

APPENDIX F: CULTURAL HERITAGE REPORT: EXISTING CONDITIONS

Cultural Heritage Resource Assessment Report

Highway 416 and Barnsdale Road Interchange (G.W.P. 4057-20-00)

Class Environmental Assessment for Provincial Transportation Facilities

City of Ottawa, Ontario

Draft Report

Prepared for:

Morrison Hershfield
1005 Skyview Drive, Suite 175
Burlington, ON L7P 5B1

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March 2022 (Updated July 2023)



Executive Summary

Archaeological Services Inc. was contracted by Morrison Hershfield, on behalf of the Ministry of Transportation, Ontario (M.T.O.), to conduct a Cultural Heritage Resource Assessment Report (C.H.R.A.R.) for the Preliminary Design and Class Environmental Assessment (EA) Study for the Highway 416 and Barnsdale Road Interchange (G.W.P. 4057-20-00) (Agreement # 4019-E-00023) (the Project). The Project involves the new interchange around the intersection of Highway 416 and Barnsdale Road in the City of Ottawa. The study area for this C.H.R.A.R. consists of the Project right-of-way with an additional 250 metre buffer around the limits of the Project right-of-way. The study area is generally bounded by agricultural properties, a forested area, a quarry, and a landfill.

The study will follow the approved environmental planning process for Group “B” projects under the *Class Environmental Assessment for Provincial Transportation Facilities* (2000) and will identify a Recommended Plan for new interchange as part of M.T.O.’s ongoing review of safety and operational needs for the provincial highway network.

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

The results of background historical research and a review of secondary source material, including historical mapping, indicate a study area with a rural land use history dating back to the late eighteenth century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there are no previously identified features of cultural heritage value within the Highway 416 and Barnsdale Road Interchange study area. One C.H.L. was identified during the fieldwork.

Based on the preliminary designs of the proposed interchange improvements provided June 2023, the proposed right-of-way will result in direct impacts to



C.H.L. 1 (4144 Viewbank Road) through encroachment onto the northwest corner of the property. As such the following next steps are recommended:

1. A cultural heritage evaluation report (C.H.E.R.) is required for C.H.L. 1 as it is identified as being potentially negatively impacted by the Recommended Plan. The C.H.E.R. is to be completed as soon as possible and within the Environmental Assessment (E.A.) process.
2. If C.H.L. 1 is found to have cultural heritage value or interest (C.H.V.I.) through a C.H.E.R. and continues to be negatively impacted as a result of the Project, then a heritage impact assessment (H.I.A.) will be undertaken prior to the completion of detailed design.
3. A copy of the H.I.A. and other heritage reports for this Project, should be provided to Ministry of Citizenship and Multiculturalism and other interested parties for review and comment.
4. All heritage reports are to be completed in accordance with the Standards and Guidelines (2010) and M.T.O.'s cultural heritage conservation policy and process by a Qualified Person as defined in the Standards and Guidelines.
5. Should future work require an expansion or alteration of the study area, the additional area or change should be studied by a qualified heritage professional to confirm the impacts of the proposed work on potential B.H.R.s and C.H.L.s.



Report Accessibility Features

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



Project Personnel

- **Senior Project Manager:** Lindsay Graves, M.A., C.A.H.P., Senior Cultural Heritage Specialist, Assistant Manager - Cultural Heritage Division
- **Project Coordinator:** Jessica Bisson, B.F.A. (Hon.), Cultural Heritage Technician – Cultural Heritage Division
- **Project Manager:** Lindsay Graves
- **Field Review:** Kirstyn Allam, B.A. (Hon), Advanced Dipl. Applied Museum Studies, Cultural Heritage Analyst, Technical Writer and Researcher - Cultural Heritage Division
- **Report Production:** Kirstyn Allam
- **Graphics Production:** Carolyn Nettleton, B.A., Archaeologist, Geomatics Technician – Operations Division
- Adam Burwell, M.Sc., Archaeologist, Geomatics Specialist – Operations Division
- Jonas Fernandez, M.S.c., Manager, Geomatics - Operations Division
- **Report Reviewer(s):** Lindsay Graves
- John Sleath, M.A., Cultural Heritage Specialist, Project Manager - Cultural Heritage Division



Qualified Persons Involved in the Project

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

Senior Cultural Heritage Specialist, Assistant Manager - Cultural Heritage Division

The Senior Project Manager for this Cultural Heritage Report is **Lindsay Graves** (M.A., Heritage Conservation), Senior Cultural Heritage Specialist and Assistant Manager for the Cultural Heritage Division. She was responsible for: overall project scoping and approach; development and confirmation of technical findings and study recommendations; application of relevant standards, guidelines and regulations; and implementation of quality control procedures. Lindsay is academically trained in the fields of heritage conservation, cultural anthropology, archaeology, and collections management and has over 15 years of experience in the field of cultural heritage resource management. This work has focused on the assessment, evaluation, and protection of above ground cultural heritage resources. Lindsay has extensive experience undertaking archival research, heritage survey work, heritage evaluation and heritage impact assessment. She has also contributed to cultural heritage landscape studies and heritage conservation plans, led heritage commemoration and interpretive programs, and worked collaboratively with multidisciplinary teams to sensitively plan interventions at historic sites/places. In addition, she is a leader in the completion of heritage studies required to fulfill Class Environmental Assessment processes and has served as Project Manager for over 100 heritage assessments during her time at A.S.I. Lindsay is a member of the Canadian Association of Heritage Professionals.

