CULTURAL HERITAGE REPORT: EXISTING CONDITIONS AND PRELIMINARY IMPACT ASSESSMENT—FULLARTON DAM REHABILITION

FINAL REPORT

March 9, 2023

Prepared for:
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Project Number:
160901056

Limitations and Sign-off

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Meaghan Rivard, MA, CAHP

Printed Name

Executive Summary

As part of a Municipal Class Environmental Assessment (MCEA), the Upper Thames River Conservation Authority (UTRCA) (the Client) retained Stantec Consulting Ltd. (Stantec) to support long term planning for the Fullarton Dam. The purpose of this project is to identify alternatives that address the safety deficiencies identified in the *Dam Safety Assessment* and to select a preferred management strategy for the dam that considers the natural environment and the social uses associated with the dam, reservoir, and rest of the Fullarton Conservation Area. The Fullarton Dam was built in the 1950s and is located in the Fullarton Conservation Area, a 34 hectare site used for recreation (Figure 1 and Figure 2).

The requirement to consider cultural heritage in MCEA is discussed in the *Municipal Class Environmental Assessment Manual* (MCEA Manual) (Municipal Engineers Association 2015) and *Provincial Policy Statement* (PPS) (Government of Ontario 2020). The MCEA Manual considers cultural heritage, including built heritage resources and cultural heritage landscapes, as well as archaeological resources, as one in a series of environmental factors to be considered when undertaking an MCEA, particularly when describing existing and future conditions, development alternatives, and determination of the preferred alternative. To facilitate this Project, the Client retained Stantec to conduct a *Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment.*

Depending on project activities, the following built heritage resources and cultural heritage landscapes may be at risk of potential direct impacts due to land disturbance as they contain built heritage resources or cultural heritage landscapes within 50 metres of the Fullarton Dam property boundary:

- North Thames River (CHL-1)
- 2955 Perth Road 163 (BHR-3)

To further understand the potential for the Project to affect the properties identified as containing Cultural Heritage Value or Interest (CHVI), the impact assessment contained within this report should be amended when design alternative information on proposed construction activity is finalized. When design alternative information is received, potential direct impacts and indirect can be refined as necessary.

Potential indirect impacts through land disturbance should be avoided through a development of design alternatives that avoids indirect impacts to the North Thames River (CHL-1) and 2955 Perth Road (BHR-3). If avoidance is not deemed feasible, potential mitigation measures can be refined following the completion of design alternatives.

The executive summary only highlights key points from the report; for complete information and findings, the reader should examine the report.

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Qualifications of heritage project personnel are included in Appendix A

Abbreviations

BHR	Built Heritage Resource
CAHP	Canadian Association of Heritage Professionals
CHRS	Canadian Heritage River System
CHL	Cultural Heritage Landscape
CHVI	Cultural Heritage Value or Interest
EA	Environmental Assessment
MA	Master of Arts
MCEA	Municipal Class Environmental Assessment
MCM	Ministry of Citizenship and Multiculturalism
O. Reg.	Ontario Regulation
OHA	*Ontario Heritage Act*
OHT	Ontario Heritage Trust
PPS	Provincial Policy Statement
UTRCA	Upper Thames River Conservation Authority

1 Introduction

1.1 Study Purpose and Objectives

As part of a Municipal Class Environmental Assessment (MCEA), the Upper Thames River Conservation Authority (UTRCA) (the Client) retained Stantec Consulting Ltd. (Stantec) to support long term planning for the Fullarton Dam. The purpose of this project is to identify alternatives that address the safety deficiencies identified in the *Dam Safety Assessment* and to select a preferred management strategy for the dam that considers the natural environment and the social uses associated with the dam, reservoir and rest of the Fullarton Conservation Area. The Fullarton Dam was built in the 1950s and is located in the Fullarton Conservation Area, a 34 hectare site used for recreation (Figure 1 and Figure 2).

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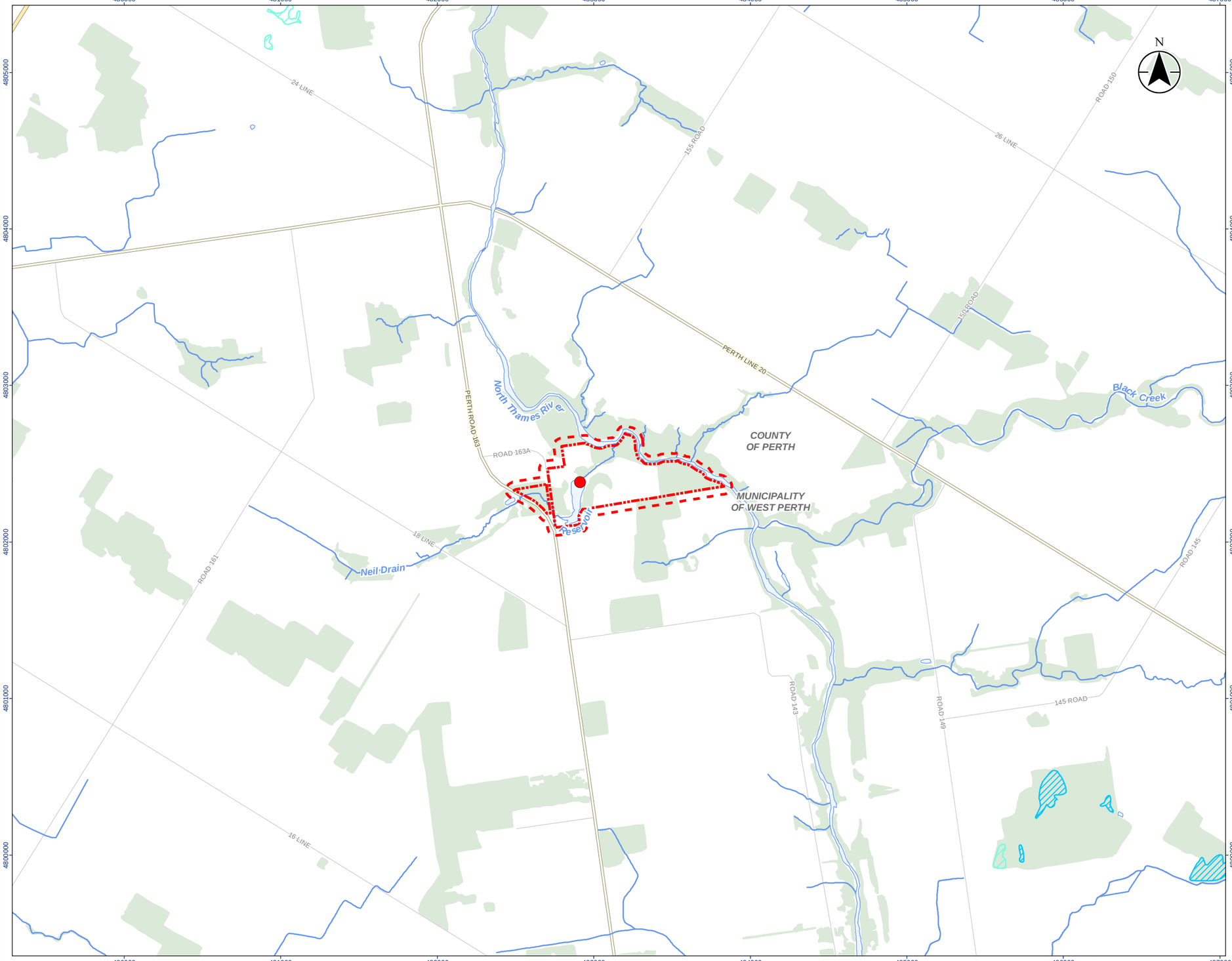
For the *Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment*, Stantec defined a Study Area for the assessment that includes a 50 metre boundary around the Fullarton Conservation Area property parcel.

