



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix A

Cultural Heritage Report

Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment

Binbrook Road – Trinity Church Road – White Church Road Intersection Improvements Municipal Class Environmental Assessment

City of Hamilton, Ontario

Final Report

Prepared for:

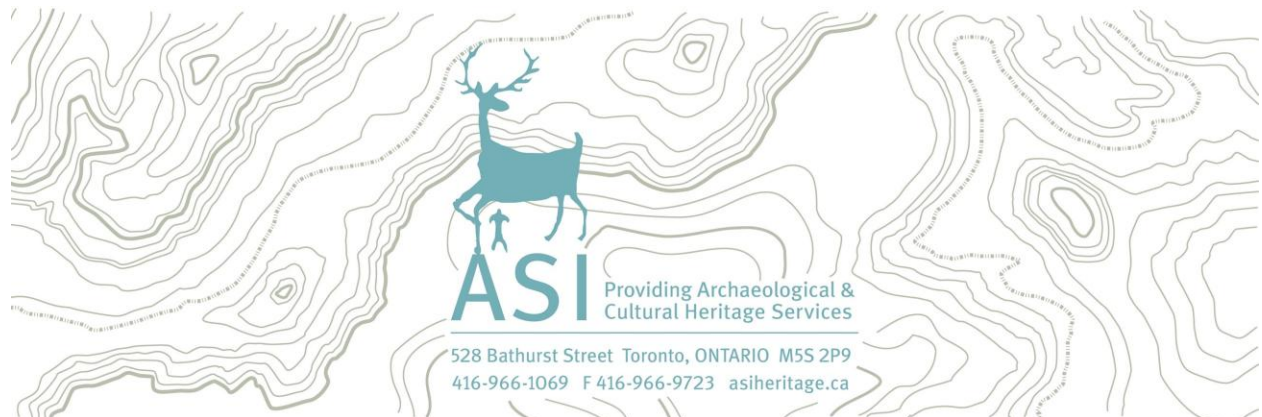
R.J. Burnside & Associates Limited

1465 Pickering Parkway, Suite 200

Pickering, ON, L1V 7G7

Archaeological Services Inc. File: 25CH-008

September 2025 (Updated June, July, and September 2026)



Executive Summary

Archaeological Services Inc. was contracted by R.J. Burnside & Associates Limited, on behalf of the City of Hamilton, to conduct a Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment as part of the Binbrook Road – Trinity Church Road – White Church Road Intersection Improvements Municipal Class Environmental Assessment. The location of the study area is just west of the community of Binbrook and north of Lake Niapenco and the Binbrook Conservation Area in the City of Hamilton.

The purpose of this report is to present an inventory of known and potential cultural heritage landscapes (C.H.L.s) and built heritage resources (B.H.R.s), identify existing conditions of the project study area, provide a preliminary impact assessment, and propose appropriate mitigation measures.

The results of background historical research and a review of secondary source material, including historical mapping, indicate a study area with an Indigenous settlement history spanning several millennia and a rural Euro-Canadian land use history dating back to the early nineteenth century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there is one known built heritage resource (B.H.R.) in the study area. Two additional potential cultural heritage landscapes (C.H.L.s) were identified during background research and field review.

No direct, adverse impacts are anticipated to any identified B.H.R. or C.H.L. based on the proposed undertakings as defined. However, while there exists some potential for indirect impacts due to disruption and vibrations resulting from close proximity of identified heritage attributes to proposed construction activities, these potential impacts are avoidable if suitable mitigation measures are developed and implemented, as have been suggested below.

Based on the results of the assessment, the following recommendations have been developed:



1. Planning, staging, and execution of construction activities should be suitably planned and undertaken to avoid unintended negative impacts to identified B.H.R.s and C.H.L.s. Mitigation measures such as remaining within the rights-of-way, establishing buffer zones with fencing if feasible, and issuing instructions to construction workers to avoid identified B.H.R.s and C.H.L.s should be considered and implemented.
 - a. Particular emphasis should be placed on mitigating such impacts from occurring to the historical barn at 5080 White Church Road (B.H.R. 1), and the main entrance of the Glanbrook Cemetery at 4350 Binbrook Road (C.H.L. 1), due to the close proximity of identified heritage attributes to the construction activities as proposed.
2. Detailed Design and construction staging should incorporate vibration limits and mitigation measures consistent with recognized best-practice guidelines for heritage resources to prevent indirect impacts to B.H.R. 1 (5080 White Church Road) and C.H.L. 1 (4350 Binbrook Road). A vibration monitoring and response plan should be prepared and implemented as part of Detailed Design to lessen vibration impacts or ground instability related to construction activities, namely excavation.
3. This Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment should be submitted by the proponent to heritage staff at the City of Hamilton and to the Ministry of Citizenship and Multiculturalism for review and feedback.



Report Accessibility Features

This report has been formatted to meet the Information and Communications Standards under the *Accessibility for Ontarians with Disabilities Act, 2005* (A.O.D.A.). Features of this report which enhance accessibility include: headings, font size and colour, alternative text provided for images, and the use of periods within acronyms. Given this is a technical report, there may be instances where additional accommodation is required in order for readers to access the report's information. If additional accommodation is required, please contact Annie Veilleux, Manager of the Cultural Heritage Practice Area at Archaeological Services Inc., by email at aveilleux@asiheritage.ca or by phone 416-966-1069 ext. 255.



Project Personnel

- **Senior Project Manager:** Lindsay Graves, M.A., C.A.H.P., Senior Cultural Heritage Specialist, Manager, Infrastructure - Cultural Heritage
- **Project Coordinator:** Jessica Bisson, B.F.A. (Hon.), Cultural Heritage Technician, Coordinator - Cultural Heritage
- **Project Manager:** John Sleath, M.A., Cultural Heritage Specialist, Project Manager - Cultural Heritage
- **Field Review:** Robert Flewelling, M.A., Technical Report Writer and Researcher, Cultural Heritage.
- **Report Production:** Robert Flewelling.
- **Graphics Production:** Jonas Fernandez, M.S.c., Manager, Geomatics - Operations
- **Report Reviewer(s):** Lindsay Graves, John Sleath.



Glossary

Built Heritage Resource (B.H.R.)

Definition: "...a building, structure, monument, installation or any manufactured or constructed part or remnant that contributes to a property's cultural heritage value or interest as identified by a community, including an Indigenous community" (Ministry of Municipal Affairs and Housing, 2024, p. 40).

Cultural Heritage Landscape (C.H.L.)

Definition: "...a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Indigenous community. The area may include features such as buildings, structures, spaces, views, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association" (Ministry of Municipal Affairs and Housing, 2024, p. 41).

Known Built Heritage Resource or Cultural Heritage Landscape

Definition: A known built heritage resource or cultural heritage landscape is a property that has recognized cultural heritage value or interest. This can include a property listed on a Municipal Heritage Register, designated under Part IV or V of the *Ontario Heritage Act*, or protected by a heritage agreement, covenant or easement, protected by the *Heritage Railway Stations Protection Act* or the *Heritage Lighthouse Protection Act*, identified as a Federal Heritage Building, or located within a U.N.E.S.C.O. World Heritage Site (Ministry of Citizenship and Multiculturalism, 2022).

Impact

Definition: Includes negative and positive, direct and indirect effects to an identified built heritage resource and cultural heritage landscape. Direct impacts include destruction of any, or part of any, significant heritage attributes or features and/or unsympathetic or incompatible alterations to an identified resource. Indirect impacts include, but are not limited to, creation of shadows, isolation of heritage attributes, direct or indirect obstruction of significant views,



change in land use, and land disturbances (Ministry of Citizenship and Multiculturalism, 2006b). Indirect impacts also include potential vibration impacts (See Section 2.7 for complete definition and discussion of potential impacts).

Mitigation

Definition: Mitigation is the process of lessening or negating anticipated adverse impacts to built heritage resources or cultural heritage landscapes and may include, but are not limited to, such actions as avoidance, monitoring, protection, relocation, remedial landscaping, and documentation of the cultural heritage landscape and/or built heritage resource if to be demolished or relocated (Ministry of Citizenship and Multiculturalism, 2006a).

Potential Built Heritage Resource or Cultural Heritage Landscape

Definition: A potential built heritage resource or cultural heritage landscape is a property that has the potential for cultural heritage value or interest. This can include properties/project area that contain a parcel of land that is the subject of a commemorative or interpretive plaque, is adjacent to a known burial site and/or cemetery, is in a Canadian Heritage River Watershed, or contains buildings or structures that are 40 or more years old (Ministry of Citizenship and Multiculturalism, 2022).

Significant

Definition: With regard to cultural heritage and archaeology resources, significant means “resources that have been determined to have cultural heritage value or interest. Processes and criteria for determining cultural heritage value or interest are established by the Province under the authority of the *Ontario Heritage Act*” (Ministry of Municipal Affairs and Housing, 2024, p. 52).

Vibration Zone of Influence

Definition: Area within a 50-metre buffer of construction-related activities in which there is potential to affect an identified built heritage resource or cultural heritage landscape. A 50-metre buffer is applied in the absence of a project-specific defined vibration zone of influence based on existing secondary source



literature (Carman et al., 2012; Crispino & D'Apuzzo, 2001; Ellis, 1987; Rainer, 1982; Wiss, 1981). This buffer accommodates the additional threat from collisions with heavy machinery or subsidence (Randl, 2001).



Table of Contents

Executive Summary	2
Report Accessibility Features	4
Project Personnel	5
Glossary	6
Table of Contents	9
1.0 Introduction	13
1.1 Project Overview	13
1.2 Description of Study Area	13
2.0 Methodology	14
2.1 Municipal Class Environmental Assessment	14
2.2 Regulatory Requirements	15
2.3 Municipal/Regional Heritage Policies	17
2.4 Identification of Built Heritage Resources and Cultural Heritage Landscapes	17
2.5 Background Information Review	18
2.5.1 Review of Existing Heritage Inventories	19
2.5.2 Review of Previous Heritage Reporting	20
2.5.3 Information Gathering	20
2.6 Community Engagement	21
2.7 Preliminary Impact Assessment Methodology	21
3.0 Summary of Historical Development Within the Study Area	24
3.1 Physiography	24



3.2	Indigenous Land Use and Settlement	25
3.2.1	Treaty Information	27
3.3	Historical Euro-Canadian Township Survey and Settlement	29
3.3.1	County of Wentworth	30
3.3.2	Township and Village of Binbrook	31
3.3.3	Halls' Corners and the Lowden Family	32
3.4	Review of Historical Mapping	33
4.0	Existing Conditions	39
4.1	Description of Field Review	39
4.2	Identification of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes	45
5.0	Preliminary Impact Assessment	49
5.1	Description of Proposed Undertaking	49
5.2	Analysis of Potential Impacts	49
6.0	Results and Mitigation Recommendations	53
7.0	References	55
	Appendix A: Qualified Persons Involved in the Project	60

List of Tables

Table 1: Inventory of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within the Study Area	46
Table 2: Preliminary Impact Assessment and Recommended Mitigation Measures.	50



