190-216 ARKELL ROAD
GUELPH, ON

Final

Phase I Environmental Site Assessment

Project Location:
190-216 Arkell Road
Guelph, ON

Prepared For:
Crescent Homes Ltd.
15 Curzon Crescent
Guelph, ON N1K 0B3

Prepared By:
MTE Consultants Inc.
520 Bingemans Centre Drive
Kitchener, ON N2B 3X9

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MTE File No.: 42063-200

TABLE OF CONTENTS

FIGURES

APPENDICES

EXECUTIVE SUMMARY

MTE Consultants Inc. (MTE) was retained by Crescent Homes Ltd. (the “Client”) to conduct a Phase I Environmental Site Assessment (ESA) for four contiguous properties located at 190, 202, 210 and 216 Arkell Road, Guelph, Ontario (hereinafter referred to as the “Site”). At the time of assessment, the Site was in use for residential purposes and was located in a primarily residential area within the municipality of Guelph.

The properties at 190, 210, and 216 Arkell Road were purchased by Client, while the property at 202 Arkell Road was to be purchased at a future date. The properties at 190, 210, and 216 Arkell Road had tenants living in them, with tenants at 210 and 216 Arkell Road being the former owners of the property. The tenant at 190 Arkell Road was not the former property owner. At the time of the site visit, 202 Arkell Road was inhabited by property owners.

The Site was approximately 2.6 hectares (6.3 acres) in size and was located west of the Arkell Road and Summerfield Drive intersection in Guelph, Ontario. At the time of assessment, the Site was composed of four residential properties with municipal addresses 190, 202, 210 and 216 Arkell Road.

In addition to residential buildings, additional sheds/garages were located across the Site. Surrounding the residences and sheds were backyards consisting of grass and/or landscaping. A wooded area and wetland were located along the west property boundary of the Site. A portion of the wetland was identified by the Ministry of Natural Resources as Provincially Significant.

MTE understands that the Site is to be redeveloped into higher density residential housing and/or a subdivision.

The properties surrounding the Site included residential uses to the north, east, and south, and a wetland/forested area to the west and further south. Beyond the residential area to the north was agricultural land. A large residential property was located to the west and northwest, followed by a former golf course.

MTE understands the Site has been used for residential purposes since approximately the early 1960s when the first residences were developed on the Site at 190, 202 and 216 Arkell Road. The residential dwelling at 210 Arkell Road was developed in 1977. A newer residence was erected at 190 Arkell Road in the 1990s. Prior to the 1960s, the area was primarily vacant or agricultural land.

During the Site visit, MTE observed additional Site operations related to "hobby" or recreational use, including the following:

- A woodshop located at 216 Arkell Road within the shed;
- A personal vehicle maintenance shed located at 210 Arkell Road, as confirmed by the tenant/former owner; and
- Former poultry areas at 210 Arkell Road.

This Phase I ESA was conducted in general accordance with the Canadian Standards Association (CSA) Standard Z768-01. This report has been completed for due diligence purposes in advance of a potential real estate transaction. MTE understands that a Record of Site Condition (RSC) has not been requested at this time.

Based on the information compiled through records review, interviews and Site visits, no issues representing potential or actual/known environmental contamination associated with surrounding properties were identified. However, the Phase I ESA revealed the following issues representing potential or actual/known environmental contamination associated with the Site:

- Soil sample results identified exceedances of the applicable Table 1 Standards for zinc at BH5 and BH6, however these exceedances are inferred to be representative of background zinc concentrations in soil;
- Importation of fill material of unknown quality for backfill and potential building debris associated with the demolition of the former residential dwelling at 190 Arkell Road;
- Possible impacts from releases from historic use of furnace oil for residential heating purposes at 190, 202 and 216 Arkell Road; and
- Importation of fill material of unknown quality stockpiled at 190 Arkell Road.

Further to the above, MTE also notes the following:

- A locally significant natural area zoned as a Provincially Significant Wetland by the MNRF is located on the west end of the Site and further south;
- The presence of domestic wells on Site; and
- The distance of the Site to the Burke municipal well (approximately 70m) and the presence of the Site in WHPA-A.

Based on the findings of this Phase I ESA, actual and potential environmental concerns have been identified at the Site. In order to assess potential environmental concerns associated with soil and groundwater quality as they may impact future development,

intrusive investigation to address the aforementioned issues is recommended. In particular, a Phase II ESA is recommended to investigate the quality of fill material at 190 Arkell Road associated with the current stockpiles and the demolition of the former residential dwelling, as well as to investigate the presence of releases from potential historic use of fuel oil for heating purposes at all residential dwellings.

Alternatively, these issues could be addressed through investigations during the first stages of redevelopment of the Site, considering it is understood that redevelopment will including the demolition of all buildings and significant ground surface disturbance. However, combining the investigation of the aforementioned issues with the commencement of Site redevelopment may result in undesirable impacts to the redevelopment schedule and/or budget, should the management of any significant amounts of contaminated soil and/or groundwater be required.

Notwithstanding the above, MTE also recommends the following:

- In addition, the on-Site monitoring wells should be operated and maintained in accordance with Ontario Regulation 903 or properly decommissioned as per the Regulation should they no longer be required;
- Solid waste debris (i.e. scrap metal and waste wood piles) should be collected and removed in accordance with regulatory requirements such as Ontario Regulation 347;
- Additional sampling and characterization of soils at the Site may be required to determine any limitations on the potential reuse of excess soil generated during future redevelopment of the Site (if excess soil generation is anticipated); and,
- A pre-demolition designated substances survey should be conducted prior to redevelopment of the Site and any designated substance should be managed in accordance with regulatory requirements during demolition.

This report does not assess geotechnical issues, compliance with municipal by-laws/ permits, or features of the natural environment.

1.0 INTRODUCTION

1.1 Site Description

MTE Consultants Inc. (MTE) was retained by Crescent Homes Ltd. (the "Client") to conduct a Phase I Environmental Site Assessment (ESA) for adjoining residential properties at 190, 202, 210 and 216 Arkell Road in Guelph, Ontario (hereinafter referred to as the "Site"). The Site is located between Gordon Street and Victoria Road in a mainly residential area in south Guelph. The Site location is shown on **Figure 1**. For the purposes of this report, Arkell Road is assumed to run in a north-south direction.

The Site is approximately 2.6 hectares (6.3 acres) in size. The properties each contain a single family dwelling with individual septic systems and various detached sheds or garages. The properties at 190, 210, and 216 Arkell Road were owned by Client, with tenants living in them. The tenants at 210 Arkell Road were former inhabitants (i.e., the children of the former property owner), and the tenant at 216 Arkell Road was the former property owner of 32 years. The tenant at 190 Arkell Road was not the former property owner. The property at 202 Arkell Road was to be purchased by the Client at a future date, and had the property owners living within the residence.

A wooded area and wetland were located along the west property boundary of the Site. A portion of the wetland was identified by the Ministry of Natural Resources as Provincially Significant. Other properties surrounding the Site are residential. The Site and surrounding properties are shown on **Figure 2.**

1.2 Purpose

Authorization to proceed with the project was received from Mr. Nitin Jain on behalf of Crescent Homes.

The assignment was completed by MTE under reference number 42063-104 for Crescent Homes. This Phase I ESA was completed for due diligence purposes in advance of a redevelopment and planning approval by the City of Guelph. MTE understands that a Record of Site Condition (RSC) is not required and has not been requested at this time.

1.3 Scope of Work

The Phase I ESA was completed in general accordance with the Canadian Standards Association (CSA) document Z768-01 and included the following tasks:

- Review of environmental information related to the Site and the surrounding properties, including published data, correspondence and online records as available from the Ontario Ministry of Environment, Conservation, and Parks (MECP), Ministry of Natural Resources and Forestry (MNRF), Grand River Conservation Authority (GRCA), Technical Standards and Safety Authority (TSSA) and the City of Guelph;

- Review of physical setting information including aerial photographs, topographic maps and geologic reference materials;
- Review of Environmental Risk Information Services Ltd. (ERIS) databases report for the Site;
- Site inspection and general observation of surrounding properties from publicly accessible areas;
- Assessment of all information to identify potential environmental concerns on the Site and surrounding properties;
- Photographic log of the Site; and
- Preparation of this report.

This report does not assess geotechnical issues or compliance with municipal by-laws/ permits.

1.3 Methodology

The "Study Area" included properties located wholly or partially within 250 m from the boundaries of the Site, as shown on **Figure 2**. MTE conducted research and collected available information that was reasonably accessible for the Site and surrounding properties, through the following methods:

- Written correspondence with regulatory and government agencies;
- Research and review of publically available information through on-line databases;
- Review of an EcoLog ERIS database report for the Site;
- Interview with persons knowledgeable about the Site;
- Inspection of the Site and its boundaries; and
- Review of compiled records, maps, figures and reports applicable to the Site and surrounding properties.

Information was reviewed back to the first developed use of the property that may affect the environmental condition or to the extent that historical records allowed.

MTE has compiled a written report of findings including figures and appendices for use by the Client that has been prepared under the supervision of Mr. Michael Fabro, P.Eng, QP_{ESA}. The qualifications of Mr. Fabro, Ms. Arissa Cummings and Ms. Jessica Sowa, who conducted the Site inspection and compiled the report, are included in **Section 6.0**.

2.0 RECORDS REVIEW

2.1 General

The Site has been used for residential purposes since the early 1960s when residential dwellings were constructed at 190, 202 and 216 Arkell Road. The residential dwelling at 210 Arkell Road was constructed in 1977. Prior to the 1960s, the area was primarily vacant or agricultural land.

2.2 Aerial Photographs

Aerial photographs were reviewed for information pertaining to the Site and surrounding lands. MTE retained LGI Copy Service Canada and used Google Earth imagery to review select aerial photographs between 1930 and 2013 in approximately ten year intervals (where available at reasonable scale). Due to scale and clarity of specific aerial photographs, observations may be limited. Summaries of each photograph are described below. Copies of the aerial photographs are included in **Appendix A**.

Year	Aerial Photograph Description
1930	Site: The Site appeared to be undeveloped or used for agricultural purposes, with no discernable buildings observed on the Site. Surrounding Land Uses: Arkell Road was visible directly east of the Site. The surrounding area was primarily agricultural. Two dirt driveways were observed north of the Site, with entrances from Arkell Road.
1951	Site: The Site appeared to be generally unchanged compared to the 1930 photograph. Surrounding Land Uses: The surrounding lands appeared to be generally unchanged compared to the 1930 photograph.
1962	Site: The Site appeared to be developed with residential dwellings at 190, 202, and 216 Arkell Road. Surrounding Land Uses: A dirt driveway was observed south of the Site, leading to inferred residential buildings. A long driveway to the north of the Site was observed to lead to a large residential property. Further north was agricultural land. Beyond Arkell Road to the East was agricultural land, with a farmstead located to the northeast of the Site. To the south of the Site was a residence followed by forested land.
1972	Site: The Site appeared to be generally unchanged compared to the 1962 photograph. Surrounding Land Uses: In general, the surrounding lands appeared generally unchanged compared to the 1962 aerial photograph, with exception of an inferred warehouse or barn having been constructed to the southeast of the Site, south of Arkell Road (approximately 80 m southeast of the southeast corner of the Site).
1981	Site: The Site appeared to be generally unchanged compared to the 1972 photograph with the exception of the addition of a residential dwelling at 210 Arkell Road. Surrounding Land Use: In general, the surrounding lands appeared similar to those in the 1972 aerial photograph. Development was observed in the area beyond the residential property to the east.

Year	Aerial Photograph Description
1990	Site: The Site appeared to be generally unchanged compared to the 1981 aerial photograph with the exception of the addition of a shed to the west of the residence at 210 Arkell Road. Surrounding Land Uses: In general, the surrounding properties appeared relatively unchanged compared to the 1981 photograph.
2006	Site: Several areas of disturbed ground were visible in the backyard of 210 Arkell Road between the residence and shed, with an additional disturbed area observed on the north and south edges of the shed. Cars were observed to be parked along the north side of the shed. The former residence at 190 Arkell Road was not observed (inferred to have been demolished) and a new residential dwelling was observed further west of the original building location. The forested area behind the residence at 190 Arkell Road was observed to have been reduced, with the eastern edge of the forest significantly further west of the pond compared to the forest edge observed in the 1990 photograph. Surrounding Land Uses: Northern lands were vacant or observed to be in use as agricultural land, with residential areas to the east and south of the Site. Zecca Drive, Coutts Court, and Bard Boulevard were observed along with completed homes. Amsterdam Crescent was not observed to have been built yet.
2013	Site: Disturbed ground areas formerly visible in the backyard and by the shed at 210 Arkell Road were observed to be covered in vegetation. The eastern edge of the forested area at 190 Arkell Road was observed to be further east, closer to the pond. Surrounding Land Use: Land to the north of the Site was observed to be disturbed and inferred to have been cleared for development. The remainder of the surrounding properties were observed to be in use for residential purposes and to generally be representative of the area's current configuration.

2.3 Municipal Directory Search

Municipal directories were reviewed at the Guelph public library for the Site and surrounding addresses. Municipal directories for the years between 1978 and 2013 were available and generally indicated that the properties surrounding the Site have been residential or undeveloped during that timeframe. Properties pertaining to the Site at 190 and 216 Arkell Road were first listed in the 1997/1998 directory. 202 Arkell Road was first listed in the 2003/2004 and 210 Arkell Road was first listed in 2012/2013. Listings prior to 1978 were not available.

The 1997/1998 directory listed *Dutch Mill Nursery Garden* at 135 Arkell Road, however there were no later listings for *Dutch Mill Nursery Garden*. Two other business listings within the Study Area included 210 Summerfield Drive (*All Occasion Cakes* and *Porta Plus*).

Summerfield Drive, Bard Boulevard, Coutts Court, and Zecca Drive were first listed in 2008/2009, and Amsterdam Crescent was first listed in 2012/2013. Amos Drive and Dawes Drive were not listed within the municipal directories.

2.4 Fire Insurance Plans and Property Underwriters' Reports

Fire Insurance Plans (FIPs) were developed between 1875 and 1923 and were revised in some areas until the 1970s. FIPs typically illustrate building construction, occupancy and potential fire hazards and may provide information regarding environmental concerns such as storage tanks, transformers, boilers and electrical rooms.

MTE reviewed FIPs for the years 1897, 1907 (revised 1911) and 1960, as obtained from the Guelph Public Library. The FIPs provided coverage of the urban portion ("downtown") of Guelph, which did not include the Study Area. Given the rural nature of the Study Area during the years in which FIPs were created and updated, it is unlikely FIPs exist for the Site. No FIPs providing coverage of the Study Area were available for review.

2.5 Topography, Geology and Hydrogeologic Setting

One 1983 Ontario Base Map (OBM) covering the Site and surrounding properties was reviewed (OBM No. 10 17 5650 48150). A copy of the 1983 OBMs is provided in **Appendix A**.

The UTM coordinates of the approximate centre of the Site are 565,184 metres east and 4,818,845 metres north. A review of the 1983 OBMs indicated the following:

- The Site appears to be located within a primarily residential area;
- Five buildings are shown to be present at the eastern portion of the Site, directly west of what is currently known as Arkell Road; and
- Based on the contour lines shown, Site elevation is relatively flat at 335.0 masl.

The Site is located within the Speed River Subwatershed and within the Guelph Drumlin Field characterized by drumlins and gravel terraces. The drumlins are comprised of sandy Wentworth Till, described as coarse-grained sandy to silty sand till (Chapman and Putnam, 1984).

The Site is underlain by the Guelph Formation, characterized as sandstone, shale, dolostone and siltstone.

2.6 Environmental Risk Information Services (ERIS) Report

MTE contacted ERIS, an environmental database and information service company, to request a search of government (federal and provincial) and private records for information pertaining to the Study Area. A copy of the ERIS Report is provided in **Appendix B**.

Based on the ERIS Report, six water well records were returned for the Site. The records indicated the presence of four ground water monitoring wells and two domestic wells. No further records were returned for the Site.

The ERIS Report provided records of four environmental compliance approvals (ECAs), one TSSA historical pipeline incident, three spills, and 14 water wells associated with surrounding properties, as summarized:

- ECA records pertaining to municipal and private sewage works along the Arkell Road corridor from Gordon Street to Victoria Road and one ECA record pertaining to municipal drinking water systems at 164 Arkell Road;
- Spill records indicating one spill of hydraulic oil (quantity unknown) at 25 Coutts Court in 2015, a natural gas pipeline strike and discharge of natural gas at 14 Amos Drive in 2015, and a spill of petroleum-based oil in 2017 at 164 Arkell Road (quantity unknown, the spill was classified as a minor environmental spill);
- TSSA records indicate a natural gas discharge at 14 Amos Drive (listed above); and
- Water well records pertaining to test holes/monitoring wells and domestic well construction.

Groundwater is expected to flow in a southerly direction, thus the properties with reported historical spills are located cross-gradient and down-gradient from the Site therefore potential impact to the Site is inferred to be very low.

2.7 Environmental Regulatory Agencies and Utilities

MTE requested and reviewed available records from several regulatory agencies. Pertinent records are summarized below and have been included in **Appendix C** of this report. If not listed otherwise, copies of the search results and records are maintained on file with MTE.

Technical Standards and Safety Authority (TSSA): The TSSA was contacted for electronic database information concerning underground storage tanks (USTs) or aboveground storage tanks (ASTs) on the Site and the following surrounding properties:

- 164, 182, and 220 Arkell Road;
- 2 Summerfield Drive; and
- 24 and 25 Coutts Court.

On September 18, 2018, the TSSA responded that no electronic records of any fuel storage tanks exist for the Site and surrounding properties. The response from the TSSA is provided in **Appendix C**.

Ministry of Environment, Conservation and Parks: The MECP was previously known as the Ontario Ministry of the Environment (MOE) and the Ontario Ministry of the Environment and Climate Change (MOECC). For ease of discussion in this report, “MECP” is used to represent this provincial ministry and is inclusive of MOE and MOECC.

MECP Freedom of Information (FOI): FOI requests were submitted to the MECP for information regarding environmental concerns on file for all four municipal addresses that comprise the Site. At the time of preparation of this report, responses had been provided from the MECP indicating no records had been found for the Site. FOI records are provided in **Appendix C**.

MECP Inventory of Coal Gasification Plant Waste Sites in Ontario (April 1987): The Site has not been used for the gasification of coal. No coal gasification plants were identified within 1 km of the Site.

MECP Inventory of Industrial Sites Producing Coal Tars and Related Tars in Ontario (November 1988): The production and use of coal or other tars has not taken place at the Site or within 1 km of the Site.

MECP Waste Disposal Inventory (June 1991): A review of the Waste Disposal Site Inventory indicated that there are no 'active' or 'closed' landfills registered on the Site or within 1 km of the Site.

MECP PCB Storage Sites (July 2000): The Site was not listed as a storage site for PCBs. No PCB storage sites were identified within the Study Area.

MECP Access Environment (December 1999): MTE reviewed the MECP online Access Environment database for any Certificate of Approval (C of A), Environmental Activity and Sector Registry (EASR) and Environmental Compliance Approval (ECA) records for the Site and Study Area.

Two records for the Site and surrounding area were returned indicating approval for private and municipal sewage works on Arkell Road, from Gordon Street to Victoria Road. The approvals were dated March 7, 2008. The registrations noted the requirement of the construction of storm and sanitary sewers, storm water management facilities, infiltration trenches, and storm water interceptors along this corridor to facilitate residential development.

An additional seven records were returned for the Victoria Gardens Subdivision located along Summerfield Drive. The approvals were dated for various phases of the subdivision construction, dating from 2003 to 2007. The registrations noted the requirement of the construction of storm and sanitary sewers, oil and grit separators, infiltration trenches and basin, dry ponds, and storm water interceptors within the subdivision construction.

No other EASR, C of A, or ECA records were identified for the Site or properties within the Study Area.

MECP Environmental Registry: MTE reviewed the Environmental Registry online and no records were found for the Site or properties within the Study Area.

MECP Brownfield Environmental Site Registry: MTE searched the Brownfield Environmental Site Registry for any Records of Site Condition (RSCs) filed within 250 m of the Site. One RSC was found at 246 Arkell Road (north adjacent property) to support a redevelopment from a vacant agricultural/residential area to a residential subdivision.

The RSC filing indicated the presence of five areas of potential environmental concern related to former farm operations and dumping. The RSC stated that only soil was impacted above applicable site condition standards established by the MECP, and migration of contaminants off of the RSC site was not anticipated as groundwater impacts were not identified. Approximately 218.49 tonnes of impacted soil was remediated via excavation, with confirmatory sampling. No additional soil was reportedly brought to the RSC site as backfill.

MECP Hazardous Waste Information Network (HWIN): MTE searched the HWIN online database for any active registrations for the Site. The Site is not listed as a registered waste generator. The surrounding properties were observed to be used for agricultural and/or residential purposes and, as such, no listings for the properties in HWIN were observed.

MECP Water Well Records Inventory: A review of the MOECC online water well records database identified two potable water wells on the Site. One record provided details for a well at 190 Arkell Road toward the southwest portion of the property that was drilled in 1962, and one another record provided details for a well located on the property line between 190 Arkell Road and the back portion of 210 Arkell Road, drilled in 1998. Based on discussions with the Site representative (refer to Section 4.3.1), domestic wells are located at 190 and 202 Arkell Road and the properties at 216 and 210 Arkell Road are serviced with municipal water.

In addition to potable water wells, four ground water monitoring wells were identified in the MECP online records. The monitoring wells were installed during the 2017 geotechnical investigation completed by Peto McCallum Ltd. (PML), see **Section 2.9**. The location of the monitoring wells are shown on **Figure 3.**

Based on a review of the MECP well records, stratigraphy in the general area of the Site is described as clay and gravel, followed by a grey hardpan layer, followed by fine sand and gravel, overlaying bedrock. Bedrock was encountered in one domestic well record at depths ranging from approximately 11.9 to termination at 24.4 mbgs. Ground water monitoring wells indicated shallow ground water was encountered as high as 1.1 mbgs, but indicated saturated soil conditions at the Site. Based on the available domestic well records, deep ground water was generally encountered in the bedrock at depths ranging from 19.8 to termination at 24.4 mbgs.

Environment Canada National Pollution Release Inventory (NPRI) (1992): The NPRI requires companies to report information on releases and transfers of pollutants to the Government of Canada on an annual basis. MTE reviewed the NPRI between 1993 and 2017 for information pertaining to the Site and Study Area. No records were returned for the Site or properties within the Study Area.

Federal Contaminated Sites Inventory: MTE reviewed the inventory for any Federal Contaminated Sites located on-Site or within the Study Area. Based on a review of the inventory, no records were identified for the Site or properties within the Study Area.

Union Gas Limited (Union Gas): MTE contacted Union Gas for information related to the installation of natural gas services at the Site. MTE received a response on September 24, 2018 indicating that natural gas services were installed at the Site properties on the following dates:

- 190 Arkell Road: September 1, 1995;
- 202 Arkell Road: November 16, 1992;
- 210 Arkell Road: May 17, 1978; and
- 216 Arkell Road: August 30, 1982.

The response from Union Gas is provided in **Appendix C.**

2.8 Company Records

No company records were made available to MTE for review.

2.9 Previous Environmental Reports

The following environmental reports pertaining to the Site were available to MTE for review:

Draft Geotechnical Investigation, Proposed Arkell Road Subdivision, Guelph, Ontario, dated April 20, 2017, completed by Peto MacCallum Ltd. for Crescent Homes Inc.

Peto MacCallum Ltd. (PML) completed a geotechnical investigation at the Site for a potential residential subdivision. The following pertinent information was identified by MTE:

- Six boreholes were completed as part of the investigation, completed to a maximum depth of 8.1 mbgs. Subsurface stratigraphy was identified as surficial topsoil and localized fill overlying cohesionless native deposits.
- Fill was found at approximately 0.46 to 0.69 mbgs in two boreholes, composed of either sand and gravel or silt. Native cohesionless deposits of silt, sand, or sand and gravel extended to borehole termination depths. Bedrock was not encountered in any borehole.

- Four of the six boreholes were completed as ground water monitoring wells with screened intervals ranging from approximately 6 to 8 m.
- Ground water was encountered at depths of 0.7 to 2.9 mbgs.
- Based on ground water observations, shallow ground water levels appear to slope down from north to south.
- Select soil samples were sampled and submitted for chemical analysis, including metals, inorganics, and pesticides. Two soil samples marginally exceeded the Table 1 Site Condition Standard for zinc (BH5-SS1 concentration of 313 µg/g and BH6-SS3 concentration of 370 µg/g, versus the 2011 Table 1 SCS of 290 µg/g).

Hydrogeological Investigation, 190-216 Arkell Road, Guelph, Ontario, dated June 29, 2018, completed by MTE Consultants Inc. for Crescent Homes.

MTE completed a hydrogeological investigation at the Site for the proposed residential subdivision. The following pertinent information was identified:

- Shallow ground water at the Site is expected to flow in a southerly direction. Based on previous environmental reports the Site is generally flat with elevations ranging between 333.3 to 335.5 m above mean sea level, with elevation decreasing toward the northeast. Surface water runoff drains from south to north, toward the Provincially Significant Wetland (PSW).
- Ground water chemistry parameters were measured in the wells, including physical tests, anions and nutrients, and dissolved metals. Detectable nitrate, calcium, magnesium, potassium, silicon, and strontium concentrations were reported.
- Sodium, chloride, barium, copper, and zinc were also reported above detection limits but did not exceed the 2011 Table 1 SCS for ground water. Elevated sodium and chloride concentrations are inferred to be resulting from road salt application on Arkell Road and concentrations decrease from south to north.
- Recommendations included:
    - Ongoing groundwater monitoring outside of construction areas;
    - Soils brought to the Site for grading purposes must have the same or better infiltration rates as current conditions; and
    - A salt management plan is required for the Site.

Note: The 2011 Table 1 SCS are considered applicable to the Site as per O.Reg. 153/04 (section 41.(1) (a) ii) due to the presence of a PSW on the Site.

2.10 Other Regulatory Agencies

2.10.1 Grand River Conservation Authority

MTE reviewed the Grand River Conservation Authority on-line mapping resource for information regarding natural features on the Site and the Study Area. The following pertinent information was noted:

- The Site is located within a GRCA Regulation Limit;
- A Wetland is located on a portion of the west end of the Site;
- The closest municipal well is Burke Well located approximately 70 m south of the Site, west of Arkell Road;
- The Site is located within Well Head Protection Areas (WHPA) A and B of the Burke Well;
- The Site and Study Area are not located within an Issue Contributing Area; and
- The Site and Study Area are not located within an Intake Protection Zone (IPZ).

The Burke municipal supply well is located at 164 Arkell Road. The Burke well is screened within bedrock to depths of 79.9 mbgs and draws from the deep aquifer system. The well depth is within the Guelph – Middle Gasport Formation.

A portion of 190 Arkell Road is located within 100 metres of the Burke Well and is identified as WHPA-A. The remainder of the Site is located within WHPA-B, which is designated as a 2 year time-of-travel to the Burke Well.

A copy of the GRCA map is included in **Appendix C**.

2.10.2 Ministry of Natural Resources and Forestry

MTE reviewed the Ministry of Natural Resources and Forestry (MNRF) online Natural Heritage mapping for information related to natural heritage features, Areas of Natural Scientific Interest (ANSIs), PSWs, and species-at-risk that may be present at the Site or within the Study Area. The MNRF mapping tool identified a Provincially Significant Wetland on the Site, as well as adjacent to the west and south of the Site. The American Burying Beetle is identified as an extirpated species (last observed 1930s) on the Site and in the Study Area; however, given the status of the species, it is unlikely to be currently present on the Site or within the Study Area.

A copy of the MNRF map is included in **Appendix C**.

2.10.3 City of Guelph

City of Guelph Official Plan

MTE reviewed the Official Plan of the City of Guelph (Consolidated March 2018), for information regarding natural and cultural resources in the Study Area.

Information pertaining to the Site and surrounding areas is as follows:

- The Site and surrounding area are within a Significant Natural Area with Low Density Greenfield Residential and Low Density Residential, and is not located within a business, commercial, industrial land use area, or major utility (Schedule 2);
- The Site and surrounding area are located within a Natural Heritage System and are not located within a flood plain (Schedule 3);

- The Site and surrounding area are designated PSW, defined by the City of Guelph (Schedule 4A);
- The Site and surrounding area are defined by the City of Guelph as Natural Heritage Systems (Schedule 4B);
- The forested portion of the Site and surrounding area is designated Significant Woodlands (Schedule 4C);
- The Site and surrounding area are defined as containing Significant Wildlife Habitat (Schedule 4E);
- There are no railway lines present in the Site or Study area (Schedule 5); and
- The Site and surrounding area are within the Wellhead Protection Areas A and B (Schedule 7).

Environmental Records Inquiry

An Environmental Record Inquiry request was submitted to the City of Guelph for information regarding environmental concerns on file for the Site at 210 Arkell Road. A response was received from the City of Guelph on October 9, 2018. The response indicated that on May 28, 2004, an unknown quantity of sewage was released onto 210 Arkell Road from a neighbouring septic system. The historic sewage release is not considered a significant environmental concern to the Site.

The response from the City of Guelph is provided in **Appendix C.**

3.0 SITE VISIT AND INTERVIEW

3.1 Site Visit

A Site inspection was completed on September 18, 2018, by Ms. Arissa Cummings and Ms. Jessica Sowa of MTE. The weather was slightly overcast and the ambient air temperature was approximately 20°C.

MTE returned to the Site on September 27, 2018 to inspect additional areas of the Site that were inaccessible during the initial Site visit.

The Inspection Report is included in **Appendix D**. Photographs were taken of the Site and adjacent properties at the time of the inspection and are included in **Appendix E**.

Limitations

During the Phase I ESA site visits, the following areas were inaccessible to MTE for inspection:

- Residential dwelling and detached garage located at 202 Arkell Road; and
- A small portion of the west end of the forested area located at 190 Arkell Road.

3.2 Interviews

MTE conducted an interview with Mr. Ted Russell (the "Site representative"). Mr. Russell is a Project Manager for Crescent Homes and has been familiar with the Site for the last two years.

Additional information was provided during the Site visits by the former tenant of 210 and current tenant (previous owner) of 216 Arkell Road.

The Site Representative indicated stockpiling of fill material and personal vehicle maintenance had taken place on the Site. The tenants at 210 and 216 Arkell Road also indicated the following information:

- An electrical fire occurred on the exterior wall of the residence at 216 Arkell Road, no firefighting chemicals were used;
- Recreational burning had previously taken place at 210 Arkell Road;
- Mold was present in the basement of 216 Arkell Road due to flooding;
- Waste vehicle fluids (e.g., motor oil) from personal vehicle maintenance was disposed off-Site; and
- The test pit observed on the property at 210 Arkell Road during the initial Site Visit was used to test a privately-owned excavator and would be filled in.

The Site Representative and interviewed tenants were unaware of other environmental concerns such as past use of heating fuel oil, spills on Site, or demolition of previous structures.

The interview questionnaires for each property are provided in **Appendix D**.

4.0 EVALUATION OF FINDINGS

4.1 Site History and Description

The Site comprises 190, 202, 210, and 216 Arkell Road in Guelph, Ontario. The legal descriptions of the properties are as follows:

Municipal Address	Legal Description
190 Arkell Road	Pt Lot 6, Concession 8, Township Of Puslinch, As In Ros231085 ; Guelph
202 Arkell Road	Pt Lot 6, Concession 8, Township Of Puslinch, Part 2, 61r516 ; Guelph
210 Arkell Road	Pt Lot 6, Concession 8, Township Of Puslinch, Part 1 & 3, 61r516 ; Guelph
216 Arkell Road	Pt South 1/2 Of Rear Pt Of Lot 6, Con. 8, Township Of Puslinch, As In Ros605347 ; Guelph

The Site is approximately 2.6 hectares (6.3 acres) in size and is located west of the intersection of Arkell Road and Summerfield Drive in south Guelph. At the time of assessment, the Site was composed of four residential properties with municipal addresses 190, 202, 210 and 216 Arkell Road. Based on the review of aerial photographs and discussions with the Site Representative, development of the residential dwellings at 202 and 216 Arkell Road occurred in the early 1960s. The existing residential dwelling located at 190 Arkell Road was developed in the 1990s; however, a former residential dwelling first visible in the 1961 aerial photograph was historically located on this property. The residential dwelling at 210 Arkell Road was developed in 1978.

In addition to the residential dwellings, additional structures consisting of sheds and garages were located across the Site. The age of construction of these structures were unknown; however, it was evident that additional structures formerly located north and west of the existing shed located at 210 Arkell Road had been demolished. Surrounding the residences and sheds were backyards consisting of grass and/or landscaping. A wooded area and wetland were located along the west property boundary of the Site.

The primary access to the Site was from Arkell Road. The Site representative was not aware of any existing easements or rights-of-way on the Site.

As described in Section 2.10.3, The City of Guelph Official Plan identifies the Subject Lands as within a 'Greenfield Area' and classifies the property as 'Low Density Greenfield Residential'. The City of Guelph Official Plan does not identify the Site as a Regulatory Floodplain; however a Significant Natural Area is illustrated along the south and west boundary of the Site. The MNRF identifies this feature as a Provincially Significant Wetland.

The properties surrounding the Site included residential uses to the north, east, and south, and a wetland/forested area to the west and further south. Beyond the residential area to the north was agricultural land. A large residential property was located to the west and northwest, followed by a former golf course.

4.2 Site Operations

MTE understands the Site has been used for residential purposes since approximately the early 1960s when the first residences were developed on the Site at 190, 202 and 216 Arkell Road. The residential dwelling at 210 Arkell Road was developed in 1977. Prior to the 1960s, the area was primarily vacant or agricultural land.

