

Appendix D

Cultural Heritage Investigation

Main & Whitney (HD17A) Water Pumping Station Class Environmental Assessment and Conceptual Design

Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment

City of Hamilton, Ontario

Final Report

Prepared for:

Arcadis Professional Services (Canada) Inc.

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Archaeological Services Inc. File: 21CH-115

December 2022 (revised January, July, and October 2023)



Executive Summary

Archaeological Services Inc. was contracted by Arcadis Professional Services (Canada) Inc., on behalf of the City of Hamilton, to conduct a Cultural Heritage Report as part of the Main & Whitney (HD17A) Water Pumping Station Class Environmental Assessment. The Class Environmental Assessment follows the Schedule B process and is intended to develop and assess alternative solutions to replace the existing Main & Whitney (HD17A) Water Pumping Station (W.P.S.) currently located at Main Street West and Whitney Avenue with a new W.P.S. at a new site near its current location. Doing so will improve water servicing and enhance water system security and reliability in Pressure District 17.

The project Study Area consists of Pressure District 17 and parts of Pressure Districts 2 and 11. It is located in the Ainslie Wood and University Gardens neighbourhoods in Hamilton, between McMaster University to the east and the town of Dundas to the west. The Initial Study Area was expanded in November 2022 to include additional lands adjacent to the intersection of Rifle Range Road and Iona Avenue with a 500 meter buffer added. The seven short-listed alternative sites include:

- Site 1 – The parcel adjacent to and located southwest of the existing Osler (HD011) W.P.S. on the north side of Osler Drive south of Grant Boulevard
- Site 4 – 88 Ofield Road
- Site 6 – 1845 Main Street West
- Site 8 – 1870 Main Street West
- Site 9 – 1872 Main Street West
- Site 12 – 125 Rifle Range Road
- Site 19 – 161 Rifle Range Road

During the course of this project, desktop data review of the entire Study Area was completed, including the area added to the study scope in November 2022. Field review was completed only for the seven short-listed alternative site locations. A brief outline of these short-listed alternative sites and adjacent



known and potential B.H.R.s and C.H.L.s was included in an earlier draft report to assist in selecting the preferred alternative site location. Subsequently, in April and May 2023, Site 6 - 1845 Main Street West was selected and presented as part of the Public Information Centre No. 2 as the preferred site alternative for the new W.P.S. (ARCADIS & IBI Group, 2023).

The purpose of this report is to present an inventory of known and potential built heritage resources (B.H.R.s) and cultural heritage landscapes (C.H.L.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 a rural land use history dating back to at least the mid-nineteenth century and an urban history dating back to the mid-twentieth century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there are 20 known B.H.R.s and 12 known C.H.L.s within the Study Area. One additional B.H.R. was encountered during field review of the short-listed alternative sites. Of these 33 identified properties, one is adjacent to the preferred site alternative (C.H.L. 7).

The proposed undertaking will not result in direct adverse impacts to C.H.L. 7 adjacent to the preferred site alternative, Site 6. Potential vibration impacts as a result of the proposed construction work may result in indirect adverse impacts to CHL-7. Based on the results of the assessment, the following recommendations have been developed:

1. Construction activities and staging should be suitably planned and undertaken to avoid unintended negative impacts to identified B.H.R.s and C.H.L.s. Avoidance measures may include, but are not limited to: erecting temporary fencing, establishing buffer zones, issuing instructions to construction crews to avoid identified B.H.R.s and C.H.L.s, etc.
2. To ensure the structures and potential heritage attributes on the property of CHL-7 (1895 Main Street West) are not adversely impacted



during construction, baseline vibration monitoring should be undertaken during detailed design. Should this advance monitoring assessment conclude that any structures or potential heritage attributes will be subject to vibrations, a vibration monitoring plan should be prepared and implemented as part of the detailed design phase of the project to lessen vibration impacts related to construction.

3. Should future work require an expansion of the Study Area then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential B.H.R.s and C.H.L.s.
4. This report should be submitted to the City of Hamilton and the Ministry of Citizenship and Multiculturalism for review and comment, and any other local heritage stakeholders that may have an interest in this project. The final report should be submitted to the City of Hamilton for their records.

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, and alternative text provided for images. 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 Division 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, Assistant Manager - Cultural Heritage Division
- **Project Coordinator:** Katrina Thach, B.A. (Hon), Associate Archaeologist, Project Coordinator - Environmental Assessment Division
- **Project Manager:** John Sleath, M.A., Cultural Heritage Specialist, Project Manager - Cultural Heritage Division
- **Report Production:** Kirstyn Allam, B.A. (Hon), Advanced Dipl. Applied Museum Studies, Cultural Heritage Analyst, Technical Writer and Researcher - Cultural Heritage Division
- John Sleath
- Michael Wilcox, P.h.D., Historian - Cultural Heritage Division
- **Field Review:** Danielle Bella, B.A. (Hon), Archaeologist, Technical Writer - Environmental Assessment Division
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- **Report Reviewer(s):** Lindsay Graves and John Sleath

Qualified Persons Involved in the Project

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

Senior Cultural Heritage Specialist, Assistant Manager - Cultural Heritage Division

The Senior Project Manager for this Cultural Heritage Report is **Lindsay Graves** (M.A., Heritage Conservation), Senior Cultural Heritage Specialist and the Environmental Assessment Coordinator for the Cultural Heritage Division. 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 above ground cultural heritage resources. 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 Division

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 Division with Archaeological Services Inc. 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 13 years, as an archaeologist and as a cultural heritage professional. 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 and museums. John has conducted heritage assessments across Ontario, with a focus on transit and rail corridor infrastructure including bridges and culverts.

Kirstyn Allam, B.A. (Hon), Advanced Dipl. in Applied Museum Studies
Cultural Heritage Analyst, Technical Writer and Researcher - Cultural Heritage Division

One of the report writers for this project is **Kirstyn Allam** (B.A. (Hon.), Advanced Diploma in Applied Museum Studies), who is a Cultural Heritage Analyst and Technical Writer and Researcher within the Cultural Heritage Division. She was responsible for preparing and contributing to research and technical reporting. Kirstyn Allam's education and experience in cultural heritage, historical research, archaeology, and collections management has provided her with a deep knowledge and strong understanding of the issues facing the cultural heritage industry and best practices in the field. Kirstyn has experience in heritage conservation principles and practices in cultural resource management, including three years' experience as a member of the Heritage Whitby Advisory Committee. Kirstyn also has experience being involved with Stage 1-4 archaeological excavations in the Province of Ontario. Kirstyn is an intern member of the Canadian Association of Heritage Professionals.



Michael Wilcox, P.h.D.

Historian - Cultural Heritage Division

One of the report writers for this report is **Michael Wilcox** (P.h.D., History), who is a historian within the Cultural Heritage Division. He was responsible for preparing and contributing to background historical research, reviewing existing heritage inventories, and technical reporting for this project. His current responsibilities focus on identifying and researching historical documents as well as background research, assessment, and evaluation of built heritage resources and cultural heritage landscapes in Ontario. He has over a decade of combined academic and workplace experience in conducting historical research and crafting reports, presentations, articles, films, and lectures on a wide range of Canadian history topics.



Glossary

Built Heritage Resource (B.H.R.)

Definition: "...a building, structure, monument, installation or any manufactured remnant that contributes to a property's cultural heritage value or interest as identified by a community, including an Indigenous community. Built heritage resources are located on property that may be designated under Parts IV or V of the *Ontario Heritage Act*, or that may be included on local, provincial, federal and/or international registers" (Ministry of Municipal Affairs and Housing, 2020, p. 41).

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. Cultural heritage landscapes may be properties that have been determined to have cultural heritage value or interest under the *Ontario Heritage Act*, or have been included on federal and/or international registers, and/or protected through official plan, zoning by-law, or other land use planning mechanisms" (Ministry of Municipal Affairs and Housing, 2020, p. 42).

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 Tourism, Culture and Sport, 2016).



Impact

Definition: Includes negative and positive, direct and indirect effects to an identified cultural heritage resource. 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, land disturbances (Ministry of Tourism Culture and Sport, 2006b). Indirect impacts also include potential vibration impacts (See Section 2.5 of this report 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 Tourism Culture and Sport, 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 Tourism, Culture and Sport, 2016).

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*.



While some significant resources may already be identified and inventoried by official sources, the significance of others can only be determined after evaluation” (Ministry of Municipal Affairs and Housing, 2020, p. 51).

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; P. Ellis, 1987; Rainer, 1982; Wiss, 1981). This buffer accommodates the additional threat from collisions with heavy machinery or subsidence (Randl, 2001).

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1.0 Introduction

Archaeological Services Incorporated was contracted by Arcadis Professional Services (Canada) Inc., on behalf of the City of Hamilton, to conduct a Cultural Heritage Report as part of the Main & Whitney (HD17A) Water Pumping Station Class Environmental Assessment and Conceptual Design. The Class Environmental Assessment (Class EA) follows the Schedule B process. The purpose of this report is to present an inventory of known and potential built heritage resources (B.H.R.s) and cultural heritage landscapes (C.H.L.s), identify existing conditions of the project study area, provide a preliminary impact assessment, and propose appropriate mitigation measures.

1.1 Project Overview

The Main & Whitney (HD17A) Water Pumping Station Class Environmental Assessment is intended to develop and assess alternative solutions to replace the existing Main & Whitney (HD17A) Water Pumping Station (W.P.S.) currently located at Main Street West and Whitney Avenue with a new W.P.S. at a new site near its current location. Doing so will improve water servicing and enhance water system security and reliability in Pressure District 17. The project Study Area consists of Pressure District 17 and parts of Pressure Districts 2 and 11. It is located in the Ainslie Wood and University Gardens neighbourhoods in Hamilton, between McMaster University to the east and the town of Dundas to the west. The Initial Study Area was expanded in November 2022 to include additional lands adjacent to the intersection of Rifle Range Road and Iona Avenue.

The seven short-listed alternative sites include:

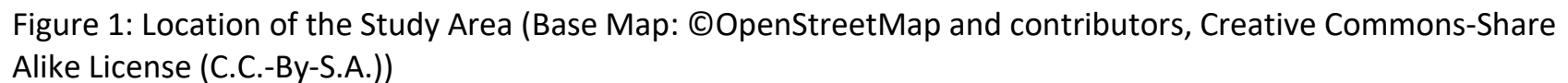
- Site 1 – The parcel adjacent to and located southwest of the existing Osler (HD011) W.P.S. on the north side of Osler Drive south of Grant Boulevard
- Site 4 – 88 Ofield Rodd
- Site 6 – 1845 Main Street West
- Site 8 – 1870 Main Street West
- Site 9 – 1872 Main Street West
- Site 12 – 125 Rifle Range Road



- Site 19 – 161 Rifle Range Road

1.2 Description of Study Area

This Cultural Heritage Report will focus on the Study Area (Figure 1). This project Study Area, which is entirely located within the City of Hamilton includes lands that may contain B.H.R.s or C.H.L.s that may be subject to direct or indirect impacts as a result of the proposed undertaking.



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 Regulatory Requirements

The *Ontario Heritage Act* (O.H.A.) (Ontario Heritage Act, R.S.O. 1990, c. O.18, [as Amended in 2023]) 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), which states that “conservation of features of significant architectural, cultural, historical, archaeological or scientific interest” is a “matter of provincial interest”. The *Provincial Policy Statement* (Ministry of Municipal Affairs and Housing, 2020), issued under the *Planning Act*, links heritage conservation to long-term economic prosperity and requires municipalities and the Crown to conserve significant B.H.R.s and C.H.L.s.
- The *Environmental Assessment Act* (Environmental Assessment Act, R.S.O. c. E.18), which defines “environment” to include cultural conditions that influence the life of humans or a community. Cultural heritage resources, which includes archaeological resources, built heritage resources and cultural heritage landscapes, 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* (Ministry of Tourism Culture and Sport, 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 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 Culture, 2006) provides a guide to evaluate heritage properties. To conserve a B.H.R. or 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.

