



Appendix C: Cultural Heritage Assessment Report

**CULTURAL HERITAGE REPORT:
EXISTING CONDITIONS AND PRELIMINARY IMPACT ASSESSMENT**

**BRADFORD STREET AND ADJACENT ROADWAYS
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT**

**CITY OF BARRIE
SIMCOE COUNTY, ONTARIO**

FINAL REPORT

Prepared for:

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EXECUTIVE SUMMARY

ASI was contracted by CIMA+, on behalf of the City of Barrie, to conduct a Cultural Heritage Report as part of the Bradford Street and Adjacent Roadways Municipal Class Environmental Assessment. The Bradford Street and Adjacent Roadways Municipal Class Environmental Assessment involves the identification of transportation infrastructure requirements to address the area's projected growth, and will protect the proposed future right-of-way to accommodate this. The project study area consists of Bradford Street from Dunlop Street to Tiffin Street, High Street from Dunlop Street to Bradford Street, Simcoe Street from Toronto Street to Bradford Street, and Tiffin Street from Bradford Street to Lakeshore Drive in the City of Barrie. This Cultural Heritage Report focuses on the project study area with an additional 50 m buffer.

The purpose of this report is to describe the existing conditions of the study area, present an inventory of known and potential built heritage resources (BHRs) and cultural heritage landscapes (CHLs), 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 early settlement history dating back to the early nineteenth century with a concentration of residential and transportation infrastructure development which transitioned towards increased commercial land use in the twentieth century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there are five previously identified features of cultural heritage value within the Bradford Street and Adjacent Roadways study area. An additional 18 features were identified during the fieldwork. Of the five known BHRs, two (50 Tiffin Street and 168-170 Bradford Street) have been included within potential CHLs in this report, resulting in a total of nine BHRs and 12 CHLs identified in this report.

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 BHRs and CHLs. Avoidance measures may include, but are not limited to: erecting temporary fencing, establishing buffer zones, issuing instructions to construction crews to avoid identified BHRs and CHLs, etc.
2. The proposed limits of the future right-of-way will result in direct impacts through property encroachment, which are anticipated to take place at the following properties: Memorial at the Intersection of Essa Road and Tiffin Street (BHR 5); 101 Bradford Street (CHL 3); 112 and 118 Bradford Street (CHL 4); 146-218 (west side) and 151-161 (east side) Bradford Street (CHL 6); 244-252 Bradford Street (CHL 8); 30-50 (north side) and 47 (south side) Tiffin Street (CHL 9); and 27-35 Essa Road (CHL 11). However, it is unknown at this time whether the expansion



of the right-of-way will require removals or alterations to the subject properties and which could significantly adversely impact their potential cultural heritage value.

3. Given the potential cultural heritage value of the CHL 3, CHL 4, CHL 6, CHL 8, CHL 9 and CHL 11, a resource-specific Cultural Heritage Evaluation Report (CHER) for each should be conducted to determine their cultural heritage value or interest (CHVI). However, details of encroachment are not known at this time. The long-range corridor protection plan represents the ultimate corridor state, and will be used to guide re-development along the corridor. As such, the City of Barrie has no plans to acquire property or expropriate property at this time. Cultural heritage requirements, including recommended CHERs and heritage impact assessments will be met as the corridor redevelops and will be the responsibility of the developer. In the future, when the City of Barrie decides to reconstruct Bradford Street, an Addendum to this study will be required to develop an optimized design plan that fully considers the transportation and land use planning context at that time coupled with mitigation measures to minimize impacts to in-situ corridor constraints including BHRs and CHLs based on best practices in place at that time
4. Recommendations for BHR 5 include removal of the flag poles/flags, commemorative marker, and other items from the memorial prior to construction and storage in a secure facility to prevent damage. Removal, storage, and future placement should all be done in consultation with the City of Barrie and Barrie Unit 365 of the Army, Navy and Air Force Veterans in Canada.
5. To ensure the following properties are not adversely impacted during construction, baseline vibration monitoring should be undertaken during detailed design:
 - 50 Bradford Street (BHR 1)
 - 48 Dunlop Street West (BHR 2)
 - 50 John Street (BHR 3)
 - 35 John Street (BHR 4)
 - 285 Bradford Street (BHR 7)
 - 34-46 (west side) and 27-31 (east side) Toronto Street (CHL 1)
 - 5-13 Bradford Street (CHL 2)
 - 101 Bradford Street + 28, 31, and 34 Vespra Street (CHL 3)
 - 112 and 118 Bradford Street (CHL 4)
 - 28, 29, 48, 50 and 51 Victoria St (CHL 5)
 - 146-218 (west side) and 151-161 (east side) Bradford Street (CHL 6)
 - 36-43 Brock Street (CHL 7)
 - 244-252 Bradford Street (CHL 8)
 - 30-50 (north side) and 47 (south side) Tiffin Street (CHL 9)
 - 268 Bradford St, 4 Essa Rd/5-7 Tiffin St + 8-10 Essa Rd (CHL 10)
 - 27-35 (west side) and 28-34 (east side) Essa Rd (CHL 11)

Should this advance monitoring assessment conclude that the structure(s) on these properties will be subject to vibrations, prepare and implement a vibration monitoring plan as part of the detailed design phase of the project to lessen vibration impacts related to construction.



6. 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 heritage resources.
7. This report should be submitted to the City of Barrie 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 Barrie for their records.



PROJECT PERSONNEL

<i>Senior Project Manager:</i>	Lindsay Graves, MA, CAHP Senior Cultural Heritage Specialist Senior Project Manager - Cultural Heritage Division
<i>Project Coordinator:</i>	Katrina Thach, Hon. BA Associate Archaeologist Project Coordinator - Environmental Assessment Division
<i>Project Manager:</i>	Johanna Kelly, MSc Cultural Heritage Analyst Project Manager - Cultural Heritage Division
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<i>Report Reviewer(s):</i>	Annie Veilleux, MA, CAHP Senior Cultural Heritage Specialist Manager – Cultural Heritage Division Johanna Kelly Lindsay Graves



QUALIFIED PERSONS INVOLVED IN THE PROJECT

Lindsay Graves, MA, CAHP

Senior Cultural Heritage Specialist | Senior Project Manager - Cultural Heritage Division

The Senior Project Manager for this Cultural Heritage Report is **Lindsay Graves** (MA, Heritage Conservation), Senior Cultural Heritage Specialist and the Environmental Assessment Coordinator for the Cultural Heritage Division at ASI. 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 EA processes and has served as Project Manager for over 100 heritage assessments during her time at ASI. Lindsay is a member of the Canadian Association of Heritage Professionals.

Johanna Kelly, MSc

Cultural Heritage Analyst | Project Manager - Cultural Heritage Division

The Project Manager for this Cultural Heritage Report is **Johanna Kelly** (MSc), who is a Cultural Heritage Analyst and Project Manager within the Cultural Heritage Division with ASI. She was responsible for the day-to-day management activities, including scoping of research activities and reviewing study findings and recommendations. With over ten years of experience in the field, Johanna has focused on the identification and evaluation of cultural heritage resources both above and below ground. With a background in archaeology, her current focus is the assessment, evaluation, and protection of above ground cultural heritage resources. Johanna has been involved in numerous large scale and high profile projects in various capacities, including built heritage and cultural heritage landscape assessments under the *Ontario Environmental Assessment Act* for Class Environmental Assessments and Individual Environmental Assessments, and as required for various planning studies throughout the Province of Ontario.

Meredith Stewart, MA, MSc

Cultural Heritage Technician | Researcher and Technical Writer - Cultural Heritage Division

The report writer for this report is **Meredith Stewart** (MA, Art History, MSc, Historic Preservation), who is a Cultural Heritage Technician and Technical Writer and Researcher within the Cultural Heritage Division with ASI. She was responsible for preparing and contributing research, reviewing existing heritage inventories, conducting the field review, and technical reporting. Meredith's work as a cultural heritage professional has focused on historical research, large-area studies, and survey work. Meredith



holds a MA in Art History from Carleton University, where she focused on architectural history and the built environment, and graduated with a MSc in Historic Preservation from the School of the Art Institute of Chicago. Meredith utilizes her knowledge of architectural history and building materials in the identification and evaluation of heritage buildings and structures. Meredith is an intern member of CAHP.



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 2020:41).

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 2020:42).

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 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, land disturbances (M.T.C.S. Ministry of Citizenship and Multiculturalism 2006). Indirect impacts also include potential vibration impacts (See Section 2.5 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 2006).

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 2020:51).

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



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1.0 INTRODUCTION

1.1 Report Purpose

ASI was contracted by CIMA+, on behalf of the City of Barrie, to conduct a Cultural Heritage Report as part of the Bradford Street and Adjacent Roadways Municipal Class Environmental Assessment. The purpose of this report is to describe the existing conditions of the study area, present an inventory of known and potential built heritage resources (BHRs) and cultural heritage landscapes (CHLs), provide a preliminary impact assessment, and propose appropriate mitigation measures.

1.2 Project Overview

The Bradford Street and Adjacent Roadways Municipal Class Environmental Assessment involves the identification of transportation infrastructure requirements to address the area's projected growth. This is a long-range planning study that will confirm and protect the right-of-way for:

- Improved sidewalks to enhance safety and accessibility of pedestrians and mobility device users
- New in-boulevard cycle track for all ages and abilities
- Traffic operational improvements to enhance safety
- Landscape design to create a vibrant and attractive street environment and complement future land uses

Currently, no immediate capital works are planned.

The project study area consists of Bradford Street from Dunlop Street to Tiffin Street, High Street from Dunlop Street to Bradford Street, Simcoe Street from Toronto Street to Bradford Street, and Tiffin Street from Bradford Street to Lakeshore Drive in the City of Barrie.

1.3 Description of Study Area

This Cultural Heritage Report will focus on the project study area with an additional 50 m buffer (Figure 1). This project study area has been defined as inclusive of those lands that may contain BHRs or CHLs 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 Barrie.



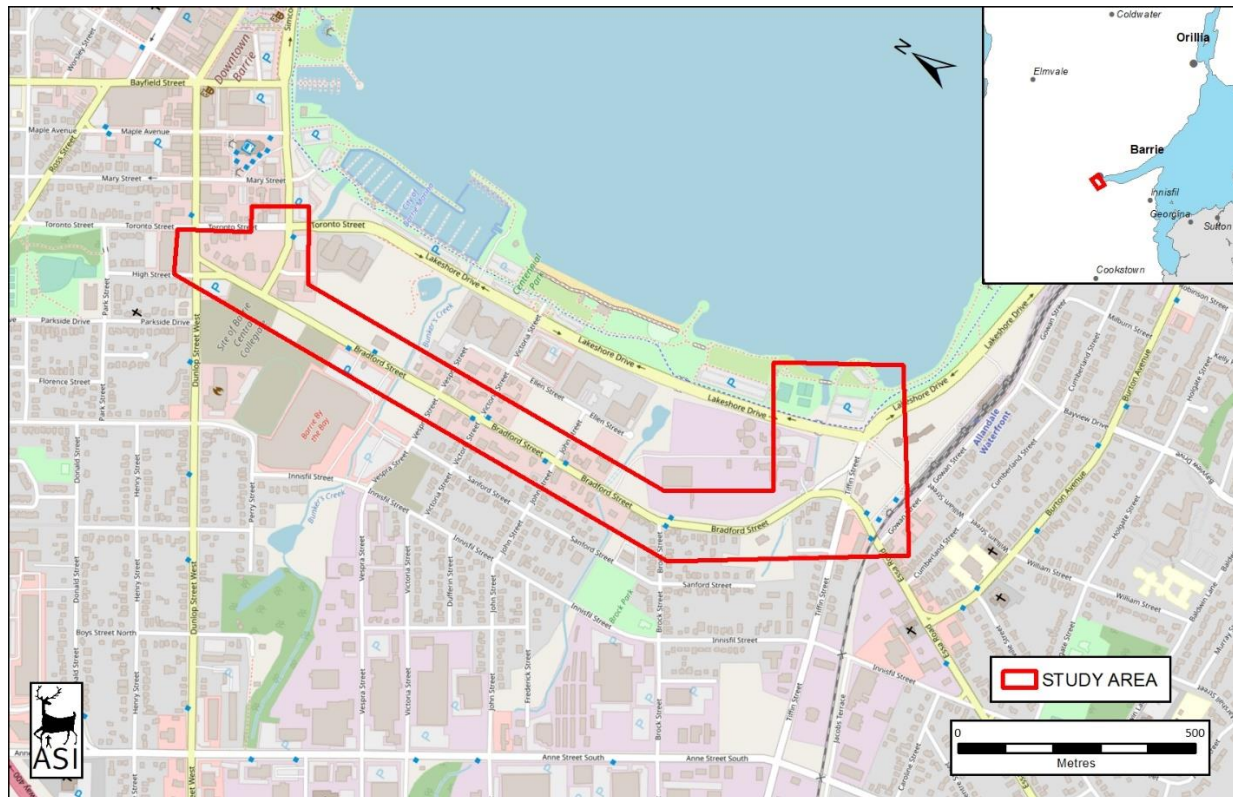


Figure 1: Location of the study area

Base Map: ©OpenStreetMap and contributors, Creative Commons-Share Alike License (CC-BY-SA)

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 and cultural heritage landscapes 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.) (Ministry of Citizenship and Culture 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* (Ministry of Municipal Affairs and Housing 1990), 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 built heritage resources and cultural heritage landscapes.