During the Site visit, MTE observed additional Site operations related to "hobby" or recreational use, including the following:

- A woodshop located at 216 Arkell Road within the shed;

- A personal vehicle maintenance shed located at 210 Arkell Road, as confirmed by the tenant/former owner; and
- Former poultry areas at 210 Arkell Road.

4.3 Utility Services

4.3.1 Stormwater/Water Wells/Wastewater/Sewage Disposal

No stormwater management utilities (e.g. catch basin, sewers, etc.) were observed on the Site during the Site visit. Stormwater is inferred to either infiltrate the ground or is directed off-Site via overland flow toward catch basins located along Arkell Road.

The residential dwellings located at 190 and 202 Arkell Road were supplied with domestic wells located in the front yards of each residence. Reportedly, the residential dwellings located at 210 and 216 Arkell Road were supplied with municipal water.

Each residential dwelling on the Site was serviced with a septic system. The approximate locations of the septic systems are shown on **Figure 3**.

4.3.2 Electricity, Heating and Cooling

All residential dwellings were supplied with electricity and natural gas. Heating was provided by forced air-furnace. Additional structures (including garages and sheds) were observed to be serviced with electricity. MTE observed air conditioning units at 190, 210, and 216 Arkell Road, with one window mounted unit observed at 202 Arkell Road on the north wall.

Interviews indicated that the homes had reportedly not been heated with fuel oil, but given the age of the buildings and former buildings, it is possible residences were once heated using this method (see **Section 4.4**). In addition, during the Site visit, wood fire stoves that were historically used to heat the basements were observed at 190 Arkell and 210 Arkell Road.

4.3.3 Floor Drains, Sumps, Pits

MTE observed sump pits within the basements of 190, 210 and 216 Arkell Road property. According to the Site Representative, a sump pit is also located within the residential dwelling at 202 Arkell Road.

Reportedly, accumulated groundwater or storm water collected within the sump pits are discharged to the exterior surfaces of the Site, with exception of 216 Arkell Road, where the drainage from the sump has been diverted to a storm catch basin on Arkell Road.

MTE did not observe any additional floor drains or pits in accessible areas. The Site Representative did not know whether floor drains, pits, or oil/water separators were present on Site.

4.3.4 Mechanical/Hydraulic Equipment

MTE did not observe any mechanical or hydraulic equipment in accessible areas.

4.4 Aboveground and Underground Storage Tanks (ASTs/USTs)

At the time of the Site visit on September 18, 2018, no ASTs or USTs were observed at the Site in accessible areas. As stated in **Section 2.6**, the TSSA records indicated no ASTs or USTs at the Site or in the Study Area.

Based on correspondence received from Union Gas, natural gas services were installed for 210 Arkell Road at 1978, when the property was first developed. Therefore, there is likely no potential historic use of fuel oil at this property.

Union Gas indicated that the remaining properties were serviced with natural gas between 1982 and 1995. Based on the development of these properties (early 1960s), there is potential for the historic use of fuel oil for heating purposes at the former residential dwelling at 190 Arkell Road or formerly located within the current residential dwellings at 202 or 216 Arkell Road.

4.5 Chemical Use and Storage

During the Site visit, MTE observed the following chemicals in storage:

- General cleaning supplies;
- Small canisters of paint;
- Oils and lubricants;
- Gasoline;
- Kerosene; and
- Hypochlorite solution.

Small quantities of consumer-sized cleaning supplies and paint were observed to be stored on shelves or the concrete floor of the basement at 190 Arkell Road. Small quantities of consumer-sized kerosene and hypochlorite solution were observed within the shed of 216 Arkell Road. Consumer-sized containers of oils were observed on a shelf within the shed at 210 Arkell Road and small quantities of gasoline in jerry cans were observed within the sheds at 202 and 216 Arkell Road.

According to the tenant at 216 Arkell Road, minor amounts of varsol, wood stains and glue were historically used for recreational woodshop purposes. Reportedly, no wastes were generated from the use of these chemicals.

No evidence of significant spills or leaks from any chemical storage areas was identified during the Site visit. However, minor areas of oil staining were observed on the driveway and beneath the tractor stored in the shed at 210 Arkell Road.

4.6 Solid Waste

Based on observations made during the site visit and discussions with the Site Representative, solid wastes generated on-Site included domestic refuse as well as scrap metal and construction debris, as described below.

Domestic refuse is reportedly removed off-Site via municipal curbside pickup on a weekly basis.

Scrap metal/waste wood was observed on the bare ground to the west of the shed at 210 Arkell Road. According to the Site Representative, this scrap metal and waste wood was reportedly associated with the demolition of former structures located north and west of the current shed at 210 Arkell Road. Several empty pails and eight empty metal drums were observed within the shed at 210 Arkell Road. According to the former tenant, the empty pails were used for wine-making or storing grains and the empty drums were used to store grains for the poultry formerly raised on the property.

Yard waste was observed to be stored in bags along the west property line at 216 Arkell Road in the wooded area and a dishwasher was observed along the west side of the residence at 210 Arkell Road.

4.7 Hazardous and Liquid Waste

Waste oils generated from personal vehicle maintenance at 210 Arkell Road was reportedly collected and disposed of off-Site at a recycling facility. No active oil storage was observed at 210 Arkell Road by MTE during the Site visit.

During the Site visit, MTE observed multiple small pails of waste oil at the east exterior of the woodshop shed at 216 Arkell Road. According to the tenant, the waste oil was from lawn mower maintenance and the tenant reportedly disposes the oil regularly at an off-Site facility.

No records of hazardous and liquid waste removal were available.

4.8 Unidentified Substances or Odours

No unidentified substances or unusual odours were observed or detected in the accessible areas of the Site at the time of inspection.

4.9 Fill Materials

Stockpiled fill materials were observed to the north of the residence at 190 Arkell Road, around the pond area in three piles (see **Figure 3**). The Site Representative indicated that approximately 100 tonnes of fill was imported from 1 Castlebury Drive, Guelph, and would potentially be utilized to re-grade the Site for redevelopment. No analytical information regarding the imported fill material was provided.

In addition, the inferred demolition of the historical house at 190 Arkell Road likely required fill for re-grading of the property and portions of the foundation may remain.

The presence of fill material of unknown quality at the Site represents a potential environmental concern.

4.10 Air Emissions

No evidence of odours or particulate accumulation associated with the operation of any of the potential air emission sources operated at the Site was observed by MTE in the accessible areas of the Site during the inspection. Potential sources of air emissions from current and historical Site operations are limited to natural gas heating equipment.

4.11 Fires

MTE did not observe any areas on Site where current open burning was conducted. However, during the Site visit an area of recreational burning (e.g. fire pit) was observed southeast of the shed at 210 Arkell Road.

The tenant of 216 Arkell Road indicated an electrical fire had occurred “at the south exterior of the residential dwelling resulting from a light. Reportedly, fire response was contacted, however, the electrical fire was suppressed without the use of firefighting chemicals.

No other interviews indicated that fires had occurred at the Site. No records were available relating to any historical fires at the Site.

4.12 Spills / Releases

Interviews with tenants/former owners indicated no spills or releases had taken place on Site. At the time of Site visits, no significant areas of staining were observed; however, minor areas of oil staining were observed on the driveway and beneath the tractor stored in the shed at 210 Arkell Road.

4.13 Stained Materials and Stressed Vegetation

No significant staining or stressed vegetation was observed in the accessible areas of the Site by MTE during the Site visit.

4.14 Test Pits

At the time of the initial Site visit, a small, open excavation was observed in the central area of the Site to the west of the shed at 210 Arkell Road. The tenant of the residence indicated that the excavation was the result of testing the function of a mini-excavator and soil was not excavated for any other reason. The tenants indicated to the Site Representative that the excavation would be backfilled. See **Figure 3** for the location of the excavation.

4.15 Special Attention Items

4.15.1 Asbestos Containing Materials

Asbestos is defined as a designated substance under the Ontario Occupational Health and Safety Act (OHSA). Asbestos containing materials (ACM) were discontinued from use in the early 1980's. No evidence of ACMs were observed within the buildings that were accessed; however, given the age of the remaining buildings and access limitations, ACMs may be present in building materials.

4.15.2 Lead

Lead can typically be found in paint in older buildings. Lead was banned from products in the early 1970's and is considered a designated substance under the OHSA. Given the age of some of the buildings, lead may be present in paint in these locations. However, no material sampling was performed as part of this investigation.

4.15.3 Polychlorinated Biphenyls (PCBs)

The use of PCB's was phased out in 1978. Some portions of the Site were initially developed prior to 1978 and, as such, PCB equipment may be present at the Site. No PCB equipment was observed during the Site visit.

4.15.4 Ozone Depleting Substances (ODS)

Refrigeration and air conditioning equipment may contain refrigerants composed of ODSs. The occurrence of equipment on Site which may contain ODSs does not represent a concern with respect to soil and/or groundwater. However, this equipment must be maintained by qualified contractors and ODSs must be handled and disposed in accordance with regulatory requirements.

4.15.5 Urea Formaldehyde Foam Insulation (UFFI)

Urea formaldehyde foam insulation was not observed during the Site visit to accessible areas. No UFFI sampling was completed as part of this Phase I ESA.

4.15.6 Radon Gas

Radon is a naturally occurring radioactive gas that is odourless and colourless. It is formed by the natural breakdown of uranium in soil and bedrock containing deposits of uranium, granite, coal or black shale. Radon may enter a building through cracks and penetrations in concrete foundations, earth floors, wall-slab joints, drains and sumps or sewers. In enclosed indoor spaces, such as a basements and crawlspaces, radon gas can accumulate. The presence of radon can only be confirmed through sampling. No radon sampling was completed as part of this Phase I ESA.

4.15.7 Water Staining/Mould

Due to accessibility limitations, no observation of water staining and/or mould was observed by MTE.

Through the questionnaire, the tenant of 216 Arkell Road indicated the basement had water damage and mould due to several floods.

No intrusive investigation to observe concealed spaces or material sampling was conducted as part of this investigation.

4.15.8 Electric and Magnetic Fields

Over-head electrical distribution lines were observed on the south side of Arkell Road. No high-voltage transmission lines or electrical substations, which could generate significant electromagnetic fields, were identified on or adjacent to the Site. Although electromagnetic fields are assumed to be typical for developed areas, no testing was performed as part of this assessment.

4.15.9 Noise and Vibration

The effects of noise and vibration on human health vary according to the susceptibility of the individual exposed, the nature of the noise/vibration and whether exposure occurs in the working environment or in the home.

No major or persistent sources of noise and/or vibration were observed on or adjacent to the Site at the time of the Site visit. However, no noise or vibration testing was performed as part of this assessment.

4.16 Surrounding Properties

The properties adjoining and surrounding the Site were observed during the Site reconnaissance from publicly accessible locations. These properties are outlined on **Figure 2** and are summarized below.

Position Relative to the Site	Description	Potential for Contamination
North	The Site was bordered to the north by residential properties, along with Amos Drive and Dawes Avenue, followed by an agricultural area.	Surrounding properties are not considered to represent a potential environmental concern to the Site.
East	The Site was bordered to the east by the Arkell Road/Summerfield Drive intersection, followed by residential properties, followed by Amsterdam Crescent and Coutts Crescent, followed by residential properties.	

Position Relative to the Site	Description	Potential for Contamination
South	The Site was bordered to the west by one residential property, a municipal wellhead and followed by undeveloped woodland area.	
West	The Site was bordered to the west by undeveloped forested area, followed by a large residential property, followed by an ongoing residential development (former golf course).	

5.0 CONCLUSIONS AND RECOMMENDATIONS

MTE reviewed available records for properties within 250 metres of the Site (representing the "Study Area") - including available aerial photographs; geology and hydrogeological records and mapping. MTE also contacted the City of Guelph and provincial regulatory agencies including the MECP and TSSA for information related to the Site and surrounding area.

Based on the information compiled through records review, interviews and Site visits, no issues representing potential or actual/known environmental contamination associated with surrounding properties were identified. However, the Phase I ESA identified the following potential or actual/known environmental concerns associated with the Site:

- Soil sample results from the PML Geotechnical report identified exceedances of the applicable Table 1 SCS for zinc at BH5 (313 µg/g) and BH6 (370 µg/g);
- Importation of fill of unknown quality used for backfill associated with the demolition of the former residential dwelling at 190 Arkell Road, including currently stockpiled material; and
- Potential historic use of furnace oil for residential heating purposes at 190, 202 and 216 Arkell Road.

Further to the above, MTE also notes the following:

- A locally significant natural area zoned as a Provincially Significant Wetland by the MNRF is located on the west end of the Site and further south;
- The presence of domestic wells on Site; and
- The distance of the Site to the Burke municipal well (approximately 70m) and the location of the Site within wellhead protection area WHPA-A.

While zinc concentrations measured in soil samples from the Site exceeded the 2011 Table 1 SCS, the City of Guelph has acknowledged the presence of elevated levels of zinc in soil in various areas of the City (email communication to MTE Consultants Inc.). Elevated levels of zinc in these areas are inferred to not be attributed to an anthropogenic source. Considering this, zinc is not inferred to represent a potential environmental concern for the Site.

Based on the findings of this Phase I ESA, actual and potential environmental concerns have been identified at the Site. In order to assess potential environmental concerns associated with soil and groundwater quality as they may impact future development, intrusive investigation to address the aforementioned issues is recommended. In particular, a Phase II ESA is recommended to investigate the quality of fill material at 190 Arkell Road associated with the current stockpiles and the demolition of the former residential dwelling, as well as to investigate the presence of releases from potential historic use of fuel oil for heating purposes at all residential dwellings.

Alternatively, these issues could be addressed through investigations during the first stages of redevelopment of the Site, considering it is understood that redevelopment will including the demolition of all buildings and significant ground surface disturbance. However, combining the investigation of the aforementioned issues with the commencement of Site redevelopment may result in undesirable impacts to the redevelopment schedule and/or budget, should the management of any significant amounts of contaminated soil and/or groundwater be required.

Notwithstanding the above, MTE also recommends the following:

- In addition, the on-Site monitoring wells should be operated and maintained in accordance with Ontario Regulation 903 or properly decommissioned as per the Regulation should they no longer be required;
- Solid waste debris (i.e. scrap metal and waste wood piles) should be collected and removed in accordance with regulatory requirements (e.g. Ontario Regulation 347);
- Additional sampling and characterization of soils at the Site may be required to determine any limitations on the potential reuse of excess soil generated during future redevelopment of the Site (if excess soil generation is anticipated); and
- A pre-demolition designated substances survey should be conducted prior to redevelopment of the Site and any designated substance should be managed in accordance with regulatory requirements during demolition.

This report does not assess geotechnical issues or compliance with municipal by-laws/ permits.

6.0 QUALIFICATIONS OF ASSESSORS

As required by CSA Standard Z768-01, an appropriate combination of formal education, skills, experience and training is required in order to provide a technically sound and rational Phase I ESA. The key participants involved in performing the components of the Phase I ESA are Mr. Michael Fabro, Ms. Arissa Cummings, and Ms. Jessica Sowa.

Mr. Fabro has obtained Bachelor of Applied Science, Honours Environmental Engineering, Management Sciences Option and Master of Environment and Business degrees from the University of Waterloo. His responsibilities include project management, site inspections, regulatory and public liaison, coordinating field work activities including soil/sediment/groundwater sampling, data analysis, remediation planning and report preparation. Mr. Fabro has over 10 years of professional experience during which he has conducted phased Environmental Site Assessments for over 150 properties. Mr. Fabro is a licensed Professional Engineer in the Province of Ontario and a Qualified Person for Environmental Site Assessment as defined in Ontario Regulation 153/04 (as amended).

Ms. Cummings is a graduate of the Honours Biology Program at the University of Waterloo and the Environmental Engineering Applications Program at Conestoga College. She has over 5 years of experience in the environmental consulting industry that includes Phase I and II Environmental Site Assessments, environmental groundwater sampling, drilling supervision, remediation, and collection of surficial and subsurface soil samples.

Ms. Sowa is a graduate of the Honours Toxicology Program and Masters of Environmental Science Program at the University of Guelph. She has approximately 2 years of experience in the environmental consulting industry including environmental ground water sampling, collection of surficial and subsurface soil samples, assistance with authorship of Phase I and II Environmental Site Assessments, and authorships of Environmental Risk Assessments.

7.0 LIMITATIONS

Services performed by **MTE Consultants Inc.** (MTE) were conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the Environmental Engineering & Consulting profession. No other warranty or representation expressed or implied as to the accuracy of the information, conclusions or recommendations is included or intended in this report.

This report was completed for the sole use of MTE and Crescent Homes Ltd. No other parties may rely upon this report without the written permission of MTE. This report was completed in accordance with the Scope of Work referred to in Section 1.2 and meets the mandatory requirements of CAN/CSA-Z768-01. As such, this report may not deal with all issues potentially applicable to the site and may omit issues, which are or may be of interest to the reader. MTE makes no representation that the present report has dealt with any and all of the important features, including any or all important environmental features, except as provided in the Scope of Work. All findings and conclusions presented in this report are based on site conditions, as they existed during the time period of the investigation. In addition, MTE has relied on information provided by the persons interviewed as part of this study (identified herein) as being accurate and representative. This report is not intended to be exhaustive in scope or to imply a risk-free facility.

Any use which a third party makes of this report, or any reliance on, or decisions to be made based upon it, are the responsibility of such third parties. MTE accepts no responsibility for liabilities incurred by or damages, if any, suffered by any third party as a result of decisions made or actions taken, based upon this report. Others with interest in the site should undertake their own investigations and studies to determine how or if the condition affects them or their plans.

It should be recognized that the passage of time may affect the views, conclusions and recommendations (if any) provided in this report because environmental conditions of a property can change. Should additional or new information become available, MTE recommends that it be brought to our attention in order that we may re-assess the contents of this report.

Respectfully Submitted,

MTE CONSULTANTS INC.

Michael Fabro, P.Eng., QP_{ESA}
Environmental Engineer

Arissa Cummings, B.Sc.
Environmental Scientist

Jessica Sowa, M.E.S., B.Sc.
Environmental Scientist

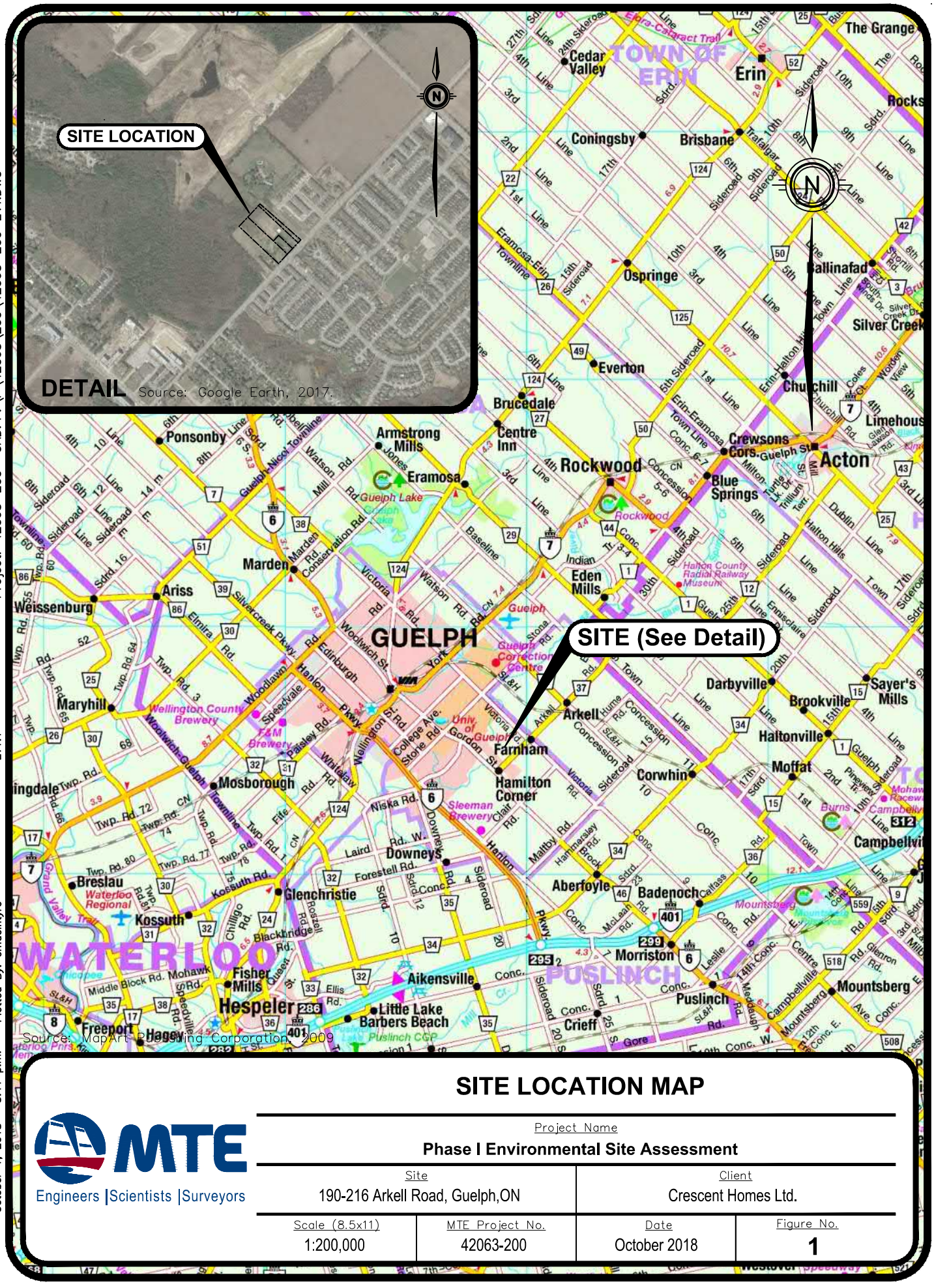
8.0 LIST OF REFERENCES AND SOURCES OF INFORMATION

The following list of references and sources were reviewed for the purposes of preparing the report:

Applicable Section	Reference / Source	Date
All	Canadian Standards Association Z768-01 "Phase I – Environmental Site Assessments"	November 2001 Reaffirmed 2016
2.2	Aerial images, LGI Copy Services Canada	1930, 1951, 1990
2.2	Google Earth Imagery	2006 and 2013
2.5	ERIS Report Number 20180913184	September 20, 2018 (date of report)
2.6	Technical Standards and Safety Authority – Fuel Safety Division inquiry	September 20, 2018 (date of response)
2.6	Ministry of the Environment and Climate Change, Freedom of Information	Response not yet received
2.6	Ontario Ministry of the Environment, "Inventory of Coal Gasification Plant Waste Sites in Ontario"	April 1987, Reprinted February 1989
2.6	Ministry of the Environment, Inventory of Industrial Sites Producing or Using Coal Tar and Related Tars in Ontario	November 1988
2.6	Ontario Ministry of the Environment, "PCB Site Inventory System 2000"	July 2000
2.6	Ontario Ministry of the Environment, "Waste Disposal Site Inventory"	June 1991
2.6	Ontario Ministry of the Environment, Brownfields Environmental Site Registry (website)	January 15, 2018 (date of search)
2.6	Ontario Ministry of the Environment Hazardous Waste Information Network (website)	January 19, 2018 (date of search)

Applicable Section	Reference / Source	Date
2.6	Ministry of the Environment and Climate Change, Water Well Inventory (website)	January 12, 2018 (date of search)
2.7	Union Gas Limited Natural Gas Servicing Information Request	September 24, 2018 (date of response)
2.7	Chapman and Putnam. The Physiography of Southern Ontario, Third Edition.	1984
2.7	Ontario Base Map, Ministry of Natural Resources 10 17 5650 48150	1983 (date of aerial images)
2.10.1	Grand River Conservation Authority (website)	September 14, 2018 (date of search)
2.10.2	Ministry of Natural Resources and Forestry Natural Heritage Map	September 14, 2018 (date of search)
2.10.3	City of Guelph Information Request and Response	October 9, 2018 (date of response)
2.11.3	City of Guelph Official Plan	March 2018
5.0	City of Guelph, Project Engineer Supervisor (e-mail communication with MTE Consultants Inc.)	June 2016

FIGURES



SITE LOCATION MAP

Engineers | Scientists | Surveyors

Project Name			
Phase I Environmental Site Assessment			
Site		Client	
190-216 Arkell Road, Guelph,ON		Crescent Homes Ltd.	
Scale (8.5x11)	MTE Project No.	Date	Figure No.
1:200,000	42063-200	October 2018	1

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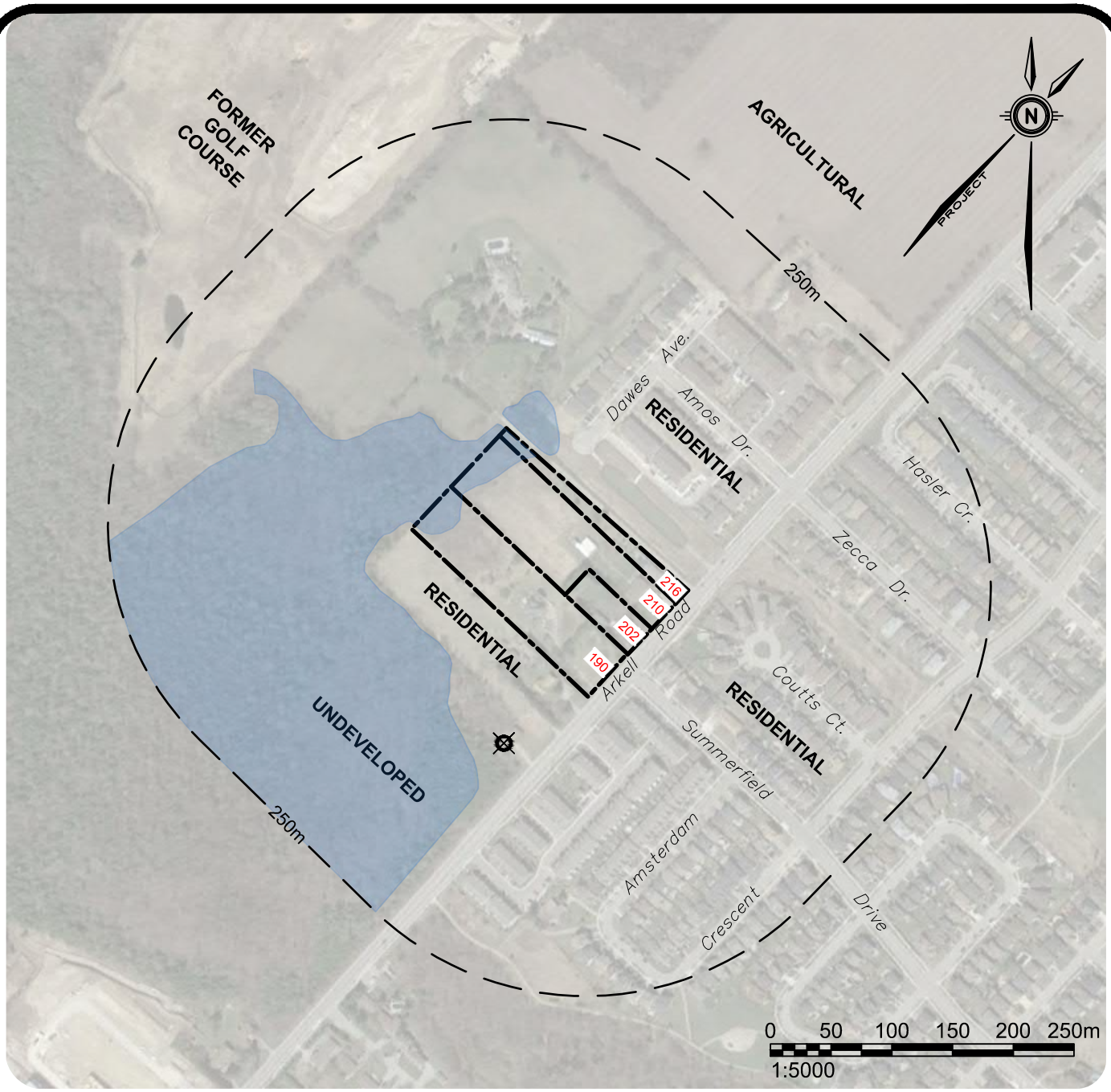


LEGEND

433 Municipal Address

Phase I Property Boundary

Phase I Study Area

Municipal Well

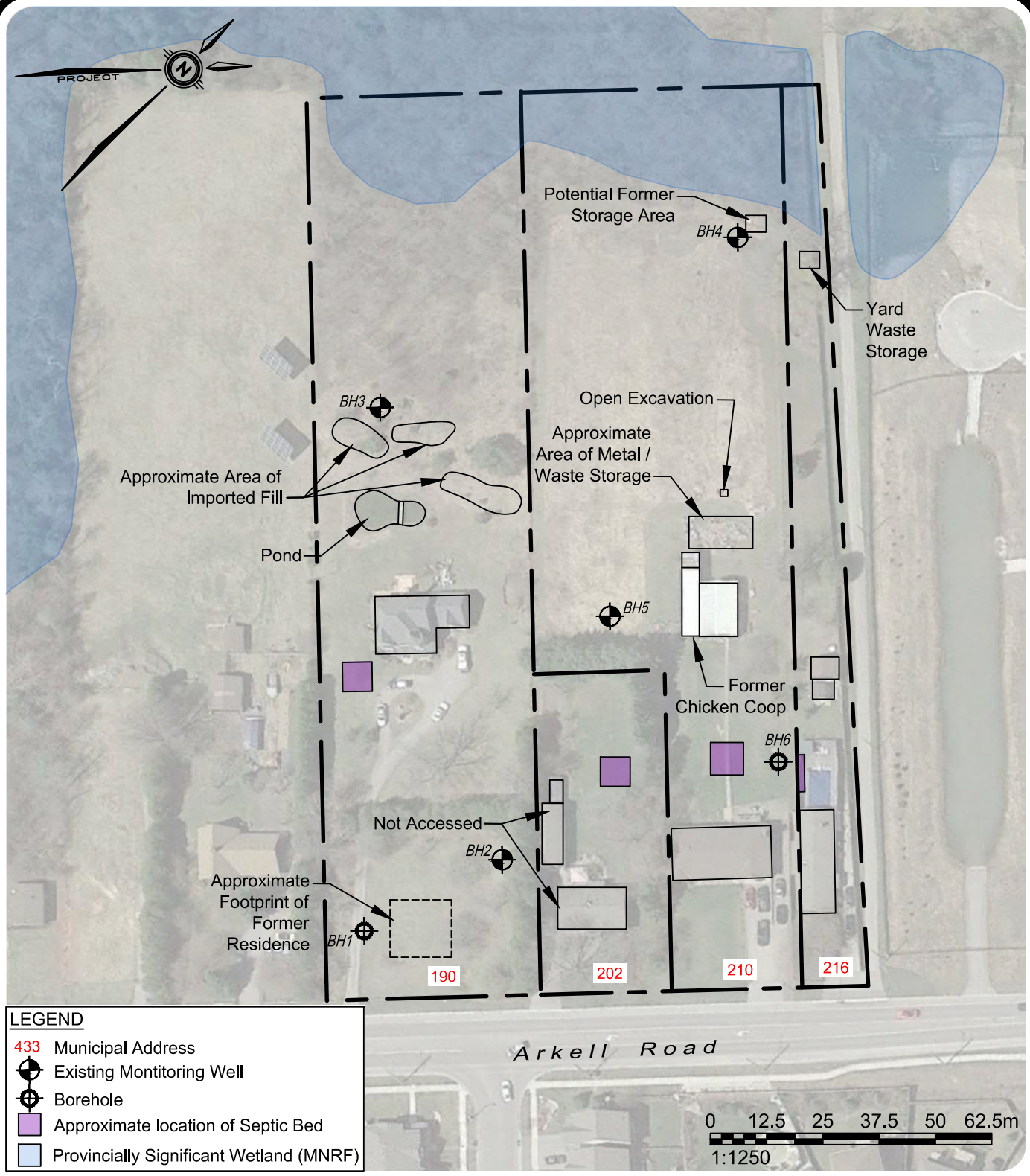
Provincially Significant Wetland (MNRF)

SURROUNDING LAND USE

Engineers | Scientists | Surveyors

Project Name	
Phase I Environmental Site Assessment	
Site: 190-216 Arkell Road, Guelph,ON	Client: Crescent Homes Ltd.