2.2 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:

- *Urban Hamilton Official Plan* (Urban Hamilton Official Plan, 2013)
- *Niagara Escarpment Plan* (Niagara Escarpment Commission, 2017)
- *A Place to Grow: Growth Plan for the Greater Golden Horseshoe* (Government of Ontario, 2020)



2.3 Identification of Built Heritage Resources and Cultural Heritage Landscapes

This Cultural Heritage Report follows guidelines presented in the *Ontario Heritage Tool Kit* (Ministry of Culture, 2006) and *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* (Ministry of Tourism, Culture and Sport, 2016). 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 built heritage resources and cultural heritage landscapes 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.

2.4 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.

2.4.1 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 6 May and 23 November 2022, include:

- The City of Hamilton's Cultural Heritage Resources Interactive Map (City of Hamilton, 2022);
- Historical maps (including historical atlases, topographic maps, and aerial photography);
- The *Ontario Heritage Act Register* (Ontario Heritage Trust, n.d.b);
- The *Places of Worship Inventory* (Ontario Heritage Trust, n.d.c);



- The inventory of Ontario Heritage Trust easements (Ontario Heritage Trust, n.d.a);
- 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, 2018);
- Inventory of known cemeteries/burial sites in the Ontario Genealogical Society's online databases (Ontario Genealogical Society, n.d.);
- 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.).

2.4.2 Review of Previous Heritage Reporting

No additional cultural heritage studies undertaken within parts of the Study Area were reviewed.



2.4.3 Stakeholder Data Collection

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:

- James Croft, Assistant Cultural Heritage Planner, City of Hamilton (email communication 2, 6, and 21 June 2022). Email correspondence confirmed the location of known and potential B.H.R.s and C.H.L.s within the Initial Study Area. Additional correspondence with the City of Hamilton was completed on 28 November 2022 to confirm the location of known and potential B.H.R.s and C.H.L.s in the Study Area Expansion. A response on 30 November 2022 indicated that one additional Inventoried Property was included in the Study Area. This property was added to the inventory of known and potential B.H.R.s and C.H.L.s in this report.
- The Ministry (email communication 2 June, 10 July 2022). Email correspondence confirmed that there are no properties designated by the minister or Provincial Heritage Properties (P.H.P.s) known to be within or adjacent to the Initial Study Area. Additional correspondence was completed on 30 November 2022 to confirm the location of known and potential B.H.R.s and C.H.L.s in the Study Area Expansion. A response on 5 December 2022 indicated that there are no properties designated by the minister or P.H.P.s known to be within or adjacent to the Study Area Expansion.
- The Ontario Heritage Trust (email communications 2 June, 30 November, and 1 December 2022). A response indicated that there are no conservation easements or Trust-owned properties within the Study Area.
- At project start-up in late June 2022 the City of Hamilton noted that Indigenous Nation Engagement was being undertaken and included general project information and notification of upcoming Public Information Centres (email communication 6 June 2022). Additional communications with Indigenous communities in April-June 2023 included the invitation to

review the archaeological Stage 1 report prepared concurrently for this project and to provide feedback.

2.5 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 InfoSheet #5: Heritage Impact Assessments and Conservation Plans* (Ministry of Tourism Culture and Sport, 2006b). 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 cultural heritage resources (B.H.R.s, C.H.L.s, and archaeological resources) 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 and 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; P. 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 significant cultural heritage resources 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 to B.H.R.s and C.H.L.s 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 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 subject property is situated within the Iroquois Plain physiographic region of southern Ontario, which is a lowland region bordering Lake Ontario. This region is characteristically flat and formed by lacustrine deposits laid down by the inundation of Lake Iroquois, a body of water that existed during the late Pleistocene. This region extends from the Trent River, around the western part of Lake Ontario, to the Niagara River, spanning a distance of 300 kilometres (Chapman & Putnam, 1984). The old shorelines of Lake Iroquois include cliffs, bars, beaches, and boulder pavements. The old sandbars in this region are good aquifers that supply water to farms and villages. The gravel bars are quarried for road and building material, while the clays of the old lake bed have been used for the manufacture of bricks (Chapman & Putnam, 1984).



3.2 Indigenous Land Use and Settlement

Southern Ontario has been occupied by human populations since the retreat of the Laurentide glacier approximately 13,000 years ago, or 11,000 Before the Common Era (B.C.E.) (Ferris, 2013).¹ During the Paleo period (c. 11,000 B.C.E. to 9,000 B.C.E.), groups tended to be small, nomadic, and non-stratified. The population relied on hunting, fishing, and gathering for sustenance, though their lives went far beyond subsistence strategies to include cultural practices including but not limited to art and astronomy. Fluted points, beaked scrapers, and gravers are among the most important artifacts to have been found at various sites throughout southern Ontario, and particularly along the shorelines of former glacial lakes. Given the low regional population levels at this time, evidence concerning Paleo-Indian period groups is very limited (C. J. Ellis & Deller, 1990).

Moving into the Archaic period (c. 9,000 B.C.E. to 1,000 B.C.E.), many of the same roles and responsibilities continued as they had for millennia, with groups generally remaining small, nomadic, and non-hierarchical. The seasons dictated the size of groups (with a general tendency to congregate in the spring/summer and disperse in the fall/winter), as well as their various sustenance activities, including fishing, foraging, trapping, and food storage and preparation. There were extensive trade networks which involved the exchange of both raw materials and finished objects such as polished or ground stone tools, beads, and notched or stemmed projectile points. Furthermore, mortuary ceremonialism was evident, meaning that there were burial practices and traditions associated with a group member's death (C. J. Ellis et al., 2009; C. J. Ellis & Deller, 1990).

The Woodland period (c. 1,000 B.C.E. to 1600 C.E.) saw several trends and aspects of life remain consistent with previous generations. Among the more notable changes, however, was the introduction of pottery, the establishment of larger

¹ While many types of information can inform the precontact settlement of Ontario, such as oral traditions and histories, this summary provides information drawn from archaeological research conducted in southern Ontario over the last century.



occupations and territorial settlements, incipient horticulture, more stratified societies, and more elaborate burials. Later in this period, settlement patterns, foods, and the socio-political system continued to change. A major shift to agriculture occurred in some regions, and the ability to grow vegetables and legumes such as corn, beans, and squash ensured long-term settlement occupation and less dependence upon hunting and fishing. This development contributed to population growth as well as the emergence of permanent villages and special purpose sites supporting those villages. Furthermore, the socio-political system shifted from one which was strongly kinship based to one that involved tribal differentiation as well as political alliances across and between regions (Birch et al., 2021; Dodd et al., 1990; C. J. Ellis & Deller, 1990; Williamson, 1990).

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.

The Study Area is within the Treaty #3/Between the Lakes Purchases (1784/1792) lands. Following the American Revolutionary War, 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 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 7 December 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; Mississaugas of the Credit First Nation, 2017; Surtees, 1984).

The original text stipulated that the north-west boundary of the parcel was an imaginary line between Burlington Bay and the Trent 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 followed existing Indigenous trails that typically followed the highlands adjacent to various creeks and rivers (Archaeological Services Inc., 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.

Historically, the Study Area is located in the former Township of Ancaster, County of Wentworth, in part of Lots 48-55, Concession 2 and Lots 49-56, Concession 1.

3.3.1 Township of Ancaster

The land within Ancaster Township was acquired by the British from the Mississaugas in 1784. The first township survey was undertaken in 1793, and the first legal settlers occupied their land holdings two years later. The township is said to have been named after a town in Lincolnshire, England. Ancaster 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 both excellent and indifferent soils. By the 1840s, the township was noted for its fine farms (Boulton 1805:79; Armstrong 1985:141; Rayburn 1997:11; Smith 1846:6).

3.3.2 City of Hamilton

The City of Hamilton was surveyed and established by 1820 through the combined efforts of George Hamilton, James Durand and Nathaniel Hughson. The first courthouse and jail, a log and-frame building, was constructed in 1817, which



was replaced with a stone building in 1827-28. The settlement became a port in 1827, at which point Hamilton became the commercial centre of the District of Gore, in addition to serving as its administrative centre (Gentilcore, 1987:101-103). Hamilton was incorporated as a City in 1846.

The earliest plans of subdivision for Hamilton were laid out around 1815 by George Hamilton, the namesake for the City. The commerce and population of the town greatly increased following the opening of the Burlington Canal (constructed between 1823 and 1832 which thereby provided Hamilton with direct access to Lake Ontario and other market towns around the lake. The settlement was also linked to other parts of the province by various roads, and after 1853-1857 by the Great Western Railway. Visitors to Hamilton remarked upon the well-laid out streets in the town, and on the number of fine stone shops and houses that had been built there. The Gore District Court was first held in Hamilton in 1822, and a post office was established there in 1825 when W.B. Sheldon was appointed to serve as the first postmaster. The settlement was incorporated as a police village in January 1833, and the place was elevated to city status in June 1846. The population of the town in 1845 was estimated to number 6,475. Directories and gazetteers published during the 1840s and 1850s show that Hamilton was a thriving place, and these sources listed the various businesses, trades, and public institutions that had been established (Smith, 1846a).

In the latter half of the nineteenth century, many industries had become established within Hamilton and the city's population continued to expand. An additional boost to Hamilton's economy occurred in 1887 with the opening of the Welland Canal. Canada's steel industry found a new hub in Hamilton as they could now ship their goods on the Great Lakes and in 1899 the Hamilton Steel and Iron Company was formed by the merger of the Ontario Rolling Mills and Hamilton's Blast Furnace. In 1910, the Steel Company of Canada (Stelco.) was formed by merging leading steel companies in Ontario and Montreal to block the American takeover of the market (Mika & Mika, 1981)



Hamilton's manufacturers produced a wide variety of products from matches to threshing machines. Though as with many other cities, it was hit hard by the Great Depression. This did not last long as WWII had resulted in large demands on iron and steel foundries and Hamilton had tripled its population by 1940 since 1900. The city had over 450 manufacturers with various railway lines and three steamship lines to provide shipment options for companies (Mika & Mika, 1981).

It was during the mid-twentieth century that the present layout of Hamilton began to develop. Many of the heavy industries could be found in the northeast, with many retail and professional businesses grouped around Gore Park in the centre of the city. The residential areas were focused on the Niagara Escarpment, though many people still live in the lower part of the city (Mika & Mika, 1981).

As the twentieth century progressed, the boundaries of the city expanded. Hamilton annexed Burlington Beach in 1956 and part of Halton County. Following this in 1960, Barton Township, and portions of Glanford, Saltfleet, and Ancaster Townships joined Hamilton. More recently, Hamilton underwent a large urban renewal project. The city was divided into 118 neighbourhoods in order to encourage citizens to participate in urban redevelopment. Hamilton Place, a modern cultural centre was built, and other efforts have been made to revitalize the downtown area. Another was Hesse Village, an area of restaurants and shops in restored Victorian houses (Mika & Mika, 1981).

3.4 Review of Historical Mapping

The 1859 *Map of the County of Wentworth* (Surtees, 1859) and the 1875 *Illustrated Historical Atlas of the County of Wentworth* (Page & Smith, 1875) were examined to determine the presence of historical features within the Study Area during the nineteenth century (Figure 2 and Figure 3). Historically, the Study Area is in the former Ancaster Township, Wentworth County, in part of Lots 49-56, Concession 1 and Lots 48-55, Concession 2.

It should be noted, 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 differences of scale and resolution, and distortions introduced by reproduction of the sources.