- 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, 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 Citizenship and Multiculturalism 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 built heritage resources and cultural heritage landscapes. 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 built heritage resource or cultural heritage landscape, 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 Barrie, in Simcoe County. Policies relating to cultural heritage resources were reviewed from the following sources:

- The City of Barrie Official Plan (2018)
 - Schedule C – Defined Policy Areas – Historic Neighbourhood Defined Policy Area
- Official Plan of the County of Simcoe (2016)
- Allandale Heritage Urban Design Development Guidelines (City of Barrie 2016)
- Historic Neighbourhoods Strategy (City of Barrie 2010)
 - The study area is included in the Queen’s Park, Downtown, Brock Park and Allandale neighbourhoods identified in the Strategy.

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 BHRs and CHLs, and to provide a preliminary understanding of known and potential BHRs and CHLs 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 BHRs and CHLs are subject to identification and inventory. Generally, when conducting an identification of BHRs and CHLs within a study area, three stages of research and data collection are undertaken to appropriately establish the potential for and existence of BHRs and CHLs 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 BHRs and CHLs. The field review is also used to identify potential BHRs or CHLs 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 BHR or CHL based on research, the Ministry screening tool, and professional expertise. In addition, use of a 40-year-old benchmark is a guiding principle when conducting a preliminary identification of BHRs and CHLs. 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 BHRs and CHLs within the study area, the following resources were consulted as part of this Cultural Heritage Report.



2.4.1 Review of Existing Heritage Inventories

A number of federal, provincial, and municipal registers, inventories, and databases were consulted in order to identify previously identified BHRs and CHLs within the study area. These resources, reviewed on 16 June 2021, include:

- The City of Barrie's Municipal Heritage Register (City of Barrie and Heritage Barrie 2021);
- The City of Barrie's Municipal Heritage Register Properties Interactive Map (City of Barrie);
- Finding Barrie: A Guide to Plaques and Markers in the City of Barrie (Heritage Barrie 2006);
- The *Ontario Heritage Act Register* (Ontario Heritage Trust n.d.);
- The *Places of Worship Inventory* (Ontario Heritage Trust n.d.);
- The inventory of Ontario Heritage Trust easements (Ontario Heritage Trust n.d.);
- The Ontario Heritage Trust's Ontario Heritage Plaque Inventory (Ontario Heritage Trust 2018);
- The Ontario Heritage Trust's Inventory of Trust-Owned Properties Across Ontario (Ontario Heritage Trust 2019);
- 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.);
- 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.);
- 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 (UNESCO) World Heritage Sites (U.N.E.S.C.O. World Heritage Centre n.d.).

2.4.2 Review of Previous Heritage Reporting

Additional cultural heritage studies undertaken within parts of the study area were also reviewed. These include:

- New Track & Facilities TPAP – Final Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment – Volume 2: Impact Assessment (ASI 2020);
- OnCorr Due Diligence Project, Barrie Corridor Non-Priority Properties Cultural Heritage Assessment Report (A.S.I. 2020);
- OnCorr Due Diligence Project, Cultural Heritage Gap Analysis: Barrie Rail Corridor (A.S.I. 2019); and
- GO Rail Network Electrification TPAP – Final Cultural Heritage Impact Assessment Report (ASI 2017).



2.4.3 Community Information Gathering

The following individuals, groups, and/or organizations were contacted to gather information on known and potential BHRs and CHLs, active and inactive cemeteries, and areas of identified Indigenous interest within the study area:

- Tomasz Wierzba, Planner – Development Services, City of Barrie (email communication between 16 and 24 June 2021). Reasons for Heritage Listing were requested and still outstanding at the time of writing this report.
- The Ministry of Citizenship and Multiculturalism (email communication 16 and 21 June 2021)¹. Email correspondence confirmed that there are no properties designated by the Minister and no known Provincial Heritage Properties within the study area.
- The Ontario Heritage Trust (email communications 16 and 23 June 2021). A response indicated that the OHT does have one cultural easement property at Allandale Train Station, 528 Bradford Street. The OHT requested to be kept informed of any future plans or changes to the surrounding land that may impact the OHT Easement property - Allandale Train Station.

2.5 Preliminary Impact Assessment Methodology

To assess the potential impacts of the undertaking, identified BHRs and CHLs are considered against a range of possible negative impacts, based on the *Ontario Heritage Tool Kit InfoSheet #5: Heritage Impact Assessments and Conservation Plans* (M.T.C.S. Ministry of Citizenship and Multiculturalism 2006). 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 BHRs or CHLs 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

¹ Contacted at registrar@ontario.ca.



to affect an identified BHRs and CHLs where work is taking place within 50 m of features on the property. A 50 m buffer is applied in the absence of a project-specific defined vibration zone of influence based on existing secondary source literature and direction provided from the Ministry (Wiss 1981; Rainer 1982; Ellis 1987; Crispino and D'Apuzzo 2001; Carman et al. 2012). 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 BHRs and CHLs. These are outlined in a document set out by the Ministry of Culture and Communications (now the Ministry of Citizenship and Multiculturalism) and the Ministry of the Environment entitled *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments* (1992) and include:

- 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 BHRs and CHLs 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 BHRs and CHLs. Mitigation is the process of lessening or negating anticipated adverse impacts to cultural heritage resources and may include, but are not limited to, such actions as avoidance, monitoring, protection, relocation, remedial landscaping, and documentation of the BHR or CHL if to be demolished or relocated.

Various works associated with infrastructure improvements have the potential to affect BHRs and CHLs 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 situated within the Simcoe Lowlands physiographic region of southern Ontario (Chapman and Putnam 1984). The Simcoe Lowlands physiographic region consists of low-lying belts of sand plain, which cover an area of 280,000 hectares, bordering Georgian Bay and Lake Simcoe. The area was once inundated by the waters of glacial Lake Algonquin, inland of the present-day shorelines. Remnant shoreline features (beaches, shorecliffs, bars, etc.) mark the former water level of Lake



Algonquin. Topography is generally flat and subsoil consists of variable sand, gravel, silt and clay deposits as formed on the lake bottom (Chapman and Putnam 1984). Sand plains and beach ridges are glaciolacustrine features and are products of the Late Wisconsinian glacial stage (ca. 25,000-10,000 BP). Sand plains are formed in shallow waters and beach ridges mark the former shorelines (Karrow and Warner 1990).

3.2 Summary of Early Indigenous History in Southern Ontario

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).² 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 period groups is very limited (Ellis and 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 (Ellis and Deller 1990; Ellis et al. 2009).

The Woodland period (c. 1,000 B.C.E. to 1650 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 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 (Ellis and Deller 1990; Williamson 1990; Dodd et al. 1990; Birch and Williamson 2013).

² 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.



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 north portion of the study area is located within Treaty No. 16, also known as the Lake Simcoe Purchase, and the south portion is within Treaty No. 18, also known as the Nottawasaga Purchase. Treaty No. 16 was signed in 1815 between the Chippewa (Ojibwa) and the Crown for a tract of land approximately 250,000 acres of land between Kempenfelt Bay and Lake Simcoe to Nottawasaga Bay in Georgian Bay, bordering the Penetanguishene Bay Purchase. In 1811 Samuel S. Wilmot surveyed the Penetanguishene Road, prior to the Treaty No. 16 signing. The Provisional Agreement of the Lake Simcoe – Nottawasaga Treaty, registered as Treaty No. 18, was signed in 1818. The agreement was made between the Chippewas of Lake Huron and Simcoe and the Government of Upper Canada concerning lands lying between Nottawasaga Bay east to Lake Simcoe and south to (formerly) West York County (Williams Treaties First Nations 2021).

3.3 Historical Euro-Canadian Township Survey and Settlement

Historically, the study area is located in the Former Townships of Vespra and Innisfil, County of Simcoe in part of Lots 7-8, Concession 14 and Lots 24-26, Concession 5.

3.3.1 County of Simcoe

The area within what is now Simcoe County was inhabited by the ancestral Huron-Wendat at the time of European contact. European goods reached the area before 1600 and missionaries and Jesuits arrived soon after. Sainte Marie was established in 1639 and became the first European settlement in Upper Canada. In 1798, the County of Simcoe was formed as part of the “Home District”. The boundaries of the county were refined in 1821. Almost 20 years later, in 1843, the area was declared a separate district, attaining county status in 1850, with Barrie as the county seat. At this time Simcoe County included portions of Grey and Dufferin Counties, and Muskoka and Parry Sound Districts. In 1881 the borders of Simcoe County were again redefined and the present townships of Tiny, Tay, Matchedash, Flos, Medonte, Orillia, Nottawasaga, Sunnidale, Vespra, Oro, Tosorontio, Essa, Innisfil, Adjala, Tecumseth, and West Gwillimbury were contained within. As of the late twentieth century, Simcoe County had two cities, seven towns, and eight villages (Mika and Mika 1983).

3.3.2 City of Barrie

The City of Barrie is located at the head of Kempenfelt Bay on Lake Simcoe and at the junction of a number of major transportation routes, including the Barrie Rail Corridor. Kempenfelt, east of the bay and now part of the City of Barrie, was an important site during the War of 1812 as it was the starting point of Nine Mile Portage. First established by First Nations prior to the arrival of Europeans, the



portage became a strategic military transportation route between Lake Simcoe and Lake Huron. A storehouse was built at this location which also served as a stopping site for traders and settlers. The town of Barrie was named after Commodore Barrie, commander of British warships at Kingston in the early nineteenth century. The town site was surveyed into town lots in the early 1830s and the first settler to permanently locate in Barrie was a Scottish farmer named Alexander Walker. Other early settlers include David Edgar, Captain Oliver, and John McWatt. The 1830s also saw the establishment of taverns, a general store, a post office, a school house, and a number of churches.

Rail service arrived in Barrie in the mid-nineteenth century, to serve the port towns on Georgian Bay. The Ontario, Simcoe and Huron Union Rail Road Company opened a line connecting Toronto to Allandale in 1853. This line would later be taken over by the Grand Trunk Railway Company of Canada (GTR) before being operated by the Canadian National Railway (CNR) in the twentieth century (Andreae 1997). Today it serves as a commuter route for the GO Rail Network.