List of Figures

Figure 1: Location of the study area (Base Map: ©OpenStreetMap and contributors, Creative Commons-Share Alike License (C.C.-By-S.A.)	14
Figure 2: The study area overlaid on the 1859 Historical Illustrated Atlas, County of Wentworth (Tremaine, 1859)	35
Figure 3: The study area overlaid on the 1875 Historical Illustrated Atlas, County of Wentworth (Page & Smith, 1875).	35
Figure 4: The study area overlaid on the 1907 Topographical Map, Sheet 30M/05 (Department of Militia and Defence, 1907).	36
Figure 5: The study area overlaid on the 1923 Topographical Map, <i>Hamilton Sheet 030M05</i> (Department of National Defence, 1923).	36
Figure 6: The study area overlaid on the 1934 Topographical Map, <i>Grimsby Sheet 030M04</i> (Department of National Defence, 1934)	37
Figure 7: The study area overlaid on the 1954 Aerial Photograph (City of Toronto Archives, 1954)	37
Figure 8: The study area overlaid on the 1968 Topographic Map, <i>Hamilton Sheet 030/M05</i> (Department of National Defence, 1968)	38
Figure 9: The study area overlaid on the 1996 Topographic map, Niagara Sheet (Department of Natural Resources, 1996).	38
Figure 10: The study area overlaid on a current aerial photograph (Orthographic Map, 2025).	39
Figure 11: Proposed Design Alternative Overlaid the Identified Built Heritage Resources (B.H.R.) and Cultural Heritage Landscapes (C.H.L.s).	48

List of Plates

Plate 1: C.H.L 1, looking southwest from northeastern entrance of Binbrook Intersection (A.S.I. 2025).	40
Plate 2: Northeastern entrance of Binbrook Intersection, looking north-west (A.S.I. 2026).	40
Plate 3: Northern entrance of Binbrook Intersection, looking east (A.S.I. 2025).	41



Plate 4: Taken from middle portion of Binbrook Intersection, looking north (A.S.I. 2025).	41
Plate 5: Southeastern entrance of Binbrook Intersection, looking northeast (A.S.I. 2025).	42
Plate 6: Known B.H.R. 1, looking west from middle of Binbrook Intersection (A.S.I. 2025).	42
Plate 7: Facade of B.H.R. 1, taken from opposite side of White Church Road looking north (A.S.I. 2025).	43
Plate 8: Western side of B.H.R. 1, taken from opposite side of White Church Road looking north (A.S.I. 2025).	43
Plate 9: Residential structure at Potential C.H.L. 2, looking east (A.S.I. 2025).	44
Plate 10: Agricultural structures at Potential C.H.L. 2, looking east (A.S.I. 2025).	44
Plate 11: Parts of C.H.L. 1 and C.H.L. 2, broken up by agricultural fields (A.S.I. 2025).	45
Plate 12: Glanbrook Cemetery, looking north (A.S.I. 2025).	46
Plate 13: Agricultural structures at Potential C.H.L. 2, looking east (A.S.I. 2025).	46
Plate 14: Western side of B.H.R. 1, taken from opposite side of White Church Road looking north (A.S.I. 2025).	47

1.0 Introduction

Archaeological Services Inc. was contracted by R.J. Burnside & Associates Limited, on behalf of the City of Hamilton, to conduct a Cultural Heritage Report: Existing Conditions as part of the Binbrook Road – Trinity Church Road – White Church Road Intersection Improvements Municipal Class Environmental Assessment. The purpose of this report is to present an inventory of known and potential cultural heritage landscapes (C.H.L.s) and built heritage resources (B.H.R.s), identify existing conditions of the project study area, provide a preliminary impact assessment, and propose appropriate mitigation measures.

1.1 Project Overview

The Binbrook Road – Trinity Church Road – White Church Road Intersection Improvements Municipal Class Environmental Assessment proposes the construction of dual roundabouts at the intersections of Binbrook Road, Trinity Church Road, and White Church Road, with the express purpose of eliminating the currently existing redundant intersections. As per a public notice issued by the City of Hamilton, the scope of this project also includes general improvements to pedestrian, cyclist, operational performance, and traffic safety, such as the inclusion of bike lanes (City of Hamilton, 2025)

1.2 Description of Study Area

This Cultural Heritage Report will focus on the project study area which includes an approximately 500 metre diameter circle encompassing the intersection of Binbrook, Trinity Church, and White Church roads (Figure 1). This project study area provided by R.J. Burnside & Associates Inc. has been defined as inclusive of those lands that may contain B.H.R.s and C.H.L.s that may be subject to direct or indirect impacts as a result of the proposed undertaking. Properties within the study area are located in the City of Hamilton.

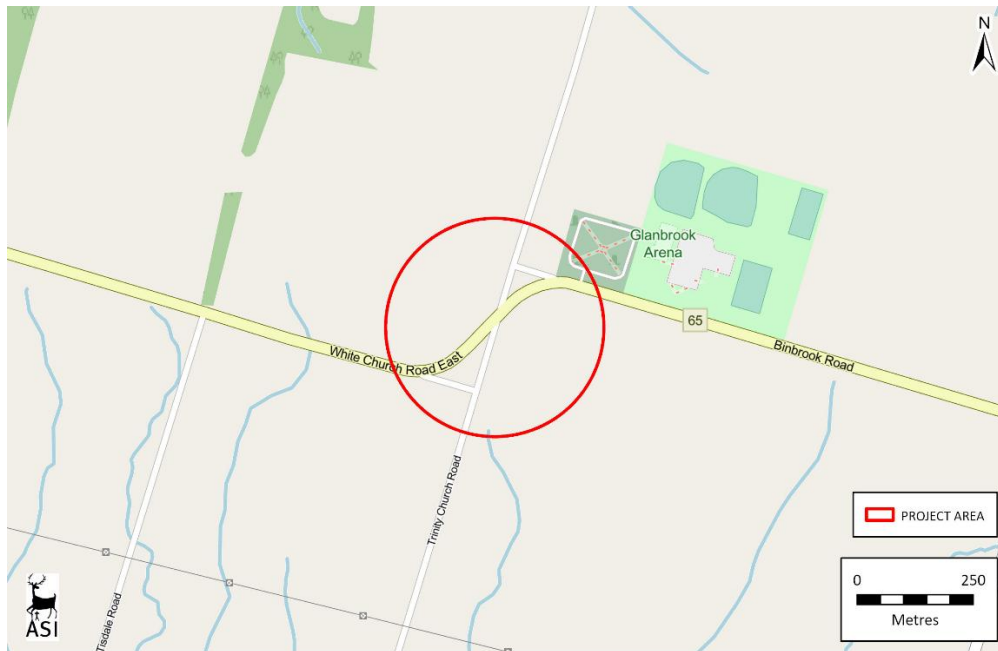


Figure 1: Location of the study area (Base Map: ©OpenStreetMap and contributors, Creative Commons-Share Alike License (C.C.-By-S.A.)

2.0 Methodology

The following sections provide a summary of regulatory requirements and municipal and regional heritage policies that guide this cultural heritage assessment. In addition, an overview of the process undertaken to identify known and potential built heritage resources (B.H.R.s) and cultural heritage landscapes (C.H.L.s) is provided, along with a description of how the preliminary impact assessment will be undertaken.

2.1 Municipal Class Environmental Assessment

A Municipal Class Environmental Assessment (M.C.E.A) is a process through which municipalities investigate projects related to infrastructure, including transportation, water, wastewater, and stormwater. M.C.E.A's generally have five phases:

- Phase 1: Problem or Opportunity Statement
- Phase 2: Alternative Solutions

- Phase 3: Alternative Design Concepts for Preferred Solution
- Phase 4: Environmental Study Report (E.S.R)
- Phase 5: Implementation (B.M. Ross & Associates Limited, 2018).

As stated above, the Binbrook Road – Trinity Church Road – White Church Road Intersection Improvements Project is a Schedule C M.C.E.A, and thus has the:

“potential for more significant environmental effects than a Schedule B project and as such a proponent is required to complete the full planning and documentation process set out in the MCEA. For Schedule C projects, proponents are required to prepare an Environmental Study Report for review by the public and review agencies. If there are no outstanding concerns, the proponent may proceed to implementation once the regulatory process has been completed. Schedule C projects generally include the construction of new facilities and major expansions to existing facilities (M.C.E.A, 2024. P. 8).”

2.2 Regulatory Requirements

The *Ontario Heritage Act* (O.H.A.) (Ontario Heritage Act, R.S.O. c. O.18 [as Amended in 2024], 1990) is the primary piece of legislation that determines policies, priorities and programs for the conservation of Ontario’s heritage. There are many other provincial acts, regulations and policies governing land use planning and resource development that support heritage conservation, including:

- The *Planning Act* (Planning Act, R.S.O. 1990, c. P.13, 1990), which states that “conservation of features of significant architectural, cultural, historical, archaeological or scientific interest” is a “matter of provincial interest”. The *Provincial Planning Statement* (Ministry of Municipal Affairs and Housing, 2024) issued under the *Planning Act*, requires municipalities and the Crown to conserve significant B.H.R.s and C.H.L.s.



- The *Environmental Assessment Act* (Ministry of the Environment, 1990), which defines “environment” to include cultural conditions that influence the life of humans or a community. Cultural heritage resources, which includes archaeological resources, B.H.R.s and C.H.L.s, are important components of those cultural conditions.

The Ministry of Citizenship and Multiculturalism (hereafter “The Ministry”) is charged under Section 2.0 of the O.H.A. with the responsibility to determine policies, priorities, and programs for the conservation, protection, and preservation of the heritage of Ontario. The *Standards and Guidelines for Conservation of Provincial Heritage Properties* (Government of Ontario, 2010) (hereinafter “*Standards and Guidelines*”) apply to properties the Government of Ontario owns or controls that have “cultural heritage value or interest” (C.H.V.I.). The *Standards and Guidelines* provide a series of guidelines that apply to provincial heritage properties in the areas of identification and evaluation; protection; maintenance; use; and disposal. For the purpose of this report, the *Standards and Guidelines* provide points of reference to aid in determining potential heritage significance in the identification of B.H.R.s and C.H.L.s. While not directly applicable for use in properties not under provincial ownership, the *Standards and Guidelines* are regarded as best practice for guiding heritage assessments and ensure that additional identification and mitigation measures are considered.

Similarly, the *Ontario Heritage Tool Kit* (Ministry of Citizenship and Multiculturalism, 2025) provides a guide to evaluate heritage properties. To conserve a B.H.R. and C.H.L., the *Ontario Heritage Tool Kit* states that a municipality or approval authority may require a heritage impact assessment and/or a conservation plan to guide the approval, modification, or denial of a proposed development.



2.3 Municipal/Regional Heritage Policies

The study area is located within the City of Hamilton. Policies relating to B.H.R.s and C.H.L.s were reviewed from the following sources:

- Rural Hamilton Official Plan (City of Hamilton, 2021):
 - Chapter A-1 Rural Settlement Area Plans General Policies (City of Hamilton, 2022b)
- Built Heritage Inventory Strategy, City of Hamilton (City of Hamilton, 2023)

2.4 Identification of Built Heritage Resources and Cultural Heritage Landscapes

This Cultural Heritage Report follows guidelines presented in the *Ontario Heritage Tool Kit* (Ministry of Citizenship and Multiculturalism, 2025) and *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* (Ministry of Citizenship and Multiculturalism, 2022). The objective of this report is to present an inventory of known and potential B.H.R.s and C.H.L.s, and to provide a preliminary understanding of known and potential B.H.R.s and C.H.L.s located within areas anticipated to be directly or indirectly impacted by the proposed project.