This *Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment* summarizes the applicable heritage policies, summarizes the Study Area's geography and history, identifies known and potential built heritage resources and cultural heritage landscapes, and screens the potential built heritage resources and cultural heritage landscapes for potential cultural heritage value or interest (CHVI) using the criteria prescribed in *Ontario Regulation* (O. Reg.) *9/06* of the *Ontario Heritage Act* (OHA). Based on this understanding of the Study Area and surrounding area, the potential impacts resulting from the Project are assessed, and future actions are recommended.



Stantec

Legend

- Fullarton Dam
- Expressway / Highway
- Major Road
- Minor Road
- Regulated Watercourse (UTRCA)
- Waterbody
- Wetland - Evaluated (Other)
- Wetland - Not evaluated per Ontario Wetland Evaluation System
- Wooded Area
- Fullarton Dam Property Boundary
- Study Area

0 0.5 1 km

1:25,000 (At original document size of 11x17)

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, 2023.

Project Location
County of Perth

160901056 REVA
Prepared by PRM on 2023-03-09
Technical Review by FS on 2023-03-09

Client/Project
CULTURAL HERITAGE REPORT: EXISTING CONDITIONS AND PRELIMINARY IMPACT ASSESSMENT - FULLARTON DAM REHABILITION

Figure No.
1

Title
Location of Study Area

Stantec

Legend

- Fullarton Dam
- Major Road
- Minor Road
- Regulated Watercourse (UTRCA)
- Waterbody
- Fullarton Dam Property Boundary
- Study Area

0 250 500 metres

1:10,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
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Client/Project
CULTURAL HERITAGE REPORT: EXISTING CONDITIONS AND PRELIMINARY IMPACT ASSESSMENT - FULLARTON DAM REHABILITION

Figure No.
2

Title
Study Area

2 Methodology

2.1 Requirements

The *Ontario Heritage Act* (OHA) provides the primary statutory framework for the conservation of cultural heritage resources in Ontario. Conservation of cultural heritage resources is a matter of provincial interest, as reflected in the OHA and Ministry of Citizenship and Multiculturalism (MCM) policies.

The requirement to consider cultural heritage in Municipal Class EAs (MCEA) is discussed in the *Municipal Class Environmental Assessment Manual* (MCEA Manual) (Municipal Engineers Association 2015) and the revised 2020 *Provincial Policy Statement* (PPS) (Government of Ontario 2020). The MCEA Manual considers cultural heritage, including built heritage resources and cultural heritage landscapes, as well as archaeological resources, as one in a series of environmental factors to be considered when undertaking an MCEA, particularly when describing existing and future conditions, development alternatives, and determination of the preferred alternative.

The MCEA Manual further suggests that cultural heritage resources that retain heritage attributes should be identified early in the environmental assessment (EA) process and avoided where possible. Where avoidance is not possible, potential effects to these attributes should be identified and minimized. Adverse impacts should be mitigated according to provincial and municipal guidelines. It is suggested that this happen early in the process so that potential impacts to significant features can be included in understanding project impacts and mitigation plans.

In addition to requirements outlined in the MCEA Manual, provisions made under the 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 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.*
>
> (Government of Ontario 2020)

2.2 Background History

To familiarize 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 from 1879, 1927, 1959, 1960, 1975, and 1976 were reviewed to identify the presence of structures, settlements, and other potential built heritage resources and cultural heritage landscapes.

2.3 Municipal and Agency Consultation

Listings of provincially and locally designated properties, districts, and easements for the municipality were collected from the Ontario Heritage Trust (OHT), the MCM, and the Municipality of West Perth. 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. Consultation with the public and Indigenous peoples is undertaken as part of the broader EA process. Built heritage resources or cultural heritage landscapes identified by the public of Indigenous peoples will be incorporated into this report.

2.4 Field Program

Frank Smith, Cultural Heritage Specialist with Stantec, conducted a pedestrian and vehicular windshield survey on January 27, 2023, from publicly accessible roadways unless specified otherwise. During the survey, the Study Area was surveyed for previously identified or potential built heritage resources or cultural heritage landscapes. These were photographed, their characteristics noted while in the field, and their locations digitally recorded.

Generally, buildings and structures older than 40 years of age were screened during the survey for their potential to satisfy O. Reg. 9/06 criteria and the MCM *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* (MCM 2016). Only properties containing buildings or structures determined to have the potential to satisfy O. Reg. 9/06 were inventoried. 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.

2.5 Screening of Cultural Heritage Value or Interest

The criteria for determining CHVI is defined by O. Reg. 9/06 (See Section 2.5.1). Each potential heritage resource was screened both as an individual structure and as a potential cultural heritage landscape. Where potential CHVI was identified, a structure or landscape was assigned a built heritage resource (BHR) or cultural heritage landscape (CHL) number and the property was determined to contain a potential heritage resource.

2.5.1 Ontario Regulation 9/06

1. The property has design value or physical value because it is a rare, unique, representative or early example of a style, type, expression, material or construction method.

2. The property has design value or physical value because it displays a high degree of craftsmanship or artistic merit.

3. The property has design value or physical value because it demonstrates a high degree of technical or scientific achievement.

4. The property has historical value or associative value because it has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community.

5. The property has historical value or associative value because it yields, or has the potential to yield, information that contributes to an understanding of a community or culture.

6. The property has historical value or associative value because it demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.

7. The property has contextual value because it is important in defining, maintaining or supporting the character of an area.

8. The property has contextual value because it is physically, functionally, visually or historically linked to its surroundings.

9. The property has contextual value because it is a landmark

(Government of Ontario 2023)

2.6 Assessment of Impacts

Where a component of a previously identified or potential built heritage resource or cultural heritage landscape was situated within the Study Area, the impacts of the proposed undertaking were evaluated. The impacts, both direct and indirect, are evaluated according to InfoSheet #5.

Seven potential negative effects have been identified, including:

1. Destruction of any, or part of any, significant heritage attributes or features
2. Alteration that is not sympathetic, or is incompatible, with the historic fabric and appearance
3. Shadows created that alter the appearance of a heritage attribute or change the viability of a natural feature or plantings, such as a garden
4. Isolation of a heritage attribute from its surrounding environment, context, or a significant relationship
5. Direct or indirect obstruction of significant views or vistas within, from, or of built and natural features
6. 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
7. Land disturbances such as a change in grade that alters soils and drainage patterns that adversely affect an archaeological resource

(Government of Ontario 2006)

In addition to direct effects related to destruction, the potential for indirect effects 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 historic 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; Rainer 1982; Wiss 1981; National Park Service 2001). The proximity of Project components to built heritage resources and cultural heritage landscapes was considered in this assessment, particularly those within 50 metres, 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.

Indirect impacts resulting from land disturbances apply to archaeological resources, which are beyond the scope of this assessment. An Archaeological Assessment has been prepared under separate cover which addresses the archaeological potential of the Study Area and includes recommendations for further work (Stantec 2023). No further consideration to archaeological resources is provided in this report.

3 Existing Conditions

3.1 Background and Historical Research

3.1.1 Introduction

The Study Area is located in southwestern Ontario in the Municipality of West Perth, Perth County. The Study Area includes the Fullarton Conservation Area and a 50-metre buffer surrounding the conservation area's property parcel. The Study Area is historically located in the former Township of Fullarton in the following lots and concessions:

- Lots 15-17, Mitchell Road East Side
- Lots 16-17, Mitchell Road West Side
- Lots 12-14, Concession 9

The County of Perth is located on the traditional lands of the Anishinaabe peoples (West Perth Public Libraries 2021; Stratford Beacon Herald 2022; Native Land 2023). The Study Area and Perth County is located on land covered under Treaty 29, also known as the Huron Tract Purchase. This treaty was signed in 1827 between the Crown and certain Anishinaabe peoples. The treaty covered approximately 2.2 million acres of land in southwestern Ontario (Ministry of Indigenous Affairs 2023).