Scale. (8.5x11)	MTE Project No.	Date	Figure No.
1:5000	42063-200	October 2018	2



SITE LAYOUT & FEATURES

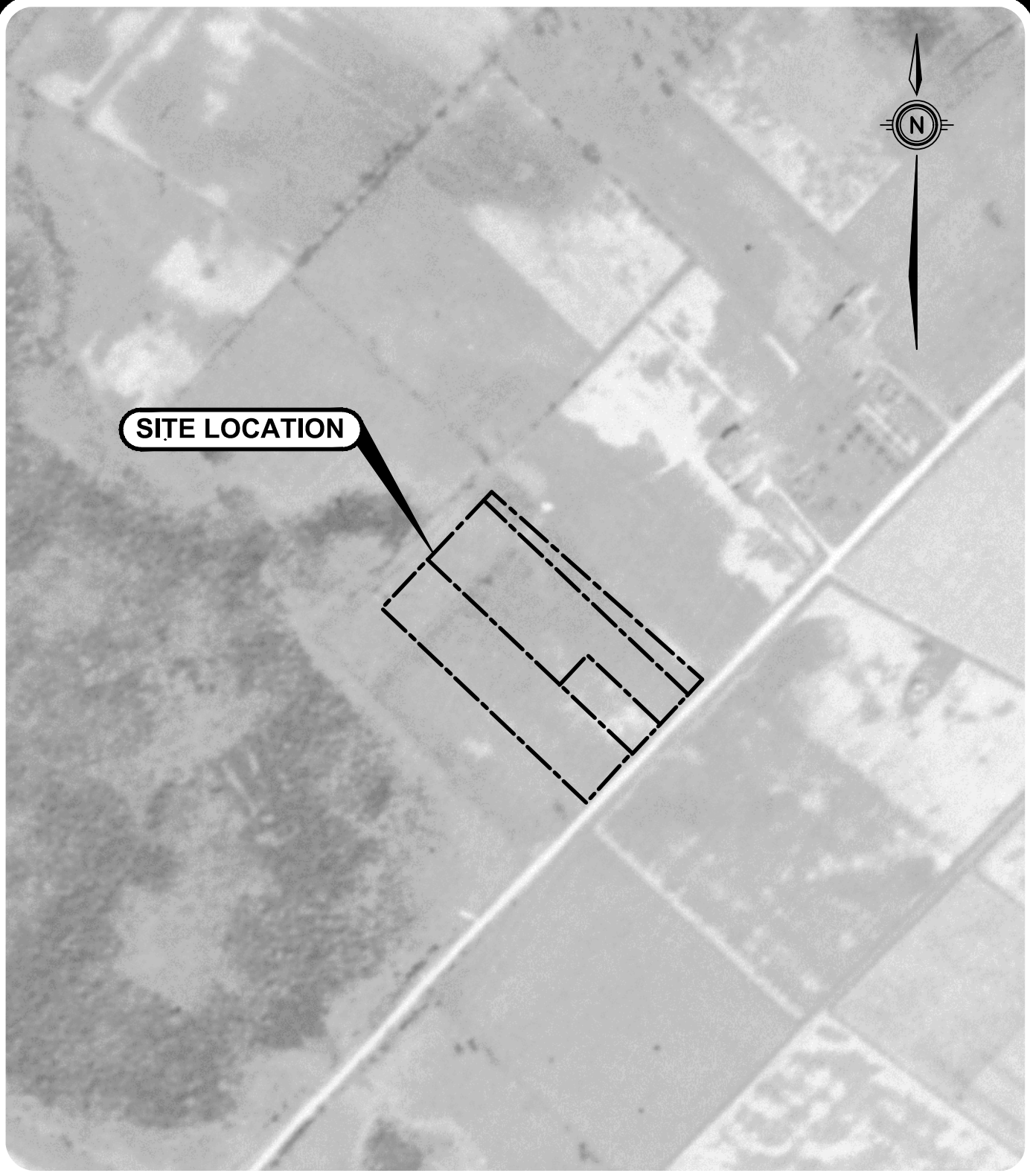
MTE Engineers | Scientists | Surveyors

Project Name	
Phase I Environmental Site Assessment	
Site: 190-216 Arkell Road, Guelph,ON	Client: Crescent Homes Ltd.

Scale. (8.5x11)	MTE Project No.	Date	Figure No.
1:1250	42063-200	October 2018	3

APPENDIX A

MAPS AND AERIAL PHOTOGRAPHS



1930 AERIAL PHOTOGRAPH

MTE
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Project Name			
Phase I Environmental Site Assessment			
Site		Client	
190-216 Arkell Road, Guelph,ON		Crescent Homes Ltd.	
Scale. (8.5x11)	MTE Project No.	Date	Appendix:
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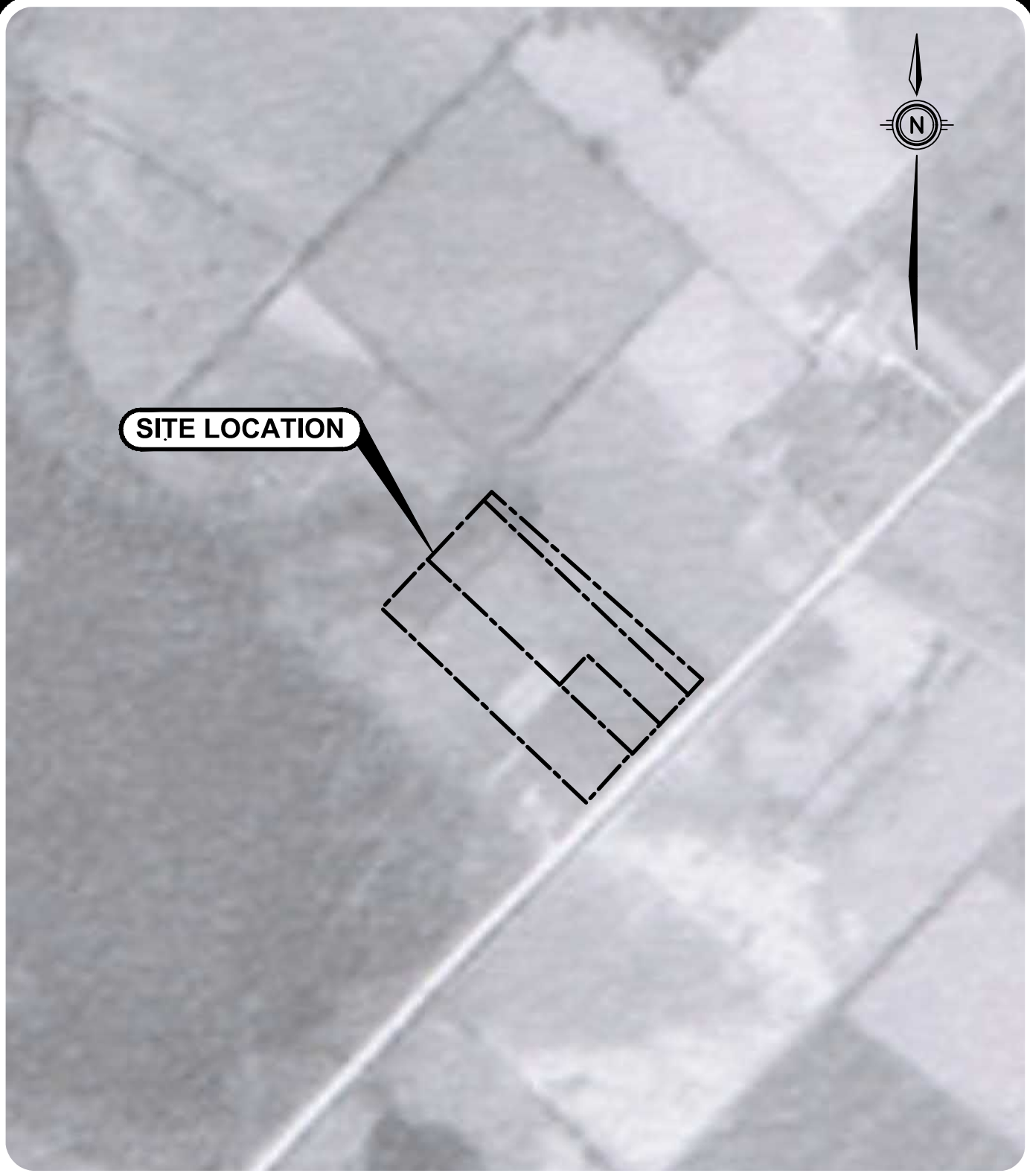

1951 AERIAL PHOTOGRAPH

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Project Name			
Phase I Environmental Site Assessment			
Site		Client	
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Scale. (8.5x11)	MTE Project No.	Date	Appendix:
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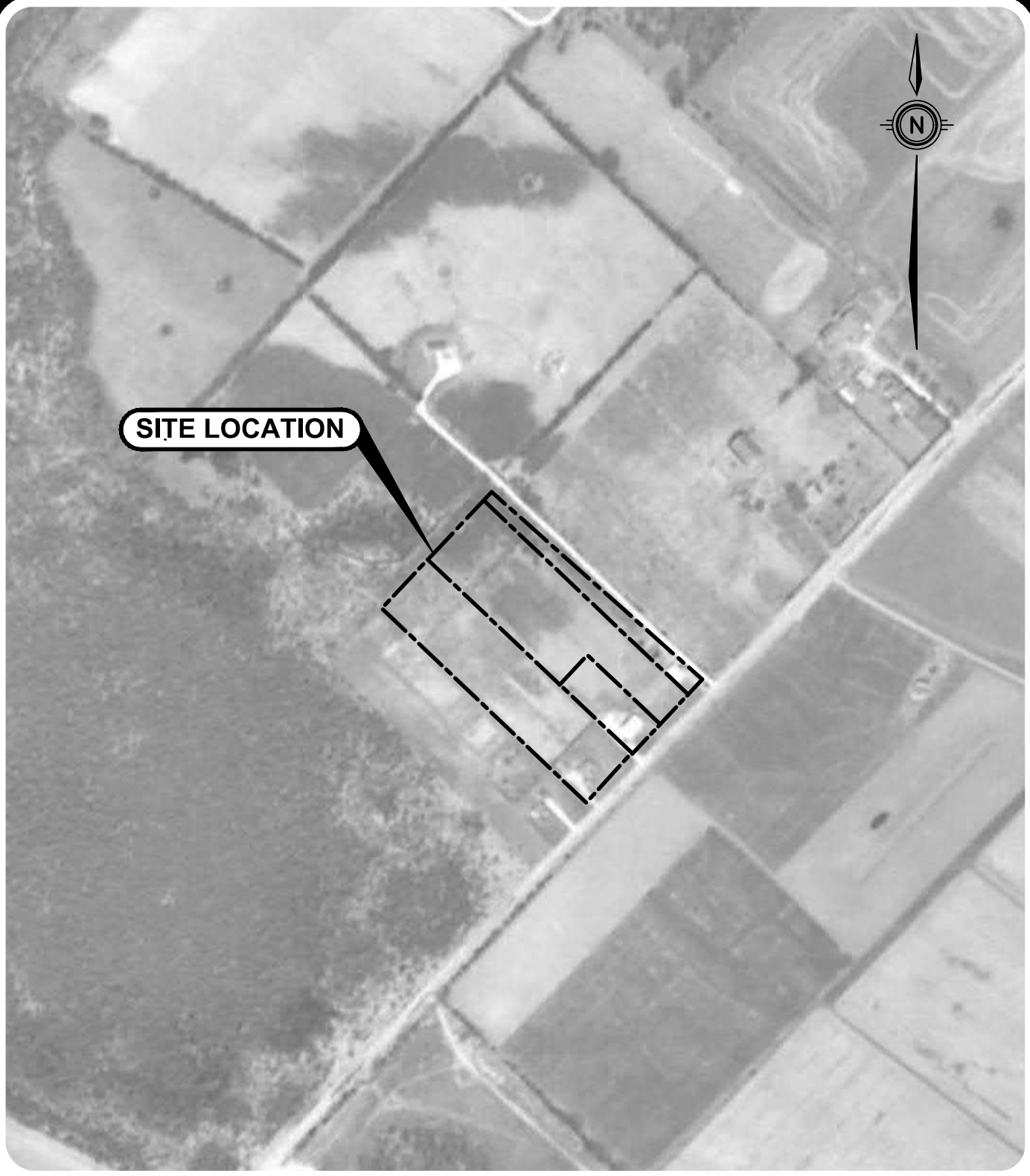

1962 AERIAL PHOTOGRAPH

MTE
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Project Name			
Phase I Environmental Site Assessment			
Site		Client	
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Scale. (8.5x11)	MTE Project No.	Date	Appendix:
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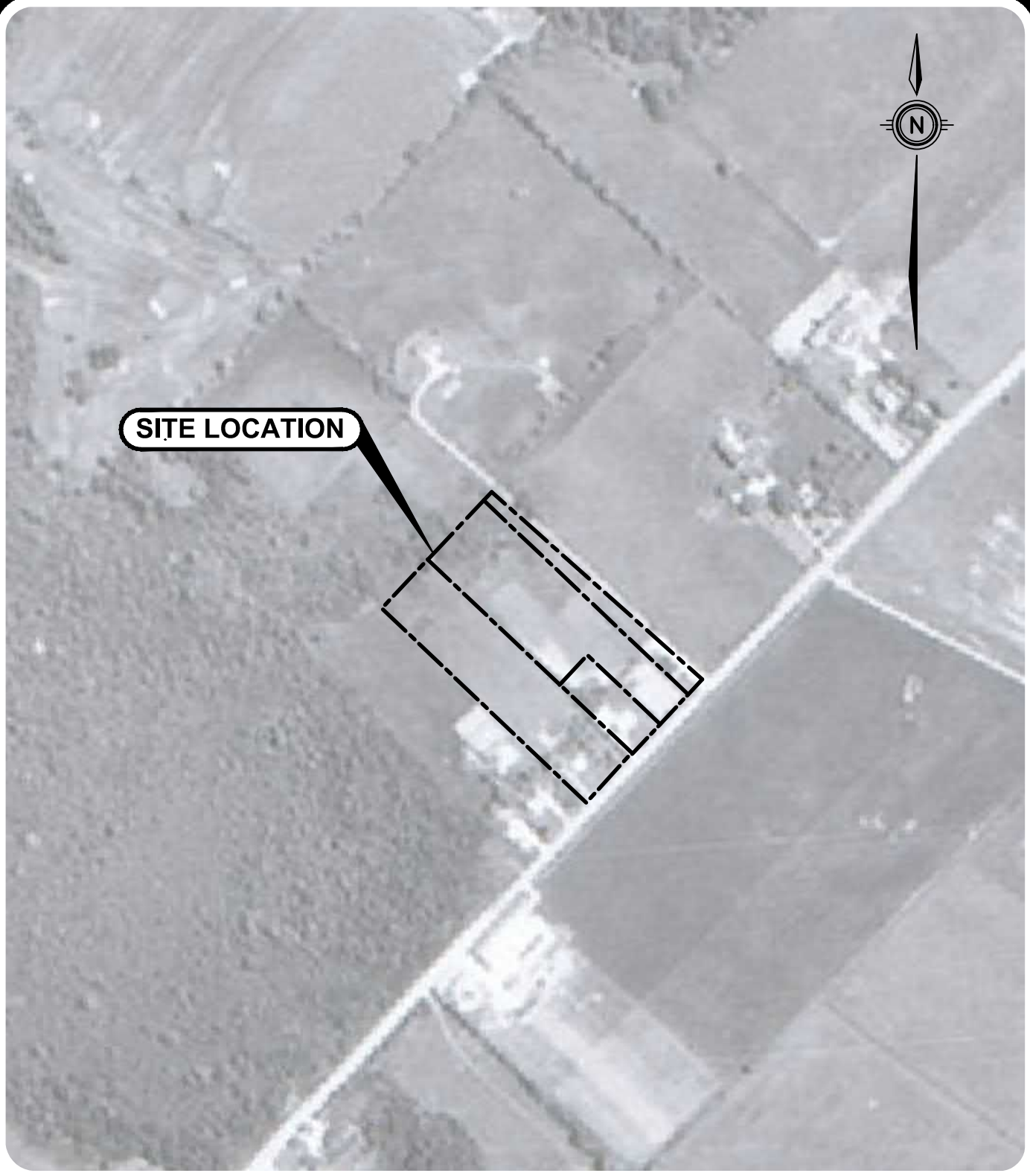

1972 AERIAL PHOTOGRAPH

Engineers | Scientists | Surveyors

Project Name			
Phase I Environmental Site Assessment			
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Scale. (8.5x11)	MTE Project No.	Date	Appendix:
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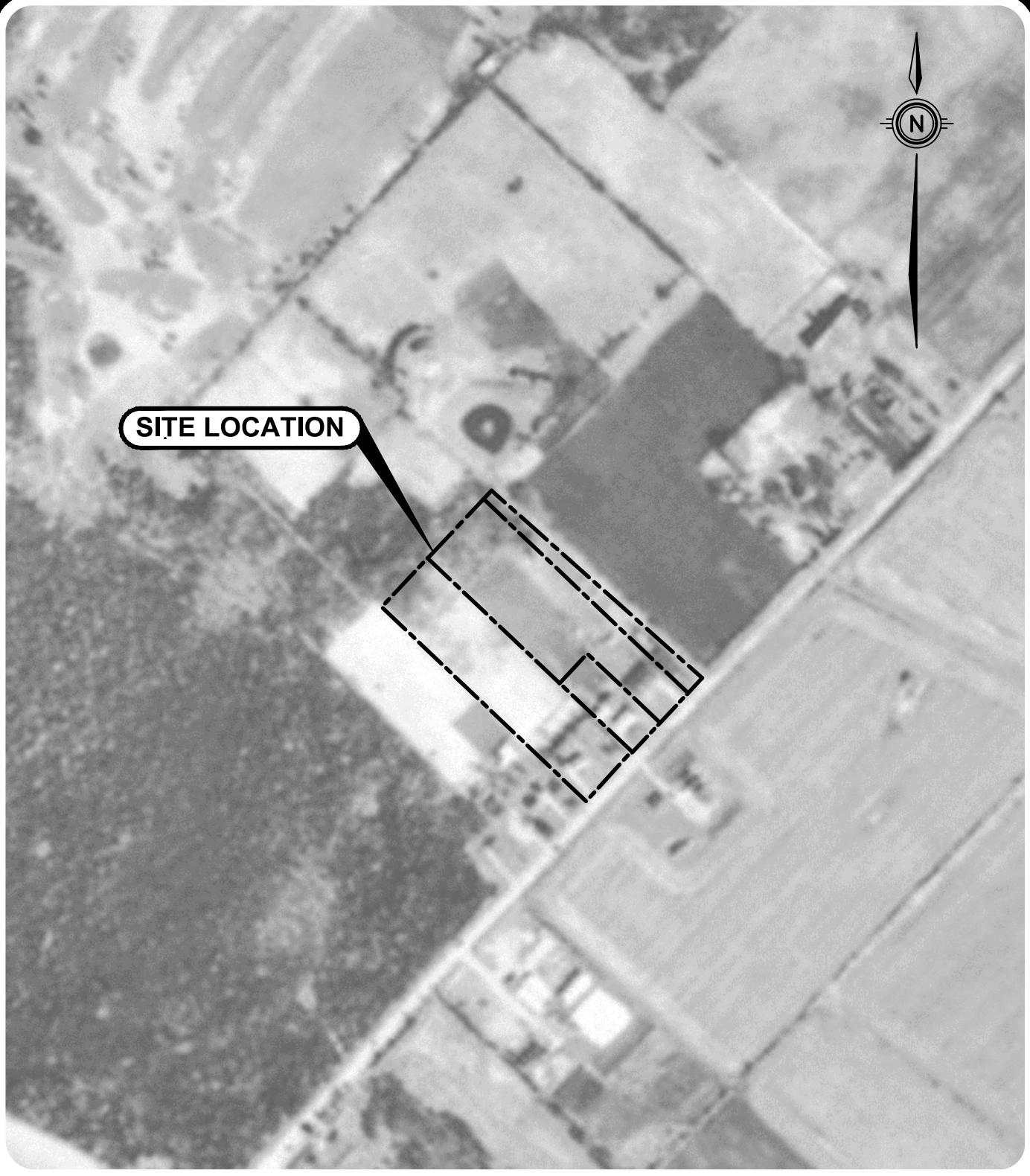


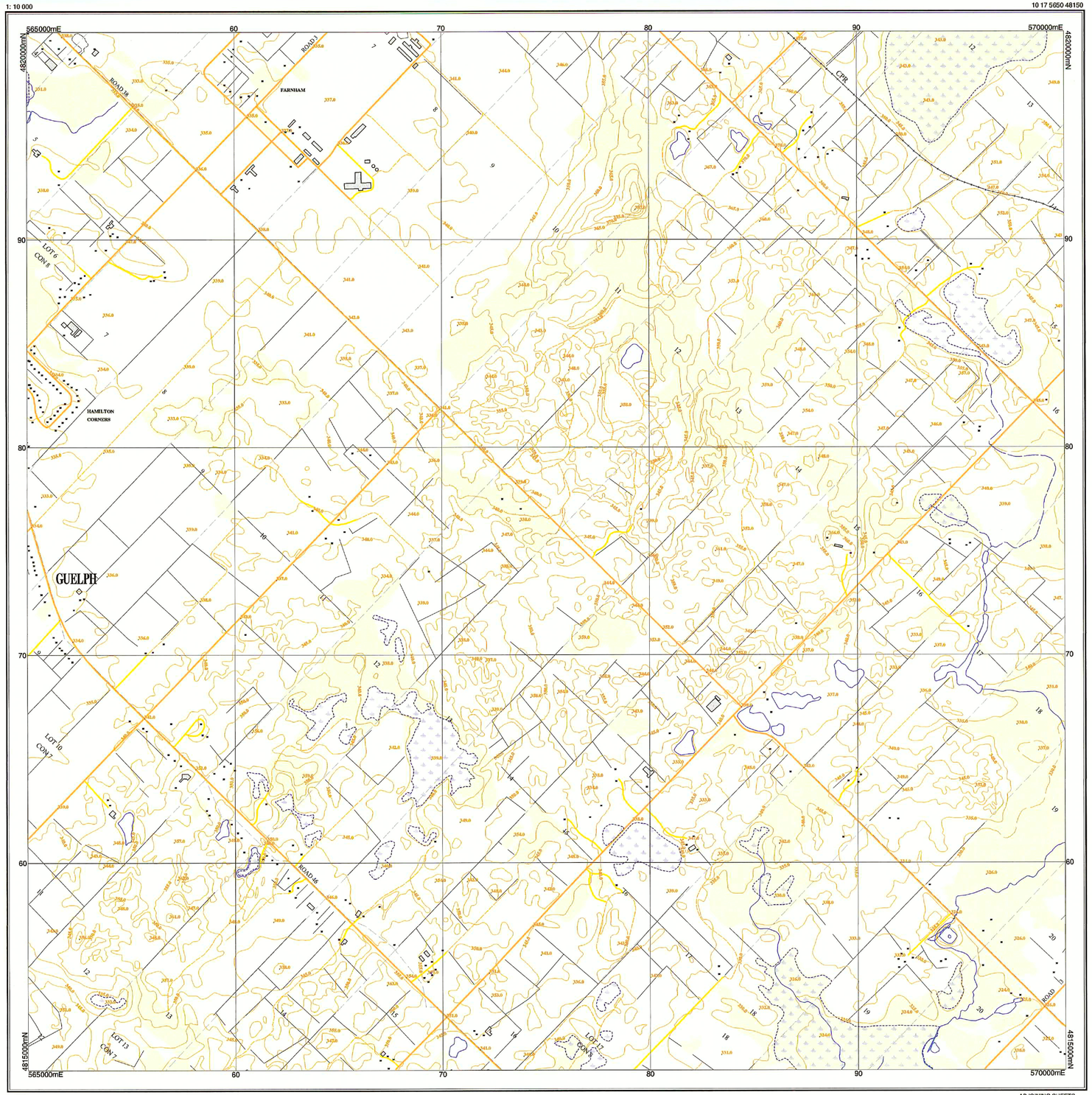
1981 AERIAL PHOTOGRAPH

MTE
Engineers | Scientists | Surveyors

Project Name			
Phase I Environmental Site Assessment			
Site		Client	
190-216 Arkell Road, Guelph,ON		Crescent Homes Ltd.	
Scale. (8.5x11)	MTE Project No.	Date	Appendix:
1:4000	42063-200	October 2018	A

1: 10 000

10 17 5650 48150



Area of Vegetation.
Zone de végétation.

Area of Marsh.
Zone marécageuse.

Lake, Reservoir, Double Line River.
Lac, réservoir, rivière à double voie.

Trails/Racetrack Centre Line.
Axe - sentiers, piste de course.

Access Road.
Chemin d'accès.

Road Edge/Racetrack Edge.
Bordure de route, de piste.

Road Edge Under Construction.
Bordure de route en construction.

Road Centre Line.
Axe de route.

Road Centre Line Under Construction.
Axe de route en construction.

Feature Outline/Parking Lot.
Contour de l'accident géographique -Stationnement.

Aerial Cableway.
Téléphérique.

Airstrip.
Piste d'atterrissage.

Rail Line.
Chemin de fer à voie unique.

Boundary Provincial/National Park.
Limite du parc provincial, national.

Surveyed Line.
Ligne arpentée.

Township Lot.
Lot cantonal.

Turntable Railway.
Chemin de fer : plaque tournante.

Pit.
Fosse.

Pile.
Pile.

River/Stream Single Line.
Rivière, cours d'eau à voie unique.

River/Stream Approximate.
Rivière, cours d'eau - tracé approximatif.

Bridge Road/Rail.
Pont (route, chemin de fer).

Tunnel Road/Rail.
Tunnel (route, chemin de fer).

Beaver Dam.
Barrage de castor.

Dike.
Digue.

Dam to Scale.
Barrage à l'échelle.

Rapids/Falls on Double Line River.
Rapides, chutes de rivière à double voie.

Lock.
Écluse.

Flow Arrow.
Direction du courant.

Rock.
Rocher.

Rapids/Falls on Single Line River.
Rapides, chutes de rivière à voie unique.

Building to Scale.
Édifice à l'échelle.

Fence/Wall.
Clôture, mur.

Pipeline.
Pipeline.

Transmission Line.
Ligne de transport d'énergie.

Hedge.
Haie.

Building.
Édifice.

Milepost.
Borne kilométrique.

Horizontal Control Point.
Point géodésique.

Smoke Stack.
Cheminée industrielle.

Electrical Substation.
Sous-station électrique.

Mine Headframe.
Chevalement.

Tank Water/Petroleum.
Réservoir d'eau, de pétrole.

Tower.
Tour.

Land Contours.
Courbe d'élévation.

Land Contour Approximate.
Courbe d'élévation approximative.

Land Contour Auxiliary.
Courbe d'élévation auxiliaire.

Land Contour Depression.
Courbe de cuvette.

Ministry of Natural Resources
Ontario

Ministère des Richesses naturelles

Sheet Coupure

10 17 5650 48150

NOTES

North American datum 1983.

Universal Transverse Mercator (6°) projection.
Zone 17. Central Meridian 81° W.

Grid interval 1000 metres.

Scale 1:10 000 Échelle

Metres 500 0 500 1000 Mètres

Contour interval 5 Metres Équidistance des courbes 5 Mètres

DIGITAL MAPPING CARTOGRAPHIE NUMÉRIQUE

Map base by Natural Resources
Information Branch
Air Photography 1982
Published 2003

Carte de base préparée par la Direction de l'information sur les ressources naturelles.
Photographie aérienne 1982
Publiée en 2003

NOTES

Système de référence géodésique nord-américain de 1983.

Projection transverse universelle de Mercator (6°).
Zone 17. Méridien Central 81° O.

Intervalle de quadrillage 1000 mètres.

ADJOINING SHEETS

	10 17 5650 48200	
10 17 5600 48150	10 17 5650 48150	10 17 5700 48150
	10 17 5650 48100	

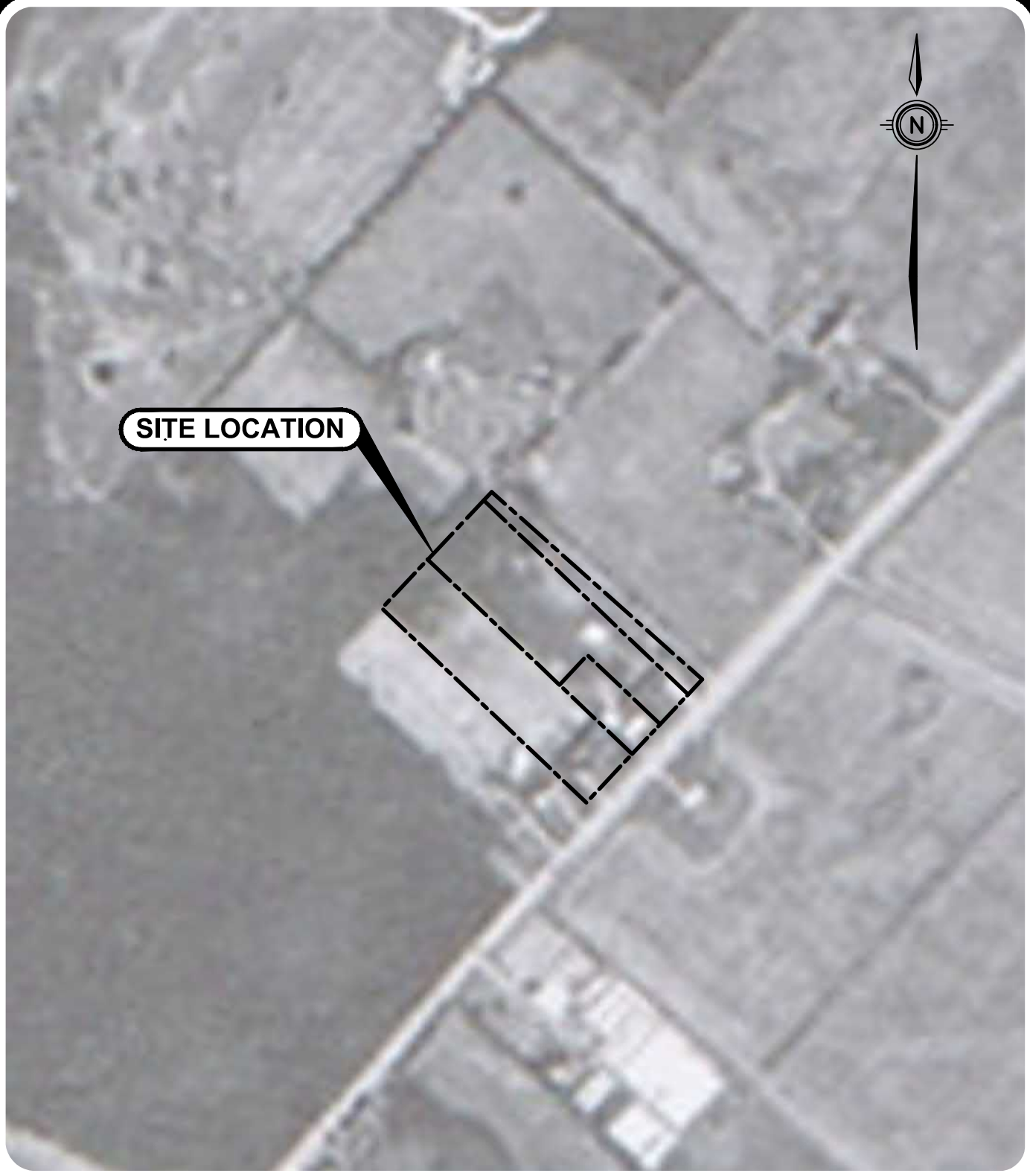
TABLEAU D'ASSEMBLAGE

N

MTE CONSULTANTS INC.
FILE #_____
SEP 2 4 2003

FYI	ACTN	AGRN'D.	FYI	ACTN	AGRN'D.
DEAL	C				

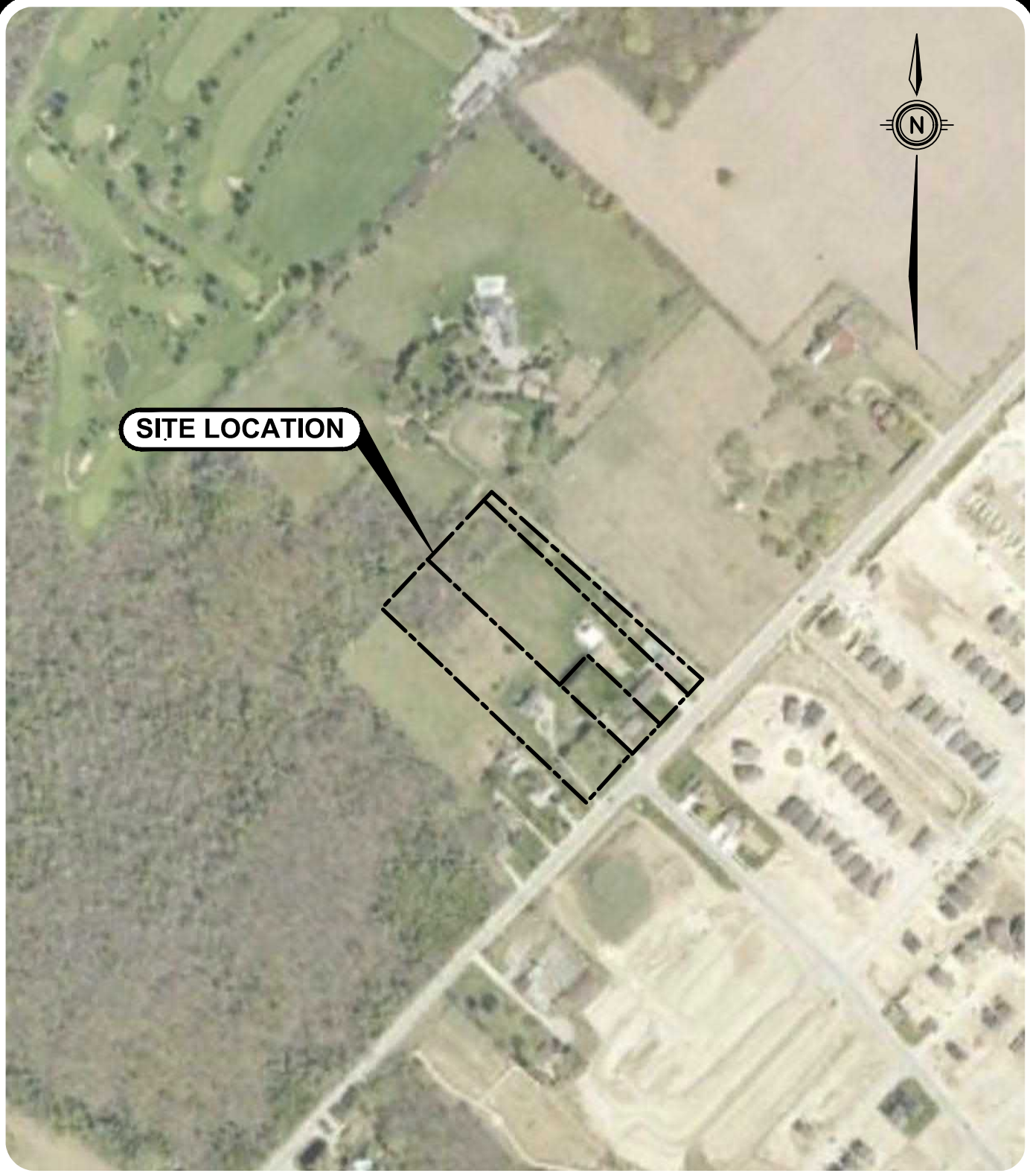
MTE CONSULTANTS INC.
520 BINGEMANS CENTRE DRIVE
KITCHENER ONTARIO N2B 3X9
TEL (519) 743-6500 FAX (519) 743-6513



