREY GRVL SAND CLAY 0086 GREY MSND 0096 GREY MSND 0102 GREY FSND 0112 BLUE CLAY SAND 0115

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VAUGHAN TOWN (VAUGHAN 05(026))	17 615437 4857769 W	1987/06 1663	06	FR 0071	047 / 080 017 / :0	DO	81 6	6919320 (09126) BRWN CLAY GRVL 0020 BLUE CLAY 0026 BRWN CLAY GRVL 0034 BRWN FSND 0046 BLUE CLAY GRVL SAND 0059 GREY MSND SAND 0071 GREY MSND 0076 GREY MSND CSND 0086 GREY FSND 0110 BLUE CLAY SILT 0125
VAUGHAN TOWN (VAUGHAN 05(026))	17 615321 4858026 W	1987/09 1663	06	FR 0085	042 / 106 012 / 1:30	DO	109 3	6919294 (09142) BRWN CLAY FILL 0004 BRWN CLAY GRVL 0014 BLUE CLAY GRVL 0040 BLUE CLAY SILT 0052 BRWN SAND 0071 BLUE CLAY GRVL 0084 GREY FSND 0099 GREY MSND FSND 0126 BLUE CLAY SAND 0140
VAUGHAN TOWN (VAUGHAN 05(026))	17 616210 4857946 W	1987/11 1663	06	FR 0101	048 / 105 015 / 1:30	DO	108 3	6919291 () BRWN CLAY FILL 0006 BRWN CLAY GRVL 0019 BRWN FSND 0024 BRWN CLAY SAND 0033 BRWN FSND 0058 BRWN MSND 0066 BRWN MSND CLAY 0068 GREY MSND 0089 GREY FSND SILT 0101 GREY 0112
VAUGHAN TOWN (VAUGHAN 05(026))	17 615414 4858082 W	1987/06 1663	06	FR 0090	048 / 100 025 / 1:0	DO	105 3	6919297 () BRWN CLAY 0013 BLUE CLAY GRVL 0029 BRWN CLAY GRVL 0032 BRWN SAND 0056 BRWN MSND 0067 BLUE CLAY 0070 BRWN FSND 0074 BRWN MSND 0076 BLUE CLAY 0078 GREY MSND 0090 GREY SAND 0110
VAUGHAN TOWN (VAUGHAN 05(029))	17 615420 4859087 W	2005/09 1663	02	FR 0115	054 / 017 / 1:0	DO	114 5	6929532 (Z24789) A023427 BRWN CLAY 0016 GREY CLAY GRVL 0028 BRWN CLAY SILT 0046 GREY CLAY SILT 0063 GREY FSND 0073 GREY CSND 0078 GREY CLAY SILT 0113 GREY MSND 0120
VAUGHAN TOWN (VAUGHAN 05(036))	17 616035 4854049 W	1988/09 3656	06	FR 0217	080 / 140 012 / 2:15	DO		6919834 (39205) BRWN CLAY TILL DNSE 0012 GREY CLAY TILL DNSE 0082 GREY SILT DNSE 0112 GREY CLAY TILL DNSE 0180 BRWN SAND SLTY DNSE 0197 GREY TILL DNSE 0209 GREY SHLE DNSE 0220
VAUGHAN TOWN (VAUGHAN 06(020))	17 615646 4855581 W	2006/12 3108				NU		7039924 (Z30630) A 0036 0020
VAUGHAN TOWN (VAUGHAN 06(020))	17 615260 4855291 W	2008/08 7147	02	FR 0010	010 / / :0	NU		7110422 (M02862) A073787 BRWN CLAY SILT 0008 BRWN CLAY TILL 0020 ---- 0020

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VAUGHAN TOWN (VAUGHAN 06(021))	17 614637 4855547 L	1987/10 1663	06	FR 0075	031 / 018 / 1:30	DO	79 3	6919293 () BRWN LOAM 0002 BRWN CLAY GRVL 0028 BRWN SAND 0033 BLUE CLAY GRVL 0048 BLUE CLAY SAND 0056 BLUE CLAY GRVL 0073 GREY SAND GRVL CLAY 0082 BLUE CLAY GRVL 0093 GREY FSND SILT 0110 BLUE CLAY GRVL SAND 0125
VAUGHAN TOWN (VAUGHAN 06(023))	17 615245 4856169 W	2006/08 7219	30			NU		6930606 (Z53033) A047074 A
VAUGHAN TOWN (VAUGHAN 06(023))	17 615336 4856784 W	2007/07 3108				NU		7052433 (Z08358) A 0312 PGVL 0300 PGVL LYRD 0296 PGVL 0050
VAUGHAN TOWN (VAUGHAN 06(023))	17 615141 4856430 W	2005/10 7219	36		053 / / :0	NU		6930143 (Z39817) A035982 A
VAUGHAN TOWN (VAUGHAN 06(024))	17 615295 4857173 W	1987/09 1663	06	FR 0272	/ 010 / 1:30	DO	281 3	6919296 (09149) BRWN FILL 0001 BRWN CLAY SAND 0050 GREY GRVL 0062 BLUE CLAY SILT 0169 BLUE CLAY 0198 BLUE CLAY SILT 0248 GREY SAND SILT FSND 0272 GREY SAND FSND 0290 BLUE CLAY SILT 0305
VAUGHAN TOWN (VAUGHAN 06(024))	17 615144 4857128 W	2004/12 1663	06	FR 0249	026 / 040 018 / 1:0	DO	268 6	6928611 (Z23964) A013027 BRWN CLAY FILL 0020 BRWN CLAY GRVL 0037 GREY CLAY GRVL STNS 0078 GREY SAND GRVL STNS 0088 GREY CLAY GRVL 0100 BLUE CLAY HARD 0238 GREY CLAY SILT 0248 GREY FSND SILT 0275 BLUE CLAY SILT 0340
VAUGHAN TOWN (VAUGHAN 06(024))	17 615185 4856938 W	1987/04 1663	06	FR 0106	069 / 127 060 / 1:30	DO	131 3	6919290 (07671) BRWN CLAY GRVL 0013 BLUE CLAY GRVL 0021 BRWN CLAY GRVL 0032 BRWN FSND CLAY 0048 BRWN MSND 0063 BRWN GRVL 0078 BLUE CLAY GRVL 0106 GREY MSND 0114 GREY CSND MSND 0136 GREY MSND CLAY 0155
VAUGHAN TOWN (VAUGHAN 5(27))	17 616907 4858783 W	2007/10 7219			015 / / :0	NU		7100633 (Z67280) A060721 A GRVL 0084
VAUGHAN TOWN (VAUGHAN 5(27))	17 616903 4858768 W	2007/10 7219				NU		7100630 (Z67281) A060717 A BRWN CLAY SAND 0017 0018

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VAUGHAN TOWN (VAUGHAN (039))	17 614459 4854634 W	2007/10 7341	00					7053213 (Z62722) A065426 BRWN TILL SILT CLAY 0013 GREY SILT DNSE 0018 GREY FSND 0023 GREY TILL SILT CLAY 0025
VAUGHAN TOWN (VAUGHAN (039))	17 614457 4854661 W	2007/10 7341	00					7053212 (Z62721) A065427 BRWN TILL SILT CLAY 0013 GREY SILT DNSE 0018 GREY FSND 0023 GREY TILL SILT 0025
VAUGHAN TOWN (VAUGHAN ())	17 620056 4857171 W	2007/06 7241	02			NU	10 10	7046659 (Z66293) A055977 BRWN GRVL SAND FILL 0002 BRWN SAND SILT DNSE 0010 GREY SAND SILT DNSE 0020
VAUGHAN TOWN (VAUGHAN ())	17 617960 4854362 W	2007/07 6926				NU		7047295 (Z70065) A050475 A BRWN FILL SAND 0002 BRWN GRVL FSND SLTY 0004 BRWN SAND SLTY 0013 BRWN SAND SLTY DNSE 0022 GREY SILT CLYY GRVL 0024 BRWN SAND SLTY GRVL 0031
VAUGHAN TOWN (VAUGHAN ())	17 617486 4854244 W	2007/07 6926				NU		7047297 (Z70067) A004173 A BRWN FILL LOAM 0002 GREY SILT SNDY CLAY 0010 GREY SILT SNDY CLAY 0049
VAUGHAN TOWN (VAUGHAN ())	17 616378 4853841 W	2007/07 6032	02			NU	20 10	7048072 (Z66498) A041648 BRWN SAND SILT WBRG 0030 BRWN SAND SILT WBRG 0030 BRWN SAND SILT WBRG 0030 BRWN SAND SILT WBRG 0030 BRWN SAND SILT WBRG 0030
VAUGHAN TOWN (VAUGHAN ())	17 619910 4856820 W	2007/06 7341	02	FR 0007			20 3	7048849 (Z66991) A054284 GREY TILL SAND SILT 0007 GREY FSND GRVL DNSE 0010 GREY SAND SILT DNSE 0023
VAUGHAN TOWN (VAUGHAN ())	17 617608 4858284 W	2007/02 7247	02			NU	10 5	7049063 (Z70015) A013323 BRWN FILL LOAM 0000 GREY CLAY TILL SLTY 0015
VAUGHAN TOWN (VAUGHAN ())	17 614481 4854646 W	2007/04 7247	02			NU	13 10	7051966 (Z70013) A062623 BRWN LOAM SILT CLAY 0003 BRWN SILT CLAY SAND 0013 BRWN SILT CLAY 0020 GREY SILT CLAY TILL 0023
VAUGHAN TOWN (VAUGHAN ())	17 615168 4858633 W	2007/07 6809	02					7052350 (Z63405) A057029 BRWN SILT HARD DRY 0015 GREY SILT HARD DRY 0020 GREY SILT 0025 GREY SILT WBRG 0030