Kirstyn Allam, B.A. (Hon), Advanced Dipl. in Applied Museum Studies

Cultural Heritage Analyst, Technical Writer and Researcher - Cultural Heritage Division

The report writer for this project is **Kirstyn Allam** (B.A. (Hon.), Advanced Diploma in Applied Museum Studies), who is a Cultural Heritage Analyst, Technical Writer and Researcher within the Cultural Heritage Division. She was responsible for preparing and contributing to research and technical reporting. Kirstyn Allam's



education and experience in cultural heritage, historical research, archaeology, and collections management has provided her with a deep knowledge and strong understanding of the issues facing the cultural heritage industry and best practices in the field. Kirstyn has experience in heritage conservation principles and practices in cultural resource management, including three years' experience as a member of the Heritage Whitby Advisory Committee. Kirstyn also has experience being involved with Stage 1-4 archaeological excavations in the Province of Ontario.



Glossary

Built Heritage Resource (B.H.R.)

Definition: "...one or more significant buildings (including fixtures or equipment location in or forming part of a building), structures, monuments, installations, or remains associated with architectural, cultural, social, political, economic, or military history and identified as being important to a community. For the purposes of these Standards and Guidelines, "structures" does not include roadways in the provincial highway network an in-use electrical or telecommunications transmission towers" (Standards and Guidelines for Conservation of Provincial Heritage Properties, 2010).

Cultural Heritage Landscape (C.H.L.)

Definition: "...a defined geographical area of heritage significance that human activity has modified and that a community values. Such an area involves a grouping(s) of individual heritage features, such as structures, spaces, archaeological sites, and natural elements, which together form a significant type of heritage form distinct from its constituent elements or parts. Heritage conservation districts designated under the *Ontario Heritage Act*, villages, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trails, and industrial complexes of cultural heritage value are some examples." (Standards and Guidelines for Conservation of Provincial Heritage Properties, 2010).

Known Built Heritage Resource or Cultural Heritage Landscape

Definition: A known built heritage resource or cultural heritage landscape is a property that has recognized cultural heritage value or interest. This can include a property listed on a Municipal Heritage Register, designated under Part IV or V of the *Ontario Heritage Act*, or protected by a heritage agreement, covenant or easement, protected by the *Heritage Railway Stations Protection Act* or the *Heritage Lighthouse Protection Act*, identified as a Federal Heritage Building, or located within a U.N.E.S.C.O. World Heritage Site (Ministry of Citizenship and Multiculturalism, 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 (Ministry of Citizenship and Multiculturalism, 2006). Indirect impacts also include potential vibration 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 Citizenship and Multiculturalism, 2016).

Significant

Definition: With regard to cultural heritage and archaeology resources, significant means “resources that have been determined to have cultural heritage value or interest. Processes and criteria for determining cultural heritage value or interest are established by the Province under the authority of the *Ontario Heritage Act*. While some significant resources may already be identified and inventoried by official sources, the significance of others can only be determined after evaluation” (Ministry of Municipal Affairs and Housing, 2020, p. 51).



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1.0 Introduction

Archaeological Services Inc. was contracted by Morrison Hershfield, on behalf of the Ministry of Transportation, Ontario (M.T.O.), to conduct a Cultural Heritage Resource Assessment Report (C.H.R.A.R.) for the Preliminary Design and Class Environmental Assessment (EA) Study for the Highway 416 and Barnsdale Road Interchange (G.W.P. 4057-20-00) (Agreement # 4019-E-00023) in the City of Ottawa (hereafter referred to as “The Project”). The study will follow the approved environmental planning process for Group “B” projects under the (2000) and will identify a Recommended Plan for new interchange as part of M.T.O.’s ongoing review of safety and operational needs for the provincial highway network.

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

1.1 Project Overview

The Project involves the construction of a new interchange around the intersection of Highway 416 and Barnsdale Road. Currently, an overpass carries traffic east-west along Barnsdale Road over Highway 416 but the intersection’s current configuration does not allow for entry to, or exit from, Highway 416. The proposed interchange would accommodate traffic movements in all directions by providing entry and exit from both the northbound and southbound lanes of Highway 416. The interchange is intended to address increased traffic demands and improve operational and safety concerns (MTO, 2022). The Project will also require the realignment or closure of the following municipal roads:

- Trail Road: closed north of the interchange with cul-de-sac constructed.
- William McEwen Road: realigned further west along Barnsdale Road.



- Borrisokane Road: Kilbirnie Drive to be extended as a replacement route for Borrisokane Road traffic to access Barnsdale Road via Greenbank Road (Morrison Hershfield, 2022).
 - The Kilbirnie Drive Extension, is part of a subdivision/development and the impacts associated with this roadway will be considered under the development process rather than this project (email communication 6 July 2023).

