Appendix E Cultural Heritage Assessment Report, and Cultural Heritage Memo

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Dawn-Enniskillen Pipeline Project Cultural Heritage Assessment Report



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Executive Summary

In 2014, Union Gas retained Stantec to prepare a Cultural Heritage Assessment Report (CHAR) as part of an Environmental Report (ER) for the proposed Dawn-Enniskillen Pipeline Project (the Project). The study and ER are required to meet the intent of the 6th Edition (2011) of the Ontario Energy Board (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* (Environmental Guidelines or Guidelines). Section 4.3.4 of the Environmental Guidelines require that where the Project may affect known or potential heritage resources, further studies may be required. In order to identify the presence of heritage resources within the Study Area, understand the potential impacts of the Project on these resources, and prepare mitigation strategies to minimize these impacts, it was determined that a Cultural Heritage Assessment Report (CHAR) would be prepared.

The study methodology is broadly based on guidelines provided by MTCS within InfoSheet #5 in *Heritage Resources in the Land Use Planning Process, Cultural Heritage and Archaeology Policies of the Ontario Provincial Policy Statement, 2005* (MTC 2006). The *OEB Environmental Guidelines* stipulate that pipeline proponents are responsible for demonstrating the appropriate level of due diligence regarding heritage resources. This involves both the identification of heritage resources and the assessment of impacts of the Project on these resources. According to the *OEB Environmental Guidelines*, due diligence should be exhibited by:

- *Recognizing cultural heritage resources that may be affected by pipeline development, identifying significant cultural heritage resources and understanding their cultural heritage value or interest;*
- *Assessing the effects or impacts that could result from proposed pipeline development; and*
- *Protecting cultural heritage resources by appropriate conservation, avoidance, and mitigation.*

The CHAR was composed of a program of archival research and municipal consultation focused on the Study Area. Listings of provincially and locally designated properties, districts and easements for each municipality were collected from the County of Lambton, the Ontario Heritage Trust (OHT), and the Ministry of Tourism, Culture and Sport (MTCS). Consultation with these interested agencies and municipalities within which the Project is proposed was undertaken to determine the presence of designated, listed, or registered heritage properties within the Study Area. A total of one Heritage Conservation District and one protected property were identified within the vicinity of the Study Area. Upon inspection, both were determined to be situated outside the Study Area.

A vehicular windshield survey was conducted on January 21, 2015 from publicly accessible roadways, unless specified otherwise. The survey was conducted by James Sebele, Cultural Heritage Specialist Assistant with Stantec. During the survey, the Study Area was surveyed for potential heritage resources, including both potential built heritage resources and components of cultural heritage landscapes. Where identified, these were photographed and their locations recorded. Characteristics of each potential heritage resource were noted while in the field and their locations recorded. A total of 15 individual properties were identified as containing potential heritage resources.

Where a Heritage resource was identified within or across the Project Location, an assessment of potential impacts was undertaken. Where potential impacts are identified, measures to mitigate the impact have been prepared. Mitigation options are required for the two and one half storey brick residence at 2070 Oil Heritage Road. Following analysis, it has been determined that the use of isolation and buffer zones is the preferred mitigation option to prevent negative indirect Project impacts.

Given the position of the heritage resources within the 50 metre buffer of the Project easement and TLU, it is recommended that a buffer zone be established to indicate where all construction activities must be avoided including, but not limited to, ground disturbance and the movement of equipment and people to and from the site. The buffer zone should be established where the Project easement and TLU are positioned within 10 metres of the residence and delineated with temporary fencing. If construction activities enter into the 10 metre buffer zone, all activities should cease immediately and a temporary 60 metre buffer zone surrounding the impacted area should be established where no construction activities should occur. A qualified building condition specialist should be retained to determine if any damage was incurred as a result of the construction activities. Only following approval from the building specialist, should construction activities resume at which point the 10 metre buffer should be re-established.

In addition, to assist in the retention of historic information, copies of this report should be deposited with local libraries and municipalities. Therefore, it is recommended that this report be deposited at the Oil Springs branch of the Lambton County Public Library and the County of Lambton Planning and Development Services.

The Executive Summary highlights key points from the report only; for complete information and findings the reader should examine the complete report.

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1.0 INTRODUCTION

1.1 PROJECT OVERVIEW

In order to serve a growing demand for clean, affordable natural gas, Union Gas Limited (Union Gas) is proposing to construct a 48-inch diameter steel natural gas pipeline between the existing Union Gas Cuthbert Station located north of Bentpath Line, on Cuthbert Road in the Township of Dawn-Euphemia, Lambton County (with a connection into the existing Union Gas Dawn Compressor Station), and the existing Union Gas Enniskillen Station located north of Oil Springs Line, on Oakdale Road in the Township of Enniskillen, Lambton County (Dawn-Enniskillen) (the "Project"). Union Gas retained Stantec Consulting Ltd. (Stantec) to undertake an environmental study of the construction and operation of the proposed natural gas pipeline (Figure 1).

1.2 STUDY PURPOSE AND OBJECTIVES

The environmental study was completed to meet the intent of the 6th Edition (2011) of the Ontario Energy Board (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* (Environmental Guidelines or Guidelines). Section 4.3.4 of the Environmental Guidelines require that where the Project may affect known or potential heritage resources, further studies may be required. In order to identify the presence of heritage resources within the Study Area, understand the potential impacts of the Project on these resources, and prepare mitigation strategies to minimize these impacts, it was determined that a Cultural Heritage Assessment Report (CHAR) would be prepared.

To meet these objectives, the CHAR:

- summarizes the historical context of the area surrounding the Project
- identifies properties protected under the *Ontario Heritage Act* through consultation with the local heritage planners and regulatory bodies
- identifies and describes potential heritage resources situated on properties within the Project Location based on a windshield survey of the Study Area
- evaluates the cultural heritage value or interest of potential heritage resources at the Project Location according to *Ontario Regulation (*O. Reg.*) 9/06* to determine the heritage resources within the Study Area
- identifies areas of potential impacts according to the Ministry of Tourism, Culture and Sport's InfoSheet #5 in *Heritage Resources in the Land Use Planning Process, Cultural Heritage and Archaeology Policies of the Ontario Provincial Policy Statement, 2005* (Ministry of Tourism and Culture 2006)
- establishes measures to mitigate negative direct or indirect impacts to heritage resources associated with construction and operation of the Project.

1.3 ACTIVITY SUMMARY

The pipeline construction process includes various activities as described below:

1. *Site Preparation*: The first crew to enter the construction site is typically the survey and staking crew who delineate the boundaries of the right of way (RoW) and temporary work areas. Safety fence is installed at the edge of the construction RoW where public safety considerations are required, and aspects of the traffic management plan are implemented (i.e., signs, vehicle access). Pre-tiling work is completed to accommodate agricultural drainage.
2. *Clearing*: The clearing crew braces and cuts fences crossing the RoW. This crew also clears vegetation and crops on the RoW to permit construction of the pipeline.
3. *Grading and Stripping*: The grading crew prepares the RoW for access by construction equipment. At this stage, the topsoil (on agricultural lands) or the duff layer (on natural lands) is stripped by bulldozers and graders then segregated so it will not be mixed with the subsoil later removed from the trench.
4. *Trenching*: Once the RoW has been graded, a trenching machine or hydraulic hoe can begin excavating a trench. Laneways and driveways are left over the trench as long as feasible where requested by the landowner. In agricultural areas, tiles that are cut during the trench excavation are flagged and repaired as quickly as practical.
5. *Stringing:* Subsequent to trenching, the stringing crew lays pipe on wooden skids adjacent to the trench area. In some cases, such as in agricultural areas, trenching is undertaken after stringing therefore allowing the stringing trucks to travel down the centre of the proposed trench to limit compaction.
6. *Pipe Fabrication and Lowering*: The pipe is bent as required and the welding crew welds the pipe into continuous lengths. The pipe welds are x-rayed and coated then inspected before the pipeline is lowered into the trench. Crews also install pipes under obstacles such as roads or watercourses through a variety of different means.
7. *Backfilling*: The backfilling crew backfills the originally excavated subsoil and topsoil over the pipe in the trench. In stony areas, the pipe may be sand-padded to protect the coating. In shallow water table areas, the pipeline may be weighted to provide negative buoyancy. In agricultural areas, after the trench is backfilled, a tiling crew repairs disturbed or broken tiles. Landowners with tile drainage are given the opportunity to inspect tile repairs. A tile consultant is retained to oversee tile repairs and the design of a header tile system if required and if not completed during pre-tiling.
8. *Hydrostatic Test*: The pipeline is tested hydrostatically. Water is typically drawn from nearby water sources such as watercourses or lakes, if available. Municipal water may at times also be used for hydrostatic testing. Upon completion of the hydrostatic testing, the pipeline is purged of air and packed with natural gas.

9. *Clean-Up and Restoration*: The clean-up crew is responsible for the restoration of the RoW and other work areas. On agricultural land, this may require decompaction of the subsoil (i.e., chisel ploughing) and stone picking to maintain productivity. In natural areas the clean-up crew undertakes restoration including re-seeding of the RoW and restoring ditch banks, watercourse crossings and wooded areas, and removing erosion and sediment controls.

1.4 TERMINOLOGY

Built Heritage Resource (BHR) as used herein refers to a single building, structure, monument, installation or remains determined to be of cultural heritage value or interest following evaluation according to O.Reg.9/06 or protected under the *Ontario Heritage Act* or listed by local, provincial or federal jurisdictions. This may include residences, barns, bridges, and similar features (based on definition provided in the 2014 *Provincial Policy Statement* (PPS) (Government of Ontario 2014).

Cultural Heritage Landscape (CHL) as used herein refers to a defined geographical area modified by human activities and determined to be of cultural heritage value or interest following evaluation according to O.Reg.9/06 or protected under the *Ontario Heritage Act* or listed by local, provincial or federal jurisdictions. This may include grouping(s) of individual heritage features such as structures, spaces, archaeological sites and natural elements, which together form an important type of heritage form, distinctive from that of its constituent elements or parts (based on definition provided in the PPS).

Heritage attributes as used herein refers to the components of a heritage resource that define its CHVI. These may include, but are not limited to, principal features, characteristics, context, and appearance of a heritage resource (based on definition provided in the PPS).

Heritage resource as used herein refers to built or cultural resources where cultural heritage value or interest (CHVI) has been determined according to O. Reg. 9/06. Prior to evaluation, resources identified to be 40 years of age or older are considered to be *potential* heritage resources. There are two categories of heritage resources: Built Heritage Resources and Cultural Heritage Landscapes. For the purposes of this report, the term heritage resource is used exclusively unless assessing the CHVI of a potential heritage resource.

Protected Heritage Property as used herein refers to properties which are designated under, or subject to an easement made under, the *Ontario Heritage Act*, as well as properties identified by provincial authorities and proscribed public bodies as a provincial heritage property. In addition, protected heritage property includes those identified by federal or international authorities as such including, but not limited to, Parks Canada or UNESCO (based on definition provided in the PPS).

Protected Property as used herein refers to Protected Heritage Properties as well as any property previously identified by municipal staff or provincial agencies as containing, or having the potential to contain, cultural heritage value or interest. This includes properties identified on municipal registers, lists, or inventories of potential heritage resources.

Project Location as used herein refers to any land or air space in, on, over, or under which part of the Union Gas easement and temporary land use (TLU) for the Project is proposed plus a 50 metre area surrounding the Project components. This includes structures such as the pipeline itself, as well as any temporary work areas (constructible areas) which are required to be utilized during the construction of the Project (Figure 1).

Study Area as used herein refers all properties through which the Project Location is proposed to pass through. This area was used to define the limit of site investigations (Figure 1).



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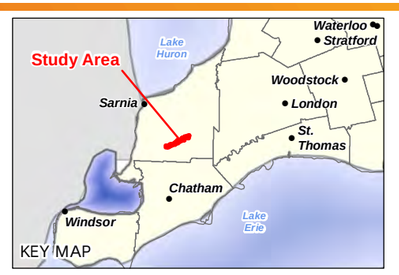
Revised: 2017-06-13 By: pworsell

June 2017
160960981

Stantec

Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2017.
3. Orthoimagery © Mapcon, 2017. Imagery taken in 2010.

Legend
- Study Area
- Preliminary Preferred Pipeline Route
- Enniskillen Station
- Dawn Hub
- Identified Heritage Resource
- Oil Springs Heritage Conservation District Boundary
- Road
- Existing Dawn-Parkway System
- Hydro Corridor
- Municipal Boundary - Lower Tier
- Property Boundary



Client/Project
Union Gas Limited
Dawn-Enniskillen Pipeline Project

Figure No.
1

Title
Study Area & Project Location

2.0 METHODOLOGY

2.1 REGULATORY REQUIREMENTS

The study methodology is broadly based on guidelines provided by MTCS within InfoSheet #5 in *Heritage Resources in the Land Use Planning Process, Cultural Heritage and Archaeology Policies of the Ontario Provincial Policy Statement, 2005* (MTC 2006). As discussed briefly in Section 1.0, the *OEB Environmental Guidelines* make provisions for the consideration of heritage in the pipeline development planning stage of the Project. The *OEB Environmental Guidelines* stipulate that pipeline proponents are responsible for demonstrating the appropriate level of due diligence regarding heritage resources. This involves both the identification of heritage resources and the assessment of impacts of the Project on these resources. According to the *OEB Environmental Guidelines*, due diligence should be exhibited by:

- *Recognizing cultural heritage resources that may be affected by pipeline development, identifying significant cultural heritage resources and understanding their cultural heritage value or interest;*
- *Assessing the effects or impacts that could result from proposed pipeline development; and*
- *Protecting cultural heritage resources by appropriate conservation, avoidance and mitigation.*

(OEB 2011:34)

In addition to requirements outlined in the *OEB Environmental Guidelines*, provisions made under the revised 2014 *Provincial Policy Statement* (PPS) were also considered in the preparation of the study. Section 2.6 of the PPS addresses cultural heritage in the land use planning process and as such was considered. The applicable provisions include:

2.6.1 - Significant built heritage resources and significant cultural heritage landscapes shall be conserved.

2.6.3 - Planning authorities shall not permit development and site alteration on adjacent lands to protected heritage property except where the proposed development and site alteration has been evaluated and it has been demonstrated that the heritage attributes of the protected heritage property will be conserved.

(PPS 2014: 29)

In response to requirements outlined within Infosheet #5, the *OEB Environmental Guidelines*, and the PPS, Stantec has identified built heritage resources and cultural heritage landscapes; evaluated the impacts of the proposed undertaking on the resources and landscapes; and

provided options to mitigate those impacts and to conserve protected properties, if applicable.
Background History

The CHAR was composed of a program of archival research focused on the Study Area. To familiarise the study team with the Study Area, local historical resources were consulted, archival documents were reviewed, and a summary of the historical background of the local area was prepared. Specifically, historical mapping was consulted to identify the presence of structures, settlements, and other potential heritage resources in advance of the field program.

2.2 MUNICIPAL AND AGENCY CONSULTATION

Listings of provincially and locally designated properties, districts and easements for each municipality were collected from Lambton County, the Ontario Heritage Trust (OHT), and the MTCS. Consultation with these interested agencies and municipalities within which the Project is proposed was undertaken to determine the presence of designated, listed, or registered heritage properties within the Study Area.

Recognition of protected properties varies greatly and is dependent on the level of cultural heritage value or interest identified or, in some cases, the level of investigation undertaken. For the purpose of this study, any property previously identified by municipal staff or provincial agencies as containing, or having the potential to contain, cultural heritage value or interest was determined to be a protected property. Specific requirements pertaining to protected properties are described within the OEB Guidelines which emphasize that early identification allows the proponent to consider the impact the Project may have on protected heritage properties.

2.3 FIELD PROGRAM

A vehicular windshield survey was conducted on January 21, 2015 from publicly accessible roadways, unless specified otherwise. During the survey, the Study Area was surveyed for potential heritage resources, including both potential built heritage resources and components of cultural heritage landscapes. Where identified, these were photographed and their locations recorded. Characteristics of each potential heritage resource were noted while in the field and their locations recorded.

In general, buildings and structures of more than 40 years of age were evaluated during the survey for their potential to satisfy O.Reg.9/06 criteria. The use of the 40 year threshold is generally accepted by both the federal and provincial authorities as a preliminary screening measure for cultural heritage interest or value. This practice does not imply that all buildings and structures more than 40 years of age are inherently of significant heritage value, nor does it exclude exceptional examples constructed within the past 40 years of being of significant cultural heritage value.

2.4 EVALUATION OF CULTURAL HERITAGE VALUE OR INTEREST

The criteria for determining CHVI is defined by *Ontario Regulation 9/06*. Each potential heritage resource was considered both as an individual structure and as cultural landscape. Where CHVI was identified, a structure or landscape was assigned a CHR number and the property was determined to contain a heritage resource. Evaluations for each property are contained within Appendix A.

2.4.1 Ontario Regulation 9/06

In order to identify CHVI at least one of the following criteria must be met:

1. The property has design value or physical value because it,
    i. is a rare, unique, representative or early example of a style, type, expression, material or construction method,
    ii. displays a high degree of craftsmanship or artistic merit, or
    iii. demonstrates a high degree of technical or scientific achievement.
2. The property has historical value or associative value because it,
    i. has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community,
    ii. yields, or has the potential to yield, information that contributes to an understanding of a community or culture, or
    iii. demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.
3. The property has contextual value because it,
    i. is important in defining, maintaining or supporting the character of an area,
    ii. is physically, functionally, visually or historically linked to its surroundings, or
    iii. is a landmark.

2.5 ASSESSMENT OF PROJECT IMPACTS

Where a heritage resource was identified within or across the Project Location, an assessment of potential impacts as a result of the Project was undertaken. The assessment of potential impacts was undertaken according to InfoSheet #5 in *Heritage Resources in the Land Use Planning Process, Cultural Heritage and Archaeology Policies of the Ontario Provincial Policy Statement, 2005* (MTC 2006). Seven potential negative impacts have been identified, including, but not limited to:

- Destruction of any, or part of any, *significant heritage attributes* or features;

- Alteration that is not sympathetic, or is incompatible, with the historic fabric and appearance;
- Shadows created that alter the appearance of a *heritage attribute* or change the viability of a natural feature or plantings, such as a garden;
- Isolation of a *heritage attribute* from its surrounding environment, context or a *significant* relationship;
- Direct or indirect obstruction of *significant* views or vistas within, from, or of built and natural features;
- A change in land use such as rezoning a battlefield from open space to residential use, allowing new *development* or *site alteration* to fill in the formerly open spaces; and
- Land disturbances such as a change in grade that alters soils, and drainage patterns that adversely affect an *archaeological resource*.