1990 AERIAL PHOTOGRAPH

MTE
Engineers | Scientists | Surveyors

Project Name			
Phase I Environmental Site Assessment			
Site		Client	
190-216 Arkell Road, Guelph,ON		Crescent Homes Ltd.	
Scale. (8.5x11)	MTE Project No.	Date	Appendix:
1:4000	42063-200	October 2018	A



2006 AERIAL PHOTOGRAPH

MTE
Engineers | Scientists | Surveyors

Project Name			
Phase I Environmental Site Assessment			
Site		Client	
190-216 Arkell Road, Guelph,ON		Crescent Homes Ltd.	
Scale. (8.5x11)	MTE Project No.	Date	Appendix:
1:4000	42063-200	October 2018	**A**

2013 AERIAL PHOTOGRAPH

MTE
Engineers | Scientists | Surveyors

Project Name			
Phase I Environmental Site Assessment			
Site		Client	
190-216 Arkell Road, Guelph,ON		Crescent Homes Ltd.	
Scale. (8.5x11)	MTE Project No.	Date	Appendix:
1:4000	42063-200	October 2018	A

2017 AERIAL PHOTOGRAPH

MTE
Engineers | Scientists | Surveyors

Project Name			
Phase I Environmental Site Assessment			
Site		Client	
190-216 Arkell Road, Guelph,ON		Crescent Homes Ltd.	
Scale. (8.5x11)	MTE Project No.	Date	Appendix:
1:4000	42063-200	October 2018	**A**

APPENDIX B

ERIS REPORT

ENVIRONMENTAL RISK INFORMATION SERVICES

DATABASE REPORT

Project Property:	*Arkell Road* *190 Arkell Road* *Guelph ON N1L 1E6*
Project No:	*TBD*
Report Type:	*Standard Report*
Order No:	*20180913184*
Requested by:	*MTE Consultants Inc.*
Date Completed:	*September 20, 2018*

Environmental Risk Information Services
A division of Glacier Media Inc.
P: 1.866.517.5204
E: info@erisinfo.com

www.erisinfo.com

Table of Contents

Executive Summary

Property Information:

Project Property: *Arkell Road*
190 Arkell Road Guelph ON N1L 1E6

Project No: *TBD*

Coordinates:

Latitude:	*43.519718*
Longitude:	*-80.193266*
UTM Northing:	*4,818,847.36*
UTM Easting:	*565,198.72*
UTM Zone:	*UTM Zone 17T*

Elevation: *1,099 FT*
334.86 M

Order Information:

Order No: *20180913184*
Date Requested: *September 13, 2018*
Requested by: *MTE Consultants Inc.*
Report Type: *Standard Report*

Historical/Products:

Executive Summary: Report Summary

Database	Name	Searched	Project Property	Within 0.25 km	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	0	0	0
CA	*Certificates of Approval*	Y	0	0	0
CFOT	*Commercial Fuel Oil Tanks*	Y	0	0	0
CHEM	*Chemical Register*	Y	0	0	0
CNG	*Compressed Natural Gas Stations*	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
DRYCLEANERS	*Dry Cleaning Facilities*	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	4	4
EEM	*Environmental Effects Monitoring*	Y	0	0	0
EHS	*ERIS Historical Searches*	Y	0	2	2
EIIS	*Environmental Issues Inventory System*	Y	0	0	0
EMHE	*Emergency Management Historical Event*	Y	0	0	0
EXP	*List of TSSA Expired Facilities*	Y	0	0	0
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	0	0
FSTH	*Fuel Storage Tank - Historic*	Y	0	0	0
GEN	*Ontario Regulation 347 Waste Generators Summary*	Y	0	0	0
GHG	*Greenhouse Gas Emissions from Large Facilities*	Y	0	0	0
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
MISA PENALTY	*Environmental Penalty Annual Report*	Y	0	0	0

Database	Name	Searched	Project Property	Within 0.25 km	Total
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 Defense & Canadian Forces Fuel Tanks	Y	0	0	0
NDSP	National Defense & Canadian Forces Spills	Y	0	0	0
NDWD	National Defence & Canadian Forces Waste Disposal Sites	Y	0	0	0
NEBI	National Energy Board Pipeline Incidents	Y	0	0	0
NEBW	National Energy Board Wells	Y	0	0	0
NEES	National Environmental Emergencies System (NEES)	Y	0	0	0
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	0	0
PINC	TSSA Pipeline Incidents	Y	0	1	1
PRT	Private and Retail Fuel Storage Tanks	Y	0	0	0
PTTW	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	0	0
SCT	Scott's Manufacturing Directory	Y	0	0	0
SPL	Ontario Spills	Y	0	3	3
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	0	20	20
	Total:		0	30	30

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev diff (m)	Page Number

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
1	WWIS		Guelph ON **Well ID:** 7285695	SE/10.4	0.00	17
2	WWIS		Guelph ON **Well ID:** 7285692	W/65.9	0.00	19
3	WWIS		Guelph ON **Well ID:** 7285693	SSE/68.1	-0.08	22
4	WWIS		ON **Well ID:** 7209139	NE/72.0	0.22	24
5	WWIS		Guelph ON **Well ID:** 7285694	NNW/77.4	0.00	25
6	WWIS		lot 6 con 8 ON **Well ID:** 6702590	SSE/82.5	-0.08	27
7	WWIS		ON **Well ID:** 7229605	ENE/82.9	1.50	30
8	WWIS		lot 6 con 8 ON **Well ID:** 6712543	NW/94.9	-0.46	31
9	ECA	The Corporation of the City of Guelph	Part Lots 6 & 7, Conc. 8, Former Twp. of Puslinch Guelph ON N1H 3A1	WNW/99.2	-0.46	34
9	ECA	The Corporation of the City of Guelph	Arkell Rd (from Gordon Street to Victoria Road) Guelph ON N1H 3A1	WNW/99.2	-0.46	34
9	ECA	The Corporation of the City of Guelph	Arkell Rd (from Gordon Street to Victoria Road) Guelph ON N1H 3A1	WNW/99.2	-0.46	34
10	WWIS		lot 6 con 8 ON	S/114.4	-0.03	35

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
			Well ID: 6703579			
11	WWIS		Guelph ON ***Well ID:*** 7188310	S/142.7	0.33	38
12	WWIS		lot 6 con 8 ON ***Well ID:*** 6703602	NE/143.8	3.31	41
13	EHS		164 And 174 Arkell Rd Guelph ON ***Order ID:*** 219047	SSW/147.0	0.00	43
14	ECA	The Corporation of the City of Guelph	164 Arkell Rd Guelph ON N1H 3A1	SSW/161.5	0.00	43
14	SPL	City of Guelph	164 Arkell Road Guelph ON	SSW/161.5	0.00	43
15	WWIS		GUELPH ON ***Well ID:*** 7163099	NE/168.5	5.01	44
16	WWIS		lot 6 con 8 ON ***Well ID:*** 6704985	SSW/168.8	0.00	46
17	SPL		25 coutts court Guelph ON	ESE/178.8	3.00	49
18	WWIS		lot 6 con 8 GUELPH ON ***Well ID:*** 7211048	SE/194.9	3.00	49
19	PINC		14 AMOS DR, GUELPH ON	NE/208.7	7.03	51
19	SPL	Union Gas Limited	14 Amos Dr Guelph ON	NE/208.7	7.03	51
20	WWIS		GUELPH ON ***Well ID:*** 7163100	ENE/217.7	7.71	52
21	WWIS		lot 7 con 8 GUELPH ON	SE/222.7	2.69	54

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
			Well ID: 6715351			
22	EHS		220 Arkell Road Guelph ON ***Order ID:*** 467181	NNW/225.4	3.72	55
23	WWIS		lot 7 con 8 ON ***Well ID:*** 6711291	SSE/228.6	1.97	56
24	WWIS		lot 7 con 8 ON ***Well ID:*** 6714128	SE/235.7	3.00	59
25	WWIS		lot 6 con 8 ON ***Well ID:*** 6702585	SW/237.4	0.00	60
26	WWIS		lot 6 con 8 GUELPH ON ***Well ID:*** 7211047	NE/241.1	10.43	63

Executive Summary: Summary By Data Source

ECA - Environmental Compliance Approval

A search of the ECA database, dated Oct 2011-Jul 31, 2018 has found that there are 4 ECA site(s) within approximately 0.25 kilometers of the project property.

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
The Corporation of the City of Guelph	164 Arkell Rd Guelph ON N1H 3A1	SSW	161.54	14

Lower Elevation	Address	Direction	Distance (m)	Map Key
The Corporation of the City of Guelph	Arkell Rd (from Gordon Street to Victoria Road) Guelph ON N1H 3A1	WNW	99.19	9
The Corporation of the City of Guelph	Part Lots 6 & 7, Conc. 8, Former Twp. of Puslinch Guelph ON N1H 3A1	WNW	99.19	9
The Corporation of the City of Guelph	Arkell Rd (from Gordon Street to Victoria Road) Guelph ON N1H 3A1	WNW	99.19	9

EHS - ERIS Historical Searches

A search of the EHS database, dated 1999-Feb 28, 2018 has found that there are 2 EHS site(s) within approximately 0.25 kilometers of the project property.

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
	164 And 174 Arkell Rd Guelph ON ***Order ID:*** 219047	SSW	146.95	13
	220 Arkell Road Guelph ON ***Order ID:*** 467181	NNW	225.37	22

PINC - TSSA Pipeline Incidents

A search of the PINC database, dated Feb 28, 2017 has found that there are 1 PINC site(s) within approximately 0.25 kilometers of the project property.

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
	14 AMOS DR, GUELPH ON	NE	208.73	19

SPL - Ontario Spills

A search of the SPL database, dated 1988-May 2018 has found that there are 3 SPL site(s) within approximately 0.25 kilometers of the project property.

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
City of Guelph	164 Arkell Road Guelph ON	SSW	161.54	14
	25 coutts court Guelph ON	ESE	178.84	17
Union Gas Limited	14 Amos Dr Guelph ON	NE	208.73	19

WWIS - Water Well Information System

A search of the WWIS database, dated Dec 31, 2017 has found that there are 20 WWIS site(s) within approximately 0.25 kilometers of the project property.

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
	Guelph ON ***Well ID:*** 7285695	SE	10.44	1
	Guelph ON ***Well ID:*** 7285692	W	65.89	2
	ON ***Well ID:*** 7209139	NE	72.01	4
	Guelph ON ***Well ID:*** 7285694	NNW	77.43	5
	ON	ENE	82.92	7

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
	Well ID: 7229605			
	Guelph ON ***Well ID:*** 7188310	S	142.70	11
	lot 6 con 8 ON ***Well ID:*** 6703602	NE	143.85	12
	GUELPH ON ***Well ID:*** 7163099	NE	168.46	15
	lot 6 con 8 ON ***Well ID:*** 6704985	SSW	168.80	16
	lot 6 con 8 GUELPH ON ***Well ID:*** 7211048	SE	194.86	18
	GUELPH ON ***Well ID:*** 7163100	ENE	217.68	20
	lot 7 con 8 GUELPH ON ***Well ID:*** 6715351	SE	222.70	21
	lot 7 con 8 ON ***Well ID:*** 6711291	SSE	228.64	23
	lot 7 con 8 ON ***Well ID:*** 6714128	SE	235.73	24
	lot 6 con 8 ON ***Well ID:*** 6702585	SW	237.40	25
	lot 6 con 8 GUELPH ON ***Well ID:*** 7211047	NE	241.06	26

Lower Elevation	Address	Direction	Distance (m)	Map Key
	Guelph ON ***Well ID:*** 7285693	SSE	68.11	3
	lot 6 con 8 ON ***Well ID:*** 6702590	SSE	82.48	6
	lot 6 con 8 ON ***Well ID:*** 6712543	NW	94.92	8
	lot 6 con 8 ON ***Well ID:*** 6703579	S	114.45	10

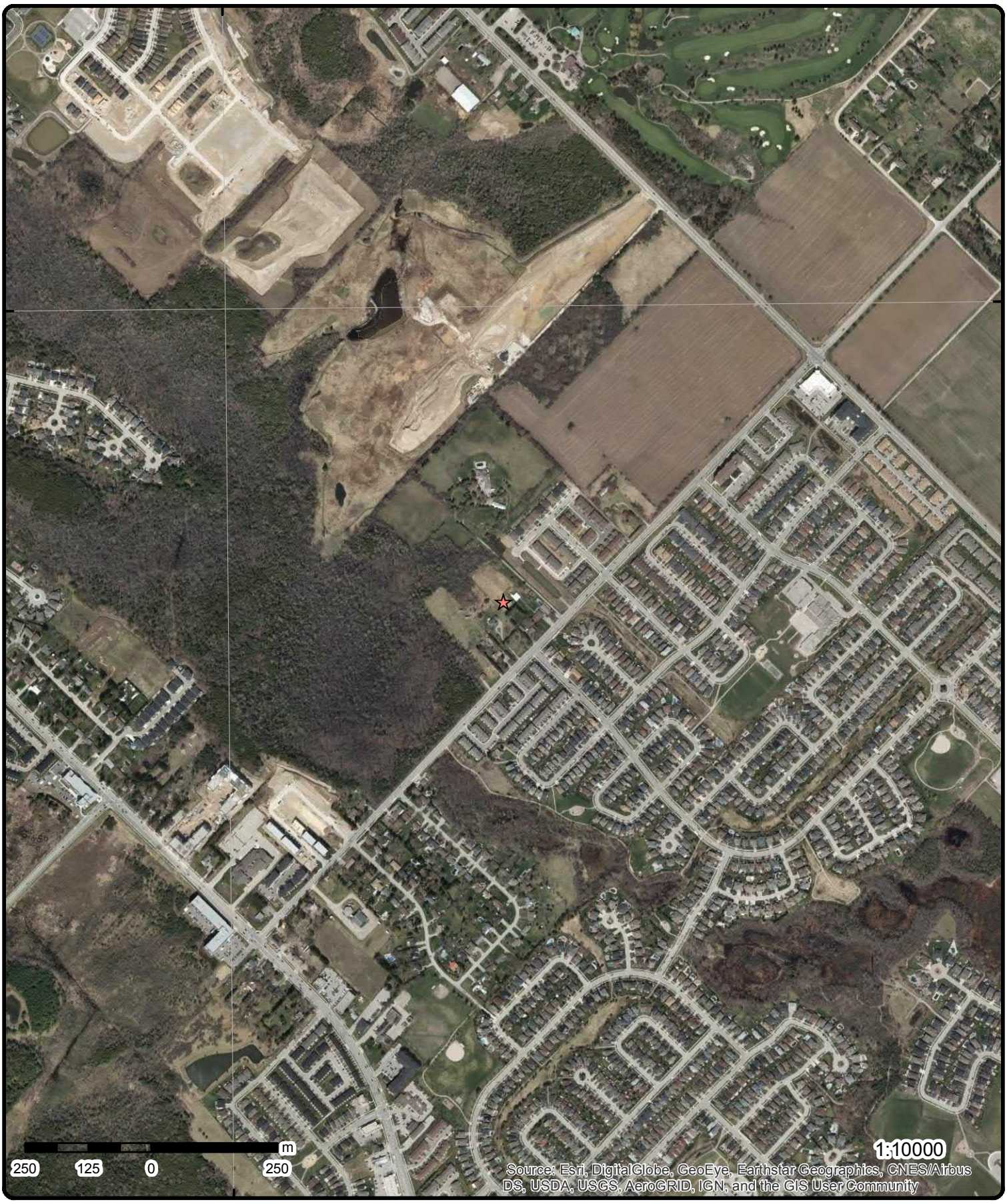
Map : 0.25 Kilometer Radius

Order No: 20180913184

Address: 190 Arkell Road, Guelph, ON, N1L 1E6

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- Expressway
- Principal Highway
- Secondary Highway
- Major Road
- Local road
- Trail
- Proposed Road
- Ferry Route/Ice Road
- Industrial and Resource - Regions
- Main Line
- Sidetrack
- Transit Line
- Abandoned Line
- National Park
- Provincial or Territorial Park
- Other Park
- Golf Course or Driving Range
- Park or Sports Field
- Other Recreation Area

Source: © 2015 DMTI Spatial Inc.



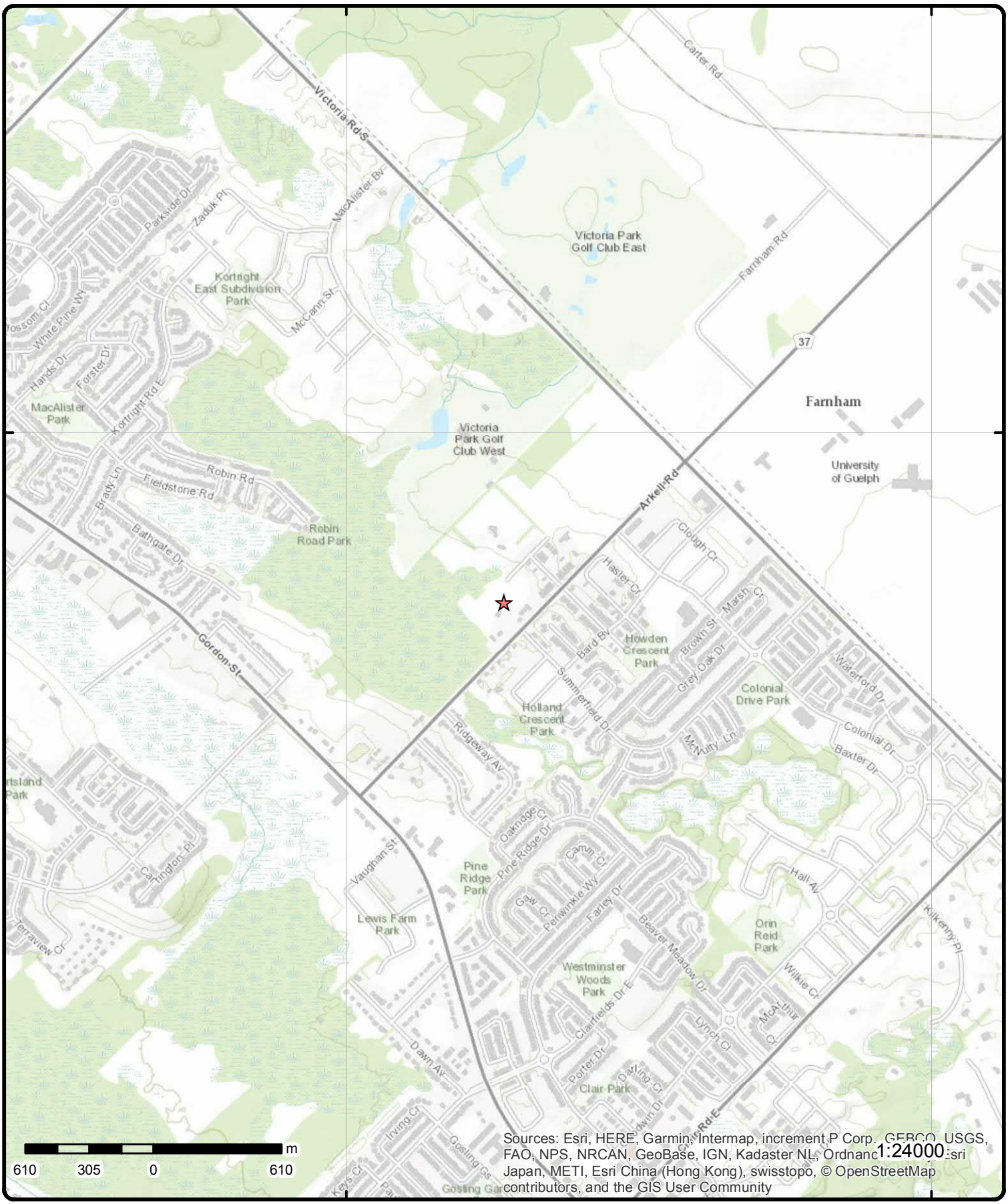
Aerial (2017)

Address: 190 Arkell Road, Guelph, ON, N1L 1E6

Source: ESRI World Imagery

Order No: 20180913184

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



Topographic Map

Address: 190 Arkell Road, Guelph, ON, N1L 1E6

Source: ESRI World Topographic Map

Order No: 20180913184

ERIS ENVIRONMENTAL RISK INFORMATION SERVICES

Detail Report

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
1	1 of 1	SE/10.4	334.9 / 0.00	Guelph ON	WWIS

Well ID:	7285695	**Data Entry Status:**	
Construction Date:		**Data Src:**	
Primary Water Use:	Test Hole	**Date Received:**	4/27/2017
Sec. Water Use:		**Selected Flag:**	Yes
Final Well Status:	Monitoring and Test Hole	**Abandonment Rec:**	
Water Type:		**Contractor:**	7320
Casing Material:		**Form Version:**	7
Audit No:	Z256382	**Owner:**	
Tag:	A219998	**Street Name:**	190 ARKELL RD
Construction Method:		**County:**	WELLINGTON
Elevation (m):		**Municipality:**	PUSLINCH TOWNSHIP
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	
Well Depth:		**Concession:**	
Overburden/Bedrock:		**Concession Name:**	
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	1006384737	**Elevation:**	335.04
DP2BR:		**Elevrc:**	
Spatial Status:		**Zone:**	17
Code OB:		**East83:**	565207
Code OB Desc:		**Org CS:**	UTM83
Open Hole:		**North83:**	4818841
Cluster Kind:		**UTMRC:**	4
Date Completed:	21-MAR-17	**UTMRC Desc:**	margin of error : 30 m - 100 m
Remarks:		**Location Method:**	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	1006690368
Layer:	2
Color:	6
General Color:	BROWN
Mat1:	28
Most Common Material:	SAND
Mat2:	11
Other Materials:	GRAVEL
Mat3:	91

Other Materials:	WATER-BEARING
Formation Top Depth:	4.6
Formation End Depth:	7.6
Formation End Depth UOM:	m
Formation ID:	1006690367
Layer:	1
Color:	6
General Color:	BROWN
Mat1:	28
Most Common Material:	SAND
Mat2:	11
Other Materials:	GRAVEL
Mat3:	
Other Materials:	
Formation Top Depth:	0
Formation End Depth:	4.6
Formation End Depth UOM:	m

Annular Space/Abandonment Sealing Record

Plug ID:	1006690375
Layer:	1
Plug From:	0
Plug To:	.15
Plug Depth UOM:	m
Plug ID:	1006690376
Layer:	2
Plug From:	.15
Plug To:	5.7
Plug Depth UOM:	m
Plug ID:	1006690377
Layer:	3
Plug From:	5.7
Plug To:	7.6
Plug Depth UOM:	m

Method of Construction & Well Use

Method Construction ID:	1006690374
Method Construction Code:	2
Method Construction:	Rotary (Convent.)
Other Method Construction:	HSA

Pipe Information

Pipe ID:	1006690366
Casing No:	0
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	1006690371
Layer:	1
Material:	5
Open Hole or Material:	PLASTIC
Depth From:	-.7

Depth To:	6.1
Casing Diameter:	5.1
Casing Diameter UOM:	cm
Casing Depth UOM:	m

Construction Record - Screen

Screen ID:	1006690372
Layer:	1
Slot:	.01
Screen Top Depth:	6.1
Screen End Depth:	7.6
Screen Material:	5
Screen Depth UOM:	m
Screen Diameter UOM:	cm
Screen Diameter:	6.1

Water Details

Water ID:	1006690370
Layer:	1
Kind Code:	8
Kind:	Untested
Water Found Depth:	
Water Found Depth UOM:	m

Hole Diameter

Hole ID:	1006690369
Diameter:	21
Depth From:	0
Depth To:	7.6
Hole Depth UOM:	m
Hole Diameter UOM:	cm

---

2 ***1 of 1*** ***W/65.9*** ***334.9 / 0.00*** ***Guelph ON*** ***WWIS***

Well ID:	7285692	**Data Entry Status:**	
Construction Date:		**Data Src:**	
Primary Water Use:	Test Hole	**Date Received:**	4/27/2017
Sec. Water Use:		**Selected Flag:**	Yes
Final Well Status:	Test Hole	**Abandonment Rec:**	
Water Type:		**Contractor:**	7320
Casing Material:		**Form Version:**	7
Audit No:	Z250516	**Owner:**	
Tag:	A220009	**Street Name:**	190 ARKELL ST
Construction Method:		**County:**	WELLINGTON
Elevation (m):		**Municipality:**	PUSLINCH TOWNSHIP
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	
Well Depth:		**Concession:**	
Overburden/Bedrock:		**Concession Name:**	
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	1006384728	**Elevation:**	334.82

DP2BR:		**Elevrc:**	
Spatial Status:		**Zone:**	17
Code OB:		**East83:**	565134
Code OB Desc:		**Org CS:**	UTM83
Open Hole:		**North83:**	4818835
Cluster Kind:		**UTMRC:**	4
Date Completed:	14-FEB-17	**UTMRC Desc:**	margin of error : 30 m - 100 m
Remarks:		**Location Method:**	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	1006690151
Layer:	2
Color:	6
General Color:	BROWN
Mat1:	28
Most Common Material:	SAND
Mat2:	11
Other Materials:	GRAVEL
Mat3:	
Other Materials:	
Formation Top Depth:	2.1
Formation End Depth:	7.6
Formation End Depth UOM:	m

Formation ID:	1006690150
Layer:	1
Color:	6
General Color:	BROWN
Mat1:	28
Most Common Material:	SAND
Mat2:	06
Other Materials:	SILT
Mat3:	11
Other Materials:	GRAVEL
Formation Top Depth:	0
Formation End Depth:	2.1
Formation End Depth UOM:	m

Annular Space/Abandonment Sealing Record

Plug ID:	1006690158
Layer:	1
Plug From:	0
Plug To:	.3
Plug Depth UOM:	m

Plug ID:	1006690159
Layer:	2
Plug From:	.3
Plug To:	5.7
Plug Depth UOM:	m

Plug ID:	1006690160
Layer:	3
Plug From:	5.7

Plug To:	7.6
Plug Depth UOM:	m

Method of Construction & Well Use

Method Construction ID:	1006690157
Method Construction Code:	6
Method Construction:	Boring
Other Method Construction:	HSA

Pipe Information

Pipe ID:	1006690149
Casing No:	0
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	1006690154
Layer:	1
Material:	5
Open Hole or Material:	PLASTIC
Depth From:	-.7
Depth To:	6.1
Casing Diameter:	5.1
Casing Diameter UOM:	cm
Casing Depth UOM:	m

Construction Record - Screen

Screen ID:	1006690155
Layer:	1
Slot:	10
Screen Top Depth:	6.1
Screen End Depth:	7.6
Screen Material:	5
Screen Depth UOM:	m
Screen Diameter UOM:	cm
Screen Diameter:	6.1

Water Details

Water ID:	1006690153
Layer:	1
Kind Code:	8
Kind:	Untested
Water Found Depth:	2.1
Water Found Depth UOM:	m

Hole Diameter

Hole ID:	1006690152
Diameter:	21
Depth From:	0
Depth To:	7.6
Hole Depth UOM:	m
Hole Diameter UOM:	cm

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	1 of 1	SSE/68.1	334.8 / -0.08	Guelph ON	WWIS

Well ID: 7285693
Construction Date:
Primary Water Use: Test Hole
Sec. Water Use:
Final Well Status: Test Hole
Water Type:
Casing Material:
Audit No: Z250515
Tag: A220008
Construction Method:
Elevation (m):
Elevation Reliability:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:

Data Entry Status:
Data Src:
Date Received: 4/27/2017
Selected Flag: Yes
Abandonment Rec:
Contractor: 7320
Form Version: 7
Owner:
Street Name: 190 ARKELL ST
County: WELLINGTON
Municipality: PUSLINCH TOWNSHIP
Site Info:
Lot:
Concession:
Concession Name:
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 1006384731
DP2BR:
Spatial Status:
Code OB:
Code OB Desc:
Open Hole:
Cluster Kind:
Date Completed: 14-FEB-17
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Elevation: 335.68
Elevrc:
Zone: 17
East83: 565221
Org CS: UTM83
North83: 4818783
UTMRC: 4
UTMRC Desc: margin of error : 30 m - 100 m
Location Method: wwr

Overburden and Bedrock Materials Interval

Formation ID: 1006690235
Layer: 1
Color: 6
General Color: BROWN
Mat1: 28
Most Common Material: SAND
Mat2: 11
Other Materials: GRAVEL
Mat3: 77
Other Materials: LOOSE
Formation Top Depth: 0
Formation End Depth: 3.1
Formation End Depth UOM: m

Formation ID: 1006690236
Layer: 2
Color: 6
General Color: BROWN
Mat1: 28

Most Common Material:	SAND
Mat2:	11
Other Materials:	GRAVEL
Mat3:	
Other Materials:	
Formation Top Depth:	3.1
Formation End Depth:	7.6
Formation End Depth UOM:	m

Annular Space/Abandonment Sealing Record

Plug ID:	1006690245
Layer:	3
Plug From:	5.7
Plug To:	7.6
Plug Depth UOM:	m

Plug ID:	1006690244
Layer:	2
Plug From:	.3
Plug To:	5.7
Plug Depth UOM:	m

Plug ID:	1006690243
Layer:	1
Plug From:	0
Plug To:	.3
Plug Depth UOM:	m

Method of Construction & Well Use

Method Construction ID:	1006690242
Method Construction Code:	6
Method Construction:	Boring
Other Method Construction:	HSA

Pipe Information

Pipe ID:	1006690234
Casing No:	0
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	1006690239
Layer:	1
Material:	5
Open Hole or Material:	PLASTIC
Depth From:	-.7
Depth To:	6.1
Casing Diameter:	5.1
Casing Diameter UOM:	cm
Casing Depth UOM:	m

Construction Record - Screen

Screen ID:	1006690240
Layer:	1
Slot:	10

Screen Top Depth:	6.1
Screen End Depth:	7.6
Screen Material:	5
Screen Depth UOM:	m
Screen Diameter UOM:	cm
Screen Diameter:	6.1

Water Details

Water ID:	1006690238
Layer:	1
Kind Code:	8
Kind:	Untested
Water Found Depth:	3.1
Water Found Depth UOM:	m

Hole Diameter

Hole ID:	1006690237
Diameter:	21
Depth From:	0
Depth To:	7.6
Hole Depth UOM:	m
Hole Diameter UOM:	cm

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4 ***1 of 1*** ***NE/72.0*** ***335.1 / 0.22*** ***ON*** ***WWIS***

Well ID:	7209139	**Data Entry Status:**	Yes
Construction Date:		**Data Src:**	
Primary Water Use:		**Date Received:**	10/3/2013
Sec. Water Use:		**Selected Flag:**	Yes
Final Well Status:		**Abandonment Rec:**	
Water Type:		**Contractor:**	7282
Casing Material:		**Form Version:**	8
Audit No:	C21501	**Owner:**	
Tag:		**Street Name:**	
Construction Method:		**County:**	WELLINGTON
Elevation (m):		**Municipality:**	PUSLINCH TOWNSHIP
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	
Well Depth:		**Concession:**	
Overburden/Bedrock:		**Concession Name:**	
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	1004596557	**Elevation:**	335.43
DP2BR:		**Elevrc:**	
Spatial Status:		**Zone:**	17
Code OB:		**East83:**	565256
Code OB Desc:		**Org CS:**	UTM83
Open Hole:		**North83:**	4818891
Cluster Kind:		**UTMRC:**	4
Date Completed:	13-JUN-13	**UTMRC Desc:**	margin of error : 30 m - 100 m
Remarks:		**Location Method:**	wwr
Elevrc Desc:			
Location Source Date:			

Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

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5 | ***1 of 1*** | ***NNW/77.4*** | ***334.9 / 0.00*** | ***Guelph ON*** | ***WWIS***

Well ID:	7285694	***Data Entry Status:***	
Construction Date:		***Data Src:***	
Primary Water Use:	Test Hole	***Date Received:***	4/27/2017
Sec. Water Use:		***Selected Flag:***	Yes
Final Well Status:	Monitoring and Test Hole	***Abandonment Rec:***	
Water Type:		***Contractor:***	7320
Casing Material:		***Form Version:***	7
Audit No:	Z256381	***Owner:***	
Tag:	A219997	***Street Name:***	190 ARKELL RD
Construction Method:		***County:***	WELLINGTON
Elevation (m):		***Municipality:***	PUSLINCH TOWNSHIP
Elevation Reliability:		***Site Info:***	
Depth to Bedrock:		***Lot:***	
Well Depth:		***Concession:***	
Overburden/Bedrock:		***Concession Name:***	
Pump Rate:		***Easting NAD83:***	
Static Water Level:		***Northing NAD83:***	
Flowing (Y/N):		***Zone:***	
Flow Rate:		***UTM Reliability:***	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	1006384734	***Elevation:***	334.76
DP2BR:		***Elevrc:***	
Spatial Status:		***Zone:***	17
Code OB:		***East83:***	565167
Code OB Desc:		***Org CS:***	UTM83
Open Hole:		***North83:***	4818918
Cluster Kind:		***UTMRC:***	4
Date Completed:	21-MAR-17	***UTMRC Desc:***	margin of error : 30 m - 100 m
Remarks:		***Location Method:***	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	1006690279
Layer:	1
Color:	6
General Color:	BROWN
Mat1:	28
Most Common Material:	SAND
Mat2:	11
Other Materials:	GRAVEL
Mat3:	
Other Materials:	
Formation Top Depth:	0
Formation End Depth:	4.6
Formation End Depth UOM:	m