The study area is generally bounded by agricultural properties, a forested area, a quarry, and a landfill.

1.2 Description of Study Area

This C.H.R.A.R. will focus on the Project right-of-way with an addition 250 metre buffer around the limits of the Project right-of-way within the City of Ottawa (Figure 1). This Project study area is inclusive of all lands that may subject to direct or indirect impacts as a result of the proposed undertaking.

The *Environmental Guide for Built Heritage and Cultural Heritage Landscapes* (2007) defines a study area as “all lands to be affected adversely either through displacement and/or disruption by the proposed highway design and construction within the existing and proposed highway Right-of-Way (R.O.W.) and the off-route zones adjacent or abutting the existing R.O.W. (Ministry of Transportation, 2007, p. 13). It further describes the study area as having three zones, which are as follows:

1. A R.O.W. study zone comprises lands to be cleared and developed for the proposed highway R.O.W.
2. A 25-metre study zone is located immediately beside the R.O.W. and has potential for associated land clearance.
3. A 25 to 250-metre study zone further off the R.O.W. comprising an area where land clearance is unlike to occur, however, where impacts to B.H.R.s and C.H.L.s may be experienced.



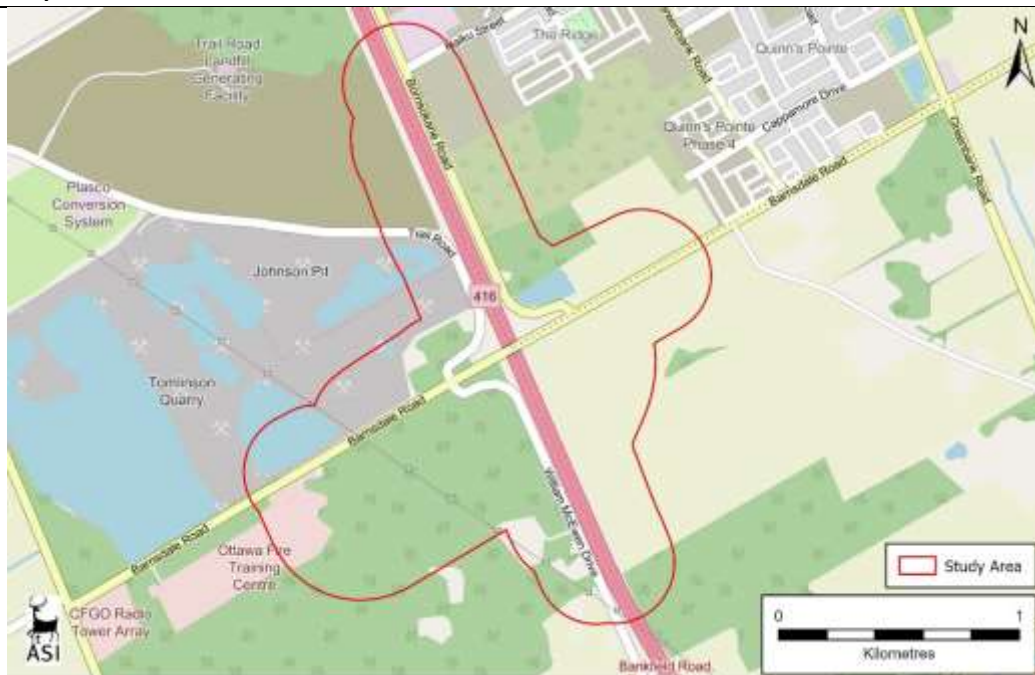


Figure 1: Location of the study area. Base Map: ©OpenStreetMap and contributors, Creative Commons-Share Alike License (C.C.-By-S.A.)

2.0 Methodology

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

The Cultural Heritage Resource Assessment Report (C.H.R.A.R.) is prepared in accordance with Ministry of Transportation, Ontario (M.T.O)'s cultural heritage conservation policy and guidelines as required under the *Standards and Guidelines for Conservation of Provincial Heritage Properties* (2010). Specifically, the following legislation and guidelines were reviewed in preparation of this report:

- *Ontario Heritage Act* (Ministry of Citizenship and Multiculturalism, 1990);

- *Standards and Guidelines for Conservation of Provincial Heritage Properties* (2010) (hereafter the Standards and Guidelines) issued under Section 25.2 of the *Ontario Heritage Act* (OHA);
- *Class Environmental Assessment for Provincial Transportation Facilities* (amended, 2000) including M.T.O. technical standards and guidance documents;
- *Environmental Guide for Built Heritage and Cultural Heritage Landscapes* (MTO, 2007); and,
- *Ontario Heritage Bridge Guidelines for Provincially Owned Bridges* (interim) (M.T.O., January 11, 2008) (OHBG).

Part III.1 of the Ontario Heritage Act (O.H.A.) enables the Minister of Citizenship and Multiculturalism (M.C.M.) in consultation with affected ministries and prescribed public bodies to prepare standards and guidelines that set out the criteria and process for identifying Provincial Heritage Properties (P.H.P.s) and to set standards for their protection, use and disposal. All Ontario government ministries and prescribed public bodies are required to follow the Standards and Guidelines, prepared under Section 25.2 of the O.H.A., when making any decisions affecting B.H.R.s and C.H.L.s on lands under their control.