Barrie was incorporated as a town in the early 1850s, expanding when the town united with Allandale in 1897, and was incorporated as a city in 1959 (Mika and Mika 1983).

3.3.3 Grand Trunk Railway and Allandale Station

The rail corridor that operates as a commuter line for GO Transit was constructed in 1853 by the Ontario, Simcoe and Huron Union Rail Road Company (OSHURR). The OSHURR began as the Toronto, Simcoe and Lake Huron Union Rail Road Company, and was incorporated in 1844. The company was renamed shortly after in 1850. Under this new name, a railway was built connecting Toronto to Collingwood. This corridor was extended to Allandale in 1853. Shortly after the rail company was renamed to the Northern Railway Company of Canada and the new line was known as the Ontario, Simcoe and Huron Railway (Andreae 1997).

The GTR was incorporated by the Canadian government in 1852 and began purchasing existing railways in 1853. The company fell into great debt in 1861 was saved from bankruptcy by the Canadian government. The GTR went on to take over operation of the Ontario, Simcoe and Huron Railway when it amalgamated with the Northern Railway Company in 1888.

Allandale Train Station was built between 1895 and 1905 and was acknowledged as the “flagship of the Grand Trunk Line” when the restaurant and passenger depot were opened in 1905 (City of Barrie 2009). The red brick office building was constructed c. 1895 and was last used as a passenger waiting room for VIA Rail and GO Rail into the 1990s. The three connected frame buildings making up the restaurant and passenger depot were designed by the Detroit firm of Spier and Rohns to be of Italianate residential scale and inspiration (Canada’s Historic Places 2019). Allandale was a “vital transportation link in the north-south corridor of south central Ontario, and in the Grand Trunk Railway’s northern Ontario and western Canadian operations” (City of Barrie 2009:3).

Following an expansion west in an attempt to compete with the Canadian Pacific and Canadian Northern Railways, the company went bankrupt in 1919 and in 1920, control of the GTR was assumed by the Canadian Government. Three years later, in 1923, the GTR was amalgamated with CNR (Library and Archives Canada 2005; Andreae 1997).



3.4 Review of Historical Mapping

The 1871 *Map of the County of Simcoe* (Hogg 1871), and the 1881 *Illustrated Historical Atlas of the County of Simcoe* (Belden 1881), 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 located on part of Lots 7-8, Concession 14 and Lots 24-26, Concession 5 in the Townships of Vespra and Innisfil, County of Simcoe.

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 study area in mapping from 1871 is shown to be in an area of settlement with a dense roadway network extending north and westward from the tip of the “Kempenfeldt Bay”. The eastern edge of the study area marks the transition to agricultural land use, with J. Jacobs identified as a landowner in a portion of the study area. Essa Road is indicated as a major roadway and generally follows its current alignment. At the roadway’s terminus at the bay is a label for “Allandale”. A post office is located in this area and a rail line is indicated connecting to Allandale. Present-day Tiffin, Mary, and Toronto Streets are also located on the mapping, generally following their current alignment. Bradford Street is extant on the mapping, however, its alignment in the north and south portions of the study area have been subsequently altered. Several watercourses extend from Kempenfeldt Bay into the north half of the study area. In the following decade, the area shows continued growth and settlement based on 1881 mapping. Areas of density are indicated throughout most of the study area, including the eastern-most portion of the study area that was agricultural the decade prior. Allandale continues to be depicted on the mapping, with an additional rail line connecting at the location. The shoreline of Kempenfeldt Bay has expanded on its southwest side, squaring out the tip of the bay. Watercourses from the bay continue to run through 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 1928, 1954, 1968, and 1986 (Figure 4 to Figure 7). 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. Topographic mapping from 1928 shows more detail of the density observed on the late-nineteenth-century mapping (Figure 4). Structures are illustrated lining both sides of Bradford Street throughout the study area. A bridge is shown carrying Bradford Street over Bunkers Creek. The rail corridor extends along the shoreline and two tanneries are shown between the rail corridor and the study area. A track labelled fair grounds is pictured on the west side of Bradford Street in the north portion of the study area. Development continues through the early twentieth century and the study area and much of the land in the surrounding area is developed by the 1950s. The 1954 aerial shows the expansion of the road network as well as residential and commercial development (Figure 5). Late-



twentieth-century mapping shows the study area in much the same developed context with little change. The Prince of Wales school, at 50 Bradford Street, is labelled 'school' on the west side of Bradford Street on the 1968 mapping (Figure 6). The 1986 mapping labels a tannery, waste, water, and sewage facilities in the south portion of the study area (Figure 7).



Figure 2: The study area overlaid on the 1871 Hogg's Map of the County of Simcoe

Base Map: (Hogg 1871)



Figure 3: The study area overlaid on the 1881 Historical Atlas of the County of Simcoe

Base Map: (Belden 1881)



Figure 4: The study area overlaid on the 1928 topographic map of Barrie (Sheet 31D-5)

Base Map: (Department of National Defence 1928)

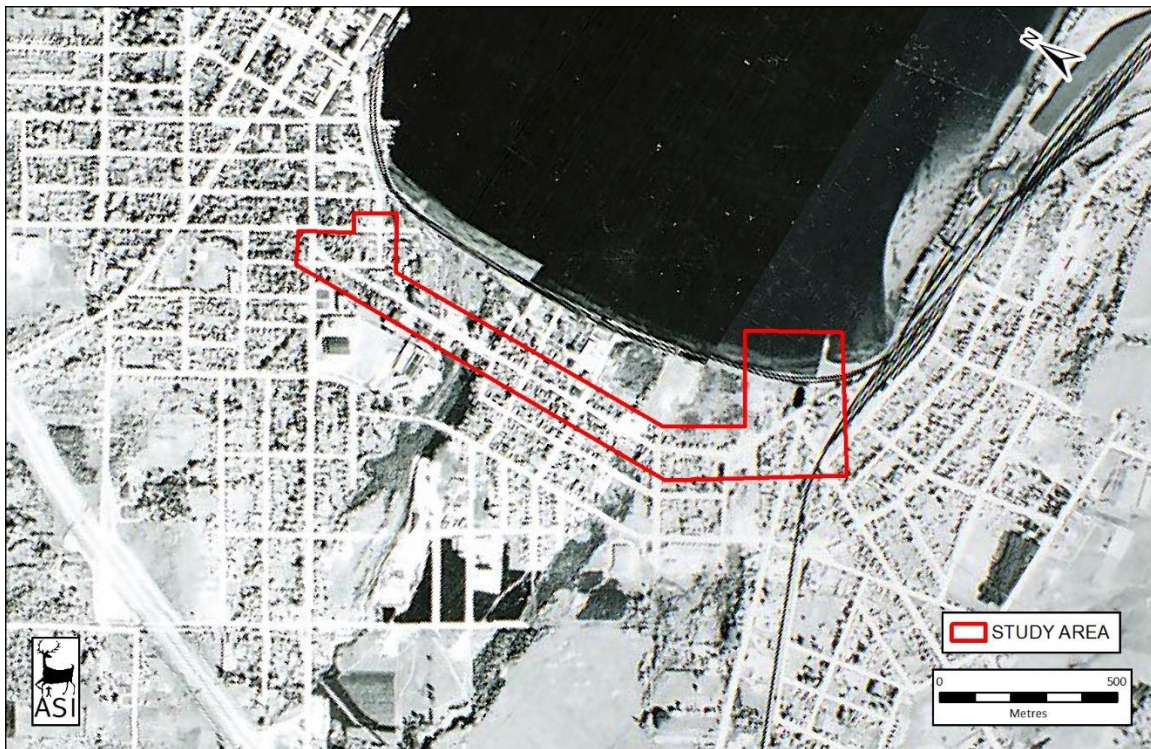


Figure 5: The study area overlaid on the 1954 aerial photograph of Barrie
Base Map: (Hunting Survey Corporation Limited 1954)



Figure 6: The study area overlaid on the 1968 topographic map of Barrie
Base Map: (Department of National Defence 1968)

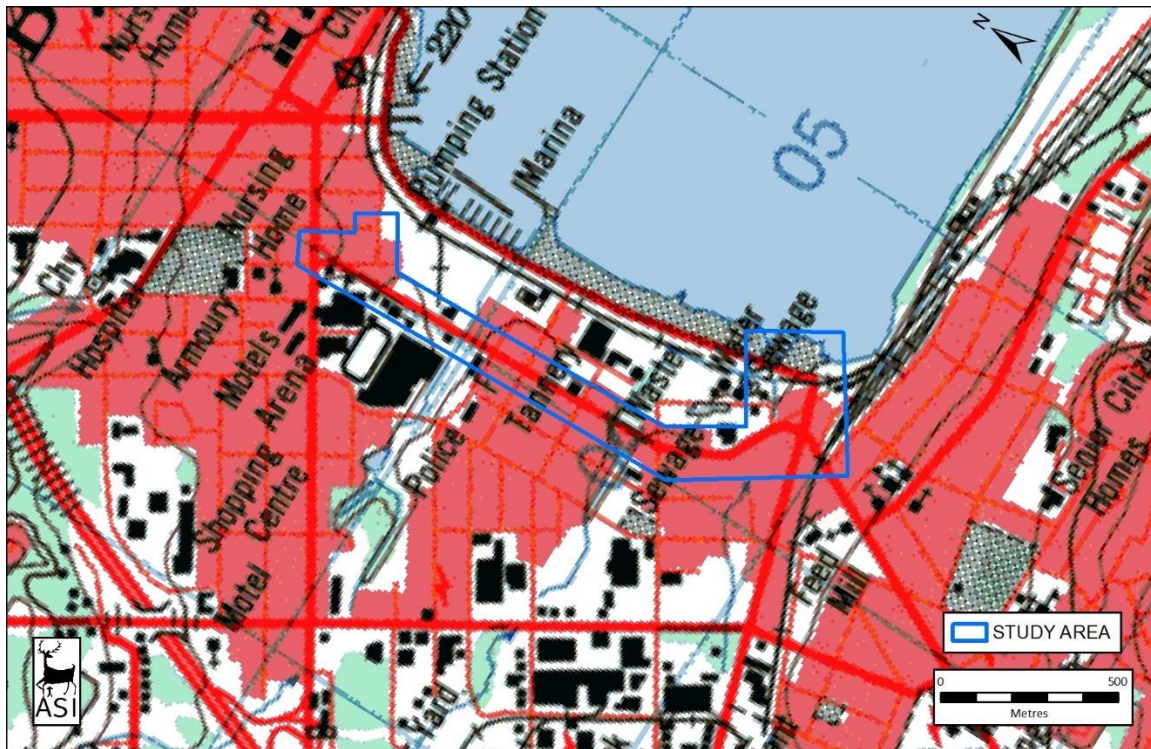


Figure 7: The study area overlaid on the 1986 NTS map of Barrie

Base Map: (Department of Energy, Mines and Resources 1986)

4.0 EXISTING CONDITIONS

4.1 Description of Field Review

A field review of the study area was undertaken by Meredith Stewart of ASI, on 21 June 2021 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 8.