In the course of the cultural heritage assessment process, all potentially affected B.H.R.s and C.H.L.s are subject to identification and inventory. Generally, when conducting an identification of B.H.R.s and C.H.L.s within a study area, three stages of research and data collection are undertaken to appropriately establish the potential for and existence of B.H.R.s and C.H.L.s in a geographic area: background research and desktop data collection; field review; and identification.

Background historical research, which includes consultation of primary and secondary source research and historical mapping, is undertaken to identify early settlement patterns and broad agents or themes of change in a study area. This stage in the data collection process enables the researcher to determine the



presence of sensitive heritage areas that correspond to nineteenth- and twentieth-century settlement and development patterns. To augment data collected during this stage of the research process, federal, provincial, and municipal databases and/or agencies are consulted to obtain information about specific properties that have been previously identified and/or designated as having cultural heritage value. Typically, resources identified during these stages of the research process are reflective of particular architectural styles or construction methods, associated with an important person, place, or event, and contribute to the contextual facets of a particular place, neighbourhood, or intersection.

A field review is then undertaken to confirm the location and condition of previously identified B.H.R.s and C.H.L.s. The field review is also used to identify potential B.H.R.s and C.H.L.s that have not been previously identified on federal, provincial, or municipal databases or through other appropriate agency data sources.

During the cultural heritage assessment process, a property is identified as a potential B.H.R. or C.H.L. based on research, the Ministry screening tool, and professional expertise and best practice. In addition, use of a 40-year-old benchmark is a guiding principle when conducting a preliminary identification of B.H.R.s and C.H.L.s. While identification of a resource that is 40 years old or older does not confer outright heritage significance, this benchmark provides a means to collect information about resources that may retain heritage value. Similarly, if a resource is slightly younger than 40 years old, this does not preclude the resource from having cultural heritage value or interest.

2.5 Background Information Review

To make an identification of previously identified known or potential B.H.R.s and C.H.L.s within the study area, the following sections present the resources that were consulted as part of this Cultural Heritage Report.



2.5.1 Review of Existing Heritage Inventories

A number of resources were consulted in order to identify previously identified B.H.R.s and C.H.L.s within the study area. These resources, reviewed on 30 July, 2025, include:

- City of Hamilton Municipal Heritage Register (City of Hamilton, 2022c);
 - City of Hamilton: Cultural Heritage Resources Map (City of Hamilton, 2022a);
- The *Ontario Heritage Act Register* (Ontario Heritage Trust, 2025);
- The Ontario Heritage Trust's *An Inventory of Provincial Plaques Across Ontario*: a PDF of Ontario Heritage Trust Plaques and their locations (Ontario Heritage Trust, 2023);
- The Ontario Heritage Trust's *An Inventory of Ontario Heritage Trust-owned properties across Ontario*: a PDF of properties owned by the Ontario Heritage Trust (Ontario Heritage Trust, 2019);
- Inventory of known cemeteries/burial sites in the Ontario Genealogical Society's online databases (Ontario Genealogical Society, no date);
- Canada's Historic Places website: available online, the searchable register provides information on historic places recognized for their heritage value at the local, provincial, territorial, and national levels (Parks Canada, n.d.a);
- Directory of Federal Heritage Designations: a searchable on-line database that identifies National Historic Sites, National Historic Events, National Historic People, Heritage Railway Stations, Federal Heritage Buildings, and Heritage Lighthouses (Parks Canada, n.d.b);
- Canadian Heritage River System: a national river conservation program that promotes, protects and enhances the best examples of Canada's river heritage (Canadian Heritage Rivers Board and Technical Planning Committee, n.d.); and,
- United Nations Educational, Scientific and Cultural Organization (U.N.E.S.C.O.) World Heritage Sites (U.N.E.S.C.O. World Heritage Centre, n.d.).



2.5.2 Review of Previous Heritage Reporting

A review was also made of a Local Architectural Conservation Advisory Committee report compiled in 1984 by the Township of Glanbrook that was provided to A.S.I. by the City of Hamilton Cultural Heritage Planning staff.

2.5.3 Information Gathering

The following individuals, groups, and/or organizations were contacted to gather information on known and potential B.H.R.s and C.H.L.s, active and inactive cemeteries, and areas of identified Indigenous interest within the study area:

- Cultural Heritage Planning, City of Hamilton (email communication: August 26th, 2025). Email correspondence requested confirmation of the heritage status of a list of Inventoried Properties and a Registered Non-Designated Property within the study area, as well as any previously conducted cultural heritage studies in the study area. A response provided the list of properties, and confirmation that the City of Hamilton does not currently have any cultural heritage concerns in the area, nor past or current heritage reports. City staff also provided a Local Architectural Conservation Advisory committee report from 1984 and a 2008 archaeological assessment conducted ahead of expansions to the Glanbrook Arena.
- Mariana Nito, The Ministry of Citizenship and Multiculturalism (email communication: August 26th and August 29th, 2025). Email correspondence requested confirmation as to whether the Ministry of Citizenship and Multiculturalism is aware of any provincially recognized heritage properties within or adjacent to the study area. A response confirmed that no properties had been designated by the Minister and there were no records of a provincial heritage property within or adjacent to the study area.
- Samuel Bayefsky, The Ontario Heritage Trust (email communications: 26 August and 12 September, 2025). Email correspondence with Samuel

Bayesfsky confirmed that the Ontario Heritage Trust (O.H.T.) neither owns nor protects via conservation easement any properties within or adjacent to the study area shown in the map provided. Likewise, the O.H.T. does not have any heritage plaques within the study area.

2.6 Community Engagement

Indigenous community engagement for this project is being completed by the City of Hamilton, who have reached out to the Six Nations of the Grand River, the Mississaugas of the Credit First Nation, and the Haudenosaunee Development Institute. To date, no comments have been received by the City of Hamilton from the listed communities regarding areas of significance or cultural heritage resources.

2.7 Preliminary Impact Assessment Methodology

To assess the potential impacts of the undertaking, identified B.H.R.s and C.H.L.s are considered against a range of possible negative impacts, based on the *Ontario Heritage Tool Kit Info Sheet #5: Heritage Impact Assessments and Conservation Plans* (Ministry of Citizenship and Multiculturalism, 2006a). These include:

Direct impacts:

- Destruction of any, or part of any, significant heritage attributes or features; and
- Alteration that is not sympathetic, or is incompatible, with the historic fabric and appearance.

Indirect impacts:

- 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.

Indirect impacts from construction-related vibration have the potential to negatively affect B.H.R.s and C.H.L.s depending on the type of construction methods and machinery selected for the project and proximity and composition of the identified resources. Potential vibration impacts are defined as having potential to affect an identified B.H.R.s or C.H.L.s where work is taking place within 50 metres of features on the property. A 50-metre buffer is applied in the absence of a project-specific defined vibration zone of influence based on existing secondary source literature (Carman et al., 2012; Crispino & D'Apuzzo, 2001; Ellis, 1987; Rainer, 1982; Wiss, 1981). This buffer accommodates any additional or potential threat from collisions with heavy machinery or subsidence (Randl, 2001).

Several additional factors are also considered when evaluating potential impacts on identified B.H.R.s and C.H.L.s. These are outlined in a document set out by the Ministry of Culture and Communications (now Ministry of Citizenship and Multiculturalism) and the Ministry of the Environment entitled *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments* (1992). While this document has largely been superseded in some respects by more current policies and legislation, the guidance provided that continues to be of relevance to this specific project includes the following definitions:

- Magnitude: the amount of physical alteration or destruction which can be expected;
- Severity: the irreversibility or reversibility of an impact;



- Duration: the length of time an adverse impact persists;
- Frequency: the number of times an impact can be expected;
- Range: the spatial distribution, widespread or site specific, of an adverse impact; and
- Diversity: the number of different kinds of activities to affect a heritage resource.

The proposed undertaking should endeavor to avoid adversely affecting known and potential B.H.R.s and C.H.L.s and interventions should be managed in such a way that identified features are conserved. When the nature of the undertaking is such that adverse impacts are unavoidable, it may be necessary to implement alternative approaches or mitigation strategies that alleviate the negative effects on identified B.H.R.s and C.H.L.s. Mitigation is the process of lessening or negating anticipated adverse impacts and may include, but are not limited to, such actions as avoidance, monitoring, protection, relocation, remedial landscaping, and documentation of the B.H.R. or C.H.L. if it is to be demolished or relocated.

Various works associated with infrastructure improvements have the potential to affect B.H.R.s and C.H.L.s in a variety of ways, and as such, appropriate mitigation measures for the undertaking need to be considered.

3.0 Summary of Historical Development Within the Study Area

This section provides a brief summary of historical research. A review of available primary and secondary source material was undertaken to produce a contextual overview of the study area, including a general description of physiography, Indigenous land use, and Euro-Canadian settlement.

3.1 Physiography

The study area is located on the Haldimand Clay plain physiographic region (Chapman & Putnam, 1984, pp. 156–159), which is among the largest of the 53 defined physiographic regions in southern Ontario, comprising approximately 3,500 square kilometres (MacDonald, 1980, p. 3). Generally, this region is flat and poorly drained, although it includes several distinctive landforms including dunes, cobble, clay, and sand beaches, limestone pavements, and back-shore wetland basins.

Within this part of the Niagara peninsula, a number of environmental sub-regions have been described, including the Niagara Slough Clay Plain, the Fort Erie Clay Plain, the Calcareous Rock Plain (Onondaga Escarpment), the Buried Moraines, the Lake Erie Coast, and the Niagara River Valley (MacDonald, 1980). The distribution and nature of these sub-regions, and the specific environmental features they contain, have influenced both Indigenous and settler-colonial land use in the region throughout time

The study area, as is the case with most of the present day community of Binbrook, sits atop a Till Moraine flanked to the north and south by Clay Plains, and just south of the study area is Lake Niapenco, which was a reservoir created in 1971 following the construction of a dam on the Welland River by the Niagara Peninsula Conservation Authority. It is the largest inland lake in Niagara District.



3.2 Indigenous Land Use and Settlement

Current archaeological evidence indicates humans were present in southern Ontario approximately 13,000 years before present (B.P.) (Ferris, 2013). Populations at this time would have been highly mobile, inhabiting a boreal-parkland similar to the modern sub-arctic. By approximately 10,000 B.P., the environment had progressively warmed (Edwards & Fritz, 1988) and populations now occupied less extensive territories (C. J. Ellis & Deller, 1990).