2.1 Identification of Built Heritage Resources and Cultural Heritage Landscapes

This C.H.R.A.R. is prepared in accordance with the legislation and guidelines stated above. The objective of this report is to identify known and potential B.H.R.s and C.H.L.s within the study area, identify potential impacts to known and potential B.H.R.s and C.H.L.s as a result of the proposed project, and recommend mitigation measures.

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



Background historical research, which includes consultation of primary and secondary source research and historical mapping, is undertaken to identify early settlement patterns and broad agents or themes of change in a study area. This stage in the data collection process enables the researcher to determine the presence of sensitive heritage areas that correspond to nineteenth- and twentieth-century settlement and development patterns. To augment data collected during this stage of the research process, federal, provincial, and municipal databases and/or agencies are consulted to obtain information about specific properties that have been previously identified and/or designated as having cultural heritage value. Typically, resources identified during these stages of the research process are reflective of particular architectural styles or construction methods, associated with an important person, place, or event, and contribute to the contextual facets of a particular place, neighbourhood, or intersection.

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

Properties identified are screened using the Ministry of Citizenship and Multiculturalism's form, *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* (Ministry of Citizenship and Multiculturalism, 2016). The screening form is used in conjunction with the professional judgement of the qualified person to determine if a more technical Cultural Heritage Evaluation is required. In addition, use of a 40-year-old benchmark is a guiding principle when conducting a preliminary identification of B.H.R.s and C.H.L.s. While identification of a resource that is 40 years old or older does not confer outright heritage significance, this benchmark provides a means to collect information about resources that may retain heritage value. Similarly, if a resource is slightly younger than 40 years old, this does not preclude the resource from having cultural heritage value or interest.



2.2 Background Information Review

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

2.2.1 Review of Existing Heritage Inventories

A number of resources were consulted in order to identify previously identified B.H.R.s and C.H.L.s within the study area. These resources, reviewed on 8 and 9 February, 2022, include:

- The City of Ottawa's *Individual Designation* (City of Ottawa, 2020b);
- The City of Ottawa's *Listings on the Heritage Register* (City of Ottawa, 2020c);
- The City of Ottawa's *Heritage Conservation Districts* (City of Ottawa, 2020a);
- The *Ontario Heritage Act Register* (Ontario Heritage Trust, n.d.b);
- The *Places of Worship Inventory* (Ontario Heritage Trust, n.d.c);
- The inventory of Ontario Heritage Trust easements (Ontario Heritage Trust, n.d.a);
- The Ontario Heritage Trust's *An Inventory of Provincial Plaques Across Ontario*: a PDF of Ontario Heritage Trust Plaques and their locations (Ontario Heritage Trust, 2018);
- Inventory of known cemeteries/burial sites in the Ontario Genealogical Society's online databases (Ontario Genealogical Society, n.d.);
- Canada's Historic Places website: available online, the searchable register provides information on historic places recognized for their heritage value at the local, provincial, territorial, and national levels (Parks Canada, n.d.a);
- Directory of Federal Heritage Designations: a searchable on-line database that identifies National Historic Sites, National Historic Events, National Historic People, Heritage Railway Stations, Federal Heritage Buildings, and Heritage Lighthouses (Parks Canada, n.d.b);



- Canadian Heritage River System: a national river conservation program that promotes, protects and enhances the best examples of Canada’s river heritage (Canadian Heritage Rivers Board and Technical Planning Committee, n.d.); and,
- United Nations Educational, Scientific and Cultural Organization (U.N.E.S.C.O.) World Heritage Sites (U.N.E.S.C.O. World Heritage Centre, n.d.).

2.2.2 Review of Previous Heritage Reporting

No additional cultural heritage studies are known to have been undertaken within the study area and so none were reviewed as part of this assessment.

2.2.3 Community Information Gathering

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

- Adrian van Wyk, Planner – Heritage and Urban Design, City of Ottawa (email communication 1 and 2 March 2022). Email correspondence provided the location of one previously identified heritage resource; however, upon review this property was confirmed to be approximately 366 metres east of the study area. Staff also confirmed that they were not aware of any previous heritage reporting in the study area.
- The Ministry of Citizenship and Multiculturalism (email communication 1 and 2 March 2022). Email correspondence confirmed that there are no properties designated by the Ministry and that there are no known Provincial Heritage Properties within the study area.
- The Ontario Heritage Trust (email communication 1 March 2022; 26 and 27 June 2023). Email correspondence confirmed that there are no conservation easements or Trust-owned properties within the study area.



The Ministry of Transportation distributed the environmental assessment notifications (Notice of Study Commencement, Notice of Public Information Centre, and Notice of Completion) directly to the following communities:

- Algonquins of Ontario Consultation Office,
- Algonquins of Pikwàkanagàn First Nation, and
- Métis Nation of Ontario Head Office.

No responses have yet been received from any of these communities. Should information be received, this report will be updated, as appropriate.