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VAUGHAN TOWN (VAUGHAN ())	17 616382 4853844 W	2007/10 6032						7053007 (Z69113) A041648 A
VAUGHAN TOWN (VAUGHAN ())	17 614427 4854649 W	2007/10 7341	00					7053211 (Z62744) A065428 BRWN TILL SILT CLAY 0013 GREY SILT 0018 GREY FSND 0023 GREY TILL SILT CLAY 0025
VAUGHAN TOWN (VAUGHAN ())	17 619905 4854196 W	2011/07 7241	02				25 10	7168098 (Z136753) A116650 BLCK ---- 0001 BRWN SAND SILT LOOS 0001 BRWN SAND SILT LOOS 0035
VAUGHAN TOWN (VAUGHAN ())	17 618389 4856486 W	2011/09 7241	01				10 10	7169814 (Z140205) A116612 BRWN FILL ROCK DNSE 0014 BRWN SILT ROCK 0016 GREY SAND SILT 0020
VAUGHAN TOWN (VAUGHAN ())	17 618401 4856515 W	2011/09 7241	01				9 15	7169815 (Z140202) A115655 BRWN FILL ROCK DNSE 0014 BRWN SILT ROCK DNSE 0020 GREY SAND SILT WBRG 0024
VAUGHAN TOWN (VAUGHAN ())	17 618401 4856295 W	2011/09 7241	01				8 10	7169816 (Z140203) A123833 BRWN FILL ROCK DNSE 0012 GREY SILT ROCK DNSE 0014 GREY SAND SILT WBRG 0018
VAUGHAN TOWN (VAUGHAN ())	17 619872 4855059 W	2011/08 6607						7170904 (M10353) A094771 P
VAUGHAN TOWN (VAUGHAN ())	17 619869 4854814 W	2011/10 6032						7172574 (Z121272) A
VAUGHAN TOWN (VAUGHAN ())	17 615837 4857830 W	2012/03 6300	01		067 / 073 / 2:0		92 5	7178477 (Z123676) A109456 LOAM 0005 BRWN SAND SOFT 0010 BRWN GRVL STNS 0015 BRWN SAND CLAY 0090 BLCK SAND 0100 SILT 0114
VAUGHAN TOWN (VAUGHAN ())	17 615843 4857802 W	2012/03 6300	05		067 / / :0		64 3	7178478 (Z146832) A132005 A
VAUGHAN TOWN (VAUGHAN ())	17 619925 4854751 W	2012/01 7215	02				10 10	7185504 (Z146170) A103096
VAUGHAN TOWN (VAUGHAN ())	17 617671 4855580 W	2012/06 6607						7188786 (C18026) A132926 P
VAUGHAN TOWN (VAUGHAN ())	17 617635 4856258 W	6607						7188795 (C18028) P

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VAUGHAN TOWN (VAUGHAN ())	17 615226 4855858 W	2012/03 6607						7188789 (C16772) A126282 P
VAUGHAN TOWN (VAUGHAN ())	17 618055 4854476 W	2012/05 6926						7189009 (C18643) A127788 P
VAUGHAN TOWN (VAUGHAN ())	17 619853 4854840 W	2012/07 6607						7189031 (C19037) A134175 P
VAUGHAN TOWN (VAUGHAN ())	17 618055 4854476 W	2012/12 6926						7195733 (C19868) A127788 P
VAUGHAN TOWN (VAUGHAN ())	17 617854 4853515 W	2012/11 7247						7207765 (Z156476) A141115 P
VAUGHAN TOWN (VAUGHAN ())	17 619658 4857469 W	2004/11 7230				NU		6928633 (Z22507) A
VAUGHAN TOWN (VAUGHAN ())	17 617009 4859007 W	2005/06 6032	00			NU	20 5	6929126 (Z05306) A005294 BRWN CLAY SAND 0025 BRWN SILT SAND 0025 GREY CLAY SILT 0025 GREY CLAY SILT 0035 GREY CLAY SILT 0025 GREY CLAY SILT 0025 GREY CLAY SILT 0025 GREY CLAY SILT 0039
VAUGHAN TOWN (VAUGHAN ())	17 618362 4853256 W	2005/07 6607	02	FR 0014		NU	10 10	6929203 (Z32262) A027605 BRWN GRVL SAND FILL 0003 BRWN SILT SAND TILL 0012 GREY SILT SAND 0013 BRWN SILT SAND 0020
VAUGHAN TOWN (VAUGHAN ())	17 619583 4856735 W	2005/08 7215	01				8 10	6929456 (Z33938) A019777
VAUGHAN TOWN (VAUGHAN ())	17 615513 4855394 W	2005/09 6607	02	FR 0005			5 15	6929499 (Z34986) A027633 BRWN SAND GRVL FILL 0003 GREY SILT SAND 0008 GREY SILT CLAY 0016 GREY SILT CLAY 0020
VAUGHAN TOWN (VAUGHAN ())	17 620097 4858062 W	2006/08 6809	02				60 20	6930725 (Z51175) A035696 BRWN FSND 0080
VAUGHAN TOWN (VAUGHAN ())	17 619944 4853719 W	2006/09 7215	02			NU	3 5	6930790 (Z53195) A044777
VAUGHAN TOWN (VAUGHAN ())	17 615693 4857956 W	2006/09 7215	01				7 10	6930792 (Z53215) A047208

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VAUGHAN TOWN (VAUGHAN ())	17 617947 4853283 W	2006/07 6032	02			NU	11 9	6930865 (Z05106) A005247 BRWN FILL LOAM GRVL 0004 BRWN SILT SAND CLAY 0015 GREY SILT SAND 0020
VAUGHAN TOWN (VAUGHAN ())	17 614141 4858909 W	2006/09 6809	02				10 15	6930900 (Z51212) A035691 BLCK LOAM 0006 BRWN CLAY SILT TILL 0013 GREY CLAY SILT TILL 0020 GREY SAND 0025
VAUGHAN TOWN (VAUGHAN ())	17 617548 4854556 W	2006/09 6809	02				5 10	6930902 (Z51218) A035690 BRWN SILT CLAY TILL 0009 GREY SILT CLAY TILL 0015
VAUGHAN TOWN (VAUGHAN ())	17 617960 4854862 W	2006/11 6926	01	0003		NU	28 3	6931110 (Z56226) A050475 BRWN FILL SAND 0002 BRWN FSND SLTY 0004 BRWN SAND SLTY 0046 BRWN SAND SLTY CLAY 0022 GREY SILT CLYY GRVL 0024 BRWN SAND SLTY GRVL 0031
VAUGHAN TOWN (VAUGHAN ())	17 617560 4854580 W	2006/11 6809	01				16 33	6931115 (Z73991) A035690 A
VAUGHAN TOWN (VAUGHAN ())	17 619899 4854745 W	2006/08 7241	02				9 15	7034869 (Z51908) A046083 A BRWN SAND GRVL 0008 BRWN CLAY SAND 0020 GREY SILT CLAY 0024
VAUGHAN TOWN (VAUGHAN ())	17 615254 4855329 W	2006/10 7241	02				9 10	7038436 (Z54889) A BRWN SAND SILT 0015 GREY SILT SAND CLAY 0022
VAUGHAN TOWN (VAUGHAN ())	17 615749 4856675 W	2013/08 7147						7207881 (Z171582) P
VAUGHAN TOWN (VAUGHAN ())	17 619725 4853254 W	2010/02 6032	02				4 10	7141399 (Z108992) A083985 BRWN CLAY SILT FILL 0015
VAUGHAN TOWN (VAUGHAN ())	17 619376 4858340 W	2010/02 7215					12 10	7141656 (Z110045) A095333 BRWN FILL 0004 BRWN TILL SLTY 0012 BRWN TILL DRY 0019 BRWN SAND WBRG 0022
VAUGHAN TOWN (VAUGHAN ())	17 619950 4856732 W	2010/04 6875						7145216 (Z117750) A 0007
VAUGHAN TOWN (VAUGHAN ())	17 619960 4856732 W	2010/04 6875						7145217 (Z117751) A 0013

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VAUGHAN TOWN (VAUGHAN ())	17 619114 4853546 W	2010/05 7241	02					7145291 (M07124) A099905 BRWN SAND LOOS 0008 GREY SAND SILT LOOS 0016
VAUGHAN TOWN (VAUGHAN ())	17 616568 4855545 W	2010/07 7241	02				14 10	7149498 (Z118904) A102894 BRWN GRVL SAND FILL 0001 BRWN SILT CLAY GRVL 0013 GREY SILT CLAY TILL 0024
VAUGHAN TOWN (VAUGHAN ())	17 616548 4855595 W	2010/07 7241	02				10 10	7149499 (Z118905) A102895 BRWN GRVL SAND FILL 0002 SILT CLAY GRVL 0012 GREY SILT CLAY GRVL 0020
VAUGHAN TOWN (VAUGHAN ())	17 618014 4854460 W	2010/05 6926						7154942 (M07223) A097382 P
VAUGHAN TOWN (VAUGHAN ())	17 619291 4858912 W	2012/01 7247	02	0008			15 10	7177290 (Z140549) A124052 BRWN SAND GRVL 0002 BRWN CLAY SAND SILT 0008 BRWN CLAY SAND SILT 0025
VAUGHAN TOWN (VAUGHAN ())	17 619480 4857003 W	2012/03 7230						7179436 (C17751) A128923 P
VAUGHAN TOWN (VAUGHAN ())	17 620095 4857650 W	2011/11 6809						7179452 (C15769) A119984 P
VAUGHAN TOWN (VAUGHAN ())	17 619970 4857636 W	2011/08 6809						7179466 (C15735) A113645 P
VAUGHAN TOWN (VAUGHAN ())	17 617710 4856044 W	2012/09 6607						7189720 (C19060) P
VAUGHAN TOWN (VAUGHAN ())	17 614245 4858715 W	2012/05 6607						7192976 (C17978) A126134 P
VAUGHAN TOWN (VAUGHAN ())	17 617204 4858249 W	2012/04 7215						7194695 (C17441) A121138 P
VAUGHAN TOWN (VAUGHAN ())	17 619642 4856543 W	2012/11 6032						7196438 (Z158114) A116397 P
VAUGHAN TOWN (VAUGHAN ())	17 619128 4853545 W	2012/10 6032						7196445 (Z158094) A116430 P
VAUGHAN TOWN (VAUGHAN ())	17 619505 4856786 W	2013/02 7241						7198109 (Z157030) A143651 P
VAUGHAN TOWN (VAUGHAN ())	17 619460 4856733 W	2013/02 7241						7198110 (Z157031) A143652 P