The 1859 *Map of the County of Wentworth* (Figure 2) shows that the Study Area is located in a largely rural context southeast of the town of Dundas, west of the City of Hamilton, and north of the escarpment, which features prominently on the map. Key roadways include the Binkley Road (now Osler Drive) that runs along a southwestern/northeastern trajectory between Dundas and the Milton and Brantford Macadamised Road (now Main Street West/Wilson Street East). The Cootes Marshland is found to the north of the Study Area, surrounding the Dundas Canal, and a few creeks are found within the Study Area as well.

The 1875 *Illustrated Historical Atlas of the County of Wentworth* (Figure 3) continues to show the Study Area in a rural context, with large properties, residences, and orchards adjacent to what is now Main Street West. Various members of the Binkley family are the dominant landowners in the Study Area. The ridge of the escarpment forms a prominent natural boundary on the landscape, and one that is reinforced by the southern boundary of the subject Study Area. A few unnamed creeks cross through the Study Area, as do some unnamed roadways, though they appear to be well-travelled routes given the number of residences that line the road, especially to the east of the Study Area.

In addition to nineteenth-century mapping, historical topographic mapping and aerial photographs from the twentieth century were examined. This report presents maps and aerial photographs from 1909, 1938, 1954, 1972/1973, and 1994 (Figure 4 to Figure 8). These do not represent the full range of maps



consulted for the purpose of this study but were judged to cover the full range of land uses that occurred in the area during this period.

The 1909 topographic map (Figure 4) depicts the Study Area in a largely rural and forested context between Dundas to the northwest and West Hamilton Station/Osealey to the east. Among the major features include the Brantford and Hamilton Stone Road (now Main Street West) which has several houses, including many made of brick, found along the road. The Horning Mountain Road is also visible, running north-south from just below the major intersection of the Brantford and Hamilton Stone Road and what is now Osler Road. An unnamed creek (now called Coldwater Creek) runs along a generally east-west axis through the Study Area before splitting into multiple smaller creeks to the west. The Toronto, Hamilton and Buffalo Railway (T.H.&B.) has been built, and it too runs along an east-west axis through the Study Area. A rifle range, a school, and a few small cemeteries are depicted. The major natural feature continues to be the escarpment along the southern boundary of the Study Area.

The 1938 topographic map (Figure 5) illustrates the Study Area in much the same way as in 1909. It continues to be a primarily rural wooded area, albeit with major roadways running through, including Highway 8 between Dundas and West Hamilton, Highway 2 between Ancaster and West Hamilton, and Highway 2-8, that runs between West Hamilton and the city of Hamilton to the east. The communities of West Hamilton and Westdale are named for the first time in this mapping package and are located east of the Study Area, as is McMaster University. Power lines of the Hydro-Electric Power Commission of Ontario (H.E.P.C.) run along a north-south axis at the eastern edge of the Study Area. The T.H.&B. continues to be the most prominent built piece of infrastructure while the unnamed creek (Coldwater Creek) and the escarpment continue to be the most prominent natural features.

The 1954 aerial photograph (Figure 6) shows the Study Area to be a mix of urban and rural settings. The rural area includes both farmland (especially in the southwestern portion of the Study Area) and forested areas (especially adjacent to the waterways to the west of Highway 2 and along the escarpment). The urban



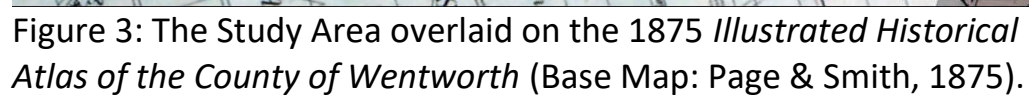
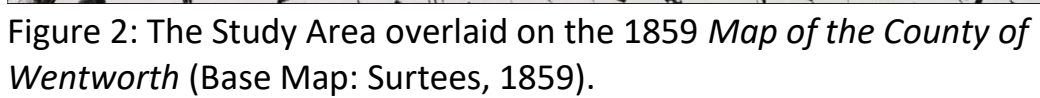
area includes the southeastern part of Dundas in the northwestern portion of the Study Area and the expansion of West Hamilton onto the east side of Highway 2. The primary roadways and railway remain as they were on earlier mapping, although the roadways are built up more significantly.

The 1972/1973 National Topographic System (N.T.S.) map² (Figure 7) shows the east half of the Study Area in an entirely urban environment, with residential neighbourhoods, schools, a shopping centre, motel, pumping station, and other unnamed buildings. The west half of the Study Area continues to be a mix of agricultural and forested lands, albeit with many residences lining Highway 2, the major roadway through the Study Area.

The 1994 N.T.S. map (Figure 8) shows the Study Area in a largely urban and residential setting, albeit with significant greenspace along the shoreline of what is now labelled as Coldwater Creek and forested and agricultural lands in the western-most portions of the Study Area. Among the key structures are churches, schools, and businesses along Main Street West. The power lines continue to remain as a key feature on the landscape.

² The Figure 7 map is a combination of the 1972 N.T.S. Dundas Sheet map and 1973 N.T.S. Mount Hope Sheet map.





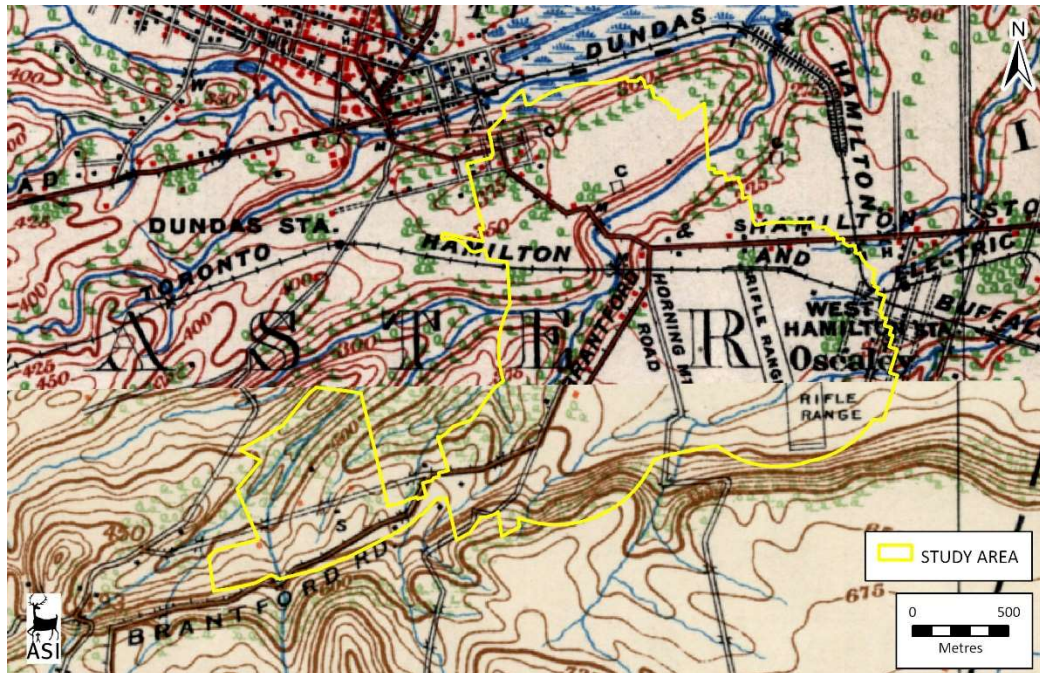


Figure 4: The Study Area overlaid on a 1909 topographic map, Hamilton Sheet (Base Map: Department of Militia and Defence, 1909).

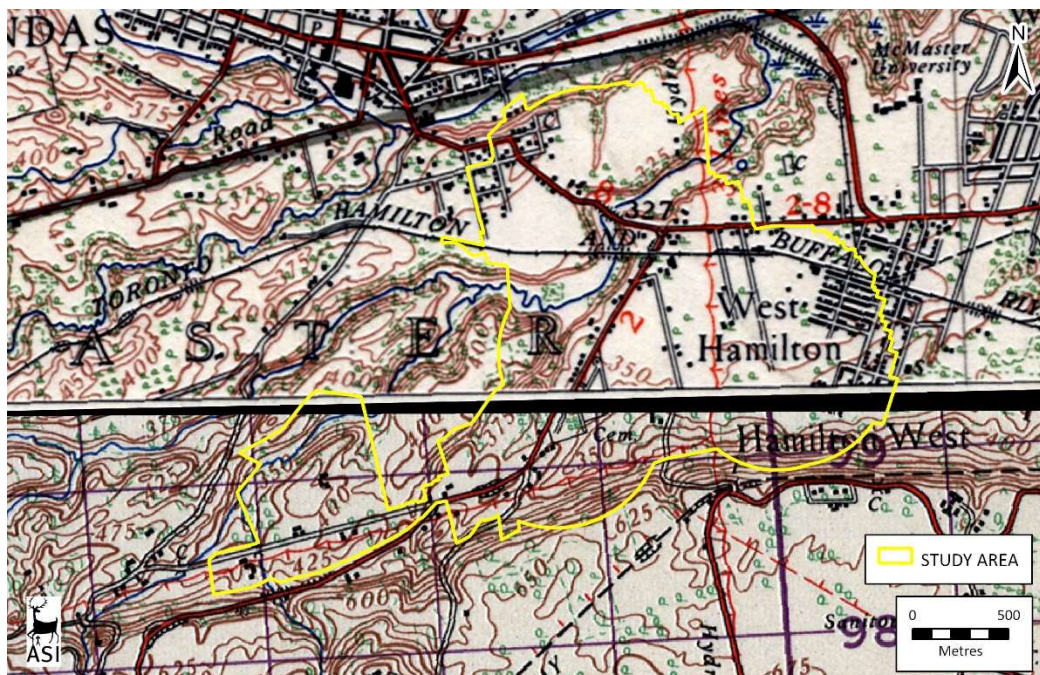


Figure 5: The Study Area overlaid on a 1938 topographic map, Hamilton Sheet (Base Map: Department of National Defence, 1938).

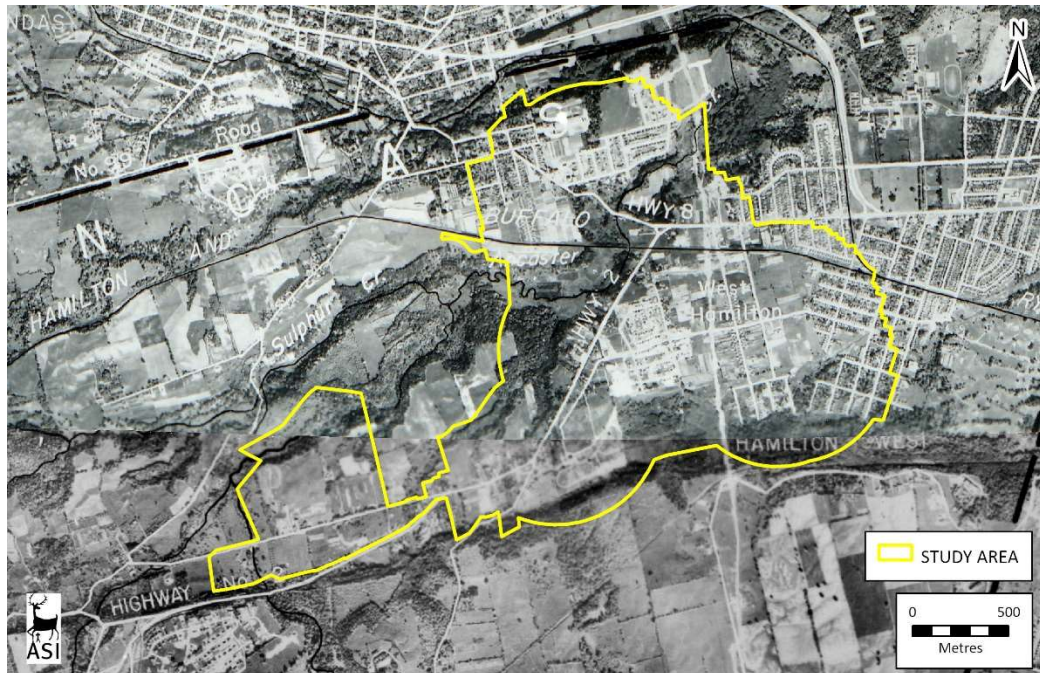


Figure 6: The Study Area overlaid on a 1954 aerial photograph (Base Map: Hunting Survey Corporation Limited, 1954).