3.1.2 Physiography

The Study Area is situated within the Stratford Till Plain physiographic region of southern Ontario. The Stratford Till Plain is a broad clay till plain extending from London to the Grand River Valley. The plain consists of a large ground moraine interrupted by several terminal moraines. It is divided in its drainage by the Thames River in the centre and southern areas and by the Grand River in the northern area. The plain is included within the Lake Huron lake-effect belt and receives more precipitation than average in southern Ontario. This, combined with the good natural soil fertility, allows it to be one of the most agriculturally productive areas in Ontario (Chapman and Putnam 1984: 133-134).

Part of the north branch of the Thames River is located within the Study Area. The Thames River is part of the Canadian Heritage River Systems (CHRS) and is 273 kilometres in length. The three branches of the Thames River begin near Mitchell, Hickson, and Tavistock. The upper parts of the Thames River are located in a former glacial spillway. This area contains rocky riverbeds and steep valleys. The north and south branches of the Thames River confluence near downtown London. West of London, the Thames River is located in a shallow channel that was carved by the river. The river empties into Lake St. Clair at Lighthouse Cove (CHRS 2022). The Thames River was historically known as the *Deshkan Ziibi* (Antler River) to the Anishinaabe, *Askunessippi* (Antlered River) to the Neutral People, and *La Tranche* to French explorers. In 1793, it was named the Thames River by Lieutenant Governor John Graves Simcoe (UTRCA 2023a).

3.1.3 Township of Fullarton

Survey and Settlement

The Township of Fullarton was originally part of a large land grant to the Canada Company known as the Huron Tract. The Canada Company was formed in 1826 to assist in the improvement, settlement, and administration of land holdings in Upper Canada (Karr 1974: 3). The privately owned company was organized under the leadership of John Galt with financial backing from merchants in London, England (Karr 1974: 7). The Canada Company was modeled on similar settlement schemes in Australia and New York State (Karr 1974: 8-9). While the company originally intended to purchase all the Crown Reserves and half the Clergy Reserves of the colony, this was met with opposition by John Strachan, Anglican Bishop of Toronto, and his allies in Britain. After several rounds of negotiation, the Canada Company forewent the purchase of Clergy Reserves and instead opted to purchase a one million acre tract in the London and Western District known as the Huron Tract (Karr 1974: 12). In 1827, the boundaries of Huron Tract were finalized, and William Dunlop was dispatched to explore the area (Karr 1974: 30). To facilitate settlement, Canada Company placed agents in the British Isles and the United States to advertise lands for sale and work started on the Huron Road to connect Guelph to the edge of the Huron Tract (Karr 1974: 25; 33).

The baseline of the survey for Fullarton Township was laid out along the south side of the Huron Road by Dunlop and his exploration party in 1829. The townships of South Easthope, Downie, and Ellice also contain baselines along the south side of the Huron Road (Johnston and Johnston 1967: 6). Fullarton Township was named in honour of John Fullarton, a Directory of the Canada Company (Gardiner 1899: 351). Many of the townships in Perth County were named in honour of Canada Company officials (Gardiner 1899: 350). The survey of Fullarton Township was completed in 1835 by John McDonald (Association of Ontario Land Surveyors [AOLS] 1997; Canada Company 1835). The township was surveyed using a special variant used to survey Canada Company lands (AOLS 1997). This system of survey was first used by the Canada Company to survey the Huron Tract and created 100 acres lots that measured 20 chains by 50 chains (1,320 feet by 3,300 feet). Road allowances were located every alternate concession and every fifth lot. Survey lines were located in the centre of road allowances and this created sections of 1,000 acres with ten lots of 100 acres each (Plate 1). In 1850, this survey system was adopted for use in Crown surveys and much of Ontario between Georgian Bay and the Ottawa River was surveyed using this system (Weaver 1968: 16).

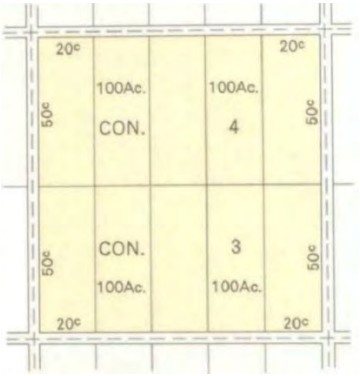


Plate 1: 1,000 Acre Sectional Survey System (Dean 1968)

The Huron Tract grew slowly during the 1830s as Canada Company officials in London, England frequently dictated impractical policy and cheaper land remained widely available elsewhere in Upper Canada (Kerr 1974: 52). By the close of the 1830s, Fullarton Township only contained 11 families (Kerr 1974: 97).

19th Century Development

Immigration to the Huron Tract and Fullarton Township increased during the 1840s. During this time, the Canada Company loosened its direct control of the Huron Tract and initiated a leasing plan to offset the costs associated with relocating to Upper Canada (Kerr 1974: 123-124). By 1844, just over 8,000 acres of land had been sold or leased in Fullarton Township and the population was recorded as 236. However, the township clearly remained in the early stages of development as only 393 acres of land were under cultivation (Kerr 1974: 120). In 1846, *Smith's Canadian Gazetteer* described the township's soil as "mostly good" and noted the population was 419 (Smith 1846: 61).

The most important roadway in Fullarton Township during the mid-19th century was the Mitchell Road (present day County Road 163 and County Road 163A), which is partially located within the Study Area. The road was opened in 1844 to connect St. Mary's and Mitchell. However, conditions on this roadway remained rudimentary and consisted of a narrow strip of land mostly cleared of trees with no bridges over water courses. This road was the last road financed by the Canada Company in present-day Perth County (Johnson and Johnson 1967: 183). Mitchell Road was finally improved in the 1850s by private efforts (Johnson and Johnson 1967: 188).

Fullarton Township was originally located in the Huron District, which was seated in Goderich. Settlers in the Huron District near Stratford resented the considerable distance required to travel to Goderich and petitioned to have the Huron District subdivided (Johnson and Johnson 1967: 37). In 1850, as part of the *Baldwin Act* to establish municipal government, the County of Perth was formed. The new county was comprised of 11 townships from the former Huron District and District of Wellington (Johnson and Johnson 1967: 56-57).

In 1857, the Buffalo and Lake Huron Railway was completed through Fullarton Township and reached Mitchell. The community became an important shipping point and grew to become Fullarton Township's most significant community. As a result, Mitchell was incorporated as a village (Johnson and Johnson 1967: 78). Other hamlets in the township included Fullarton, Russeldale, and Carlingford (Belden 1879). During the 1850s, the township's population grew rapidly and increased from 1,750 in 1851 to 2,890 in 1861 (Census of the Canadas 1853; Census of the Canadas 1861). In 1861, the township contained 405 farmsteads on 36,566 acres of land. A total of 14,006 acres of land were under cultivation (Census of the Canadas 1864).

The population of Fullarton Township reached a peak of 2,903 in 1871. For the remainder of the 19th century and into the mid-20th century the township entered into a period of population decline. In 1891, the population of the township was recorded as 2,511 (Dominion Bureau of Statistics 1953a). The contraction of Fullarton Township's population was part of a broader trend of urbanization in the late 19th and early 20th centuries. The emergence of industrialization increased the number of wage workers required in cities and towns. At the same time, improvements in farm equipment and the mechanization of farming meant that less labour was required on a farm (Samson 2012). This encouraged out-migration from rural areas to the burgeoning cities of Ontario (Drummond 1987: 30).