2.3 Preliminary Impact Assessment Methodology

The development of transportation facilities has the potential to impact B.H.R.s and C.H.L.s through various methods. These impacts are outlined in *Information Bulletin 3: Heritage Impact Assessments for Provincial Heritage Properties* (Ministry of Citizenship and Multiculturalism, 2017):

- removal or demolition of all or part of any heritage attribute;
- removal or demolition of any building or structure on the provincial heritage property whether or not it contributes to the cultural heritage value or interest of the property (i.e. non-contributing buildings);
- any land disturbance, such as a change in grade and/or drainage patterns that may adversely affect a provincial heritage property, including archaeological resources;
- alterations to the property in a manner that is not sympathetic, or is incompatible, with cultural heritage value or interest of the property. This may include necessary alterations, such as new systems or materials to address health and safety requirements, energy-saving upgrades, building performance upgrades, security upgrades or servicing needs;
- alterations for access requirements or limitations to address such factors as accessibility, emergency egress, public access, security;
- introduction of new elements that diminish the integrity of the property, such as a new building, structure or addition, parking expansion or addition, access or circulation roads, landscape features;



- changing the character of the property through removal or planting of trees or other natural features, such as a garden, or that may result in the obstruction of significant views or vistas within, from, or of built and natural features;
- change in use for the provincial heritage property that could result in permanent, irreversible damage or negates the property's cultural heritage value or interest;
- continuation or intensification of a use of the provincial heritage property without conservation of heritage attributes;
- shadows that alter the appearance of a heritage attribute or change the visibility of an associated natural feature or plantings, such as a tree row, hedge or garden;
- isolation of a heritage attribute from its surrounding environment, context or a significant relationship;
- vibration damage to a structure due to construction or activities on or adjacent to the property; and
- alteration or obstruction of a significant view of or from the provincial heritage property from a key vantage point.

In accordance with this document, direct adverse impacts are identified where the following resulting conditions are anticipated:

- a permanent and irreversible negative affect on the cultural heritage value or interest of a property; and
- loss of a heritage attribute on all or part of the provincial heritage property.

Indirect adverse impacts are identified where activities on or near the property may adversely affect its cultural heritage value or interest and/or heritage attributes. Positive impacts may also result where a property's cultural heritage value or interest and/or heritage attributes is conserved or enhanced.

The proposed undertaking should endeavor to avoid adversely affecting known and potential B.H.R.s and C.H.L.s and interventions should be managed in such a way that identified cultural heritage resources are conserved. When the nature of the undertaking is such that adverse impacts are unavoidable, it may be necessary



to implement alternative approaches or mitigation strategies that alleviate the negative effects on identified B.H.R.s and C.H.L.s. Mitigation is the process of lessening or negating anticipated adverse impacts to B.H.R.s and C.H.L.s and may include, but are not limited to, such actions as avoidance, monitoring, protection, relocation, remedial landscaping, and documentation of the B.H.R.s and C.H.L.s if to be demolished or relocated.

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

3.0 Summary of Historical Development Within the Study Area

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

3.1 Physiography

The study area is located in the Ottawa Valley Clay Plains physiographic region of southern Ontario. The Ottawa Valley clay between Pembroke and Hawkesbury consist of clay plains interrupted by ridges of rock or sand. The region divides into two parts, above and below Ottawa, with each section having its own distinctive traits. The upper section is characterized by a broad valley with the Laurentian uplands rising on both sides. The Quebec side of the valley features a steep slope with a sharp rise of approximately 600 feet, while the Ontario side is gradually sloping with some prominent scarps (Chapman & Putnam, 1984).

The physiography of the region and the generally poor drainage led to the quality of the soils being poor and acidic in the area south of Ottawa. When artificially drained and well handled, the soil can be highly productive. This has caused farming to vary in different parts of the region. Rideau clay in the vicinity of



Ottawa has a high value due to its location and much of the land has been cleared and used for pasture (Chapman & Putnam, 1984). Thus, the study area's physiography, soil type, and location in the vicinity of the Jock River to the north and the Rideau River to the east influenced early settlement and its eventual transformation into agricultural lands.

3.2 Indigenous Land Use and Settlement

Eastern Ontario has been occupied by human populations since the retreat of the Laurentide glacier approximately 13,000 years before present (B.P.) (Ferris, 2013).¹ Populations at this time would have been highly mobile, inhabiting a boreal-parkland similar to the modern sub-arctic. By approximately 10,000 B.P., the environment had progressively warmed (Edwards & Fritz, 1988) and populations now occupied less extensive territories (Ellis & Deller, 1990).

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

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



Between 3,000-2,500 B.P., populations continued to practice residential mobility and to harvest seasonally available resources, including spawning fish. The Woodland period begins around 2,500 B.P. and exchange and interaction networks broaden at this time (Spence et al., 1990, pp. 136, 138) and by approximately 2,000 B.P., evidence exists for small community camps, focusing on the seasonal harvesting of resources (Spence et al., 1990, pp. 155, 164). By 1,500 B.P. there is macro botanical evidence for maize in southern Ontario, and it is thought that maize only supplemented people's diet. There is earlier phytolithic evidence for maize in central New York State by 2,300 B.P. - it is likely that once similar analyses are conducted on Ontario ceramic vessels of the same period, the same evidence will be found (Birch & Williamson, 2013, pp. 13–15). As is evident in detailed Anishinaabeg ethnographies, winter was a period during which some families would depart from the larger group as it was easier to sustain smaller populations (Rogers, 1962). It is generally understood that these populations were Algonquian-speakers during these millennia of settlement and land use.