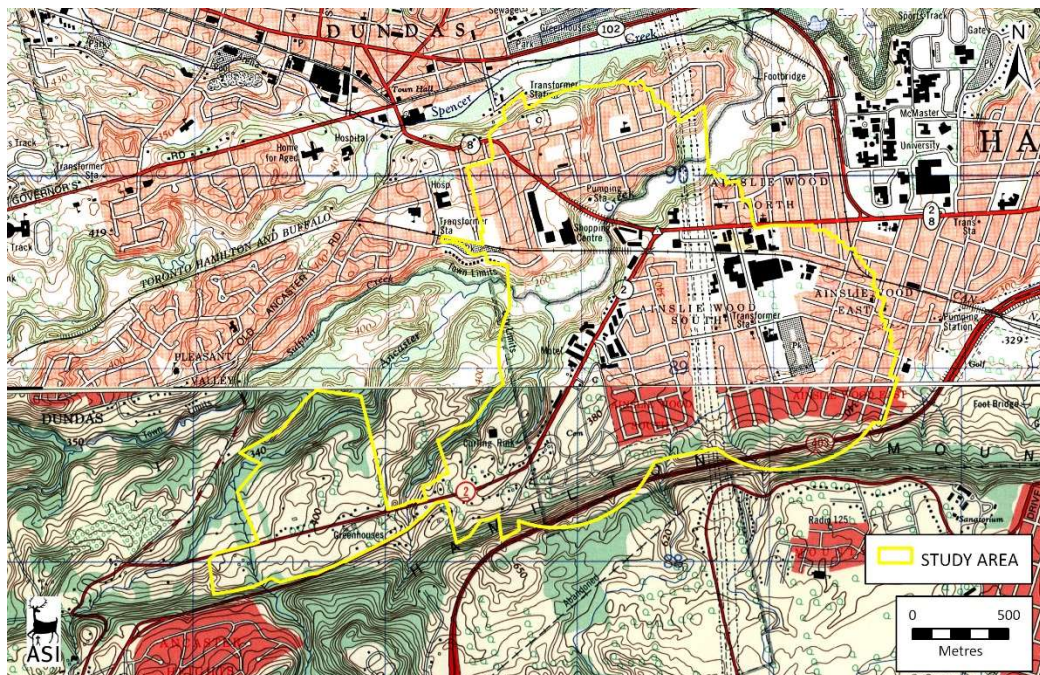


Figure 7: The Study Area overlaid on the 1972 N.T.S. map, Dundas Sheet and 1973 N.T.S. map, Mount Hope Sheet (Base Maps: Department of Energy, Mines and Resources, 1972, 1973).

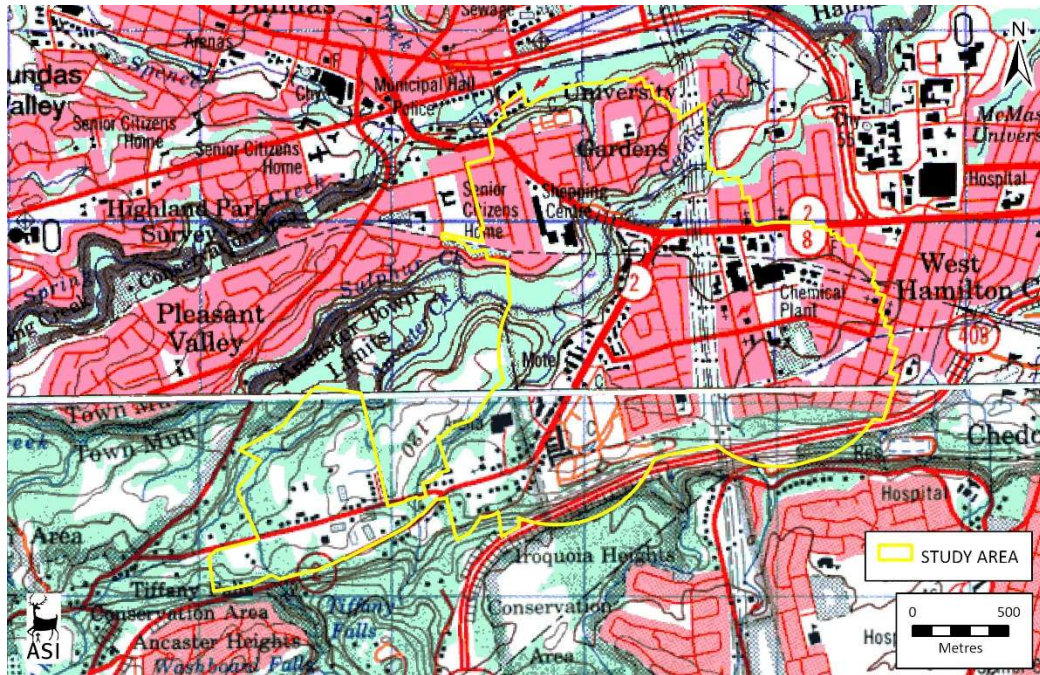


Figure 8: The Study Area overlaid on a 1994 N.T.S. map (Base Map: Department of Energy, Mines and Resources, 1994).

4.0 Existing Conditions

A field review of the Study Area was undertaken by Danielle Bella of Archaeological Services Inc., on 22 November 2022 to document the existing conditions of the Study Area from existing rights-of-way. The existing conditions of the Study Area are described below and captured in Plate 1 to Plate 12. Field review was completed for each of the proposed short-listed alternative locations (Figure 9 to Figure 14) and adjacent lands, but not for the overall Study Area (Figure 1). These larger areas were subject to desktop data review of existing heritage inventories and other background resources only. In general, the Study Area is located in a mixed commercial and residential setting in the City of Hamilton.

4.1 Description of Field Review

Site 1 – The parcel adjacent to and located southwest of the existing Osler (HD011) W.P.S. on the north side of Osler Drive south of Grant Boulevard is in a grassed context with a wooded area adjacent to the north. Coldwater

Creek is located approximately 105 metres east of the site, and a large shopping centre is approximately 80 metres southwest (Plate 1 and Plate 2).

Site 4 – 88 Ofield Road is in a residential context at the intersection of Main Street and Ofield Road. A single storey early-mid twentieth century brick residence with texture concrete block foundation and hipped gable roof is in the site location (BHR-20) (Plate 3 and Plate 4).

Site 6 – 1845 Main Street West is in a commercial retail context at the southeast corner of Main Street West and Whitney Avenue. The proposed site footprint is currently a parking lot adjacent to White Chapel Memorial Gardens (CHL-7) (Plate 5 and Plate 6).

Site 8 – 1870 Main Street West is in a commercial retail context set back approximately 70 metres west of Main Street and is accessed by an easement. The site footprint includes a parking lot and part of a structure that operates as the Haven Inn (Plate 7 and Plate 8).

Site 9 – 1872 Main Street West is in a commercial retail context set back approximately 70 metres west of Main Street and is accessed by an easement. The site footprint includes a parking lot associated with Westdale Car Service (Plate 9 and Plate 10).

Site 12 – 125 Rifle Range Road is in a recreational park setting with a baseball diamond associated with Alexander Park (CHL-11) to the east and Rifle Range Road to the west. The site lacks any structures (Plate 11 and Plate 12).

Site 19 – 161 Rifle Range Road features a single storey church and is adjacent to a recreational park with baseball diamonds associated with Alexander Park (CHL-11) to the east, Rifle Range Road to the west, and a parking lot to the south (Plate 12 and Plate 13).





Plate 1: Site 1 – existing Osler W.P.S. (HD011), looking east with Osler Drive to the right and Coldwater Creek at rear (A.S.I. 2022).

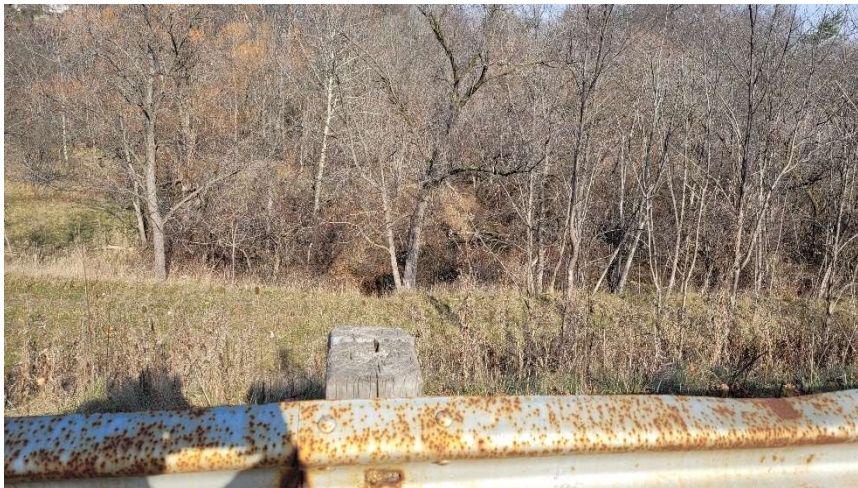


Plate 2: Coldwater Creek floodplain and associated wooded area approximately 105 metres east of Site 1 – the parcel adjacent to and located southwest of the existing Osler (HD011) W.P.S., looking north from Osler Drive (A.S.I. 2022).



Plate 3: Residence at 88 Ofield Road in the location of Site 4, looking northeast from the intersection of Main Street West and Ofield Road (A.S.I. 2022).



Plate 4: South elevation of the residence at 88 Ofield Road in the location of Site 4, looking north from Ofield Road (A.S.I. 2022).



Plate 5: Parking lot of commercial retail structure at Site 6 – 1845 Main Street West, looking north towards Whitney Avenue (A.S.I. 2022).

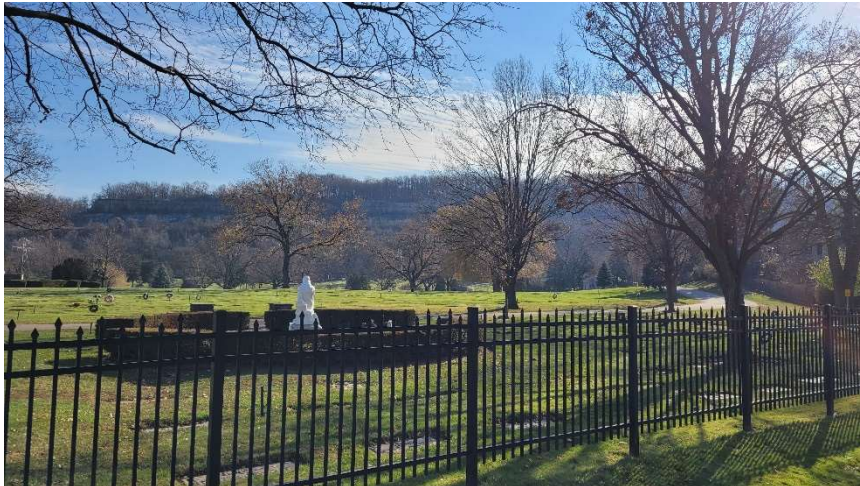


Plate 6: White Chapel Memorial Gardens (CHL 7) adjacent to Site 6 – 1845 Main Street West, looking east from Main Street West (A.S.I. 2022).



Plate 7: Parking lot of Haven Inn at Site 8 – 1870 Main Street West, looking west from Main Street West (A.S.I. 2022).