20th Century Development

Between 1901 and 1911, the population of Fullarton Township decreased from 2,295 to 1,965 (Dominion Bureau of Statistics 1953a). However, the amount of improved land in the township remained high because of agricultural mechanization. The Census of 1911 recorded 401 farmsteads in the township on 40,089 acres of land. A total of 35,399 acres of land was considered improved and only 5,974 acres of land was considered unimproved (Census of Canada 1911).

The township's population decline continued into the early 1950s. In 1951, the population of the township was recorded as 1,548 (Dominion Bureau of Statistics 1953a). That year, the township contained 336 farmsteads on 39,853 acres. The amount of improved land in the township was recorded as 35,175 acres. This improved land included 21,793 acres of crops and 11,207 acres of pasture. The remainder of improved land was fallow or classified as "other" (Dominion Bureau of Statistics 1953b). The continuous population decline of Fullarton Township was reversed in 1956 when the population increased by 65 people between 1951 and 1956 (Johnson and Johnson 1967: 443). After this, the population of the township stabilized at around 1,500 individuals into the 1980s (Johnson and Johnson 1967: 443; Statistics Canada 1982). Located relatively far from major roadways and cities, agriculture continued to remain the dominant economic driver of the township through the remainder of the 20th century and into the present-day.

Beginning in the mid-1990s, the provincial government embarked on a program of municipal restructuring to reduce the total number of municipalities in Ontario. Between 1996 and 2001, the number of municipalities in Ontario was reduced from 815 to 471 (Rusk 2000). As part of this restructuring, the number of municipalities in Perth County was reduced from 14 to four in 1998. The Township of Fullarton was amalgamated with Hibbert Township, Logan Township, and the Town of Mitchell to form the lower-tier Municipality of West Perth (Perth County 2023; Municipal Affairs and Housing 2023). Stratford and

St. Mary's continued to operate outside of county government (Perth County 2023). The population of West Perth was recorded as 8,865 in 2016 (Statistics Canada 2021).

3.1.4 Site History

Like much of Fullarton Township, the Study Area was mostly settled in the 1850s. The Study Area contains five lots situated along the Mitchell Road, an important early roadway through the township. The remainder of the Study Area is located on lots that back onto the Thames River in Concession 9 of the township. All the lots in the Study Area were originally patented to the Canada Company by the Crown. Table 1 contains a list of the individuals in the Study Area to receive title to their lot from the Canada Company.

Table 1 Canada Company Land Sales in Study Area

Lot, Concession	Date of Instrument	Grantee	Source
Lot 15, Mitchell Road East Side	March 24, 1855	James Baker	OnLand 2023a
Lot 16, Mitchell Road East Side	January 29, 1856	John C.W. Daly	OnLand 2023a
Lot 17, Mitchell Road East Side	June 6, 1845	Robert Porteous	OnLand 2023a
Lot 16, Mitchell Road West Side	September 9, 1854	William Haynes	OnLand 2023b
Lot 17, Mitchell Road West Side	March 2, 1849	Thomas Robertson	OnLand 2023b
Lot 12, Concession 9	March 8, 1853	Daniel Colgan	OnLand 2023c
Lot 13, Concession 9	May 15, 1852	Colin McNicol	OnLand 2023c
Lot 14, Concession 9	July 12, 1855	Malcolm McNeil	OnLand 2023c

Among these first landowners, John C.W. Daly can be confirmed as a land speculator. Daly was a land agent of the Canada Company and settled in Stratford in the second frame home built in the settlement (Swainson 1972). Daly amassed significant power in the area through his association with the Canada Company and his appointments as magistrate, coroner, and district councillor. In addition, he owned a mill and ran the post office. Daly was also known for his significant land holdings, this included Lot 16, Mitchell Road East in the Study Area (Johnson and Johnson 1967: 43). The remainder of the lots in the Study Area were likely settled and farmed by the individuals who purchased land from the Canada Company.

Historical mapping from 1879 indicates that many of these original settlers or their descendants remained within the Study Area including the Baker, Porteous, Haynes, Colgan, and McNeil families. The mapping depicts the Study Area along Mitchell Road lined with structures and shows that the lots in Concession 9 also contained structures (Figure 3). The Census of 1881 contains the following entries for the lot occupants. Lot 15, Mitchell Road East was occupied by H. [Henry] Baker, likely a relative of the original landowner James Baker. Henry Baker was enumerated as a 47-year-old farmer born in England. He lived with his wife Elizabeth, age 45, and three children between the ages of 14 and 23. Lot 16, Mitchell Road East was occupied by R. [Richard] Sandercook. He was enumerated as a 57-year-old farmer born in England. He lived with his wife Anne, age 63. Lot 17, Mitchell Road East was occupied by W. [William]

Porteous. He was enumerated as a 55-year-old farmer born in Ontario. He lived with Mary, age 33. Lot 16, Mitchell Road West was occupied by E. [Edward] Haynes (spelled Haines in census records), a 27-year-old farmer born in Ontario. He lived with his wife Christiana, age 26, a 23 year old relative whose first name is illegible, and three children between the ages of six months and three. Lot 17, Mitchell Road West was occupied by T. [Thomas] Currelley. He was enumerated as 43-year-old farmer born in Ontario. He lived with his wife Mary, age 46, and five children between the ages of nine and 18. Lot 12, Concession 9 was occupied by Daniel Colgan. He was enumerated as a 60-year-old farmer born in Ireland. He lived with his three children between the ages of 19 and 26. Lot 13, Concession 9 was occupied by G. Brown. The Census of 1881 does not list anyone with the first name starting with G as a head of a household in Fullarton Township in 1881. Lot 14, Concession 9 was occupied by M. [Malcolm] McNeil. He was enumerated as a 67-year-old farmer born in Scotland. He lived with his wife Margaret, age 57, and their three children between the ages of 18 and 24 (Library and Archives Canada 1881). Descendants of Malcolm McNeil remained on Lot 14, Concession 9 until at least the Canadian Centennial in 1967 as their farmstead was noted as a “Centennial Farm” in Perth County. A Centennial Farm was a farmstead occupied by the same family since at least 1867 (Johnson and Johnson 1967: 449).

Topographic mapping from 1927 shows that the Study Area remained rural. The mapping shows that Mitchell Road had been improved into a gravel road, indicating it remained an important transportation route in the township. Present-day County Road 20 along Concession 9 remained unimproved. The mapping depicts a bridge crossing the stream that is presently dammed by the earthen structure in the Study Area (Figure 4).

In 1953, 77 acres of Lot 16 Mitchell Road East and four acres of Lot 17, Mitchell Road East were sold to the UTRCA by Alonzo Hart and Ernest Rogers respectively (OnLand 2023a). The UTRCA was formed in 1947 to implement flood control measures in the upper watershed of the Thames River (UTRCA 2023b). In 1955, the UTRCA built a nine foot high and 300 foot long earth dam in the Study Area along a stream inhabited by trout fish. This dam was primarily recreational in purpose but served a secondary purpose as part of wider floor control measures in the upper Thames watershed (UTRCA 2023c; UTRCA 2023d). The Fullarton Dam was one of several recreational earth dams built or reconstructed by UTRCA in the 1950s. Other earth dams completed by UTRCA in the 1950s include the Shakespeare Dam (built 1954), Embro Dam (reconstructed 1959), and the Dorchester Dam (built 1958) (UTRCA 2023 e; UTRCA 2023f; UTRCA 2015;). Topographic mapping from 1959 to 1960 shows the dam and pond. The mapping also indicates that Mitchell Road remained paved in gravel (Figure 5). Earth dams (also called embankment dams) have been frequently built in North America over the last 100 years. As of 2002, 72% of all dams in the United States are these types of structures (Bureau of Reclamation 2002).