The study area encompasses Bradford Street from Dunlop Street to Tiffin Street, High Street from Dunlop Street to Bradford Street, Simcoe Street from Toronto Street to Bradford Street, and Tiffin Street from Bradford Street to Lakeshore Drive. Bradford Street is in a north-south alignment carrying two lanes of traffic in each direction. A paved pedestrian sidewalk is located on both sides of the roadway, separated by a concrete boulevard. A hydro line runs along the east side of the roadway throughout most of the study area. Bradford Street can be characterized as a mixed-use roadway with commercial properties (primarily auto based) located within the north half with a consistent presence of historically residential properties located along the roadway throughout the study area. Many of these residential building types have been converted to commercial use. The Barrie Sewage Treatment Plant occupies a large portion of the east side of Bradford Street within the south half of the study area (Plate 1). There is a curve in the roadway in the area of the plant, with late nineteenth- and early twentieth-century residential built forms lining the west side of the street. The north end of Bradford Street terminates at Dunlop Street, a commercial east-west aligned roadway that carries one lane of traffic in each direction

with primarily street-wall commercial buildings lining the roadway towards the direction of the downtown core (located east). High Street is a short roadway that provides a connection between Dunlop Street and Bradford Street, with a landscaped triangular boulevard located between the roadway and Bradford Street on its east (Plate 2). High Street is currently under active construction, which extends south on a portion Bradford Street and east and west on portions of Dunlop Street. This network of roads in the study area is located on a slight hill that slopes south along Bradford Street.

Simcoe Street meets Bradford Street at a T-intersection, extending east from the roadway towards the downtown core following the north side of Kempenfelt Bay. Simcoe Street is a heavily trafficked roadway carrying two lanes of traffic in each direction and paved pedestrian sidewalks located on both sides of the roadway. In the location of the study area, Simcoe Street contains several commercial properties as well as large areas of paved surface parking. Directly south of the study area boundary in this area are two apartment towers that are visible from most locations throughout the study area. Toronto Street is located east of Bradford Street, intersecting with Dunlop Street and Simcoe Street in the study area. The north-south oriented roadway carries two lanes of traffic in each direction and features primarily residential properties.

The centre portion of the study area contains a series of cross streets – Vespra Street, Victoria Street, John Street, and Brock Street – which are secondary roadways that carry a single lane of traffic in each direction and are primarily residential land use containing detached single-family homes (Plate 3).

South of its intersection with Brock Street, Bradford Street runs at an angle in a northwest-southeast direction that eventually connects with Tiffin Street on a curve before continuing through the intersection as Essa Road (Plate 4 and Plate 5). Tiffin Street approaches Bradford Street at a slight angle carrying one lane of traffic in each direction. The roadway terminates where it meets Lakeshore Drive, east of its intersection with Bradford Street. The Allandale Train Station and the Allandale GO Station are located in this area, which has characterized this portion as a major transit hub. The active rail line associated with the transit hub roughly follows Tiffin Road, located north of the line, and curves to run parallel with Lakeshore Drive east of the study area. East of the stations on the east side of Lakeshore Drive are recreational walking and bicycle trails that follow the shoreline of Kempenfelt Bay. Essa Road, which extends southwest from Tiffin Street where Bradford Street terminates, carries two lanes of traffic in each direction with paved pedestrian sidewalks on each side of the roadway (Plate 6). The network of roadways and intersections in the south portion of the study area feature primarily commercial properties (Plate 8), with the exception of the north side of Tiffin Street. Gowan Street, which extends from a T-intersection with Essa Road is located on the south side of the rail line and contains primarily residential properties on its south side (Plate 7).





Plate 1: Looking north on Bradford Street towards a commercial auto property (left) and sewage plant (right) with residential built forms in distance (ASI 2021).



Plate 2: Looking south from landscaped boulevard separating Bradford Street (left) and High Street (right) located south of Dunlop Street (ASI 2021).



Plate 3: Looking west towards Brock Street, a typical cross street in the centre portion of the study area, from Bradford Street (ASI 2021).



Plate 4: Looking southeast where Bradford Street meets Tiffin Street, with nineteenth-century commercial buildings in the background (ASI 2021).



Plate 5: Looking north along Bradford Street north of its intersection with Tiffin Street (ASI 2021).



Plate 6: Looking east from the intersection of Tiffin Street and Bradford Street/Essa Road.



Plate 7: Looking east along GO rail line with bus terminal (left) and Gowan Street (right) flanking (ASI 2021).



Plate 8: Essa Street looking northwest from a commercial stretch towards the transit hub (ASI 2021).

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

Based on the review of available municipal, provincial, and federal data, and the results of public consultation, there are five previously identified BHRs within the study area. These resources include: three BHRs listed on the Municipal Heritage Register; one BHR included on Heritage Barrie's Guide to Plaques and Markers; and one BHR designated under the following protections: Part IV of the *Ontario Heritage Act*; designated under the Federal Heritage Railway Stations Protections Act; and an Ontario Heritage Trust Cultural Easement property. A further seven potential BHRs and 12 potential CHLs were identified within the study area as a result of background research and field review. Based on the type of resources, their physical location, architectural style and/or function, some of these individual resources were combined into a larger CHLs. Of the five known BHRs, two (50 Tiffin Street and 168-170 Bradford Street) have been included within potential CHLs in this report, resulting in nine BHRs and 12 CHLs identified in this report. A detailed inventory of known and potential BHRs and CHLs within the study area is presented in Table 1. See Figure 8 to Figure 11 for mapping showing the location of identified BHRs and CHLs.

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

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
BHR 1	Educational	50 Bradford Street	Known BHR – Listed on Municipal Heritage Register	This BHR contains the exterior elevations of a late nineteenth-century brick elementary school. The Prince of Wales Public School was built in 1876 as West Ward School and is the oldest elementary school in the Simcoe County District School Board. The two-storey building was constructed with a red brick exterior, large window openings, and central entrance covered by a porch supported by stone piers. The school was deemed ‘Prohibitive to Repair’ and officially closed in 2011. Only a portion of this building remains as the property is under development with plans to redevelop with a YMCA facility and three residential apartment buildings. Elements of the former Public School are planned to be retained and incorporated into the development (MacNaughton Hermesen Britton Clarkson Planning Limited 2019). Heritage attributes include the remaining elements of the former school.	 Plate 9: 50 Bradford Street (ASI 2021).
BHR 2	Commercial (former residential)	48 Dunlop Street West	Potential BHR – Identified during field review	This BHR contains a red brick, 2.5 storey former residence located on the northwest corner of Dunlop Street West and High Street. The former residential building has been converted to commercial use. The early twentieth-century building features elements of the Arts and Crafts style. Potential attributes include the 2.5 storey massing, red brick exterior, wood shingle gable ends, shed dormer, bay windows, and wrap around porch. The 1928 topographic map illustrates a structure in this location (Figure 4). Previous mapping shows only density and no specific structures or property owners. Based on the Arts and Crafts style elements, such as the wood shingled gable ends, shed dormer, and asymmetrical arrangement, utilized in the construction of the building it is likely to have been built in the early twentieth century when that style was popular in use. The property is located in an area that historically has been part of the density and development of the downtown core of the City of Barrie. In this area there are both single detached residential buildings and commercial buildings, with many of the residential built form having been subsequently converted to commercial use.	 Plate 10: 48 Dunlop Street (ASI 2021).

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
BHR 3	Residential	50 John Street	Potential BHR – Identified during field review	This BHR contains a red brick, 2.5 storey residence located on the north side of John Street. The early twentieth-century building features elements of the Queen Anne style. Potential attributes include the 2.5 storey massing, red brick exterior, combination hipped and gable roof, enclosed porched, bay window, and original window sash. The 1928 topographic map illustrates a structure in this location (Figure 4). Previous mapping shows only density and no specific structures or property owners. Based on the Queen Anne style elements, such as the combination roof, two-storey bay window, and asymmetrical arrangement, of the building it is likely to have been constructed in the late nineteenth or early twentieth century when that style was popular in use. The residence is located on a historically residential street that was part of the density of the settlement of the City of Barrie that encircled the tip of Kempenfelt Bay.	 Plate 11: 50 John Street (ASI 2021).
BHR 4	Residential	35 John Street	Potential BHR – Identified during field review	This BHR contains a one-storey residence located on the south side of John Street. Potential attributes include the one-storey height, wood board-and-batten siding, and hipped roof. The 1928 topographic map does not illustrate a structure in this location (Figure 4), however a structure is visible in 1954 aerial photography (Figure 5). The modest residence may have been constructed between 1928 and 1954 or deemed too minor to be included on the 1928 mapping. Based on its restrained expression of style and form which is typical of some interwar and postwar residential architecture, it is likely the residence was constructed in the first half of the twentieth century. The residence is located on a historically residential street that was part of the density of the settlement of the City of Barrie that encircled the tip of Kempenfelt Bay.	 Plate 12: 35 John Street (ASI 2021).

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
BHR 5	Memorial	Intersection of Essa Road and Tiffin Street	Known BHR – Identified by Heritage Barrie in Guide to Plaques and Markers	This memorial was erected June 11, 1967 as a Centennial project by the members of Barrie Unit 365 (Army, Navy and Air Force Veterans in Canada) and is dedicated to the City of Barrie in memory of all veterans of the Army, Navy, and Airforce. The memorial features three flagstaff poles and a commemorative stone marker within a landscaped boulevard at the intersection of Essa Road and Tiffin Street (Heritage Barrie 2006).	 Plate 13: Veteran’s Memorial Flag Pole (ASI 2021).
BHR 6	Residential	1 Short Street	Potential BHR – Identified during field review	This BHR contains a vernacular red brick, 1.5 storey residence located on the east side of Short Street at the northern terminus of the dead-end roadway. Potential attributes include the 1.5 storey massing, red brick exterior, cross gable roof and gable feature, masonry lintels, cast concrete foundation and porch piers, enclosed entrance, and L-shaped footprint. Short Street, a minor roadway, is not depicted on 1928 topographic mapping (Figure 4), however, the residential street is visible in 1954 aerial photography. Based on the vernacular style and materials used, such as the gable roof and gable feature, red brick exterior, rectangular masonry lintels, and cast concrete foundation, the residence was likely to have been constructed in the late nineteenth or early twentieth century when these elements were popular in use. The residence is located on a historically residential street that was part of the density of the settlement of the City of Barrie that encircled the tip of Kempenfelt Bay.	 Plate 14: 1 Short Street (ASI 2021).

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
BHR 7	Transportation	285 Bradford Street	Known BHR – Designated under Part IV of the Ontario Heritage Act; Listed on the Canadian Register; Designated under the Federal Heritage Railway Stations Protections Act; Ontario Heritage Trust Cultural Easement	The Allandale Train Station was constructed in 1890 and served as a significant transportation hub in the early 1900s for the Grand Truck Railway (GTR)(Canada’s Historic Places 2019). The station is valued for its historical associations and physical design. The station was constructed in an Italianate Villa style. Attributes include its picturesque massing, composition of elevations, and residential scale. For a full list of attributes and character defining elements of the property, please consult the Part IV designation By-law (By-law 2009-144) or visit https://www.historicplaces.ca/en/rep-reg/place-lieu.aspx?id=8884. “Allandale” is labelled on mapping from 1871 and 1881 , indicating the area was already established prior to the construction of the Allandale Train Station (Figure 2 and Figure 3). Topographic mapping from 1928 illustrates that convergence of rail lines in the location of the station (Figure 4). At the height of its activity in the early 1900s the Italianate Villa style building contained a passenger depot, restaurant and two-storey office building (City of Barrie). Following the bankruptcy of the GTR in 1919, the station then came under ownership of the Canadian National Railway (CNR). A decline in ridership and freight traffic led to a diminished role for the station, with the passenger depot and restaurant eventually closing in the 1980s. VIA Rail and GO Transit used the office building as a passenger waiting room briefly in the early 1990s. The Allandale Train Station is currently undergoing restoration under the guidance of the Ontario Heritage Trust (City of Barrie).	 Plate 15: Allandale Train Station (ASI 2021).