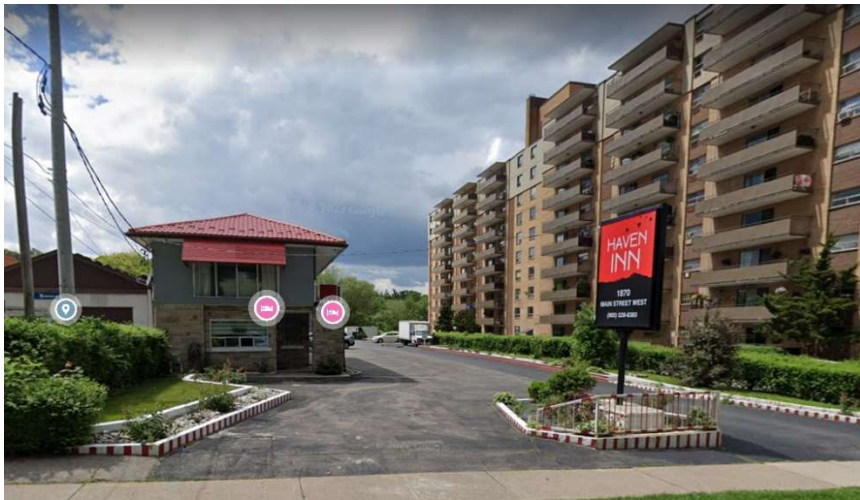


Plate 8: Haven Inn at Site 8 – 1870 Main Street West, looking west from Main Street West (Google Streetview 2022).



Plate 9: Parking lot of Westlake Car Service at Site 9 – 1872 Main Street West, looking west from Main Street West (A.S.I. 2022).

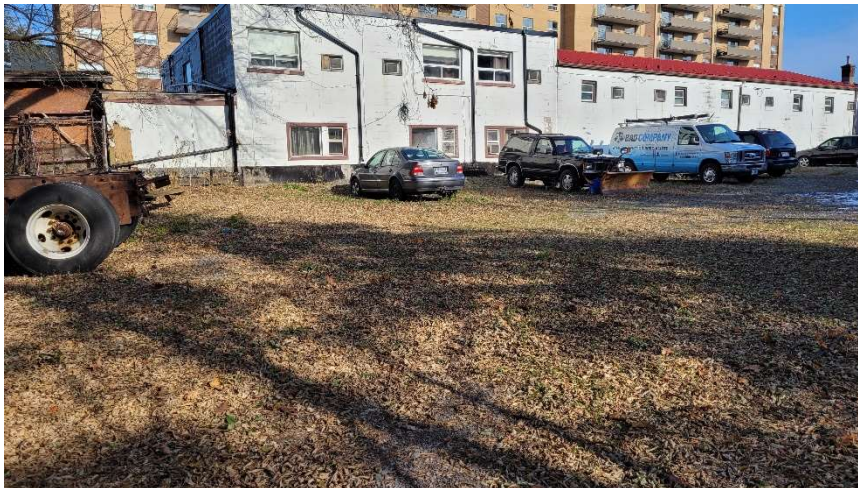


Plate 10: Rear of Westlake Car Service at Site 9 – 1872 Main Street West, looking north (A.S.I. 2022).



Plate 11: Grass field adjacent to Alexander Park at Site 12 – 125 Rifle Range Road, looking south with Rifle Range Road at right (A.S.I. 2022).



Plate 12: Baseball diamond in Alexander Park adjacent to Site 12 – 125 Rifle Range Road and Site 19 – 161 Rifle Range Road, looking east (A.S.I. 2022).



Plate 13: Church and entrance driveway at Site 19 – 161 Rifle Range Road, looking east from Rifle Range Road (A.S.I. 2022).

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

Based on the results of the background research, 21 built heritage resources (B.H.R.s) and 12 cultural heritage landscapes (C.H.L.s) were identified within the Study Area. Of the 21 identified B.H.R.s, one is a Registered (non-Designated) Property, 18 are Inventoried Properties, one is on the Heritage Bridge Inventory, and one was identified during background research and field review. Of the 12 identified C.H.L.s, one is a Registered (non-Designated) Property, one is an Inventoried Property, four are on the Inventory of Cemeteries and Burial Grounds, five are on the C.H.L. Inventory, and one is part of a Historic Neighbourhood Inventory. A summary inventory of known B.H.R.s and C.H.L.s within the Study Area is presented below in Table 1.³

Of these 21 B.H.R.s and 12 C.H.L.s identified within the Study Area, one B.H.R. and two C.H.L.s are within or adjacent to the short-listed alternative sites. A detailed

³ Please note that this summary table is meant to be used for planning purposes to aid in the evaluation and selection of the preferred alternative.

inventory of known and potential B.H.R.s and C.H.L.s within and adjacent to the short-listed alternatives that were subject to field review is included in Table 2. See Figure 9 to Figure 14 for mapping showing the location of identified B.H.R.s and C.H.L.s. within the Study Area.

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

Feature I.D.	Address or Location	Heritage Status and Recognition
<i>Initial Study Area</i>		
BHR-1	961 Lower Lions Club Road	Inventoried Property
BHR-2	1176 Wilson Street East	Inventoried Property
BHR-3	1169 Wilson Street East	Inventoried Property
BHR-4	1221 Wilson Street East	Inventoried Property
BHR-5	1260 Wilson Street East	Registered (Non-Designated) Property
BHR-6	143 Lower Horning Road	Inventoried Property
BHR-7	7 Butty Place	Inventoried Property
BHR-8	71 East Street	Inventoried Property
BHR-9	69 East Street	Inventoried Property
BHR-10	12 Ancaster Street East	Inventoried Property
BHR-11	14 Meadow Lane	Inventoried Property
BHR-12	8 Meadow Lane	Inventoried Property
BHR-13	2 Meadow Lane	Inventoried Property
BHR-14	6 South Street East	Inventoried Property

BHR-15	2 South Street East	Inventoried Property
BHR-16	Pedestrian Bridge on Rail Trail	Heritage Bridge Inventory
BHR-17	51 Lower Horning Road	Inventoried Property
CHL-1	1032 Lower Lions Club Road	Registered (Non-Designated) Property
CHL-2	1019 Lower Lions Club Road	Inventoried Property
CHL-3	East Street South (St. Augustine's Roman Catholic Church Cemetery)	Inventory of Cemeteries and Burial Grounds
CHL-4	60 Osler Drive (Union Cemetery)	Inventory of Cemeteries and Burial Grounds
CHL-5	Coldwater Creek CHL	CHL Inventory
CHL-6	Toronto, Hamilton, and Brantford Railway	CHL Inventory
CHL-7	1895 Main Street West (White Chapel Memorial Gardens and Crematorium)	Inventory of Cemeteries and Burial Grounds
CHL-8	Cootes Paradise Plan CHL	CHL Inventory
CHL-9	Dundas Central Business District CHL	Historic Neighbourhood Inventory
CHL-10	Henry Binkley Family Cemetery	Inventory of Cemeteries and Burial Grounds
<i>Study Area Expansion</i>		
BHR-18	261 Whitney Avenue	Inventoried Property

BHR-19	151 Emerson Street	Inventoried Property
BHR-20	134 Emerson Street	Inventoried Property
BHR-21	88 Ofield Road	Identified during Background Research and Field Review
CHL-11	Alexander Park	CHL Inventory
CHL-12	Burke Survey	CHL Inventory

Table 2: Inventory of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within or adjacent to the Short-Listed Alternatives

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
BHR-21	Residence	88 Ofield Road (Located at Site 4)	Potential B.H.R. - Identified during Background Research and Field Review	This residence is located at the northwest corner of the intersection of Main Street West and Ofield Road. The structure is a single-storey brick residence with a hipped gable roof and texture concrete block foundations. There is an enclosed porch and bay window on the south elevation fronting on Ofield Road. Based on the use of textured concrete blocks, window type, and the scale and massing, this residence with elements of Edwardian architectural style is assumed to have been constructed in the early twentieth century. A northern addition was constructed at an unknown date based on the use of different bricks, with the roofline assumed to have been altered at the same time in both the front and rear. The residence and Ofield Road are depicted in the 1954 aerial photograph (Figure 6).	 Plate 14: South elevation of the residence at 88 Ofield Road (A.S.I. 2022)  Plate 15: West elevation of the residence at 88 Ofield Road (A.S.I. 2022)

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
CHL-7	Cemetery	1895 Main Street West (White Chapel Memorial Gardens and Crematorium) (Adjacent to Site 6)	Known C.H.L. - Inventory of Cemeteries and Burial Grounds	White Chapel Memorial Gardens and Crematorium was established in 1929 as the ‘Westmount Memorial Park Cemetery’ and owned by H.G. Binet. The site is an active cemetery and features 16,000 monuments (City of Hamilton, 2005)	 Plate 16: Representative interments in the White Chapel Memorial Gardens and Crematorium (A.S.I. 2022)
CHL-11	Recreational Park	Alexander Park (Adjacent to Site 12 and Site 19)	Known C.H.L. - Listed on Municipal CHL Inventory	Alexander Park is a recreational park southeast of the intersection of Rifle Range Road and Whitney Avenue. The park features baseball diamonds, a playground, several small single storey structures, and other recreational amenities. The land on which Alexander Park is located is depicted in the general location of a rifle range in the 1909 topographic map (Figure 4) and is noted as a park in the 1973 topographic map (Figure 7).	 Plate 17: Aerial image of Alexander Park with boundary depicted in green (City of Hamilton Interactive Map).