Between 1962 and 1966, the area around the dam owned by UTRCA was developed into a public park (UTRCA 2023c). In 1967, Norman Clarke sold for $1 an unspecified amount of land in Lot 16, Mitchell Road West to complete the acquisition of the present-day footprint of UTRCA lands within the Study Area (OnLand 2023b). Topographic mapping from 1975 and 1976 shows the pond had grown in size. The mapping also shows that the present-day alignment of Mitchell Road had been completed and the roadway and new alignment were paved with asphalt (Figure 6).

Stantec

Legend

- Fullarton Dam Property Boundary
- Study Area

Figure Not to Scale

Notes

1. Belden, H. & Co. 1879. Illustrated Historical Atlas of the County of Perth, Ont. Toronto: H. Belden & Co.

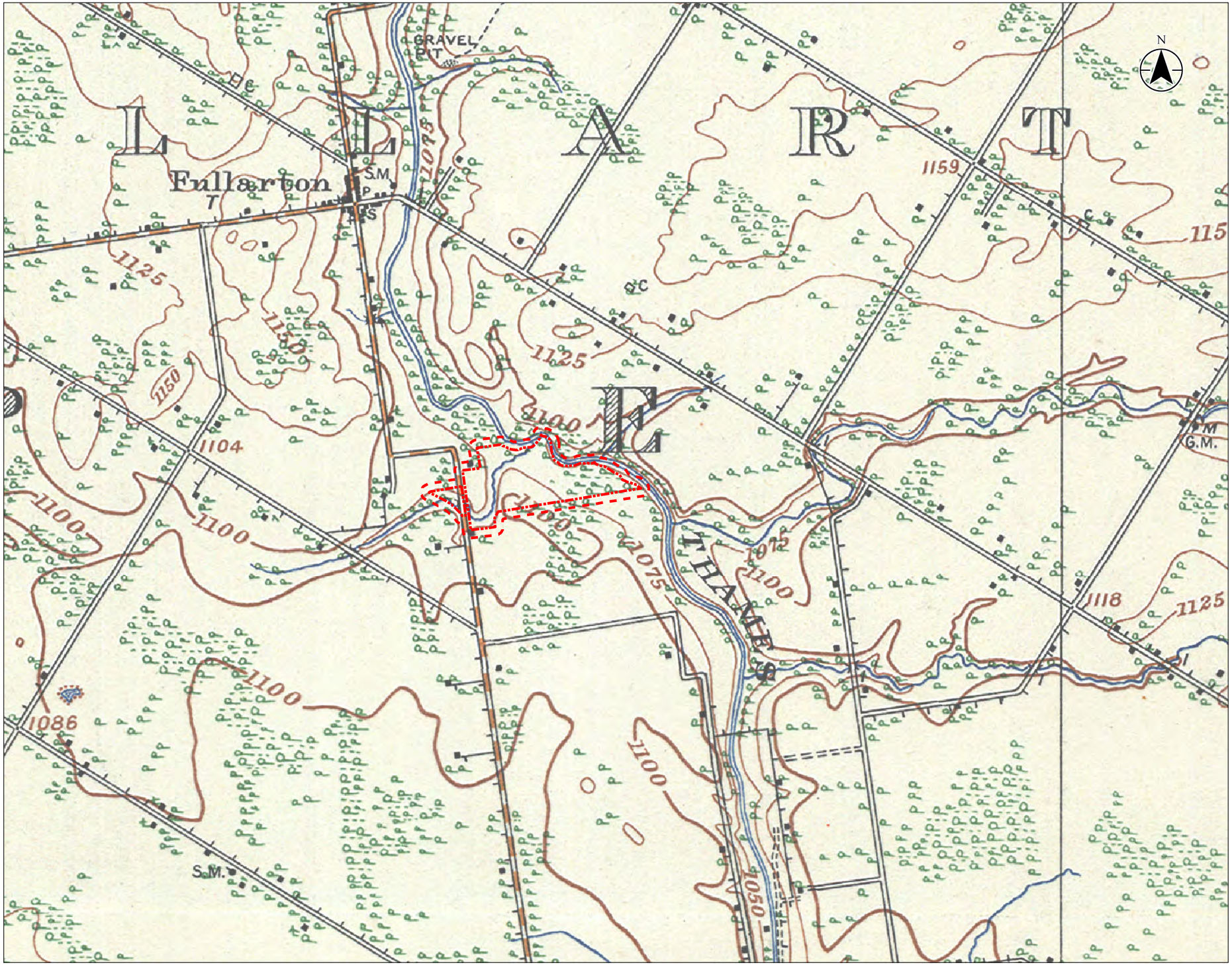
Project Location
County of Perth

160901056 REVA
Prepared by PRM on 2023-03-09
Technical Review by FS on 2023-03-09

Client/Project
CULTURAL HERITAGE REPORT: EXISTING CONDITIONS AND PRELIMINARY IMPACT ASSESSMENT - FULLARTON DAM REHABILITION

Figure No.
3

Title
Historical Mapping, 1879



Stantec

Legend

- Fullarton Dam Property Boundary
- Study Area

Figure Not to Scale

Notes

Department of National Defence. 1927. Topographic Map, Ontario, St. Mary's Sheet

Project Location
County of Perth

160901056 REVA
Prepared by PRM on 2023-03-09
Technical Review by FS on 2023-03-09

Client/Project

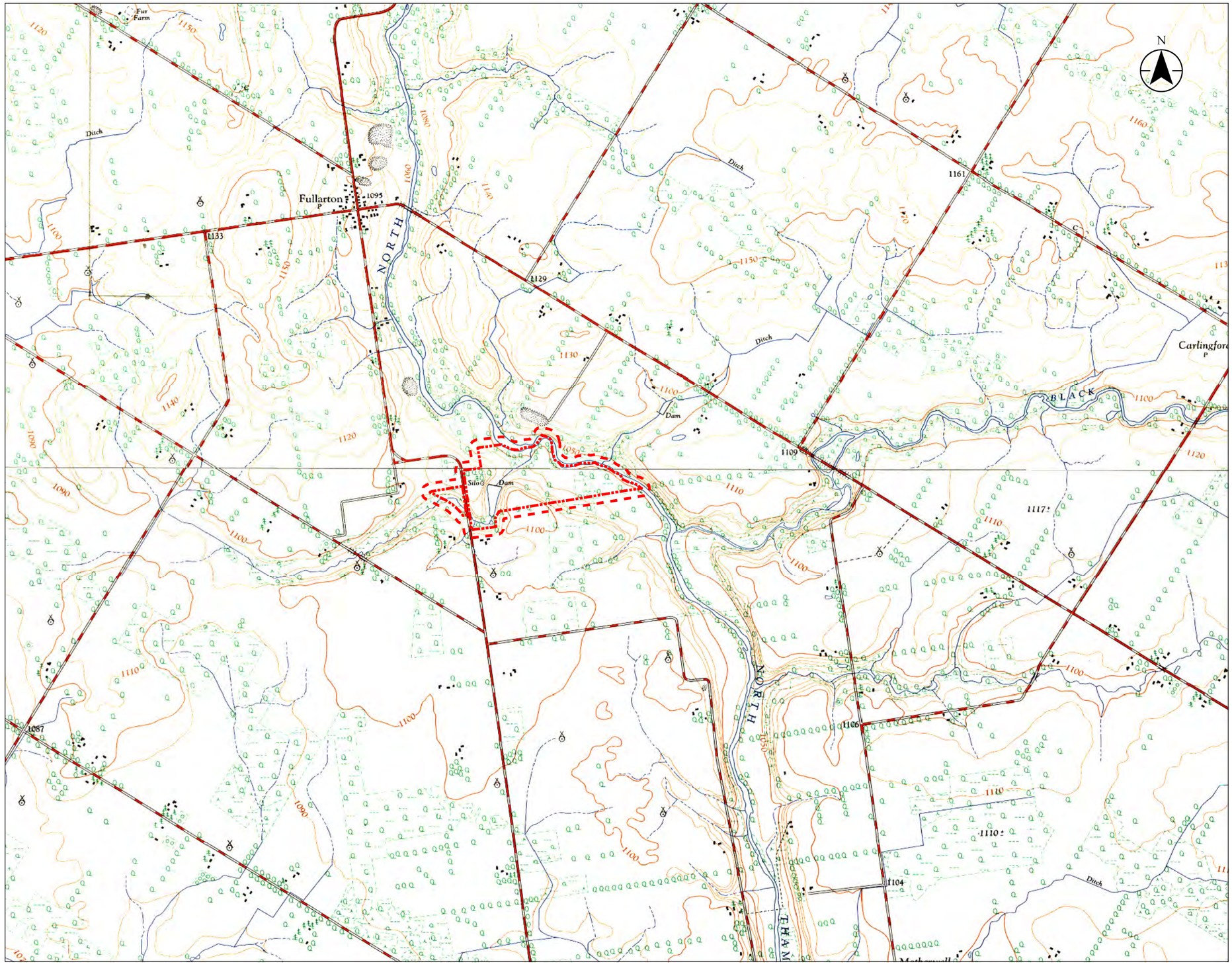
CULTURAL HERITAGE REPORT: EXISTING CONDITIONS AND PRELIMINARY IMPACT ASSESSMENT - FULLARTON DAM REHABILITION