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
BHR 8	Commercial	9 Gowan Street	Potential BHR – Identified during field review	This BHR contains a one-storey commercial building located on the north side of Gowan Street. The early to mid twentieth-century auto garage is modest and utilitarian in design. Potential attributes include the one storey massing, metal roof, large garage door opening on the street-facing elevation, metal siding, and front facing gable roof. The 1928 topographic map illustrates a structure in this location (Figure 4). Previous mapping shows only density and no specific structures or property owners. Based on the simple frame construction and utilitarian materials used, such as metal siding and metal roof, it is likely that this structure was constructed after the establishment of the neighboring late nineteenth- and early twentieth-century buildings along this stretch of road. The auto garage is located on a historically residential street indicating a transition that occurred in the area, likely influenced by the presence of the rail line on the north side of Gowan Street in this area.	 Plate 16: 9 Gowan Street (ASI 2021).
BHR 9	Residential	13 Gowan Street	Potential BHR – Identified during field review	This BHR contains a red brick, 2.5 storey residence located on the south side of Gowan Street. The vernacular building features elements of the Queen Anne style. Potential attributes include the 2.5 storey massing, red brick exterior, front facing gable roof with return eaves and wood shingles cladding the gable face, oval window with ornamental surround, enclosed porched, art glass transom, and stone foundation. The 1928 topographic map illustrates a structure in this location (Figure 4). Previous mapping shows only density and no specific structures or property owners. Based on the Queen Anne style elements, such the wood shingle siding in the gable end, oval window, and art glass transom, it is likely the building was constructed in the late nineteenth or early twentieth century when that style was popular in use. The residence is located on a historically residential street, however, the introduction of a rail line on the north side of the roadway has altered the character of the street.	 Plate 17: 13 Gowan Street (ASI 2021).

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
CHL 1	Residential Streetscape	34-46 (west side) and 27-31 (east side) Toronto Street	Potential CHL – Identified during field review	This CHL contains nine residential properties that are located on the east and west side of Toronto Street. The properties are residential in use and are either single detached or semi-detached homes. The properties within this CHL represent a range of styles and materials, however, all are typical of the late nineteenth and early twentieth century. There are several properties (36, 42-44, and 46-48 Bradford Street) that are similar in design, indicating these were likely constructed simultaneously by the same builder. The 1928 topographic map illustrates a row of structures in the location of the CHL (Figure 4). Previous mapping shows only density and no specific structures or property owners. Based on the styles of the included residential properties, such as Edwardian Classical and Ontario Cottage, which are typical of the late nineteenth and early twentieth century, it is likely that the 1928 mapping is depicting the extant structures. Toronto Street has maintained its residential use in this area.	 Plate 18: Looking northwest on Toronto Street (ASI 2021).
CHL 2	Former Residential Streetscape	5-13 Bradford Street	Potential CHL – Identified during field review	This CHL contains four residential properties that are located on the east side of Bradford Street. The properties are historically residential in use though they have since been converted to commercial use and single detached homes. The properties vary in form but are generally a vernacular expression of the Edwardian Classical style. Three of the four properties are 2.5 storeys in height, with the fourth rising to two storeys. All have front porches (one enclosed) and are generally contain a brick or stucco exterior. The 1928 topographic map does not show any structures in the location of the CHL, however, structures are visible in 1954 aerial photography (Figure 4 and Figure 5). Based on the mapping and vernacular Edwardian Classical style of the included residential properties, it is likely they were constructed in the early twentieth century. Bradford Street in this area has transitioned from residential land use to commercial, reflected in the conversion of the residential built forms to commercial use.	 Plate 19: Looking northeast on Bradford Street (ASI 2021).

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
CHL 3	Residential Streetscape	101 Bradford Street + 28, 31, and 34 Vespra Street	Potential CHL – Identified during field review	This CHL contains four residential properties that are located on the north and south sides of Vespra. The properties are residential in use and are single detached homes. The properties represent a range of styles and materials, however, all are typical of the late nineteenth and early twentieth century. Potential attributes include the single detached form, similar scale and massing, setback from the road, and mature trees. The 1928 topographic map illustrates a collection of structures in the location of the CHL (Figure 4). Previous mapping shows only density and no specific structures or property owners. Based on the architectural styles of the included residential properties, such as Dutch Colonial Revival, which are typical of the early to mid twentieth century, it is likely that residences were constructed in the first half of the twentieth century. Vespra Street has maintained its residential use in this area.	 Plate 20: Looking east on Vespra Street from Bradford Street (ASI 2021).
CHL 4	Former Residential Streetscape	112 and 118 Bradford Street	Potential CHL – Identified during field review	This CHL contains two former residential properties that are located on the west side of Bradford Street. The detached residential built forms have been converted to commercial land use. The properties feature a vernacular Italianate architectural style, typical of the late nineteenth century. Potential attributes include the similar scale and massing, gable roof configurations, rounded arch window located within a gable end, and wood siding. These houses were constructed between before 1928. The 1928 topographic map illustrates houses in the location of these residences. Previous mapping shows only density and no specific structures or property owners.	 Plate 21: Looking northwest from Bradford Street (ASI 2021).

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
CHL 5	Former Residential Streetscape	28, 29, 48, 50 and 51 Victoria St	Potential CHL – Identified during field review	This CHL contains five residential properties that are located on both sides of Victoria Street, spanning across Bradford Street. The detached residential built forms have been converted to commercial land use. The properties feature a variety of styles and materials, primarily vernacular expressions or Edwardian Classical. They also represent a range in the period of construction, though confined to the early twentieth century. Potential attributes include the similar scale and massing, setback from the roadway, masonry exterior (where currently applied), and detached arrangement. The houses located west of Bradford Street were likely constructed after 1928, as they are not shown on topographic mapping from that year, however, there are structure depicted on the east side (Figure 4). All residences in this CHL are shown to be extant in 1954 aerial photography (Figure 5).	 Plate 22: Looking northwest on Victoria Street (ASI 2021).
CHL 6*	Former Residential Streetscape	146-218 (west side) and 151-161 (east side) Bradford Street	Potential CHL – Identified during field review *Includes 168-170 Bradford Street – Known BHR – Listed on the municipal Heritage Register	This CHL contains 25 residential properties that are located on the east and west sides of Brock Street. The properties are residential built forms that primarily have been converted to commercial use. They are single detached and semi-detached in form. The properties feature primarily the Edwardian Classical architectural style, typical of the early twentieth century. There are also a few Italianate style and foursquare homes. Potential attributes include the similar scale and massing, red brick construction, and Edwardian Classicism architectural elements such as square footprint; either a hipped roof with a large centred dormer or gable roof, typically with a pediment style front gable with double hung windows; large porch with classically inspired columns; decorative millwork; and flat arches made with bricks standing on end or large plain stone lintels accentuate windows and doors The residences located in the north half of the CHL are depicted in topographic mapping from 1928, however, the land on the west side of the street between the watercourse and Brock Street is undeveloped. Aerial photography from 1954 indicates the extant structures in this south half were constructed by that date. As a result, the date of construction for the north half of the CHL is generally before 1928, and the south half between 1928 and 1954.	 Plate 23: Looking north on Bradford Street (ASI 2021).

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
CHL 7	Residential Streetscape	36-43 Brock Street	Potential CHL – Identified during field review	This CHL contains seven residential properties that are located on the north and south sides of Brock Street. The properties are residential in use and are single detached homes. The properties feature primarily the Edwardian Classicism architectural style, typical of the early twentieth century. Potential attributes include the similar scale and massing, red brick construction, and Edwardian Classicism architectural elements such as square footprint; either a hipped roof with a large centred dormer or gable roof, typically with a pediment style front gable with double hung windows; large porch with classically inspired columns; and flat arches made with bricks standing on end or large plain stone lintels accentuate windows and doors. These houses were constructed between 1928 and 1954. The 1928 topographic map does not illustrate houses in the location of these residences but the 1954 aerial photograph shows the street has been developed.	 Plate 24: Looking southwest on Brock Street (ASI 2021).
CHL 8	Residential Streetscape	244-252 Bradford Street	Potential CHL – Identified during field review	This CHL contains five residential built forms that are located on the west side of Bradford Street. The properties are residential and converted residential to commercial in use and are single detached buildings. The properties represent a range of styles and some have been altered, but the original form and detailing of the buildings are typical of vernacular residential construction dating to the early twentieth century. Potential attributes include the similar scale and massing, setback following the angle of the roadway, and detached structures. Topographic mapping from 1928 illustrates structures along this section of Bradford Street (Figure 4), indicating that they were likely constructed in the early twentieth century prior to the realignment of Bradford Street.	 Plate 25: Looking east on Bradford Street (ASI 2021).

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
CHL 9*	Residential Streetscape	30-50 (north side) and 47 (south side) Tiffin Street	Potential CHL – Identified during field review *Includes 50 Tiffin Street – Known BHR – Listed on the municipal Heritage Register	This CHL contains eight residential properties that are located primarily on the north side of Tiffin Street, with one property located on the south side. The properties are residential in use and are single detached homes. The properties feature primarily the Edwardian Classicism architectural style, typical of the early twentieth century. Potential attributes include the similar scale and massing, red brick construction, and Edwardian Classicism architectural elements such as square footprint; either a hipped roof with a large centred dormer or gable roof, typically with a pediment style front gable with double hung windows; large porch with classically inspired columns; and flat arches made with bricks standing on end or large plain stone lintels accentuate windows and doors. There are structures depicted in this area of Tiffin Street in 1928 topographic mapping. The mapping in addition to the general style an materials of the residences suggests they were constructed in the early twentieth century.	 Plate 26: Looking northwest from the intersection of Tiffin Street and Essa Road (ASI 2021).
CHL 10	Mixed Use (Residential and Commercial) Streetscape	268 Bradford St, 4 Essa Rd/5-7 Tiffin St + 8-10 Essa Rd	Potential CHL – Identified during field review	This CHL contains three mixed-used commercial/residential properties that are located on the south side of the intersection of Tiffin Street and Essa Road. The properties are generally commercial on the ground floor with residential units in the upper levels. One property was solely residential use that has been converted to commercial. The properties feature primarily the Italianate architectural style, typical of the late nineteenth century. Potential attributes include close setting to the roadway, brick construction, commercial storefronts, and Italianate architectural elements such as ornamental cornices; decorative brickwork; and segmental or rounded arch windows. These commercial properties are illustrated and visible in 1928 topographic mapping and 1954 aerial photography. The style materials used in their construction suggest they were constructed in the late nineteenth century. Their proximity to the rail line likely supported the commercial development in CHL.	 Plate 27: Looking east from Essa Road (ASI 2021).

Feature ID	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
CHL 11	Mixed Use (Residential and Commercial) Streetscape	27-35 (west side) and 28-34 (east side) Essa Rd	Potential CHL – Identified during field review	This CHL contains four mixed-used commercial/residential properties that are located on Essa Road, south of the roadway’s intersection with Gowan Street. The properties are generally commercial on the ground floor with residential units in the upper levels. The properties have been altered and few original elements are visible and/or extant, though the general forms and massing are typical of commercial buildings from the late nineteenth and early twentieth century. Potential attributes include close setting to the roadway, commercial storefronts, and similar scale and massing. These commercial properties are illustrated and visible in 1928 topographic mapping and 1954 aerial photography. The style materials used in their construction suggest they were constructed in the late nineteenth and early twentieth century. Their proximity to the rail line likely supported the commercial development in CHL.	 Plate 28: Looking southwest from the intersection of Essa Road and Gowan Street (ASI 2021).
CHL 12	Recreational Trail	Waterfront Heritage Trail – Shoreline of Kempenfelt Bay	Potential CHL – Identified during field review	This CHL extends the length of Barrie’s waterfront, from the east end of Allandale Station Park to the end of the North Short Trail at Penetanguishene Road, and features 11 interpretive stations to create a ‘historical experience’ (City of Barrie n.d.). Each station provides information and context on a different historical theme and together they tell the story of the City of Barrie’s past from the last ice age to the present. Each station is arranged thematically, rather than chronologically, and they are linked to nearby walking tour districts (City of Barrie 2017). Potential attributes include the location of the trail along the shoreline, the information plaques/stations individually and as a collection which provides a historical experience, and the link between the interpretive stations to the surrounding walking tour districts.	 Plate 29: Looking southeast towards the Waterfront Heritage Trail (ASI 2021).