Evidence for contacts with populations in New York State and New England has been found at the Morrison's Island-2 archaeological site in the Ottawa River Valley. The Morrison's Island-2 site demonstrates the continuation of this mortuary landscape as well as provides evidence for elaborate burial customs (Spence et al., 1990). The presence of red ochre at this site is specifically implicit of ceremonialism.

In southern Ontario, from the beginning of the Late Woodland period at approximately 1,000 B.P., lifeways became more similar to that described in early historical documents. Between approximately 1000-1300 Common Era (C.E.), the communal site is replaced by the village focused on horticulture. Seasonal disintegration of the community for the exploitation of a wider territory and more varied resource base was still practised (Williamson, 1990, p. 317). By 1300-1450 C.E., this episodic community disintegration was no longer practised and populations now communally occupied sites throughout the year (Dodd et al., 1990, p. 343). By the mid-sixteenth century these small villages had coalesced into larger communities (Birch et al., 2021). Through this process, the socio-political organization of the Indigenous groups, as described historically by the French and



English explorers who first visited southern Ontario, was developed. By 1600 C.E., the communities within Simcoe County had formed the Confederation of Nations encountered by the first European explorers and missionaries.

Algonquian-speaking groups were historically documented wintering with the Huron-Wendat, some who abandoned their country on the shores of the St. Lawrence because of attacks from the Haudenosaunee (Thwaites, 1896-1901: 27: 37). Other Algonquian groups were recorded along the northern and eastern shores and islands of Lake Huron and Georgian Bay - the "Ouasouarini" [Chippewa], the "Outchougai" [Outchougai], the "Atchiligouan" [Achiligouan] near the mouth of the French River and north of Manitoulin Island the "Amikouai, or the nation of the Beaver" [Amikwa; Algonquian] and the "Oumisagai" [Missisauga; Chippewa] (Thwaites, 1896-1901: 18: 229, 231).

Historically, the main Algonquin bands included the Kichesipirini or "Big River people", with their main village on Morrison Island; the Waweskarini (literally wawashkesh irini or "deer people"), or the "Petite Nation des Algonquins", who lived along the rivers immediately west of Montreal; the Matouweskarini ("Madawaska people"), who lived in the Madawaska River region west of Ottawa; the Kinouchibiriniouek (Kinozhe sipi iriniwag or "Pike river people"), who lived in the Bonnechere River watershed near Renfrew; and the Onontchataronon, or people of Iroquet, who lived south and east of Ottawa (Morrison, 2005, pp. 14–15).

The earliest recorded form of the name 'Algonquin' is the name 'Algoumequin' which dates to 1603. The name 'Algonquain' appears in 1632 (Day & Trigger, 1978, p. 797). The name 'Algonquins' is used by the modern name Algonquins of Ontario, and it is this name that will be used in this report. The Algonquins were primarily hunter-fishers. While this was of the utmost economic importance, protocol was strictly guided by Algonquin cosmology and understanding of the spiritualism in the natural world. Some Algonquins also practiced limited horticulture on lots cleared by slash-and-burn (Whiteduck, 2002). Control of the waterways was also an important facet of the Algonquin economy, as sovereignty and tolls were exacted for right-of-passage. Such tolls may be seen as comparable



to modern day visas and/or tariffs and were important elements of the Algonquins' place and position in the geo-political world of the seventeenth century (Whiteduck, 2002). The Algonquin were referred to by the seventeenth century French as "la petite Nation." This refers to a tradition that the Algonquins had previously (prior to the sixteenth century) constituted a much larger group which had been fragmented in a battle near Trois Rivières (Day & Trigger, 1978, p. 794).

In the 1640s, the traditional enmity between the Haudenosaunee and the Huron-Wendat (and their Algonquian allies such as the Nipissing and Odawa) led to the dispersal of the Huron-Wendat. Shortly afterwards, the Haudenosaunee established a series of settlements at strategic locations along the trade routes inland from the north shore of Lake Ontario. By the 1690s however, the Anishinaabeg were the only communities with a permanent presence in southern Ontario. From the beginning of the eighteenth century to the assertion of British sovereignty in 1763, there was no interruption to Anishinaabeg control and use of southern Ontario.

During this period Algonquins, Nipissings, and Hurons found refuge in various locations including French settlements at Trois-Rivières, Quebec City, Sillery, and Montreal; others went to the Lake St. John region to the east. Other Nipissings and Algonquins, remained in their traditional territories, avoiding the unsafe lower Ottawa valley in summer (Joan Holmes & Associates, 1993; Morrison, 2005). Algonquins did not completely abandon the Ottawa valley but withdrew to its interior locations between 1650 and 1675. Algonquins used the Ottawa River for trade purposes from about 1654. During the last quarter of the seventeenth century, Algonquins were reported at numerous locations within the French sphere of influence.