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VAUGHAN TOWN (VAUGHAN ())	17 619551 4856758 W	2013/02 7241						7198111 (Z157032) A143653 P
VAUGHAN TOWN (VAUGHAN ())	17 619556 4856747 W	2013/02 7241						7198112 (Z157033) A143654 P
VAUGHAN TOWN (VAUGHAN ())	17 615739 4855836 W	2012/12 7215						7201516 (Z163830) A142402 P
VAUGHAN TOWN (VAUGHAN ())	17 615739 4855836 W	2012/12 7215						7201517 (Z163829) A142402 P
VAUGHAN TOWN (VAUGHAN ())	17 619802 4858931 W	2012/11 7215						7202166 (C20430) A139552 P
VAUGHAN TOWN (VAUGHAN ())	17 615760 4855863 W	2012/11 7215						7202226 (C20460) A139565 P
VAUGHAN TOWN (VAUGHAN ())	17 620075 4857274 W	2007/02 6607	02	0020			15 10	7041857 (Z64641) A053600 BRWN FILL 0006 RED SAND SILT 0020 BRWN SILT SAND WBRG 0025
VAUGHAN TOWN (VAUGHAN ())	17 619203 4858511 W	2007/04 6926				NU		7043459 (Z70033) A035732 A GREY LOAM FILL 0005 GREY SAND SLTY 0020 GREY SAND SLTY TILL 0026 GREY TILL 0041 GREY SAND SLTY CLAY 0049 GREY SAND CLYY TILL 0066
VAUGHAN TOWN (VAUGHAN ())	17 614203 4858673 W	2007/04 6926				NU		7043460 (Z70034) A035733 A BRWN LOAM FILL 0005 GREY SAND SLTY 0018 GREY SAND SLTY 0028 GREY TILL SAND 0043 GREY SAND SLTY CLAY 0051 GREY TILL SLDY CLAY 0066
VAUGHAN TOWN (VAUGHAN ())	17 614404 4857012 W	2007/05 6809	02				35 10	7045662 (Z70851) A053010 BRWN SILT SAND 0010 GREY SILT STNS 0015 BRWN SAND SILT 0045
VAUGHAN TOWN (VAUGHAN ())	17 617660 4854579 W	2007/09 7247	02	0020		NU		7103743 (Z78258) A066724 BRWN CLAY SLTY LOAM 0005 BRWN CLAY SLTY TILL 0013 BRWN FSND DNSE 0018 GREY SILT SAND DNSE 0025
VAUGHAN TOWN (VAUGHAN ())	17 614740 4854796 W	2008/08 7147	02			NU		7111310 (Z87559) A074050 BLCK LOAM 0001 BRWN CLAY 0035

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VAUGHAN TOWN (VAUGHA ())	17 614740 4854796 W	2008/08 7147	02			NU		7111311 (Z87560) A074050 BLCK LOAM 0001 BRWN CLAY 0025
VAUGHAN TOWN (VAUGHA ())	17 615579 4855468 W	2009/05 7241	02				3 9	7123748 (Z098091) A086721 BLCK ---- HARD 0001 BRWN SAND GRVL SOFT 0003 BLCK CSND SOFT 0004 BRWN SILT FSND SOFT 0012
VAUGHAN TOWN (VAUGHA ())	17 619570 4858068 W	2009/06 6032	02				20 10	7125802 (Z095845) A083926 BRWN LOAM SAND GRVL 0010 GREY SILT CLAY DNSE 0023 GREY SILT CLAY WBRG 0030
VAUGHAN TOWN (VAUGHA ())	17 617007 4856242 W	2009/07 7241	01					7126507 (M03337) A087368 BRWN SAND GRVL DNSE 0004 BRWN SILT CLAY DNSE 0012 GREY SILT CLAY DNSE 0020
VAUGHAN TOWN (VAUGHA ())	17 619560 4856267 W	2007/07 7247	02	UK 0012		NU	11 5	7128424 (Z70018) A062625 BLCK HARD 0001 BRWN CLAY SAND HARD 0012 GREY FSND SILT DNSE 0016
VAUGHAN TOWN (VAUGHA ())	17 619818 4855041 W	2009/09 6607	02	0011				7134003 (M05655) A088157 BRWN SAND SILT LOOS 0004 BRWN SAND SILT HARD 0010 GREY SILT CLAY SOFT 0014 BRWN SAND SILT DNSE 0020
VAUGHAN TOWN (VAUGHA ())	17 617551 4853913 W	2009/09 7383	02	FR 0024	024 / / :0		16.5 20	7138886 (M02104) A069024 BRWN SILT SAND GRVL 0015 GREY SILT CLAY 0030 GREY SILT SAND 0037
VAUGHAN TOWN (VAUGHA ())	17 618433 4856528 W	2010/05 7215					20 10	7146061 (Z114486) A097594 BRWN GRVL FILL LOOS 0002 BRWN CLAY SAND SOFT 0012 GREY SILT SAND PCKD 0030
VAUGHAN TOWN (VAUGHA ())	17 618014 4854460 W	2010/05 6926						7146475 (M06023) A097382 P
VAUGHAN TOWN (VAUGHA ())	17 615188 4855521 W	2011/05 7215	02				10 10	7166956 (Z129095) A113892 BRWN LOAM GRVL LOOS 0005 BRWN SILT TILL 0015 GREY SILT CLAY WBRG 0020
VAUGHAN TOWN (VAUGHA ())	17 615627 4855683 W	2011/09 7215	02				10 -7	7170044 (Z133738) A121205 BRWN FILL 0002 BRWN CLAY SILT 0014 GREY CLAY SNDY SILT 0020

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VAUGHAN TOWN (VAUGHA ())	17 620008 4859235 W	2011/01 3406	12 06		139 / 152 002 / 8:0	IN	140 30	7178753 (Z127393) A076892 BRWN SAND 0025 BRWN SAND SILT 0035 GREY SILT SAND CLAY 0096 GREY SAND SILT FSND 0120 GREY SAND SILT FGRD 0163 GREY CLAY SILT 0170
VAUGHAN TOWN (VAUGHA ())	17 619731 4853293 W	2010/03 7215	02				11 10	7144431 (Z112602) A095303 BRWN GRVL SAND LOOS 0005 BRWN CLAY SAND SOFT 0012 GREY SILT CLAY 0021
VAUGHAN TOWN (VAUGHA ())	17 620036 4853253 W	2011/04 6946	02	0015			15 5	7162217 (Z122585) A112927 BRWN SAND SILT STNS 0003 BRWN SILT SAND STNS 0005 BRWN SILT DNSE 0010 BRWN SAND STNS DNSE 0014 GREY SILT STNS DNSE 0018 GREY SILT SAND LYRD 0022
VAUGHAN TOWN (VAUGHA ())	17 619897 4854801 W	2011/03 6032					5 10	7162493 (Z121248) A106865 BRWN SILT SAND LOOS 0007 GREY SILT SAND DNSE 0015
VAUGHAN TOWN (VAUGHA ())	17 619095 4854558 W	2011/02 6032	02	0023				7162510 (Z121216) A084013 BRWN CLAY SILT DNSE 0020 BRWN SILT 0042 GREY CLAY TILL DNSE 0049
VAUGHAN TOWN (VAUGHA ())	17 614955 4855484 W	2011/03 7215	02				16 -10	7162963 (Z129063) A111984 BRWN TILL DRY 0012 GREY CLAY TILL WBRG 0016
VAUGHAN TOWN (VAUGHA ())	17 617640 4856261 W	2011/04 6607						7164062 (M10334) A110393 P
VAUGHAN TOWN (VAUGHA ())	17 619712 4854204 W	2011/07 7241	02				14 10	7168030 (Z136755) A116645 BLCK ---- 0001 BRWN SAND GRVL LOOS 0001 BRWN SAND SILT LOOS 0024
VAUGHAN TOWN (VAUGHA ())	17 619926 4854139 W	2011/07 7241	02				25 10	7168095 (Z136754) A116705 BRWN SAND GRVL 0002 BRWN SAND 0015 BRWN SAND WBRG 0028 BRWN SAND SILT WBRG 0035
VAUGHAN TOWN (VAUGHA ())	17 619791 4854222 W	2011/07 7241	02				20 10	7168096 (Z136756) A116644 BLCK ---- 0001 BRWN SAND GRVL LOOS 0002 BRWN SAND SILT LOOS 0030
VAUGHAN TOWN (VAUGHA ())	17 619705 4854138 W	2011/07 7241	02				15 10	7168097 (Z136764) A116646 BLCK ---- 0001 BRWN SAND GRVL LOOS 0001 BRWN SAND SILT LOOS 0025