Formation ID: 1006690280
Layer: 2
Color: 6
General Color: BROWN
Mat1: 28
Most Common Material: SAND
Mat2: 11
Other Materials: GRAVEL
Mat3: 91
Other Materials: WATER-BEARING
Formation Top Depth: 4.6
Formation End Depth: 7.6
Formation End Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1006690289
Layer: 3
Plug From: 5.7
Plug To: 7.6
Plug Depth UOM: m

Plug ID: 1006690288
Layer: 2
Plug From: .15
Plug To: 5.7
Plug Depth UOM: m

Plug ID: 1006690287
Layer: 1
Plug From: 0
Plug To: .15
Plug Depth UOM: m

Method of Construction & Well Use

Method Construction ID: 1006690286
Method Construction Code: 2
Method Construction: Rotary (Convent.)
Other Method Construction: HSA

Pipe Information

Pipe ID: 1006690278
Casing No: 0
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 1006690283
Layer: 1
Material: 5
Open Hole or Material: PLASTIC
Depth From: -.7
Depth To: 6.1
Casing Diameter: 5.1
Casing Diameter UOM: cm
Casing Depth UOM: m

Construction Record - Screen

Screen ID:	1006690284
Layer:	1
Slot:	.01
Screen Top Depth:	6.1
Screen End Depth:	7.6
Screen Material:	5
Screen Depth UOM:	m
Screen Diameter UOM:	cm
Screen Diameter:	6.1

Water Details

Water ID:	1006690282
Layer:	
Kind Code:	
Kind:	
Water Found Depth:	
Water Found Depth UOM:	m

Hole Diameter

Hole ID:	1006690281
Diameter:	21
Depth From:	0
Depth To:	7.6
Hole Depth UOM:	m
Hole Diameter UOM:	cm

6 ***1 of 1*** ***SSE/82.5*** ***334.8 / -0.08*** ***lot 6 con 8 ON*** ***WWIS***

Well ID:	6702590	***Data Entry Status:***	
Construction Date:		***Data Src:***	1
Primary Water Use:	Domestic	***Date Received:***	11/9/1962
Sec. Water Use:	0	***Selected Flag:***	Yes
Final Well Status:	Water Supply	***Abandonment Rec:***	
Water Type:		***Contractor:***	2414
Casing Material:		***Form Version:***	1
Audit No:		***Owner:***	
Tag:		***Street Name:***	
Construction Method:		***County:***	WELLINGTON
Elevation (m):		***Municipality:***	GUELPH CITY (PUSLINCH TWP)
Elevation Reliability:		***Site Info:***	
Depth to Bedrock:		***Lot:***	006
Well Depth:		***Concession:***	08
Overburden/Bedrock:		***Concession Name:***	CON
Pump Rate:		***Easting NAD83:***	
Static Water Level:		***Northing NAD83:***	
Flowing (Y/N):		***Zone:***	
Flow Rate:		***UTM Reliability:***	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	10466733	***Elevation:***	335.98
DP2BR:		***Elevrc:***	
Spatial Status:		***Zone:***	17
Code OB:	o	***East83:***	565238.3
Code OB Desc:	Overburden	***Org CS:***	

Open Hole:
Cluster Kind:
Date Completed: 24-OCT-62
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

North83: 4818775
UTMRC: 5
UTMRC Desc: margin of error : 100 m - 300 m
Location Method: p5

Overburden and Bedrock Materials Interval

Formation ID: 932614469
Layer: 1
Color:
General Color:
Mat1: 23
Most Common Material: PREVIOUSLY DUG
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 0
Formation End Depth: 9
Formation End Depth UOM: ft

Formation ID: 932614471
Layer: 3
Color: 2
General Color: GREY
Mat1: 14
Most Common Material: HARDPAN
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 34
Formation End Depth: 45
Formation End Depth UOM: ft

Formation ID: 932614470
Layer: 2
Color: 6
General Color: BROWN
Mat1: 05
Most Common Material: CLAY
Mat2: 11
Other Materials: GRAVEL
Mat3:
Other Materials:
Formation Top Depth: 9
Formation End Depth: 34
Formation End Depth UOM: ft

Formation ID: 932614473
Layer: 5
Color:
General Color:
Mat1: 11
Most Common Material: GRAVEL
Mat2:
Other Materials:
Mat3:

Other Materials:	
Formation Top Depth:	58
Formation End Depth:	65
Formation End Depth UOM:	ft
Formation ID:	932614472
Layer:	4
Color:	
General Color:	
Mat1:	08
Most Common Material:	FINE SAND
Mat2:	11
Other Materials:	GRAVEL
Mat3:	
Other Materials:	
Formation Top Depth:	45
Formation End Depth:	58
Formation End Depth UOM:	ft

Method of Construction & Well Use

Method Construction ID:	966702590
Method Construction Code:	1
Method Construction:	Cable Tool
Other Method Construction:	

Pipe Information

Pipe ID:	11015303
Casing No:	1
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	930759062
Layer:	2
Material:	1
Open Hole or Material:	STEEL
Depth From:	
Depth To:	60
Casing Diameter:	4
Casing Diameter UOM:	inch
Casing Depth UOM:	ft
Casing ID:	930759061
Layer:	1
Material:	
Open Hole or Material:	
Depth From:	
Depth To:	5
Casing Diameter:	
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Results of Well Yield Testing

Pump Test ID:	996702590
Pump Set At:	
Static Level:	16
Final Level After Pumping:	20

Recommended Pump Depth:	30
Pumping Rate:	10
Flowing Rate:	
Recommended Pump Rate:	8
Levels UOM:	ft
Rate UOM:	GPM
Water State After Test Code:	1
Water State After Test:	CLEAR
Pumping Test Method:	1
Pumping Duration HR:	2
Pumping Duration MIN:	0
Flowing:	N

Water Details

Water ID:	933954930
Layer:	1
Kind Code:	1
Kind:	FRESH
Water Found Depth:	65
Water Found Depth UOM:	ft

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7 ***1 of 1*** ***ENE/82.9*** ***336.4 / 1.50*** ***ON*** ***WWIS***

Well ID:	7229605	***Data Entry Status:***	Yes
Construction Date:		***Data Src:***	
Primary Water Use:		***Date Received:***	10/16/2014
Sec. Water Use:		***Selected Flag:***	Yes
Final Well Status:		***Abandonment Rec:***	
Water Type:		***Contractor:***	6607
Casing Material:		***Form Version:***	8
Audit No:	C23988	***Owner:***	
Tag:	A126174	***Street Name:***	
Construction Method:		***County:***	WELLINGTON
Elevation (m):		***Municipality:***	PUSLINCH TOWNSHIP
Elevation Reliability:		***Site Info:***	
Depth to Bedrock:		***Lot:***	
Well Depth:		***Concession:***	
Overburden/Bedrock:		***Concession Name:***	
Pump Rate:		***Easting NAD83:***	
Static Water Level:		***Northing NAD83:***	
Flowing (Y/N):		***Zone:***	
Flow Rate:		***UTM Reliability:***	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	1005164294	***Elevation:***	335.8
DP2BR:		***Elevrc:***	
Spatial Status:		***Zone:***	17
Code OB:		***East83:***	565271
Code OB Desc:		***Org CS:***	UTM83
Open Hole:		***North83:***	4818888
Cluster Kind:		***UTMRC:***	4
Date Completed:	13-AUG-14	***UTMRC Desc:***	margin of error : 30 m - 100 m
Remarks:		***Location Method:***	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
8	1 of 1	NW/94.9	334.4 / -0.46	lot 6 con 8 ON	WWIS

Well ID: 6712543
Construction Date:
Primary Water Use: Domestic
Sec. Water Use:
Final Well Status: Water Supply
Water Type:
Casing Material:
Audit No: 187626
Tag:
Construction Method:
Elevation (m):
Elevation Reliability:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:

Data Entry Status:
Data Src: 1
Date Received: 6/8/1998
Selected Flag: Yes
Abandonment Rec:
Contractor: 2336
Form Version: 1
Owner:
Street Name:
County: WELLINGTON
Municipality: PUSLINCH TOWNSHIP
Site Info:
Lot: 006
Concession: 08
Concession Name: CON
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 10476376
DP2BR: 39
Spatial Status:
Code OB: r
Code OB Desc: Bedrock
Open Hole:
Cluster Kind:
Date Completed: 21-MAY-98
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Elevation: 334.66
Elevrc:
Zone: 17
East83: 565123.3
Org CS:
North83: 4818905
UTMRC: 9
UTMRC Desc: unknown UTM
Location Method: lot

Overburden and Bedrock Materials Interval

Formation ID: 932657688
Layer: 4
Color: 2
General Color: GREY
Mat1: 26
Most Common Material: ROCK
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 55
Formation End Depth: 80
Formation End Depth UOM: ft

Formation ID: 932657686
Layer: 2
Color: 6

General Color:	BROWN
Mat1:	28
Most Common Material:	SAND
Mat2:	11
Other Materials:	GRAVEL
Mat3:	
Other Materials:	
Formation Top Depth:	30
Formation End Depth:	39
Formation End Depth UOM:	ft

Formation ID:	932657685
Layer:	1
Color:	6
General Color:	BROWN
Mat1:	28
Most Common Material:	SAND
Mat2:	12
Other Materials:	STONES
Mat3:	
Other Materials:	
Formation Top Depth:	0
Formation End Depth:	30
Formation End Depth UOM:	ft

Formation ID:	932657687
Layer:	3
Color:	6
General Color:	BROWN
Mat1:	26
Most Common Material:	ROCK
Mat2:	
Other Materials:	
Mat3:	
Other Materials:	
Formation Top Depth:	39
Formation End Depth:	55
Formation End Depth UOM:	ft

Annular Space/Abandonment Sealing Record

Plug ID:	933210822
Layer:	1
Plug From:	0
Plug To:	25
Plug Depth UOM:	ft

Method of Construction & Well Use

Method Construction ID:	966712543
Method Construction Code:	4
Method Construction:	Rotary (Air)
Other Method Construction:	

Pipe Information

Pipe ID:	11024946
Casing No:	1
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	930776088
Layer:	1
Material:	1
Open Hole or Material:	STEEL
Depth From:	
Depth To:	42
Casing Diameter:	6
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Casing ID:	930776089
Layer:	2
Material:	4
Open Hole or Material:	OPEN HOLE
Depth From:	
Depth To:	80
Casing Diameter:	6
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Results of Well Yield Testing

Pump Test ID:	996712543
Pump Set At:	
Static Level:	10
Final Level After Pumping:	50
Recommended Pump Depth:	70
Pumping Rate:	10
Flowing Rate:	
Recommended Pump Rate:	10
Levels UOM:	ft
Rate UOM:	GPM
Water State After Test Code:	1
Water State After Test:	CLEAR
Pumping Test Method:	1
Pumping Duration HR:	1
Pumping Duration MIN:	0
Flowing:	N

Draw Down & Recovery

Pump Test Detail ID:	934617298
Test Type:	Draw Down
Test Duration:	30
Test Level:	46
Test Level UOM:	ft

Pump Test Detail ID:	934869129
Test Type:	Draw Down
Test Duration:	45
Test Level:	50
Test Level UOM:	ft

Pump Test Detail ID:	934352296
Test Type:	Draw Down
Test Duration:	15
Test Level:	32
Test Level UOM:	ft

Pump Test Detail ID:	935138943
Test Type:	Draw Down

Test Duration: 60
Test Level: 50
Test Level UOM: ft

Water Details

Water ID: 933966957
Layer: 1
Kind Code: 1
Kind: FRESH
Water Found Depth: 75
Water Found Depth UOM: ft

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9 | **1 of 3** | **WNW/99.2** | **334.4 / -0.46** | **The Corporation of the City of Guelph**
Part Lots 6 & 7, Conc. 8, Former Twp. of Puslinch
Guelph ON N1H 3A1 | **ECA**

Approval No: 8674-5B5M74
Approval Date: 2002-06-21
Status: Approved
Record Type: ECA
Link Source: IDS
Approval Type: ECA-Municipal and Private Water Works
Project Type: Municipal and Private Water Works
Address: Part Lots 6 & 7, Conc. 8, Former Twp. of Puslinch
Full Address:
Full PDF Link:
SWP Area Name: Grand River
MOE District: Guelph
City:
Longitude: -80.1943
Latitude: 43.5202

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9 | **2 of 3** | **WNW/99.2** | **334.4 / -0.46** | **The Corporation of the City of Guelph**
Arkell Rd (from Gordon Street to Victoria Road)
Guelph ON N1H 3A1 | **ECA**

Approval No: 9839-7CDS44
Approval Date: 2008-03-07
Status: Approved
Record Type: ECA
Link Source: IDS
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Address: Arkell Rd (from Gordon Street to Victoria Road)
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/1943-7BSTND-14.pdf
SWP Area Name: Grand River
MOE District: Guelph
City: Guelph
Longitude: -80.1943
Latitude: 43.5202

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9 | **3 of 3** | **WNW/99.2** | **334.4 / -0.46** | **The Corporation of the City of Guelph**
Arkell Rd (from Gordon Street to Victoria Road)
Guelph ON N1H 3A1 | **ECA**

Approval No: 3084-7CAQT3
Approval Date: 2008-03-07
Status: Approved
Record Type: ECA
Link Source: IDS
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Address: Arkell Rd (from Gordon Street to Victoria Road)
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/9013-7BSTM2-14.pdf
SWP Area Name: Grand River
MOE District: Guelph
City: Guelph
Longitude: -80.1943
Latitude: 43.5202

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
10	1 of 1	S/114.4	334.8 / -0.03	lot 6 con 8 ON	WWIS

Well ID: 6703579
Construction Date:
Primary Water Use: Domestic
Sec. Water Use: 0
Final Well Status: Water Supply
Water Type:
Casing Material:
Audit No:
Tag:
Construction Method:
Elevation (m):
Elevation Reliability:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:

Data Entry Status:
Data Src: 1
Date Received: 10/22/1969
Selected Flag: Yes
Abandonment Rec:
Contractor: 2414
Form Version: 1
Owner:
Street Name:
County: WELLINGTON
Municipality: PUSLINCH TOWNSHIP
Site Info:
Lot: 006
Concession: 08
Concession Name: CON
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 10467714
DP2BR: 70
Spatial Status:
Code OB: r
Code OB Desc: Bedrock
Open Hole:
Cluster Kind:
Date Completed: 27-SEP-69
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Elevation: 335.74
Elevrc:
Zone: 17
East83: 565194.3
Org CS:
North83: 4818733
UTMRC: 4
UTMRC Desc: margin of error : 30 m - 100 m
Location Method: p4

Overburden and Bedrock Materials Interval

Formation ID: 932618536
Layer: 6
Color: 6
General Color: BROWN
Mat1: 26
Most Common Material: ROCK
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 70
Formation End Depth: 93
Formation End Depth UOM: ft

Formation ID: 932618535
Layer: 5
Color: 6
General Color: BROWN
Mat1: 05

Most Common Material:	CLAY
Mat2:	11
Other Materials:	GRAVEL
Mat3:	
Other Materials:	
Formation Top Depth:	55
Formation End Depth:	70
Formation End Depth UOM:	ft
Formation ID:	932618531
Layer:	1
Color:	
General Color:	
Mat1:	23
Most Common Material:	PREVIOUSLY DUG
Mat2:	
Other Materials:	
Mat3:	
Other Materials:	
Formation Top Depth:	0
Formation End Depth:	9
Formation End Depth UOM:	ft
Formation ID:	932618533
Layer:	3
Color:	6
General Color:	BROWN
Mat1:	09
Most Common Material:	MEDIUM SAND
Mat2:	
Other Materials:	
Mat3:	
Other Materials:	
Formation Top Depth:	15
Formation End Depth:	25
Formation End Depth UOM:	ft
Formation ID:	932618532
Layer:	2
Color:	6
General Color:	BROWN
Mat1:	05
Most Common Material:	CLAY
Mat2:	12
Other Materials:	STONES
Mat3:	
Other Materials:	
Formation Top Depth:	9
Formation End Depth:	15
Formation End Depth UOM:	ft
Formation ID:	932618534
Layer:	4
Color:	6
General Color:	BROWN
Mat1:	05
Most Common Material:	CLAY
Mat2:	09
Other Materials:	MEDIUM SAND
Mat3:	11
Other Materials:	GRAVEL
Formation Top Depth:	25
Formation End Depth:	55
Formation End Depth UOM:	ft

Method of Construction & Well Use

Method Construction ID:	966703579
Method Construction Code:	1
Method Construction:	Cable Tool
Other Method Construction:	

Pipe Information

Pipe ID:	11016284
Casing No:	1
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	930760898
Layer:	1
Material:	1
Open Hole or Material:	STEEL
Depth From:	
Depth To:	72
Casing Diameter:	4
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Casing ID:	930760899
Layer:	2
Material:	4
Open Hole or Material:	OPEN HOLE
Depth From:	
Depth To:	93
Casing Diameter:	
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Results of Well Yield Testing

Pump Test ID:	996703579
Pump Set At:	
Static Level:	6
Final Level After Pumping:	15
Recommended Pump Depth:	30
Pumping Rate:	10
Flowing Rate:	
Recommended Pump Rate:	10
Levels UOM:	ft
Rate UOM:	GPM
Water State After Test Code:	1
Water State After Test:	CLEAR
Pumping Test Method:	2
Pumping Duration HR:	1
Pumping Duration MIN:	0
Flowing:	N

Draw Down & Recovery

Pump Test Detail ID:	934604748
Test Type:	Recovery
Test Duration:	30
Test Level:	6

Test Level UOM:	ft
Pump Test Detail ID:	934345758
Test Type:	Recovery
Test Duration:	15
Test Level:	6
Test Level UOM:	ft
Pump Test Detail ID:	934858518
Test Type:	Recovery
Test Duration:	45
Test Level:	6
Test Level UOM:	ft
Pump Test Detail ID:	935123311
Test Type:	Recovery
Test Duration:	60
Test Level:	6
Test Level UOM:	ft

Water Details

Water ID:	933956070
Layer:	1
Kind Code:	1
Kind:	FRESH
Water Found Depth:	93
Water Found Depth UOM:	ft

11 ***1 of 1*** ***S/142.7*** ***335.2 / 0.33*** ***Guelph ON*** ***WWIS***

Well ID:	7188310	***Data Entry Status:***	
Construction Date:		***Data Src:***	
Primary Water Use:	Monitoring	***Date Received:***	9/27/2012
Sec. Water Use:		***Selected Flag:***	Yes
Final Well Status:	Observation Wells	***Abandonment Rec:***	
Water Type:		***Contractor:***	6607
Casing Material:		***Form Version:***	7
Audit No:	Z147899	***Owner:***	
Tag:	A134137	***Street Name:***	176 ARKELL RD
Construction Method:		***County:***	WELLINGTON
Elevation (m):		***Municipality:***	PUSLINCH TOWNSHIP
Elevation Reliability:		***Site Info:***	
Depth to Bedrock:		***Lot:***	
Well Depth:		***Concession:***	
Overburden/Bedrock:		***Concession Name:***	
Pump Rate:		***Easting NAD83:***	
Static Water Level:		***Northing NAD83:***	
Flowing (Y/N):		***Zone:***	
Flow Rate:		***UTM Reliability:***	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	1004168811	***Elevation:***	335.28
DP2BR:		***Elevrc:***	
Spatial Status:		***Zone:***	17
Code OB:		***East83:***	565173
Code OB Desc:		***Org CS:***	UTM83
Open Hole:		***North83:***	4818707
Cluster Kind:		***UTMRC:***	4
Date Completed:	05-SEP-12	***UTMRC Desc:***	margin of error : 30 m - 100 m

Remarks: ***Location Method:*** wwr
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Overburden and Bedrock Materials Interval

Formation ID: 1004465655
Layer: 2
Color:
General Color:
Mat1: 28
Most Common Material: SAND
Mat2: 11
Other Materials: GRAVEL
Mat3:
Other Materials:
Formation Top Depth: 2
Formation End Depth: 10
Formation End Depth UOM: ft

Formation ID: 1004465656
Layer: 3
Color:
General Color:
Mat1: 28
Most Common Material: SAND
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 10
Formation End Depth: 17.5
Formation End Depth UOM: ft

Formation ID: 1004465654
Layer: 1
Color: 6
General Color: BROWN
Mat1: 06
Most Common Material: SILT
Mat2: 01
Other Materials: FILL
Mat3:
Other Materials:
Formation Top Depth: 0
Formation End Depth: 2
Formation End Depth UOM: ft

Annular Space/Abandonment Sealing Record

Plug ID: 1004465663
Layer: 1
Plug From: 0
Plug To: 6.5
Plug Depth UOM: ft

Plug ID: 1004465664
Layer: 2

Plug From: 6.5
Plug To: 17.5
Plug Depth UOM: ft

Method of Construction & Well Use

Method Construction ID: 1004465662
Method Construction Code: 6
Method Construction: Boring
Other Method Construction:

Pipe Information

Pipe ID: 1004465653
Casing No: 0
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 1004465659
Layer: 1
Material: 5
Open Hole or Material: PLASTIC
Depth From: 0
Depth To: 7.5
Casing Diameter: 5.1
Casing Diameter UOM: inch
Casing Depth UOM: ft

Construction Record - Screen

Screen ID: 1004465660
Layer: 1
Slot: 10
Screen Top Depth: 7.8
Screen End Depth: 17.5
Screen Material: 5
Screen Depth UOM: ft
Screen Diameter UOM: inch
Screen Diameter: 6.4

Water Details

Water ID: 1004465658
Layer: 1
Kind Code:
Kind:
Water Found Depth: 10
Water Found Depth UOM: ft

Hole Diameter

Hole ID: 1004465657
Diameter: 8
Depth From: 0
Depth To: 17.5
Hole Depth UOM: ft
Hole Diameter UOM: inch

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
12	1 of 1	NE/143.8	338.2 / 3.31	lot 6 con 8 ON	WWIS

Well ID:	6703602	**Data Entry Status:**	
Construction Date:		**Data Src:**	1
Primary Water Use:	Domestic	**Date Received:**	2/10/1970
Sec. Water Use:	0	**Selected Flag:**	Yes
Final Well Status:	Water Supply	**Abandonment Rec:**	
Water Type:		**Contractor:**	2414
Casing Material:		**Form Version:**	1
Audit No:		**Owner:**	
Tag:		**Street Name:**	
Construction Method:		**County:**	WELLINGTON
Elevation (m):		**Municipality:**	PUSLINCH TOWNSHIP
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	006
Well Depth:		**Concession:**	08
Overburden/Bedrock:		**Concession Name:**	CON
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	10467737	**Elevation:**	337.8
DP2BR:	83	**Elevrc:**	
Spatial Status:		**Zone:**	17
Code OB:	r	**East83:**	565314.3
Code OB Desc:	Bedrock	**Org CS:**	
Open Hole:		**North83:**	4818933
Cluster Kind:		**UTMRC:**	4
Date Completed:	08-JAN-70	**UTMRC Desc:**	margin of error : 30 m - 100 m
Remarks:		**Location Method:**	p4
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	932618626
Layer:	3
Color:	6
General Color:	BROWN
Mat1:	15
Most Common Material:	LIMESTONE
Mat2:	
Other Materials:	
Mat3:	
Other Materials:	
Formation Top Depth:	83
Formation End Depth:	124
Formation End Depth UOM:	ft

Formation ID:	932618625
Layer:	2
Color:	
General Color:	

Mat1:	05
Most Common Material:	CLAY
Mat2:	12
Other Materials:	STONES
Mat3:	11
Other Materials:	GRAVEL
Formation Top Depth:	6
Formation End Depth:	83
Formation End Depth UOM:	ft
Formation ID:	932618624
Layer:	1
Color:	
General Color:	
Mat1:	01
Most Common Material:	FILL
Mat2:	
Other Materials:	
Mat3:	
Other Materials:	
Formation Top Depth:	0
Formation End Depth:	6
Formation End Depth UOM:	ft

Method of Construction & Well Use

Method Construction ID:	966703602
Method Construction Code:	1
Method Construction:	Cable Tool
Other Method Construction:	

Pipe Information

Pipe ID:	11016307
Casing No:	1
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	930760943
Layer:	1
Material:	1
Open Hole or Material:	STEEL
Depth From:	
Depth To:	86
Casing Diameter:	4
Casing Diameter UOM:	inch
Casing Depth UOM:	ft
Casing ID:	930760944
Layer:	2
Material:	4
Open Hole or Material:	OPEN HOLE
Depth From:	
Depth To:	124
Casing Diameter:	
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Results of Well Yield Testing

Pump Test ID:	996703602
Pump Set At:	
Static Level:	23
Final Level After Pumping:	70
Recommended Pump Depth:	80
Pumping Rate:	8
Flowing Rate:	
Recommended Pump Rate:	8
Levels UOM:	ft
Rate UOM:	GPM
Water State After Test Code:	2
Water State After Test:	CLOUDY
Pumping Test Method:	2
Pumping Duration HR:	1
Pumping Duration MIN:	0
Flowing:	N

Water Details

Water ID:	933956094
Layer:	1
Kind Code:	1
Kind:	FRESH
Water Found Depth:	120
Water Found Depth UOM:	ft

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13 ***1 of 1*** ***SSW/147.0*** ***334.9 / 0.00*** ***164 And 174 Arkell Rd Guelph ON*** ***EHS***

Order ID:	219047	***Date Received:***	21-AUG-12
Order No:	20120821014	***Lot/Building Size:***	
Customer ID:	39567	***Municipality:***	
Company ID:	50665	***Client Prov/State:***	ON
Status:	C	***Search Radius (km):***	.25
Report Code:	2CAN	***Large Radius:***	2
Report Type:	Standard Select Report	***X:***	-80.193745
Report Date:	24-AUG-12	***Y:***	43.518442
Report Requested by:	LVM Inc.		
Nearest Intersection:			
Previous Site Name:			
Additional Info Ordered:			

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14 ***1 of 2*** ***SSW/161.5*** ***334.9 / 0.00*** ***The Corporation of the City of Guelph 164 Arkell Rd Guelph ON N1H 3A1*** ***ECA***

Approval No:	7075-5VVHYU	***SWP Area Name:***	
Approval Date:	2004-02-05	***MOE District:***	
Status:	Approved	***City:***	
Record Type:	ECA	***Longitude:***	
Link Source:	IDS	***Latitude:***	
Approval Type:	ECA-Municipal Drinking Water Systems		
Project Type:	Municipal Drinking Water Systems		
Address:	164 Arkell Rd		
Full Address:			
Full PDF Link:			

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14 ***2 of 2*** ***SSW/161.5*** ***334.9 / 0.00*** ***City of Guelph 164 Arkell Road*** ***SPL***

Guelph ON

Ref No:	0325-ANCMS4	**Discharger Report:**	
Site No:		**Material Group:**	
Incident Dt:	6/14/2017	**Client Type:**	Municipal Government
Year:		**Sector Type:**	Miscellaneous Industrial
Incident Cause:		**Source Type:**	Other
Incident Event:	Leak/Break	**Nearest Watercourse:**	
Contaminant Code:	15	**Site Name:**	Burke Well - Spill Site<UNOFFICIAL>
Contaminant Name:	OIL (PETROLEUM BASED, NOT SPECIFIED)	**Site Address:**	164 Arkell Road
Contaminant Limit 1:		**Site District Office:**	Guelph
Contam Limit Freq 1:		**Site County/District:**	County of Wellington
Contaminant UN No 1:	n/a	**Site Postal Code:**	
Contaminant Qty:	0 other - see incident description	**Site Region:**	West Central
Environment Impact:		**Site Municipality:**	Guelph
Nature of Impact:		**Site Lot:**	
Receiving Medium:		**Site Conc:**	
Receiving Env:	Land	**Northing:**	
Health/Env Conseq:	2 - Minor Environment	**Easting:**	
MOE Response:		**Site Geo Ref Accu:**	
Dt MOE Arvl on Scn:		**Site Geo Ref Meth:**	
MOE Reported Dt:	6/15/2017	**Site Map Datum:**	
Dt Document Closed:			
Agency Involved:			
SAC Action Class:			
Incident Reason:	Unknown / N/A		
Incident Summary:	C of Guelph: engine oil to land,		

15 **1 of 1** **NE/168.5** **339.9 / 5.01** **WWIS**

GUELPH ON

Well ID:	7163099	**Data Entry Status:**	
Construction Date:		**Data Src:**	
Primary Water Use:		**Date Received:**	5/13/2011
Sec. Water Use:		**Selected Flag:**	Yes
Final Well Status:	Test Hole	**Abandonment Rec:**	
Water Type:		**Contractor:**	7238
Casing Material:		**Form Version:**	7
Audit No:	Z129152	**Owner:**	
Tag:	A109401	**Street Name:**	246 ARKELL RD
Construction Method:		**County:**	WELLINGTON
Elevation (m):		**Municipality:**	GUELPH CITY
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	
Well Depth:		**Concession:**	
Overburden/Bedrock:		**Concession Name:**	
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	1003509262	**Elevation:**	338.91
DP2BR:		**Elevrc:**	
Spatial Status:		**Zone:**	17
Code OB:		**East83:**	565336
Code OB Desc:		**Org CS:**	UTM83
Open Hole:		**North83:**	4818945
Cluster Kind:		**UTMRC:**	3
Date Completed:	25-APR-11	**UTMRC Desc:**	margin of error : 10 - 30 m

Remarks: ***Location Method:*** wwr
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Overburden and Bedrock Materials Interval

Formation ID: 1003821494
Layer: 1
Color: 6
General Color: BROWN
Mat1: 13
Most Common Material: BOULDERS
Mat2: 11
Other Materials: GRAVEL
Mat3: 73
Other Materials: HARD
Formation Top Depth: 0
Formation End Depth: 3.05
Formation End Depth UOM: m

Formation ID: 1003821495
Layer: 2
Color: 6
General Color: BROWN
Mat1: 05
Most Common Material: CLAY
Mat2: 11
Other Materials: GRAVEL
Mat3: 73
Other Materials: HARD
Formation Top Depth: 3.05
Formation End Depth: 6.1
Formation End Depth UOM: m

Annular Space/Abandonment Sealing Record

Plug ID: 1003821502
Layer: 1
Plug From: 0
Plug To: 2.44
Plug Depth UOM: m

Method of Construction & Well Use

Method Construction ID: 1003821500
Method Construction Code: E
Method Construction: Auger
Other Method Construction:

Pipe Information

Pipe ID: 1003821493
Casing No: 0
Comment:
Alt Name:

Construction Record - Casing

Casing ID:	1003821498
Layer:	1
Material:	5
Open Hole or Material:	PLASTIC
Depth From:	0
Depth To:	3.05
Casing Diameter:	5.1
Casing Diameter UOM:	cm
Casing Depth UOM:	m

Construction Record - Screen

Screen ID:	1003821499
Layer:	1
Slot:	10
Screen Top Depth:	3.05
Screen End Depth:	6.1
Screen Material:	5
Screen Depth UOM:	m
Screen Diameter UOM:	cm
Screen Diameter:	6.4

Water Details

Water ID:	1003821497
Layer:	
Kind Code:	
Kind:	
Water Found Depth:	
Water Found Depth UOM:	m

Hole Diameter

Hole ID:	1003821496
Diameter:	21
Depth From:	0
Depth To:	6.1
Hole Depth UOM:	m
Hole Diameter UOM:	cm

16 ***1 of 1*** ***SSW/168.8*** ***334.9 / 0.00*** ***lot 6 con 8 ON*** ***WWIS***

Well ID:	6704985	***Data Entry Status:***	
Construction Date:		***Data Src:***	1
Primary Water Use:		***Date Received:***	2/25/1974
Sec. Water Use:		***Selected Flag:***	Yes
Final Well Status:	Test Hole	***Abandonment Rec:***	
Water Type:		***Contractor:***	2336
Casing Material:		***Form Version:***	1
Audit No:		***Owner:***	
Tag:		***Street Name:***	
Construction Method:		***County:***	WELLINGTON
Elevation (m):		***Municipality:***	PUSLINCH TOWNSHIP
Elevation Reliability:		***Site Info:***	
Depth to Bedrock:		***Lot:***	006
Well Depth:		***Concession:***	08
Overburden/Bedrock:		***Concession Name:***	CON
Pump Rate:		***Easting NAD83:***	

Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID:	10469087	***Elevation:***	334.99
DP2BR:		***Elevrc:***	
Spatial Status:		***Zone:***	17
Code OB:	o	***East83:***	565140.3
Code OB Desc:	Overburden	***Org CS:***	
Open Hole:		***North83:***	4818689
Cluster Kind:		***UTMRC:***	4
Date Completed:	24-JAN-74	***UTMRC Desc:***	margin of error : 30 m - 100 m
Remarks:		***Location Method:***	p4
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	932624410
Layer:	1
Color:	6
General Color:	BROWN
Mat1:	11
Most Common Material:	GRAVEL
Mat2:	01
Other Materials:	FILL
Mat3:	
Other Materials:	
Formation Top Depth:	0
Formation End Depth:	4
Formation End Depth UOM:	ft