The eighteenth century saw the ethnogenesis in Ontario of the Métis, when Métis people began to identify as a separate group, rather than as extensions of their typically maternal Indigenous and paternal European ancestry (Métis National Council, n.d.b). Living in both Euro-Canadian and Indigenous societies, the Métis acted as agents and subagents in the fur trade but also as surveyors and



interpreters. Métis populations were predominantly located north and west of Lake Superior, however, communities were located throughout Ontario (MNC n.d.b; Stone & Chaput, 1978, p. 607,608). During the early nineteenth century, many Métis families moved towards locales around southern Lake Huron and Georgian Bay, including Kincardine, Owen Sound, Penetanguishene, and Parry Sound (MNC n.d.a). By the mid-twentieth century, Indigenous communities, including the Métis, began to advance their rights within Ontario and across Canada, and in 1982, the Métis were federally recognized as one of Canada's distinct Indigenous peoples. Recent decisions by the Supreme Court of Canada (*R. v. Powley*, 2003; *Daniels v. Canada (Indian Affairs and Northern Development)*, 2016) have reaffirmed that Métis people have full rights as one of the Indigenous peoples of Canada under subsection 91(24) of the Constitution Act, 1867.

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

The study area is within Crawford Purchases of 1783. The Crawford Purchases were agreements for large land surrenders along then north shore of Lake Ontario and the St. Lawrence River, negotiated between the Mississaugas and William Crawford representing the Crown at Carleton Island. Although the land in question was occupied by Algonquin people, they were not included in the negotiations (Huitema, n.d.). The Algonquin challenged the treaty in 1836 however no action was taken to recognize the treaty lands as within their traditional territory (Aboriginal Affairs and Northern Development Canada, 2016; Archaeological Services Inc. & Geomatics International Inc., 1999; Hessel, 1987, p. 69; Walker & Walker, 1968, p. 7). This area is part of the current Algonquins of Ontario (A.O.O.) land claim (Algonquins of Ontario, 2013). A historic Agreement-in-Principle was signed in 2016 by the A.O.O. and the Governments of Ontario and



Canada representing a major step towards continued negotiations of a modern-day treaty and outlined the main elements of a potential settlement.

3.3 Historical Euro-Canadian Township Survey and Settlement

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

Historically, the study area is located in the former Township of Nepean, County of Carleton in part of Lots 3 – 8, Concession 3 and Lots 3 – 8, Concession 4.

3.3.1 Township of Nepean

Settlement in the Ottawa area was not actively encouraged by the colonial government until the late eighteenth century. With the end of the American Revolutionary war in 1783, an exodus of Loyalists and disbanded soldiers moving north across the St. Lawrence required the acquisition and settling of new lands. In response, the British Government sought to obtain the rights to lands in eastern Ontario by negotiating treaties with local Indigenous groups. The first such treaty, known as the “Crawford Purchase” was negotiated in 1783 with the Mississauga for a huge parcel of land that would become the Counties of Glengarry, Stormont, Dundas, Prescott, Russell, Leeds, Grenville and Prince Edward, the southern parts of Frontenac, Lennox, Addington and Hastings (Elliot, 1991).



United Empire Loyalists began settling the newly surveyed townships along the north shore of the St. Lawrence River and Lake Ontario the following year. By the late 1780s the waterfront townships were full and more land was required to meet both an increase in the size of grants to all Loyalists and grant obligations to the children of Loyalists who were now entitled to 200 acres in their own right upon reaching the age of 21 (Elliot, 1991).

The outline survey of Nepean Township was completed in preparation for George Hamilton's settlement. In 1792 Hamilton, a veteran of the Revolutionary War, applied to the colonial government for land in the township claiming he could bring 143 settlers to the area. Although originally referred to as Township "D", the township was named Nepean in 1798. Hamilton had difficulty attracting settlers because of the distance from the St. Lawrence River and the lack of any road communication and abandoned the settlement. His grant was revoked by the government, who decided that it was more prudent to populate the township through the granting of individual lots (Elliot, 1991).

Rice Honeywell of Prescott was a landholder in Nepean Township and gave 1,000 acres of land in Nepean to his son Ira when he became an adult. Between 1809 and 1810, Ira cleared about four acres of the land given to him by his father and the following spring, moved his family into the township, thus becoming the first Euro-Canadian settler in the township. Other Euro-Canadian settlers followed the Honeywells. In 1814, a Mr. Draper moved to the township and a pair of brothers, Roger and Martin Moore followed. Ira Honeywell built a new home by 1819 on Richmond Road and was granted a license to operate a ferry across the Ottawa River (Mika & Mika, 1983).