(MTC 2006)

In addition to direct impacts related to destruction, this CHAR also evaluated the potential for indirect impacts resulting from the vibrations of construction and the transportation of Project components and personnel. Although the effect of traffic and construction vibrations on historic period structures is not fully understood, negative effects have been demonstrated on buildings with a setback of less than 40 metres from the curbside (Crispino and D'Apuzzo 2001; Ellis 1987; Rainer 1982; Wiss 1981). The proximity of Project components to heritage resources was considered in this assessment, particularly those within 50 metres, in order to encompass a wide enough buffer zone to account for built resources less than 40 metres from curbside or potential Project activities.

2.6 MITIGATION STRATEGIES

Mitigation strategies were prepared based on guidelines provided by both the MTCS and the OEB. The MTCS suggest methods of minimizing or avoiding negative direct or indirect impacts including, but not limited to:

- alternative development approaches
- isolating development and site alteration from significant built and natural features and vistas
- design guidelines that harmonize mass, setback, setting, and materials
- limiting height and density
- allowing only compatible infill and additions
- reversible alterations
- buffer zones, site plan control, and other planning mechanisms.

(MTC 2006)

In the case of pipeline projects, as discussed in more detail in Section 5.4, buffer zones and site plan controls are often the most appropriate method of mitigation when used in combination with alternative development approaches.

3.0 HISTORICAL DEVELOPMENT

3.1 INTRODUCTION

The Study Area is historically linked to Lambton County, the Township of Enniskillen and the Township of Dawn, now the Township of Dawn-Euphemia. The Study Area is comprised of a 16.5 kilometre (km) southwest-northeast corridor of land beginning approximately at the intersection of Dawn Valley Road and Bentpath Line and ending near the intersection of Oakdale Road and Oil Springs Line (Figure 1). The following sections outline the historical development of the land from the time of settlement to the 20th century.

3.2 PHYSIOGRAPHY

The Study Area is situated within the St. Clair Clay Plains physiographic region. The region is surrounded by the Bothwell sand plains to the south, the Ekfrid clay plains to the east and the Huron fringe to the north. The St. Clair Clay Plains consists of an extensive clay plain with little relief covering 5,880 square kilometres (km) throughout the province (Chapman and Putnam 1984:147). Lambton County is situated on a beveled till plain with better drainage then the surrounding areas (Chapman and Putnam 1984:148). That is not to say that drainage was not an issue. The area was mainly swamp before settlers arrived. The issue of drainage was addressed beginning in 1869 with the first *Ontario Drainage Act.* The act provided municipal and provincial funding to landowners for the construction of drains in southwestern Ontario (Burr 2006: 22). Throughout the late 19th to the early 20th century new innovations established effective drainage throughout the county to facilitate improved agriculture. The Township of Moore spent approximately $20,000 in 1880 on drainage and up to $200,000 a year by 1980 (Elford 1982:57). Still seen on the landscape today are numerous pump houses and windmills used to move water, deep ditches, and dykes. Within the Township of Enniskillen there are eight municipal drains located within the Study Area (Township of Enniskillen 2011).

The physiographic and soil characteristics of the St. Clair Clay Plains have influenced subsequent land use throughout its history. There are two main soils found in Lambton County; Brookston clay found in the wetter areas and Caistor clay found in the higher areas (Chapman and Putnam 1984:150). As a result, the soil tends to better produce grains and crops. Soybeans and wheat are the county's most produced products. The total crop area is approximately 77% while the remaining 13% is devoted to pasture (Chapman and Putnam 1984:150).

The Study Area is located within the Black Creek Subwatershed of the St. Clair River Watershed. The Black Creek is 580 km in length and its watershed covers 324 square km in the Townships of Enniskillen, Dawn-Euphemia, St. Clair, Brooke-Alvinston, and the Village of Oil Springs. The majority of the subwatershed is an open municipal drain, at 59%, while 16% of the creek is natural. To control the drainage of Black Creek, 63% of it has been systemically tiled (SCRCA 2013).

3.3 SURVEYS & EARLY SETTLEMENT

3.3.1 Lambton County

The Study Area is located within Lambton County, originally a part of Kent County which was created in 1792. The first townships that would eventually form part of Lambton County were surveyed in the 1820s and 1830s. Lambton County was created in 1849 within the United Counties of Kent and Lambton. In 1853, Lambton County separated from Kent County and became independent. Sarnia was appointed the County Seat in 1853 (Elford 1982:2-3).

Lambton County saw numerous population shifts since its creation. In 1834, the population was 1,728 and by 1851 it was 10,815. The 1850s experienced a large influx of people due to the oil boom. With oil, the railway expanded to the area resulting in the construction of the Great Western and Grand Trunk railways. The population of the County more than doubled in a decade and by 1861 the population was 24,916 (Elford 1982:5).

The boom bust cycle of oil continued through the latter half of the 19th century in various locations throughout Lambton County. By 1891, the population had peaked at 58,810. There was a decline in population for the next 40 years due to emigration to the United States and western Canada. The 1891 population figure was not reached again until after World War II. The development of chemical industries in the county led to another population increase, this time to 123,000 in 1980. A further wave of emigration to western Canada in 1982 led to a population decline to 118,500 (Elford 1982:5).

3.3.2 Township of Enniskillen

The northern portion of the Study Area is located within the Township of Enniskillen. Enniskillen was one of the ten townships surveyed in Lambton County during the 1820s and 1830s. Geographically, Enniskillen was surrounded by Moore Township to the west, Plympton Township to the north, Brooke Township to the east and Dawn Township to the south. The Township of Enniskillen was surveyed in 1833 by Deputy Surveyor Eliakim Malcom and was completed according to the Double-front survey system (Elford 1982:44). The Double-front system divides the land into ten equal 100 acre lots surrounded by roads (Plate 1).



Plate 1: Double-front township system (Dean 1969: Plate 99)

Generally, settlement of the township was slow as the land in the township was not accessible due to the forested swampy land that occupied much of the area. Settlers were not willing to risk disease venturing into the swamp areas until the discovery of oil in the mid-19th century. The swamp area was a barrier to agriculture, settlement, and road development in the township (Ontario Visual Heritage Project 2006). Only a few settlers, mainly British soldiers who had

completed their service came to the township during the 1830s. It was not until 1855, when the township had enough people to incorporate and have its own council (Elford 1982:44-45).

Early settlement in the Township of Enniskillen was centered in the community of Oil Springs, located northwest of the Study Area. Originally called Black Creek, the hamlet's name changed to Oil Springs with the discovery of oil in 1858. By 1896, Oil Springs was incorporated as a town and contained eight general stores, five blacksmith shops, two shoe shops, 25 carpenters, five hotels and a bank. The town growth was characterized by the boom and bust cycles of the oil industry with populations fluctuating dramatically. The population stabilized between 500 and 1,000 throughout the 19th century depending on the flow and price of oil (Elford 1982:111).

3.3.3 Township of Dawn

The south portion of the Study Area is located within the Township of Dawn. The Township of Dawn was surrounded by Sombra Township to the west, the Township of Enniskillen to the north, Euphemia Township to the east and Kent County to the south. The Township of Dawn was surveyed in 1821 by King's Deputy Surveyor Shubal Park and was completed according to the Double-front survey system with roads between each concession similar to Enniskillen (Elford 1982:41).

Settlement of Dawn Township was generally slow. Of all the townships in Lambton County, Dawn was the most sparsely settled and underdeveloped in 1880 due in part to the heavy dense soil and wooded lots without natural drainage. The township only had a population of 429 by 1850. With the clearing of additional land, the population grew to 1,758 in 1880 but the township remained the least settled and populated township of Lambton County, accounting for only 5% of the total county population (OAC 1880:267).

Early settlement in Dawn Township occurred primarily in the southeastern portions of the township. The presence of the Sydenham River in this corner of the township attracted settlement because of its use as a transportation route and source of milling power. The community of Florence was established along the Sydenham River and located on the southeastern border of Dawn Township abutting the Township of Euphemia (Figure 2). Florence was a small community that serviced the needs of the residents in both Dawn and Euphemia Township. By 1881, Florence had a general store, school, mill and a church (Belden 1880:5).

Settlement expanded in the last decade of the 19th century in Dawn resulting in the establishment of a numerous post offices in the early 20th century. The construction of a railway station at Edys Mills in 1885 spurred settlement as did widespread county led drainage initiatives. A post office was established there in 1892 followed by post offices in Beaver Meadow and Cuthbert in 1903 (Elford 1982:42).

3.4 19TH CENTURY LAND USE

3.4.1 Township of Enniskillen

Land use throughout the Study Area and surrounding region was and continues to be primarily agricultural in nature. In 1880, all the land in the Township of Enniskillen was considered to be first class for agriculture purposes with a total of 15,000 acres of cleared land. The main crops harvested in the township were wheat and oats (OAC 1880:267).

Located within the Study Area just northwest of the Project is Oil Springs. The discovery of oil at Oil Springs in 1858 saw an influx of new land owners to the township. Although land was sold at a premium, land owners who only sought oil did not develop the land as required choosing not to build ditches or clear the land. This resulted in the slow development of the township as a whole because roads were slow to be constructed so access was more challenging. As a result, the road network was very poor in the township and incomplete concession and side roads were common throughout the area. When new provincial legislation was introduced in the 1860s and 1870s that made it mandatory for landowners to develop their land, the township gradually saw the construction of proper concession and side roads.

The first major road built in the township was the Sarnia Plank Road, completed in 1865. This road angled northwest and provided the residents of Oil Springs a direct route to the large Town of Sarnia. It is still notable in the landscape today because it deviates from the typical grid pattern established by the original surveys where roads were laid out in a north south direction; the Sarnia Plank Road travels in a northwest to southeast direction.

Within the Study Area, roads were opened in the late 19th century to facilitate settlement. The 1880 Historical Atlas Map of the Township of Enniskillen shows only two property owners within the Study Area, situated within close proximity to the Village of Oil Springs (Figure 2). The map also displays the grid layout of the concession and side roads and what roads were opened by 1880. The currents roads within the Study Area that were opened at this time include portions of Aberfeldy Line, Gypsie Flats Road, Black Ash Road, Wanstead Road and Oil Springs Line.

In 1885, the Lake Erie, Essex and Detroit Railway Company extended its network of railways with the construction of a rail line through Oil Springs. Building on the railway established in the late 1850s, this line facilitated the movement of goods including oil and crops from the area to larger markets. Just north of the Study Area, the Erie and Niagara Railway Company constructed a railway that traveled west-east, connecting the Village of Courtright to St. Thomas, passing north of Oil Springs (Elford 1982:45).

3.4.2 Township of Dawn

The Township of Dawn was primarily a farming area with no incorporated municipalities and only a few small communities in the 19th century. In 1880, two-thirds of land in Dawn Township was considered to be first class for agriculture purposes (OAC 1880:257). This land was located in the

southeastern portions of the township. The chief crops and products produced in Dawn Township were peas, wool, and wheat (Elford 1982:42). Later in the 19th century, farms were established in the northern and western portions of Dawn Township as population began to grow.

The Dawn Township road network of in the 19th century was not well developed. The heavy clay and dense bush made road construction difficult and expensive. Evidence of this is depicted in Figure 2 where none of the concession roads were open for their entire length. Only portions of Sideroads 20, 25 and 30 were clear and open. The Study Area is located on Bentpath Line, formerly Sideroad 25. Based on historic mapping, the Study Area was located on the portion of the Sideroad that was not cleared as of 1880. It was not until the early 20th century that the township committed to improving roads (Elford 1982:43).

The Lake Erie, Essex and Detroit Railway Company built a railway in 1885 that reached Edys Mills, the small hamlet northeast of the Study Area. This railway serviced Edys Mills and the surrounding region as it provided a transportation and trade route to the City of Sarnia via Oil Springs and Petrolia. The railway proved to be important in the lumbering years of the area and continued to play an important economic role by making Edys Mills a shipping point for farm produce. Use of the railway was discontinued in 1966 (Elford 1982:43).

3.5 20TH CENTURY LAND USE

3.5.1 Township of Enniskillen

Land use in the township throughout the 20th century shifted from oil production to primarily agriculture. With improvements in drainage more land was converted to cash crop and expanded pasture areas were evident. Soybeans were the main crop grown followed by winter wheat, barley, and corn. By the latter half of the 20th century poultry, hog, and sheep raising increased (Elford 1982:46).

The road network of Enniskillen Township improved in the 20th century as roads began to be paved. Within the Study Area specifically, the former 4th Line became King's Highway 21 in 1927. In 1937, the former 10th Line, north of Oil Springs outside of the Study Area, became Highway 80 which connected Oil Springs to the west and east of the county (Bevers 2013:online). These two highways provided residents and travelers easy access to the township while also making Oil Springs a more central and convenient place to live. In general, throughout the 20th century, the small hamlets of the township began to shrink as people began to move to the larger settlement areas such as Oil Springs and Petrolia. When the hydro lines were added in the mid-20th along the roadways within the Study Area, they helped to frame the grid landscape, as corridor lines bisect at road intersections.

The population of the Enniskillen Township has been in continual flux throughout the 20th century. In 1951, the population was at 2,511, nearly half of what it was in 1901. Gradual growth of the

township, specifically the development of small neighbourhoods around Oil Springs and Petrolia, brought the population up to 3,340 in 1981 (Elford 1982:48).

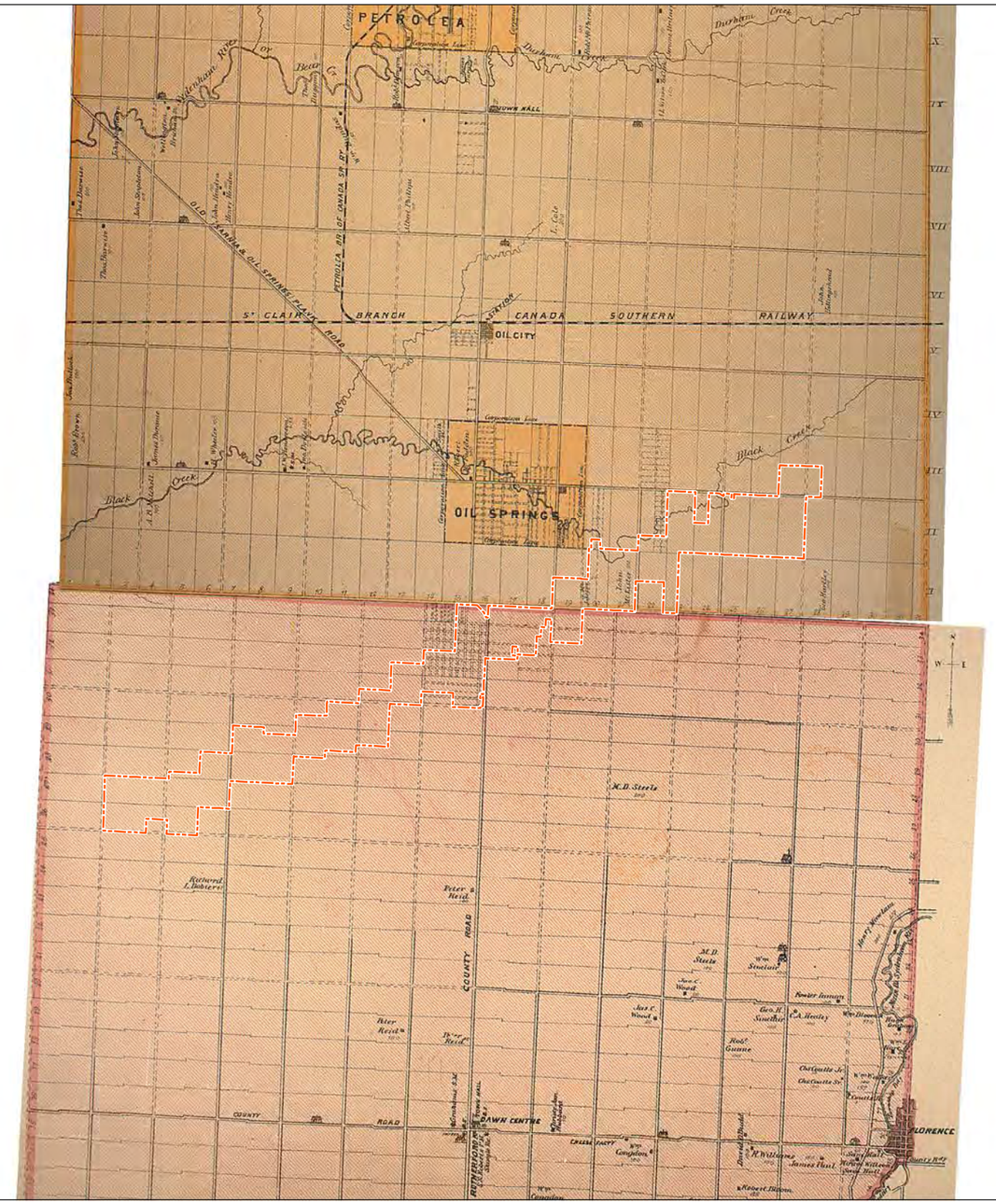
3.5.2 Township of Dawn

Land use throughout the 20th century in the Township of Dawn remained largely agricultural in nature. By 1924, nearly all of the land in Dawn Township was farmed with a total 500 farms. The main crops produced were soybeans, corn and hay (Elford 1982:42). Since drainage was still a problem in the township, more land was devoted to pasture resulting in an increase in beef production.

The road network in Dawn Township improved in the 20th century as roads began to be surfaced with stone by 1927. Full opening of roads helped spur the settlement of the township in the north and west areas and, as a result, population of the township grew. Similarly, to the Township of Enniskillen the addition of hydro lines in the mid-20th century along the roadways in the Study Area, also helped to frame the gridded landscape, as corridor lines bisect at road intersections.

The oil boom from the 19th century continued to influence land use in Dawn Township in the form of natural gas and, to a lesser extent, oil as well. From the 1930s to the present day on Lot 1 of Concession 25, Union Gas has been storing and transferring gas from its station in Dawn Township. As a result of the continual presence of natural gas found within the township, Dawn Township has many pipelines that traverse its landscape which can be seen today.

The population of Dawn Township has declined slightly towards the end of the 20th century. In 1980, the population totaled 1,796 – the lowest it had been since 1870 (Elford 1982:42). In 1991, the population was down to nearly 1,600 inhabitants.



Legend

Study Area

Notes

1. Not to scale.
2. Source for map: Dawn Township and Enniskillen Township maps from Illustrated Historical Atlas of the County of Lambton. Belden, H. and Co., 1880.

Client/Project

Union Gas Limited
Dawn-Enniskillen Pipeline Project

Figure No.