Figure No.

4

Title

Topographic Mapping, 1927



Stantec

Legend

- Fullarton Dam Property Boundary
- Study Area

Figure Not to Scale

Notes

1. Army Survey Establishment. 1959. St. Mary's, Perth County, Ontario.
2. Army Survey Establishment. 1960. Mitchell, Perth County, Ontario.

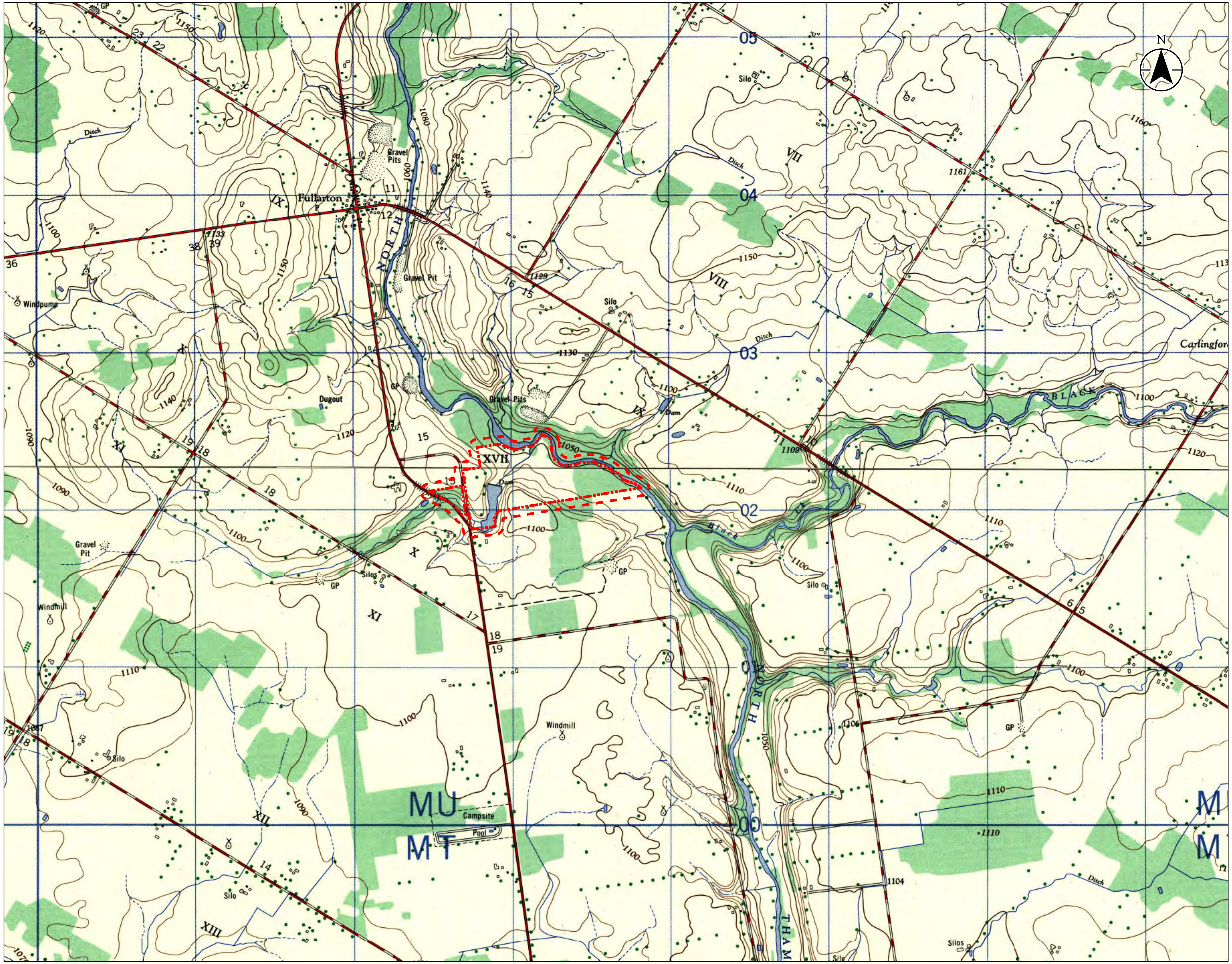
Project Location
County of Perth

160901056 REVA
Prepared by PRM on 2023-03-09
Technical Review by FS on 2023-03-09

Client/Project
CULTURAL HERITAGE REPORT: EXISTING CONDITIONS AND PRELIMINARY IMPACT ASSESSMENT - FULLARTON DAM REHABILITION

Figure No.
5

Title
Topographic Mapping, 1959-1960



Stantec

Legend

Fullarton Dam Property Boundary

Study Area

Figure Not to Scale

Notes

1. Department of Energy, Mines, and Resources. 1975. St. Mary's, Perth County, Ontario. Ottawa: Canada Map Office.
2. Department of Energy, Mines, and Resources. 1976. Mitchell, Perth County, Ontario. Ottawa: Canada Map Office.

Project Location County of Perth	160901056 REVA Prepared by PRM on 2023-03-09 Technical Review by FS on 2023-03-09

Client/Project

CULTURAL HERITAGE REPORT: EXISTING CONDITIONS AND PRELIMINARY IMPACT ASSESSMENT - FULLARTON DAM REHABILITION

Figure No.

6

Title

Topographic Mapping, 1975-1976

3.2 Municipal and Agency Requests

To identify previously identified built heritage resources or cultural heritage landscapes, the MCM, Ontario Heritage Trust (OHT), and Municipality of West Perth were contacted, and municipal heritage registers were reviewed. The results of the information requests are presented in Table 2.

Table 2 Information Request Results

Organization	Contact	Results
MCM	Karla Barboza, Team Lead, Heritage	No properties designated by the Minister or provincial heritage properties are located within or adjacent to the Study Area.
OHT	Kevin Baksh, Provincial Heritage Registrar	The OHT does not have any conservation easements or trust-owned properties within or adjacent to the Study Area.
West Perth	Municipal Website	A response from the municipality was not received.

3.3 Identification of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes

As described in Section 2.4, a windshield and pedestrian survey of the Study Area was undertaken to identify potential built heritage resources and cultural heritage landscapes within the Study Area and confirm the presence of previously identified protected properties. Where identified, the site was photographically documented from publicly accessible roadways, and its location was digitally recorded.