Between approximately 10,000-5,500 B.P., the Great Lakes basins experienced low-water levels, and many sites which would have been located on those former shorelines are now submerged. This period produces the earliest evidence of heavy wood working tools, an indication of greater investment of labour in felling trees for fuel, to build shelter, and watercraft production. These activities suggest prolonged seasonal residency at occupation sites. Polished stone and native copper implements were being produced by approximately 8,000 B.P.; the latter was acquired from the north shore of Lake Superior, evidence of extensive exchange networks throughout the Great Lakes region. The earliest evidence for cemeteries dates to approximately 4,500-3,000 B.P. and is indicative of increased social organization and investment of labour into social infrastructure (Brown, 1995, p. 13; C. J. Ellis et al., 1990, 2009).

Between 3,000-2,500 B.P., populations continued to practice residential mobility and to harvest seasonally available resources, including spawning fish. The Woodland period begins around 2,500 B.P. and exchange and interaction networks broaden at this time (Spence et al., 1990, pp. 136, 138) and by approximately 2,000 B.P., evidence exists for small community camps, focusing on the seasonal harvesting of resources (Spence et al., 1990, pp. 155, 164). By 1,500 B.P. there is macro botanical evidence for maize in southern Ontario, and it is thought that maize only supplemented people's diet. There is earlier phytolithic evidence for maize in central New York State by 2,300 B.P. – it is likely that once similar analyses are conducted on Ontario ceramic vessels of the same period, the same evidence will be found (Birch & Williamson, 2013, pp. 13–15). As is evident



in detailed Anishinaabeg ethnographies, winter was a period during which some families would depart from the larger group as it was easier to sustain smaller populations (Rogers, 1962). It is generally understood that these populations were Algonquian-speakers during these millennia of settlement and land use.

From the beginning of the Late Woodland period at approximately 1,000 B.P., lifeways became more similar to that described in early historical documents. Between approximately 1000-1300 Common Era (C.E.), village sites focused on horticulture increased in the archaeological record while the seasonal disintegration of the community for the exploitation of a wider territory and more varied resource base was still practised by some (Williamson, 1990, p. 317). By 1300-1450 C.E., archaeological research focusing on these horticultural societies note that this episodic community disintegration was no longer practised and these populations now communally occupied sites throughout the year (Dodd et al., 1990, p. 343). By the mid-sixteenth century these small villages had coalesced into larger communities (Birch et al., 2021). Through this process, the socio-political organization of these First Nations, as described historically by the French and English explorers who first visited southern Ontario, was developed. Other First Nation communities continued to practice residential mobility and to harvest available resources across landscapes they returned to seasonally/annually.

By 1600 C.E., the Wendat were encountered by the first European explorers and missionaries in Simcoe County. Samuel de Champlain in 1615 reported that a group of Iroquoian-speaking people situated between the warring Haudenosaunee and Wendat were at peace with both groups and remained “la nation neutre” in the conflict. Like the Wendat, Petun, and Haudenosaunee, the Neutral or Attawandaron people were settled village agriculturalists. In the 1640s, the Attawandaron and the Wendat (and their Algonquian allies such as the Nipissing and Odawa) were decimated by epidemics and ultimately dispersed by the Haudenosaunee. Shortly afterwards, the Haudenosaunee established a series of settlements at strategic locations along the trade routes inland from the north shore of Lake Ontario. During this time of warfare and upheaval, Anishinaabeg



groups temporarily left the area until the ‘smoke had cleared’ (Migizi, 2018). By the 1690s however, the Anishinaabeg were the only communities with a permanent presence in southern Ontario. From the beginning of the eighteenth century to the assertion of British sovereignty in 1763, there was no interruption to Anishinaabeg control and use of southern Ontario.

The arrival of European trade goods in the sixteenth century, Europeans themselves in the seventeenth century, and increasing settlement efforts in the eighteenth century all significantly impacted traditional ways of life in Southern Ontario. Over time, war and disease contributed to death, dispersion, and displacement of many Indigenous peoples across the region. The Euro-Canadian population grew in both numbers and power through the eighteenth and nineteenth centuries and treaties between colonial administrators and First Nations representatives began to be negotiated.

3.2.1 Treaty Information

The study area is within Treaty 3, the Between the Lakes Purchase.

Following the American Revolutionary War (1775-1783), the British Crown needed to find lands on which to settle United Empire Loyalists, including approximately 2,000 members of the Six Nations confederacy who had fought alongside British troops. Led by Sir Frederick Haldimand who was the governor of Quebec at that time, the Crown was initially planning on providing lands for Loyalist settlers in Quebec and Southeastern Ontario, including providing land in the Bay of Quinte for Six Nations refugees. This was not suitable for many of the members of Six Nations and a contingent of approximately 1,800 community members, led by Chief Joseph Brant, requested land north of Lake Erie along the Grand River. Brant felt that the location in the Bay of Quinte was too isolated and that his followers could be better served by being closer to the Six Nations communities that chose to remain in the United States in western New York (Surtees, 1984, p. 21).



Recognizing that, under the terms of the Royal Proclamation of 1763, the land needed to be purchased prior to settlement, Colonel John Butler was sent to negotiate with the Mississaugas of the Credit for lands east of Lake Ontario and north of Lake Erie. On May 22, 1784, the Mississaugas of the Credit agreed to cede approximately 3,000,000 acres (1,214,057 hectares) of land containing all or part of Brant, Elgin, Middlesex, Oxford, and Wellington Counties as well as the Regions of Haldimand-Norfolk, Halton, Hamilton-Wentworth, Niagara, and Waterloo. In exchange for these lands, the Mississaugas received £1180.74 worth of trade goods (Crown-Indigenous Relations and Northern Affairs, 2016; Surtees, 1984). Of the 3,000,000 acres (1,214,057 hectares), approximately 550,000 acres (222,577 hectares) was set aside for the settlement of Six Nations people.

However, due to uncertainties with the description of the lands in the original surrender, Treaty 3 was renegotiated on December 7, 1792, to clarify what was ceded. This largely revolved around the northern boundary of the Treaty area and in particular the area set aside for Six Nations settlement along the Grand River (see Haldimand Tract and Treaty 4). The signees on the side of the British included Lieutenant Governor John Graves Simcoe, John Butler, Robert Kerr, Peter Russell, John McGill, and Davie William Smith. The signees on the side of the Mississauga included Chiefs Wabakayne, Wabanip, Kautabus, Wabaniship and Mottotow (Crown-Indigenous Relations and Northern Affairs, 2016; Surtees, 1984).

The original text stipulated that the north-west boundary of the parcel was an imaginary line between Burlington Bay and the Thames River, which is inconsistent with the geography of the area. The boundaries of the parcel were corrected to create a polygon encompassing the Niagara peninsula up to Burlington Bay and then up north to the present-day town of Arthur then south to the present-day town of Woodstock to finally meet Lake Erie at Port Bruce. Treaty 3 lands exclude a corridor along the Grand River set aside for Six Nations (Crown-Indigenous Relations and Northern Affairs, 2016; Native Land Digital, 2018).



3.3 Historical Euro-Canadian Township Survey and Settlement

The first Europeans to arrive in the area were transient merchants and traders from France and England, who followed Indigenous pathways and set up trading posts at strategic locations along the well-traveled river routes. All of these occupations occurred at sites that afforded both natural landfalls and convenient access, by means of the various waterways and overland trails, into the hinterlands. Early transportation routes continued the use of existing Indigenous trails that typically followed the highlands adjacent to various creeks and rivers (A.S.I., 2006). Early European settlements occupied similar locations as Indigenous settlements as they were generally accessible by trail or water routes and would have been in locations with good soil and suitable topography to ensure adequate drainage.

Throughout the period of initial European settlement, Indigenous groups continued to inhabit Southern Ontario, and continued to fish, gather, and hunt within their traditional and treaty territories, albeit often with legal and informal restrictions imposed by colonial authorities and settlers. In many cases, Indigenous peoples acted as guides and teachers, passing on their traditional knowledge to Euro-Canadian settlers, allowing them to sustain themselves in their new homes. Indigenous peoples entered into economic arrangements and partnerships, and often inter-married with settlers. However, pervasive and systemic oppression and marginalization of Indigenous peoples also characterized Euro-Canadian colonization, with thousands being displaced from their lands, denied access to traditional and treaty hunting, fishing, and collecting grounds, and forced to assimilate with Euro-Canadian culture through mandatory attendance at Day and Residential Schools (Ray, 2005; Rogers & Smith, 1994).

Historically, the study area is located in the County of Wentworth, Township of Binbrook. The study area covers parts of the following lots: Part Lot 16, Concession 5; Part Lot 16, Concession 6; Part Lot 5, Block 5, Concession 3; Part Lot 7, Block Five, Concession 4.



3.3.1 County of Wentworth

The County of Wentworth is situated at the head of Lake Ontario, abutting Lincoln and Welland Counties to the south, Brant and Waterloo Counties to the west, and Wellington and Halton Counties to the north. Wentworth County was named after Sir John Wentworth (1737-1820) in 1816, the Lieutenant-Governor of Nova Scotia from 1792-1808 (Hamilton Public Library, 2023). The first settlers arrived in 1786, consisting mainly of United Empire Loyalists (Gardiner, 1886:16). In 1791, James Wilson and Richard Beasley constructed the first sawmill and grist mill in present-day Ancaster, and in 1805, Samuel and Richard Hatt built a third mill, which drew settlement, creating a village and then a town (Mika and Mika, 1983:624). Richard Beasley also built a residence and trading post at Burlington Heights in the 1790s (Martin, 2020:1). The location was strategically chosen for access to the fur trade as the area was already an important trading place for the Mississaugas.

In 1793, Governor Simcoe requested a town plot to be drawn for Dundas at the head of Lake Ontario on the western side of Cootes Paradise, a large marsh named for Captain Coote, a British military officer with the 8th Regiment of Foot, who spent much of his time hunting there (Mika and Mika, 1977:593, 1983:624) Martin, 2020:1). The Town of Dundas was established during the same decade, and by the close of the century, Dundas had become an important milling and trading centre connected to Lake Ontario through Cootes Paradise. As the passage through the marsh's shallow waters was dangerous, a path was dredged through the centre in 1804. This was later deepened when the Desjardin Canal was cut through in 1837 (Martin, 2020:2). In 1853, the Great Western Railway was extended to Hamilton, a settlement just south of Dundas, and a tunnel was blasted through Burlington Heights, which created a direct outlet from Cootes Paradise to Lake Ontario. The importance of Dundas would be short-lived, however, given the maintenance expense of the canal and the construction of several bridges connecting the area more directly to Hamilton. Hamilton had been plotted in 1813 on farmland owned by George Hamilton, and in 1816, Hamilton was incorporated as a village and became the judicial seat for the Gore District (Mika and Mika, 1983:626). By the late nineteenth century, Hamilton had



overshadowed Dundas to become the more accessible centre of trading and manufacture (Martin, 2020:2).

The settlement of Stoney Creek, located in the south of the county, was the site of an important battle during the War of 1812 (Mika and Mika, 1983:626). Following the capture of Fort George, some 3,000 American troops were moved inland to pursue the British and encamped near Stoney Creek. On June 5, 1813, the British forces mounted a surprise attack in the night led by Lieutenant-Colonel John Henry, which resulted in heavy losses on both sides and the capture of two American Brigadier-Generals, causing the Americans to retreat.