2

Title

Project Location, 1880

May 2017
160960981

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Revised: 2017-05-11 By: pworsell

4.0 RESULTS

4.1 AGENCY AND MUNICIPAL CONSULTATION

In order to identify protected properties, the MTCS, OHT, and the County of Lambton were consulted. As a result of the consultation, one designated property and one Heritage Conservation District were identified within the vicinity of the Study Area (see Table 1).

Deborah Hossack, Registrar, Register Developer, Heritage Advisor with the MTCS reported that there were no properties on the List of Provincial Heritage Properties within the vicinity of the Study Area. Michael Sawchuck, Manager, Acquisitions and Conservation Services with the OHT, reported that there is no heritage easement site in the vicinity of the Study Area. William Nywening, Planner in the Planning and Development Services Department at the County of Lambton, reported that there is one property designated under Part IV of the *Ontario Heritage Act* and one Heritage Conservation District designated under Part V of the *Ontario Heritage Act* in the vicinity of the Study Area. Upon further inspection, neither the designated property or district was determined to be situated within the Study Area (Table 1).

Table 1: Identified and Protected Heritage Resources

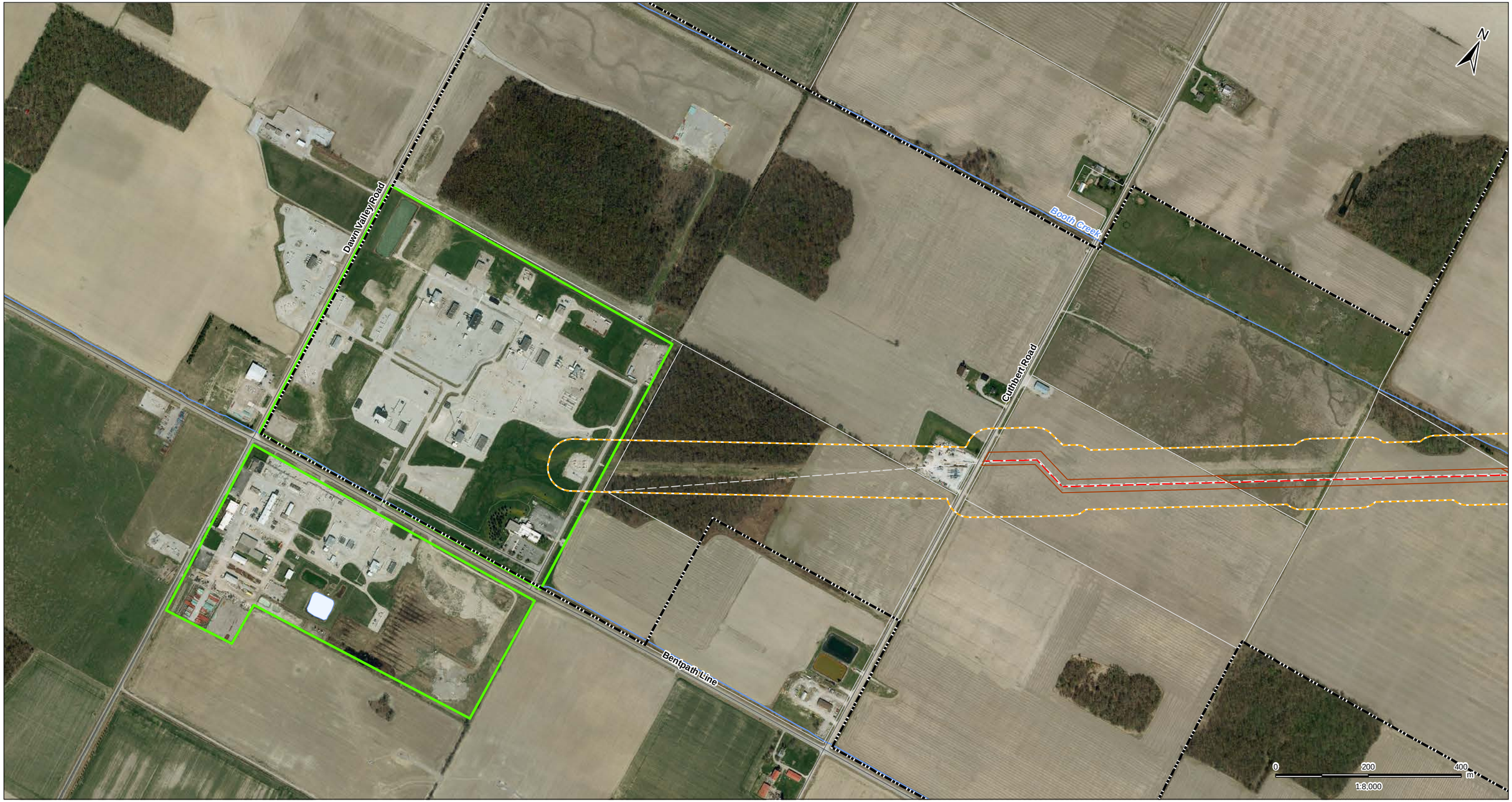
Location/Municipal Address	Level of Recognition	Relationship to the Study Area
2417 Kelly Road	Designated Part IV	Outside Study Area
Multiple Addresses – Oil Heritage Conservation District	Designated Part V	Outside Study Area

4.2 FIELD PROGRAM

4.2.1 Potential Heritage Resources

As described in Section 2.4, a windshield survey of the Study Area was undertaken to identify potential heritage resources situated within the Study Area and confirm the presence of previously identified protected properties. Where identified, the site was photographically documented from publicly accessible roadways. During the course of the survey, a total of 15 individual properties were identified as containing potential heritage resources. Of these, nine were constructed in the 19th century. The majority of these date to the late 19th century while only two are estimated to have been constructed in the mid-late 19th century. The 20th century construction was an even split between early and mid-20th century. Of the 15 properties, 14 contained residences and six of those also contained barns and outbuildings forming farmsteads.

As part of the survey, roadways were also examined to determine the potential of cultural heritage landscape value. As the Study Area runs on an angle from the Union Gas Cuthbert Station northeast to the Union Gas Enniskillen Station, it only contains small portions of roadways within the township. Some of these roadways are rural gravel roads with adjacent fields, woodlots and have drainage ditches. The largest sections of roadway that the Study Area crosses is along Aberfeldy Line and Oil Springs Line. On Aberfeldy Line between Gypsie Flats Road and Black Ash Road, the rural gravel road has a drainage ditch on its south side, with adjacent fields and woodlots. Within this section, only one mid-20th century structure faces the roadway. Given the length that was assessed, there is no potential for Aberfeldy Line within the Study Area to be a cultural heritage landscape. On Oil Springs Line between Wanstead Road and Oakdale Road, the asphalt roadway crosses a modern bridge over Black Creek, with a deep drainage ditch on its south side. Two potential heritage resources were identified facing the roadway. As the Oil Springs Line, within the Study Area has had modern alterations there is no potential as a cultural heritage landscape.



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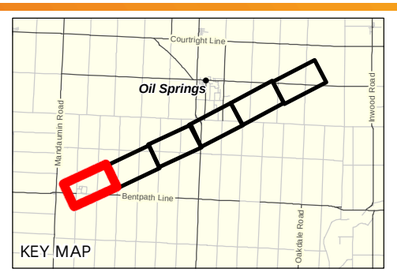
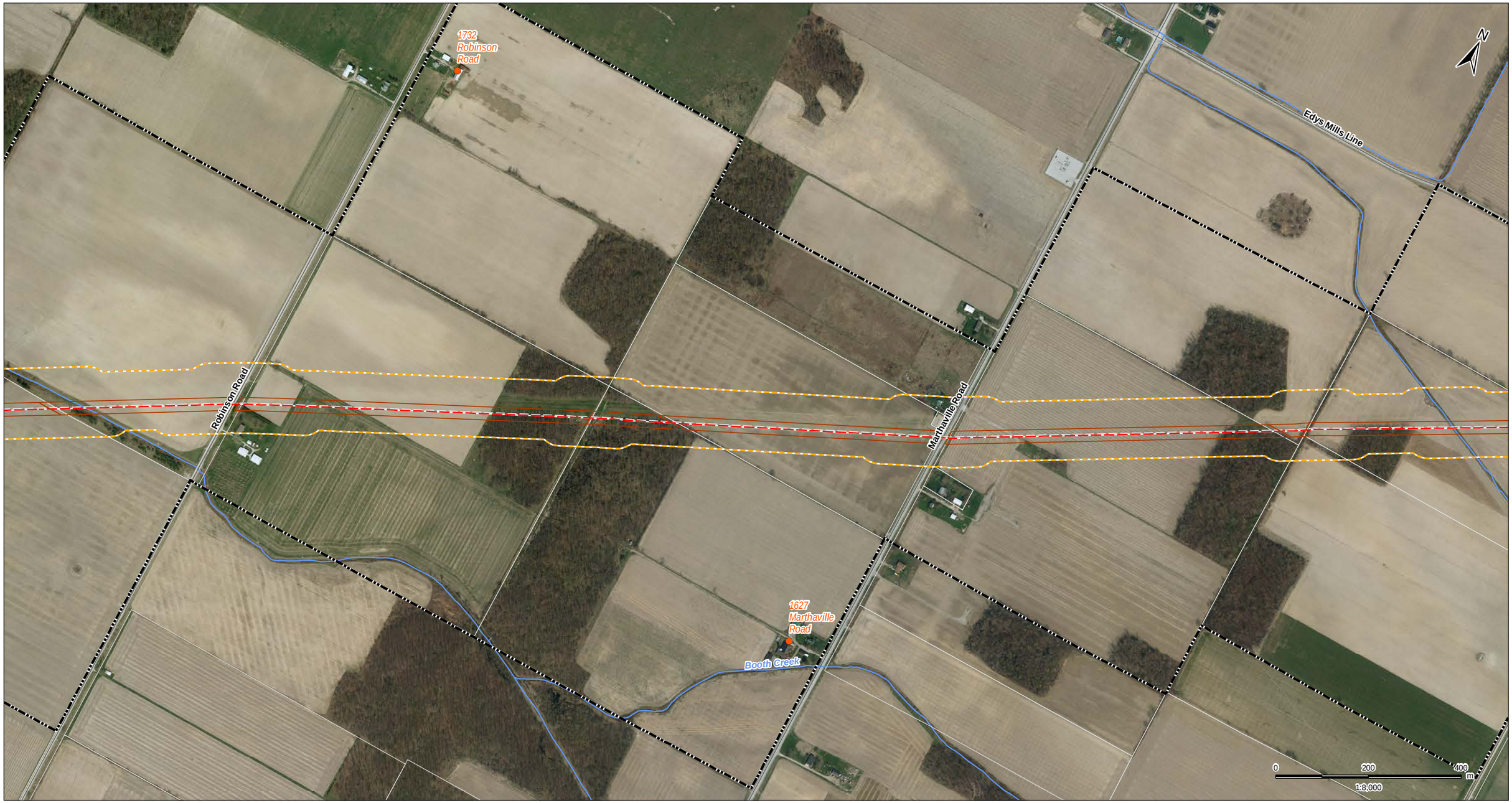
Legend
- Study Area
- Project Location
- Preferred Pipeline Route
- Pipeline Easement
- Dawn Hub
- Existing Dawn-Parkway System
- Road
- Watercourse
- Waterbody
- Municipal Boundary - Lower Tier



Client/Project
Union Gas Limited
Dawn-Enniskillen Pipeline Project

Figure No.
3.1

Title
Overview of Potential Heritage Resources



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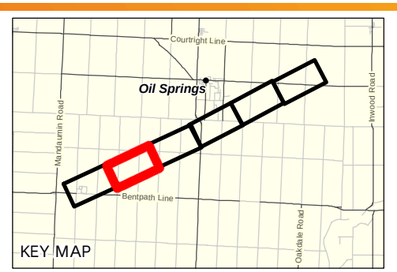
Legend
- Study Area
- Project Location
- Potential Heritage Resource
- Preferred Pipeline Route
- Pipeline Easement
- Existing Dawn-Parkway System
- Road
- Watercourse
- Municipal Boundary - Lower Tier



Client/Project
Union Gas Limited
Dawn-Enniskillen Pipeline Project

Figure No.
3.2

Title
Overview of Potential Heritage Resources



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Legend
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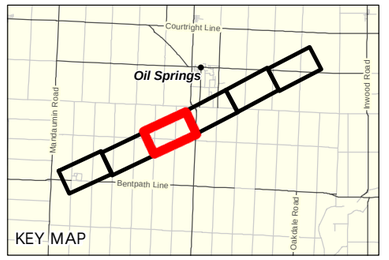
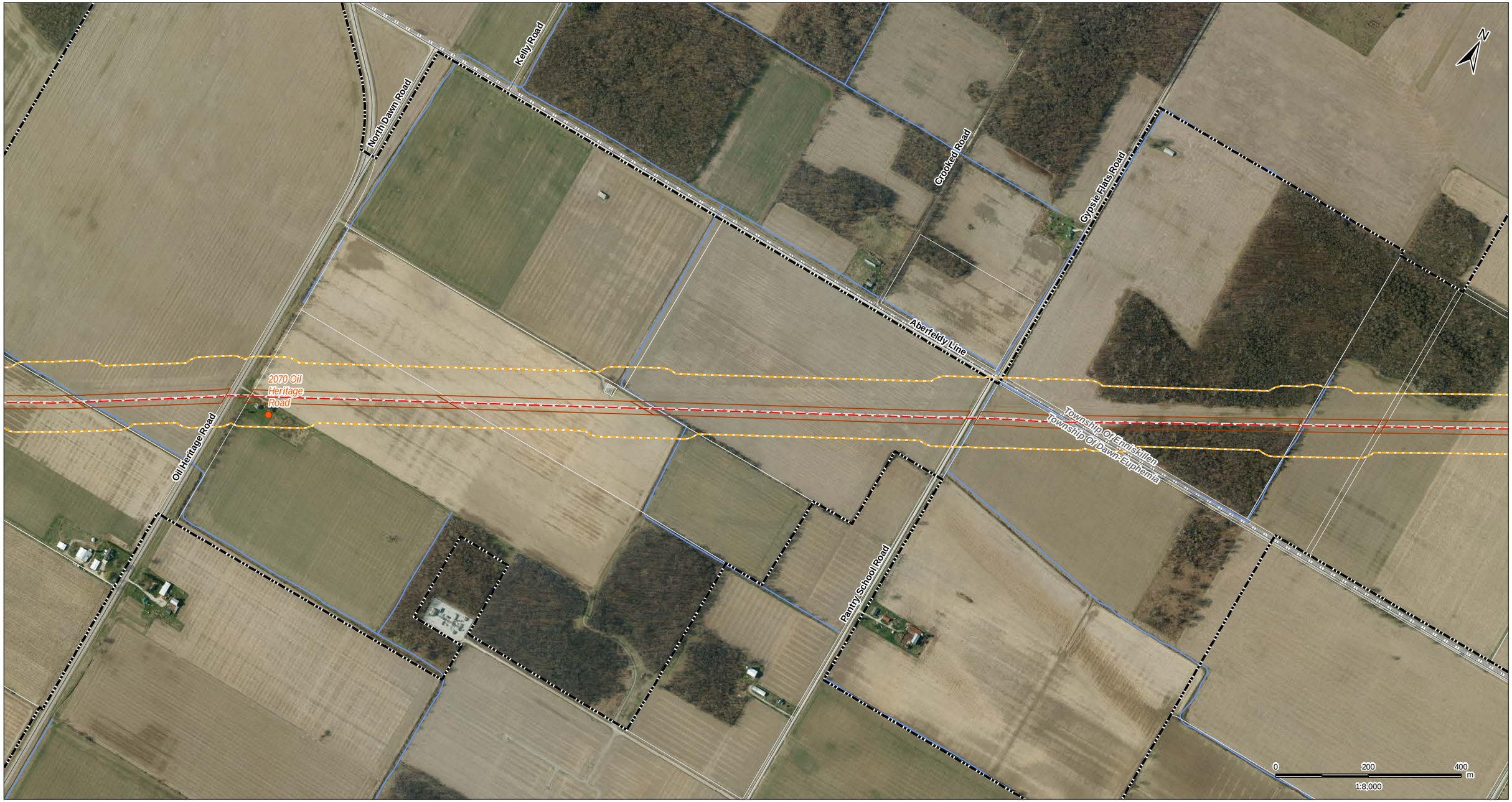
- Municipal Boundary - Lower Tier



Client/Project
Union Gas Limited
Dawn-Enniskillen Pipeline Project

Figure No.
3.3

Title
Overview of Potential Heritage Resources



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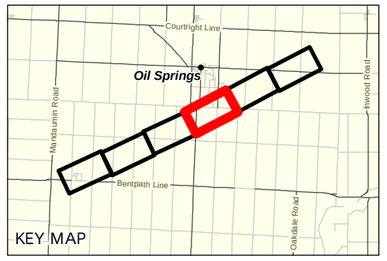

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Dawn-Enniskillen Pipeline Project