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VAUGHAN TOWN (KING) CON 05(017)	17 617656 4854555 W	2008/10 7147	02					7112745 (Z85220) A066724 A
VAUGHAN TOWN (KING) CON 05(017)	17 617664 4854555 W	2008/10 7147	02					7112746 (Z85219) A066724 A
VAUGHAN TOWN (KING) CON 06(019)	17 614228 4854730 W	2008/11 7241						7116085 (Z91387) A
VAUGHAN TOWN (KING) ()	17 614504 4855039 W	2008/10 7341	00	FR 0010				7115087 (Z79687) A070775 BRWN FSND GRVL PCKD 0015 GREY SILT TILL SAND 0023
VAUGHAN TOWN (KING) ()	17 614504 4855039 W	2008/10 7341						7115086 (Z62736) A070775 A
TORONTO CITY ()	17 618582 4858205 W	2004/03 6809	02			NU	13 5	6927751 (Z02681) A002587 BRWN SAND SILT DRY 0007 BRWN UNKN SILT SNDY 0012 BRWN SILT SNDY WBRG 0018
()	17 619477 4856210 W	2011/08 7241	01				25 15	7171665 (Z129634) A114427 BLCK SOFT 0000 BRWN SAND HARD 0039
()	17 619521 4856210 W	2011/08 7241	03				7.5 4.5	7171667 (Z129722) A114426 BLCK SOFT 0000 BRWN SAND HARD 0012
()	17 619480 4856190 W	2011/08 7241	03				7.5 4.5	7171666 (Z129632) A114430 BLCK SOFT 0000 BRWN SAND HARD 0012

- Notes:
1. UTM in Zone, Easting, Northing and Datum is NAD83; L: UTM estimated from Centroid of Lot; W: UTM not from Lot Centroid
 2. Date Work Completed
 3. Well Contractor Licence Number
 4. Casing diameter in inches
 5. Unit of Depth in Feet
 6. See Table 4 for Meaning of Code
 7. STAT LVL: Static Water Level in Feet ; PUMP LVL: Water Level After Pumping in Feet
 8. Pump Test Rate in GPM, Pump Test Duration in Hour : Minutes
 9. See Table 3 for Meaning of Code
 10. Screen Depth and Length in feet
 11. See Table 1 and 2 for Meaning of Code
 12. A: Abandonment; P: Partial Data Entry Only

1. Core Material and Descriptive terms										
Code	Description	...	Code	Description	...	Code	Description	...	Code	Description
BLDR	BOULDERS		FCRD	FRACTURED		IRFM	IRON FORMATION		PORS	POROUS
									SOFT	SOFT
BSLT	BASALT		FGRD	FINE-GRAINED		LIMY	LIMY		PRDG	PREVIOUSLY DUG
									SPST	SOAPSTONE
CGRD	COARSE-GRAINED		FGVL	FINE GRAVEL		LMSN	LIMESTONE		PRDR	PREV. DRILLED
									STKY	STICKY
CGVL	COARSE GRAVEL		FILL	FILL		LOAM	TOPSOIL		QRTZ	QUARTZITE
									STNS	STONES
CHRT	CHERT		FLDS	FELDSPAR		LOOS	LOOSE		QSND	QUICKSAND
									STNY	STONEY
CLAY	CLAY		FLNT	FLINT		LTCL	LIGHT-COLOURED		QTZ	QUARTZ
									THIK	THICK
CLN	CLEAN		FOSS	FOSILIFEROUS		LYRD	LAYERED		ROCK	ROCK
									THIN	THIN
CLYY	CLAYEY		FSND	FINE SAND		MARL	MARL		SAND	SAND
									TILL	TILL
CMTD	CEMENTED		GNIS	GNEISS		MGRD	MEDIUM-GRAINED		SHLE	SHALE
									UNKN	UNKNOWN TYPE
CONG	CONGLOMERATE		GRNT	GRANITE		MGVL	MEDIUM GRAVEL		SHLY	SHALY
									VERY	VERY
CRYS	CRYSTALLINE		GRSN	GREENSTONE		MRBL	MARBLE		SHRP	SHARP
									WBRG	WATER-BEARING
CSND	COARSE SAND		GRVL	GRAVEL		MSND	MEDIUM SAND		SHST	SCHIST
									WDFR	WOOD FRAGMENTS
DKCL	DARK-COLOURED		GRWK	GREYWACKE		MUCK	MUCK		SILT	SILT
									WTHD	WEATHERED
DLMT	DOLOMITE		GVLY	GRAVELLY		OBDN	OVERBURDEN		SLTE	SLATE
DNSE	DENSE		GYPS	GYP SUM		PCKD	PACKED		SLTY	SILTY
DRTY	DIRTY		HARD	HARD		PEAT	PEAT		SNDS	SANDSTONE
DRY	DRY		HPAN	HARDPAN		PGVL	PEA GRAVEL		SNDY	SANDY

2. Core Color	
Code	Description
WHIT	WHITE
GREY	GREY
BLUE	BLUE
GREN	GREEN
YLLW	YELLOW
BRWN	BROWN
RED	RED
BLCK	BLACK
BLGY	BLUE-GREY

3. Water Use			
Code	Description	Code	Description
DO	Domestic	OT	Other
ST	Livestock	TH	Test Hole
IR	Irrigation	DE	Dewatering
IN	Industrial	MO	Monitoring
CO	Commercial		
MN	Municipal		
PS	Public		
AC	Cooling And A/C		
NU	Not Used		

4. Water Detail			
Code	Description	Code	Description
FR	Fresh	GS	Gas
SA	Salty	IR	Iron
SU	Sulphur		
MN	Mineral		
UK	Unknown		

Appendix B

Field Investigation

Site Photographs

Site Investigation PhotoLog



Photo 1: A view of the eastern portion of the Site looking south from the northeast corner of the property.



Photo 2: A view of the eastern portion of the Site.



Photo 3: A view of the Site looking north from the southeast corner of the property.



Photo 4: A view of the southern portion of the Site (south of Major MacKenzie Road West).



Photo 5: A view from the south central portion of the Site looking west.



Photo 6: A view of the western portion of the Site.



Photo 7: A view from the southwestern portion of the Site looking north.



Photo 8: A view of northern portion of the Site looking west. Note the adjacent residential subdivision to the north.



Photo 9: A view of the neighbouring residential subdivision to the east of the Site.



Photo 10: A view of the commercial retail operations located to the east of the southeast corner of the Site.



Photo 11: A view of the southern parcel of the Site immediately adjacent to the Canada's Wonderland amusement park.



Photo 12: A view of the works yard to the west of the southern parcel of the Site.

Field Investigation Notes

Phase 1 Environmental Assessment – Field Notes

VAGLIANO HOSPITAL

Date: OCT 17, 2013

Field Personnel: ABL

Time: 10:30-12 PM

Current Land Use: VACANT

Vacant?: (X) Yes () No

Structures On-Site?: () Yes (X) No

EXTERIOR ITEMS CHECKED

- Storage tanks or Containers () Yes (X) No () N/A
- Monitoring Wells () Yes (X) No () N/A
- Odours () Yes (X) No () N/A
- Catchbasins () Yes () No () N/A NONE OBSERVED
- Surface stains/ Stressed () Yes (X) No () N/A

Vegetation

- Abandoned or Existing Wells () Yes (X) No () N/A
- Pits, Lagoons, Ditches, Standing Water () Yes (X) No () N/A
- Hazardous or Unidentified Substances () Yes (X) No () N/A
- Roads & Parking Facilities (X) Yes () No () N/A

ALONG THE NORTHERN PORTION OF SITE (E-W) WITH TWO (2) BRANCHES WHICH TRAVEL IN A N-S DIRECTION HEADING UNDER MAJOR MACKENZIE DRW TO CAMPBELL WOODS/LAND AND A THIRD WHICH EXITS ONTO THE WEST BOUND LANE OF MAJOR MAC. DR. W.

INTERIOR ITEMS CHECKED (X) N/A

- Storage Tank or Containers () Yes () No () N/A
- Possible Lead-based paint (peeling) () Yes () No () N/A
- Possible Asbestos Containing Materials () Yes () No () N/A
- Possible PCBs (ballasts, transformers) () Yes () No () N/A
- Possible UFFI () Yes () No () N/A
- Sumps () Yes () No () N/A
- Odours () Yes () No () N/A
- Floor Staining () Yes () No () N/A
- Hazardous or Unidentified Substances () Yes () No () N/A
- Floor Drains () Yes () No () N/A
- Building Heating System
- Potable Water Supply () Municipal () Other
- Sewage and Wastewater Disposal () Municipal () Other

SAMPLES TAKEN:

- Soil
- Water
- Roof
- Asbestos
- Paint
- Other

Notes:

Phase 1 Environmental Assessment – Field Notes

SITE SKETCH:

Sketch includes property lines, buildings, structures, sample locations, tank locations, areas of interest, and adjacent lands.