The rural parts of Wentworth County were largely settled in the nineteenth century, and the area became a centre for the cultivation of wheat and fruit (Gardiner, 1886:17). In 1886, the population outside the Town of Hamilton was 28,886. In 1973, the County of Wentworth was superseded by the Regional Municipality of Hamilton-Wentworth (Ministry of Government and Consumer Services, n.d.).

3.3.2 Township and Village of Binbrook

The first township survey was undertaken in 1789, and the first legal settlers occupied their land holdings the same year. Early survey divided the township into four concessions, each containing five blocks of 1,000 acres each. The township is said to have been named after a town in Lincolnshire, England. Binbrook was initially settled by disbanded soldiers, mainly Butler's Rangers, and other Loyalists following the end of the American Revolutionary War. In 1805, Boulton noted that this township contained good land but "the settlement of it proceeds rather slowly...from the want of settlers." In 1820 there were less than 20 families living in the township. By the 1840s, the township was described as "well settled". In 1841, there was a movement towards self-government with the establishment of municipal councils.

By 1850, the two principle settlements in Binbrook Township had been established; Hall's Corners (Binbrook), near the centre of the township, and Woodburn, in the southeast corner. Much of the township was covered in pine forest and this supplied the area with enough lumber to keep six sawmills



operating in the township. By this time the 389 inhabitants of the township had cleared enough land to produce ten thousand bushels of wheat and eight thousand bushels of oats. In 1851, a municipality was formed between Wentworth, Halton and Brant counties. A year later, Brant County separated and by 1853, Halton too had separated from the municipality. In 1854, Wentworth municipality composed of: Ancaster, Barton, Beverly, Binbrook, Flamboro East, Flamboro West, Glandford, Waterdown and Dundas townships.

Aside from being the birthplace of George Johnson, writer of the famous 1886 poem and song “When You and I Were Young, Maggie” (Glanbrook Heritage Society & George Rickard, 1981), and the nearby Royal Canadian Air Force Station Hamilton base in Mount Hope, which is now the John C. Munro Hamilton International Airport (*Our History - John C. Munro Hamilton International Airport*, 2025), the area remained quiet, rural, and agricultural from its settlement until 1974, when Binbrook Township amalgamated with the Township of Glanford and Mount Hope to become the Township of Glanbrook. A further amalgamation took place in 2001, when Glanbrook amalgamated into the newly formed Regional Municipality of Hamilton-Wentworth (Armstrong, 1985; Binbrook Historical Society, 1979; Boulton, 1805; Mika & Mika, 1977; Rayburn, 1997).

3.3.3 Halls’ Corners and the Lowden Family

By 1850, the two principal settlements in Binbrook Township had been established; Halls’ Corners (Binbrook), near the centre of the township, and Woodburn, in the southeast corner. The Village of Binbrook was originally considered to be a “post office village” and was situated on part Lot 5 Range 3 in Concession 4 and part Lot 1 Range 4 in Concessions 3 and 4, Binbrook Township. The village contained a church and the Town Hall in 1875. It was originally known as “Hall’s Corners” after merchant and postmaster Henry Hall (Rayburn, 1997).

The Lowden Family are believed to be the first family to have settled on what is currently 5080 White Church Road, to the west of the historical hamlet of Hall’s Corners. Primary source materials indicate that they were reputable farmers in the area, and were particularly well-known for their involvement in the



“Temperance Movement”, which saw the rise in popularity of societies advocating for abstention from alcohol (“Three Great Pioneers All Over Eighty,” 1931).

The original construction date of the barn at 5080 White Church Road is difficult to establish. That is, while municipal heritage records indicate an 1867 construction date, primary source testimonies attributed to Milton Lowden, the son of the farmer who settled the lot and built the barn:

“I forgot to mention about the barn. I don't remember when the old barn was built but I was ten years old when the addition for the horses on its east end, and the addition on the west for cows and the open shed were built.” (Milton Lowden, 1951)

Based on this testimony, the date of construction must have occurred between 1849, when the Lowden's are known to have first settled on the lot, and 1861, the year that Milton Lowden would have turned 10 years old. However, according to a 1984 LACAC Historical Inventory report, the barn was completely rebuilt following a devastating fire in 1932, caused by a stray dog that had knocked over a lantern (Local Architectural Conservation Advisory Committee, 1984).

3.4 Review of Historical Mapping

The 1856 *Map of the County of Wentworth* (Figure 2) and the 1875 *Illustrated Historical Atlas of the County of Wentworth* (Figure 3) were examined to determine the presence of historical features within the study area during the nineteenth century. In addition to nineteenth-century mapping, historical topographic mapping and aerial photographs from the twentieth century were examined. This report presents topographic maps from 1907, 1923, 1934, 1954, 1968, and 1996 (Figure 4 to Figure 9). The study area is located on lands that were part of both the Township of Binbrook and Township of Glanford, in County of Wentworth.



It should be noted first, however, that not all features of interest were mapped systematically in the Ontario series of historical atlases. For instance, they were often financed by subscription limiting the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the atlases. The use of historical map sources to reconstruct or predict the location of former features within the modern landscape generally begins by using common reference points between the various sources. The historical maps are geo-referenced to provide the most accurate determination of the location of any property on a modern map. The results of this exercise can often be imprecise or even contradictory, as there are numerous potential sources of error inherent in such a process, including distortions or differences of scale and resolution.

While absent from the 1859 map, the 1875 atlas depicts the footprint of a structure is just outside the western limits of the study area on the north side of White Church Road. Since demolished, this is likely the farmhouse that was originally associated with the historical barn at 5080 White Church Road. While itself absent from both the historical atlases and the early-twentieth century topographic maps, the barn is clearly visible, in the 1954 aerial and 1968 topographic map, and historical narratives indicate a barn was present more or less in the same footprint since the nineteenth century (Figure 7 and Figure 8).

More generally, the most defining features of the study area is the misalignment of the lots and concessions on either side of what is today called Trinity Church Road, which also serves as the historical boundary between the former townships of Binbrook and Glanford (Figure 2 to Figure 3). This misalignment serves as the historical precedent for the current, atypical road alignment that required cars to make a full stop at either the White Church Road and Trinity Church Road or Binbrook Road and Trinity Church Road. Bypasses were added in the northern and southern sections sometime between 1934 and 1954, likely to improve the flow of traffic by removing the need for (Figure 6 and Figure 7). A large collection of homes along the south side of White Church Road first appear in the 1968 topographic map (Figure 8), followed the Glanbrook Arena and the more northern residences in the 1998 topographic map (Figure 9).





Figure 2: The study area overlaid on the 1859 Historical Illustrated Atlas, County of Wentworth (Tremaine, 1859)



Figure 3: The study area overlaid on the 1875 Historical Illustrated Atlas, County of Wentworth (Page & Smith, 1875).



Figure 4: The study area overlaid on the 1907 Topographical Map, Sheet 30M/05 (Department of Militia and Defence, 1907).

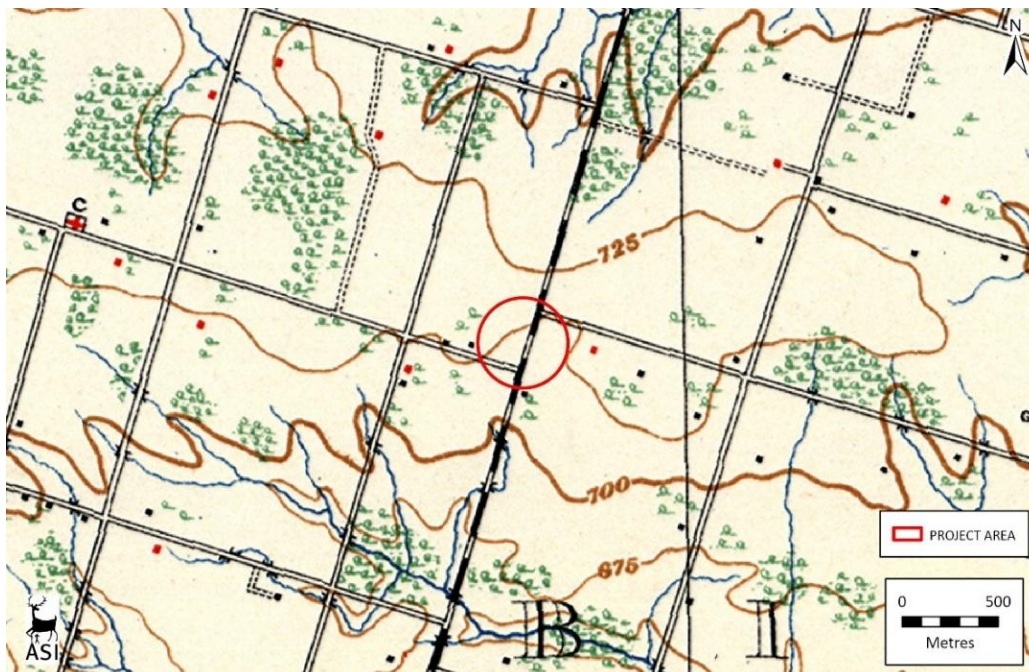


Figure 5: The study area overlaid on the 1923 Topographical Map, *Hamilton Sheet 030M05* (Department of National Defence, 1923).

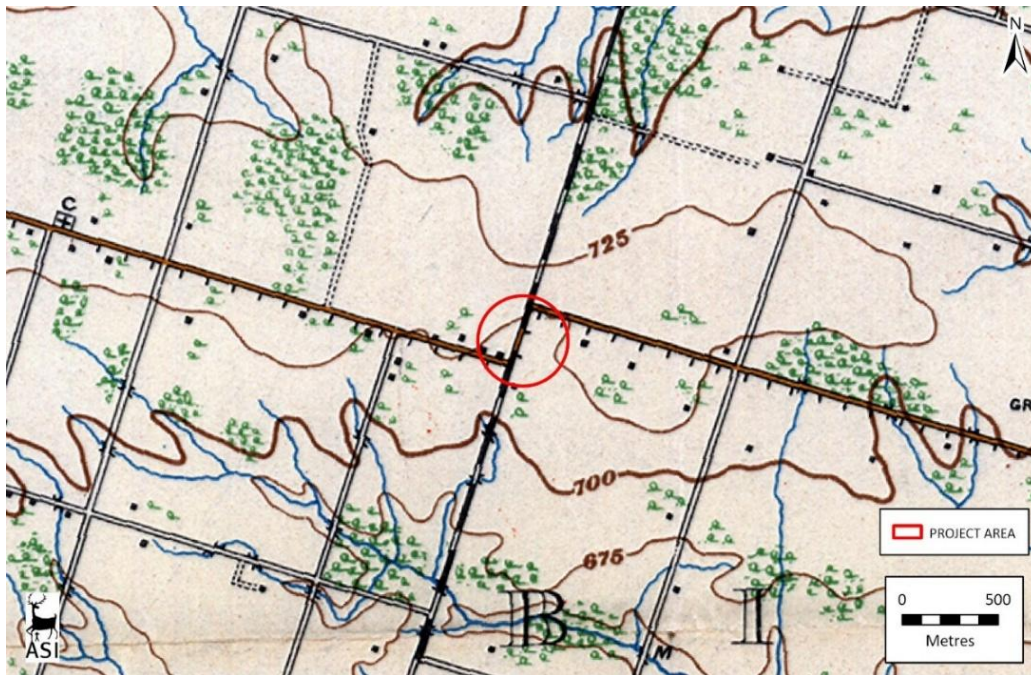


Figure 6: The study area overlaid on the 1934 Topographical Map, *Grimsby Sheet 030M04* (Department of National Defence, 1934)