Figure No.
3.4

Title
Overview of Potential Heritage Resources



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Legend
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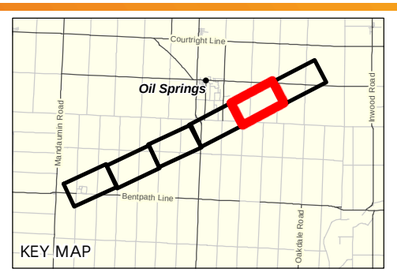
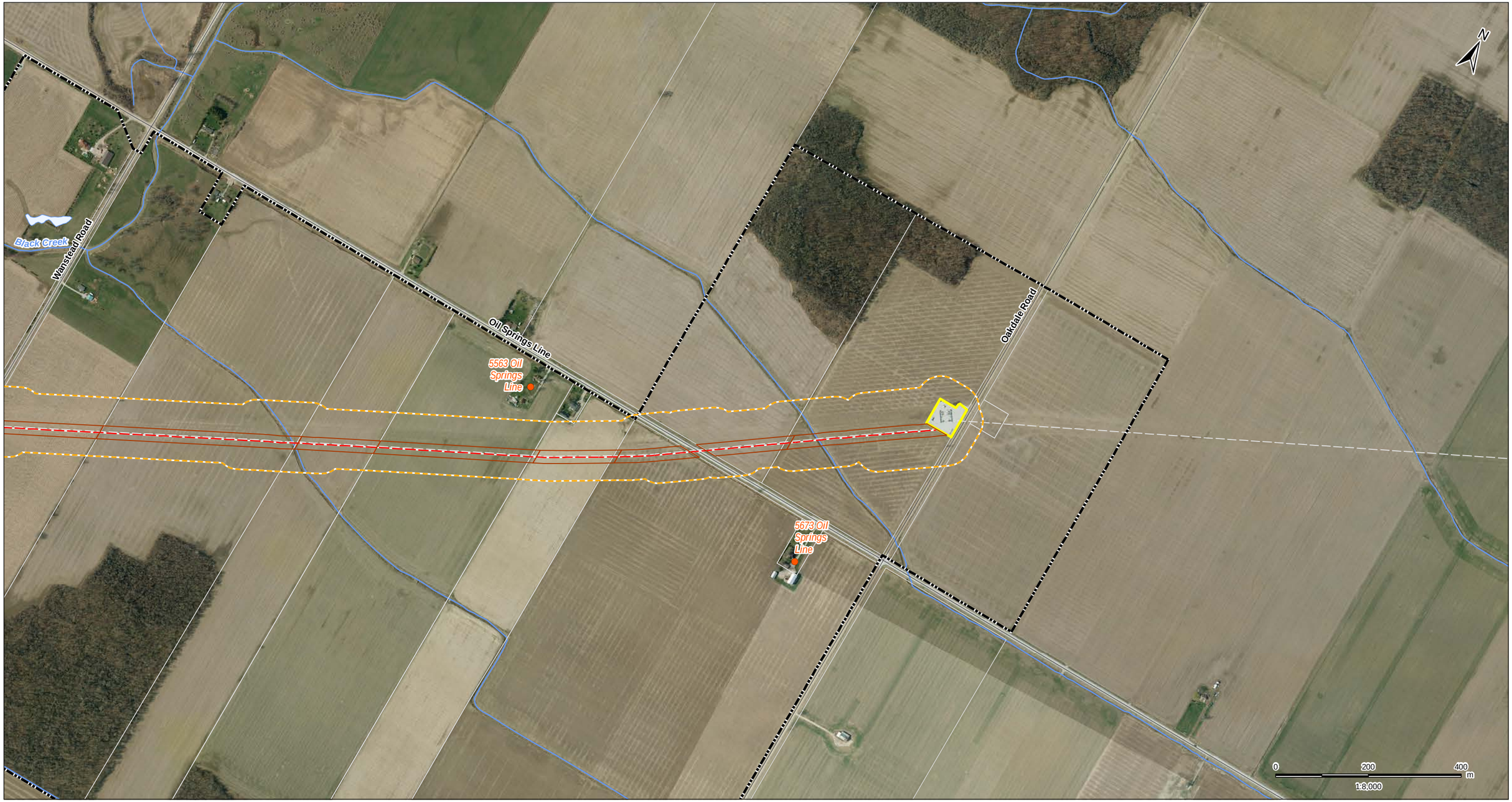
- Road
- Watercourse
- Waterbody
- Municipal Boundary - Lower Tier



Client/Project
Union Gas Limited
Dawn-Enniskillen Pipeline Project

Figure No.
3.5

Title
Overview of Potential Heritage Resources



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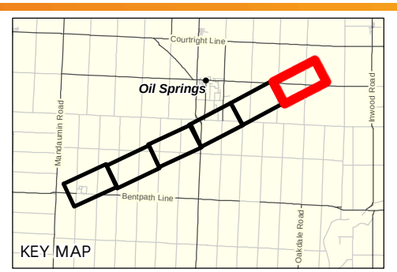
- Pipeline Easement
- Enniskillen Station
- Existing Dawn-Parkway System
- Road
- Watercourse
- Waterbody
- Municipal Boundary - Lower Tier



Client/Project
Union Gas Limited
Dawn-Enniskillen Pipeline Project

Figure No.
3.6

Title
Overview of Potential Heritage Resources

4.2.2 OEB *Guideline* Indicators

Based on the field program, two indicators of cultural heritage value or interest according to Section 4.3.4 of the OEB *Guidelines* were identified (see Table 2). Where potential heritage resources are identified, evaluation of the cultural heritage value or interest according to O. Reg. 9/06 is required to confirm the presence of heritage resources. Where heritage resources are identified, the impacts of the Project on these resources must be assessed.

Table 2: Indicators of CHVI According to Section 4.3.4 of the OEB Guidelines

Indicators	Identified within the Study Area
Property designated under Part IV of the *Ontario Heritage Act*	Not Identified
A bridge on Ontario Heritage Bridge List	Not Identified
Property within a Heritage Conservation District designated under Part V of the *Ontario Heritage Act*	Not Identified
Property with an Ontario Heritage Trust or municipal heritage conservation easement	Not Identified
Property with a provincial or federal plaque	Not Identified
A National Historic Site	Not Identified
Property containing a registered archaeological site	Not Applicable*
Property with archaeological potential	Not Applicable*
Property listed on a municipal heritage register or the provincial register	Not Identified
Property adjacent to an identified heritage property	Not Identified
Property that has buildings or structures over 40 years old	Identified
Property within a Canadian Heritage River watershed	Not Identified
Property associated with a renowned architect or builder	Not Identified
Property containing or adjacent to a burial site or cemetery	Not Identified
Parkland	Not Identified
Land with distinctive landforms or geographic features	Not Identified
Historic transportation corridors (such as navigational canals, rail lines or trails, traditional Métis portage routes etc.)	Not Identified
Other human-made alterations to natural landscapes (such as earthworks, plantings, etc.)	Identified

*An Archaeological Assessment has been undertaken under separate cover. Archeological potential is considered beyond the scope of the current study.

4.3 EVALUATION OF CULTURAL HERITAGE VALUE OR INTEREST

Where a potential heritage resource was identified within the Study Area, an evaluation of the cultural heritage value or interest of the property was undertaken. Detailed evaluations are contained within Appendix A. As described in Section 2.5, each potential heritage resource was evaluated according to O. Reg. 9/06, the criteria for determining cultural heritage value or interest. There were 15 potential heritage resources identified, nine of which were determined to represent heritage resources. Table 3 summarizes the findings.

Table 3: Summary of Determination of Cultural Heritage Value or Interest

Municipal Address	CHVI	CHR Number
1732 Robinson Road	Yes	CHR-1
1713 Marthaville Road	No	N/A
1627 Marthaville Road	Yes	CHR-2
1686 Marthaville Road	No	N/A
1688 Marthaville Road	No	N/A
1736 Tramway Road	Yes	CHR-3
1777 Tramway Road	Yes	CHR-4
1833 Tramway Road	No	N/A
4164 Edys Mills Line	Yes	CHR-5
2070 Oil Heritage Road	Yes	CHR-6
2249 Crooked Line	No	N/A
Black Ash Road (Concession 1, Lot 21)	Yes	CHR-7
2382 Wanstead Road	No	N/A
5563 Oil Springs Line	Yes	CHR-8
5673 Oil Springs Line	Yes	CHR-9
Modified agricultural landscape within the Study Area	Yes	CHR-10

Generally, the characteristics of heritage resources are similar to those previously described for potential heritage resources (Sections 4.2.1 and 4.2.2). Approximately 22% of heritage resources were constructed prior to 1920 compared to 54% post-1920 while 22% have elements of both 19th and 20th century construction. In total there were ten farmsteads, ten residences and one standalone barn evaluated with ten farmsteads, three residences and one barn determined to be heritage resources. Most heritage resources contained timber frame barns, accounting for 64% of the resources identified.

5.0 EVALUATION OF ANTICIPATED IMPACTS AND MITIGATION OPTIONS

5.1 DESCRIPTION OF THE UNDERTAKING

In response to the growing demand for natural gas, Union Gas is proposing to install a natural gas pipeline between the existing Union Gas Dawn Compressor Station located at the intersection of Bentpath Line and Dawn Valley Road in the Township of Dawn-Euphemia and the existing Enniskillen Transmission Station located at Oakdale Road in the Township of Enniskillen. While the alignment for the new pipeline is expected to follow the existing easement of the Dawn-Parkway System, the final construction easement, or temporary land use, will be determined by Union Gas at a later date. As described in Section 1.3, the pipeline construction process involves the following activities:

- surveying and staking
- clearing
- grading and stripping
- stringing
- trenching
- pipe fabrication and lowering
- backfilling
- hydrostatic test
- clean-up and restoration

It is anticipated that the proposed undertaking will be contained entirely within the easement and TLU as depicted in Figure 1. The Project will also be situated entirely underground and will run parallel to a preexisting pipeline. Therefore, much of the clearing, grading and stripping will occur in areas previously disturbed by the original pipeline.

5.2 RELATIONSHIP TO THE PROJECT LOCATION

Given the proposed undertaking, the evaluation of potential impacts was undertaken where a component of the heritage resource was positioned within the Project Location. The position within the Project Location was used as a measure of potential impacts which would result from the proposed undertaking as described in Section 5.1. This determination was based on the presence of a pre-existing pipeline and based on the understanding that conditions would be returned to those identified at the time of the site visit. The positions of each heritage resources are considered in relation to the Project Location in Table 4.

Table 4: Relationship of Heritage Resources to the Project Location

Municipal Address	CHR Number	Relationship to the Project Location
1732 Robinson Road	CHR-1	Outside the Project Location
1627 Marthaville Road	CHR-2	Outside the Project Location
1736 Tramway Road	CHR-3	Outside the Project Location
1777 Tramway Road	CHR-4	Outside the Project Location
4164 Edys Mills Line	CHR-5	Outside the Project Location
2070 Oil Heritage Road	CHR-6	Within the Project Location
Black Ash Road (Concession 1, Lot 21)	CHR-7	Outside the Project Location
5563 Oil Springs Line	CHR-8	Outside the Project Location
5673 Oil Springs Line	CHR-9	Outside the Project Location
Modified agricultural landscape within the Study Area	CHR-10	Sections outside and within Project Location

5.3 ANTICIPATED IMPACTS

Where a heritage resource was determined to be situated within the Project Location, the impacts of the proposed undertaking were evaluated. The impacts, both direct and indirect were evaluated according to InfoSheet #5 in *Heritage Resources in the Land Use Planning Process, Cultural Heritage and Archaeology Policies of the Ontario Provincial Policy Statement, 2005* (included in the MTCS Ontario Heritage Toolkit). See Section 2.6 for further discussion of impacts assessed and discussed in Table 5.

Table 5: Evaluation of Potential Impacts

Address	Direct Impact		Indirect Impact					Discussion
	Destruction	Alteration	Shadows	Isolation	Obstruction	Change in Land Use	Land Disturbances	
2070 Oil Heritage Road (CHR-6)	NA	NA	NA	NA	NA	NA	I	The two and one half brick residence was determined to be situated within the 50 metre buffer but outside of the easement and TLU. The position of the barn outside of the area of direct impact minimizes the potential of destruction as a result of Project construction. However, its position within the buffer suggests the potential for indirect impacts resulting from land disturbance during construction activities. Therefore, mitigation measures must be prepared to mitigate potential indirect impacts.

Table 5: Evaluation of Potential Impacts

Address	Direct Impact		Indirect Impact					Discussion
	Destruction	Alteration	Shadows	Isolation	Obstruction	Change in Land Use	Land Disturbances	
Modified agricultural landscape within the Study Area	NA	NA	NA	NA	NA	NA	NA	The proposed pipeline is to follow the existing easement of the Dawn-Parkway System, and no further permanent alterations are anticipated for the installation of the pipeline that would alter or otherwise impact heritage attributes of the modified agricultural landscape. Therefore, no mitigation measures are required.

*I = Potential Impact Anticipated, NA = Not Anticipated

5.4 MITIGATION OPTIONS

Where potential impacts are identified, either direct or indirect, measures to mitigate them have been prepared. The impetus for avoidance of impacts comes from two sources, the *OEB Environmental Guidelines* and the PPS (see Section 2.1). The former requires that cultural heritage resources be protected by "appropriate conservation, avoidance and mitigation", while the latter requires conservation of "significant" heritage resources as well as "heritage attributes of the protected heritage property" (see Section 2.1 for full excerpts of requirements). When combined, precautions are required to conserve heritage resources through avoidance and mitigation where the potential for a Project to impact heritage resources has been identified. Therefore, the below mitigation options have been developed to provide for the conservation of heritage attributes of all heritage resources. These are based on mitigation or avoidance measures developed by the MTCS and contained within InfoSheet #5 in *Heritage Resources in the Land Use Planning Process, Cultural Heritage and Archaeology Policies of the Ontario Provincial Policy Statement, 2005* (included in the MTCS Ontario Heritage Toolkit). See Section 2.7 for further discussion of mitigation methods assessed.

The proposed undertaking involves installation of a pipeline belowground and adjacent to a previously constructed pipeline. As the land will be returned to its current state and above ground features installed only where existing currently features exist; all anticipated impacts are related to the construction phase of the Project. Generally, retention *in situ* is the preferred option when addressing any structure where CHVI has been identified, even if limited. Where potential impacts have been identified, components of heritage resources are positioned within the 50 metre buffer but outside the easement and TLU where project activities are anticipated. As a result, CHR-6 is not at risk of removal and will be retained intact. Therefore, a preventive approach to mitigation measures will best serve to reduce the risk of indirect impacts. Table 6 contains a summary of the evolution of mitigation options.

Table 6: Evaluation of Mitigation and Avoidance Options

Methods	Discussion
Alternative Development	The current approach involves minimal land disturbance and generally follows the path of a pre-existing pipeline.
Isolation of Development	Isolation of Project construction activities from CHR-6 will prevent unanticipated direct and indirect impacts.
Harmonization of Design Guidelines	The Project will not introduce any above ground features outside of existing features and will return the landscape to current conditions. These existing features are not located within, or adjacent to, cultural heritage resources. Therefore, no additional design guidelines are required.
Limitation of Construction	The Project will not introduce any above ground features outside of existing features and will return the landscape to current conditions. These existing features are not located within, or adjacent to, cultural heritage resources. Therefore, no limitations on height or density of construction are required.
Compatible Additions	The Project will not introduce any above ground features outside of existing features and will return the landscape to current conditions. These existing features are not located within, or adjacent to, cultural heritage resources. Therefore, compatible additions are not required.
Reversible Alterations	The Project will not introduce any above ground features outside of existing features and will return the landscape to current conditions. These existing features are not located within, or adjacent to, cultural heritage resources. Therefore, alterations to the landscape do not need to be considered.
Planning Mechanisms	Various planning mechanisms have been introduced to the Project in order to evaluate impacts of the Project on multiple aspects of the surrounding environment. As these mechanisms pertain to heritage resources, the use of a 50 metre buffer surrounding the easement and TLU is the most significant planning mechanism. The use of buffer zones on construction maps to indicate where a heritage resource is positioned within the Project Location will indicate to construction crews the need for complete avoidance of construction activities in the vicinity of the CHR. The depiction of buffer zones on construction mapping should be used only where a heritage resource has been identified within the 50 metre zone. Where this occurs physical markers will be used during Project activities to demarcate the appropriate buffer zone.



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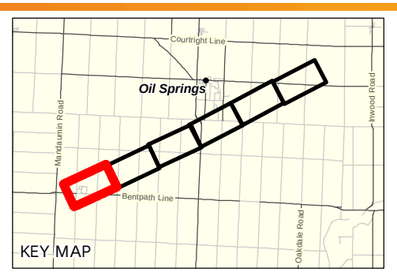
Legend
- Study Area
- Project Location
- CHR-10
- Preferred Pipeline Route
- Pipeline Easement
- Dawn Hub
- Existing Dawn-Parkway System
- Road
- Watercourse
- Waterbody
- Municipal Boundary - Lower Tier



Client/Project
Union Gas Limited
Dawn-Enniskillen Pipeline Project

Figure No.
4.1

Title
Identified Heritage Properties



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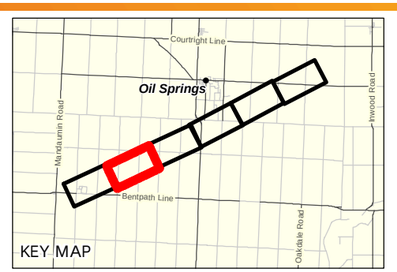
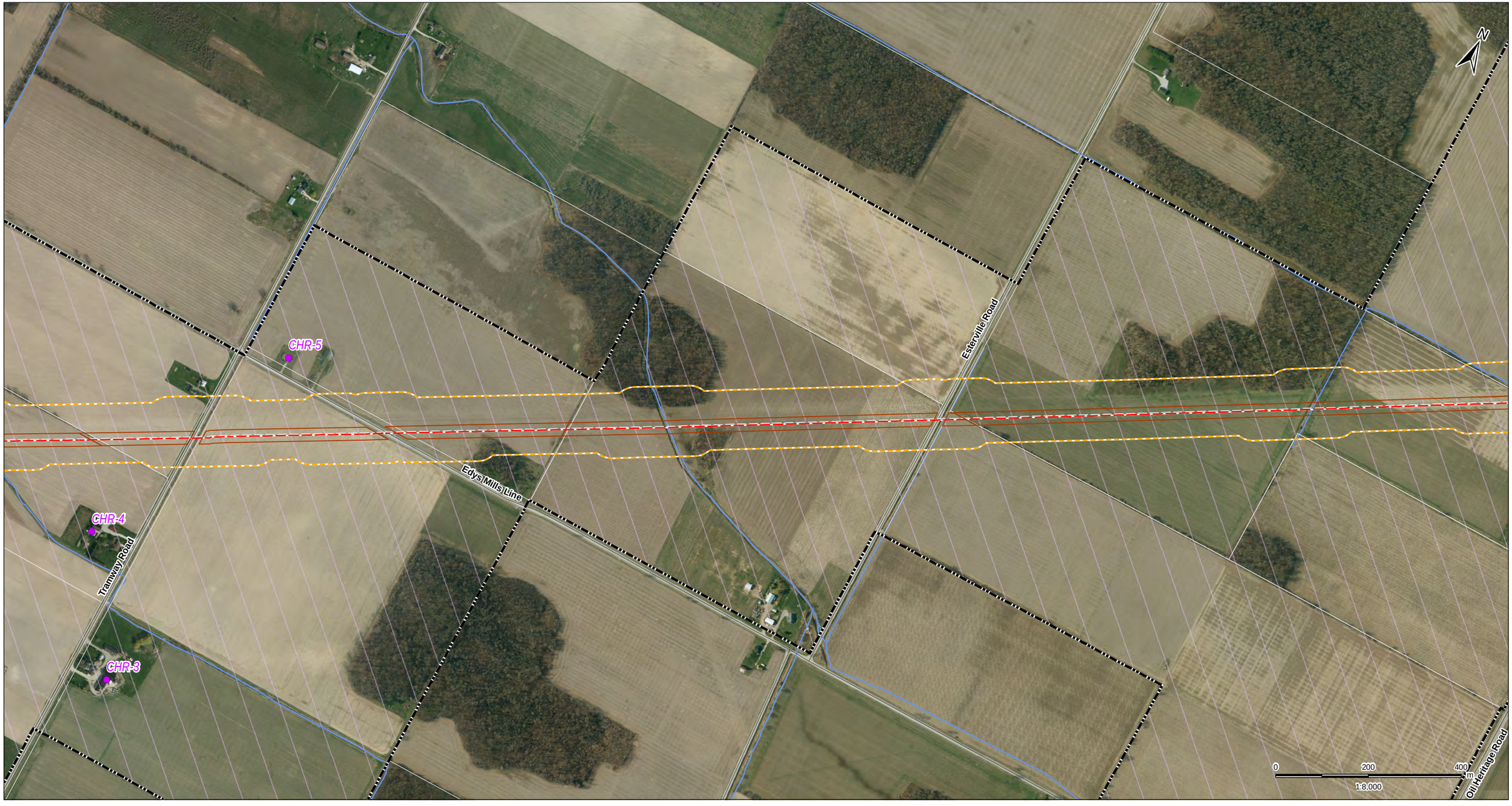
Legend
- Study Area
- Project Location
- Identified Heritage Property
- CHR-10
- Preferred Pipeline Route
- Pipeline Easement
- Existing Dawn-Parkway System
- Road
- Watercourse
- Municipal Boundary - Lower Tier