EAST HALF OF SITE - FROM EAST TO WEST

Topography: WEST HALF OF SITE - TO THE MIDDLE

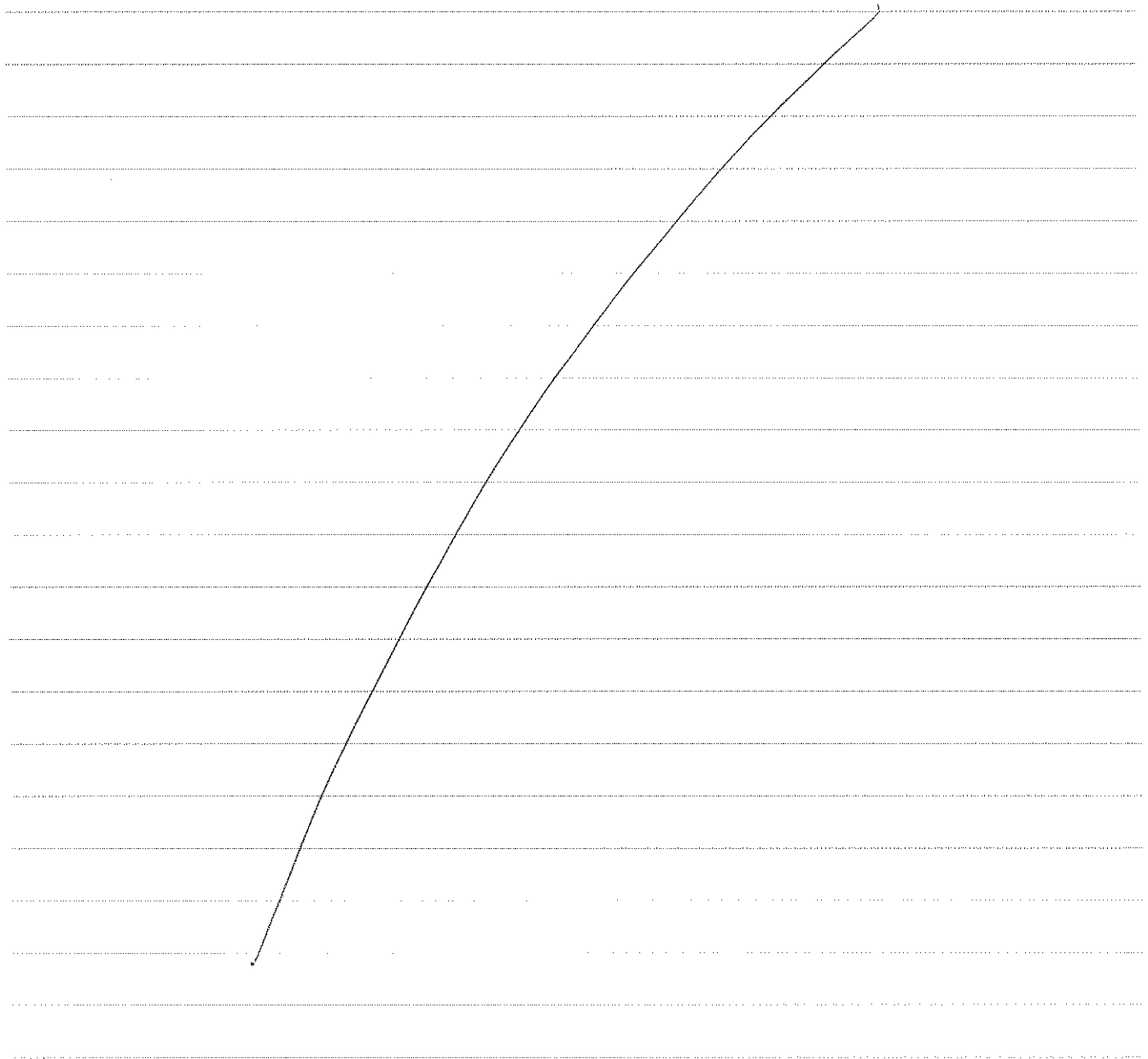
Vegetation: TALL GRASSES + PALMS

Other Notable Features: SOIL BUMP ON EAST + SOUTH SIDES OF SITE

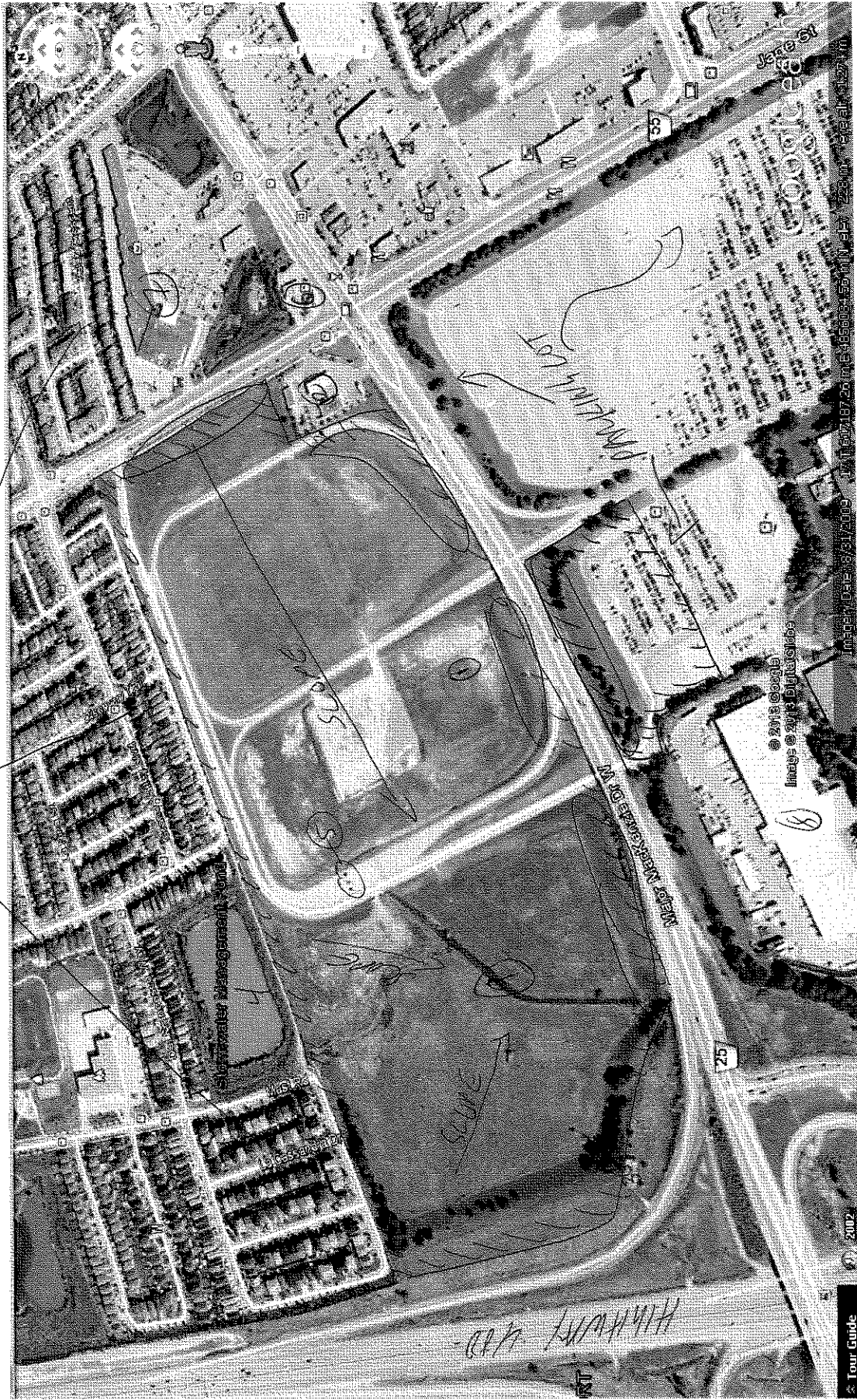
Description of Photo: _____ Disk No. : _____ Photo No. _____

Phase 1 Environmental Assessment – Field Notes

ADDITIONAL NOTES:

A large area of horizontal dashed lines for writing, with a diagonal line drawn across it from the bottom-left to the top-right.

9



- ① BASEBALL BACKSTOP FENCE
- ② TIM HORTON'S + GASOLINE SERVICE STATION
- ③ CELL PHONE COMMUNICATIONS TOWER
- ④ STORMWATER MANAGEMENT POND
- ⑤ PARKING ATTENDANT KIOSKS
- ⑥ GASOLINE SERVICE STATION
- ⑦ RETAIL COMMERCIAL PLAZA
- ⑧ MAINTENANCE YARD - CADONAS WOODLAND AVENUE
- ⑨ RESIDENTIAL SIMILAR FAMILY DWELLINGS
- ⑩ SOIL AREAS

Appendix F

Stage 1 and 2 Archaeological Assessment Report

Stage 1 and 2 Archaeological Assessment of
Part of Lot 21, Concession 5
Former Township of Vaughan, County of York
Now in the City of Vaughan,
Regional Municipality of York

Prepared for:

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Archaeological Licence P049 (Steiss)
MCL CIF P049-421-2009/ P049-410-2009
ASI File 09TS-074

July, 2009



Archaeological Services Inc.

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**Stage 1 and 2 Archaeological Assessment of
Part of Lot 21, Concession 5
Former Township of Vaughan, County of York
Now in the City of Vaughan,
Regional Municipality of York**

EXECUTIVE SUMMARY

Archaeological Services Inc. was retained by Cole Engineering Group Ltd. of Markham, Ontario to undertake a Stage 1 and 2 archaeological assessment of Part of Lot 21, Concession 5, in the former Township of Vaughan, now in the City of Vaughan within the Regional Municipality of York. The study area encompasses approximately 26 ha and is located at the northeast intersection of Major Mackenzie Drive and Highway 400.

The study area was determined to be predominately level, with some areas of gentle slope in the western extent of the study area. Two tributaries of the Don River flow into the study area from the north, joining up into one channel within the study area. A review of the previous archaeological research conducted in the area determined that 16 archaeological sites had been found within one kilometre to the study area. A review of historical mapping indicated the presence a homestead within the study area.

The Stage 1 field review of the study area determined that the majority of the study area had been previously graded and now consisted of park land, playing fields, access ways, all of which was considered disturbed and had no archaeological potential. Only three parcels, located within the westernmost portions of the study area, were thought to have archaeological potential. These three areas were subject to Stage 2 survey, conducted by means of a judgmental test pit strategy. The areas within the study area considered to have archaeological potential were found to have multiple layers of fill and are therefore completely disturbed. No archaeological resources were encountered during this assessment and the study area is considered free from any further archaeological concern, with the proviso that the appropriate authorities must be contacted if deeply buried archaeological or human remains be encountered during future development of this study area.