The Study Area is situated within and adjacent to the Fullarton Conservation Area, located on Perth Road 163 and Perth Road 163A. Perth Road 163 is a two-lane asphalt paved roadway with gravel shoulders and no curbs. Perth Road 163A is a gravel paved roadway that is located on an alignment of the former Mitchell Road that was bypassed in the mid-20th century (Photo 1 and Photo 2). Perth Road 163A now serves as an access route to the Fullarton Conservation Area. Timber utility poles follow the original alignment of the Mitchell Road on Perth Road 163 and Perth Road 163A (Photo 3 and Photo 4). The general character of the area is rural and agricultural. Perth Road 163 is mostly lined with a mix of mid-19th to late-20th century agricultural properties with large agricultural fields and Perth Road 163A is surrounded by agricultural fields and recreational land part of the Fullarton Conservation Area.

The Fullarton Conservation Area contains baseball fields, a picnic area, nature trails, and wood lots (Photo 5). The Fullarton Dam is located approximately 165 metres east of Perth Road 163A. The dam is an earthen structure with a pathway along the top of the dam. Both slopes of the dam contain vegetation in early stages of ecological succession. The pond formed by the dam is located on the south side of the dam. The stream on the north side of the dam flows into the Thames River (Photo 6).

Photo 1 **Perth Road 163, looking south**

Photo 2 **Perth Road 163, looking north**

Photo 3 **Perth Road 163A, looking east**

Photo 4 **Perth Road 163A, looking west**

Photo 5 **Fullarton Conservation Area, looking east**

Photo 6 **Fullarton Dam, looking east**

As described in Section 2, known and potential built heritage resources and cultural heritage landscapes were assessed based on the MCM *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* (MCM 2016), which was supplemented by historical research, field investigations, and professional judgement. Properties with buildings or structures 40 or more years old were field documented and screened as having potential CHVI if they met one or more of the criteria prescribed in *O. Reg. 9/06*. Also, each property was considered both as an individual built heritage resource and as part of a larger potential cultural heritage landscape. If a property contained a known or potential built heritage resource or cultural heritage landscape, the built heritage resource (referred to as BHR) and cultural heritage landscape (referred to as CHL) was assigned a number. A total of seven properties and the Thames River were screened. Following application of the screening criteria, three built heritage resources and one cultural heritage landscape was identified.

While the Study Area contains several agricultural properties with multiple built and landscape components, they were not considered cultural heritage landscapes as they remain active agricultural operations with circulation routes, modern structures, and farming methods that do not resemble 19th and early 20th century farmsteads in southern Ontario.

Properties screened and determined not to contain a potential for CHVI include 5461 Perth Line 20, 2978 Perth Road 163, and the Fullarton Conservation Area (including the dam). The properties on 5461 Perth Line 20 and 2978 Perth Road 163 contain modern or heavily modified structures. The Fullarton Conservation Area is one of many recreational areas operated by UTRCA and the Fullarton Dam is one of several earthen dams built by UTRCA in the 1950s. This style of dam remains prevalent across Canada and the United States, including among the dams operated by UTRCA.

An inventory of the built heritage resources and cultural heritage landscape identified within the Study Area through documentary research and field investigations is provided in the following section in Table 3. These identified built heritage resources and cultural heritage landscapes are mapped in Figure 7.

Table 3 Known or Potential Built Heritage Resources and Cultural Heritage Landscapes

Reference Number	Type of Property	Location	Heritage Recognition	Description of Known or Potential CHVI	Photograph
BHR-1	Farmstead	3049 Perth Road 163	Identified during field program	This property contains a farmstead comprised of a residence, barn, outbuilding and silos. The residence is a two and one half storey structure with a medium pitched hip roof with a centre gable peak with bargeboard and a wood sash window. The exterior of the residence is red brick and the residence contains a mix of vinyl sash and wood sash windows with stone or concrete lintels. The front façade contains a full width porch and balcony with rusticated concrete block and wood porch support columns. The foundation is poured concrete or concrete parging. The rear (east) façade of the residence contains a hip roof and gable roof addition. The barn is a gable roof bank barn with a stone foundation and earth ramp. The barn is clad in metal siding. The barn contains gable and shed roof additions on the south, east, and north facades. The barn additions are also clad in metal. A small mid-20th century to late 20th century gable roof outbuilding clad in metal is located between the barn and residence. Three cast-in-place concrete silos are located just west of the barn. The property is landscaped with deciduous and coniferous trees, shrubs, and agricultural fields. The residence was likely built between 1900 and 1927 based on architectural style and topographic mapping. The barn was likely built between 1854 and 1880 based on settlement patterns, materials, and architectural style. The residence has potential design value as a representative example of an early 20th century Ontario vernacular structure with a predominantly Edwardian design influence. The barn has potential design value as a representative example of a Central Ontario barn.	
BHR-2	Farmstead	2954 Perth Road 163	Identified during field program	This property contains a farmstead comprised of a residence, barn, outbuildings, and silos. The residence is a two storey structure with a cross hip roof with wood brackets. The exterior of the residence is buff brick and contains segmental arch window openings with modern windows and buff brick drip moulds. The front (east) façade contains a partial width front porch. The foundation is stone. The barn is a gable roof bank barn with an earth ramp, metal cladding, and a stone foundation. The barn contains a gable roof addition on the west façade and a gable roof addition on the north façade connected to two cast-in-place concrete silos. The property contains four mid-20th century to late 20th century gable roof outbuildings with a mix of wood and metal cladding. The property is landscaped with deciduous and coniferous trees, a post and wire fence, and agricultural fields. The residence was likely built between 1871 and 1910 based on historical research, architectural style, and materials. The barn was likely built between 1849 and 1880 based on historical research, materials, and architectural style. The residence has potential design value as a representative example of a late 19th to early 20th century Ontario vernacular structure with Italianate design elements. The barn has potential design value as a representative example of a Central Ontario barn.	
BHR-3	Residence	2955 Perth Road 163	Identified during field program	This property contains a residence and outbuildings. The residence is a one and one half storey structure with a medium pitched side gable roof with return eaves and bookend concrete block chimneys. The exterior of the residence is stone and wood sash windows and stone lintels. The front (west) façade is symmetrical in composition and contains a pointed arch window above the main entrance. The main entrance contains a modern frontispiece and stone soldier course. The rear (east) of the residence contains a gable roof addition clad in stone with two gable dormers. A hip roof garage is attached to this gable addition. The property contains two mid-20th to late 20th century gable roof outbuildings clad in metal and a mid-20th century to late 20th century gambrel roof outbuilding clad in timber. The residence was likely built between 1862 and 1890 based on historical research, architectural style, and materials. The residence has potential design value as a representative example of mid-19th to late 19th century Ontario vernacular structure with Classic Revival and Gothic Revival design influences.	

Reference Number	Type of Property	Location	Heritage Recognition	Description of Known or Potential CHVI	Photograph
CHL-1	River	N/A—Thames River	Canadian Heritage River Systems	The Thames River is part of the CHRS and is 273 kilometres in length. The three branches of the Thames River begin near Mitchell, Hickson, and Tavistock. The Thames River within and adjacent to the Study Area is located within a shallow valley and largely surrounded by riparian vegetation and mature trees. The Thames River contains historical and associative value for its role with Indigenous communities for over 11,000 years and its history of European exploration and settlement beginning in the 17th century (CHRS 2023). As a result, the Thames River played an important role in the development and settlement of southwestern Ontario.	

Stantec

Legend

- Fullarton Dam
- Built Heritage
- Cultural Heritage Landscape
- Major Road
- Minor Road
- Regulated Watercourse (UTRCA)
- Waterbody
- Fullarton Dam Property Boundary
- Study Area

0 250 500 metres

1:10,000 (At original document size of 11x17)

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, 2023.
3. Orthoimagery © SWOOP UTRCA 2023, Imagery date 2020.