Client/Project
Union Gas Limited
Dawn-Enniskillen Pipeline Project

Figure No.
4.2

Title
Identified Heritage Properties



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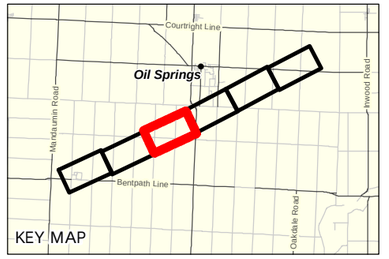
Legend
- Study Area
- Project Location
- Identified Heritage Property
- CHR-10
- Preferred Pipeline Route
- Pipeline Easement
- Existing Dawn-Parkway System
- Road
- Watercourse
- Municipal Boundary - Lower Tier



Client/Project
Union Gas Limited
Dawn-Enniskillen Pipeline Project

Figure No.
4.3

Title
Identified Heritage Properties



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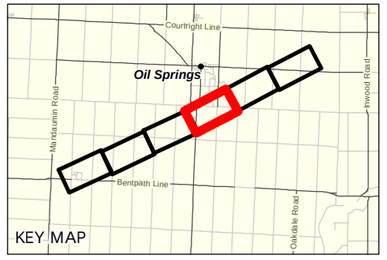
Legend
- Study Area
- Project Location
- Identified Heritage Property
- CHR-10
- Preferred Pipeline Route
- Pipeline Easement
- Existing Dawn-Parkway System
- Road
- Watercourse
- Municipal Boundary - Lower Tier



Client/Project
Union Gas Limited
Dawn-Enniskillen Pipeline Project

Figure No.
4.4

Title
Identified Heritage Properties



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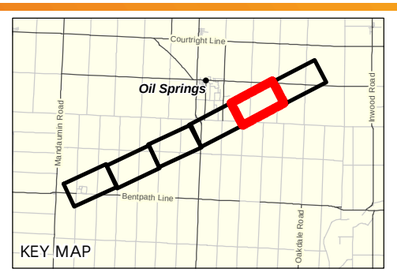
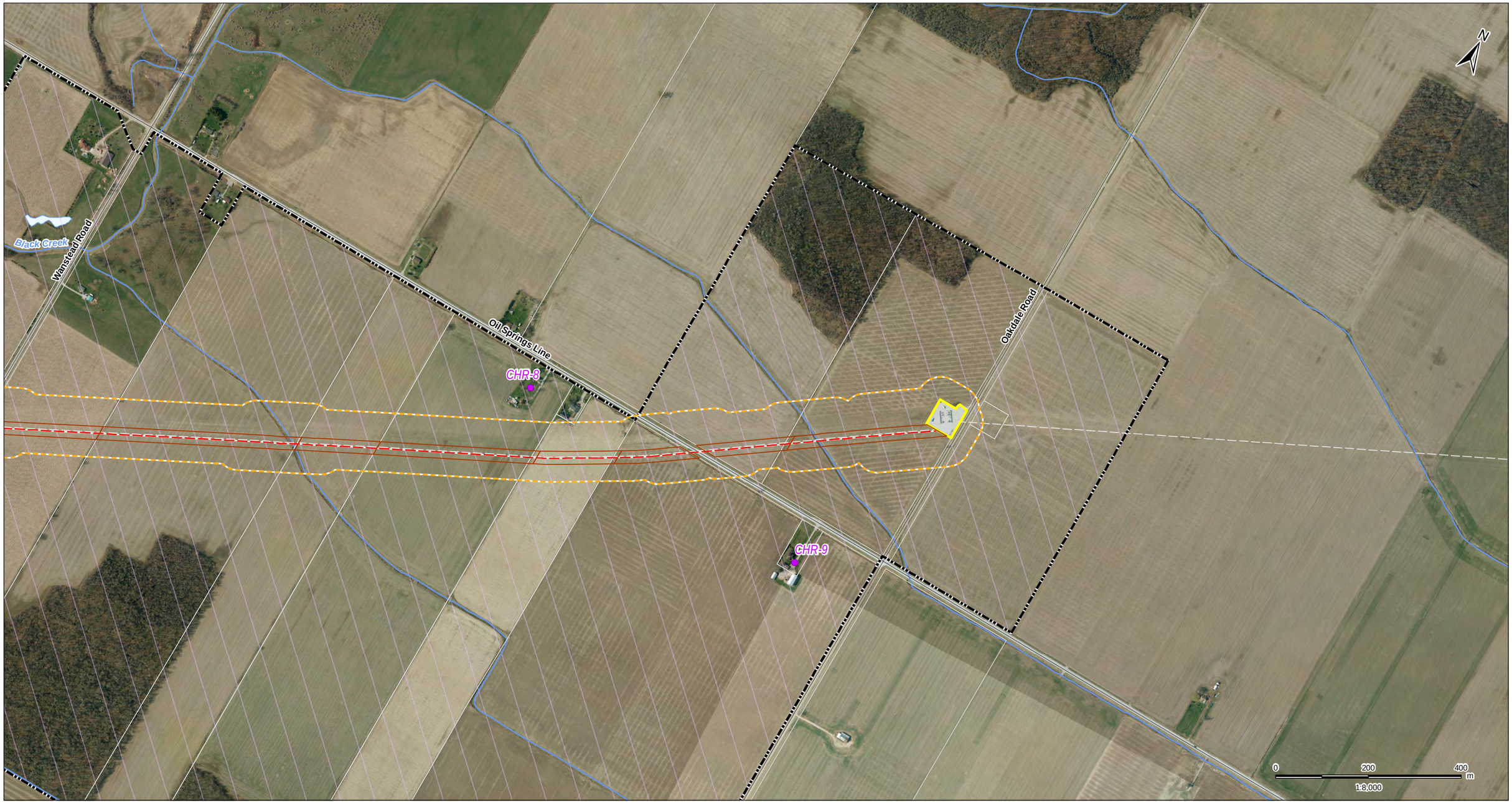
Legend
- Study Area
- Project Location
- Identified Heritage Property
- CHR-10
- Preferred Pipeline Route
- Pipeline Easement
- Existing Dawn-Parkway System
- Road
- Watercourse
- Waterbody
- Municipal Boundary - Lower Tier



Client/Project
Union Gas Limited
Dawn-Enniskillen Pipeline Project

Figure No.
4.5

Title
Identified Heritage Properties



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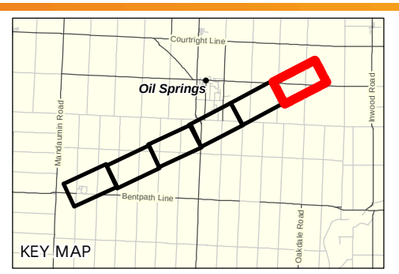
Legend
- Study Area
- Project Location
- Identified Heritage Property
- CHR-10
- Preferred Pipeline Route
- Pipeline Easement
- Enniskillen Station
- Existing Dawn-Parkway System
- Road
- Watercourse
- Waterbody
- Municipal Boundary - Lower Tier



Client/Project
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Dawn-Enniskillen Pipeline Project

Figure No.
4.6

Title
Identified Heritage Properties

6.0 RECOMMENDATIONS

6.1 DEPOSIT COPIES

To assist in the retention of historic information, copies of this report should be deposited with local repositories of historic material and municipalities. Therefore, it is recommended that this report be deposited at the following locations:

Lambton County Public Library, Oil Springs Branch
4596 Oil Springs Road
Oil Springs, Ontario N0N 1P0

Planning and Development Services, County of Lambton
789 Broadway Street, Box 3000
Wyoming, ON N0N 1T0

6.2 ISOLATION AND BUFFER ZONES

Components of one heritage resource, the two and one half storey brick residence at 2070 Oil Heritage Road, was determined to be situated within the 50 metre buffer of the Project easement and TLU. In order to prevent negative indirect Project impacts, the heritage resource should be isolated from Project activities. It is recommended that site plan controls be put in place prior to construction to prevent potential indirect impacts as a result of the Project. The site plan controls shall include fencing to indicate where Project activities are restricted as described below. These controls should be indicated on all construction mapping and communicated to the construction team leads.

Given the position of the heritage resources within the 50 metre buffer of the Project easement and TLU, it is recommended that a buffer zone be established to indicate where all construction activities must be avoided including, but not limited to, ground disturbance and the movement of equipment and people to and from the site. The buffer zone should be established where the Project easement and TLU are positioned within 10 metres of the residence and delineated with temporary fencing. If construction activities enter into the 10 metre buffer zone, all activities should cease immediately and a temporary 60 metre buffer zone surrounding the impacted area should be established where no construction activities should occur. A qualified building condition specialist should be retained to determine if any damage was incurred as a result of the construction activities. Only following approval from the building specialist, should construction activities resume at which point the 10 metre buffer should be re-established.

6.3 ENVIRONMENTAL MONITORING AND REPORTING

Union Gas' on-site inspection team should monitor that buffer zone fencing, outlining the limit of the construction footprint and subsequent setback from heritage features, is maintained throughout construction and post-construction rehabilitation. It is anticipated that, as a condition of project approval, the Ontario Energy Board will require post-construction monitoring reports; such reports will document the implementation and effectiveness of environmental mitigation and protective measures, including the installation and maintenance of site plan controls.

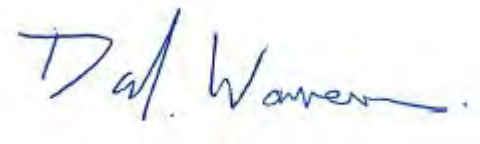
7.0 CLOSURE

This report has been prepared for the sole benefit of the Union Gas Limited, and may not be used by any third party without the express written consent of Stantec Consulting Ltd. Any use which a third party makes of this report is the responsibility of such third party.

We trust this report meets your current requirements. Please do not hesitate to contact us should you require further information or have additional questions about any facet of this report.

Yours truly,

STANTEC CONSULTING LTD.



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APPENDIX A: CULTURAL HERITAGE RESOURCE EVALUATION FORMS

Stantec

Municipal Address: 1732 Robinson Road

Former Township or County: Dawn Township

Municipality: Township of Dawn-Euphemia

Resource Type: Farmstead

Associated Dates: Mid to late 19th century

Relationship to Project: North of project



Description: The property contains a farmstead comprised of a residence, barn and multiple outbuildings surrounded by agricultural fields under cultivation.

The residence is a two-and-one-half storey, side gable structure with a medium pitched roof. The residence is clad with red brick and sits on a concrete foundation.

On the front façade of the residence, there is an enclosed porch with a front gable covering. On the south end of the residence, is a brick chimney stack. The offset placement of the windows suggests modification from the original residence.

There is one barn and multiple modern outbuildings situated at the rear of the residence. The timber frame barn has a medium pitched roof and has a concrete foundation.

Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:

Design or Physical Value: Residence is characteristic of mid-19th century vernacular design. Barn design and materials are representative of 19th century barn construction and design.

Historical or Associative Value: None identified.

Contextual Value: The location of the buildings on the property in relation to each other, the road, and the surrounding agricultural fields physically and functionally link the structures to their surroundings.

Identified Heritage Attributes: Residence: two-and-one-half storey, side gable, clad in red brick. Barn: timber frame, medium pitched roof. Property: relationship between residence, outbuildings and agricultural fields.

Identification of CHVI: Yes

Completed by (name): James Sebele

Date Completed: July 23, 2015

Heritage Resource/Landscape Number: CHR-1

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Municipal Address: 1713 Marthaville Road

Former Township or County: Dawn Township

Municipality: Township of Dawn-Euphemia

Resource Type: Residence

Associated Dates: Late 19th

Relationship to Project: North of project

Description: The property contains a residence surrounded by trees.



The residence is a one-and-one-half storey, cross gabled structure with a medium pitched roof. The residence has modern siding and a concrete foundation. A covered entranceway is visible on the north façade of the building as well as an entrance on the south side of the building.

There is a modern outbuilding situated northeast of the residence.

Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:

Design or Physical Value: None identified.

Historical or Associative Value: None identified.

Contextual Value: None identified.

Identified Heritage Attributes: None identified.

Identification of CHVI: No

Completed by (name): James Sebele

Date Completed: July 23, 2015

Heritage Resource/Landscape Number: N/A

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Municipal Address: 1627 Marthaville Road

Former Township or County: Dawn Township

Municipality: Township of Dawn-Euphemia

Resource Type: Farmstead

Associated Dates: Late 19th century

Relationship to Project: South of project

Description: The property contains a farmstead comprised of a residence, barn, silo and multiple outbuildings surrounded by agricultural fields under cultivation.

The residence is a one-and-one-half storey, side gable structure with a medium pitched roof. The residence is clad in modern siding with a portion of brick siding surrounding the front entrance, and sits on a concrete foundation.

On the front façade of the residence is a covered porch and a shed dormer door that opens to a small second level deck. Attached to the rear of the residence is a one-and-one-half storey front gable addition with windows and a brick chimney stack. A small one storey addition with a sloped roof is attached to the rear of the front gable addition.

A barn, silo and multiple modern outbuildings are situated at the rear of the residence. The red timber frame barn has a medium pitched roof and an undetermined foundation. A covered addition is attached to the south side of the barn. A concrete silo is situated behind the barn.

Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:

Design or Physical Value: Barn design and materials are representative of 19th century barn construction and design.

Historical or Associative Value: None identified.

Contextual Value: The location of the buildings on the property in relation to each other, the road, and the surrounding agricultural fields physically and functionally link the structures to their surroundings.

Identified Heritage Attributes: Barn: red timber frame, medium pitched roof. Property: Relationship between outbuildings and agricultural fields.

Identification of CHVI: Yes

Completed by (name): James Sebele

Date Completed: July 23, 2015

Heritage Resource/Landscape Number: CHR-2







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Municipal Address: 1686 Marthaville Road

Former Township or County: Dawn Township

Municipality: Township of Dawn Euphemia

Resource Type: Residence

Associated Dates: Early to mid-20th century

Relationship to Project: South of project



Description: The property contains a residence and an outbuilding surrounded by trees.

The residence is a one-and-one-half story side gable structure with a medium pitched roof. The residence has modern siding and a concrete foundation.

The residence has a shed dormer window and a brick chimney stack positioned at the centre of the front façade. A wooden deck, which leads to a door, is attached to the north side of the residence.

A modern outbuilding is situated at the rear of the residence.

Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:

Design or Physical Value: None identified.

Historical or Associative Value: None identified.

Contextual Value: None identified.

Identified Heritage Attributes: None identified.

Identification of CHVI: No

Completed by (name): James Sebele

Date Completed: July 23, 2015

Heritage Resource/Landscape Number: N/A

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Municipal Address: 1688 Marthaville Road

Former Township or County: Dawn Township

Municipality: Township of Dawn-Euphemia

Resource Type: Residence

Associated Dates: Mid-20th century

Relationship to Project: South of project

Description: The property contains a residence and outbuilding surrounded by trees.



The residence is a one storey, side gabled structure with a low pitched roof. The residence has modern siding and a concrete foundation. On the front façade of the residence, are two doors and five windows. A projecting bay window with three panes is visible on the south side of the residence.

A modern outbuilding it situated at the rear of the residence.

Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:

Design or Physical Value: None identified.

Historical or Associative Value: None identified.

Contextual Value: None identified.

Identified Heritage Attributes: None identified.

Identification of CHVI: No

Completed by (name): James Sebele

Date Completed: July 23, 2015

Heritage Resource/Landscape Number: N/A

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Municipal Address: 1736 Tramway Road

Former Township or County: Dawn Township

Municipality: Township of Dawn-Euphemia

Resource Type: Farmstead

Associated Dates: Late 19th century

Relationship to Project: South of project

Description: The property contains a farmstead comprised of a residence, barn, silo and multiple outbuildings surrounded by agricultural fields under cultivation.



The residence is a one-and-one-half storey structure with a medium hip on gable roof with multiple gable windows. The residence has modern siding and a rusticated concrete block foundation.

The residence has an enclosed porch with multiple windows. Multiple one storey additions are attached to the rear and north side of the residence. A detached side gable garage is situated south of the residence.



At the rear of the residence is a barn, silo and multiple modern outbuildings and a barn. The large red timber frame barn has a gambrel roof with roof ridge cupolas and an undetermined foundation.

Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:

Design or Physical Value: Barn design and materials are representative of 19th century barn construction and design.

Historical or Associative Value: None identified.

Contextual Value: The location of the buildings on the property in relation to each other, the road, and the surrounding agricultural fields physically and functionally link the structures to their surroundings.

Identified Heritage Attributes: Barn: timber frame, gambrel roof, roof ridge cupolas. Property: relationship of barn and outbuildings and agricultural fields.

Identification of CHVI: Yes

Completed by (name): James Sebele

Date Completed: July 23, 2015

Heritage Resource/Landscape Number: CHR-3

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Municipal Address: 1777 Tramway Road

Former Township or County: Dawn Township

Municipality: Township of Dawn-Euphemia

Resource Type: Farmstead

Associated Dates: Mid-20th century (residence), Late 19th century (Barn)

Relationship to Project: South of project

Description: The property contains a farmstead comprised of a residence, barn, silo and multiple outbuildings surrounded by agricultural fields under cultivation.

The residence is a modern one storey side gable residence with a low hipped roof. The residence is clad in yellow brick siding and has a concrete foundation.

At the rear of the residence is a barn, silo and multiple modern outbuildings. The timber frame barn has a gambrel roof and an undetermined foundation. Note: view of barn obstructed by tree in photos.

Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:

Design or Physical Value: Barn design and materials are representative of 19th century barn construction and design.

Historical or Associative Value: None identified.

Contextual Value: The location of the buildings on the property in relation to each other, the road, and the surrounding agricultural fields physically and functionally link the structures to their surroundings.

Identified Heritage Attributes: Barn: timber frame, gambrel roof. Relationship between barn, outbuildings and agricultural fields.