PROJECT PERSONNEL: ARCHAEOLOGICAL SERVICES INC., PLANNING DIVISION

<i>Project Manager:</i>	Ms. Beverly Garner, B.A. Hons., Assistant Manager, GTA Planning
<i>Project Director:</i>	Debbie Steiss, MA, Partner, Centralized Support Services, (PO49)
<i>Field Director:</i>	Mr. Rob Wojtowicz, BSc., Staff Archaeologist, GTA Planning (R291)
<i>Field Archaeologists:</i>	Ms. Aleks Pradzynski B.A. Hons., Staff Archaeologist, GTA Planning (R190) Ms. Amy Fox B.A. Hons., Field Archaeologist, GTA Planning Ms. Alisha Mohammed B.A. Hons. (pending), Field Archaeologist, GTA Planning.
<i>Report Preparation:</i>	Mr. John Dunlop, B.A. Hons., Staff Archaeologist, GTA Planning (R261)
<i>Archival Research:</i>	Dr. Colin McFarquhar, PhD, Historical Researcher
<i>Graphics Preparation:</i>	Mr. John Dunlop
<i>Report Preparation:</i>	Mr. John Dunlop
<i>Report Reviewer:</i>	Ms. Beverly Garner



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1.0 INTRODUCTION

Archaeological Services Inc. was retained by Cole Engineering Group Ltd. of Markham, Ontario to undertake a Stage 1 and 2 archaeological assessment of Part of Lot 21, Concession 5, in the former Township of Vaughan, now in the City of Vaughan within the Regional Municipality of York. The study area encompasses approximately 26 ha and is located at the northeast intersection of Major Mackenzie Drive and Highway 400 (Figure 1).

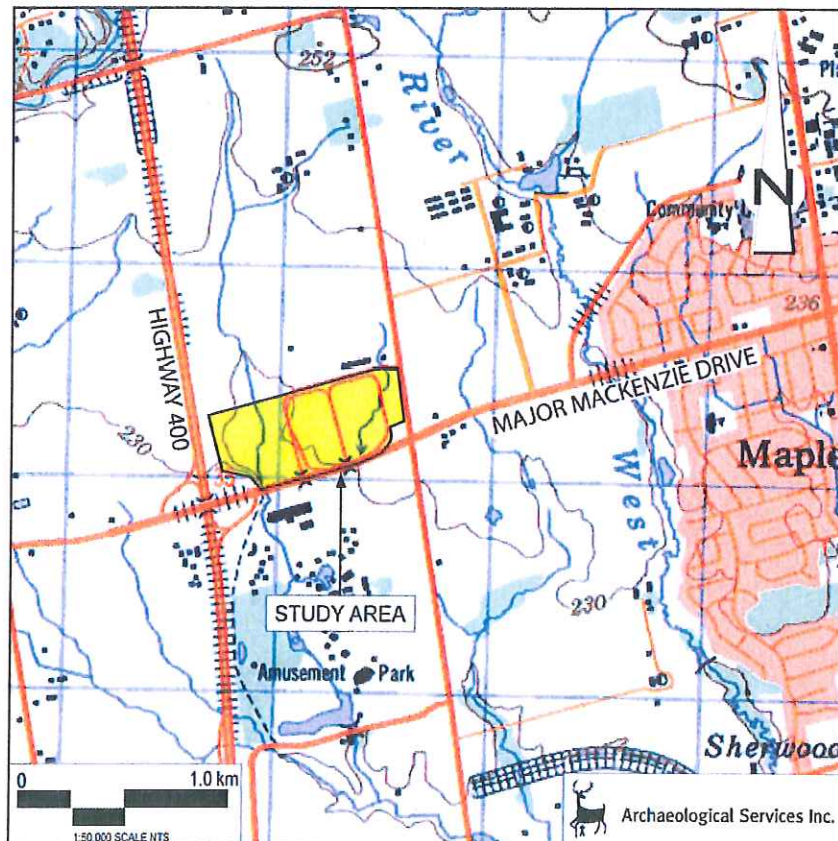


Figure 1: The location of the study area.
Illustrated on the NTS Map Bolton 31 M/13, 7th Edition, 1989

The Stage 1 portion of this project was conducted under archaeological license P049 (MCL CIF P049-410-2009), and is reported in the *Stage 1 Archaeological Assessment of Part of Lot 21, Concession 5, Former Township of Vaughan, County of York Now in the City of Vaughan, Regional Municipality of York* (ASI 2009).

The Stage 2 portion of this project was conducted under the project direction of Ms. Debbie Steiss, under professional archaeological license P049 (MCL CIF P049-421-2009) issued to Ms. Steiss in accordance with the Ontario Heritage Act (R.S.O. 1990 and 2006). The field assessment was conducted under the field direction of Mr. Rob Wojtowicz. Ms. Beverly Garner was the project manager. Permission to access the subject lands was granted by Cole Engineering Group Ltd.



2.0 STAGE 1 BACKGROUND RESEARCH

Background research was completed to identify any archaeological sites in the study area and to assess the area's archaeological potential.

2.1 Previous Archaeological Research

In order that an inventory of archaeological resources could be compiled for the study area, three sources of information were consulted: site record forms for registered sites housed at the Ontario Ministry of Culture (MCL); published and unpublished documentary sources, and the files of Archaeological Services Inc.

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (O.A.S.D.), a database maintained by the Ontario Ministry of Culture. This database contains archaeological sites registered within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on latitude and longitude. A Borden block is approximately 13 kilometres east to west, and approximately 18.5 kilometres north to south. Each Borden block is referenced by a four-letter designator, and sites within a block are numbered sequentially as they are found. The study area is located in Borden Block *AlGv*.

Sixteen sites have been registered within one kilometre of the study area. The information available about these sites has been summarized in Table 1. Regional sites can be expected to relate to the cultural/temporal categories outlined in Table 2. A detailed description of the time periods listed in Table 2 is found in Appendix A.

Table 1: Archaeological Sites Registered Within 1 km of the Study Area

Borden No.	Site Name	Site Type	Cultural Affiliation	Researcher
AlGv-18	Jarrett	Village	Undetermined pre-contact	Roland Orr, 1911 and 1918; MPP*, 1987
AlGv-34	Packers 1	Findspot	Undetermined pre-contact	MPP, 1987
AlGv-35	Packers 2	Campsite	Undetermined pre-contact	MPP, 1987
AlGv-36	Williams	Cabin	Historic Euro-Canadian	MPP, 1987 and 1991
AlGv-37	Packers 3	Campsite	Undetermined pre-contact	MPP, 1987
AlGv-59	Packers 8	Campsite	Undetermined pre-contact	MPP, 1987
AlGv-63	Packers 11	Findspot	Undetermined pre-contact	MPP, 1987
AlGv-95		Cabin	Historic Euro-Canadian	MPP, 1991
AlGv-96	Maple N'Hood 4 #1	Findspot	Late Archaic	Robert Pearce, 1992
AlGv-150		Findspot	Middle Archaic; Brewerton	ASI**, 1996
AlGv-151		Findspot	Undetermined pre-contact	ASI, 1996
AlGv-152		Homestead	Historic Euro-Canadian	ASI, 1996
AlGv-154		Findspot	Early Archaic; Nettling	ASI, 1996
AlGv-156		Findspot	Late Archaic; Innes	ASI, 1996
AlGv-157		Findspot	Undetermined pre-contact	ASI, 1996
AlGv-194	Richards	Homestead	Historic Euro-Canadian	ASI, 2001

MPP* = Mayer, Pihl, Poulton & Assoc., ASI** = Archaeological Services Inc.



Table 2: Outline of Southern Ontario Prehistoric and Historic Cultures

Period	Archaeological Culture	Date Range	Attributes
PALEO-INDIAN			
Early	Gainey, Barnes, Crowfield	9000 - 8500 BC	Big game hunters
Late	Holcombe, Hi-Lo, Lanceolate	8500 - 7500 BC	Small nomadic groups
ARCHAIC			
Early	Nettling, Bifurcate-base	7800 - 6000 BC	Nomadic hunters and gatherers
Middle	Kirk, Stanly, Brewerton, Laurentian	6000 - 2000 BC	Transition to territorial settlements
Late	Lamoka, Genesee, Crawford Knoll, Innes	2500 - 500 BC	Polished/ground stone tools (small stemmed)
WOODLAND			
Early	Meadowood	800 - 400 BC	Introduction of pottery
Middle	Point Peninsula, Saugeen, Jack's Reef Corner-Notched	400 BC - AD 800	Incipient horticulture
Late	Algonkian, Iroquoian	AD 800 – 1300	Transition to village life and agriculture Establishment of large palisaded villages Tribal differentiation and warfare
	Algonkian, Iroquoian	AD 1300 – 1400	
	Algonkian, Iroquoian	AD 1400 - 1600	
HISTORIC			
Early	Huron, Neutral, Petun, Odawa, Ojibwa	AD 1600 - 1650	Tribal displacements
Late	Six Nations Iroquois, Ojibwa, Mississauga Euro/Canadian	AD 1650 - 1800s AD 1780 -	Present European settlement

2.2 Physiography and Assessment of Prehistoric Potential

The study area is situated within the Peel Plain physiographic region of southern Ontario (Chapman and Putnam 1984: 174-176). The Peel Plain physiographic region covers a large area across the central portions of the Regional Municipalities of York, Peel and Halton. The surface of the plain is characterized by level to gently rolling topography, with a consistent, gradual slope toward Lake Ontario. The plain is made up of deep deposits of dense limestone- and shale-imbued till, often covered by a shallow layer of clay sediment. Soils within the study area and vicinity belong to the Chinguacousy series which have a heavy clay loam texture, predominantly formed on moderately sloping terrain (Hoffman and Richards 1955: Soil Map of York County). Although drained by many rivers flowing into Lake Ontario, drainage is imperfect within the inter-stream areas.