Figure 8: Location of Identified Built Heritage Resources and Cultural Heritage Landscapes in the Study Area (Key Map)



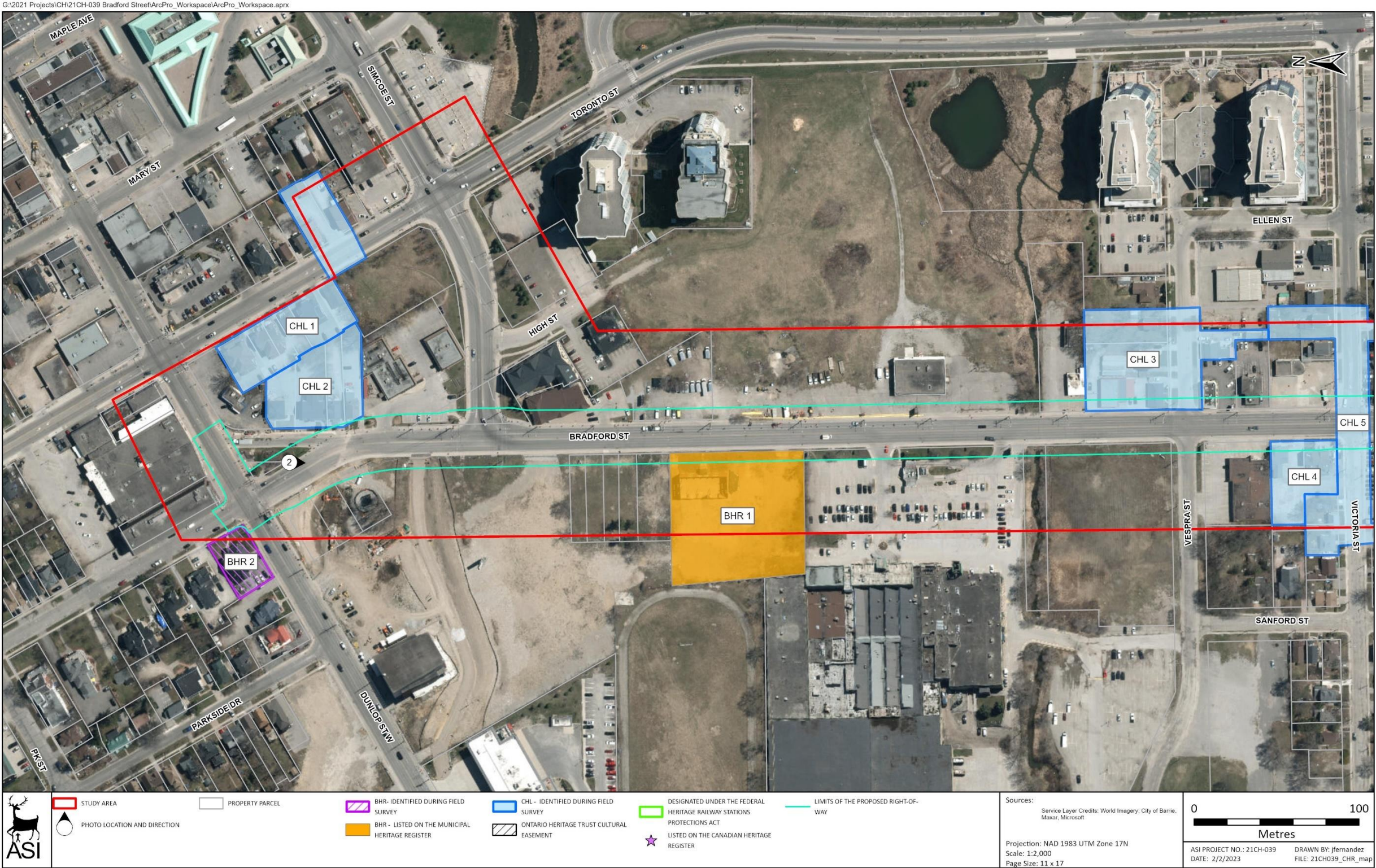


Figure 9: Location of Identified Built Heritage Resources and Cultural Heritage Landscapes in the Study Area (Sheet 1)



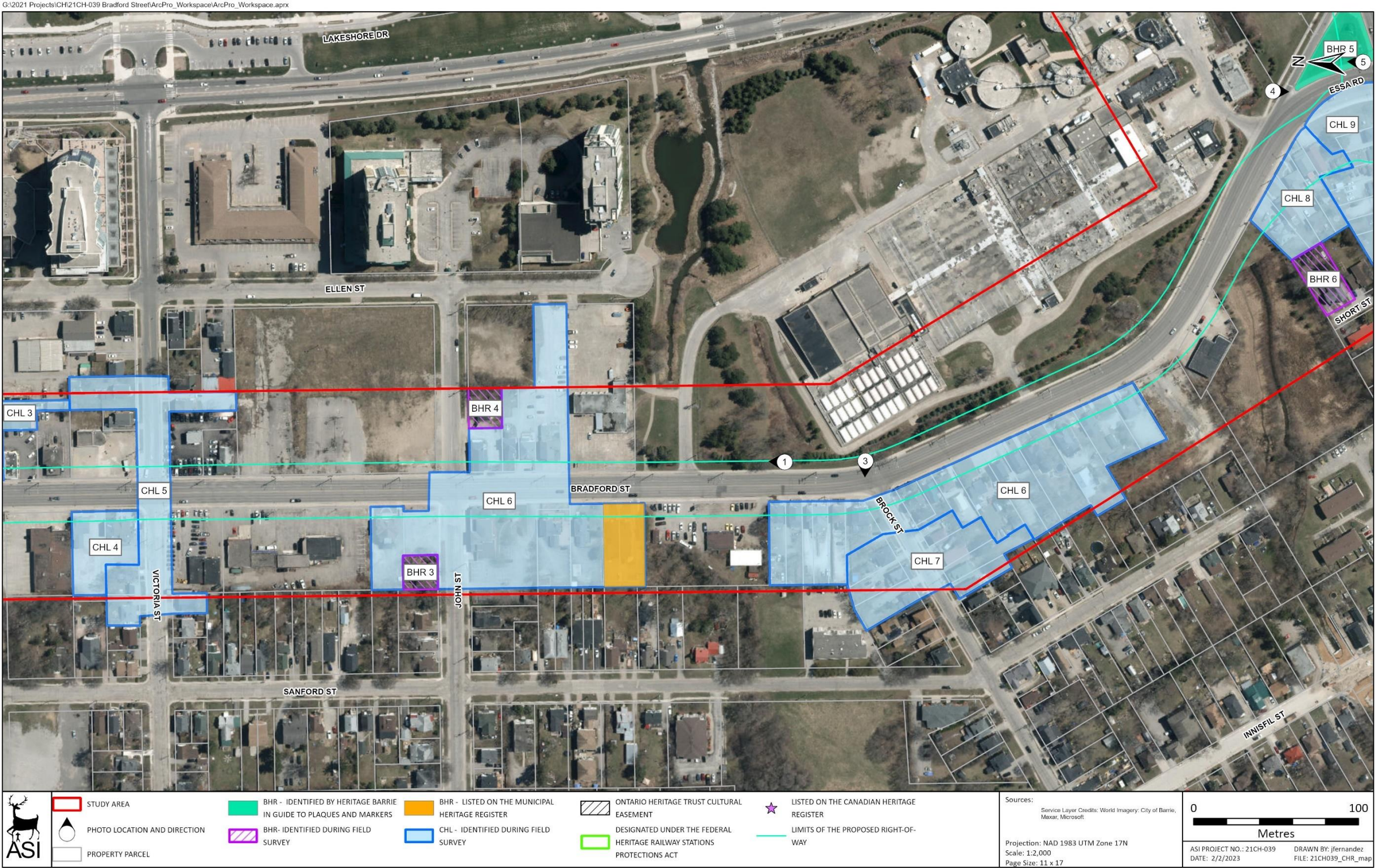


Figure 10: Location of Identified Built Heritage Resources and Cultural Heritage Landscapes in the Study Area (Sheet 2)



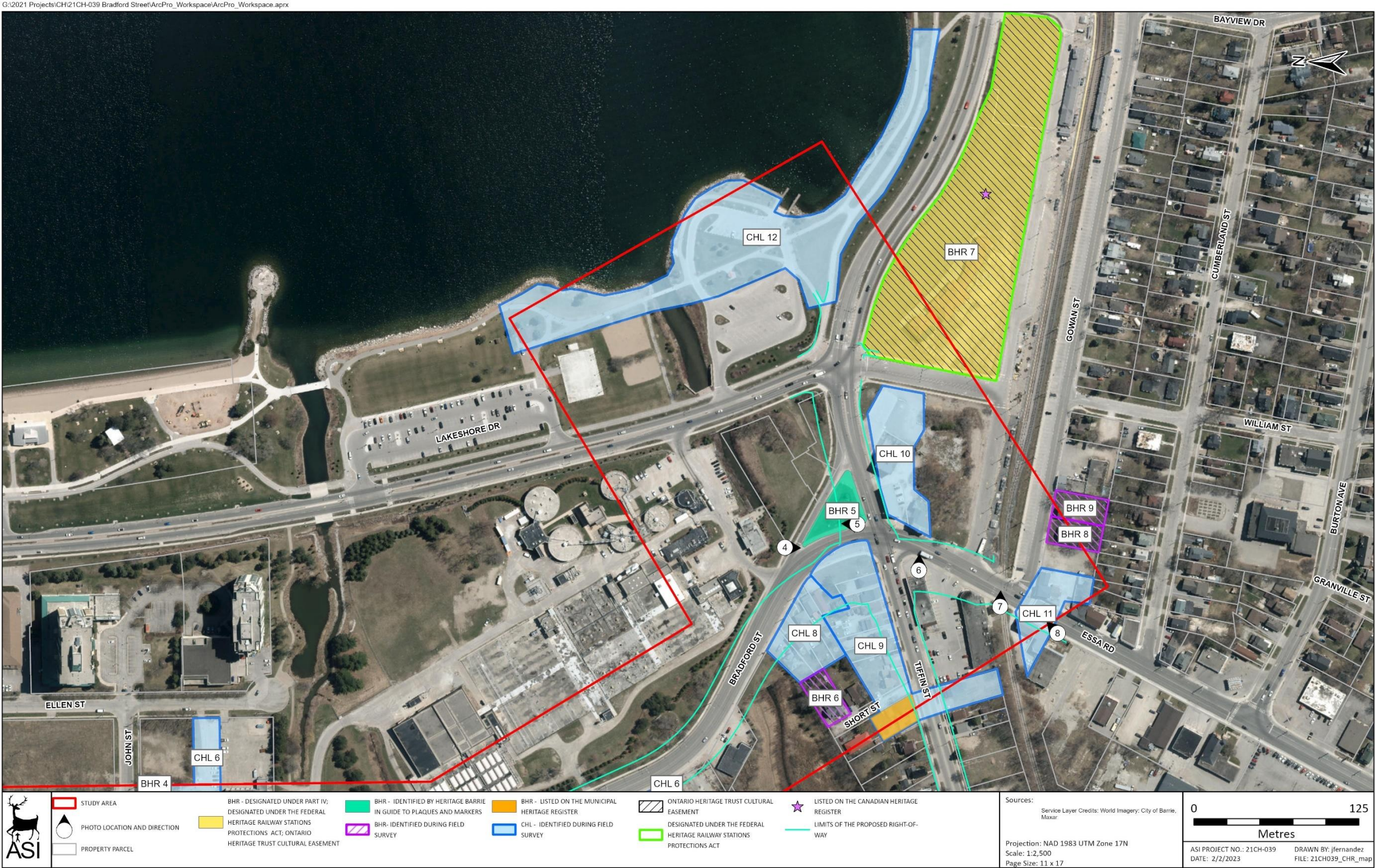


Figure 11: Location of Identified Built Heritage Resources and Cultural Heritage Landscapes in the Study Area (Sheet 3)



5.0 PRELIMINARY IMPACT ASSESSMENT

The following sections provide more detailed information regarding the proposed project undertaking and analysis of the potential impacts on identified built heritage resources and cultural heritage landscapes.