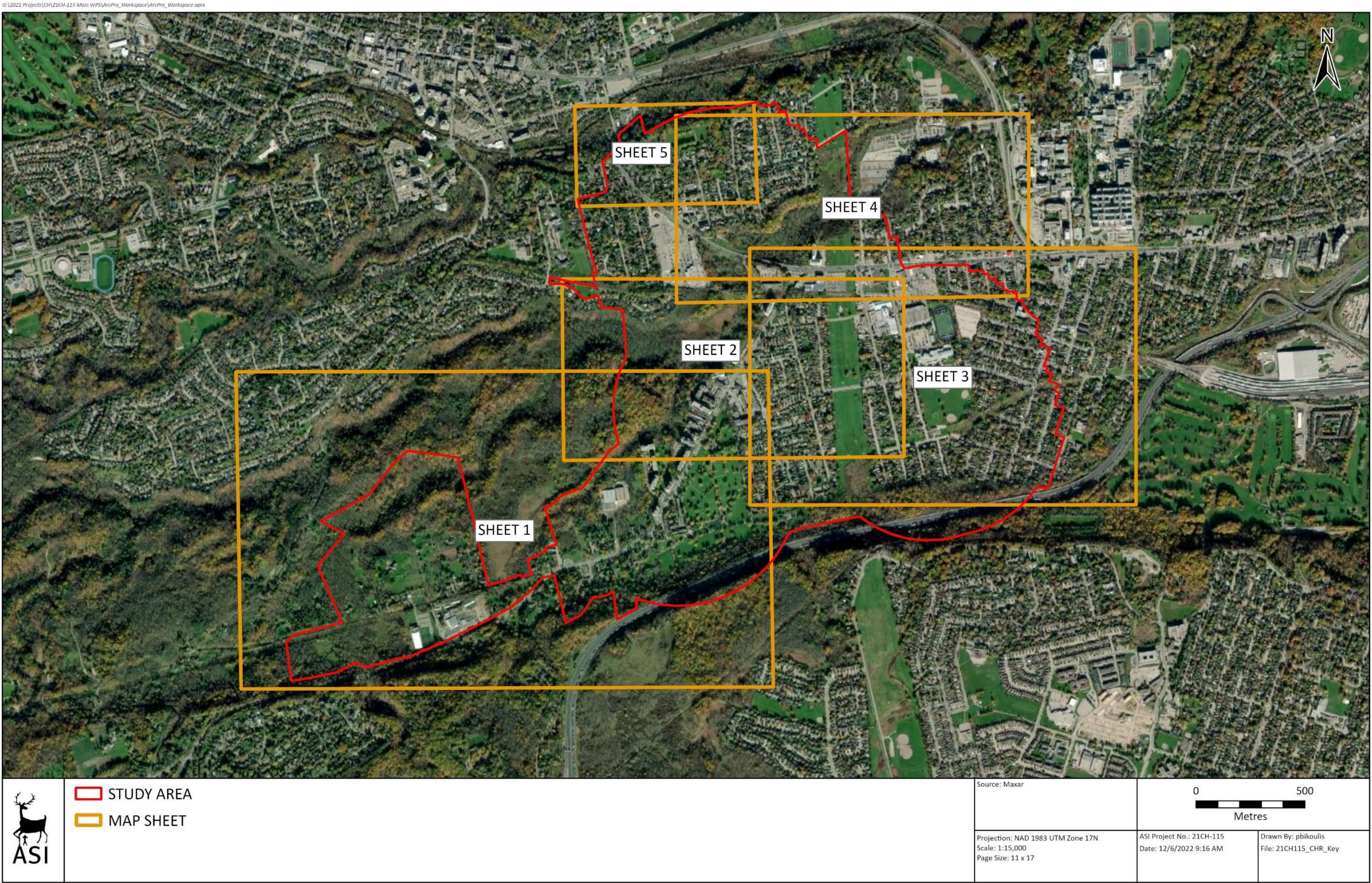


Figure 9: Location of Identified Built Heritage Resources (B.H.R.s) and Cultural Heritage Landscapes (C.H.L.s) in the Study Area (Key Sheet)



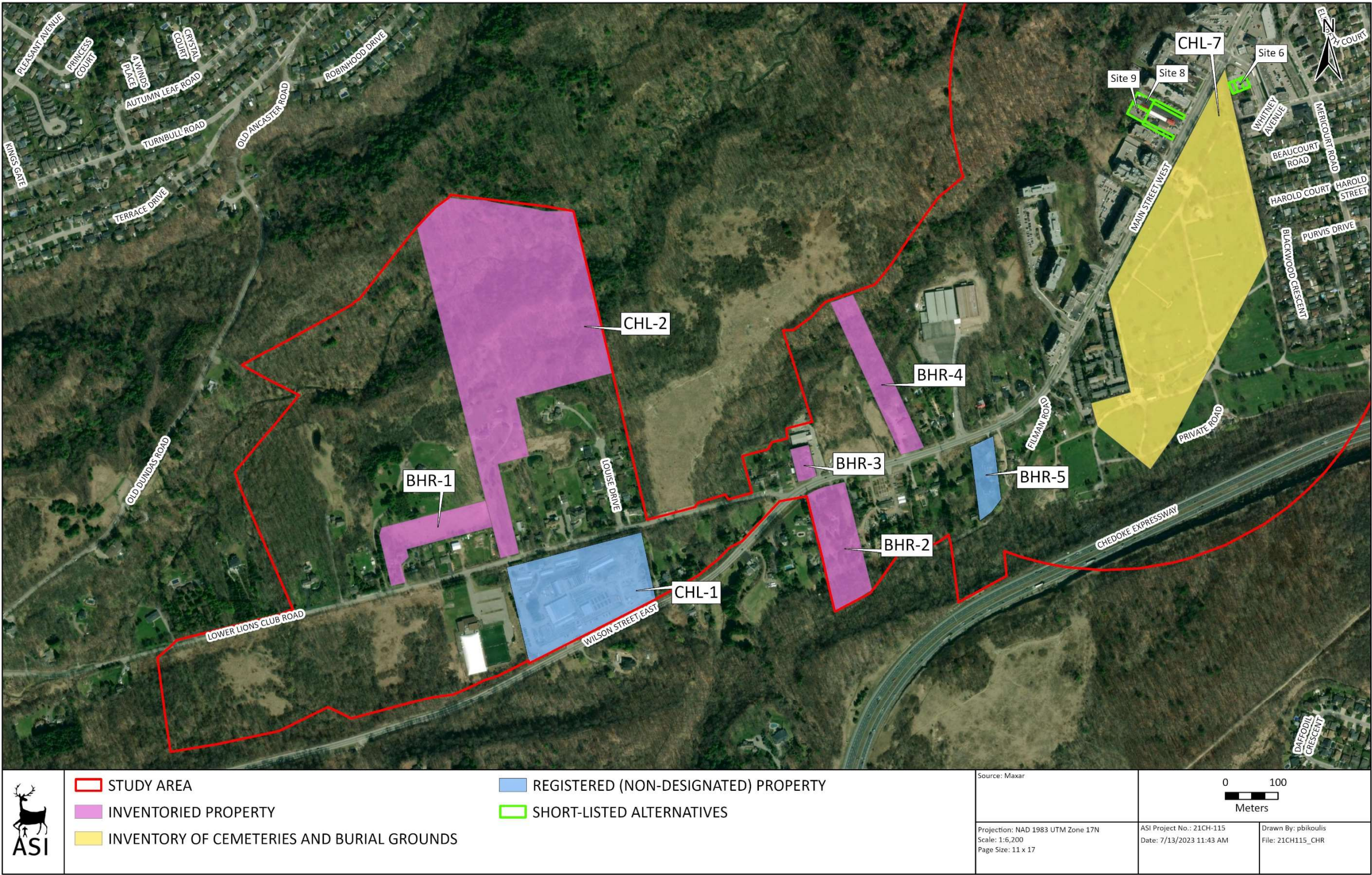


Figure 10: Location of Identified Built Heritage Resources (B.H.R.s) and Cultural Heritage Landscapes (C.H.L.s) in the Study Area (Sheet 1)



Figure 11: Location of Identified Built Heritage Resources (B.H.R.s) and Cultural Heritage Landscapes (C.H.L.s) in the Study Area (Sheet 2)



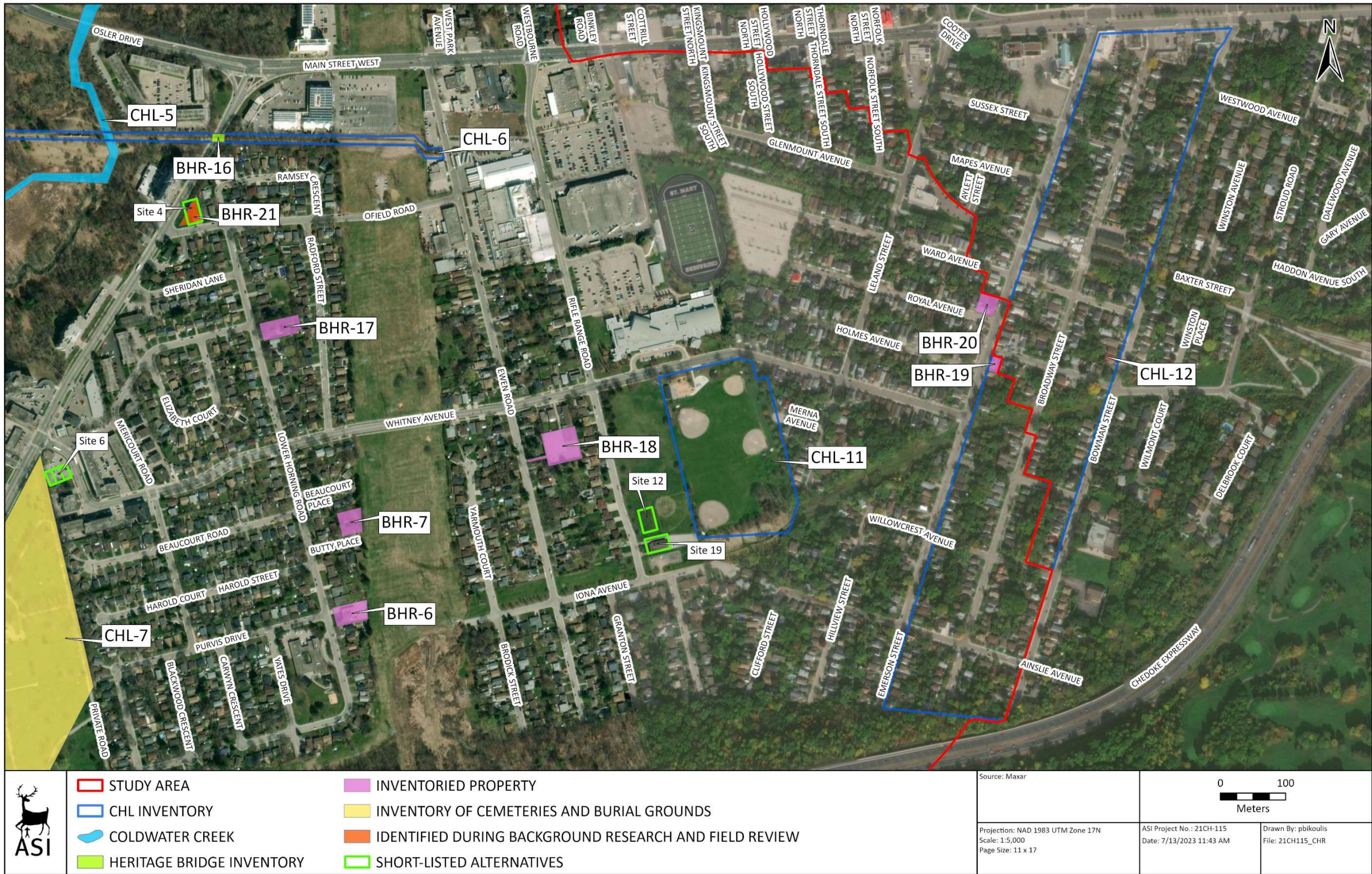


Figure 12: Location of Identified Built Heritage Resources (B.H.R.s) and Cultural Heritage Landscapes (C.H.L.s) in the Study Area (Sheet 3)