Two tributaries of the West Branch of the Don River flow into the study area where they join to form one creek. The study area consists of generally level terrain.

Potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in south central Ontario after



the Pleistocene era, proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most commonly used variables for predictive modelling of site location.

The Ministry of Culture Primer on Archaeology, Land Use Planning and Development in Ontario (1997:12-13) stipulates that undisturbed land within 300 metres of a primary water source (lakeshore, river, large creek, etc.), and undisturbed land within 200 metres of a secondary water source (stream, spring, marsh, swamp, etc.), as well as undisturbed land within 300 metres of an ancient water source (as indicated by remnant beaches, shore-cliffs, terraces, abandoned river channel features, etc.), are considered to have archaeological potential.

Therefore, based on the presence of tributaries of the West Branch of the Don River within the study area, as well as the proximity of 12 registered pre-contact archaeological sites within one kilometre of the study area (Section 2.1), the study area has potential for the identification of pre-contact archaeological remains.

2.2 Summary Review of Historical Mapping

The 1860 *Tremaine Map of the County of York* and the 1878 *Illustrated Historical Atlas of the County of York* were reviewed to determine the potential for finding historic archaeological remains within the study area. The study area is located within the former Township of Vaughan. It comprises Part of Lot 21, Concession 5 (Figures 2 and 3).

By 1860, the time of the *Tremaine Map* publication, the vicinity of the study area was settled, and the village of

Maple had developed within two kilometres of the study area. The bulk of the east half of Lot 21, Concession 5 is shown to be under the ownership of Mr. J. Richard while the most eastern part of the lot, which fronts onto Jane Street, was owned by a Mr. Mathison [sic]. No structures are illustrated within the study area.



Figure 2: The study area illustrated on the 1860 *Tremaine Map of the County of York*.

The 1878 *Illustrated Historical Atlas of the County of York* indicates that most of the east half of Lot 21, Concession 5 remained under the ownership of Mr. Jesse Richards (Figure 3). The eastern-most portion of the lot was owned by Mr. Gilbert Matheson. One homestead is indicated within Jesse Richards' land, fronting onto the present Major Mackenzie Drive.

Therefore, based on the presence of the homestead depicted in the 1878 *Illustrated Historical Atlas of the County of York*, the study area is deemed to have the potential for the recovery of historical archaeological remains, depending on the degree of more recent land disturbance.

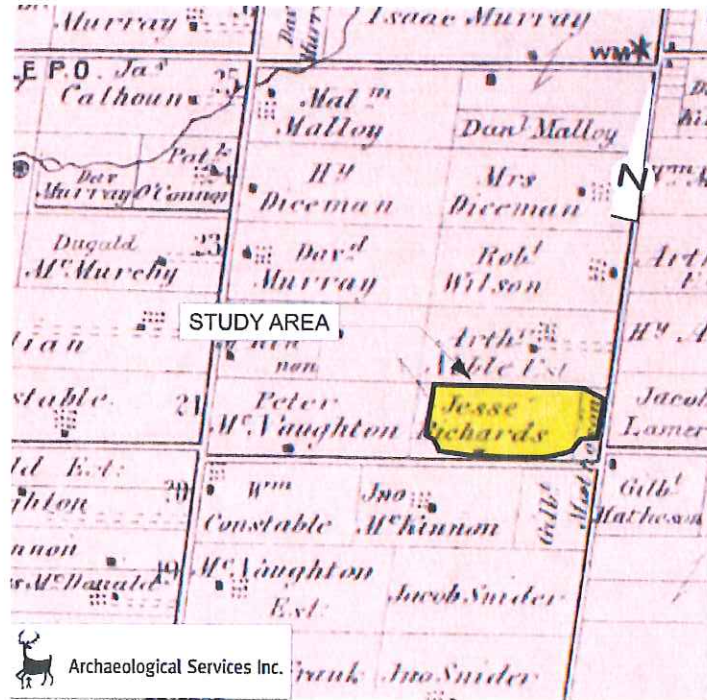


Figure 3: The study area illustrated on the 1878 *Illustrated Historical Atlas of the County of York*.

3.0 FIELD ASSESSMENTS

The study area is approximately 26 ha in size, and is bounded to the south by Major Mackenzie Drive, to the west by the Right of Way (ROW) of the Highway 400 on-ramp, to the west by Jane Street, and to the north by a residential area. Field observations have been compiled on project mapping for the study area (Figures 4 and 5).

3.1 Stage 1 Field Review

The Stage 1 field review of the study area was carried out by Mr. John Dunlop on April 29th, 2009, in order to confirm the assessment of archaeological site potential and to determine the degree to which development and landscape alteration may have affected that potential (ASI:2009). Weather conditions during the field review were cool and sunny.

Overall, two thirds of the study area is determined to have been previously disturbed and have no archaeological potential. These areas include all paved roads and access ways, as well as all parking lots extending through the study area. Extensive gravel was noted across the majority of the surface. The central and eastern portions of the study area, which consisted of level, grassed parkland with utilities such as light standards throughout, were determined to have been graded, and are therefore disturbed and have no archaeological potential (Plates 1, 2 and 3).

There is a series of berms, which run along the western, northern and southern study area boundaries, in the western half of the study area, which area also considered disturbed. There is also a level section, between the berm and the on-ramp ROW, which has been graded and is also considered disturbed (Plate 4).



Two small tributaries of the West Branch of the Don River join to form a larger creek channel within the western half of the study area (Plate 5). Low, wet areas are considered to have no archaeological potential.

The remainder of the study area consists of three separate parcels of land, one large area located between the tributary of the Don River and the berms adjacent to the western study area boundary, and two smaller areas located between the eastern side of the Don River tributary and a paved road. The large parcel is considered to be undisturbed, and the two smaller areas are deemed to be partially disturbed, given the presence of some gravel cover and compost dumping within these parcels (Plates 6 and 7). These three parcels of the study area were considered to have archaeological potential and require a Stage 2 survey.

Given that the two smaller parcels of the study area with archaeological potential requiring a Stage 2 archaeological assessment were found to be partially disturbed, a judgmental test pit strategy was recommended for these areas. The largest parcel, located west of the tributary, while grass covered lacked access for ploughing. This parcel is surrounded on three sides by berms and barbed wire fencing and there is no access from any roadway. There is also no access over the tributary which borders the eastern side of the parcel., therefore a test pit survey was recommended.





Figure 4: Stage 1 archaeological assessment of the study area.

3.2 Stage 2 Field Assessment

The Stage 2 field assessment was carried out on June 8th, 9th, and 10th, 2009 in order to inventory, identify and describe any archaeological resources extant on the subject property. All field work was conducted under the field direction of Mr. Rob Wojtowicz. The weather on all three days was cool, with a mix of sun and cloud.

The test pitting was limited to the three areas identified as having archaeological potential during the Stage 1 archaeological assessment (ASI 2009) (Figure 4). Once the Stage 2 survey began it was evident that all three parcels were disturbed, so a judgmental test pit strategy was adopted in accordance with the *Standards and Guidelines for Consulting Archaeologists (draft)* (MCL 2009: 17). The test pits were excavated into subsoil: the soils were screened through six millimetre mesh to facilitate artifact recovery (Plates 8 and 9). All test pits were backfilled.

Parcel 1 of the study area subject to test pitting is approximately 2.5 ha and is bounded by Major Mackenzie Drive, the tributary of the Don River and a paved access way. This parcel is characterized as mounding towards its' centre and is grassed. Gravel was noted on the surface in the northeast corner of the parcel. This parcel was test pitted in a "T" pattern, with two outlying test pits, at 10 to 15 m intervals (Figure 5).

Test pits ranged in depth from 22 cm near the bottom of the mound, to 95 cm on the mound. Soil profiles encountered in excavated test pits consisted of a 5 to 20 cm layer of dark brown loam, over a layer of gray/bluish dense clay with a depth of 15-50 cm, extending into light brown silty-clay subsoil. Gravel and asphalt deposits were encountered throughout the parcel in the top two layers of soil (Plates 10 and 11). The location of the homestead as illustrated on the 1878 *Atlas* (Section 2.2) corresponds to this parcel. No deposits associated with the homestead were encountered during the test pit survey nor are likely to have survived. No natural topsoil was encountered in this parcel.

Parcel 2 is bounded by the tributary of the Don River to the east, and the berms along the Highway 400 ROW and residential area to the west and north. This parcel is approximately 5.5 ha, and has a gentle slope to the southeast. This parcel is also grass covered. This parcel was test pitted in an "X" pattern, with intervals spacing of 15-30 m (Figure 5).

The test pits excavated in this parcel were more uniform than Parcel 1, with a depth range of 60-110 cm. The test pits excavated within 15 m of the tributary encountered the water table at a depth of 75 cm; all other test pits were excavated to subsoil. Soil profiles encountered consisted of dark brown clayey loam with a depth of 10 to 15 cm, over a brown or grey clay, often with inclusions of modern garbage and fragmentary building debris such as concrete and asphalt, with a depth range of 60-80 cm, and light brown silty-clay subsoil (Plates 12, 13 and 14). No natural topsoil was encountered.

Parcel 3 is bounded by the northern study area boundary, the tributary of the Don River and a paved access way. This parcel measures approximately 1.2 ha.