5.1 Description of Proposed Undertaking

The project study area consists of Bradford Street from Dunlop Street to Tiffin Street, High Street from Dunlop Street to Bradford Street, Simcoe Street from Toronto Street to Bradford Street, and Tiffin Street from Bradford Street to Lakeshore Drive in the City of Barrie.

The Bradford Street and Adjacent Roadways Municipal Class Environmental Assessment involves the identification of transportation infrastructure requirements to address the area's projected growth. The undertaking will include the introduction of new curbs and gutters, drop curbs, a cycle track, sidewalks, boulevards, transit stops, and medians, as well as reconfigured roadways and intersections.

This study is a long-range corridor protection plan that provides additional detail than what is contained in the City's new Official Plan with respect to alignment and corridor protection needs. The long-range corridor protection plan represents the ultimate corridor state, and will be used to guide re-development along the corridor. As such, the City of Barrie has no plans to acquire property or expropriate property at this time. Cultural heritage requirements, including additional heritage evaluation, impact assessment and mitigation will be met as the corridor redevelops and will be the responsibility of the developer. In the future, when the City of Barrie decides to reconstruct Bradford Street, an Addendum to this study will be required to develop an optimized design plan that fully considers the transportation and land use planning context at that time coupled with mitigation measures to minimize impacts to in-situ corridor constraints including built heritage resources and cultural heritage landscapes based on best practices in place at that time.

The preferred design concept plan (January 2023) showing the extent of the proposed future right-of-way limits is shown in relation to identified BHRs and CHLs in Section 4.2.

5.2 Analysis of Potential Impacts

Table 2 outlines the potential impacts on all identified BHRs and CHLs within the study area.



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
BHR 1	50 Bradford Street	Known BHR – Listed on Municipal Heritage Register	The limits of the proposed future right-of-way in the vicinity of BHR 1 are anticipated to result in minimal encroachment on to this property. However, this encroachment is not anticipated to have a direct adverse impact on the heritage attributes associated with this property. Indirect adverse impacts due to construction related vibration are possible as the structure sits within 50 m from the proposed work. These impacts are expected to be limited and temporary. No additional indirect impacts were identified.	The proposed design and construction activities related to this project should continue to avoid adverse impacts to identified potential heritage attributes. The proposed property encroachment should be minimized, where technically feasible. Suitable mitigation measures including post construction rehabilitation should be implemented. Suitable mitigation measures may also include establishing no-go zones with fencing and issuing instructions to construction crews to avoid the BHR. 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.
BHR 2	48 Dunlop Street West	Potential BHR – Identified during field review	The limits of the proposed future right-of-way in the vicinity of BHR 2 are not expected to have a direct impact to this property. Tying in the improvements with the existing right-of-way is also not anticipated to result with any direct adverse impacts on the potential heritage attributes associated with this property. Indirect adverse impacts due to construction related vibration are possible as the structure sits within 50 m from the proposed work. These impacts are expected to be limited and temporary. No additional indirect impacts were identified.	The proposed design and construction activities related to this project should continue to avoid adverse impacts to identified potential heritage attributes. 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.
BHR 3	50 John Street	Potential BHR – Identified during field review	The limits of the proposed future right-of-way in the vicinity of BHR 3 are not expected to result in direct impacts to this property. Tying in the improvements with the existing John Street right-of-way is also not anticipated to result with any direct adverse impacts on the potential heritage attributes associated with this property. Indirect adverse impacts due to construction related vibration are possible as the structure sits within 50 m from the proposed work. These impacts are expected to be limited and temporary. No additional indirect impacts were identified.	The proposed design and construction activities related to this project should continue to avoid adverse impacts to identified potential heritage attributes. 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.
BHR 4	35 John Street	Potential BHR – Identified during field review	The limits of the proposed future right-of-way in the vicinity of BHR 4 are not expected to result in direct impacts to this property. Tying in the improvements with the existing John Street right-of-way is also not anticipated to result in any direct adverse impacts on the potential heritage attributes associated with this property. Indirect adverse impacts due to construction related vibration are possible as the structure sits within 50 m from the proposed work. These impacts are expected to be limited and temporary. No additional indirect impacts were identified.	The proposed design and construction activities related to this project should continue to avoid adverse impacts to identified potential heritage attributes. 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.



Feature I.D.	Location/Name	Heritage Status and Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
BHR 5	Intersection of Essa Road and Tiffin Street	Known BHR – Identified by Heritage Barrie in Guide to Plaques and Markers	The limits of the proposed future right-of-way are anticipated to have direct adverse impacts to BHR 5. Impacts include the removal of the island within the intersection, resulting with the removal of the three flag poles, flags, and commemorative stone marker.	The flag poles/flags, commemorative marker, and other items from the memorial should be removed prior to construction and stored in a secure facility to prevent damage, in consultation with the City of Barrie and Barrie Unit 365 of the Army, Navy and Air Force Veterans in Canada. Following construction activities, these items should be reinstalled at an appropriate location near the newly reconfigured intersection, or in a similarly accessible location based on consultation with the City of Barrie and Barrie Unit 365 of the Army, Navy and Air Force Veterans in Canada.
BHR 6	1 Short Street	Potential BHR – Identified during field review	The limits of the proposed future right-of-way in the vicinity of BHR 6 are not expected to result in direct impacts to this property. No indirect impacts to BHR 6 are anticipated as the proposed improvements will occur more than 50 m from the potential BHR.	No further work required.
BHR 7	285 Bradford Street	Known BHR – Designated under Part IV of the Ontario Heritage Act; Listed on the Canadian Register; Designated under the Federal Heritage Railway Stations Protections Act; Ontario Heritage Trust Cultural Easement	The limits of the proposed future right-of-way in the vicinity of BHR 7 are not expected to result in direct impacts to this property. The “conceptual only” work of tying in the improvements with the road network west of this BHR is also not anticipated to result in any direct adverse impacts on the heritage attributes associated with this property. Indirect adverse impacts due to construction related vibration are possible as the structure sits within 50 m from the proposed work. These impacts are expected to be limited and temporary. No additional indirect impacts were identified.	The proposed design and construction activities related to this project should continue to avoid adverse impacts to identified heritage attributes. Suitable mitigation measures may include establishing no-go zones with fencing and issuing instructions to construction crews to avoid the BHR. 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.
BHR 8	9 Gowan Street	Potential BHR – Identified during field review	The limits of the proposed future right-of-way in the vicinity of BHR 8 are not expected to result in direct impacts to this property. No indirect impacts to BHR 8 are anticipated as the proposed improvements will occur more than 50 m from the potential BHR.	No further work required.
BHR 9	13 Gowan Street	Potential BHR – Identified during field review	The limits of the proposed future right-of-way in the vicinity of BHR 9 are not expected to result in direct impacts to this property. No indirect impacts to BHR 9 are anticipated as the proposed improvements will occur more than 50 m from the potential BHR.	No further work required.
CHL 1	34-46 (west side) and 27-31 (east side) Toronto Street	Potential CHL – Identified during field review	The limits of the proposed future right-of-way in the vicinity of CHL 1 are located northwest of and not adjacent to CHL 1. No direct impacts are anticipated. Indirect adverse impacts due to construction related vibration are possible as the CHL sits within 50 m from the proposed work. These impacts are expected to be limited and temporary. No additional indirect impacts were identified.	The proposed design and construction activities related to this project should continue to avoid adverse impacts to this CHL. 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.



Feature I.D.	Location/Name	Heritage Status and Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
CHL 2	5-13 Bradford Street	Potential CHL – Identified during field review	The limits of the proposed future right-of-way in the vicinity of CHL 2 may result in minimal property encroachment along the front portion of 11 and 13 Bradford Street. However, this encroachment is not expected to have a direct adverse impact on the potential heritage attributes associated with CHL 2. Indirect adverse impacts due to construction related vibration are possible as the structures within the CHL sit within 50 m from the proposed work. These impacts are expected to be limited and temporary. No additional indirect impacts were identified.	The proposed design and construction activities related to this project should continue to avoid adverse impacts to identified potential heritage attributes. The proposed property encroachment should be minimized, where technically feasible. Suitable mitigation measures including post construction rehabilitation should be implemented. Suitable mitigation measures may also include establishing no-go zones with fencing and issuing instructions to construction crews to avoid the CHL. 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.
CHL 3	101 Bradford Street + 28, 31, and 34 Vespra Street	Potential CHL – Identified during field review	The limits of the proposed future right-of-way in the vicinity of CHL 3 are anticipated to result in property encroachment at 101 Bradford Street. It is unknown at this time whether the expansion of the right-of-way will require removals or alterations to the subject property and which could significantly adversely impact its potential cultural heritage value. The property at 101 Bradford Street is identified as a potential heritage attribute of CHL 3. Indirect adverse impacts due to construction related vibration are possible as the structures within the CHL sit within 50 m from the proposed work. These impacts are expected to be limited and temporary. No additional indirect impacts were identified.	Given the potential cultural heritage value of the property at 101 Bradford Street, a resource-specific Cultural Heritage Evaluation Report (CHER) should be conducted to determine the property’s cultural heritage value or interest (CHVI). 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.
CHL 4	112 and 118 Bradford Street	Potential CHL – Identified during field review	The limits of the proposed future right-of-way in the vicinity of CHL 4 are anticipated to result in property encroachment at 112 and 118 Bradford Street. It is unknown at this time whether the expansion of the right-of-way will require removals or alterations to the subject properties and which could significantly adversely impact their potential cultural heritage value. Both properties are identified as potential heritage attributes of CHL 4. Indirect adverse impacts due to construction related vibration are possible as the structures within the CHL sit within 50 m from the proposed work. These impacts are expected to be limited and temporary. No additional indirect impacts were identified.	Given the potential cultural heritage value of the properties at 112 and 118 Bradford Street, a resource-specific CHER should be conducted to determine the properties’ CHVI. 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.
CHL 5	28, 29, 48, 50 and 51 Victoria St	Potential CHL – Identified during field review	The limits of the proposed future right-of-way in the vicinity of CHL 5 are located along Bradford Street and not adjacent to the potential heritage attributes within this CHL. No direct impacts are anticipated. Indirect adverse impacts due to construction related vibration are possible for the properties at 28, 29, and 48 Victoria Street as they sit within 50 m from the proposed work. These impacts are expected to be limited and temporary. No additional indirect impacts were identified.	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.