Figure 7: The study area overlaid on the 1954 Aerial Photograph (City of Toronto Archives, 1954)

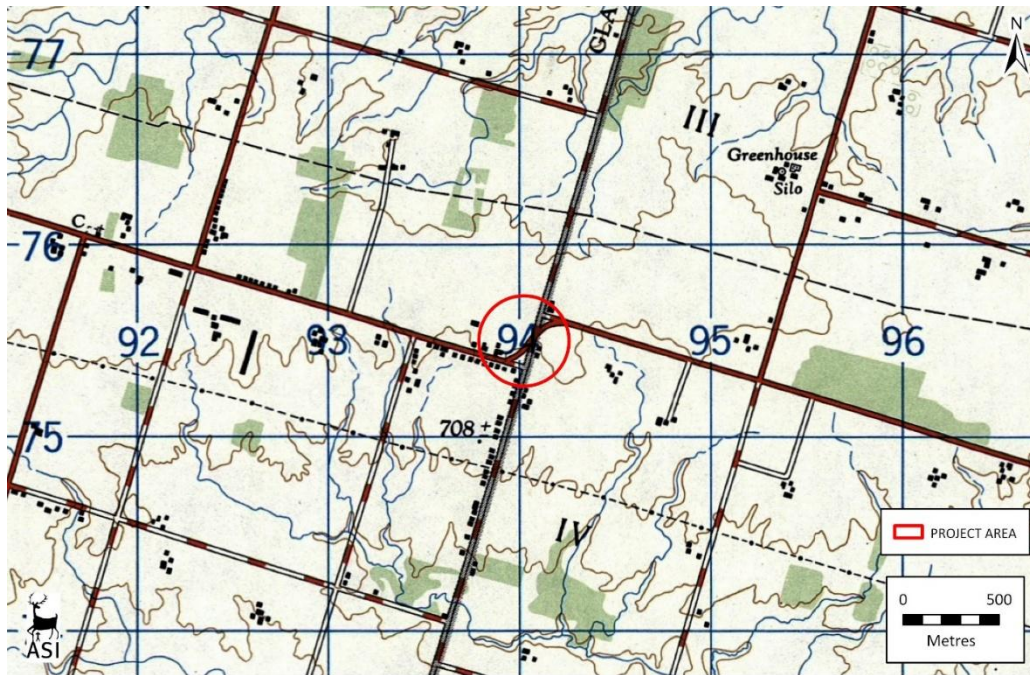


Figure 8: The study area overlaid on the 1968 Topographic Map, *Hamilton Sheet 030/M05* (Department of National Defence, 1968)

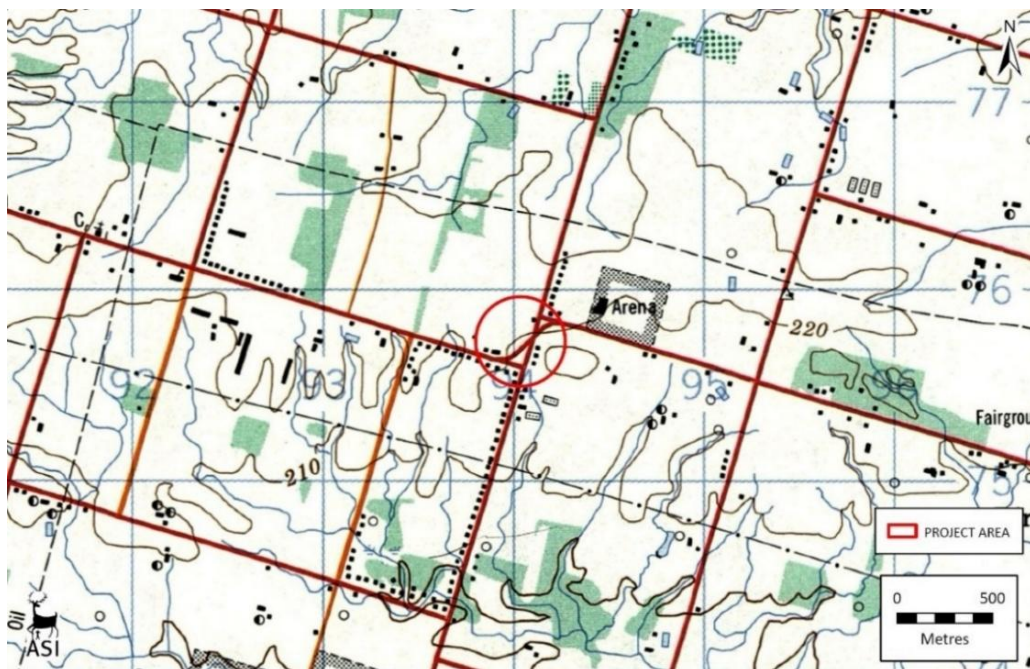


Figure 9: The study area overlaid on the 1996 Topographic map, *Niagara Sheet* (Department of Natural Resources, 1996).



Figure 10: The study area overlaid on a current aerial photograph (Orthographic Map, 2025).

4.0 Existing Conditions

A field review of the study area was undertaken by Robert Flewelling on the morning of August 18th, 2025, during which photographs were taken, as documented in Plate 1 to Plate 11.

4.1 Description of Field Review

The study area and adjacent properties are comprised of a range of residential, agricultural, and municipal uses. To the east on Binbrook Road is the Glanbrook Arena and a modern cemetery, first opened in 2003. The remaining properties to the north, west, and south are all residential and agricultural. The atypical intersection is composed of two main parts, through which Trinity Church Road bisects, where it is intersected with Binbrook Road in the north and White Church Road East in the south. Binbrook Road and White Church Road East both have an east-west alignment, and Trinity Church Road has a north-south alignment. The area in the middle of the intersection is a well-kempt grassy area, with a handful of mature trees.



Plate 1: C.H.L 1, looking southwest from northeastern entrance of Binbrook Intersection (A.S.I. 2025).



Plate 2: Northeastern entrance of Binbrook Intersection, looking north-west (A.S.I. 2026).



Plate 3: Northern entrance of Binbrook Intersection, looking east (A.S.I. 2025).



Plate 4: Taken from middle portion of Binbrook Intersection, looking north (A.S.I. 2025).



Plate 5: Southeastern entrance of Binbrook Intersection, looking northeast (A.S.I. 2025).



Plate 6: Known B.H.R. 1, looking west from middle of Binbrook Intersection (A.S.I. 2025).



Plate 7: Facade of B.H.R. 1, taken from opposite side of White Church Road looking north (A.S.I. 2025).



Plate 8: Western side of B.H.R. 1, taken from opposite side of White Church Road looking north (A.S.I. 2025).



Plate 9: Residential structure at Potential C.H.L. 2, looking east (A.S.I. 2025).



Plate 10: Agricultural structures at Potential C.H.L. 2, looking east (A.S.I. 2025).



Plate 11: Parts of C.H.L. 1 and C.H.L. 2, broken up by agricultural fields (A.S.I. 2025).

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

Based on the results of the background research and field review, one known built heritage resource (B.H.R.) and two potential cultural heritage landscapes (C.H.L.s) were identified within or adjacent to the study area. A detailed inventory of the known B.H.R. and potential C.H.L.s within the study area is presented below in Table 1, with their locations in relation to the proposed undertakings provided in Figure 11.

3065 Tisdale Road, which is immediately southwest of the study area, and 4125 Binbrook Road, which is immediate east, are both included on the City of Hamilton's Heritage Inventory. While nearby, both of these properties are outside of the study area and are therefore not discussed in this report.

Table 1: Inventory of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within the Study Area

Feature I.D.	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential C.H.V.I.	Photographs/ Digital Image
C.H.L. 1	Cemetery	4350 Binbrook Road	Potential C.H.L. – Identified during background research and field review	The subject property at 4350 Binbrook Road is Glanbrook Cemetery, an active cemetery administered by Hamilton Municipal Cemeteries. It was founded in 2003 and includes a circular driveway to access the grounds and four pathways to the internments at the centre of the property. Potential heritage attributes include internments, grave markers, circulation routes, and decorative vegetative plantings. The property has potential contextual value as a burying ground in the rural agricultural context.	 Plate 12: Glanbrook Cemetery, looking north (A.S.I. 2025).
C.H.L. 2	Residence and Agricultural Buildings	3055 Trinity Church Road South	Potential C.H.L. – Identified During Background Review and Fieldwork	The subject property includes a two-and-a-half storey, hipped roof brick residence, with smooth-faced block foundation and brick relieving arches over the windows. The north face has a fire escape, which is a non-typical addition to a rural farmstead. A tin-sided, gambrel-roofed barn is also present, as well as several other agricultural structures. The property is historically associated with the Lowden Family, and thus the barn at 5080 White Church Road, through Andrew Lowden, the son of Hiram Lafayette Lowden and nephew of Milton and Elijah Lowden. This property has the potential to retain historical and associative, as well as contextual heritage value, due to its agricultural character and its association to the Lowden	 Plate 13: Agricultural structures at Potential C.H.L. 2, looking east (A.S.I. 2025).

Feature I.D.	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential C.H.V.I.	Photographs/ Digital Image
				family, who are known to have strong associations to the Lowden’s that lived at 5080 White Church Road. Potential heritage attributes of the house include the Hamilton Pressed Brick veneer, stone foundation, and remaining chimney. Additional potential heritage attributes on this property include the barns, building and laneway footprints, mature trees, and agricultural fields (Local Architectural Conservation Advisory Committee, 1984).	
B.H.R. 1	Barn	5080 White Church Road	Known B.H.R. – Included in the City of Hamilton’s Inventory of Heritage Properties (City of Hamilton, 2022c)	The subject property contains a tin-sided and tin-roofed barn, with original ventilators, a concrete foundation, and a distinctive L-shaped floor plan. First built in the mid-to-late nineteenth century, the barn was either completely rebuilt or underwent significant changes in 1932 following a fire. Potential heritage attributes include the form and footprint of the barn, any original window openings or roof ventilators, and the hay track visible on the south face. Included in the City of Hamilton’s Inventory of Heritage Properties, potential heritage attributes of this B.H.R. include the form, massing, and orientation of the barn to its surroundings, situated within a wider agricultural context of the surrounding area. It also has potential historical and associative value to the Lowden family, who were reputable farmers in the area with connections to several other nearby properties (“Three Great Pioneers All Over Eighty,” 1931).	 Plate 14: Western side of B.H.R. 1, taken from opposite side of White Church Road looking north (A.S.I. 2025).