This parcel was test pitted in a linear pattern, from the northwest to the southeast, with test pit intervals of 30 m. In total, seven test pits were excavated (Figure 5). This parcel consists of a large mound of fill, along with several smaller piles, with a level area adjacent to the tributary of the Don River. This parcel is grass covered.



The test pits were all approximately 60 cm deep, consisting of soil profiles were comprised of a topsoil of brown clayey loam, with a depth of 20 cm. The layer below consisted of a light brown clay, with a depth of 30 centimetres. The next layer was a dark brown loamy soil, with a large amount of wood and other organic material included. This layer had a depth of 10 cm. The subsoil consisted of a light brown silty-clay. The dark loam organic layer is interpreted as an old dump or compost location (Plate 15). Two test pits, excavated in the level area adjacent to the tributary, were excavated to the water table, which was encountered at 75 cm (Plate 16). No natural topsoils were encountered.

Despite careful scrutiny, no archaeological deposits were encountered during this assessment.



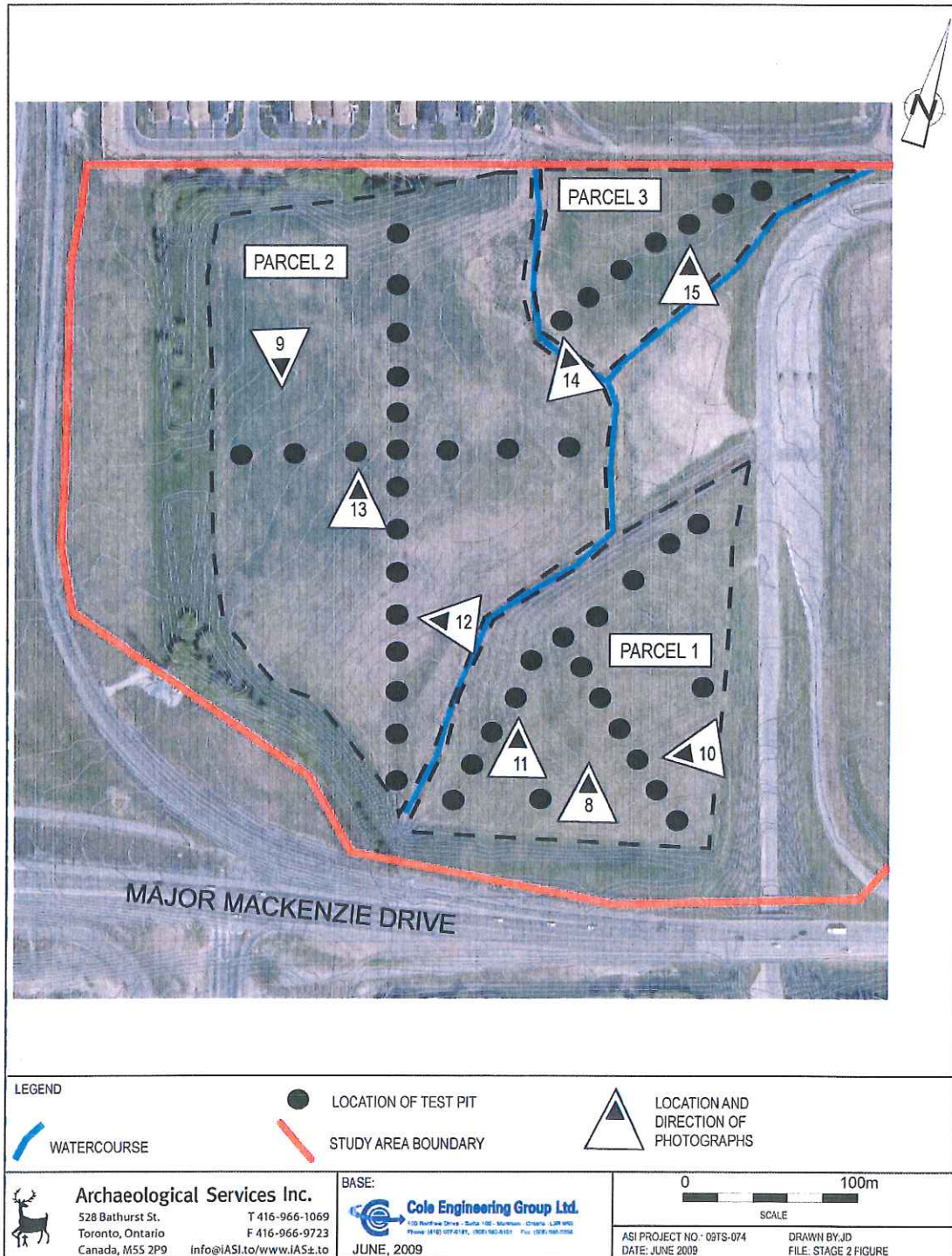


Figure 5: Stage 2 archaeological assessment of the parcels of the study area deemed to have archaeological potential on the basis of the Stage 1 field review.

4.0 CONCLUSIONS AND RECOMMENDATIONS

This report covers the Stage 1 and 2 archaeological assessment for Part of Lot 21, Concession 5, former Township of Vaughan, County of York, now the City of Vaughan, Regional Municipality of York. The study area is approximately 26 ha, and is located at the northeast corner of Highway 400 and Major Mackenzie Drive.

The background review of the study area revealed that 16 registered archaeological sites are located within one kilometre of the study area. A general review of the physiography of the study area indicated that two tributaries of the West Branch of the Don River join within the study area. The presence of watercourses and the proximity of a number of registered pre-contact archaeological sites give the study area potential for encountering pre-contact archaeological material.

A review of nineteenth century mapping indicated that there was a homestead located within the study area, along the southern boundary of the property. The location of the homestead, however, is within a disturbed area as the entire southern limit of study area consists of either a berm or an access road.

The study area was visually inspected on April 29th, 2009, and areas of archaeological potential were identified. Lands to the west of the western-most access road were deemed to require Stage 2 survey.

The Stage 2 survey was conducted on June 9th, 10th, and 11th, 2009. The three parcels of the study area subject to test pitting were found to be extremely disturbed, with layers of clay and gravel fill with depths ranging from 20 cm to 110 cm throughout. No deposits pertaining to the homestead illustrated on the 1878 *Atlas* were encountered, nor were any natural topsoils encountered during the test pitting. Despite careful scrutiny, no archaeological materials were encountered.

In light of these considerations, the following recommendation is made:

1. The study area may be considered free of any further archaeological concern.

The following conditions also apply:

This report is submitted to the Minister of Culture as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. The report is reviewed to ensure that the licensed consultant archaeologist has met the terms and conditions of their archaeological license, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with sec. 48 (1) of the *Ontario Heritage Act*.



The Cemeteries Act requires that any person discovering human remains must notify the police or coroner and the Registrar of cemeteries, Ministry of Small Business and Consumer Services.

The documentation related to the archaeological assessment of this project will be curated by Archaeological Services Inc. until such a time that arrangements for their ultimate transfer to Her Majesty the Queen in right of Ontario, or other public institution, can be made to the satisfaction of the project owner, the Ontario Ministry of Culture, and any other legitimate interest groups.



5.0 REFERENCES CITED

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6.0 PHOTOGRAPHY



Plate 1: Paved roadways which extend throughout the study area.



Plate 2: Light standards which extend throughout the eastern two thirds of the study area.



Plate 3: The graded and level portions throughout the eastern two thirds of the study area.



Plate 4: Berms, which extend around the northern, western and southern study area boundaries.





Plate 5: The tributaries of the Don River, which flow through the study area.



Plate 6: Parcel 2 of the study area, judgementally test pit.



Plate 7: Parcel 3; judgementally test pitted.



Plate 8: Test pitting the parcel (Parcel 1) west of the tributaries of the Don River.





Plate 9: Test pitting the parcels deemed to have archaeological potential, on the basis of the Stage 1 field review.



Plate 10: A disturbed test pit located in Parcel 1. Note the large gravel inclusions in the topsoil.



Plate 11: A disturbed test pit within Parcel 2. Note the gravel inclusions located throughout the topsoil layers.



Plate 12: Disturbed test pit located within Parcel 1. Note the mottled layers and gravel inclusions in the topsoil.



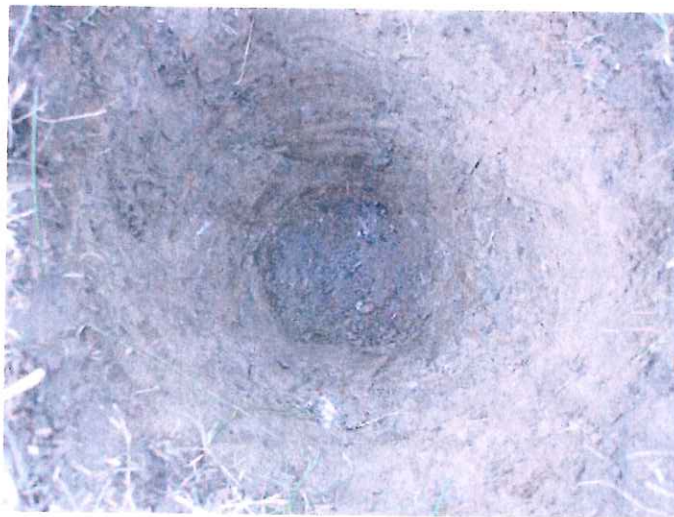


Plate 13: A disturbed test pit within Parcel 2. Note the asphalt located at the bottom of the test pit.



Plate 14: A field crew member (Ms. Amy Fox), standing in a deep test pit (>1 m).





Plate 15: A disturbed test pit located within Parcel 3. Note the deep, hard packed, clay topsoil layer.



Plate 16: A test pit excavated to the water table, within Parcel 3.