Feature I.D.	Location/Name	Heritage Status and Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
CHL 6	146-218 (west side) and 151-161 (east side) Bradford Street	Potential CHL – Identified during field review *Includes 168-170 Bradford Street – Known BHR – Listed on the municipal Heritage Register	The limits of the proposed future right-of-way in the vicinity of CHL 6 are anticipated to result in the encroachment on to properties that front on to Bradford Street. It is unknown at this time whether the expansion of the right-of-way will require removals or alterations to the subject properties and which could significantly adversely impact their potential cultural heritage value. All properties within the limits of CHL 6 that front on to Bradford Street are identified as potential heritage attributes of CHL 6. Indirect adverse impacts due to construction related vibration are possible as the structures within the CHL sit within 50 m from the proposed work. These impacts are expected to be limited and temporary. No additional indirect impacts were identified.	Given the potential cultural heritage value of the properties within the CHL, a CHER should be conducted to determine the CHVI of each property. Given the number of properties to be impacted within CHL 6, the scope of the CHER should be developed in consultation with heritage staff at the municipality, and consideration should be given to grouping certain properties into separate CHER reports. 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.
CHL 7	36-43 Brock Street	Potential CHL – Identified during field review	The limits of the proposed future right-of-way in the vicinity of CHL 7 are located along Bradford Street and not adjacent to the potential heritage attributes within this CHL. No direct impacts are anticipated. Indirect adverse impacts due to construction related vibration are possible as the structures within the CHL sit within 50 m from the proposed work. These impacts are expected to be limited and temporary. No additional indirect impacts were identified.	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.
CHL 8	244-252 Bradford Street	Potential CHL – Identified during field review	The limits of the proposed future right-of-way in the vicinity of CHL 8 are anticipated to result in encroachment on to the properties that front on to Bradford Street. At this time, it is unknown whether the expansion of the right-of-way will require removals or alterations to the subject properties and which could significantly adversely impact their potential cultural heritage value. All properties within the limits of CHL 8 that front on to Bradford Street are identified as potential heritage attributes of CHL 8. Indirect adverse impacts due to construction related vibration are possible as the structures within the CHL sit within 50 m from the proposed work. These impacts are expected to be limited and temporary. No additional indirect impacts were identified.	Given the potential cultural heritage value of the properties within the CHL, and the anticipated impacts to these properties, a CHER should be conducted to determine the CHVI each property. 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.
CHL 9	30-50 (north side) and 47 (south side) Tiffin Street	Potential CHL – Identified during field review *Includes 50 Tiffin Street – Known BHR – Listed on the municipal Heritage Register	The limits of the proposed future right-of-way in the vicinity of CHL 9 are anticipated to result in encroachment on to the properties that front on to Tiffin Street. It is unknown whether the expansion of the right-of-way will require removals or alterations to the subject properties and which could significantly adversely impact their potential cultural heritage value. All properties within the limits of CHL 9 that front on to Tiffin Street are identified as potential heritage attributes of CHL 9. Indirect adverse impacts due to construction related vibration are possible as all structures within the CHL sit within 50 m from the proposed work. These impacts are expected to be limited and temporary. No additional indirect impacts were identified.	Given the potential cultural heritage value of the properties within the CHL, and the anticipated impacts to these properties, a CHER should be conducted to determine the CHVI each property. 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.



Feature I.D.	Location/Name	Heritage Status and Recognition	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
CHL 10	268 Bradford St, 4 Essa Rd/5-7 Tiffin St + 8-10 Essa Rd	Potential CHL – Identified during field review	The limits of the proposed future right-of-way in the vicinity of CHL 10 will not encroach upon this property. No direct impacts are anticipated. Indirect adverse impacts due to construction related vibration are possible as all structures within the CHL sit within 50 m from the proposed work. These impacts are expected to be limited and temporary. No additional indirect impacts were identified.	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.
CHL 11	27-35 (west side) and 28-34 (east side) Essa Rd	Potential CHL – Identified during field review	The limits of the proposed future right-of-way in the vicinity of CHL 11 are anticipated to result in encroachment on to the properties at 27-35 Essa Road. At this time, it is unknown whether the expansion of the right-of-way will require removals or alterations to the subject properties and which could significantly adversely impact their potential cultural heritage value. Indirect adverse impacts due to construction related vibration are possible as all structures within the CHL sit within 50 m from the proposed work. These impacts are expected to be limited and temporary. No additional indirect impacts were identified.	Given the potential cultural heritage value of the properties within the CHL, a CHER should be conducted to determine the CHVI of each property. 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.
CHL 12	Waterfront Heritage Trail – Shoreline of Kempenfelt Bay	Potential CHL – Identified during field review	The limits of the proposed future right-of-way in the vicinity of CHL 10 may result in minimal encroachment to accommodate tie-ins with the existing pathways. No direct adverse impacts to the potential heritage attributes of CHL 10 are anticipated. No indirect impacts to CHL 12 are anticipated as the proposed improvements will occur more than 50 m from the structures within this potential CHL.	No further work required.



5.3 Summary of Potential Impacts

Based on the design concept plan provided in January 2023, and as presented in Table 2 above, the limits of the proposed future right-of-way is anticipated to result in encroachment on to the properties at one BHR (BHR 5) and six CHLs (CHL 3, CHL 4, CHL 6, CHL 8, CHL 9 and CHL 11). It is unknown whether the expansion of the right-of-way will require removals or alterations to the subject properties and which could significantly adversely impact their potential cultural heritage value. No direct adverse impacts to the remaining eight BHRs and seven CHLs are anticipated. Potential vibration impacts as a result of the proposed construction work may result in indirect adverse impacts to five BHRs (BHR 1, BHR 2, BHR 3, BHR 4, and BHR 7) and all CHLs except CHL 12.

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 early settlement history dating back to the early nineteenth century with a concentration of residential and transportation infrastructure development which transitioned towards increased commercial land use in the twentieth century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there are five previously identified BHRs within the Bradford Street and Adjacent Roadways study area. An additional 18 potential BHRs and CHLs were identified during background research and field review. Based on the type of resources, their physical location, architectural style and/or function, some of these individual resources were combined into a larger cultural heritage landscape, resulting in nine BHRs and 12 CHLs identified within the study area.

6.1 Key Findings

A total of nine BHRs and 12 CHLs were identified within the study area:

- Of the 21 BHRs and CHLs identified in this report, three are listed on the municipal heritage register (BHR 1; 50 Tiffin Street – included in CHL 9; and 168-170 Bradford Street – included in CHL 6), one is included in Heritage Barrie’s Guide to Plaques and Markers (BHR 5), and one property is designated under the Part IV of the *Ontario Heritage Act*, designated under the Federal Heritage Railway Stations Protections Act, and is under an Ontario Heritage Trust Cultural Easement (BHR 7). Eighteen features were identified during the field review (BHR 2-4, BHR 6, BHR 8, BHR 9, CHL 1-12).
- Identified cultural heritage resources are historically, architecturally, and associated with land use patterns and development of the City of Barrie and more specifically representative of the early residential and transportation development of the area located along Bradford Street, a historical roadway.



6.2 Results of Preliminary Impact Assessment

The Bradford Street and Adjacent Roadways Municipal Class Environmental Assessment will protect the proposed future right-of-way. This will result in encroachment on to all or part of the following BHRs and CHLs, although it is unknown whether the expansion of the right-of-way will require removals or alterations to the subject properties and which could significantly adversely impact their potential cultural heritage value:

- Memorial at the intersection of Essa Road and Tiffin Street (BHR 5)
- 101 Bradford Street (CHL 3)
- 112 and 118 Bradford Street (CHL 4)
- 146-218 (west side) and 151-161 (east side) Bradford Street (CHL 6)
- 244-252 Bradford Street (CHL 8)
- 30-50 (north side) and 47 (south side) Tiffin Street (CHL 9)
- 27-35 Essa Road (CHL 11)

Potential vibration impacts as a result of the proposed construction work may result in indirect adverse impacts to the following five BHRs and 11 CHLs.

- 50 Bradford Street (BHR 1)
- 48 Dunlop Street West (BHR 2)
- 50 John Street (BHR 3)
- 35 John Street (BHR 4)
- 285 Bradford Street (BHR 7)
- 34-46 (west side) and 27-31 (east side) Toronto Street (CHL 1)
- 5-13 Bradford Street (CHL 2)
- 101 Bradford Street + 28, 31, and 34 Vespra Street (CHL 3)
- 112 and 118 Bradford Street (CHL 4)
- 28, 29, 48, 50 and 51 Victoria St (CHL 5)
- 146-218 (west side) and 151-161 (east side) Bradford Street (CHL 6)
- 36-43 Brock Street (CHL 7)
- 244-252 Bradford Street (CHL 8)
- 30-50 (north side) and 47 (south side) Tiffin Street (CHL 9)
- 268 Bradford St, 4 Essa Rd/5-7 Tiffin St + 8-10 Essa Rd (CHL 10)
- 27-35 (west side) and 28-34 (east side) Essa Rd (CHL 11)

6.3 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 BHRs and CHLs. Avoidance measures may include, but are not limited to: erecting temporary fencing, establishing buffer zones, issuing instructions to construction crews to avoid identified BHRs and CHLs, etc.



2. The proposed limits of the future right-of-way will result in direct impacts through encroachment, which are anticipated to take place at the following properties: Memorial at the Intersection of Essa Road and Tiffin Street (BHR 5); 101 Bradford Street (CHL 3); 112 and 118 Bradford Street (CHL 4); 146-218 (west side) and 151-161 (east side) Bradford Street (CHL 6); 244-252 Bradford Street (CHL 8); 30-50 (north side) and 47 (south side) Tiffin Street (CHL 9); and 27-35 Essa Road (CHL 11). However, it is unknown at this time whether the expansion of the right-of-way will require removals or alterations to the subject properties and which could significantly adversely impact their potential cultural heritage value.
3. Given the potential cultural heritage value of CHL 3, CHL 4, CHL 6, CHL 8, CHL 9 and CHL 11, a resource-specific CHER for each should be conducted to determine their CHVI. However, details of encroachment are not known at this time. The long-range corridor protection plan represents the ultimate corridor state, and will be used to guide re-development along the corridor. As such, the City of Barrie has no plans to acquire property or expropriate property at this time. Cultural heritage requirements, including recommended CHERs and heritage impact assessments will be met as the corridor redevelops and will be the responsibility of the developer. In the future, when the City of Barrie decides to reconstruct Bradford Street, an Addendum to this study will be required to develop an optimized design plan that fully considers the transportation and land use planning context at that time coupled with mitigation measures to minimize impacts to in-situ corridor constraints including BHRs and CHLs based on best practices in place at that time.
4. Recommendations for BHR 5 include removal of the flag poles/flags, commemorative marker, and other items from the memorial prior to construction and storage in a secure facility to prevent damage. Removal, storage, and future placement should all be done in consultation with the City of Barrie and Barrie Unit 365 of the Army, Navy and Air Force Veterans in Canada.
5. To ensure the following properties are not adversely impacted during construction, baseline vibration monitoring should be undertaken during detailed design:
 - 50 Bradford Street (BHR 1)
 - 48 Dunlop Street West (BHR 2)
 - 50 John Street (BHR 3)
 - 35 John Street (BHR 4)
 - 285 Bradford Street (BHR 7)
 - 34-46 (west side) and 27-31 (east side) Toronto Street (CHL 1)
 - 5-13 Bradford Street (CHL 2)
 - 101 Bradford Street + 28, 31, and 34 Vespra Street (CHL 3)
 - 112 and 118 Bradford Street (CHL 4)
 - 28, 29, 48, 50 and 51 Victoria St (CHL 5)
 - 146-218 (west side) and 151-161 (east side) Bradford Street (CHL 6)
 - 36-43 Brock Street (CHL 7)
 - 244-252 Bradford Street (CHL 8)
 - 30-50 (north side) and 47 (south side) Tiffin Street (CHL 9)
 - 268 Bradford St, 4 Essa Rd/5-7 Tiffin St + 8-10 Essa Rd (CHL 10)



- 27-35 (west side) and 28-34 (east side) Essa Rd (CHL 11)

Should this advance monitoring assessment conclude that the structure(s) on these properties will be subject to vibrations, prepare and implement a vibration monitoring plan as part of the detailed design phase of the project to lessen vibration impacts related to construction.

6. 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 heritage resources.
7. This report should be submitted to the City of Barrie 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 Barrie for their records.



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