Formation ID:	932624413
Layer:	4
Color:	6
General Color:	BROWN
Mat1:	05
Most Common Material:	CLAY
Mat2:	12
Other Materials:	STONES
Mat3:	
Other Materials:	
Formation Top Depth:	18
Formation End Depth:	20
Formation End Depth UOM:	ft

Formation ID:	932624412
Layer:	3
Color:	6
General Color:	BROWN
Mat1:	11
Most Common Material:	GRAVEL
Mat2:	28
Other Materials:	SAND
Mat3:	05
Other Materials:	CLAY

Formation Top Depth:	6
Formation End Depth:	18
Formation End Depth UOM:	ft
Formation ID:	932624411
Layer:	2
Color:	6
General Color:	BROWN
Mat1:	02
Most Common Material:	TOPSOIL
Mat2:	
Other Materials:	
Mat3:	
Other Materials:	
Formation Top Depth:	4
Formation End Depth:	6
Formation End Depth UOM:	ft

Method of Construction & Well Use

Method Construction ID:	966704985
Method Construction Code:	1
Method Construction:	Cable Tool
Other Method Construction:	

Pipe Information

Pipe ID:	11017657
Casing No:	1
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	930763331
Layer:	1
Material:	1
Open Hole or Material:	STEEL
Depth From:	
Depth To:	20
Casing Diameter:	5
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Results of Well Yield Testing

Pump Test ID:	996704985
Pump Set At:	
Static Level:	12
Final Level After Pumping:	
Recommended Pump Depth:	
Pumping Rate:	
Flowing Rate:	
Recommended Pump Rate:	
Levels UOM:	ft
Rate UOM:	GPM
Water State After Test Code:	2
Water State After Test:	CLOUDY
Pumping Test Method:	2
Pumping Duration HR:	0
Pumping Duration MIN:	5

Flowing: N

Draw Down & Recovery

Pump Test Detail ID: 935135869
Test Type: Recovery
Test Duration: 60
Test Level: 12
Test Level UOM: ft

---

17 | ***1 of 1*** | ***ESE/178.8*** | ***337.9 / 3.00*** | ***25 coutts court Guelph ON*** | ***SPL***

Ref No: 0860-9UCQJF
Site No: NA
Incident Dt: 3/3/2015
Year:
Incident Cause: Leak/Break
Incident Event:
Contaminant Code: 15
Contaminant Name: HYDRAULIC OIL
Contaminant Limit 1:
Contam Limit Freq 1:
Contaminant UN No 1:
Contaminant Qty: 0 other - see incident description
Environment Impact:
Nature of Impact: Land
Receiving Medium:
Receiving Env:
Health/Env Conseq:
MOE Response: N
Dt MOE Arvl on Scn:
MOE Reported Dt: 3/6/2015
Dt Document Closed: 3/12/2015
Agency Involved:
SAC Action Class: Land Spills
Incident Reason: Operator/Human Error
Incident Summary: Coutts Court; Possible Hydraulic oil into snow on Cul de sac

Discharger Report:
Material Group:
Client Type:
Sector Type:
Source Type:
Nearest Watercourse:
Site Name: residential<UNOFFICIAL>
Site Address: 25 coutts court
Site District Office:
Site County/District:
Site Postal Code:
Site Region:
Site Municipality: Guelph
Site Lot:
Site Conc:
Northing: 4818765
Easting: 565373
Site Geo Ref Accu:
Site Geo Ref Meth:
Site Map Datum:

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18 | ***1 of 1*** | ***SE/194.9*** | ***337.9 / 3.00*** | ***lot 6 con 8 GUELPH ON*** | ***WWIS***

Well ID: 7211048
Construction Date:
Primary Water Use:
Sec. Water Use:
Final Well Status: 0
Water Type:
Casing Material:
Audit No: Z172130
Tag:
Construction Method:
Elevation (m):
Elevation Reliability:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:

Data Entry Status:
Data Src:
Date Received: 11/8/2013
Selected Flag: Yes
Abandonment Rec: Yes
Contractor: 2663
Form Version: 7
Owner:
Street Name: 246 ARKELL RD
County: WELLINGTON
Municipality: PUSLINCH TOWNSHIP
Site Info:
Lot: 006
Concession: 08
Concession Name: CON
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID:	1004630819	***Elevation:***	337.67
DP2BR:		***Elevrc:***	
Spatial Status:		***Zone:***	17
Code OB:		***East83:***	565360
Code OB Desc:		***Org CS:***	UTM83
Open Hole:		***North83:***	4818738
Cluster Kind:		***UTMRC:***	4
Date Completed:	23-AUG-13	***UTMRC Desc:***	margin of error : 30 m - 100 m
Remarks:		***Location Method:***	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Annular Space/Abandonment Sealing Record

Plug ID:	1004889960
Layer:	1
Plug From:	0
Plug To:	6
Plug Depth UOM:	ft

Plug ID:	1004889961
Layer:	2
Plug From:	-6
Plug To:	
Plug Depth UOM:	ft

Method of Construction & Well Use

Method Construction ID:	1004889959
Method Construction Code:	
Method Construction:	
Other Method Construction:	

Pipe Information

Pipe ID:	1004889953
Casing No:	0
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	1004889957
Layer:	
Material:	
Open Hole or Material:	
Depth From:	
Depth To:	
Casing Diameter:	
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Construction Record - Screen

Screen ID: 1004889958
Layer:
Slot:
Screen Top Depth:
Screen End Depth:
Screen Material:
Screen Depth UOM: ft
Screen Diameter UOM: inch
Screen Diameter:

Water Details

Water ID: 1004889956
Layer:
Kind Code:
Kind:
Water Found Depth:
Water Found Depth UOM: ft

Hole Diameter

Hole ID: 1004889955
Diameter:
Depth From:
Depth To:
Hole Depth UOM: ft
Hole Diameter UOM: inch

---

19 | ***1 of 2*** | ***NE/208.7*** | ***341.9 / 7.03*** | ***14 AMOS DR, GUELPH ON*** | ***PINC***

Incident ID:
Incident No: 1602706
Type: FS-Pipeline Incident
Status Code: Pipeline Damage Reason Est
Fuel Occurrence Tp:
Fuel Type:
Tank Status: RC Established
Task No: 5415812
Spills Action Centre:
Method Details: E-mail
Fuel Category: Natural Gas
Date of Occurrence:
Occurrence Start Date: 2015/03/25
Operation Type:
Pipeline Type:
Regulator Type:
Summary: 14 AMOS DR, GUELPH - PIPELINE HIT - 1/2"
Reported By: Jeremy Miller - UNION GAS
Affiliation:
Occurrence Desc:
Damage Reason: Excavation practices not sufficient
Notes:

Health Impact:
Environment Impact:
Property Damage: No
Service Interupt:
Enforce Policy: Yes
Public Relation:
Pipeline System:
Depth:
Pipe Material:
PSIG:
Attribute Category: FS-Perform P-line Inc Invest
Regualtor Location:

---

19 | ***2 of 2*** | ***NE/208.7*** | ***341.9 / 7.03*** | ***Union Gas Limited 14 Amos Dr Guelph ON*** | ***SPL***

Ref No: 2642-9UVPW3
Discharger Report:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Site No:	NA	**Material Group:**	
Incident Dt:	3/23/2015	**Client Type:**	
Year:		**Sector Type:**	
Incident Cause:	Leak/Break	**Source Type:**	
Incident Event:		**Nearest Watercourse:**	
Contaminant Code:	35	**Site Name:**	Residential<UNOFFICIAL>
Contaminant Name:	NATURAL GAS (METHANE)	**Site Address:**	14 Amos Dr
Contaminant Limit 1:		**Site District Office:**	
Contam Limit Freq 1:		**Site County/District:**	
Contaminant UN No 1:		**Site Postal Code:**	
Contaminant Qty:	0 other - see incident description	**Site Region:**	
Environment Impact:		**Site Municipality:**	Guelph
Nature of Impact:	Air	**Site Lot:**	
Receiving Medium:		**Site Conc:**	
Receiving Env:		**Northing:**	
Health/Env Conseq:		**Easting:**	
MOE Response:	N	**Site Geo Ref Accu:**	
Dt MOE Arvl on Scn:		**Site Geo Ref Meth:**	
MOE Reported Dt:	3/23/2015	**Site Map Datum:**	
Dt Document Closed:			
Agency Involved:			
SAC Action Class:	TSSA - Fuel Safety Branch - Hydrocarbon Fuel Release/Spill		
Incident Reason:	Operator/Human Error		
Incident Summary:	TSSA: Line Stike- 14 Amos Dr, Still on going- Should be done by 14:00		

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20 **1 of 1** **ENE/217.7** **342.6 / 7.71** **GUELPH ON** **WWIS**

Well ID:	7163100	**Data Entry Status:**	
Construction Date:		**Data Src:**	
Primary Water Use:	Test Hole	**Date Received:**	5/13/2011
Sec. Water Use:		**Selected Flag:**	Yes
Final Well Status:	Test Hole	**Abandonment Rec:**	
Water Type:		**Contractor:**	7238
Casing Material:		**Form Version:**	7
Audit No:	Z123619	**Owner:**	
Tag:	A109402	**Street Name:**	246 ARKELL RD
Construction Method:		**County:**	WELLINGTON
Elevation (m):		**Municipality:**	GUELPH CITY
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	
Well Depth:		**Concession:**	
Overburden/Bedrock:		**Concession Name:**	
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	1003509264	**Elevation:**	342.11
DP2BR:		**Elevrc:**	
Spatial Status:		**Zone:**	17
Code OB:		**East83:**	565385
Code OB Desc:		**Org CS:**	UTM83
Open Hole:		**North83:**	4818960
Cluster Kind:		**UTMRC:**	3
Date Completed:	25-APR-11	**UTMRC Desc:**	margin of error : 10 - 30 m
Remarks:		**Location Method:**	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			

Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Overburden and Bedrock Materials Interval

Formation ID:	1003821505
Layer:	2
Color:	6
General Color:	BROWN
Mat1:	05
Most Common Material:	CLAY
Mat2:	11
Other Materials:	GRAVEL
Mat3:	73
Other Materials:	HARD
Formation Top Depth:	2.44
Formation End Depth:	5.18
Formation End Depth UOM:	m

Formation ID:	1003821504
Layer:	1
Color:	6
General Color:	BROWN
Mat1:	13
Most Common Material:	BOULDERS
Mat2:	11
Other Materials:	GRAVEL
Mat3:	73
Other Materials:	HARD
Formation Top Depth:	0
Formation End Depth:	2.44
Formation End Depth UOM:	m

Annular Space/Abandonment Sealing Record

Plug ID:	1003821513
Layer:	1
Plug From:	0
Plug To:	1.22
Plug Depth UOM:	m

Method of Construction & Well Use

Method Construction ID:	1003821511
Method Construction Code:	E
Method Construction:	Auger
Other Method Construction:	

Pipe Information

Pipe ID:	1003821503
Casing No:	0
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	1003821508

Layer:	1
Material:	5
Open Hole or Material:	PLASTIC
Depth From:	0
Depth To:	1.52
Casing Diameter:	5.1
Casing Diameter UOM:	cm
Casing Depth UOM:	m

Construction Record - Screen

Screen ID:	1003821509
Layer:	1
Slot:	
Screen Top Depth:	1.52
Screen End Depth:	4.57
Screen Material:	5
Screen Depth UOM:	m
Screen Diameter UOM:	cm
Screen Diameter:	6.4

Water Details

Water ID:	1003821507
Layer:	
Kind Code:	
Kind:	
Water Found Depth:	
Water Found Depth UOM:	m

Hole Diameter

Hole ID:	1003821506
Diameter:	21
Depth From:	0
Depth To:	5.18
Hole Depth UOM:	m
Hole Diameter UOM:	cm

21 **1 of 1** **SE/222.7** **337.6 / 2.69** **lot 7 con 8 GUELPH ON** **WWIS**

Well ID:	6715351	**Data Entry Status:**	
Construction Date:		**Data Src:**	
Primary Water Use:		**Date Received:**	6/14/2005
Sec. Water Use:		**Selected Flag:**	Yes
Final Well Status:	Abandoned-Other	**Abandonment Rec:**	Yes
Water Type:		**Contractor:**	2663
Casing Material:		**Form Version:**	3
Audit No:	Z28958	**Owner:**	
Tag:		**Street Name:**	171 ARKEL ROAD
Construction Method:		**County:**	WELLINGTON
Elevation (m):		**Municipality:**	GUELPH CITY
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	007
Well Depth:		**Concession:**	08
Overburden/Bedrock:		**Concession Name:**	
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	11327137	***Elevation:***	336.59
DP2BR:		***Elevrc:***	
Spatial Status:		***Zone:***	17
Code OB:	_	***East83:***	565336
Code OB Desc:	No formation data	***Org CS:***	UTM83
Open Hole:		***North83:***	4818672
Cluster Kind:		***UTMRC:***	4
Date Completed:	01-JUN-05	***UTMRC Desc:***	margin of error : 30 m - 100 m
Remarks:		***Location Method:***	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Annular Space/Abandonment Sealing Record

Plug ID:	933270548
Layer:	1
Plug From:	-6
Plug To:	75
Plug Depth UOM:	m

Method of Construction & Well Use

Method Construction ID:	966715351
Method Construction Code:	
Method Construction:	
Other Method Construction:	

Pipe Information

Pipe ID:	11341992
Casing No:	1
Comment:	
Alt Name:	

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22 ***1 of 1*** ***NNW/225.4*** ***338.6 / 3.72*** ***220 Arkell Road Guelph ON*** ***EHS***

Order ID:	467181	***Date Received:***	28-JUN-16
Order No:	20160628104	***Lot/Building Size:***	
Customer ID:	56827	***Municipality:***	
Company ID:	56	***Client Prov/State:***	ON
Status:	C	***Search Radius (km):***	.25
Report Code:	4CAN	***Large Radius:***	.3
Report Type:	Custom Report	***X:***	-80.194142
Report Date:	29-JUN-16	***Y:***	43.521645
Report Requested by:	Stantec Consulting Ltd.		
Nearest Intersection:			
Previous Site Name:			
Additional Info Ordered:			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
23	1 of 1	SSE/228.6	336.8 / 1.97	lot 7 con 8 ON	WWIS

Well ID: 6711291
Construction Date:
Primary Water Use: Domestic
Sec. Water Use: 0
Final Well Status: Water Supply
Water Type:
Casing Material:
Audit No: 124315
Tag:
Construction Method:
Elevation (m):
Elevation Reliability:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:

Data Entry Status:
Data Src: 1
Date Received: 10/7/1993
Selected Flag: Yes
Abandonment Rec:
Contractor: 2663
Form Version: 1
Owner:
Street Name:
County: WELLINGTON
Municipality: PUSLINCH TOWNSHIP
Site Info:
Lot: 007
Concession: 08
Concession Name: CON
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 10475125
DP2BR:
Spatial Status:
Code OB: o
Code OB Desc: Overburden
Open Hole:
Cluster Kind:
Date Completed: 22-SEP-93
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Elevation: 336.33
Elevrc:
Zone: 17
East83: 565322.3
Org CS:
North83: 4818655
UTMRC: 5
UTMRC Desc: margin of error : 100 m - 300 m
Location Method: gps

Overburden and Bedrock Materials Interval

Formation ID: 932651879
Layer: 3
Color: 2
General Color: GREY
Mat1: 05
Most Common Material: CLAY
Mat2: 28
Other Materials: SAND
Mat3: 11
Other Materials: GRAVEL
Formation Top Depth: 20
Formation End Depth: 65
Formation End Depth UOM: ft

Formation ID: 932651880
Layer: 4
Color:
General Color:
Mat1: 31

Most Common Material: COARSE GRAVEL
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 65
Formation End Depth: 75
Formation End Depth UOM: ft

Formation ID: 932651878
Layer: 2
Color:
General Color:
Mat1: 10
Most Common Material: COARSE SAND
Mat2: 31
Other Materials: COARSE GRAVEL
Mat3:
Other Materials:
Formation Top Depth: 3
Formation End Depth: 20
Formation End Depth UOM: ft

Formation ID: 932651877
Layer: 1
Color:
General Color:
Mat1: 01
Most Common Material: FILL
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 0
Formation End Depth: 3
Formation End Depth UOM: ft

Annular Space/Abandonment Sealing Record

Plug ID: 933210343
Layer: 1
Plug From: 0
Plug To: 20
Plug Depth UOM: ft

Method of Construction & Well Use

Method Construction ID: 966711291
Method Construction Code: 4
Method Construction: Rotary (Air)
Other Method Construction:

Pipe Information

Pipe ID: 11023695
Casing No: 1
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 930773855
Layer: 1
Material: 1
Open Hole or Material: STEEL
Depth From:
Depth To: 63
Casing Diameter:
Casing Diameter UOM: inch
Casing Depth UOM: ft

Casing ID: 930773856
Layer: 2
Material: 4
Open Hole or Material: OPEN HOLE
Depth From:
Depth To: 75
Casing Diameter:
Casing Diameter UOM: inch
Casing Depth UOM: ft

Results of Well Yield Testing

Pump Test ID: 996711291
Pump Set At:
Static Level: 18
Final Level After Pumping: 18
Recommended Pump Depth: 50
Pumping Rate: 20
Flowing Rate:
Recommended Pump Rate: 20
Levels UOM: ft
Rate UOM: GPM
Water State After Test Code: 1
Water State After Test: CLEAR
Pumping Test Method: 1
Pumping Duration HR: 1
Pumping Duration MIN: 0
Flowing: N

Draw Down & Recovery

Pump Test Detail ID: 934874504
Test Type: Recovery
Test Duration: 45
Test Level: 18
Test Level UOM: ft

Pump Test Detail ID: 934348742
Test Type: Recovery
Test Duration: 15
Test Level: 18
Test Level UOM: ft

Pump Test Detail ID: 935135034
Test Type: Recovery
Test Duration: 60
Test Level: 18
Test Level UOM: ft

Pump Test Detail ID: 934613477
Test Type: Recovery
Test Duration: 30
Test Level: 18

Test Level UOM: ft

Water Details

Water ID: 933965204
Layer: 2
Kind Code: 1
Kind: FRESH
Water Found Depth: 75
Water Found Depth UOM: ft

Water ID: 933965203
Layer: 1
Kind Code: 1
Kind: FRESH
Water Found Depth: 65
Water Found Depth UOM: ft

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24 | ***1 of 1*** | ***SE/235.7*** | ***337.9 / 3.00*** | ***lot 7 con 8 ON*** | ***WWIS***

Well ID: 6714128
Construction Date:
Primary Water Use: Not Used
Sec. Water Use:
Final Well Status: Abandoned-Other
Water Type:
Casing Material:
Audit No: 235169
Tag:
Construction Method:
Elevation (m):
Elevation Reliability:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:

Data Entry Status:
Data Src: 1
Date Received: 7/3/2002
Selected Flag: Yes
Abandonment Rec:
Contractor: 2663
Form Version: 1
Owner:
Street Name:
County: WELLINGTON
Municipality: PUSLINCH TOWNSHIP
Site Info:
Lot: 007
Concession: 08
Concession Name: CON
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 10536336
DP2BR:
Spatial Status:
Code OB: _
Code OB Desc: No formation data
Open Hole:
Cluster Kind:
Date Completed: 26-JUN-02
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Elevation: 336.82
Elevrc:
Zone: 17
East83: 565360.6
Org CS:
North83: 4818676
UTMRC: 5
UTMRC Desc: margin of error : 100 m - 300 m
Location Method: gis

Method of Construction & Well Use

Method Construction ID: 966714128
Method Construction Code: 0
Method Construction: Not Known
Other Method Construction:

Pipe Information

Pipe ID: 11084906
Casing No: 1
Comment:
Alt Name:

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25 | **1 of 1** | **SW/237.4** | **334.9 / 0.00** | **lot 6 con 8 ON** | **WWIS**

Well ID: 6702585
Construction Date:
Primary Water Use: Livestock
Sec. Water Use: Domestic
Final Well Status: Water Supply
Water Type:
Casing Material:
Audit No:
Tag:
Construction Method:
Elevation (m):
Elevation Reliability:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:

Data Entry Status:
Data Src: 1
Date Received: 1/9/1952
Selected Flag: Yes
Abandonment Rec:
Contractor: 2414
Form Version: 1
Owner:
Street Name:
County: WELLINGTON
Municipality: GUELPH CITY (PUSLINCH TWP)
Site Info:
Lot: 006
Concession: 08
Concession Name: CON
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 10466728
DP2BR: 102
Spatial Status:
Code OB: r
Code OB Desc: Bedrock
Open Hole:
Cluster Kind:
Date Completed: 17-SEP-51
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Elevation: 334.3
Elevrc:
Zone: 17
East83: 565065.3
Org CS:
North83: 4818651
UTMRC: 9
UTMRC Desc: unknown UTM
Location Method: p9

Overburden and Bedrock Materials Interval

Formation ID: 932614447
Layer: 4
Color:
General Color:

Mat1: 14
Most Common Material: HARDPAN
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 79
Formation End Depth: 89
Formation End Depth UOM: ft

Formation ID: 932614445
Layer: 2
Color:
General Color:
Mat1: 11
Most Common Material: GRAVEL
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 50
Formation End Depth: 65
Formation End Depth UOM: ft

Formation ID: 932614446
Layer: 3
Color: 6
General Color: BROWN
Mat1: 05
Most Common Material: CLAY
Mat2: 09
Other Materials: MEDIUM SAND
Mat3:
Other Materials:
Formation Top Depth: 65
Formation End Depth: 79
Formation End Depth UOM: ft

Formation ID: 932614444
Layer: 1
Color: 3
General Color: BLUE
Mat1: 05
Most Common Material: CLAY
Mat2: 13
Other Materials: BOULDERS
Mat3:
Other Materials:
Formation Top Depth: 0
Formation End Depth: 50
Formation End Depth UOM: ft

Formation ID: 932614449
Layer: 6
Color: 6
General Color: BROWN
Mat1: 15
Most Common Material: LIMESTONE
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 102
Formation End Depth: 113
Formation End Depth UOM: ft

Formation ID:	932614448
Layer:	5
Color:	
General Color:	
Mat1:	09
Most Common Material:	MEDIUM SAND
Mat2:	
Other Materials:	
Mat3:	
Other Materials:	
Formation Top Depth:	89
Formation End Depth:	102
Formation End Depth UOM:	ft

Method of Construction & Well Use

Method Construction ID:	966702585
Method Construction Code:	1
Method Construction:	Cable Tool
Other Method Construction:	

Pipe Information

Pipe ID:	11015298
Casing No:	1
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	930759051
Layer:	1
Material:	1
Open Hole or Material:	STEEL
Depth From:	
Depth To:	102
Casing Diameter:	7
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Casing ID:	930759052
Layer:	2
Material:	4
Open Hole or Material:	OPEN HOLE
Depth From:	
Depth To:	113
Casing Diameter:	7
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Results of Well Yield Testing

Pump Test ID:	996702585
Pump Set At:	
Static Level:	29
Final Level After Pumping:	39
Recommended Pump Depth:	
Pumping Rate:	6
Flowing Rate:	
Recommended Pump Rate:	
Levels UOM:	ft

Rate UOM:	GPM
Water State After Test Code:	1
Water State After Test:	CLEAR
Pumping Test Method:	1
Pumping Duration HR:	2
Pumping Duration MIN:	0
Flowing:	N

Water Details

Water ID:	933954925
Layer:	1
Kind Code:	1
Kind:	FRESH
Water Found Depth:	105
Water Found Depth UOM:	ft

---

26 | ***1 of 1*** | ***NE/241.1*** | ***345.3 / 10.43*** | ***lot 6 con 8 GUELPH ON*** | ***WWIS***

Well ID:	7211047	**Data Entry Status:**	
Construction Date:		**Data Src:**	
Primary Water Use:		**Date Received:**	11/8/2013
Sec. Water Use:		**Selected Flag:**	Yes
Final Well Status:	0	**Abandonment Rec:**	Yes
Water Type:		**Contractor:**	2663
Casing Material:		**Form Version:**	7
Audit No:	Z172129	**Owner:**	
Tag:		**Street Name:**	246 ARKELL RD
Construction Method:		**County:**	WELLINGTON
Elevation (m):		**Municipality:**	PUSLINCH TOWNSHIP
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	006
Well Depth:		**Concession:**	08
Overburden/Bedrock:		**Concession Name:**	CON
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	1004630816	**Elevation:**	344.08
DP2BR:		**Elevrc:**	
Spatial Status:		**Zone:**	17
Code OB:		**East83:**	565398
Code OB Desc:		**Org CS:**	UTM83
Open Hole:		**North83:**	4818983
Cluster Kind:		**UTMRC:**	5
Date Completed:	23-AUG-13	**UTMRC Desc:**	margin of error : 100 m - 300 m
Remarks:		**Location Method:**	gis
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Annular Space/Abandonment Sealing Record

Plug ID: 1004889951
Layer: 1
Plug From: 0
Plug To: 6
Plug Depth UOM: m

Plug ID: 1004889952
Layer: 2
Plug From: -6
Plug To: 12
Plug Depth UOM: m

Method of Construction & Well Use

Method Construction ID: 1004889950
Method Construction Code:
Method Construction:
Other Method Construction:

Pipe Information

Pipe ID: 1004889944
Casing No: 0
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 1004889948
Layer:
Material:
Open Hole or Material:
Depth From:
Depth To:
Casing Diameter:
Casing Diameter UOM: cm
Casing Depth UOM: m

Construction Record - Screen

Screen ID: 1004889949
Layer:
Slot:
Screen Top Depth:
Screen End Depth:
Screen Material:
Screen Depth UOM: m
Screen Diameter UOM: cm
Screen Diameter:

Water Details

Water ID: 1004889947
Layer:
Kind Code:
Kind:
Water Found Depth:
Water Found Depth UOM: m

Hole Diameter

Hole ID:	1004889946
Diameter:	
Depth From:	
Depth To:	
Hole Depth UOM:	m
Hole Diameter UOM:	cm

Unplottable Summary

Total: 8 Unplottable sites

DB	Company Name/Site Name	Address	City	Postal
CA	The Corporation of the City of Guelph	Arkell Rd (from Gordon Street to Victoria Road)	Guelph ON	
CA	TWP.	ARKELL RD. (RD.37)	PUSLINCH ON	
CA	The Corporation of the City of Guelph	Arkell Rd (from Gordon Street to Victoria Road)	Guelph ON	
CA	Elora Rail Trail Sewer	Part of Lot 6, Lot 7 & Lot 8, RPlan 246	Centre Wellington ON	
ECA	The Corporation of the City of Guelph	Arkell Road to Stone Road East	Guelph ON	N1H 3A1
ECA	The Corporation of the City of Guelph	Arkell Road to Stone Road East	Guelph ON	N1H 3A1
PES	DUTCH MILL NURSERY LTD.	R.R. #2, ARKELL ROAD	GUELPH ON	
SPL	The Corporation of the City of Guelph	SUMMERFIELD DRIVE (BETWEEN VICTORIA ROAD SOUTH AND GORDON STREET)<UNOFFICIAL>	Guelph ON	

Unplottable Report

Site: ***The Corporation of the City of Guelph***
Arkell Rd (from Gordon Street to Victoria Road) Guelph ON

Database: ***CA***

Certificate #:	3084-7CAQT3
Application Year:	2008
Issue Date:	3/7/2008
Approval Type:	Municipal and Private Sewage Works
Status:	Approved
Application Type:	
Client Name::	
Client Address::	
Client City::	
Client Postal Code::	
Project Description::	
Contaminants::	
Emission Control::	

Site: ***TWP.***
ARKELL RD. (RD.37) PUSLINCH ON

Database: ***CA***

Certificate #:	3-0361-85-006
Application Year:	85
Issue Date:	7/10/85
Approval Type:	Municipal sewage
Status:	Approved
Application Type:	
Client Name::	
Client Address::	
Client City::	
Client Postal Code::	
Project Description::	
Contaminants::	
Emission Control::	

Site: ***The Corporation of the City of Guelph***
Arkell Rd (from Gordon Street to Victoria Road) Guelph ON

Database: ***CA***

Certificate #:	9839-7CDS44
Application Year:	2008
Issue Date:	3/7/2008
Approval Type:	Municipal and Private Sewage Works
Status:	Approved
Application Type:	
Client Name::	
Client Address::	
Client City::	
Client Postal Code::	
Project Description::	
Contaminants::	
Emission Control::	

Site: ***Elora Rail Trail Sewer***
Part of Lot 6, Lot 7 & Lot 8, RPlan 246 Centre Wellington ON

Database: ***CA***

Certificate #:	2501-4N7PRA
Application Year:	00

Issue Date: 8/14/00
Approval Type: Municipal & Private sewage
Status: Approved
Application Type: New Certificate of Approval
Client Name:: James Keating Construction Limited
Client Address:: 70 Mathieson St.
Client City:: Centre Wellington
Client Postal Code:: N0B 1S0
Project Description:: Installation of an underground sanitary sewer and apurtenances to service a commercial site being 0.966 hectares in size.
Contaminants::
Emission Control::

Site: ***The Corporation of the City of Guelph***
Arkell Road to Stone Road East Guelph ON N1H 3A1

Database: ***ECA***

Approval No: 9560-8VMLPH
Approval Date: 2012-06-28
Status: Approved
Record Type: ECA
Link Source: IDS
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Address: Arkell Road to Stone Road East
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/9672-8TMQ8U-14.pdf
SWP Area Name:
MOE District:
City: Guelph
Longitude:
Latitude:

Site: ***The Corporation of the City of Guelph***
Arkell Road to Stone Road East Guelph ON N1H 3A1

Database: ***ECA***

Approval No: 1511-8TRNYD
Approval Date: 2012-05-07
Status: Approved
Record Type: ECA
Link Source: IDS
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Address: Arkell Road to Stone Road East
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/5641-8TMQ2Q-14.pdf
SWP Area Name:
MOE District:
City: Guelph
Longitude:
Latitude:

Site: ***DUTCH MILL NURSERY LTD.***
R.R. #2, ARKELL ROAD GUELPH ON

Database: ***PES***

Licence No:
Detail Licence No:
Licence Type Code:
Licence Type: Vendor
Licence Class:
Licence Control:
Trade Name:
Post Office Box:
Lot:
Concession:
Region:
District:
County:
Operator Box:
Operator Class:
Operator No:
Operator Type:
Operator Lot:
Oper Concession:
Operator Region:
Operator District:
Operator County:
Oper Phone Area Cd:
Ext:
Oper Phone No:
Proponent Ext:

Site: ***The Corporation of the City of Guelph***
SUMMERFIELD DRIVE (BETWEEN VICTORIA ROAD SOUTH AND GORDON STREET)<UNOFFICIAL> Guelph ON

Database: ***SPL***

Ref No: 2204-66NN2U
Site No:
Incident Dt: 11/12/2004
Discharger Report:
Material Group: Oil
Client Type:

Year:		***Sector Type:***	Other Motor Vehicle
Incident Cause:	Pipe Or Hose Leak	***Source Type:***	
Incident Event:		***Nearest Watercourse:***	
Contaminant Code:	15	***Site Name:***	SUMMERFIELD DRIVE (BETWEEN VICTORIA ROAD SOUTH AND GORDON STREET)<UNOFFICIAL>
Contaminant Name:	HYDRAULIC OIL	***Site Address:***	
Contaminant Limit 1:		***Site District Office:***	Guelph
Contam Limit Freq 1:		***Site County/District:***	
Contaminant UN No 1:		***Site Postal Code:***	
Contaminant Qty:	182 L	***Site Region:***	West Central
Environment Impact:	Not Anticipated	***Site Municipality:***	Guelph
Nature of Impact:	Other Impact(s)	***Site Lot:***	
Receiving Medium:	Land	***Site Conc:***	
Receiving Env:		***Northing:***	
Health/Env Conseq:		***Easting:***	
MOE Response:		***Site Geo Ref Accu:***	
Dt MOE Arvl on Scn:		***Site Geo Ref Meth:***	
MOE Reported Dt:	11/12/2004	***Site Map Datum:***	
Dt Document Closed:			
Agency Involved:			
SAC Action Class:	Spill to Land		
Incident Reason:	Equipment Failure		
Incident Summary:	City of Guelph, 40 gall. of hydr. oil to road		

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) 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 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: Provincial AAGR

The MAAP Program maintains a database of 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.*

Government Publication Date: Sept 2002*

Aggregate Inventory: Provincial AGR

The Ontario Ministry of Natural Resources maintains a database of all active pits and quarries. The database provides information regarding the registered owner/operator, location name, operation type, approval type, and maximum annual tonnage.

Government Publication Date: Up to Sep 2017

Abandoned Mine Information System: 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.

Government Publication Date: 1800-Nov 2016

Anderson's Waste Disposal Sites: 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.

Government Publication Date: 1860s-Present

Automobile Wrecking & Supplies: Private AUWR

This database provides an inventory of 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.

Government Publication Date: 1999-Jul 31, 2018

Borehole: 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.

Government Publication Date: 1875-Jul 2014

Certificates of Approval: 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.

Government Publication Date: 1985-Oct 30, 2011*

Commercial Fuel Oil Tanks: Provincial CFOT

List of commercial underground fuel oil tanks made available by the Fuels Safety Program of the Technical Standards & Safety Authority (TSSA). Ontario Regulation 213/01 of the Technical Standards and Safety Act (2000) requires that all underground tanks be registered with the TSSA. Note: the Fuels Safety Division does not register waste oil tanks in apartments, office buildings, residences, etc., or aboveground gas or diesel tanks. Records are not verified for accuracy or completeness. This is not a comprehensive or complete inventory of commercial fuel tanks in the province. The TSSA updates information in its system on an ongoing basis; this listing is a copy of the data captured at one moment in time and is hence limited by the record date provided here.