Project Location
County of Perth

160901056 REVA
Prepared by PRM on 2023-03-09
Technical Review by FS on 2023-03-09

Client/Project
CULTURAL HERITAGE REPORT: EXISTING CONDITIONS AND PRELIMINARY IMPACT ASSESSMENT - FULLARTON DAM REHABILITION

Figure No.
7

Title
Known and Potential Built Heritage Resources and Cultural Heritage Landscapes

4 Preliminary Impact Assessment

4.1 Description of Proposed Undertaking

The UTRCA retained Stantec to support long term planning for the Fullarton Dam. The purpose of this project is to identify alternatives that address the safety deficiencies identified in the Dam Safety Assessment and to select a preferred management strategy for the dam that considers the natural environment and the social uses associated with the dam, reservoir, and rest of the Fullarton Conservation Area. The EA is presently in initial phases and gap analysis and baseline characterizations are being conducted to facilitate the development of alternatives.

4.2 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 4.

Table 4 Preliminary Impact Assessment Mitigation Measures

Reference Number	Location	Heritage Recognition	Type and Description of Potential/Anticipated Impact	Mitigation
CHL-1	N/A—North Thames River	CHRS	**Indirect:** The Thames River and its associated riparian vegetation is located within and adjacent to the Fullarton Dam property boundary. If construction or grading activity occurs adjacent to the Thames River there is a potential for land disturbance that may alter the natural grading and vegetation of the river.	**Preferred Option:** Potential indirect impacts to the Thames River should be avoided through a design that avoids construction within the Thames River valley. **Alternative Option:** If avoidance is not deemed feasible, potential mitigation measures can be refined following the completion of design alternatives.
BHR-1	3049 Perth Road 163	Identified during field program	**No Impacts Anticipated:** The property is located adjacent to the Fullarton Dam property boundary. The residence and barn are located more than 420 metres northwest of the property parcel associated with the Fullarton Dam. Therefore, the property is not at risk of direct or indirect impacts and no mitigation measures or further cultural heritage evaluation are required.	Continued avoidance is recommended.

Reference Number	Location	Heritage Recognition	Type and Description of Potential/Anticipated Impact	Mitigation
BHR-2	2954 Perth Road 163	Identified during field program	**No Impacts Anticipated:** The property is located adjacent to the Fullarton Dam property boundary. The residence and barn are located more than 75 metres west of the property parcel associated with the Fullarton Dam. Therefore, the property is not at risk of direct or indirect impacts and no mitigation measures or further cultural heritage evaluation are required.	Continued avoidance is recommended.
BHR-3	2955 Perth Road 163	Identified during field program	**Indirect:** The property is located adjacent to the Fullarton Dam property boundary. The residence is located within 45 metres of the property parcel associated with the Fullarton Dam. The position of the residence within 45 metres has the potential for indirect impacts resulting from vibration damage during construction activities.	**Preferred Option:** Avoid the BHR 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 BHR on construction maps and temporary fencing. Staging and laydown areas should also be non-invasive and avoid the BHR. 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.

4.2.1 Summary of Impacts

The following built heritage resources and cultural heritage landscapes may be at potential risk of direct impacts due to land disturbance as they contain built heritage resources or cultural heritage landscapes within 50 metres of the Fullarton Dam property boundary:

- North Thames River (CHL-1)
- 2955 Perth Road 163 (BHR-3)

The remaining properties identified to contain CHVI are not at risk of indirect impacts.

5 Recommendations

5.1 Re-Evaluation when Design Alternatives are Developed

To further understand the potential for the Project to affect the properties identified as containing CHVI, the impact assessment contained within this report should be amended when design alternative information on proposed construction activity is finalized. When design alternative information is received, potential direct impacts and indirect can be refined as necessary.

5.2 Avoidance

Potential indirect impacts through land disturbance should be avoided through a development of design alternatives that avoids indirect impacts to the North Thames River (CHL-1) and 2955 Perth Road. If avoidance is not deemed feasible, potential mitigation measures can be refined following the completion of design alternatives.

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Appendix A Project Personnel Biographies

Lashia Jones, MA, CAHP: Lashia Jones is a Senior Cultural Heritage Specialist and member of Stantec's Environmental Services Team, with experience in identifying, evaluating and planning for cultural heritage resources. Ms. Jones is a member of the Canadian Association of Heritage Professionals, and has a Master's Degree in Canadian Studies from Carleton University, specializing in Heritage Conservation. Ms. Jones has worked for both public and private sector clients, providing a variety of cultural heritage services including heritage impact assessments, cultural heritage evaluations, inventories of cultural heritage resources, heritage conservation districts, heritage master plans, conservation plans and cultural heritage bridge evaluations. Ms. Jones is well versed with local, provincial and national tools for the identification, evaluation and planning best practices for cultural heritage resources, including the Ontario Heritage Act, Provincial Policy Statement, Planning Act, Environmental Assessment Act, Ontario Heritage Tool Kit, Standards and Guidelines for the Conservation of Provincial Heritage Properties and the Standards and Guidelines for the Conservation of Historic Places in Canada. Lashia's role on various project types has given her experience in public engagement and consultation, constructive dialogue with clients, heritage committees, local councils and multi-disciplinary project teams.

Frank Smith, MA, CAHP: Frank Smith is a Cultural Heritage Specialist with over seven years of experience in detailed historical research, interpretation, and conservation of cultural heritage resources. Frank attained his Bachelor of Arts degree *magna cum laude* in history from Adelphi University in Garden City, New York and his Master of Arts degree in history (public history stream) from Western University in London, Ontario. Before joining Stantec, he was the Curator of the John P. Metras Sports Museum and Research Assistant for the Census of Canada 1891 project. Since joining Stantec, Frank has assisted in the completion of dozens of environmental assessment reports, including reports for private clients, municipal clients, and prescribed public bodies. Frank has screened and evaluated thousands of properties for cultural heritage value or interest as part of the environmental assessment process. Frank is a member of the Canadian Association of Heritage Professionals.

Meaghan Rivard, MA, CAHP: Meaghan Rivard is Stantec's Senior Heritage Consultant with over 12 years of experience in the identification, research, evaluation, and documentation of heritage resources as well as expertise in the environmental assessment process as it pertains to heritage resources. Ms. Rivard attained her Bachelor of Arts degree with honours and distinction in history from Brock University in St. Catharines, Ontario and her Master of Arts degree in history (public history stream) from Western University in London, Ontario. Ms. Rivard is a member of the Canadian Association of Heritage Professionals.

Ms. Rivard has experience managing and executing all aspects of Cultural Heritage Evaluation Reports, Heritage Impact Assessments, Photographic Documentations, and Heritage Conservation Plans. She has assessed more than 2,500 properties as part of windshield surveys and worked under various classed environmental assessments. In addition to environmental assessment related work, Meaghan continues to be actively involved in the assessment of individual properties. Here she utilizes knowledge in the identification, evaluation, and documentation of heritage resources alongside expertise in the assessment of proposed change and preparation of options to mitigate negative impacts on heritage resources.

Meaghan is focused on regulatory satisfaction balanced with an admiration for the heritage of our province.

Through her specialization in the Environmental Assessment process, over the past 14 years Meaghan has reviewed, authored, and contributed in various capacities to hundreds of cultural heritage reports under a wide variety of reporting requirements for municipal, provincial, and federal clients. Meaghan has completed work directly for Ontario's Ministry of Transportation, Hydro One Networks Inc., Metrolinx, Ontario Power Generation, and Infrastructure Ontario. She has also been listed as the lead heritage consultant on retainer assignments for the Ministry of Transportation and Infrastructure Ontario.