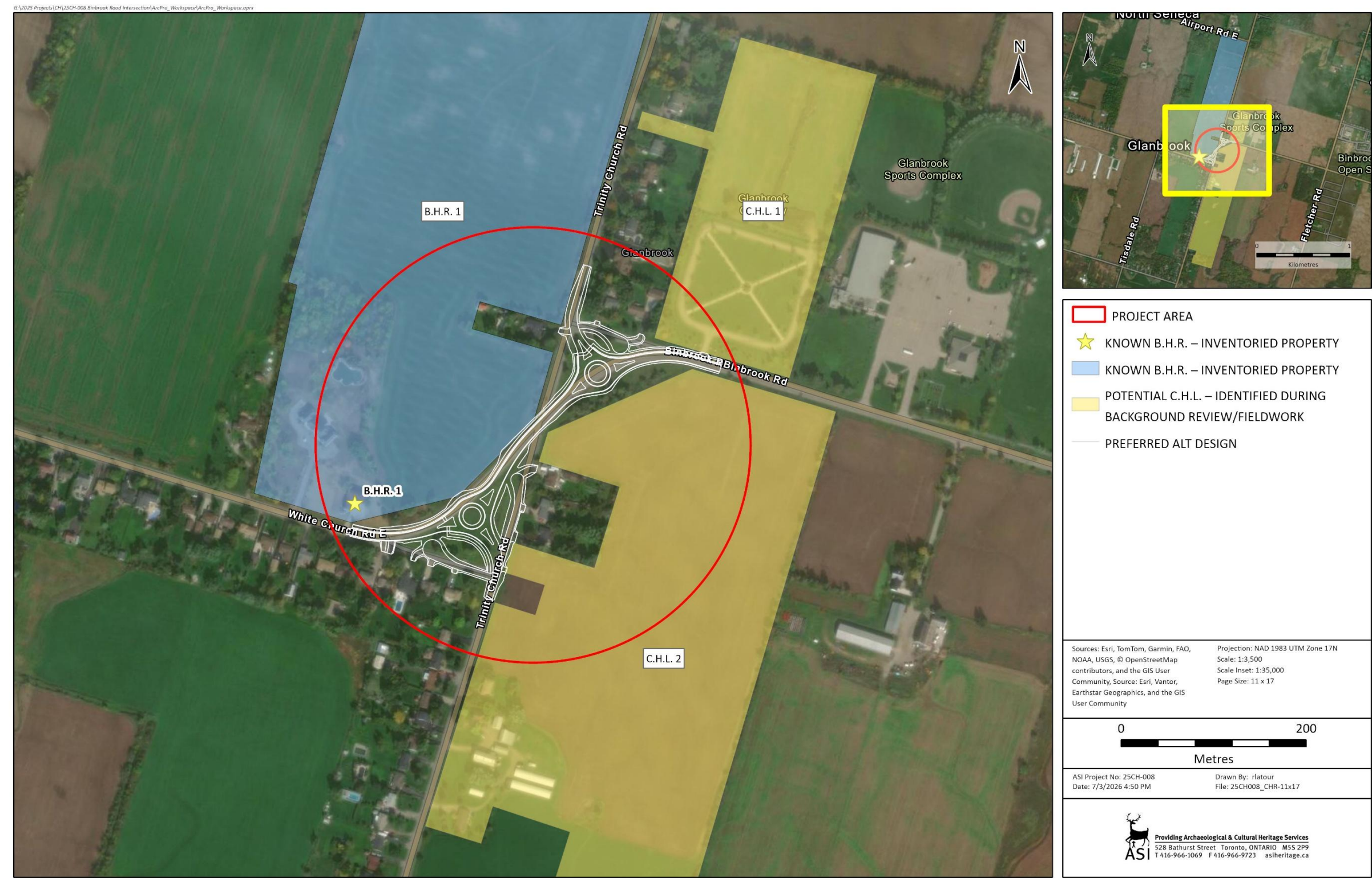


Figure 11: Proposed Design Alternative Overlaid the Identified Built Heritage Resources (B.H.R.) and Cultural Heritage Landscapes (C.H.L.s).



5.0 Preliminary Impact Assessment

The following sections provide more detailed information regarding the proposed project undertaking and analysis of the potential direct and/or indirect impacts on identified built heritage resources (B.H.R.s) and cultural heritage landscapes (C.H.L.s).

5.1 Description of Proposed Undertaking

The Binbrook Intersection Improvements Project involves the construction of dual roundabouts in order to bypass the existing atypical and disjointed intersections that currently link White Church Road East, Trinity Church Road, and Binbrook Road. The proposed works would result in the closure of two small sections of Trinity Church Road and one small portion of White Church Road, with new laneways providing access to affected private properties.

In addition to the proposed roundabouts, located in the southwest and northeast corners of the study area, the proposed design alternative also details plans for the construction of a multi-use path (M.U.P) intended for use by pedestrians and cyclists. The proposed M.U.P would follow the north side of the road alignment with a crossing at the northern roundabout just south of the existing intersection of Binbrook Road and Trinity Church Road.

The proposed undertakings are largely contained within the rights-of-way, with two minor incursions anticipated to incur onto private property for road grading purposes. These two are located just east of 5080 White Church Road, on the north side of the road alignment, and are anticipated to only extend upwards of 1-metre beyond the right-of-way.

5.2 Analysis of Potential Impacts

Table 2 below outlines the potential impacts on all identified C.H.L.s and B.H.R.s within the study area and Figure 11 shows the proposed detailed design laid overtop mapping detailing identified C.H.L.s and B.H.R.s.



Table 2: Preliminary Impact Assessment and Recommended Mitigation Measures.

Feature I.D.	Location/Name	Heritage Status and Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
C.H.L. 1	4350 Binbrook Road (Glanbrook Cemetery)	Potential C.H.L. – Identified During Background Research and Field Review	No direct impacts to identified heritage attributes within this C.H.L. are anticipated to occur, as the proposed undertakings depicted are restricted to the existing public road R.O.W. However, the proposed construction activities, namely the construction of the northern roundabout, may result in limited and temporary impacts to this property and its setting through disruption. It may also result in construction-related vibration impacts given identified heritage attributes are located within the Vibration Zone of Influence, the area within a 50-metre buffer of construction-related activities. As such, potential impacts could include vibration-related impacts to main gate, or more general accessibility impacts that could be faced by community members trying to access the cemetery for burial and memorial services. No additional indirect impacts were identified.	As the identified C.H.L. is an active cemetery, particular care should be taken to ensure that the construction activities as proposed do not adversely impact the ability of community members to access the cemetery for burial and/or memorial services. Generally speaking, construction activities and staging should be suitably planned and undertaken to avoid unintended negative impacts to the main entrance of the identified C.H.L. Avoidance measures may include the following: • keeping construction activities confined to the R.O.W.; • establishing buffer zones through the establishment of temporary fencing; and • issuing instructions to construction crews to avoid identified features. Detailed Design and construction staging should incorporate vibration limits and mitigation measures consistent with recognized best-practice guidelines for heritage resources to prevent indirect impacts to C.H.L. 1. A vibration monitoring and response plan should be prepared and implemented as part of Detailed Design to lessen vibration impacts or ground instability related to construction activities, namely excavation.



Feature I.D.	Location/Name	Heritage Status and Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
C.H.L. 2	3055 Trinity Church Road South	Potential C.H.L. – Identified During Background Research and Field Review	No direct impacts to identified heritage attributes within this C.H.L. are anticipated to occur, as the proposed undertakings depicted are restricted to the existing public road R.O.W., occurring roughly 125 metres to the closest identified heritage attribute. No additional indirect impacts were identified.	As the proposed construction activities are well-removed from the identified heritage generally, construction activities and staging should be suitably planned and undertaken to avoid unintended negative impacts to the identified C.H.L. Avoidance measures may include the following: • keeping construction activities confined to the R.O.W.; • establishing buffer zones through the establishment of temporary fencing; and • issuing instructions to construction crews to avoid identified features.
B.H.R. 1	5080 White Church Road	Known B.H.R. – Included in the City of Hamilton’s Inventory of Heritage Properties	No direct impacts to the identified heritage attributes are anticipated to adversely affect the identified heritage attributes of the B.H.R., as the proposed undertakings depicted are largely restricted to the existing public road R.O.W., save for two anticipated incursions onto private property for grading purposes (both incursions requiring less than 1-metre). However, as the B.H.R. is within a 50-metre buffer of construction-related activities, there exists low potential for construction-related vibration impacts.	To address the potential for indirect impacts due to construction-related vibration, undertake a baseline vibration assessment during detail design to determine potential vibration impacts. Should this advance assessment conclude that this B.H.R. will be subject to potentially harmful vibrations, a vibration monitoring plan should be prepared and implemented as part of detailed design to lessen vibration impacts or ground instability related to construction activities, namely excavation. Avoidance measures may include the following: • where feasible, contain construction activities within the R.O.W.; • establishing buffer zones through the establishment of temporary fencing; and

Feature I.D.	Location/Name	Heritage Status and Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
				• issue instructions to construction crews to avoid identified features. Detailed Design and construction staging should incorporate vibration limits and mitigation measures consistent with recognized best-practice guidelines for heritage resources to prevent indirect impacts to B.H.R. 1. A vibration monitoring and response plan should be prepared and implemented as part of Detailed Design to lessen vibration impacts or ground instability related to construction activities, namely excavation.

6.0 Results and Mitigation Recommendations

The results of background historical research and a review of secondary source material, including historical mapping, indicate a study area with an Indigenous settlement history spanning several millennia and a rural Euro-Canadian land use history dating back to the early nineteenth century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there is one known built heritage resource (B.H.R.) in the study area. Two additional potential C.H.Ls. were identified during background research and field review.

The identified B.H.R. and C.H.L.s are historically, architecturally, and contextually associated with land use patterns in the historical County of Wentworth and the rural areas of the contemporary City of Hamilton.

No direct, adverse impacts are anticipated to any identified B.H.R. or C.H.L. based on the proposed undertakings as defined. However, while there exists some potential for indirect impacts due to disruption and vibrations resulting from close proximity of identified heritage attributes to proposed construction activities, these potential impacts are avoidable if suitable mitigation measures are developed and implemented, as have been suggested below.

Based on the results of the assessment, the following recommendations have been developed:

1. Planning, staging, and execution of construction activities should be suitably planned and undertaken to avoid unintended negative impacts to identified B.H.R.s and C.H.L.s. Mitigation measures such as remaining within the rights-of-way, establishing buffer zones with fencing if feasible, and issuing instructions to construction workers to avoid identified B.H.R.s and C.H.L.s should be considered and implemented.
 - a. Particular emphasis should be placed on mitigating such impacts from occurring to the historical barn at 5080 White Church Road (B.H.R. 1), and the main entrance of the Glanbrook Cemetery at 4350 Binbrook Road



(C.H.L. 1), due to the close proximity of identified heritage attributes to the construction activities as proposed.

2. Detailed Design and construction staging should incorporate vibration limits and mitigation measures consistent with recognized best-practice guidelines for heritage resources to prevent indirect impacts to B.H.R. 1 (5080 White Church Road) and C.H.L. 1 (4350 Binbrook Road). A vibration monitoring and response plan should be prepared and implemented as part of Detailed Design to lessen vibration impacts or ground instability related to construction activities, namely excavation.
3. This Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment should be submitted by the proponent to heritage staff at the City of Hamilton and to the Ministry of Citizenship and Multiculturalism for review and feedback.