Government Publication Date: Feb 28, 2017

Chemical Register: 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.).

Government Publication Date: 1999-Jul 31, 2018

Compressed Natural Gas Stations: Private CNG

Canada has a network of public access compressed natural gas (CNG) refuelling stations. These stations dispense natural gas in compressed form at 3,000 pounds per square inch (psi), the pressure which is allowed within the current Canadian codes and standards. The majority of natural gas refuelling is located at existing retail gasoline that have a separate refuelling island for natural gas. This list of stations is made available by the Canadian Natural Gas Vehicle Alliance.

Government Publication Date: Dec 2012 - Apr 2018

Inventory of Coal Gasification Plants and Coal Tar Sites: Provincial COAL

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.*

Government Publication Date: Apr 1987 and Nov 1988*

Compliance and Convictions: 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.

Government Publication Date: 1989-Apr 2018

Certificates of Property Use: 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.

Government Publication Date: 1994-Jul 31, 2018

Drill Hole Database: 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 MNDM. 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".

Government Publication Date: 1886-Nov 30, 2017

Dry Cleaning Facilities: Federal DRYCLEANERS

List of dry cleaning facilities made available by Environment and Climate Change Canada. Environment and Climate Change Canada's Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations (SOR/2003-79) are intended to reduce releases of tetrachloroethylene to the environment from dry cleaning facilities.

Government Publication Date: Jan 2004-Dec 2016

Environmental Activity and Sector Registry: 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.

Government Publication Date: Oct 2011-Jul 31, 2018

Environmental Registry: 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.

Government Publication Date: 1994-Jul 31, 2018

Environmental Compliance Approval: 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 certificates of approval prior to Nov 1st, 2011, please refer to the CA database. For all Waste Disposal Sites please refer to the WDS database.

Government Publication Date: Oct 2011-Jul 31, 2018

Environmental Effects Monitoring: 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.

Government Publication Date: 1992-2007*

ERIS Historical Searches: Private EHS

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.

Government Publication Date: 1999-Feb 28, 2018

Environmental Issues Inventory System: Federal EIIS

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 EIIS provides information on the reserve under investigation, inventory number, name of site, environmental issue, site action (Remediation, Site Assessment), and date investigation completed.

Government Publication Date: 1992-2001*

Emergency Management Historical Event: Provincial EMHE

List of locations of historical occurrences of emergency events, including those assigned to the Ministry of Natural Resources by Order-In-Council (OIC) under the Emergency Management and Civil Protection Act, as well as events where MNR provided requested emergency response assistance. Many of these events will have involved community evacuations, significant structural loss, and/or involvement of MNR emergency response staff. These events fall into one of ten (10) type categories: Dam Failure; Drought / Low Water; Erosion; Flood; Forest Fire; Soil and Bedrock Instability; Petroleum Resource Center Event, EMO Requested Assistance, Continuity of Operations Event, Other Requested Assistance. EMHE record details are reproduced by ERIS under License with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2017.

Government Publication Date: Dec 31, 2016

List of TSSA Expired Facilities: Provincial EXP

List of facilities and tanks - for which there was once a registration - no longer registered with the Fuels Safety Program of the Technical Standards and Safety Authority (TSSA). Includes private fuel outlets, bulk plants, fuel oil tanks, gasoline stations, marinas, propane filling stations, liquid fuel tanks, piping systems, etc. Tanks which have been removed from the ground are included in the expired facilities inventory held by the TSSA. Notes: the Fuels Safety Division did not register private fuel underground/aboveground storage tanks prior to January of 1990, or furnace oil tanks prior to May 1, 2002; nor does the Division register waste oil tanks in apartments, office buildings, residences, etc., or aboveground gas or diesel tanks. Records are not verified for accuracy or completeness. This is not a comprehensive or complete inventory of expired tanks/tank facilities in the province. The TSSA updates information in its system on an ongoing basis; this listing is hence limited by the record date provided here.

Government Publication Date: Feb 28, 2017

Federal Convictions: 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.

Government Publication Date: 1988-Jun 2007*

Contaminated Sites on Federal Land: Federal FCS

The Federal Contaminated Sites Inventory includes information on 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.

Government Publication Date: Jun 2000-May 2018

Fisheries & Oceans Fuel Tanks: Federal FOFT

Fisheries & Oceans Canada maintains an inventory of 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.

Government Publication Date: 1964-Sep 2017

Fuel Storage Tank: Provincial FST

List of registered private and retail fuel storage tanks made available by the Fuels Safety Program of the Technical Standards & Safety Authority (TSSA). Ontario Regulation 213/01 of the Technical Standards and Safety Act (2000) requires that all underground tanks be registered with the TSSA. Notes: the Fuels Safety Division did not register private fuel underground/aboveground storage tanks prior to January of 1990, or furnace oil tanks prior to May 1, 2002; nor does the Division register waste oil tanks in apartments, office buildings, residences, etc., or aboveground gas or diesel tanks. Records are not verified for accuracy or completeness. This is not a comprehensive or complete inventory of fuel storage tanks/tank facilities in the province. The TSSA updates information in its system on an ongoing basis; this listing is hence limited by the record date provided here.

Government Publication Date: Feb 28, 2017

Fuel Storage Tank - Historic: Provincial FSTH

The Fuels Safety Branch of the Ontario Ministry of Consumer and Commercial Relations maintained a database of all registered private fuel storage tanks. Public records of private fuel storage tanks are only available since the registration became effective in September 1989. This information is now collected by the Technical Standards and Safety Authority.

Government Publication Date: Pre-Jan 2010*

Ontario Regulation 347 Waste Generators Summary: 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.

Government Publication Date: 1986-December 31, 2017

Greenhouse Gas Emissions from Large Facilities: Federal GHG

List of greenhouse gas emissions from large facilities made available by Environment Canada. Greenhouse gas emissions in kilotonnes of carbon dioxide equivalents (kt CO2 eq).

Government Publication Date: 2013-Dec 2016

TSSA Historic Incidents: Provincial HINC

List of historic incidences of spills and leaks of diesel, fuel oil, gasoline, natural gas, propane, and hydrogen recorded by the TSSA in their previous incident tracking system. The 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, the TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. Records are not verified for accuracy or completeness. This is not a comprehensive or complete inventory of historical fuel spills and leaks in the province. This listing is a copy of the data captured at one moment in time and is hence limited by the record date provided here.

Government Publication Date: 2006-June 2009*

Indian & Northern Affairs Fuel Tanks: Federal IAFT

The Department of Indian & Northern Affairs Canada (INAC) maintains an inventory of 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.

Government Publication Date: 1950-Aug 2003*

TSSA Incidents: Provincial INC

List of spills and leaks of diesel, fuel oil, gasoline, natural gas, propane, and hydrogen reported to the Spills Action Centre (SAC) and made available by the Technical Standards and Safety Authority (TSSA). Under the Technical Standards & Safety Act (2000), the 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. Records are not verified for accuracy or completeness. This is not a comprehensive or complete inventory of fuel-related leaks, spills, and incidents in the province. The TSSA updates information in its system on an ongoing basis; this listing is hence limited by the record date provided here.

Government Publication Date: Feb 28, 2017

Landfill Inventory Management Ontario: 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.

Government Publication Date: Dec 31, 2013

Canadian Mine Locations: 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.

Government Publication Date: 1998-2009*

Environmental Penalty Annual Report: Provincial MISA PENALTY

This database contains data from Ontario's annual environmental penalty report published by the Ministry of the Environment and Climate Change. These reports provide information on environmental penalties for land or water violations issued to companies in one of the nine industrial sectors covered by the Municipal Industrial Strategy for Abatement (MISA) regulations.

Government Publication Date: Jan 1, 2011 - Dec 31, 2017

Mineral Occurrences: 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 plan metric (X and Y) coordinates of that point with the coordinates of the same point as defined from a source of higher accuracy.

Government Publication Date: 1846-Jan 2018

National Analysis of Trends in Emergencies System (NATES): Federal NATE

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.

Government Publication Date: 1974-1994*

Non-Compliance Reports: 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.

Government Publication Date: Dec 31, 2016

National Defense & Canadian Forces Fuel Tanks: Federal NDFT

The Department of National Defense 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.

Government Publication Date: Up to May 2001*

National Defense & Canadian Forces Spills: Federal NDSP

The Department of National Defense 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.

Government Publication Date: Mar 1999-Apr 2018

National Defence & Canadian Forces Waste Disposal Sites: 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.

Government Publication Date: 2001-Apr 2007*

National Energy Board Pipeline Incidents: Federal NEBI

Locations of pipeline incidents from 2008 to present, made available by the National Energy Board (NEB). Includes incidents reported under the Onshore Pipeline Regulations and the Processing Plant Regulations related to pipelines under federal jurisdiction, does not include incident data related to pipelines under provincial or territorial jurisdiction.

Government Publication Date: 2008-Mar 31, 2018

National Energy Board Wells: Federal NEBW

The NEBW database contains information on onshore & offshore oil and gas wells that are outside provincial jurisdiction(s) and are thereby regulated by the National Energy Board. Data is provided regarding the operator, well name, well ID No./UWI, status, classification, well depth, spud and release date.

Government Publication Date: 1920-Feb 2003*

National Environmental Emergencies System (NEES): 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 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.

Government Publication Date: 1974-2003*

National PCB Inventory: Federal NPCB

Environment Canada's National PCB inventory includes information on in-use PCB containing equipment in Canada including federal, provincial and private facilities. Federal out-of-service PCB containing equipment and 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. Some addresses provided may be Head Office addresses and are not necessarily the location of where the waste is being used or stored.

Government Publication Date: 1988-2008*

National Pollutant Release Inventory: 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.

Government Publication Date: 1993-May 2017

Oil and Gas Wells: 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.

Government Publication Date: 1988-April 30, 2018

Ontario Oil and Gas Wells: 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, and well cap date, license 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.

Government Publication Date: 1800-May 2018

Inventory of PCB Storage Sites: 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.

Government Publication Date: 1987-Oct 2004; 2012-Dec 2013

Orders: 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.

Government Publication Date: 1994-Jul 31, 2018

Canadian Pulp and Paper: Private PAP

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.

Government Publication Date: 1999, 2002, 2004, 2005, 2009-2014

Parks Canada Fuel Storage Tanks: Federal PCFT

Canadian Heritage maintains an inventory of 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.

Government Publication Date: 1920-Jan 2005*

Pesticide Register: Provincial PES

The Ontario Ministry of the Environment and Climate Change maintains a database of licensed operators and vendors of registered pesticides.

Government Publication Date: 1988-Mar 2018

TSSA Pipeline Incidents: Provincial PINC

List of pipeline incidents (strikes, leaks, spills) made available by the Technical Standards and Safety Authority (TSSA). Under the Technical Standards & Safety Act (2000), the TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors, and equipment or appliances that use fuels. Records are not verified for accuracy or completeness. This is not a comprehensive or complete inventory of pipeline incidents in the province. The TSSA updates information in its system on an ongoing basis; this listing is hence limited by the record date provided here.

Government Publication Date: Feb 28, 2017

Private and Retail Fuel Storage Tanks: 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).

Government Publication Date: 1989-1996*

Permit to Take Water: 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.

Government Publication Date: 1994-Jul 31, 2018

Ontario Regulation 347 Waste Receivers Summary: 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.

Government Publication Date: 1986-2016

Record of Site Condition: 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).

Government Publication Date: 1997-Sept 2001, Oct 2004-Apr 2018

Retail Fuel Storage Tanks: 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.

Government Publication Date: 1999-Jul 31, 2018

Scott's Manufacturing Directory: 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.

Government Publication Date: 1992-Mar 2011*

Ontario Spills: 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.

Government Publication Date: 1988-May 2018

Wastewater Discharger Registration Database: 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).

Government Publication Date: 1990-Dec 31, 2016

Anderson's Storage Tanks: 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.

Government Publication Date: 1915-1953*

Transport Canada Fuel Storage Tanks: Federal TCFT

List of fuel storage tanks currently or previously owned or operated by Transport Canada. This inventory also includes tanks on The Pickering Lands, which refers to 7,530 hectares (18,600 acres) of land in Pickering, Markham, and Uxbridge owned by the Government of Canada since 1972; properties on this land has been leased by the government since 1975, and falls under the Site Management Policy of Transport Canada, but is administered by Public Works and Government Services Canada. This inventory provides information on the site name, location, tank age, capacity and fuel type.

Government Publication Date: 1970-Aug 2017

TSSA Variances for Abandonment of Underground Storage Tanks: Provincial VAR

List of variances granted for abandoned tanks. Under the Technical Standards and Safety Authority (TSSA) Liquid Fuels Handling Code and Fuel Oil Code, all underground storage tanks must be removed within two years of disuse. If removal of a tank is not feasible, an application may be sought for a variance from this code requirement.
Records are not verified for accuracy or completeness. This is not a comprehensive or complete inventory of tank variances in the province. The TSSA updates information in its system on an ongoing basis; this listing is hence limited by the record date provided here.

Government Publication Date: Feb 28, 2017

Waste Disposal Sites - MOE CA Inventory: 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.

Government Publication Date: Oct 2011-Jul 31, 2018

Waste Disposal Sites - MOE 1991 Historical Approval Inventory: 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.

Government Publication Date: Up to Oct 1990*

Water Well Information System: 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.

Government Publication Date: Dec 31, 2017

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.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

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 and, within the report search radii.

'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 inverted 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 are included as reference.

APPENDIX C

REGULATORY RECORDS

Arissa Cummings

From: Danielle Maddock
Sent: Thursday, September 20, 2018 4:33 PM
To: Arissa Cummings
Cc: Jessica Sowa
Subject: FW: TSSA Request - 42063-200 - Phase One ESA

FYI!

Client First | Right Solution | Work Together
Danielle Maddock
Administrative Assistant
Kitchener x1311

From: Public Information Services [mailto:publicinformationservices@tssa.org]
Sent: Thursday, September 20, 2018 12:49 PM
To: Danielle Maddock
Subject: RE: TSSA Request - 42063-200 - Phase One ESA

No Records Found

Hello,

Thank you for your request for confirmation of public information.

- We confirm that there are **no fuel storage tanks records** in our database at the subject address(es).

For copies of documents, please complete the Release of Public Information form, found at https://www.tssa.org/en/about-tssa/resources/Release-of-Records-form--Jan-2018Final.pdf and email the completed form to publicinformationservices@tssa.org or through mail along with the appropriate fee. TSSA's fee schedule can be found at: https://www.tssa.org/en/about-tssa/resources/Documents/Public-Information-Fee-Schedule_Jan_2018.pdf. Fees are payable with a credit card (Visa or MasterCard) or by 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.

Kind regards,

Connie

From: Danielle Maddock <DMaddock@mte85.com>
Sent: September 18, 2018 1:01 PM
To: Public Information Services <publicinformationservices@tssa.org>
Cc: Arissa Cummings <ACummings@mte85.com>; Jessica Sowa <JSowa@mte85.com>
Subject: TSSA Request - 42063-200 - Phase One ESA

Good morning,

Can we please do an information request for fuel tanks/USTs at the following properties?

- 164 Arkell Road
- 182 Arkell Road
- 190 Arkell Road
- 210 Arkell Road
- 202 Arkell Road
- 216 Arkell Road
- 220 Arkell Road
- 2 Summerfield Drive
- 24 Coutts Court
- 26 Coutts Court

Thank you,

Danielle

Danielle Maddock | **Administrative Assistant**
MTE Consultants Inc.
T: 519-743-6500 x1311 | DMaddock@mte85.com
520 Bingemans Centre Drive, Kitchener, Ontario N2B 3X9
www.mte85.com | Twitter | LinkedIn

B03

UTM Z E
5 R 6 N
Elev. 4 R 1095

The Ontario Water Resources Commission Act

WATER WELL RECORD

GROUND WATER BRANCH
67 No - 9 2590
NOV - 9 1962
ONTARIO WATER RESOURCES COMMISSION

Basin 23
County or District Wellington
Township, Village, Town or City Puslinch
Con. 8 Lot 6
Date completed 24th October 1962 (day month year)
[redacted] dress R R # 2 Guelph Ont

Casing and Screen Record

Inside diameter of casing 4¼ inch
Total length of casing 55 ft
Type of screen none
Length of screen nil
Depth to top of screen nil
Diameter of finished hole 4¼ inch

Pumping Test

Static level 16 ft
Test-pumping rate 10 G.P.M.
Pumping level 20 ft
Duration of test pumping 2 hrs.
Water clear or cloudy at end of test clear
Recommended pumping rate 8 G.P.M.
with pump setting of 30 feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
Dug well	0	9	65 ft	fresh
brown clay, gravel	9	34		
gray hard pan	34	45		
fine sand, gravel (cemented)	45	58		
gravel	58	64		
cemented gravel	64	65		
4 ft of 4 inch pipe up in dug well.				
total depth 65 ft.				

For what purpose(s) is the water to be used? domestic

Is well on upland, in valley, or on hillside? valley

Drilling or Boring Firm
Graham Well drilling
Address 119 Renfield St. Guelph Ont.

Licence Number 481
Name of Driller or Borer Robert Graham
Address 210 Waverley Drive Guelph Ont.
Date November 5th 1962

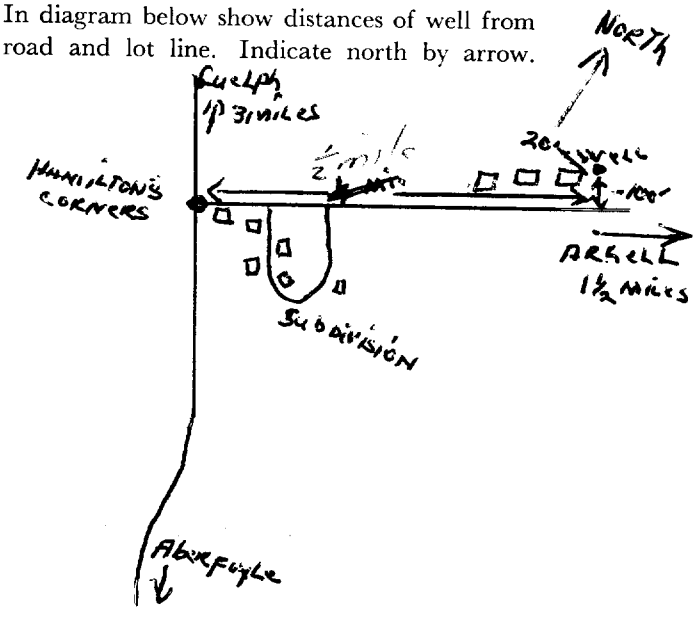
J L Graham per RCS.
(Signature of Licensed Drilling or Boring Contractor)

Form 7 10M-62-1152

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



CSS.S8

Ministry of Environment and Energy
Ontario

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

43-98

11 6712543 Municipality 67012 Con. CON 08

County or District	Township/Borough/City/Town/Village	Con	block	tract	survey, etc.	Lot
WELLINGTON	PUSLINCH TWP		8			6

Owner's surname: CONSTELLATION HOMES — First name:
Address: RR #1 PUSLINCH ONT. N0B-2J0
Date completed: 21 day 05 month 98 year

21 Zone Easting Northing RC Elevation RC Basin Code ii iii iv

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth – feet From	Depth – feet To
BROWN	SAND	STONES		0	30
BROWN		SAND - GRAVEL		30	39
D. BROWN	ROCK			39	55
GREY	ROCK			55	80
			TOTAL DEPTH	80'	
		6" DRIVE SHOE			

31
32

41 WATER RECORD

Water found at – feet	Kind of water
75-80'	1 [x] Fresh 2 [ ] Salty 3 [ ] Sulphur 4 [ ] Minerals 6 [ ] Gas
	1 [ ] Fresh 2 [ ] Salty 3 [ ] Sulphur 4 [ ] Minerals 6 [ ] Gas
	1 [ ] Fresh 2 [ ] Salty 3 [ ] Sulphur 4 [ ] Minerals 6 [ ] Gas
	1 [ ] Fresh 2 [ ] Salty 3 [ ] Sulphur 4 [ ] Minerals 6 [ ] Gas
	1 [ ] Fresh 2 [ ] Salty 3 [ ] Sulphur 4 [ ] Minerals 6 [ ] Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth – feet From	Depth – feet To
6"	1 [x] Steel 2 [ ] Galvanized 3 [ ] Concrete 4 [ ] Open hole 5 [ ] Plastic	.188	+2	42
6"	1 [ ] Steel 2 [ ] Galvanized 3 [ ] Concrete 4 [x] Open hole 5 [ ] Plastic		42	80
	1 [ ] Steel 2 [ ] Galvanized 3 [ ] Concrete 4 [ ] Open hole 5 [ ] Plastic			

SCREEN

Sizes of opening (Slot No.)	Diameter inches	Length feet
Material and type		Depth at top of screen feet

61 PLUGGING & SEALING RECORD

[x] Annular space [ ] Abandonment

Depth set at – feet From	Depth set at – feet To	Material and type (Cement grout, bentonite, etc.)
0	25	BENTONITE

71 PUMPING TEST

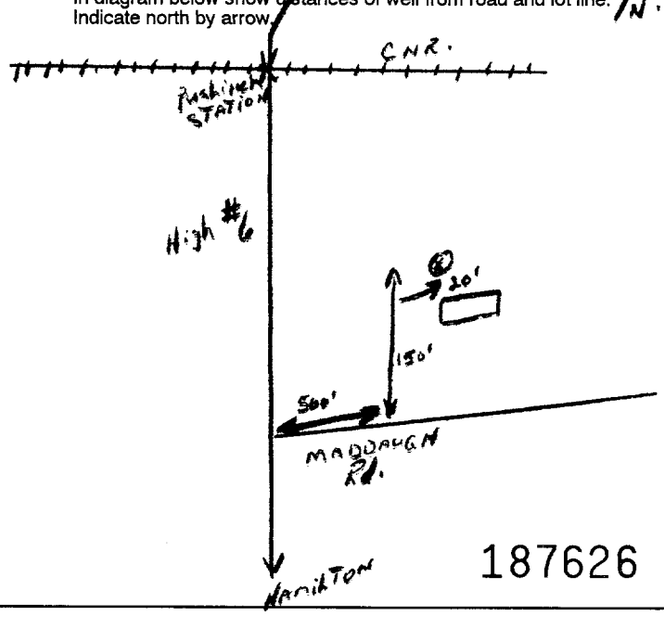
Pumping test method: 1 [x] Pump 2 [ ] Bailer
Pumping rate: 10 GPM
Duration of pumping: 1 Hours 0 Mins

Static level	Water level end of pumping	Water levels during: 1 [x] Pumping 2 [ ] Recovery			
		15 minutes	30 minutes	45 minutes	60 minutes
10 feet	50 feet	32 feet	46 feet	50 feet	50 feet

If flowing give rate: GPM
Pump intake set at: feet
Water at end of test: [x] Clear [ ] Cloudy
Recommended pump type: [ ] Shallow [x] Deep
Recommended pump setting: 70 feet
Recommended pump rate: 10 GPM

LOCATION OF WELL

In diagram below show distances of well from road and lot line. Indicate north by arrow.



187626

FINAL STATUS OF WELL

1 [x] Water supply 2 [ ] Observation well 3 [ ] Test hole 4 [ ] Recharge well 5 [ ] Abandoned, insufficient supply 6 [ ] Abandoned, poor quality 7 [ ] Abandoned (Other) 8 [ ] Dewatering 9 [ ] Unfinished 10 [ ] Replacement well

WATER USE

1 [x] Domestic 2 [ ] Stock 3 [ ] Irrigation 4 [ ] Industrial 5 [ ] Commercial 6 [ ] Municipal 7 [ ] Public supply 8 [ ] Cooling & air conditioning 9 [ ] Not used 10 [ ] Other

METHOD OF CONSTRUCTION

1 [ ] Cable tool 2 [ ] Rotary (conventional) 3 [ ] Rotary (reverse) 4 [x] Rotary (air) 5 [ ] Air percussion 6 [ ] Boring 7 [ ] Diamond 8 [ ] Jetting 9 [ ] Driving 10 [ ] Digging 11 [ ] Other

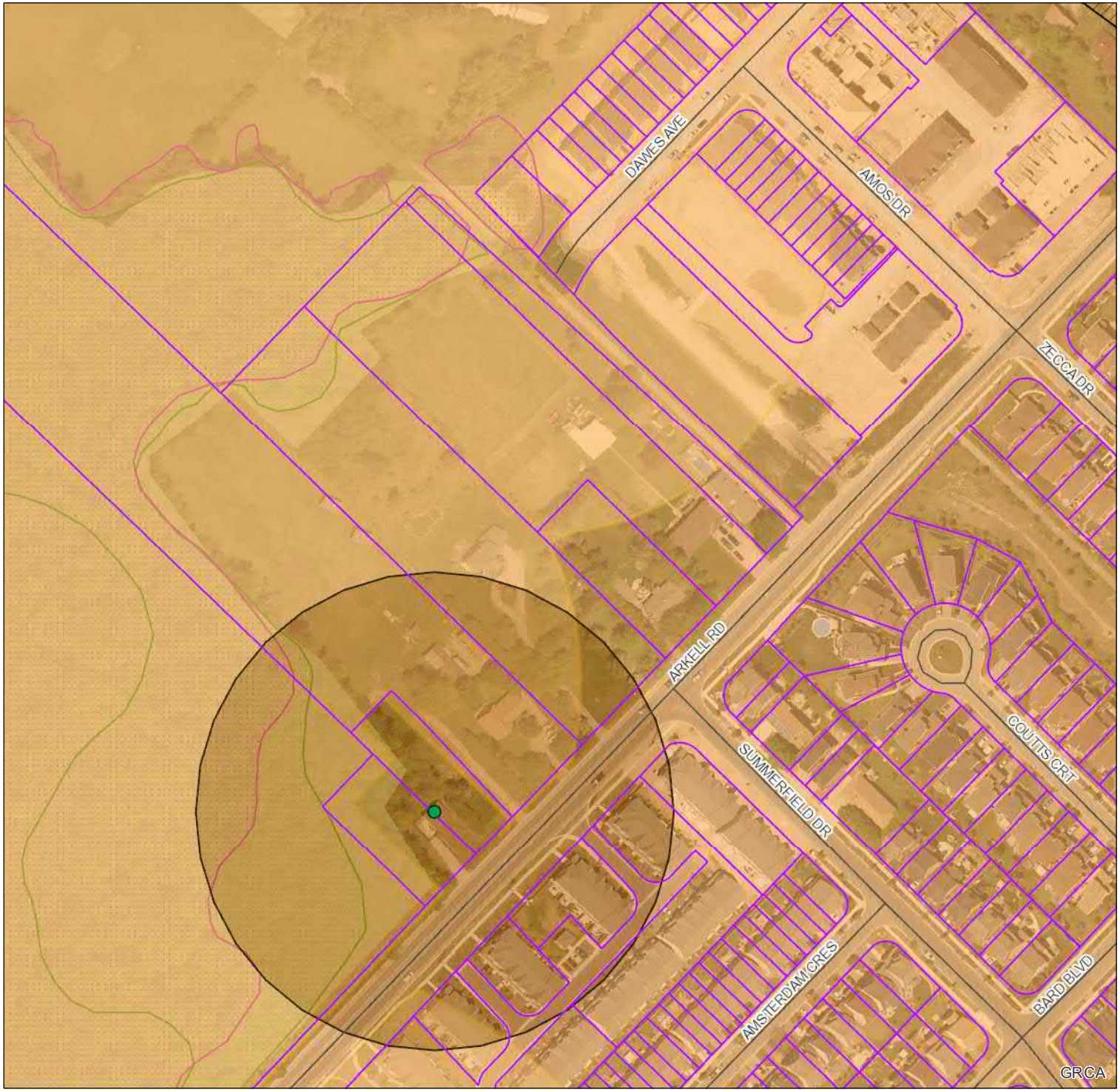
Name of Well Contractor	Well Contractor's Licence No.
GRAHAM WELL DRILLING LTD	2336
Address: RR#5 ROCKWOOD ONT. N0B-2K0	
Name of Well Technician: Jim Wilson	Well Technician's Licence No.: T-1924
Signature of Technician/Contractor: [signature]	Submission date: 30 day 06 mo 98 yr

MINISTRY USE ONLY

Data source 58 | Contractor 2336 59-62 | Date received JUN 08 1998 63-68 80
Date of inspection | Inspector
Remarks: CSS. S9

0506 (07/94) Front Form 9

2 - MINISTER OF ENVIRONMENT & ENERGY COPY



Grand River Conservation Authority

Date: Sep 24, 2018

Legend

- Regulation Limit (GRCA)
- Regulated Watercourse (GRCA)
- Regulated Waterbody (GRCA)
- Wetland (GRCA)
- Floodplain (GRCA)
  - Engineered
  - Estimated
  - Approximate
  - Special Policy Area
- Slope Valley (GRCA)
  - Steep
  - Oversteep
  - Steep
- Slope Erosion (GRCA)
  - Oversteep
  - Toe
- Lake Erie Flood (GRCA)
- Lake Erie Shoreline Reach (GRCA)
- Lake Erie Dynamic Beach (GRCA)
- Lake Erie Erosion (GRCA)
- Parcel - Assessment (MPAC/MNRF)

This legend is static and may not fully reflect the layers shown on the map. The text of Ontario Regulation 150/06 supercedes the mapping as represented by these layers.

0 12.5 25 50 75 Metres

N

Map Centre (UTM NAD83 z17): 565,209.55 4,818,812.20

This map is not to be used for navigation | 2015 Ortho (ON)

NAD 1983 UTM Zone 17N

Scale: 2,341

Jessica Sowa

From: Arissa Cummings
Sent: Monday, September 24, 2018 2:52 PM
To: Jessica Sowa
Subject: FW: [External] Natural Gas Installation Dates (CID:zjw0v9b20mmkfhvkjg)

See below.

Client First | **Right Solution** | **Work Together**
Arissa Cummings, B.Sc.
Project Manager
Kitchener x1365

From: Customer Relations [mailto:CustomerRelations@uniongas.com]
Sent: Monday, September 24, 2018 2:50 PM
To: Arissa Cummings
Subject: RE: [External] Natural Gas Installation Dates (CID:zjw0v9b20mmkfhvkjg)

Thank you for your email.

Please see the dates as requested:

- 164 Arkell Road: 4/11/2018
- 182 Arkell Road: 11/22/1995
- 190 Arkell Road: 9/1/1995
- 210 Arkell Road: 5/17/1978
- 202 Arkell Road: 11/16/1992
- 216 Arkell Road: 8/30/1982
- 220 Arkell Road: No Service

Sincerely,

Olivia

Customer Relations
Union Gas Limited

-----Original Message-----
From: Arissa Cummings [mailto:ACummings@mte85.com]
Sent: September-20-18 4:38:10 PM
To: Customer Relations

Cc: Jessica Sowa
Subject: [External] Natural Gas Installation Dates

Hello,

Can you please provide the natural gas installation date for the following properties located in Guelph, Ontario:

- 164 Arkell Road
- 182 Arkell Road
- 190 Arkell Road
- 210 Arkell Road
- 202 Arkell Road
- 216 Arkell Road
- 220 Arkell Road

Thank-you for your time,

Arissa Cummings, B.Sc. |Project Manager
MTE Consultants Inc.
T: 519-743-6500 x1365 | ACummings@mte85.com

520 Bingemans Centre Drive, Kitchener, Ontario N2B 3X9
www.mte85.com | Twitter| LinkedIn

Ontario

Ministry of Natural Resources and Forestry

Make-a-Map: Natural Heritage Areas

190 - 216 Arkell Road - MNRF

Notes: Enter map notes

Legend

- Assessment Parcel
- Woodland
- Conservation Reserve
- Provincial Park
- Natural Heritage System
- Ecoregion

Wetland
- Provincially Significant Wetland Evaluated
- Non - Provincially Significant Wetland Evaluated
- Unevaluated Wetland

Area of Natural Heritage & Scientific Interest (ANSI)
- Provincially Significant Life Science ANSI
- Provincially Significant Earth Science ANSI

Greenbelt Plan
- Boundary
- River Valley Connections

Land Use Designations
- Protected Countryside
- Towns and Villages
- Hamlets
- Urban River Valley
- Specialty Crop Area

Niagara Escarpment Plan (NEP)
- Boundary
- Parks and Open Space System

Land Use Designations
- Escarpment Natural Area
- Escarpment Protection Area
- Escarpment Rural Area
- Mineral Resource Extraction Area
- Escarpment Recreation Area
- Urban Area
- Minor Urban Centre

Oak Ridges Moraine Conservation Plan (ORM)
- Boundary

Land Use Designations
- Natural Core Area
- Natural Linkage Area
- Countryside Area
- Rural Settlement
- Palgrave Estates Residential Community
- Settlement Area

0.2 0 0.08 0.2 Kilometers

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources and Forestry(OMNRF) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

Ministry of the Environment, Conservation and Parks

Freedom of Information and Protection of Privacy Office

12th Floor
40 St. Clair Avenue West
Toronto ON M4V 1M2
Tel: (416) 314-4075

Ministère de l'Environnement, de la Protection de la nature et des Parcs

Bureau de l'accès à l'information et de la protection de la vie privée

12e étage
40, avenue St. Clair ouest
Toronto ON M4V 1M2
Tél. : (416) 314-4075

Ontario

October 3, 2018

Jessica Sowa
MTE Consultants Inc.
520 Bingemans Centre Drive
Kitchener, ON N2B 3X9

Dear Jessica Sowa:

RE: ***Freedom of Information and Protection of Privacy Act* Request**
Our File # A-2018-06529, Your Reference 42063-200

This letter is in response to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* relating to 190 Arkell Road, Guelph.