Identification of CHVI: Yes

Completed by (name): James Sebele

Date Completed: July 23, 2015

Heritage Resource/Landscape Number: CHR-4





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Municipal Address: 1833 Tramway Road

Former Township or County: Dawn Township

Municipality: Township of Dawn-Euphemia

Resource Type: Residence

Associated Dates: Early to mid-20th century

Relationship to Project: North of project

Description: The property contains a residence, an outbuilding and a shed surrounded by trees.



The residence is a one storey structure with a medium pitched cross-hipped roof. The residence has modern siding and a concrete foundation.

On the front façade of the residence is a single front entrance door, and three trios of windows.

There is a modern outbuilding with two bay doors and a shed situated south of the residence.

Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:

Design or Physical Value: None identified.

Historical or Associative Value: None identified.

Contextual Value: None identified.

Identified Heritage Attributes: None identified.

Identification of CHVI: No

Completed by (name): James Sebele

Date Completed: July 23, 2015

Heritage Resource/Landscape Number: N/A

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Municipal Address: 4164 Edys Mills Line

Former Township or County: Dawn Township

Municipality: Township of Dawn-Euphemia

Resource Type: Farmstead

Associated Dates: Late 19th century

Relationship to Project: North of project

Description: The property contains a farmstead comprised of a residence, barn and multiple outbuildings.

The residence is a one storey structure with a medium pitch hipped roof and symmetrical front façade. The residence has modern siding and a concrete foundation. A one storey addition with a sloped roof is attached to the rear of the residence.



Situated at the rear of the residence is a barn and multiple outbuildings. The timber frame barn has a medium pitched roof and an undetermined foundation.



Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:

Design or Physical Value: Single storey residence with symmetrical façade and hipped roof. Barn design and materials are representative of 19th century barn construction and design.

Historical or Associative Value: None identified.

Contextual Value: The location of the buildings on the property in relation to each other, the road, and the surrounding agricultural fields physically and functionally link the structures to their surroundings.

Identified Heritage Attributes: Residence: single storey, symmetrical façade, hipped roof. Barn: timber frame, medium pitched roof. Relationship between residence, barn, outbuildings and agricultural fields.

Identification of CHVI: Yes

Completed by (name): James Sebele

Date Completed: July 23, 2015

Heritage Resource/Landscape Number: CHR-5

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Municipal Address: 2070 Oil Heritage Road

Former Township or County: Dawn Township

Municipality: Township of Dawn-Euphemia

Resource Type: Residence (Abandoned)

Associated Dates: Late 19th century

Relationship to Project: South or project



Description: The property contains a residence and an outbuilding.

The residence is a two-and-one-half storey structure with a medium pitch hip and gable roof. The residence is clad in brick and has a concrete foundation.

The residence has a projecting front gable with an attic window contained within a triangular pediment that has modern siding. The residence has an inset wooden deck that leads to a front door. A brick chimney stack protrudes from the roof.

A modern outbuilding is situated at the rear of the residence.

Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:

Design or Physical Value: Residence is representative of late 19th century vernacular residential design.

Historical or Associative Value: None identified.

Contextual Value: None identified.

Identified Heritage Attributes: Residence: two-and-one-half, projecting front gable.

Identification of CHVI: Yes

Completed by (name): James Sebele

Date Completed: July 23, 2015

Heritage Resource/Landscape Number: CHR-6

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Municipal Address: 2249 Crooked Line

Former Township or County: N/A

Municipality: Township of Enniskillen

Resource Type: Residence

Associated Dates: Mid-20th century

Relationship to Project: North of project

Description: The property contains a residence and multiple outbuildings surrounded by trees.

The residence is a one storey structure with a low pitched side gable roof. The residence has modern siding and a concrete foundation.

On the front façade of the residence there is a single door and three rectangular windows. On the East side of the residence is a wooden deck that leads to an entry door.

Situated at the rear of the residence are two timber outbuildings with gambrel roofs.

Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:

Design or Physical Value: None identified.

Historical or Associative Value: None identified.

Contextual Value: None identified.

Identified Heritage Attributes: None identified.

Identification of CHVI: No

Completed by (name): James Sebele

Date Completed: July 23, 2015

Heritage Resource/Landscape Number: N/A





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Municipal Address: No address (Black Ash Road; Concession 1, Lot 21)

Former Township or County: N/A

Municipality: Township of Enniskillen

Resource Type: Barn

Associated Dates: Late 19th century

Relationship to Project: South of project

Description: The property contains a barn surrounded by agricultural fields under cultivation.

The timber frame barn has a medium pitched gable roof and a concrete foundation. On the south side of the barn is one large bay door while on the east side there are three large bay doors.

Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:

Barn design and materials are representative of 19th century barn construction and design.

Historical or Associative Value: None identified.

Contextual Value: The location of the buildings on the property in relation to each other, the road, and the surrounding agricultural fields physically and functionally link the structures to their surroundings.

Identified Heritage Attributes: Barn: timber frame, medium pitched gable roof. Relationship between barn and agricultural fields.

Identification of CHVI: Yes

Completed by (name): James Sebele

Date Completed: July 23, 2015

Heritage Resource/Landscape Number: CHR-7





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Municipal Address: 2382 Wanstead Road

Former Township or County: N/A

Municipality: Township of Enniskillen

Resource Type: Residence

Associated Dates: Early to mid 20th century

Relationship to Project: South of project

Description: The property contains a residence and multiple outbuildings surrounded by trees.



The residence is a one-and-one-half storey structure with a low pitched side gable roof. The residence has modern siding and a concrete foundation.

The residence appears to have many modifications as indicated by the irregular roof lines that encircle the first storey. On the front façade there is a large patio door, while on the north facade, there is an entry door and two windows.

A modern outbuilding is situated north of the residence.

Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:

Design or Physical Value: None identified.

Historical or Associative Value: None identified.

Contextual Value: None identified.

Identified Heritage Attributes: None identified.

Identification of CHVI: No

Completed by (name): James Sebele

Date Completed: July 24, 2015

Heritage Resource/Landscape Number: N/A

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Municipal Address: 5563 Oil Springs Line

Former Township or County: N/A

Municipality: Township of Enniskillen

Resource Type: Residence

Associated Dates: Late 19th

Relationship to Project: North of project

Description: The property contains a residence surrounded by trees.

The residence is a one-and-one-half storey side gable structure with a medium pitched roof. The residence has modern siding and a concrete foundation.

The residence has a projecting gable with a single window on the upper storey and a window with three panes on the lower storey. On the east façade of the residence is a second pointed gable with window. On the west side of the residence is a brick chimney stack. A porch with wooden deck leads to the front entry door.





Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:

Design or Physical Value: Residence is representative of late 19th century vernacular residential design. The residence has Gothic Revival architectural features such as its multiple gables with windows.

Historical or Associative Value: None identified.

Contextual Value: The location of the building on the property in relation to the road, and the surrounding agricultural fields physically and functionally link the structures to their surroundings.

Identified Heritage Attributes: Residence: one-and-one-half, side gable, multiple gables with windows. Relationship between residence, road and agricultural fields.

Identification of CHVI: Yes

Completed by (name): James Sebele

Date Completed: July 24, 2015

Heritage Resource/Landscape Number: CHR-8

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Municipal Address: 5673 Oil Springs Line

Former Township or County: N/A

Municipality: Township of Enniskillen

Resource Type: Farmstead

Associated Dates: Mid to late 19th century

Relationship to Project: South of project

Description: The property contains a farmstead comprised of a residence, barn, silo and multiple outbuildings surrounded by agricultural fields under cultivation.



The residence is a one-and-one-half storey structure with a medium pitched side gable roof. The residence is symmetrical in design and has modern siding and a concrete foundation.

The residence appears to have a one storey addition with a sloped roof that projects from the east side of the residence. This addition has a covered porch with a wooden deck.



Situated east of the residence is a barn. The large raised timber frame barn has a medium pitched roof and a rusticated concrete block foundation. A small addition is attached to the west side of the barn. An uncapped silo is situated at the rear of the barn.

Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:

Design or Physical Value: Residence is characteristic of mid to late 19th century vernacular design in its proportions, symmetrical design and medium roof pitch. Barn design and materials are representative of 19th century barn construction and design.

Historical or Associative Value: None identified.

Contextual Value: The location of the buildings on the property in relation to each other, the road, and the surrounding agricultural fields physically and functionally link the structures to their surroundings.

Identified Heritage Attributes: Residence: one and one half storey, medium pitch with symmetrical front façade. Barn: timber frame, medium pitched roof, rusticated concrete block foundation. Property: relationship between the buildings and agricultural fields.

Identification of CHVI: Yes

Completed by (name): James Sebele

Date Completed: July 24, 2015

Heritage Resource/Landscape Number: CHR-9

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Municipal Address: Study Area

Former Township or County: N/A

Municipality: Townships of Enniskillen and Dawn

Resource Type: Modified Agricultural Landscape

Associated Dates: Late 19th to Mid-20th century

Relationship to Project: Sections within Project Location

Description: The Study Area contains a modified agricultural landscape within a grid pattern. The grid pattern was influenced by the survey of the Townships of Enniskillen and Dawn in the 1820s and 1830s and the later layout of the hydro lines in the mid-20th century. The Study Area contains rural gravel roadways, that also influence the grid pattern of the landscape.

To address the issue of drainage, the landscape displays specific controls including pump houses, windmills, deep ditches and dykes.

The modified agricultural landscape extends beyond the Study Area in the two townships.





Evaluation of Cultural Heritage Value or Interest According to O. Reg. 9/06:

Design or Physical Value: None identified.

Historical or Associative Value: Supports the broader agricultural setting of the Townships of Enniskillen and Dawn. Influenced by settlement patterns, road development, drainage techniques and hydro lines.

Contextual Value: Connected to the rural agricultural landscape character of the Townships of Enniskillen and Dawn.

Identified Heritage Attributes: Landscape: Grid layout of agricultural fields and hydro lines, rural gravel roadways, and drainage controls including pumphouses, windmills, deep ditches and dykes.

Identification of CHVI: Yes

Completed by (name): Laura Walter

Date Completed: July 21, 2017

Heritage Resource/Landscape Number: CHR-10

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Stantec

Memo

To: Enbridge Gas Ontario

From: Frank Smith, MA, CAHP;
Julia Richards, MA
Stantec Consulting Ltd.

Project/File: 160901400

Date: October 5, 2026

Reference: Dawn Parkway System Renewal Project: Dawn to Enniskillen

1 Introduction

Enbridge Gas Ontario (Enbridge Gas) is considering the removal of the existing 16.7-kilometre Nominal Pipe Size (NPS) 26-inch diameter natural gas pipeline within the Township of Dawn-Euphemia and the Township of Enniskillen. The Study Area consists of the existing pipeline at the Enbridge Gas Dawn Natural Gas Storage and Transportation Facility (the Dawn Hub), located at Bentpath Line and Dawn Valley Road, and the existing Enbridge Gas Enniskillen Station located north of Oil Springs Line on Oakdale Road. The project will replace and construct a new NPS 48-inch diameter natural gas pipeline (via lift and lay) (Figure 1).

To facilitate this Project, Enbridge Gas retained Stantec to prepare a *Cultural Heritage Memo* for the Study Area. The need to consider known and potential built heritage resources (BHRs) and cultural heritage landscapes (CHLs) is defined by Section 4.3.4 of the *Ontario Energy Board (OEB) Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Projects and Facilities in Ontario* (OEB Guidelines) (OEB 2023).

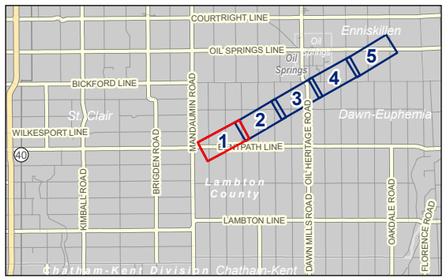
The Study Area was previously assessed for known and potential BHRs and CHLs in a *Cultural Heritage Assessment Report* (CHAR) prepared by Stantec in 2017 (Stantec 2017). The objectives of this Memo are to summarize the findings of the CHAR, re-affirm the BHRs and CHLs identified in the CHAR, identify and screen new potential and known

Reference: Dawn Parkway System Renewal Project: Dawn to Enniskillen

BHRs and CHLs within the Study Area, assess potential impacts resulting from the Project, and recommend future actions.

To screen for known or potential cultural heritage value or interest (CHVI), this Memo follows the *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes: A Checklist for the Non-Specialist* (the Checklist) published by the Ministry of Citizenship and Multiculturalism (MCM) in 2016 and last updated in 2022 (MCM 2022). Potential impacts, both direct and indirect, are assessed using the seven potential negative effects to BHRs and CHLs identified in the OEB Guidelines (OEB 2023).





Legend

- Study Area
- Enbridge Station/Valve
- Proposed Pipeline
- Existing Pipeline
- Watercourse (Permanent)
- Constructed Drain
- Parcel Boundary (PIN)
- Waterbody

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Notes

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Project Location
Township of Dawn-Euphemia

REVA
Prepared by AWhite on 2026-09-24
Technical Review by JRichards on 2026-09-24

Client/Project
ENBRIDGE GAS INC.
DAWN SYSTEM RENEWAL PROJECT
DAWN TO ENNISKILLEN

Figure No.
1.1

Title
Study Area

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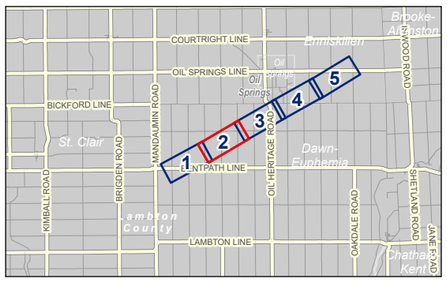

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Legend

- Study Area
- Proposed Pipeline
- Existing Pipeline
- Watercourse (Permanent)
- Constructed Drain
- Parcel Boundary (PIN)

0 100 200 m

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Project Location
Township of Dawn-Euphemia

REVA
Prepared by AWhite on 2026-09-24
Technical Review by JRichards on 2026-09-24

Client/Project
ENBRIDGE GAS INC.
DAWN SYSTEM RENEWAL PROJECT
DAWN TO ENNISKILLEN

Figure No.
1.2

Title
Study Area

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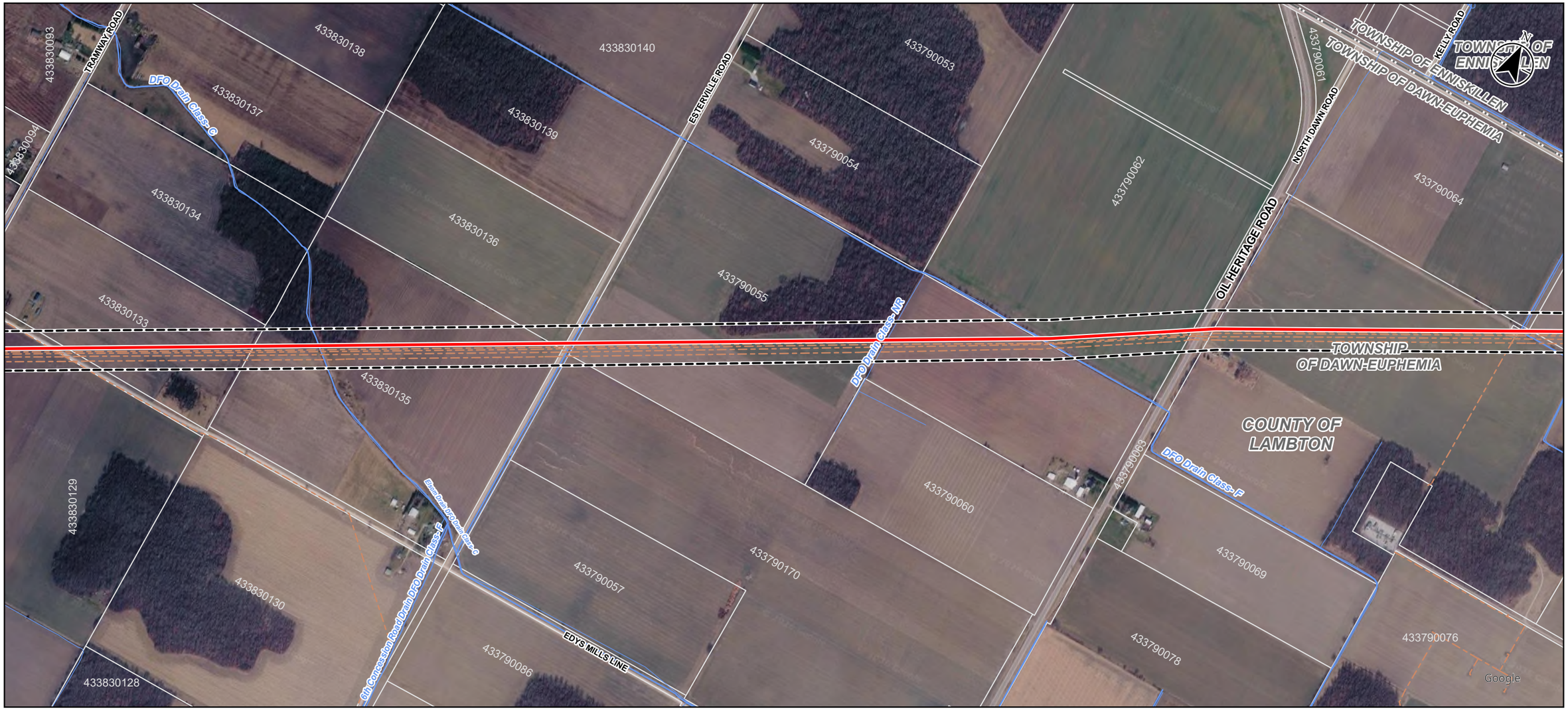

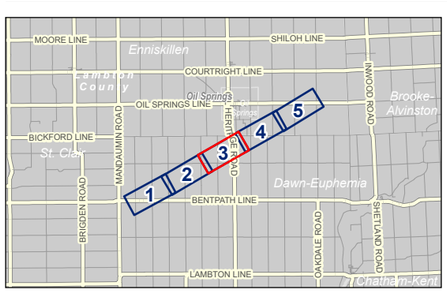

Legend

- Study Area
- Proposed Pipeline
- Existing Pipeline
- Watercourse (Permanent)
- Constructed Drain
- Parcel Boundary (PIN)

0 100 200 m

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Project Location
Township of Dawn-Euphemia

REVA
Prepared by AWhite on 2026-09-24
Technical Review by JRichards on 2026-09-24

Client/Project
ENBRIDGE GAS INC.
DAWN SYSTEM RENEWAL PROJECT
DAWN TO ENNISKILLEN

Figure No.
1.3

Title
Study Area

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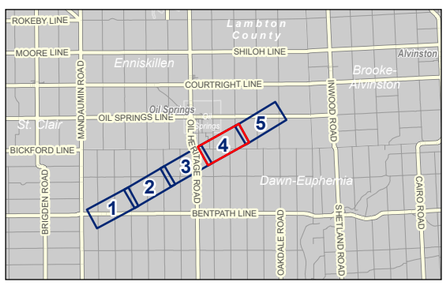

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Legend

- Study Area
- Proposed Pipeline
- Existing Pipeline
- Watercourse (Permanent)
- Constructed Drain
- Parcel Boundary (PIN)
- Waterbody

0 100 200 m

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Project Location
Township of Dawn-Euphemia

REVA
Prepared by AWhite on 2026-09-24
Technical Review by JRichards on 2026-09-24

Client/Project
ENBRIDGE GAS INC.
DAWN SYSTEM RENEWAL PROJECT
DAWN TO ENNISKILLEN

Figure No.
1.4

Title
Study Area

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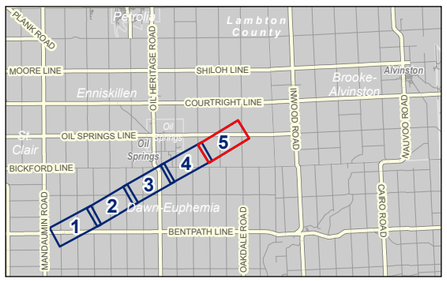

Legend

- Study Area
- Enbridge Station/Valve
- Proposed Pipeline
- Existing Pipeline
- Watercourse (Permanent)
- Constructed Drain
- Parcel Boundary (PIN)

0 100 200 m

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Project Location
Township of Dawn-Euphemia

REVA
Prepared by AWhite on 2026-09-24
Technical Review by JRichards on 2026-09-24

Client/Project
ENBRIDGE GAS INC.
DAWN SYSTEM RENEWAL PROJECT
DAWN TO ENNISKILLEN

Figure No.
1.5

Title
Study Area

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Figure placeholder

2 Methodology

2.1 Municipal and Agency Information Requests

Requests for information from municipalities, agencies, and heritage-based organizations in the area within which the Project is proposed were undertaken to determine the presence of listed, designated, or otherwise identified heritage properties within the Study Area. Stantec issued information requests to the Township of Dawn-Euphemia, the Village of Oil Springs, the Ontario Heritage Trust (OHT), and the MCM. Consultation with the public and Indigenous communities is carried out as part of the broader environmental study process. Should BHRs or CHLs be identified by the public or Indigenous communities, they will be incorporated into the finalized version of the Memo. For this study, properties previously known by municipal staff or provincial agencies as containing or having the potential to contain CHVI were determined to be potential heritage properties.