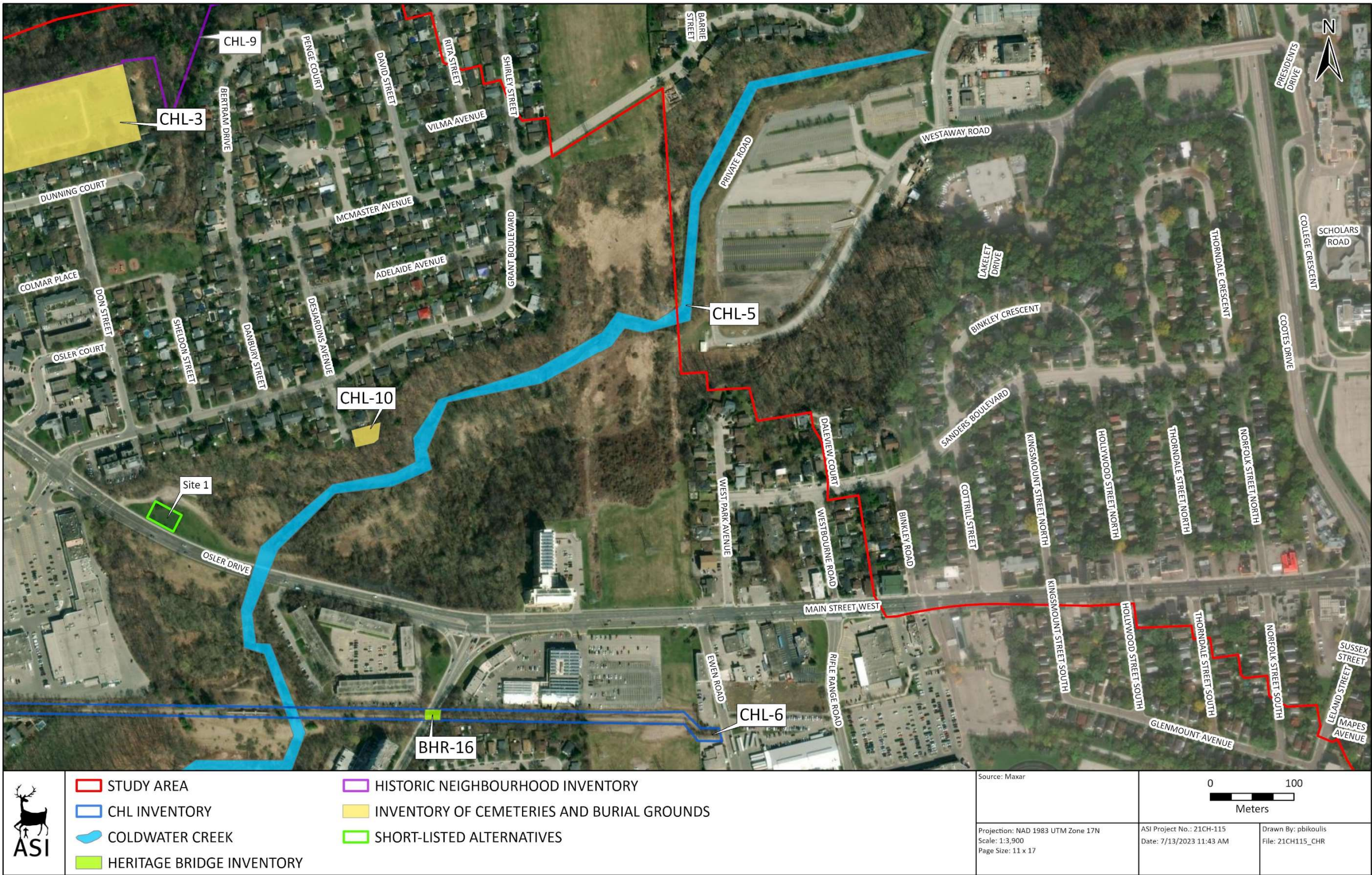


Figure 13: Location of Identified Built Heritage Resources (B.H.R.s) and Cultural Heritage Landscapes (C.H.L.s) in the Study Area (Sheet 4)



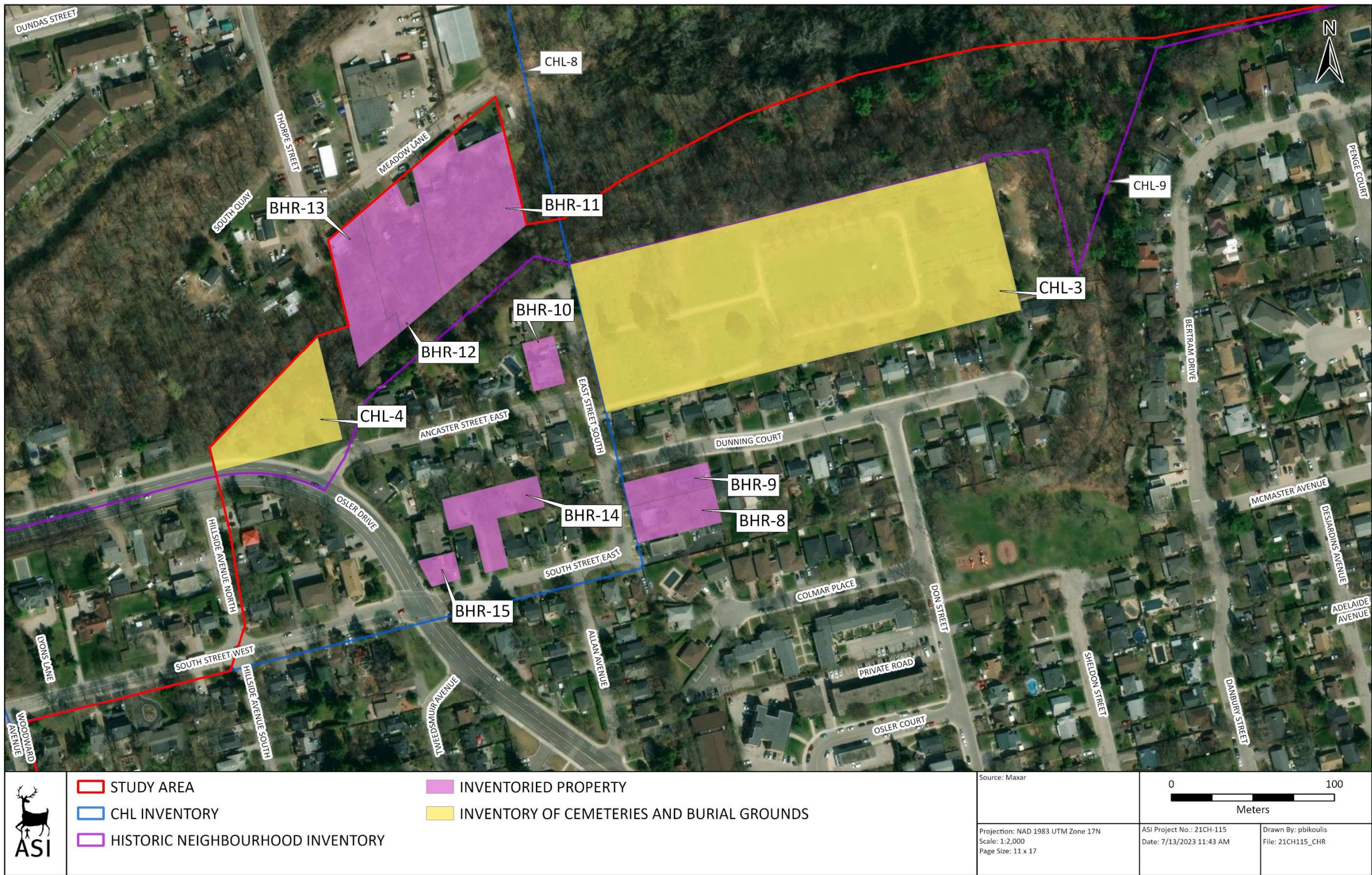


Figure 14: Location of Identified Built Heritage Resources (B.H.R.s) and Cultural Heritage Landscapes (C.H.L.s) in the Study Area (Sheet 5)



5.0 Draft Summary of Potential Impacts to Identified Built Heritage Resources and Cultural Heritage Landscapes

The following sections provide a high-level summary of the locations of known and potential built heritage resources (B.H.R.s) and cultural heritage landscapes (C.H.L.s) in relation to each of the seven short-listed alternative sites. The information contained in this section is intended to be used to help in providing a summary context of the cultural heritage component of the project to assist in the consideration of site location and the selection of the preferred alternative. When the preferred alternative was selected in April and May 2023, the site-specific preliminary impact assessment that includes mitigation measures was prepared in July 2023, and is included in Section 6.0.

5.1 Description of Proposed Undertaking

The Main and Whitney (HD17A) Water Pumping Station (WPS) Improvements project is intended to develop and assess alternative solutions to replace the existing WPS at Main Street West and Whitney Avenue (HD17A) with a new WPS at a new site near its current location. Doing so will improve water service and to enhance water system security and reliability to residents in Pressure District 17. The project Study Area consists of parts of Pressure Districts 2, 11, 17 and the short-listed alternatives (Figure 9 to Figure 14). The Initial Study Area was expanded in November 2022 to include additional lands adjacent to the intersection of Rifle Range Road and Iona Avenue. The seven short-listed alternatives include:

- Site 1 – Existing Osler WPS (HD011) on the north side of Osler Drive west of Grant Boulevard
- Site 6 – 1845 Main Street West
- Site 8 – 1870 Main Street West
- Site 9 – 1872 Main Street West
- Site 12 – 125 Rifle Range Road



- Site 19 – 161 Rifle Range Road

5.2 Summary of Potential Impacts in the Short-Listed Alternative Site Locations

Archaeological Services Incorporated (ASI) provided a high-level summary of potential impacts to Arcadis Professional Services (Canada) Inc., to assist in the consideration of site location and the selection of the long list of 21 alternative locations (email communication 3 August 2022). Mapping showing the location of the proposed long list alternatives was presented at a Public Information Centre (PIC), and the presentation materials reviewed in preparation of this high-level evaluation of alternatives are provided in Appendix A. An overview of the high-level email summary evaluation of long list alternatives relative to the location of known B.H.R.s and C.H.L.s from desktop data collection provided by ASI included the following:

- Sites 1-5, 8, 9, 13-17, and 21-22 are not adjacent to any known B.H.R.s or C.H.L.s
- Sites 6 and 7 appear to be within/adjacent to CHL-7 (White Chapel Cemetery), and would require additional cultural heritage reporting and development of mitigation measures.
- Site 10 is adjacent to CHL-7 (White Chapel Cemetery), and this would require additional cultural heritage reporting and development of mitigation measures.
- Sites 8 and 9 have easements that are adjacent to the cemetery which may trigger additional cultural heritage work and development of mitigation measures.
- Sites 12, 18, and 19 were outside the Initial Study Area in August 2022 and were not included in this preliminary email summary.

In November 2022, a short list of alternatives was prepared, which included several potential locations from the long list of alternatives and some additional areas in the Study Area Expansion. Table 3 provides a high-level summary of the

locations of known and potential B.H.R.s and C.H.L.s in relation to each of the seven short-listed alternatives⁴.

⁴ The summary provided in Table 3 was produced in January 2023 to assist in the selection of the preferred site alternative, and was superseded in July 2023 by the Preliminary Impact Assessment for Site 6-1845 Main Street West in Section 6.0



Table 3: Draft Summary of Potential Impacts

Site Number	Location/Name	Site Location Relative to Identified BHRs and CHLs	Comments
Site 1	Existing Osler Water Pumping Station (WPS) (HD011) on the north side of Osler Drive west of Grant Boulevard	The proposed footprint for Site 1 is located in a grass area in the location of an existing WPS. CHL-5- Coldwater Creek CHL is located approximately 105 metres east of the proposed site location.	Site 1 is adjacent to CHL-5, however direct or indirect negative impacts are not anticipated due to the distance from the site to the creek. This report will be updated with a Preliminary Impact Assessment when preliminary design work has been completed to determine any direct or indirect impacts, propose suitable mitigation measures, and outline any further cultural heritage reporting that may be required if Site 1 is selected as the preferred location.

Site Number	Location/Name	Site Location Relative to Identified BHRs and CHLs	Comments
Site 4	88 Ofield Road	The proposed footprint for Site 4 is located in a residential context and would require the removal of the residence at 88 Ofield Road. As this residence is a potential BHR identified during background research and field review (BHR-21), the removal of the residence would be a direct, negative, irreversible impact.	Where technically feasible, Site 4 should be eliminated from further consideration in the selection of the preferred site location. This report will be updated with a Preliminary Impact Assessment that will outline mitigation measures and required future cultural heritage reporting if Site 4 is selected as the preferred location. Further, additional cultural heritage reporting in the form of a Cultural Heritage Impact Assessment (C.H.I.A.) may be required to evaluate the subject property under Ontario Regulation 9/06 and to complete a resource-specific assessment of impacts to the structure and property.

Site Number	Location/Name	Site Location Relative to Identified BHRs and CHLs	Comments
Site 6	1845 Main Street West	The proposed footprint for Site 6 is located in a commercial context in the parking lot of a retail store. Site 6 is directly adjacent to White Chapel Memorial Gardens Cemetery and Crematorium (CHL-7)	As Site 6 is adjacent to CHL-7, direct or indirect negative impacts are possible. This report will be updated with a Preliminary Impact Assessment when preliminary design work has been completed to determine any direct or indirect impacts, propose suitable mitigation measures, and outline any further cultural heritage reporting that may be required if Site 6 is selected as the preferred location.