After a thorough search through the files of the Ministry's Guelph District Office, West-Central Region, Investigations and Enforcement Branch, 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.**

To conduct a search through the files of the Environmental Assessment and Permissions Branch requires an additional 1 hours. If you would like us to search for Environmental Compliance Approvals/Certificates of Approval at the Environmental Assessment and Permissions Branch (EAPB), please forward to me at the above address payment by money order or cheque (made payable to the "Minister of Finance (FOI)") or by credit card in the amount of $30.00. Please note that there is no guarantee any records will be located responsive to your request. Credit card forms are available on the Ministry's website http://www.ontario.ca/environment-and-energy/freedom-information-request-form. Please note, a request for records must usually be answered within 30 calendar days, however Section 27 allows for time extensions under certain circumstances. If you choose to have the search conducted at the Environmental Assessment and Permissions Branch, the time for answering your request will be extended for an additional 30 days.

When remitting payment please quote our file number or attach a copy of this letter.

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 the Freedom of Information Office at 416-314-4075.

Yours truly,

FOR 

Janet Dadufalza
FOI Manager

Ministry of the Environment, Conservation and Parks

Freedom of Information and Protection of Privacy Office

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Tél. : (416) 314-4075

Ontario

October 3, 2018

Jessica Sowa
MTE Consultants Inc.
520 Bingemans Centre Drive
Kitchener, ON N2B 3X9

Dear Jessica Sowa:

RE: ***Freedom of Information and Protection of Privacy Act*** **Request**
Our File # A-2018-06531, Your Reference 42063-200

This letter is in response to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* relating to 202 Arkell Road, Guelph.

After a thorough search through the files of the Ministry's Guelph District Office, West-Central Region, Investigations and Enforcement Branch, 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.**

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If you have any questions regarding this matter, please contact the Freedom of Information Office at 416-314-4075.

Yours truly,

FOR 

Janet Dadufalza
FOI Manager

Ministry of the Environment, Conservation and Parks

Freedom of Information and Protection of Privacy Office

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40, avenue St. Clair ouest
Toronto ON M4V 1M2
Tél. : (416) 314-4075

Ontario

October 3, 2018

Jessica Sowa
MTE Consultants Inc.
520 Bingemans Centre Drive
Kitchener, ON N2B 3X9

Dear Jessica Sowa:

RE: ***Freedom of Information and Protection of Privacy Act*** **Request**
Our File # A-2018-06530, Your Reference 42063-200

This letter is in response to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* relating to 210 Arkell Road, Guelph.

After a thorough search through the files of the Ministry's Guelph District Office, West-Central Region, Investigations and Enforcement Branch, 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.**

To conduct a search through the files of the Environmental Assessment and Permissions Branch requires an additional 1 hours. If you would like us to search for Environmental Compliance Approvals/Certificates of Approval at the Environmental Assessment and Permissions Branch (EAPB), please forward to me at the above address payment by money order or cheque (made payable to the "Minister of Finance (FOI)") or by credit card in the amount of $30.00. Please note that there is no guarantee any records will be located responsive to your request. Credit card forms are available on the Ministry's website http://www.ontario.ca/environment-and-energy/freedom-information-request-form. Please note, a request for records must usually be answered within 30 calendar days, however Section 27 allows for time extensions under certain circumstances. If you choose to have the search conducted at the Environmental Assessment and Permissions Branch, the time for answering your request will be extended for an additional 30 days.

When remitting payment please quote our file number or attach a copy of this letter.

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 the Freedom of Information Office at 416-314-4075.

Yours truly,

FOR 

Janet Dadufalza
FOI Manager

Ministry of the Environment, Conservation and Parks

Freedom of Information and Protection of Privacy Office

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Toronto ON M4V 1M2
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Tél. : (416) 314-4075

Ontario

October 3, 2018

Jessica Sowa
MTE Consultants Inc.
520 Bingemans Centre Drive
Kitchener, ON N2B 3X9

Dear Jessica Sowa:

RE: ***Freedom of Information and Protection of Privacy Act*** **Request**
Our File # A-2018-06528, Your Reference 42063-200

This letter is in response to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* relating to 216 Arkell Road, Guelph.

After a thorough search through the files of the Ministry's Guelph District Office, West-Central Region, Investigations and Enforcement Branch, 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.**

To conduct a search through the files of the Environmental Assessment and Permissions Branch requires an additional 1 hours. If you would like us to search for Environmental Compliance Approvals/Certificates of Approval at the Environmental Assessment and Permissions Branch (EAPB), please forward to me at the above address payment by money order or cheque (made payable to the "Minister of Finance (FOI)") or by credit card in the amount of $30.00. Please note that there is no guarantee any records will be located responsive to your request. Credit card forms are available on the Ministry's website http://www.ontario.ca/environment-and-energy/freedom-information-request-form. Please note, a request for records must usually be answered within 30 calendar days, however Section 27 allows for time extensions under certain circumstances. If you choose to have the search conducted at the Environmental Assessment and Permissions Branch, the time for answering your request will be extended for an additional 30 days.

When remitting payment please quote our file number or attach a copy of this letter.

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 the Freedom of Information Office at 416-314-4075.

Yours truly,

FOR 

Janet Dadufalza
FOI Manager

October 5, 2018

MTE Consultants Inc.
520 Bingemans Centre Dr
Kitchener ON N2B 3X9

MTE#
Rec'd OCT 0 9
FYI JMS Init

Dear: Jessica Sowa

RE: Environmental Records Review – 210 Arkell Rd, Guelph ON

This letter is in reply to your correspondence dated October 3, 2018 requesting a background search of our records for any environmental infractions and related concerns for the above noted property.

There is no historical data to indicate that this property is a Brownfield Site.

We have found no information that would indicate that this property has been used as a cemetery or landfill.

However, it was found that a sewage spill occurred on May 28, 2004. An unknown amount of sewage was leaking out of a neighbouring septic system, spilling onto the property at 210 Arkell Road. This concern does not fall under the scope of the Sewer Use By-law (1996) 15202 and was forwarded to the Ministry of Environment to be dealt with under the Ontario Water Resource Act and Environmental Protection Act.

You may wish to contact the Ontario Ministry of Environment, Conservation and Parks to inquire if they have any records pertaining to potential environmental contamination for this property.

Sincerely,

Alexandra Marson
Stormwater Service Program Coordinator

Engineering Services
Planning, Engineering and Environmental Services

T 519-822-1260 x 3460
F 519-822-6194
E alexandra.marson@guelph.ca

City Hall
1 Carden St
Guelph, ON
Canada
N1H 3A1

T 519-822-1260
TTY 519-826-9771

guelph.ca

APPENDIX D

INTERVIEW AND INSPECTION REPORT

PHASE I
ENVIRONMENTAL SITE ASSESSMENT
INITIAL INSPECTION REPORT

PROJECT NAME: 190-216 Arkell Rd - Phase I ESA
DATE OF INSPECTION: 09/18/18 & 09/27/18 PROJECT NO: 42063-200
COMPLETED BY: KXC & JMS SITE CONTACT: Ted Russell
NUMBER OF PHOTOS TAKEN: 103 + additional to be released from Phone
ADDRESS OF PROPERTY: 202 210 190 216 Arkell Rd, Guelph, ON

NAME AND ADDRESS OF CURRENT TENANT: Residential
190 Arkell - Mauricio Perez
202 Arkell - Brian Bard
210 Arkell - Annaleigh 216 Arkell - Herb Vandekoo
PHONE NUMBER: 519 822 5827
FAX NUMBER: ↳ Ted Russell
DESCRIPTION OF PROPERTY: (i.e. size, layout, terrain, etc.) Residential w/ grass
Approximate Land Area (acreage): 2.6 hectare 6.3 acres areas - forested / wetland at west end
Number of Buildings: 4 houses, and additional garages / sheds
Building Square Footage: measured from locator GIS or google earth
Warehouse Area (storage and distribution): N/A
Manufacturing/Processing/Laboratory Area:
Showroom/Sales/Office Area:
Residential Area: 100%

VISUAL APPEARANCE OF PROPERTY:

190, 202 & 216 - Good
210 - areas of moderate/poor but majority good

LIST OF ADJACENT PROPERTIES:
NE & S - Residential
W - wetland / forest
further NW - former golf course

DESCRIPTION OF CURRENT OPERATIONS (INCLUDING 3Rs):
- Residential

DESCRIPTION OF PAST OPERATIONS (IF AVAILABLE):
- N/A

CONFIRM THE FOLLOWING SITE FEATURES:

- TYPE OF WATER SUPPLY Combo Municipal and domestic wells - see report
- TYPE OF SANITARY WASTE DISPOSAL Septic systems
- STORM WATER AND SURFACE WATER HANDLING
  no catchbasins, storm water sump in each basement
- PRESENCE OF FLOOR DRAINS (if present where do they drain?)
  Basements - drain to exterior or septic system
- PRESENCE OF TRANSFORMERS:
  HOW MANY? 0 WHO OWNS? _____
  HAVE THEY BEEN TESTED? _____ TEST DATA AVAILABLE? N/A
  ARE THEY TAGGED PROPERLY? _____
  GENERAL DESCRIPTION (i.e. size, location, etc.)
- PRESENCE OF ANY OTHER POTENTIAL PCB ELECTRICAL EQUIPMENT? (i.e. capacitors, switches)
  None observed
- PRESENCE OF MACHINE SHOP
  N/A

NOTE THE LOCATION, EXTENT, AND CONDITION OF SUSPECTED ASBESTOS CONTAINING MATERIALS OBSERVED. FOR EACH TYPE, ESTIMATE THE TOTAL SURFACE AREA OR LINER LENGTH:

Sprayed-on Insulation: none observed
Roofing Materials:
Pipe Wrap:
Boiler Insulation:
Tank Linings:
Ceiling Tiles:
Floor Tile: Vinyl tile observed
Expansion Joint:
Thermal Insulation: none observed
Spray-on Fire-Proofing Materials:

- DOES THE FACILITY DEAL IN BATTERIES? N/A
  HOW ARE USED BATTERIES DISPOSED? (Review disposal records if offsite.)
  N/A

- PRESENCE OF UNDERGROUND/ABOVEGROUND TANKS N/A

HOW MANY AND TYPE? N/A

IS NUMBER CONSISTENT WITH OBSERVED SITE FEATURES? N/A

DOES AREA OF TANK(S) SHOW SIGNS OF SURFACE SPILLS? NA

WHAT PRODUCTS WERE OR ARE STORED IN TANK(S)? NA

WHEN WERE TANK(S) INSTALLED?

HAVE TANK(S) BEEN REGISTERED? (Confirm with records.) N/A
HAVE TANK(S) BEEN TESTED? (Confirm with records.)
HAVE ANY TANKS BEEN REMOVED IN THE PAST?
(If YES, identify records of removal, who removed, was removal certified by anyone, was any testing done during removal?)

N/A

- PRESENCE OF EQUIPMENT WASH DOWN AREA? (Where is it?):

N/A

- WERE ORGANIC SOLVENTS EVER USED OR ARE THEY USED NOW?
(If YES, identify which ones and where disposed?)

minor wards used in past @ garage @ 216 Ancell
no wastes generated

DESCRIPTION OF ANY OTHER FEATURES NOT COVERED IN POINTS ABOVE
Use of pesticides: Unknown
Floodplain:
Lagoons: N/A
Air:
Housekeeping:
Past placement of fill on the site: • Former house demolished at 190 Ancell
• imported material from 1 Castlebury Dr

WASTE GENERATED AND STORED

- HOW ARE CUTTINGS AND WASTE OIL HANDLED? N/A

- GENERATION OF WASTE OILS OR OTHER WASTES
(explain where waste oils generated)

minor when change oil in lawn mower @ 216 Atwell
or hobby vehicle maintenance @ 210 Atwell

WHERE ARE WASTE OILS OR OTHER WASTES STORED?

in pails
removed off site as required (minor)

ARE THERE SIGNS OF LEAKS OR SPILLS IN STORAGE AREAS?

minor oil staining on surface beneath tractor in shed @ 210 Atwell

HOW AND WHERE ARE WASTES DISPOSED OF? (Review disposal records)

reportedly removed off-site - no records

HOW ARE WASTES STORED ON-SITE?

Storage	Waste
Drums → only for grain for farmer animals	N/A
AST	
UST	
Surface impoundment	
Waste piles	
Dumpsters	
Other - description pails	waste oil from lawn mower

INSPECTION OF PROPERTY (Walk entire property boundary.)

- PRESENCE OF WASTE MATERIALS DISPOSED OF OR STORED ON SITE i.e. scrap metal, drums, garbage, batteries, etc.)

Scrap metal & wood from old structures next to garage @ 210 Atwell Rd

EVIDENCE OF SOIL STAINING, VEGETATION DISTRESS(i.e. from spills, etc.)

minor staining on driveway and on garage dirt
Poor growth in patch of 210 Atrell

EVIDENCE OF ANY IMPACT CAUSED BY SURFACE RUN-ON OR DISPOSAL FROM ADJACENT PROPERTIES

None observed

GROUNDWATER USAGE:

ON SITE WELLS? Yes HOW MANY? See report.
COMPLETION DEPTH: see report

WATER QUALITY INFO AVAILABLE?

Yes - see report

AIR QUALITY:

Odours noted none
Air conditioning/CFCs yes - furnace or window units

EMERGENCY PROCEDURES:

MSDS N/A
Fire

ENVIRONMENTAL COMPLAINTS OR SPILLS:

Spills and spill response
MOE
Municipal/Fire Department N/A
Other

PERSONS INTERVIEWED (Title & Phone #):

Ted Russell of Crescent Homes
and tenants @ 210 216 190 Atrell - see report

LIMITATIONS (i.e. snow cover, inaccessible areas, locked rooms, etc.)

Did not access • basement house & garage 202 Atrell Rd
• Small area @ forested area west end 190 Atrell Rd

AIR EMISSIONS

N/A

Operation	All Materials/ Wastes Used	Known Emission Contaminants	Method of Discharge (Stack, Fan, etc.)	Permit Obtained From Provincial or Other Agency (Y or N)
N/A				
N/A				

AVAILABLE DOCUMENTATION:

- Current site plan — Y__ N__ N/A✓
- Historic site plans — Y__ N✓ N/A__
- Reported results of tank integrity testing — Y__ N__ N/A✓
- Applicable documentation – leaks or spills from storage tanks — Y__ N__ N/A✓
- Material Safety Data Sheets (MSDS) — Y__ N__ N/A✓
- Certificates of Approval — Y__ N__ N/A✓
- Applicable correspondence and notices and work orders – regulatory agency — Y__ N__ N/A✓
- MOE acknowledgement of subject waste registration — Y__ N__ N/A✓
- Waste shipment manifest records — Y__ N__ N/A✓
- Waste audit — Y__ N__ N/A✓
- Spill prevention, containment and countermeasures plan — Y__ N__ N/A✓
- Applicable reports or correspondence pertaining to previous environmental evaluation or remediation, hydrogeologic investigation, or geotechnical study — Y✓ N__ N/A__
- Applicable construction pit/boring logs or well construction logs — Y✓ N__ N/A__
- Notices of Violations, a/o correspondence pertaining to violation of environmental law, legal proceedings — Y__ N__ N/A✓
- Asbestos Survey/Management plan — Y__ N✓ N/A✓
- PCB Inventory or Storage Documentation — Y__ N__ N/A✓
- Permits – AST, UST — Y__ N__ N/A✓
- Reports of Releases of hazardous materials or oil — Y__ N__ N/A✓
- Insurance risk survey — Y__ N__ N/A✓

MTE Consultants Inc. **Project No.:**
Phase I ESA Interview Questions **Client:**

Phase I Site Address: 190 Arkell Rd Guelph

Name of Interview Candidate: Ted Russell

Title Project Manager **Date:** 10/01/18

Relationship/How long with company? 3 years

1. Who is the current owner/tenant of the Site? How long have they owned/leased?

   Crescent Homes

2. Who is the previous owner of the Site? Who is the previous tenant of the Site?

   Ramon Perez

3. Have any major renovations been conducted? Demolition of buildings/structures?

   No

4. Are any water wells located on the property? If so, is the driller's well log available? How deep is the well?

   Yes front yard. Depth unknown

5. Are any septic beds located on the property? Are permits available?

   Yes, West side of house

6. Are there any problems with Site drainage? Has there ever been any flooding in the basement, building or external area of the property? Any issues with roof leaks?

   Some basement flooding controlled by sump pits and pumps

7. Are there any easements on the property (hydro, gas, telephone, etc.)?

No

8. Has dust control ever been used on the property? If so, what was used?

Not to my knowledge

9. Has salt or other de-icing chemicals been used for winter maintenance of walkways or parking areas? If yes, please describe storage and application practices.

Not to my knowledge

10. Are there any transformers located on the property? If so, who owns them?

No

11. Are there any aboveground storage tanks located on the Site? Have any been removed in the past? If so, when, what size and what did it contain?

No

12. Are there any underground storage tanks located on the Site? Have any been removed in the past? If so, when, what size and what did it contain?

No

13. Are there any fuel pumps or fuelling systems on the Site? Have any been removed in the past?

No

14. Have any pesticides/herbicides/sludge ever been applied to the Site? If so, when, and what products?

Not to my knowledge

15. Are there any noise or odours problems from the Site to your neighbours or from the surrounding neighbouring properties to your Site?

No

16. Is there chemical/solvent storage on Site? Which chemicals/method of storage?

No

17. How is solid waste stored and disposed?

In garage picked up by city weekly

18. Is any vehicle maintenance performed on the Site currently or in the past? How are the waste vehicle fluids dealt with?

None

19. Are any liquid industrial wastes generated at the Site? If so, how are they disposed of?

None

20. Does any equipment, vehicle or plant floor wash down occur on the Site currently or in the past?

No

21. Was the Site ever used for agricultural purposes? If so, approximately what years and what crops?

No

22. When was the Site developed? Has the building ever been heated with fuel oil (furnace oil)?

No

23. Have any chemical/oil spills occurred? How are spills handled? Are spill kits available? Do employees have Spill Response training?

N/A

24. Are Material Safety Data Sheets (MSDS) available for any chemical compounds used on the Site?

N/A

25. Is there a Joint Health and Safety Committee? Do they have any outstanding environmental concerns?

N/A

26. Are there any outstanding regulatory compliance issues (such as zoning, labour or environment) with the Site? Have there been any in the past?

No

27. Is there any asbestos, lead, UFFI or PCB containing materials on the Site? Have any been removed in the past?

No

28. Are batteries (non-household type) used on the Site? If so, how are they disposed?

No

29. Have any other inspections occurred on the Site (i.e. Ministry of Labour, Ministry of the Environment, Township/Municipality, Insurance agency, etc.) Any other environmental reports completed for the Site?

No

30. Any other problems with the neighbouring properties such as chemical storage, contamination, etc?

No

31. Are any waste oils generated/stored on Site? If so, how are these wastes stored and disposed of? Is there an oil-water separator?

No

32. Are there any hoists on the Site? If so are the above ground or in ground and how are they powered?

No

33. Have there been any fires or do you burn or incinerate anything?

No

34. Are there any areas of mould/water damage in the building?

No

35. Has any waste been dumped on the property? Has any soil or fill from an unknown source been deposited on the Site?

No

36. Are there any concerns related to indoor air quality in the building?

No

37. Do you have any stack emissions, fugitive air emissions? Do you have a Certificate of Approval (Air) issued by the Ontario Ministry of the Environment?

No

38. Is there another person we should contact for additional information?

No

The above information is a true representation of my knowledge of the Site and operations. I understand that this information will be reviewed by MTE and compiled in the Phase I ESA report.

Are there any additional comments related to environmental matters that you have?

Signature of Interviewed Candidate: 

MTE Consultants Inc.
Phase I ESA Interview Questions

Project No.:
Client:

Phase I Site Address: 210 Arkell Rd Guelph

Name of Interview Candidate: Ted Russell

Title Project Manager **Date:** 10/01/18

Relationship/How long with company? 3 years

1. Who is the current owner/tenant of the Site? How long have they owned/leased?

Bob + Anna Elgie: Tenant Nitin Jain: owner

2. Who is the previous owner of the Site? Who is the previous tenant of the Site?

Elia and Ororina Favaro

3. Have any major renovations been conducted? Demolition of buildings/structures?

No

4. Are any water wells located on the property? If so, is the driller's well log available? How deep is the well?

Municipal wate

5. Are any septic beds located on the property? Are permits available?

Yes behind house

6. Are there any problems with Site drainage? Has there ever been any flooding in the basement, building or external area of the property? Any issues with roof leaks?

No

7. Are there any easements on the property (hydro, gas, telephone, etc.)?

No

8. Has dust control ever been used on the property? If so, what was used?

Not to my knowledge

9. Has salt or other de-icing chemicals been used for winter maintenance of walkways or parking areas? If yes, please describe storage and application practices.

Not to my knowledge

10. Are there any transformers located on the property? If so, who owns them?

NO

11. Are there any aboveground storage tanks located on the Site? Have any been removed in the past? If so, when, what size and what did it contain?

NO

12. Are there any underground storage tanks located on the Site? Have any been removed in the past? If so, when, what size and what did it contain?

NO

13. Are there any fuel pumps or fuelling systems on the Site? Have any been removed in the past?

NO

14. Have any pesticides/herbicides/sludge ever been applied to the Site? If so, when, and what products?

Not to my knowledge

15. Are there any noise or odours problems from the Site to your neighbours or from the surrounding neighbouring properties to your Site?

No

16. Is there chemical/solvent storage on Site? Which chemicals/method of storage?

No

17. How is solid waste stored and disposed?

Stored in garage collected by city weekly

18. Is any vehicle maintenance performed on the Site currently or in the past? How are the waste vehicle fluids dealt with?

Personal vehicle maintenance
fluids taken for recycling

19. Are any liquid industrial wastes generated at the Site? If so, how are they disposed of?

No

20. Does any equipment, vehicle or plant floor wash down occur on the Site currently or in the past?

No

21. Was the Site ever used for agricultural purposes? If so, approximately what years and what crops?

Personal alfalfa crop 20 years ago

22. When was the Site developed? Has the building ever been heated with fuel oil (furnace oil)?

No

23. Have any chemical/oil spills occurred? How are spills handled? Are spill kits available? Do employees have Spill Response training?

N/A

24. Are Material Safety Data Sheets (MSDS) available for any chemical compounds used on the Site?

N/A

25. Is there a Joint Health and Safety Committee? Do they have any outstanding environmental concerns?

N/A

26. Are there any outstanding regulatory compliance issues (such as zoning, labour or environment) with the Site? Have there been any in the past?

No

27. Is there any asbestos, lead, UFFI or PCB containing materials on the Site? Have any been removed in the past?

No

28. Are batteries (non-household type) used on the Site? If so, how are they disposed?

No

29. Have any other inspections occurred on the Site (i.e. Ministry of Labour, Ministry of the Environment, Township/Municipality, Insurance agency, etc.) Any other environmental reports completed for the Site?

No

30. Any other problems with the neighbouring properties such as chemical storage, contamination, etc?

No

31. Are any waste oils generated/stored on Site? If so, how are these wastes stored and disposed of? Is there an oil-water separator?

No

32. Are there any hoists on the Site? If so are the above ground or in ground and how are they powered?

No

33. Have there been any fires or do you burn or incinerate anything?

No

34. Are there any areas of mould/water damage in the building?

No

35. Has any waste been dumped on the property? Has any soil or fill from an unknown source been deposited on the Site?

No

36. Are there any concerns related to indoor air quality in the building?

No

37. Do you have any stack emissions, fugitive air emissions? Do you have a Certificate of Approval (Air) issued by the Ontario Ministry of the Environment?

No

38. Is there another person we should contact for additional information?

No

The above information is a true representation of my knowledge of the Site and operations. I understand that this information will be reviewed by MTE and compiled in the Phase I ESA report.

Are there any additional comments related to environmental matters that you have?

Signature of Interviewed Candidate: _____

MTE Consultants Inc.
Phase I ESA Interview Questions

Project No.:
Client:

Phase I Site Address: 202 Arkell Rd Guelph

Name of Interview Candidate: Ted Russell

Title Project Manager **Date:** 10/01/18

Relationship/How long with company? 3 years

1. Who is the current owner/tenant of the Site? How long have they owned/leased?

Brian and Margaret Bard. 30 yrs

2. Who is the previous owner of the Site? Who is the previous tenant of the Site?

Unknown

3. Have any major renovations been conducted? Demolition of buildings/structures?

Interior renovations of house

4. Are any water wells located on the property? If so, is the driller's well log available? How deep is the well?

Municipal water

5. Are any septic beds located on the property? Are permits available?

Yes, back yard, no permits avail.

6. Are there any problems with Site drainage? Has there ever been any flooding in the basement, building or external area of the property? Any issues with roof leaks?

No

7. Are there any easements on the property (hydro, gas, telephone, etc.)?

No

8. Has dust control ever been used on the property? If so, what was used?

No

9. Has salt or other de-icing chemicals been used for winter maintenance of walkways or parking areas? If yes, please describe storage and application practices.

No

10. Are there any transformers located on the property? If so, who owns them?

No

11. Are there any aboveground storage tanks located on the Site? Have any been removed in the past? If so, when, what size and what did it contain?

No

12. Are there any underground storage tanks located on the Site? Have any been removed in the past? If so, when, what size and what did it contain?

No

13. Are there any fuel pumps or fuelling systems on the Site? Have any been removed in the past?

No

14. Have any pesticides/herbicides/sludge ever been applied to the Site? If so, when, and what products?

Not to my knowledge

15. Are there any noise or odours problems from the Site to your neighbours or from the surrounding neighbouring properties to your Site?

No

16. Is there chemical/solvent storage on Site? Which chemicals/method of storage?

No

17. How is solid waste stored and disposed?

Stored in garage
picked up by city weekly

18. Is any vehicle maintenance performed on the Site currently or in the past? How are the waste vehicle fluids dealt with?

No

19. Are any liquid industrial wastes generated at the Site? If so, how are they disposed of?

No

20. Does any equipment, vehicle or plant floor wash down occur on the Site currently or in the past?

No

21. Was the Site ever used for agricultural purposes? If so, approximately what years and what crops?

No

22. When was the Site developed? Has the building ever been heated with fuel oil (furnace oil)?

No

23. Have any chemical/oil spills occurred? How are spills handled? Are spill kits available? Do employees have Spill Response training?

N/A

24. Are Material Safety Data Sheets (MSDS) available for any chemical compounds used on the Site?

N/A

25. Is there a Joint Health and Safety Committee? Do they have any outstanding environmental concerns?

N/A

26. Are there any outstanding regulatory compliance issues (such as zoning, labour or environment) with the Site? Have there been any in the past?

No

27. Is there any asbestos, lead, UFFI or PCB containing materials on the Site? Have any been removed in the past?

No

28. Are batteries (non-household type) used on the Site? If so, how are they disposed?

No

29. Have any other inspections occurred on the Site (i.e. Ministry of Labour, Ministry of the Environment, Township/Municipality, Insurance agency, etc.) Any other environmental reports completed for the Site?

No

30. Any other problems with the neighbouring properties such as chemical storage, contamination, etc?

No

31. Are any waste oils generated/stored on Site? If so, how are these wastes stored and disposed of? Is there an oil-water separator?

No

32. Are there any hoists on the Site? If so are the above ground or in ground and how are they powered?

No

33. Have there been any fires or do you burn or incinerate anything?

No

34. Are there any areas of mould/water damage in the building?

No

35. Has any waste been dumped on the property? Has any soil or fill from an unknown source been deposited on the Site?

No

36. Are there any concerns related to indoor air quality in the building?

No

37. Do you have any stack emissions, fugitive air emissions? Do you have a Certificate of Approval (Air) issued by the Ontario Ministry of the Environment?

No

38. Is there another person we should contact for additional information?

No

The above information is a true representation of my knowledge of the Site and operations. I understand that this information will be reviewed by MTE and compiled in the Phase I ESA report.

Are there any additional comments related to environmental matters that you have?

Signature of Interviewed Candidate: _____

MTE Consultants Inc.
Phase I ESA Interview Questions

Project No.:
Client:

Phase I Site Address: 216 ARKELL R.D GUELPH ONT. N1L1E6

Name of Interview Candidate: HERB VANDERLOO

Title TENANT **Date:** SEPT 14, 2018

Relationship/How long with company? N/A

1. Who is the current owner/tenant of the Site? How long have they owned/leased?

HERB VANDERLOO LEASED 2 YRS CRESCENT HAVEN
" " OWNED 33 YRS. HOMES OWNER.

2. Who is the previous owner of the Site? Who is the previous tenant of the Site?

HERB VANDERLOO

3. Have any major renovations been conducted? Demolition of buildings/structures?

NO

4. Are any water wells located on the property? If so, is the driller's well log available? How deep is the well?

SISTERN / WELL IN BASEMENT - municipal water

5. Are any septic beds located on the property? Are permits available?

YES NO PERMITS

6. Are there any problems with Site drainage? Has there ever been any flooding in the basement, building or external area of the property? Any issues with roof leaks?

FLOODING IN BASEMENT

7. Are there any easements on the property (hydro, gas, telephone, etc.)?

YES TO ALL 3

8. Has dust control ever been used on the property? If so, what was used?

NO

9. Has salt or other de-icing chemicals been used for winter maintenance of walkways or parking areas? If yes, please describe storage and application practices.

SAFETY SALT STORED IN GREEN SEALED CONTAINER

10. Are there any transformers located on the property? If so, who owns them?

NO

11. Are there any aboveground storage tanks located on the Site? Have any been removed in the past? If so, when, what size and what did it contain?

NO

12. Are there any underground storage tanks located on the Site? Have any been removed in the past? If so, when, what size and what did it contain?

NO

13. Are there any fuel pumps or fuelling systems on the Site? Have any been removed in the past?

NO

14. Have any pesticides/herbicides/sludge ever been applied to the Site? If so, when, and what products?

No

15. Are there any noise or odours problems from the Site to your neighbours or from the surrounding neighbouring properties to your Site?

No

16. Is there chemical/solvent storage on Site? Which chemicals/method of storage?

No

17. How is solid waste stored and disposed?

Collected by city weekly

18. Is any vehicle maintenance performed on the Site currently or in the past? How are the waste vehicle fluids dealt with?

No

19. Are any liquid industrial wastes generated at the Site? If so, how are they disposed of?

No

20. Does any equipment, vehicle or plant floor wash down occur on the Site currently or in the past?

No

21. Was the Site ever used for agricultural purposes? If so, approximately what years and what crops?

NOT TO MY KNOWLEDGE

22. When was the Site developed? Has the building ever been heated with fuel oil (furnace oil)?

NO IDEA

23. Have any chemical/oil spills occurred? How are spills handled? Are spill kits available? Do employees have Spill Response training?

NOT WHILE I HAVE BEEN LIVING HERE

24. Are Material Safety Data Sheets (MSDS) available for any chemical compounds used on the Site?

NO

25. Is there a Joint Health and Safety Committee? Do they have any outstanding environmental concerns?

N/A

26. Are there any outstanding regulatory compliance issues (such as zoning, labour or environment) with the Site? Have there been any in the past?

N/A

27. Is there any asbestos, lead, UFFI or PCB containing materials on the Site? Have any been removed in the past?

NOT TO MY KNOWLEDGE

28. Are batteries (non-household type) used on the Site? If so, how are they disposed?

No

29. Have any other inspections occurred on the Site (i.e. Ministry of Labour, Ministry of the Environment, Township/Municipality, Insurance agency, etc.) Any other environmental reports completed for the Site?

INSURANCE DUE TO FLOOD & ELECTRICAL FIRE OUTSIDE

30. Any other problems with the neighbouring properties such as chemical storage, contamination, etc?

NO IDEA

31. Are any waste oils generated/stored on Site? If so, how are these wastes stored and disposed of? Is there an oil-water separator?

N/A

32. Are there any hoists on the Site? If so are the above ground or in ground and how are they powered?

N/A

33. Have there been any fires or do you burn or incinerate anything?

NO

34. Are there any areas of mould/water damage in the building?

BASEMENT FROM NUMEROUS FLOODS

35. Has any waste been dumped on the property? Has any soil or fill from an unknown source been deposited on the Site?

NOT TO MY KNOWLEDGE

36. Are there any concerns related to indoor air quality in the building?

No

37. Do you have any stack emissions, fugitive air emissions? Do you have a Certificate of Approval (Air) issued by the Ontario Ministry of the Environment?

N/A

38. Is there another person we should contact for additional information?

NO

The above information is a true representation of my knowledge of the Site and operations. I understand that this information will be reviewed by MTE and compiled in the Phase I ESA report.

Are there any additional comments related to environmental matters that you have?

Signature of Interviewed Candidate: [signature]

APPENDIX E

PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph No. 1 – View of sump drainage from 216 Arkell Road in to storm sewer catch basin on Arkell Road.

Photograph No. 2 – View of one stock pile, facing west toward the western property line.

Photograph No. 3 – Additional view of one stock pile, facing south toward the southern property line.

Photograph No. 4 – View of open excavation located to the west of the shed at 210 Arkell Road.

Photograph No. 5 – Front view of the shed in the backyard of 216 Arkell Road. The shed housed equipment for handcrafted furniture.

Photograph No. 6 – View of the front of the shed in the backyard at 202 Arkell Road. The shed housed garden and lawn supplies.

Photograph No. 7 – View of southern wall of the shed located at 210 Arkell Road. The shed was used as a personal vehicle shop and former chicken coop. A monitoring well installed by PML in 2017 is visible in the foreground.

Photograph No. 8 – View of the metal and wood waste storage located east of the shed at 210 Arkell Road.

Photograph No. 9 – View of potential former storage area/waste area, located in the forested portion of 210 Arkell Road (west end of the property).

Photograph No. 10 – View of the minor staining observed beneath the tractor on the bare ground of the shed at 210 Arkell Road.