2.2 Screening of Cultural Heritage Value or Interest

In general, buildings and structures of more than 40 years of age were screened during the survey using the criteria prescribed in the MCM *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* (the MCM Criteria) (MCM 2022) and professional judgement. This included a field program to re-affirm the findings of the CHAR and to identify and screen additional known and potential BHRs and CHLs within the Study Area.

A vehicular windshield survey was conducted on August 18, 2026, by Paige Murray and Julia Richards, Cultural Heritage Specialists with Stantec. The weather conditions were sunny and hot. The windshield survey was conducted from the publicly accessible right-of-way (RoWs), unless specified otherwise.

For the purposes of this memo, the resource number used in the CHAR is carried forward into this memo for consistency. These resources are identified with a cultural heritage resource number (CHR) and 2017, to denote its identification in the CHAR (e.g. CHR-1 2017). Where a new known or potential BHR or CHL was identified, the structure or landscape was assigned a BHR/CHL number as applicable and 2026, to denote it was not included in the CHAR (e.g. BHR-1 2026).

2.3 Assessment of Impacts

Where a component of a known or potential BHR or CHL was situated within the Study Area, the impacts of the proposed undertaking were evaluated. The impacts, both direct and indirect, are evaluated according to the possible effects or impacts resulting from the development of a hydrocarbon project that could affect cultural heritage resources as outlined in the OEB Guidelines.

Seven potential negative effects have been identified in the OEB Guidelines (OEB 2023), including:

1. Destruction or removal of any—or part of any—significant heritage attributes or features
2. Alteration that is not sympathetic, or is not compatible, with heritage character or appearance
3. Isolation of heritage attributes or features from their surrounding environment, context or a significant relationship
4. Visual intrusions, direct or indirect obstruction of significant views or vistas from, within, or to a built or natural feature
5. Shadows created by new development that alter the appearance or character of a heritage resource
6. A change in physical character, such as when development fills in formerly open spaces, or when significant vegetation is removed

7. Ground disturbances or land alterations, such as a change in grade, alteration of soil composition or drainage patterns that could adversely affect a cultural heritage resource

The potential for negative impacts resulting from vibration due to construction and operation activities and the transportation of Project components and personnel were also evaluated. Although the existing effect of traffic and construction vibrations on historical period structures is not fully known, negative effects have been demonstrated on buildings with a setback of less than 40 metres from the curbside (Crispino and D'Apuzzo 2001; Ellis 1987; National Park Service 2001; Rainer 1982; Wiss 1981). The proximity of Project components to previously identified or potential BHRs and CHLs was considered in this assessment, particularly those within 50 metres from the proposed pipeline alignment, to encompass a wide enough buffer zone to account for built resources less than 40 metres from curbside or potential Project activities. The 50-metre buffer represents a conservative approach to effects identification.

3 Review of Cultural Heritage Assessment Report

What follows is a high-level summary of the histories of the former Townships of Dawn and Enniskillen from survey and settlement to the 20th century. More detailed and complete histories are contained in the 2017 CHAR.

3.1 Historical Context Summary

The Study Area is located in the Township of Dawn-Euphemia and the Village of Oil Springs, both lower tier municipalities within the County of Lambton, an upper tier municipality. Historically, the Study Area is situated within parts of Lots 26-27, Concession 2; Lots 27-28, Concession 3; Lots 28-29, Concession 4; Lots 29-30, Concession 5; Lots 30-31, Concession 6; Lots 31-33, Concession 7; Lots 33-34, Concession 8; Lot 34, Concession 9 in the former Township of Dawn and parts of Lots

19-23, Concession 1; Lots 22-27, Concession 2; and Lots 26-27, Concession 3 in the former Township of Enniskillen, County of Lambton.

3.1.1 Township of Dawn

The Township of Dawn was surveyed in 1821 by Shubai Park using the double front system. Compared to other townships in Lambton County, Dawn was slow to develop due to its landscape, with heavy dense soil and wooded lots with no natural drainage. By the mid-19th century, the population was relatively low at 429 and had little land under cultivation. The population peaked at 1,758 by 1880, which was the lowest in Lambton County at the end of the 19th century (Elford 1982: 41).

Population growth and land cultivation was hindered by poor road conditions such that sections of the township were impassable. By the end of the 1920s, road improvement programs began as roads were paved with gravel (Elford 1982: 41).

In the mid-20th century, gas was found in Dawn Township and became a dominant industry in the township in addition to agriculture (Elford 1982: 76). Oil production continued in the township until the 1940s, when the wells were generally depleted (Elford 1982: 76). From the 1930s until the present day, Lot 1 on Concession 25 was used for storage and transference of gas (Elford 1982: 76).

In 1998, due to municipal restructuring combining townships, the Township of Euphemia and the Township of Dawn amalgamated to form the new lower-tier municipality of the Township of Dawn-Euphemia. The population of Dawn-Euphemia was recorded as 1,967 in 2016, a decrease of 4% since 2011 (Statistics Canada 2021).

3.1.2 Township of Enniskillen

The Township of Enniskillen was surveyed in 1832 by Lewis Burwell. Settlement began in 1833 with the first settlers being United Empire Loyalists and military veterans (County of Lambton 2010: 7). The Township of Enniskillen experienced little population growth

between 1835 and 1859 due to the swampy conditions of the landscape which hindered farming (Armstrong 2019: 23).

With the discovery of oil at Oil Springs in 1858, the Township of Enniskillen developed a booming oil industry which led to a population increase in the latter half of the 19th century (Burr 2005: 279; County of Lambton 2010: 14-15). Oil production in the township increased such that by 1866 there were an estimated 1,500 wells in operation (County of Lambton 2010: 13). The success of the oil industry in the township was aided by the introduction of the Great Western Railway in 1866 (Elford 1968: 78).

At the beginning of the 20th century, Enniskillen remained largely agricultural and experienced a population decline (Dominion Bureau of Statistics 1953). The population continued to decline throughout the 20th century which was typical of many rural communities within Ontario in the 20th century as urban centres grew and attracted workers.

3.2 Summary of Identified BHRs/CHLs

The field program for the CHAR was completed on January 21, 2015. The field program photographed and noted the location of known and potential BHRs and CHLs within the Study Area. A total of 10 properties were identified as BHRs or CHLs in the CHAR. Table 1 summarizes the findings of the field program completed for the CHAR.

Table 1 Identified BHRs/CHLs in the CHAR

Municipal Address	Type of Resource	Reference Number
1732 Robinson Road	BHR: Farmstead	CHR-1 (2017)
1627 Marthaville Road	BHR: Farmstead	CHR-2 (2017)
1736 Tramway Road	BHR: Farmstead	CHR-3 (2017)
1777 Tramway Road	BHR: Farmstead	CHR-4 (2017)

Municipal Address	Type of Resource	Reference Number
4164 Edys Mills Line	BHR: Farmstead	CHR-5 (2017)
2070 Oil Heritage Road	BHR: Residence (Noted as abandoned in CHAR)	CHR-6 (2017)
N/A - Black Ash Road (Lot 21, Concession 1)	BHR: Barn	CHR-7 (2017)
5563 Oil Springs Line	BHR: Residence	CHR-8 (2017)
5673 Oil Springs Line	BHR: Farmstead	CHR-9 (2017)
Modified Agricultural Landscapes within the Study Area	CHL: Comprised of agricultural landscape with grid layout, utilities, gravel roads, and drainage controls	CHR-10 (2017)

4 Municipal and Agency Information Requests

To identify known or potential heritage resources, the MCM, OHT, and Township of Dawn-Euphemia, and the Village of Oil Springs were contacted. The results of the information requests are summarized in Table 2.

Table 2 Municipal and Agency Information Request Summary

Organization	Contact	Results
MCM	Mariana Kimi Nito, Heritage Advisor mariana.nito@ontario.ca	Consultation email sent on September 23, 2026. Response pending.
OHT	Samuel Bayefsky, Real Property Coordinator samuel.bayefsky@ heritagetrust.on.ca	Consultation email sent on September 23, 2026. Response pending.

Organization	Contact	Results
Township of Dawn-Euphemia	admin@dawneuphemia.on.ca	Consultation email sent on September 23, 2026. Response pending.
Village of Oil Springs	info@oilsprings.ca	Consultation email sent on September 23, 2026. Response pending.

5 Re-Affirmation of 2017 CHAR Findings and Identification of Additional Known and Potential Built Heritage Resources and Cultural Heritage Landscapes

As previously discussed, a field program was completed to re-affirm the findings of the CHAR and identify additional known and potential BHRs and CHLs within the Study Area. BHRs and CHLs from the 2017 CHAR and additional known and potential BHRs and CHLs were documented from publicly accessible roadways, and their locations were digitally recorded using ESRI's ArcGIS Field Maps application.

The Study Area can be characterized by its rural landscape with largely 19th century and a few 20th century farmsteads and agricultural fields (Photo 1 and Photo 2). The majority of the roads within the Study Area are gravel with little to no shoulder. Interspersed with agricultural fields are mature trees forming dense windbreaks (Photo 3). There are also deep ditches built into the landscape near the shoulders of the road (Photo 4).

Reference: Dawn Parkway System Renewal Project: Dawn to Enniskillen



Photo 1 Representative photo of rural landscape, looking north on Cuthbert Road



Photo 2 Representative photo of agricultural fields, looking west on Robinson Road



Photo 3 Representative photos showing mature trees, looking north on Pantry School Road



Photo 4 Representative photo showing ditches, looking west on Oil Springs Line

A total of 15 properties or landscapes were inventoried. This includes the 10 CHRs identified in the CHAR (Table 3) and two additional BHRs identified in 2026 (Table 4) The location of these CHRs and BHRs are depicted in Figure 2. CHR-10 (2017) is located throughout the township and does not have a specific address, because of this it is not represented in Figure 2.

Reference: Dawn Parkway System Renewal Project: Dawn to Enniskillen

Table 3 Re-Affirmation of Built Heritage Resources and Cultural Heritage Landscapes Identified in the CHAR

Reference Number	Type of Property	Description and Review of CHVI	Current Photograph
CHR-1 (2017)	Farmstead	The property contains a farmstead comprising a residence, barn, and multiple outbuildings surrounded by agricultural fields under cultivation. The residence is a two-and-one-half storey, side gable roof clad in asphalt shingles. The exterior is clad in red brick. The barn is a timber frame structure. The CHAR identified that the residence has potential design value as a representative mid-19th century Ontario vernacular structure and the barn has potential design value as a representative 19th century barn. The property also has potential contextual value for its physical and functional links to its surroundings. **Based on the field program completed for the Memo, the property retains the potential CHVI identified in the CHAR**.	
CHR-2 (2017)	Farmstead	The property contains a farmstead comprising a residence, barn, silo, and multiple outbuildings surrounded by agricultural fields under cultivation. The residence is a one-and-one-half storey, side gable roof clad in asphalt shingles. The exterior is clad in siding and brick. A barn, silo and multiple modern outbuildings are situated at the rear of the residence. The barn is a timber frame structure. The CHAR identified that the barn has potential design value as a representative of 19th century barn in its construction and design. The property also has potential contextual value for its location of the buildings in relation to each other, the road, and the surrounding agricultural fields that physically and functionally link the structures to their surroundings. **Based on the field program completed for the Memo, the property retains the potential CHVI identified in the CHAR.**	

Reference: Dawn Parkway System Renewal Project: Dawn to Enniskillen

Reference Number	Type of Property	Description and Review of CHVI	Current Photograph
CHR-3 (2017)	Farmstead	The property contains a farmstead comprising a residence, barn, silo, and multiple outbuildings surrounded by agricultural fields under cultivation. The residence is a one-and-one-half storey structure clad in siding. At the rear of the residence is a barn, silo, and multiple modern outbuildings and a barn. The barn is clad in timber and has a gambrel roof. The CHAR identified the barn as having potential design value as a representative of 19th century barn in its construction and design. The property also has contextual value for its location of the buildings on the property and the relation to each other, the road, and the surrounding agricultural fields that physically and functionally link the structures to their surroundings. **Based on the field program completed for the Memo, the property retains the potential CHVI identified in the CHAR.**	
CHR-4 (2017)	Farmstead	The property contains a farmstead comprising a residence, barn, silo, and multiple outbuildings surrounded by agricultural fields under cultivation. The residence is a one storey side gable residence with a hip roof clad in asphalt shingles. The exterior of the residence is clad in yellow brick. At the rear of the residence is a barn, silo, and multiple modern outbuildings. The timber frame barn has a gambrel roof. The CHAR identified the barn as having potential design value as a representative of 19th century barn in its construction and design. The property also has contextual value for its location of the buildings on the property and the relation to each other, the road, and the surrounding agricultural fields that physically and functionally link the structures to their surroundings. **Based on the field program completed for the Memo, the property retains the potential CHVI identified in the CHAR.**	

Reference: Dawn Parkway System Renewal Project: Dawn to Enniskillen

Reference Number	Type of Property	Description and Review of CHVI	Current Photograph
CHR-5 (2017)	Farmstead	The property contains a farmstead comprising a residence, barn and multiple outbuildings. The residence is a one storey structure with a hip roof clad asphalt shingles and the exterior is clad in siding. Situated to the rear of the residence is a barn and multiple outbuildings. The barn is a timber frame barn with a front facing gable roof. The property parcel also now includes a second residence that was likely built in the late 20th to early 21st century. The residence was likely built in the late 19th century. The CHAR identified the residence as having potential design value as a single storey residence with a symmetrical façade and hip roof. The barn also has potential design value as a representative example of a 19th century barn in its construction and design. The property also has potential contextual value for its location of the buildings on the property and the relation to each other, the road, and the surrounding agricultural fields that physically and functionally link the structures to their surroundings. **Based on the field program completed for the Memo, the property retains the potential CHVI identified in the CHAR.**	
CHR-6 (2017)	Residence (Abandoned)	The property contains a residence and an outbuilding. The residence is a two and one half storey structure with a hip and gable roof clad in asphalt shingles and the exterior is clad in brick. There is a modern outbuilding situated at the rear of the residence. The CHAR identified the residence as having potential design value as a representative example of late 19th century vernacular residence. **Based on the field program completed for the Memo, the property retains the potential CHVI identified in the CHAR.**	

Reference: Dawn Parkway System Renewal Project: Dawn to Enniskillen

Reference Number	Type of Property	Description and Review of CHVI	Current Photograph
CHR-7 (2017)	Barn	The property contains a barn surrounded by agricultural fields under cultivation. The timber frame barn has a gable roof. The CHAR identified the barn as having potential design value as a representative example of a 19th century barn in its construction and design. The property also has potential contextual value for its location of the buildings on the property and the relation to each other, the road, and the surrounding agricultural fields that physically and functionally link the structures to their surroundings. **Based on the field program completed for the Memo, the property retains the potential CHVI identified in the CHAR.**	
CHR-8 (2017)	Residence	The property contains a residence. The residence is a one-and-one-half storey side gable roof clad in asphalt shingles and the exterior of the structure is clad in siding. The CHAR identified the residence as having potential design value as a representative example of a late 19th century vernacular structure with Gothic Revival design influences. The property also has potential contextual value for its location of the buildings on the property and the relation to each other, the road, and the surrounding agricultural fields that physically and functionally link the structures to their surroundings. **Based on the field program completed for the Memo, the property retains the potential CHVI identified in the CHAR.**	