Site Number	Location/Name	Site Location Relative to Identified BHRs and CHLs	Comments
Site 8	1870 Main Street West	The proposed footprint for Site 8 is located in a commercial context in the parking lot and part of the footprint of the structure at 1870 Main Street West, the Haven Inn. This property is not identified as a known or potential BHR or CHL	As Site 8 is not within or adjacent to any identified BHRs or CHLs, no direct or indirect negative impacts are anticipated. If Site 8 is selected as the preferred location, no further cultural heritage reporting is required.
Site 9	1872 Main Street West	The proposed footprint for Site 9 is located in a commercial context in the parking lot of an auto mechanic shop. Site 9 is not adjacent to any identified BHRs or CHLs.	As Site 9 is not within or adjacent to any identified BHRs or CHLs, no direct or indirect negative impacts are anticipated. If Site 9 is selected as the preferred location, no further cultural heritage reporting is required.

Site Number	Location/Name	Site Location Relative to Identified BHRs and CHLs	Comments
Site 12	125 Rifle Range Road	The proposed footprint for Site 12 is located in a recreational park context adjacent to Alexander Park (CHL-11).	As Site 12 is adjacent to CHL-11, direct or indirect negative impacts are possible. This report will be updated with a Preliminary Impact Assessment when preliminary design work has been completed to determine any direct or indirect impacts, propose suitable mitigation measures, and outline any further cultural heritage reporting that may be required if Site 12 is selected as the preferred location.

Site Number	Location/Name	Site Location Relative to Identified BHRs and CHLs	Comments
Site 19	161 Rifle Range Rd	The proposed footprint for Site 19 is the location of a church at 161 Rifle Range Road. It is adjacent to Alexander Park (CHL-11). The property at 161 Rifle Range Road is not identified as a known or potential BHR or CHL	As Site 19 is adjacent to CHL-11, direct or indirect negative impacts are possible. This report will be updated with a Preliminary Impact Assessment when preliminary design work has been completed to determine any direct or indirect impacts, propose suitable mitigation measures, and outline any further cultural heritage reporting that may be required if Site 19 is selected as the preferred location.

The high-level summary of the seven short-listed alternatives in relation to the locations of known and potential B.H.R.s and C.H.L.s in Table 3 is intended to assist in determining the preferred site location.

Where feasible, the preferred site location should be selected in a manner that avoids impacts to known and potential B.H.R.s and C.H.L.s. In this respect, Site 8 and Site 9 are preferred from a cultural heritage perspective as they are not within or adjacent to any identified B.H.R.s or C.H.L.s. Selection of Site 8 or Site 9 should be carried forward for consideration as the preferred site location.

If Sites 8 or 9 are eliminated from consideration, Site 1, Site 6, Site 12, or Site 19 should be considered as the preferred locations as they are adjacent to identified BHRs or CHLs. Direct or indirect impacts to these adjacent B.H.R.s and C.H.L.s should be investigated through the completion of the Preliminary Impact Assessment portion of this Cultural Heritage Report if Site 1, 6, 12, or 19 is selected as the preferred alternative location.

The selection of Site 4 is anticipated to result in the complete removal of the residence at 88 Ofield Road, a potential B.H.R. (BHR-21) with potential cultural heritage value or interest. Site 4 is the least preferred location from a cultural heritage perspective and should not be carried forward for consideration as the preferred location where feasible. If selected as the preferred site location, direct or indirect impacts to this BHR-21 should be investigated through the completion of the Preliminary Impact Assessment portion of this Cultural Heritage Report. Further, additional cultural heritage reporting in the form of a Cultural Heritage Impact Assessment (C.H.I.A.) may be required to evaluate the subject property under Ontario Regulation 9/06 and to complete a resource-specific assessment of impacts to the structure and property.

6.0 Preliminary Impact Assessment of the Preferred Site Alternative

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



section provides the Preliminary Impact Assessment of the preferred site alternative, Site 6- 1845 Main Street West.

6.1 Description of Proposed Undertaking

The Main & Whitney (HD17A) Water Pumping Station (W.P.S.) Class Environmental Assessment and Conceptual Design project is intended to develop and assess alternative solutions to replace the existing Main & Whitney (HD17A) W.P.S. currently located at Main Street West and Whitney Avenue, with a new W.P.S. at a new site near its current location.

The seven short-listed alternative sites (Figure 9 to Figure 14) were evaluated in an earlier draft of this report, and are discussed in Section 5.0.

In April and May 2023, Site 6 - 1845 Main Street West was selected and presented as part of Public Information Centre No. 2 as the preferred site alternative for the new W.P.S. (ARCADIS & IBI Group, 2023).

6.2 Analysis of Potential Impacts

Table 4 outlines the potential impacts on the identified C.H.L. (CHL-7) within the Study Area that is adjacent to the preferred site alternative, Site 6 - 1845 Main Street West. Mapping of the short-listed alternatives and the identified B.H.R.s and C.H.L.s is provided in Figure 9 to Figure 14.

There are no anticipated impacts for the remainder of the B.H.R.s and C.H.L.s (BHR-1 to BHR-21, CHL-1 to CHL-6, and CHL-8 to CHL-12) from the proposed undertaking and therefore they have not been included in the analysis of potential impacts due to their distance from the work.

Table 4: Preliminary Impact Assessment and Recommended Mitigation Measures for the Preferred Site Alternative

Feature I.D.	Location/Name	Heritage Status and Recognition	Site	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
CHL-7	1895 Main Street West (White Chapel Memorial Gardens and Crematorium)	Known CHL-Inventory of Cemeteries and Burial Grounds	Adjacent to Site 6	It is understood that the limits of the construction for Site 6 will be confined to the property adjacent to the C.H.L. No direct adverse impacts to this C.H.L. are anticipated. Indirect adverse impacts due to construction related vibrations are possible as there are grave stones that sit within 50 metres of the proposed work for Site 6. These impacts are anticipated to be limited and temporary. No additional indirect impacts from Site 6, such as isolation of a heritage attribute, or obstruction of significant views to or from the property are anticipated.	Recommended Mitigation: Continue to avoid direct adverse 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.



6.3 Summary of Potential Impacts

The proposed undertaking at Site 6 - 1845 Main Street West, will not result in direct adverse impacts to CHL-7, which is adjacent to the site (Table 4). Potential vibration impacts as a result of the proposed construction work may result in indirect adverse impacts to CHL-7.

Where feasible, the proposed alignment should be designated in a manner to avoid impacts to all identified B.H.R.s and C.H.L.s. To ensure the structures and potential heritage attributes on these properties are not adversely impacted, construction and staging should be suitably planned to avoid all impacts to these properties. Suitable mitigation measures could include the establishment of no-go zones with fencing and issuing instructions to construction crews to avoid the B.H.R.s and C.H.L.s.

Indirect impacts to CHL-7 may occur as a result of its location adjacent to the preferred alternative site. To ensure the structures and potential heritage attributes on the property of CHL-7 (1895 Main Street West) are not adversely impacted during construction, baseline vibration monitoring should be undertaken during detailed design.

Should this advance monitoring assessment conclude that the any structures or potential heritage attributes will be subject to vibrations, a vibration monitoring plan should be prepared and implemented as part of the detailed design phase of the project to lessen vibration impacts related to construction.

7.0 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 a rural land use history dating back to at least the mid-nineteenth century and an urban history dating back to the mid-twentieth century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there are 20 known built heritage resources (B.H.R.s) and 12 known cultural heritage landscapes



(C.H.L.s). One additional B.H.R. was encountered during field review of the short-listed alternative sites.

7.1 Key Findings

A total of 21 B.H.R.s and 12 C.H.L.s were identified within the Study Area. Of the 33 identified B.H.R.s and C.H.L.s:

- 19 are Inventoried Properties (BHR-1 to BHR-4, BHR-6 to BHR-15, BHR-17 to BHR-20 and CHL-2)
- Two are Registered (non-Designated) Properties (BHR-5 and CHL-1)
- One is found on the Heritage Bridge Inventory (BHR-16)
- Four are found on the Inventory of Cemeteries and Burial Grounds (CHL-3, CHL-4, CHL-7, and CHL-10)
- Five are found on the CHL Inventory (CHL-5, CHL-6, CHL-8, CHL-11, and CHL-12)
- One is found on the Historic Neighbourhood Inventory (CHL-9)
- One was identified during background research and field review (BHR- 21)

Identified B.H.R.s and C.H.L.s are historically, architecturally, and contextually associated with land use patterns in the City of Hamilton.

7.2 Results of Preliminary Impact Assessment

- The proposed undertaking will not result in direct impacts to CHL-7, the one C.H.L. adjacent to the preferred site alternative, Site 6 - 1845 Main Street West.
- Potential vibration impacts as a result of the preferred site alternative, Site 6 is anticipated to result in indirect impacts to 1895 Main Street West (CHL-7).

7.3 Recommendations

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

1. Construction activities and staging should be suitably planned and undertaken to avoid unintended negative impacts to identified B.H.R.s and C.H.L.s. Avoidance measures may include, but are not limited to: erecting temporary fencing, establishing buffer zones, issuing instructions to construction crews to avoid identified B.H.R.s and C.H.L.s, etc.
2. To ensure the structures and potential heritage attributes on the property of CHL-7 (1895 Main Street West) are not adversely impacted during construction, baseline vibration monitoring should be undertaken during detailed design. Should this advance monitoring assessment conclude that the any structures or potential heritage attributes will be subject to vibrations, a vibration monitoring plan should be prepared and implemented as part of the detailed design phase of the project to lessen vibration impacts related to construction.
3. Should future work require an expansion of the Study Area then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential B.H.R.s and C.H.L.s.
4. This report should be submitted to the City of Hamilton and the Ministry of Citizenship and Multiculturalism for review and comment, and any other local heritage stakeholders that may have an interest in this project. The final report should be submitted to the City of Hamilton for their records.

8.0 References

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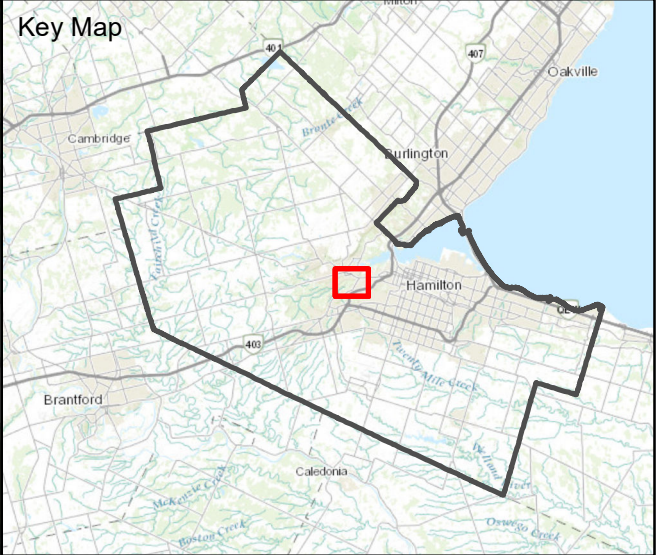
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Appendix A: Long List of Alternative Sites

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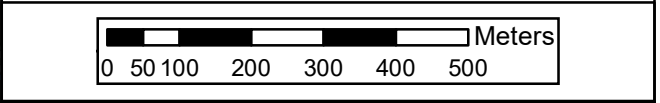


Legend

- HD011 (Osler WPS)
- HD17A (Main and Whitney WPS)
- Watercourse
- Waterbodies
- Property Boundary

Alternative Location Construction Component

- Lot Area
- Building Area
- Parking Lot
- Study Area



**HD17A (Main & Whitney WPS)
Class EA and Conceptual Design**

**Alternative Location
Overview**



Project No.: 136546	Date: September 2022
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