7.0 References

Archaeological Services Inc., (A.S.I.). (2006). *Historical Overview and Assessment of Archaeological Potential Don River Watershed, City of Toronto*.

B.M. Ross & Associates Limited. (2018). *What is a Municipal Class Environmental Assessment*.

Canadian Heritage Rivers Board and Technical Planning Committee. (n.d.). *The Rivers – Canadian Heritage Rivers System Canada’s National River Conservation Program*. Canadian Heritage Rivers System. <http://chrs.ca/en/rivers/>

Carman, R. A., Buehler, D., Mikesell, S., & Searls, C. L. (2012). *Current Practices to Address Construction Vibration and Potential Effects to Historic Buildings Adjacent to Transportation Projects*. Wilson, Ihrig and Associates, ICF International, and Simpson, Gumpertz and Heger, Incorporated for the American Association of State Highway and Transportation Officials (AASHTO).

City of Hamilton. (2021). *Rural Hamilton Official Plan*.
<https://www.hamilton.ca/sites/default/files/media/browser/2015-01-15/ruralhamiltonofficialplan-volume1-chaptera-introduction-feb2021.pdf>

City of Hamilton. (2022a). *City of Hamilton: Cultural Heritage Resources Map*.
<https://spatialsolutions.maps.arcgis.com/apps/webappviewer/index.html?id=ef361312714b4caa863016bba9e6e68f>

City of Hamilton. (2022b, May). *Volume 2, Chapter A - Rural Settlement Area Plans*. <https://www.hamilton.ca/sites/default/files/2022-07/rhop-volume2-chaptera-generalpolicies-may2022.pdf>

City of Hamilton. (2022c, July 8). *Municipal Heritage Register | City of Hamilton* [City Website]. City of Hamilton. <https://www.hamilton.ca/build-invest-grow/planning-development/heritage-properties/municipal-heritage-register>



City of Hamilton. (2023). *Built Heritage Inventory Process* [Text].
<https://www.hamilton.ca/build-invest-grow/planning-development/heritage-properties/built-heritage-inventory-strategy>

City of Hamilton. (2025, August 18). *Binbrook Rd, Trinity Church Rd & White Church Rd Intersection Improvements*. <https://www.hamilton.ca/environmental-assessments/binbrook-rd-trinity-church-rd-white-church-rd-intersection-improvements>

City of Toronto Archives. (1954). *Aerial Photographs 1954* [Map].
<https://mdl.library.utoronto.ca/collections/air-photos/1954-air-photos-southern-ontario/index>

Crispino, M., & D'Apuzzo, M. (2001). Measurement and Prediction of Traffic-induced Vibrations in a Heritage Building. *Journal of Sound and Vibration*, 246(2), 319–335.

Department of Militia and Defence. (1907). *National Topographic Survey Map 30M/05* [Map].

Department of National Defence. (1923). *Hamilton Sheet 030M05* [Map].

Department of National Defence. (1934). *Grimsby, Ontario. Map Sheet 030M04* [Topographic Map].

Department of National Defence. (1968). *Hamilton Sheet: Sheet 30M/05* [Map].

Department of Natural Resources. (1996). *Niagara Topographic Map* [Map].

Ellis, P. (1987). Effects of Traffic Vibration on Historic Buildings. *The Science of the Total Environment*, 59, 37–45.

Glanbrook Heritage Society & George Rickard. (1981). *When You and I Were Young, Maggie*. <http://www.glanbrookheritage.ca/maggie.htm>



Government of Ontario. (2010). *Standards and Guidelines for Conservation of Provincial Heritage Properties: Standards & Guidelines*.

Local Architectural Conservation Advisory Committee. (1984, September 10). *LACAC Historical Inventory—Binbrook and Glanford*.

Milton Lowden. (1951). *Jacob Lowden (1815-1892)*. Rootsweb.Com.
<https://sites.rootsweb.com/~fishabilly/jacob2.htm>

Ministry of Citizenship and Multiculturalism. (2006a). *Heritage Resources in the Land Use Planning Process: Info Sheet #5, Heritage Impact Assessments and Conservation Plans*.
http://www.mtc.gov.on.ca/en/publications/Heritage_Tool_Kit_Heritage_PPS_infoSheet.pdf

Ministry of Citizenship and Multiculturalism. (2022). *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes: A Checklist for the Non-Specialist*. <https://forms.mgcs.gov.on.ca/en/dataset/021-0500>

Ministry of Citizenship and Multiculturalism. (2025). *Ontario Heritage Tool Kit*.
<https://www.ontario.ca/page/ontario-heritage-tool-kit#section-2>

Ministry of Citizenship and Multiculturalism, M. C. M. (2006b). *Info Sheet #5: Heritage Impact Assessments and Conservation Plans*.

Ministry of Citizenship and Multiculturalism, & Ministry of the Environment. (1992). *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments*.

Ministry of Municipal Affairs and Housing. (2024). *Provincial Planning Statement, 2024, Under the Planning Act*. King's Printer for Ontario.
<https://www.ontario.ca/page/provincial-planning-statement-2024>



Ministry of the Environment. (1990). *Environmental Assessment Act, R.S.O. c. E.18*.

Ontario Genealogical Society. (no date). *OGS Cemeteries*. Digitals Collections & Library Catalogue. <http://vitacollections.ca/ogscollections/2818487/data>

Ontario Heritage Act, R.S.O. c. O.18 [as Amended in 2024] (1990).

Ontario Heritage Trust. (2019, September 30). *An Inventory of Ontario Heritage Trust-Owned Properties Across Ontario*.
https://www.heritagetrust.on.ca/user_assets/documents/Inventory-of-OHT-owned-properties-ENG-Sep-30-2019-FINAL.pdf

Ontario Heritage Trust. (2023). *An Inventory of Provincial Plaques Across Ontario*.
https://www.heritagetrust.on.ca/user_assets/documents/Inventory-of-provincial-plaques-ENG.pdf

Ontario Heritage Trust. (2025). *Ontario Heritage Act Register*.
<https://www.heritagetrust.on.ca/en/pages/tools/ontario-heritage-act-register>

Our History—John C. Munro Hamilton International Airport. (2025).
Flyhamilton.Ca. <https://flyhamilton.ca/history/>

Parks Canada. (n.d.a). *Canada's Historic Places*. www.historicplaces.ca

Parks Canada. (n.d.b). *Directory of Federal Heritage Designations*.
https://www.pc.gc.ca/apps/dfhd/search-recherche_eng.aspx

Planning Act, R.S.O. 1990, c. P.13 (1990).

Rainer, J. H. (1982). Effect of Vibrations on Historic Buildings. *The Association for Preservation Technology Bulletin*, XIV(1), 2–10.

Randl, C. (2001, July). *Preservation Tech Notes: Protecting a Historic Structure during Adjacent Construction*. U.S. Department of the Interior National Park



Service. <https://www.nps.gov/tps/how-to-preserve/tech-notes/Tech-Notes-Protection03.pdf>

Ray, A. J. (2005). *I Have Lived Here Since the World Began: An Illustrated history of Canada's Native People*. Key Porter Books.

Rogers, E. S., & Smith, D. B. (Eds.). (1994). *Aboriginal Ontario: Historical Perspectives on the First Nations*. Dundurn Press.

Three Great Pioneers All Over Eighty. (1931, January 13). *The Standard*, Page 3. Newspapers.com.

Tremaine, G. C. (1859). *Tremaine's Map of the County of Wentworth* [Map]. George C. Tremaine.

U.N.E.S.C.O. World Heritage Centre. (n.d.). *World Heritage List*. U.N.E.S.C.O. World Heritage Centre. <http://whc.unesco.org/en/list/>

Wiss, J. F. (1981). Construction Vibrations; State-of-the-Art. *Journal of Geotechnical Engineering*, 107, 167–181.



Appendix A: Qualified Persons Involved in the Project

Lindsay Graves, M.A., C.A.H.P.

Senior Cultural Heritage Specialist, Manager, Infrastructure - Cultural Heritage

The Senior Project Manager for this Cultural Heritage Report is **Lindsay Graves** (M.A., Heritage Conservation), Senior Cultural Heritage Specialist and Manager of Infrastructure, Cultural Heritage Practice Area. She was responsible for: overall project scoping and approach; development and confirmation of technical findings and study recommendations; application of relevant standards, guidelines and regulations; and implementation of quality control procedures.

Lindsay is academically trained in the fields of heritage conservation, cultural anthropology, archaeology, and collections management and has over 15 years of experience in the field of cultural heritage resource management. This work has focused on the assessment, evaluation, and protection of built heritage resources and cultural heritage landscapes. Lindsay has extensive experience undertaking archival research, heritage survey work, heritage evaluation and heritage impact assessment. She has also contributed to cultural heritage landscape studies and heritage conservation plans, led heritage commemoration and interpretive programs, and worked collaboratively with multidisciplinary teams to sensitively plan interventions at historic sites/places. In addition, she is a leader in the completion of heritage studies required to fulfill Class Environmental Assessment processes and has served as Project Manager for over 100 heritage assessments during her time at Archaeological Services Inc. Lindsay is a member of the Canadian Association of Heritage Professionals.

John Sleath, M.A.

Cultural Heritage Specialist, Project Manager - Cultural Heritage

The Project Manager for this Cultural Heritage Report is **John Sleath** (M.A.), who is a Cultural Heritage Specialist and Project Manager within the Cultural Heritage Practice Area with A.S.I. He was responsible for the day-to-day management activities, including scoping of research activities and site surveys and drafting of



study findings and recommendations. John has worked in a variety of contexts within the field of cultural heritage resource management for the past 15 years, as an archaeologist and as a cultural heritage professional. An exposure to both land-based and underwater archaeology and above ground cultural heritage assessments has provided John with a holistic understanding of heritage in a variety of contexts. In 2015 John began working in the Cultural Heritage Division researching and preparing a multitude of cultural heritage assessment reports and for which he was responsible for a variety of tasks including: completing archival research, investigating built heritage and cultural heritage landscapes, report preparation, historical map regression, and municipal consultation. Since 2018 John has been a project manager responsible for a variety of tasks required for successful project completion. This work has allowed John to engage with stakeholders from the public and private sector, as well as representatives from local municipal planning departments, museums, and Indigenous communities. John has conducted hundreds of cultural heritage assessments across Ontario, with a focus on transit and rail corridor infrastructure including bridges and culverts.

Robert Flewelling, M.A.

**Technical Writer & Researcher | Indigenous Engagement Administrator -
Cultural Heritage**

Serving as a Technical Writer and Researcher on this project is **Robert Flewelling**, with the primary responsibilities of conducting background research, contributing towards technical report writing, and engaging in field work. Robert received both his B.A. and M.A. from the University of Guelph, where he specialized in the history of Crown-Indigenous Relations in Upper Canada and the Grand River Valley in the nineteenth century. Following his studies, Robert worked with both the Guelph Civic Museum and City of Guelph, Heritage Planning on a variety of projects, including Part IV Designations and museum exhibitions.