Reference: Dawn Parkway System Renewal Project: Dawn to Enniskillen

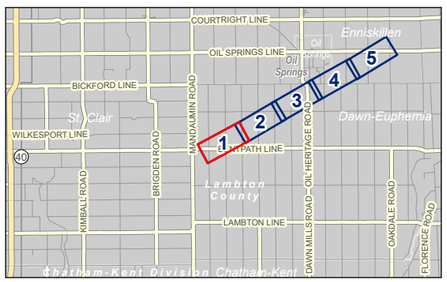
Reference Number	Type of Property	Description and Review of CHVI	Current Photograph
CHR-9 (2017)	Farmstead	The property contains a farmstead comprising a residence, barn, silo and multiple outbuildings surrounded by agricultural fields under cultivation. The residence is a one-and-one-half storey structure with a side gable roof clad in asphalt shingles and the exterior is clad in siding. Since the 2017 CHAR, a wrap around porch has been added to the front and side façades. Situated east of the residence is a barn. The barn is clad in timber frame and is raised. The CHAR identified the residence as having potential design value as characteristic of mid to late 19th century vernacular residence. The barn also has potential design value as a representative example of 19th century barn in its construction and design. The property also has potential contextual value for its location of the buildings on the property and the relation to each other, the road, and the surrounding agricultural fields that physically and functionally link the structures to their surroundings. **Based on the field program completed for the Memo, the property retains the potential CHVI identified in the CHAR.**	
CHR-10 (2017)	Modified Agricultural Landscape	The Study Area contains a modified agricultural landscape within a grid pattern. The grid pattern was influenced by the survey of the Townships of Enniskillen and Dawn in the 1820s and 1830s and the later layout of the hydro lines in the mid-20th century. The Study Area contains rural gravel roadways that also influence the grid pattern of the landscape. To address the issue of poor drainage that hindered settlement and agriculture these ditches were added in the late 19th to early 20th century, the landscape contains specific controls including pump houses, windmills, deep ditches and dykes. The modified agricultural landscape extends beyond the Study Area in the two townships. The CHAR identified potential historical value for the Study Area as it supports the broader agricultural setting of the Townships of Enniskillen and Dawn. These ditches also have potential historical value as their construction was influenced by settlement patterns and subsequently informed road development and hydro lines. They are examples of relevant drainage techniques available in the late 19th and early 20th centuries. This modified agricultural landscape also has potential contextual value as it is connected to the rural agricultural landscape of the Townships of Enniskillen and Dawn. **Based on the field program completed for the Memo, the property retains the potential CHVI identified in the CHAR.**	

Reference: Dawn Parkway System Renewal Project: Dawn to Enniskillen

Table 4 Additional Built Heritage Resources and Cultural Heritage Landscapes

Reference Number	Type of Property	Address	Previous Heritage Recognition	Description of Known or Potential CHVI	Photograph
BHR-1 (2026)	Residence	1523 Cuthbert Road	Identified during field review	This property contains a residence, barn, and outbuildings. The residence is a one and one half storey structure with a front facing gable roof clad in asphalt shingles. The exterior of the residence is clad in siding and contains replacement windows. There is a shed roof addition to the south façade, clad in siding. The foundation is obscured. The barn is a side facing gable roof with a vertical wood siding board. Based on construction materials and available historic mapping the residence was likely built between 1880 and 1913. The property has potential design value as a representative example of a late 19th to early 20th century Ontario vernacular residence.	
BHR-2 (2026)	Barn	2110 Pantry School Road	Identified during field review	This property contains a residence, barn, and outbuildings. The residence appears to be built in the late 20th century and does not have potential for CHVI. The barn has a side facing gable roof with a metal roof and vertical wood siding. The foundation appears to be concrete block. Based on available historic mapping, the barn was likely constructed between 1900 and 1920. The property has potential design value as a representative example of an early 20th century Ontario barn.	





Legend

- Study Area
- Built Heritage Resource
- Enbridge Station/Valve
- Proposed Pipeline
- Existing Pipeline
- Watercourse (Permanent)
- Constructed Drain
- Parcel Boundary (PIN)
- Waterbody

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Notes

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Project Location
Township of Dawn-Euphemia

REVA
Prepared by AWhite on 2026-09-24
Technical Review by JRichards on 2026-09-24

Client/Project
ENBRIDGE GAS INC.
DAWN SYSTEM RENEWAL PROJECT
DAWN TO ENNISKILLEN

Figure No.
2.1

Title
Previously Identified and Potential Built Heritage Resources and Cultural Heritage Landscapes

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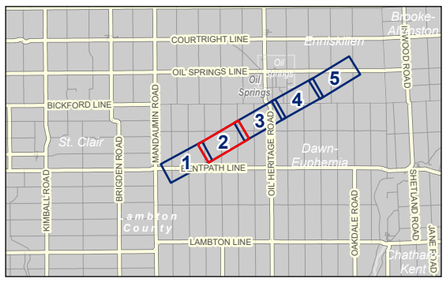

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Legend

- Study Area
- Cultural Heritage Resource
- Proposed Pipeline
- Existing Pipeline
- Watercourse (Permanent)
- Constructed Drain
- Parcel Boundary (PIN)

0 100 200 m

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Project Location
Township of Dawn-Euphemia

REVA
Prepared by AWhite on 2026-09-24
Technical Review by JRichards on 2026-09-24

Client/Project
ENBRIDGE GAS INC.
DAWN SYSTEM RENEWAL PROJECT
DAWN TO ENNISKILLEN

Figure No.
2.2

Title
Previously Identified and Potential Built Heritage Resources and Cultural Heritage Landscapes

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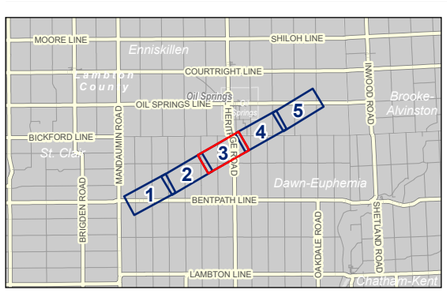

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Legend

- Study Area
- Cultural Heritage Resource
- Proposed Pipeline
- Existing Pipeline
- Watercourse (Permanent)
- Constructed Drain
- Parcel Boundary (PIN)

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Project Location
Township of Dawn-Euphemia

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Prepared by AWhite on 2026-09-24
Technical Review by JRichards on 2026-09-24

Client/Project
ENBRIDGE GAS INC.
DAWN SYSTEM RENEWAL PROJECT
DAWN TO ENNISKILLEN

Figure No.
2.3

Title
Previously Identified and Potential Built Heritage Resources and Cultural Heritage Landscapes

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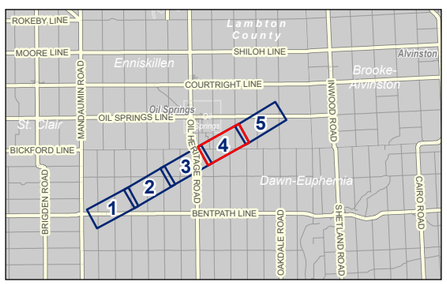

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Legend

- Study Area
- Cultural Heritage Resource
- Built Heritage Resource
- Proposed Pipeline
- Existing Pipeline
- Watercourse (Permanent)
- Constructed Drain
- Parcel Boundary (PIN)
- Waterbody

0 100 200 m

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Project Location
Township of Dawn-Euphemia

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Prepared by AWhite on 2026-09-24
Technical Review by JRichards on 2026-09-24

Client/Project
ENBRIDGE GAS INC.
DAWN SYSTEM RENEWAL PROJECT
DAWN TO ENNISKILLEN

Figure No.
2.4

Title
Previously Identified and Potential Built Heritage Resources and Cultural Heritage Landscapes

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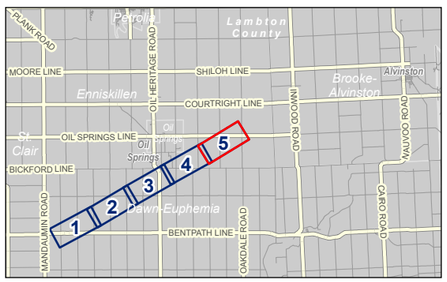

Legend

- Study Area
- Cultural Heritage Resource
- Enbridge Station/Valve
- Proposed Pipeline
- Existing Pipeline
- Watercourse (Permanent)
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Project Location
Township of Dawn-Euphemia

REVA
Prepared by AWhite on 2026-09-24
Technical Review by JRichards on 2026-09-24

Client/Project
ENBRIDGE GAS INC.
DAWN SYSTEM RENEWAL PROJECT
DAWN TO ENNISKILLEN

Figure No.
2.5

Title
Previously Identified and Potential Built Heritage Resources and Cultural Heritage Landscapes

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6 Preliminary Impact Assessment

6.1 Description of Proposed Undertaking

The Project construction process includes various activities as described below:

- **Site Preparation and Clearing**: The first activity is typically the survey and staking, which delineates the boundaries of the road allowance and temporary work areas where necessary. Next, the temporary work areas are cleared of brush and trees, if necessary. Safety barriers are then installed at the limits of the temporary work areas where public safety considerations are required, and aspects of the Traffic Management Plan are implemented (i.e., signs, vehicle access).
- **Pipeline Installation:** Following site preparation and clearing, the pipeline may be installed by one of the following methods:
  - **Horizontal Directional Drilling (HDD):** This trenchless pipeline installation method involves creating entry and exit pits on either side of a feature (such as roads), drilling a pilot hole and reaming the hole to the required size with the aid of drilling fluid, and then pulling the pipeline back through the hole.
  - **Trenching:** This pipeline installation method involves excavation of a trench, lowering the pipeline into place, and backfilling the trench. During backfilling the originally excavated subsoil is placed over the pipe in the trench. In stony areas, the pipe may be sand padded to protect the coating. In shallow water table areas, the pipeline may be weighted to provide negative buoyancy.
- **Pressure Testing:** The pipeline will be pressure tested by filling the pipe with nitrogen or water. The pipeline will be held at a high pressure for a set period of time, per the requirements of CSA Z662-19 Clause 8 and applicable Enbridge Gas specifications for pressure testing.

Clean-Up and Restoration: This will include the restoration of all work areas disturbed during construction. Erosion and sediment controls (ESC) installed during construction (if required) will be removed. Re-seeding of any grassed areas, landscaping, repair and restoration of roads and sidewalks, and laneway and driveway rehabilitation will all be completed.

6.2 Identification of Preliminary Potential Project Specific Impacts and Proposed Mitigation Measures

The results of the preliminary impact assessment and preparation of mitigation measures are presented in Table 5. Distances provided are based on the distance of the BHR or CHL from the Project Location (proposed pipeline alignment) and not the property parcel boundary.

Reference: Dawn Parkway System Renewal Project: Dawn to Enniskillen

Table 5 Preliminary Impact Assessment and Mitigation Measures

Reference Number	Location	Previous Heritage Recognition	Type and Description of Potential/Anticipated Impact	Mitigation
CHR-1 (2017)	1732 Robinson Road	Identified in 2017 CHAR	**No Impacts Anticipated:** The residence and barn are located adjacent to the Project Location. Construction activities are proposed more than 602 metres north of the residence and barn. Therefore, the property is not at risk of direct or indirect impacts, and no mitigation measures or further cultural heritage studies are required.	**Continued avoidance is recommended.**
CHR-2 (2017)	1627 Marthaville Road	Identified in 2017 CHAR	**No Impacts Anticipated:** The barn is located adjacent to the Project Location. Construction activities are proposed more than 436 metres south of the barn. Therefore, the property is not at risk of direct or indirect impacts, and no mitigation measures or further cultural heritage studies are required.	**Continued avoidance is recommended.**
CHR-3 (2017)	1736 Tramway Road	Identified in 2017 CHAR	**No Impacts Anticipated:** The barn is located adjacent to the Project Location. Construction activities are proposed more than 503 metres south of the barn. Therefore, the property is not at risk of direct or indirect impacts, and no mitigation measures or further cultural heritage studies are required.	**Continued avoidance is recommended.**
CHR-4 (2017)	1777 Tramway Road	Identified in 2017 CHAR	**No Impacts Anticipated:** The barn is located adjacent to the Project Location. Construction activities are proposed more than 206 metres south of the barn. Therefore, the property is not at risk of direct or indirect impacts, and no mitigation measures or further cultural heritage studies are required.	**Continued avoidance is recommended.**

Reference: Dawn Parkway System Renewal Project: Dawn to Enniskillen

Reference Number	Location	Previous Heritage Recognition	Type and Description of Potential/Anticipated Impact	Mitigation
CHR-5 (2017)	4164 Edys Mills Line	Identified in 2017 CHAR	**Indirect:** The residence is located adjacent to the Project Location. Construction activities are proposed within 25 metres of the identified CHR. The position of the residence within 25 metres has the potential for indirect impacts resulting from vibration damage during construction activities.	**Preferred Option:** Avoid the CHR by establishing a buffer zone around the residence to limit construction activity to more than 50 metres away. This should use appropriate preventive measures such as mapping the CHR on construction maps and temporary fencing. Staging and laydown areas should also be non-invasive and avoid the CHR. Where avoidance is not feasible, the alternative option should be applied. **Alternative Option:** Where construction activities are anticipated within the 50-metre buffer zone, a pre-construction vibration assessment by a qualified engineer is recommended to determine if vibration monitoring or site plan controls are required.
CHR-6 (2017)	2070 Oil Heritage Road	Identified in 2017 CHAR	**Indirect:** The residence is located adjacent to the Project Location. Construction activities are proposed within 7 metres of the identified CHR. The position of the residence within 7 metres has the potential for indirect impacts resulting from vibration damage during construction activities.	**Preferred Option:** Avoid the CHR by establishing a buffer zone around the residence to limit construction activity to more than 50 metres away. This should use appropriate preventive measures such as mapping the CHR on construction maps and temporary fencing. Staging and laydown areas should also be non-invasive and avoid the CHR. Where avoidance is not feasible, the alternative option should be applied. **Alternative Option:** Where construction activities are anticipated within the 50-metre buffer zone, a pre-construction vibration assessment by a qualified engineer is recommended to determine if vibration monitoring or site plan controls are required.
CHR-7 (2017)	Black Ash Road Lot 21 Concession 1	Identified in 2017 CHAR	**No Impacts Anticipated:** The barn is located adjacent to the Project Location. Construction activities are proposed more than 126 metres north of the barn. Therefore, the property is not at risk of direct or indirect impacts, and no mitigation measures or further cultural heritage studies are required.	**Continued avoidance is recommended.**

Reference: Dawn Parkway System Renewal Project: Dawn to Enniskillen

Reference Number	Location	Previous Heritage Recognition	Type and Description of Potential/Anticipated Impact	Mitigation
CHR-8 (2017)	5563 Oil Springs Line	Identified in 2017 CHAR	**Indirect:** The residence is located adjacent to the Project Location. Construction activities are proposed within 22 metres of the identified CHR. The position of the residence within 22 metres has the potential for indirect impacts resulting from vibration damage during construction activities.	**Preferred Option:** Avoid the CHR by establishing a buffer zone around the residence to limit construction activity to more than 50 metres away. This should use appropriate preventive measures such as mapping the CHR on construction maps and temporary fencing. Staging and laydown areas should also be non-invasive and avoid the CHR. Where avoidance is not feasible, the alternative option should be applied. **Alternative Option:** Where construction activities are anticipated within the 50-metre buffer zone, a pre-construction vibration assessment by a qualified engineer is recommended to determine if vibration monitoring or site plan controls are required.
CHR-9 (2017)	5673 Oil Springs Line	Identified in 2017 CHAR	**No Impacts Anticipated:** The residence is located adjacent to the Project Location. Construction activities are proposed more than 280 metres east of the residence. Therefore, the property is not at risk of direct or indirect impacts, and no mitigation measures or further cultural heritage studies are required.	**Continued avoidance is recommended.**
CHR-10 (2017)	Modified Agricultural Landscapes	Identified in 2017 CHAR	**No Impacts Anticipated:** The proposed pipeline is to follow the existing easement of the Dawn-Parkway System, and no further permanent alterations are anticipated for the installation of the pipeline that would alter or otherwise impact potential heritage attributes of the modified agricultural landscape. Therefore, no mitigation measures are required.	**Continued avoidance is recommended.**
BHR-1 (2026)	1523 Cuthbert Road	Identified during field review	**No Impacts Anticipated:** The residence is located adjacent to the Project Location. Construction activities are proposed more than 110 metres northeast of the residence. Therefore, the property is not at risk of direct or indirect impacts, and no mitigation measures or further cultural heritage studies are required.	**Continued avoidance is recommended.**

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Reference Number	Location	Previous Heritage Recognition	Type and Description of Potential/Anticipated Impact	Mitigation
BHR-2 (2026)	2110 Pantry School Road	Identified during field review	**No Impacts Anticipated:** The barn is located adjacent to the Project Location. Construction activities are proposed more than 405 metres southeast of the barn. Therefore, the property is not at risk of direct or indirect impacts, and no mitigation measures or further cultural heritage studies are required.	**Continued avoidance is recommended.**

7 Recommendations

Historical research, municipal and agency data requests, and the field program completed for this memo identified a total of 10 CHRs (2017) and two BHRs. This includes 10 CHRs previously identified in the 2017 CHAR and two additional BHRs identified in 2026. Following an assessment of impacts, properties with potential risk for indirect impacts due to vibration damage were identified for:

- CHR-5 4164 Edys Mills Line
- CHR-6 2070 Oil Heritage Road
- CHR-8 5563 Oil Springs Line

The preferred option is to avoid the CHRs and BHRs by establishing a buffer zone around the resources to avoid construction activity within 50 metres of the CHRs and BHRs. This should use appropriate preventive measures such as mapping on construction maps or plans and temporary fencing. Staging and laydown areas should also be selected to be non-invasive and avoid the built heritage resource or cultural heritage landscape.

Where avoidance is not feasible, the alternative option should be applied. If the 50-metre buffer cannot be avoided, the alternative option to mitigate this risk is for a qualified building condition specialist or engineer to develop a strategy to carry out condition surveys and vibration monitoring, where required. The purpose of the condition surveys is to establish baseline conditions of structures prior to construction activities occurring within their vicinity, and the vibration monitoring is to be used as a precautionary measure against excessive impacts which may cause shifts in foundations, walls, masonry, or historic finishes.

The pre-condition survey may include screening activities to identify critical properties and determine appropriate vibration levels based on building type, age, and condition. Vibration monitoring may consist of random confirmatory vibration monitoring during

construction at the most critical properties. A post-condition survey should be carried out on an as-needed basis to be determined by a qualified building condition specialist or engineer to confirm no historic foundations, walls, masonry, or historic finishes were damaged due to vibration effects.

8 Limitations and Use

The conclusions in the Memo titled Dawn Parkway System Renewal Project: Dawn to Enniskillen are Stantec's professional opinion, as of the time of the Memo, and concerning the scope described in the Memo. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. The Memo relates solely to the specific project for which Stantec was retained and the stated purpose for which the Memo was prepared. The Memo is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from Enbridge Gas (the "Client") and third parties in the preparation of the Memo to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

This Memo is intended solely for use by the Client in accordance with Stantec's contract with the Client. While the Memo may be provided by the Client to applicable authorities having jurisdiction and to other third parties in connection with the project, Stantec disclaims any legal duty based upon warranty, reliance or any other theory to any third party, and will not be liable to such third party for any damages or losses of any kind that may result.

Reference: Dawn Parkway System Renewal Project: Dawn to Enniskillen

Respectfully,

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