Municipal government for Nepean began on 1 January 1850 when a meeting was held at Bell's Corners to elect the first township council following the Municipal Act of 1849. At that time the township included much of the western portion of what is now Ottawa. Known at the time as Bytown, Ottawa was a lumber town with desires to become the capital of the county and over time, Ottawa took over much of the township's territory. Between 1907 and 1947, Ottawa took over 4,459 acres of Nepean Township including the areas of Bayswater, Hintonburg,



Merivale Road area, and others. An additional 7,420 acres were annexed by the now capital city in 1950. This reduced Nepean's population from 20,830 to 2,503 people living in a rural environment. Through well-planned residential and commercial development, Nepean was incorporated as a city in 1978 (Mika & Mika, 1983). Nepean's city status was short-lived as in 2001, it along with 10 other municipalities were merged into the new City of Ottawa (Welch & Payne, 2015).

3.3.2 Highway 416

The study area is centred on the location of Highway 416 and Barnsdale Road. The need for a highway between Ottawa and Highway 401 was first noted in 1966 by the Ontario Department of Highways in their Eastern Ontario Highway Planning Study. The first stage of the highway was completed between 1969 and 1983 and was a 57 kilometre stretch of Highway 16, a two-lane link between Highway 401 and Century Road. This would later become the northbound lanes of Highway 416 South (Ministry of Transportation, 2010).

The section of the highway from Century Road northwards to Highway 417 in Ottawa, is known as Highway 416 North and as the Veterans Memorial Highway. This portion is 21 kilometres in length and was approved in the mid-1980s (Ministry of Transportation, 2010). This section was built on an entirely new alignment of highway and construction began in the early 1990s. The highway was fully opened from Highway 16 to Highway 417 in Ottawa in 1997 (Bever, 2018).

A second phase of construction of Highway 416 occurred with the twinning of the existing lanes of Highway 16 southerly from Century Road to just north of Highway 401. This twinning was completed in 1999 and Highway 416 officially opened on 23 September 1999, one year ahead of schedule and \$14 million under budget (Bever, 2018; Ministry of Transportation, 2010). The existing lanes were closed for reconstruction in 2000; however, the work was completed the same year and all work on Highway 416 was finished in late 2000 (Bever, 2018).



3.4 Review of Historical Mapping

The 1863 *Map of the County of Carleton* (Gray, 1863) and the 1879 *Illustrated Historical Atlas of the County of Carleton* (Belden, 1879) 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 in part of Lots 3 – 8, Concession 3 and Lots 3 – 8, Concession 4 in the in the former Township of Nepean, County of Carleton.

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.

Nineteenth-century mapping depicts the study area in a rural agricultural context (Figure 2 and Figure 3). The 1863 *Map of the County of Carleton* (Figure 2) depicts Trail Road as a historically surveyed road and as a continuous roadway connected to present-day Viewbank Road. Barnsdale Road is depicted as a side line in a similar alignment to its present orientation and a northwest-southeast oriented concession line is depicted through roughly the centre of the study area. A lot/concession system is evident, and several names are identified as property owners of what may be called large homesteads though several lots do not contain owner information. A residence is depicted at the southwest corner of the intersection of the concession line and Trail Road. The 1879 *Illustrated Historical Atlas of the County of Carleton* (Figure 3) depicts the study area in a similar context as earlier mapping. The centrally-located concession line is illustrated as a



completed roadway as well as the portion of Barnsdale Road to the west of that concession line. Barnsdale Road to the east is depicted as a proposed road as indicated by the dashed lines. The previously-illustrated residence is no longer depicted. Two residences are illustrated to the south of Trail Road near the western edge of the study area.

In addition to nineteenth-century mapping, historical topographic mapping and aerial photographs from the twentieth century were examined. This report presents maps and aerial photographs from 1908, 1954, and 1999 (Figure 4 to Figure 6).

Twentieth-century mapping continues to depict the study area in an agricultural context with the most notable change coming from the introduction of Highway 416 near the end of the twentieth century. The 1908 topographic map (Figure 4) depicts some change within the study area. Trail Road is no longer illustrated as a continuous road connecting to present-day Viewbank Road, and terminates at the northwest-southeast concession road. A mill is illustrated at the northwest corner of the intersection of Barnsdale Road and the concession road. The map shows the location of frame and brick farmhouses (black squares represent frame houses, red squares represent brick/masonry houses), though only frame houses are depicted within the study area. All the roads within the study area are unmetalled roads, with the exception being in the northern portion of the study area, an unfenced road is depicted, likely an access road to agricultural fields, given its location. Few changes to the area occur through the middle of the twentieth century and the study area remains largely agricultural and rural with few houses as captured in the 1954 aerial photography (Figure 5). The 1999 aerial photography (Figure 6) captures the changes that occurred in the study area following the construction of Highway 416. The former concession road has been replaced with Highway 416. Trail Road has been re-routed and William McEwen Drive and Borrisokane Road have been built. The former agricultural lands to the west of Highway 416 are now a landfill to the north of Trail Road and a quarry to the south. The lands to the south of Barnsdale Road to the west of Highway 416 is forested with some rural residential properties and the lands to the east of



Highway 416 both to the north and south of Barnsdale Road are primarily agricultural.



Figure 2: The study area overlaid on the 1863 Map of the County of Carleton. Base Map: (Gray, 1863).



Figure 3: The study area overlaid on the 1879 *Illustrated Historical Atlas of the County of Carleton*. Base Map: (Belden, 1879)

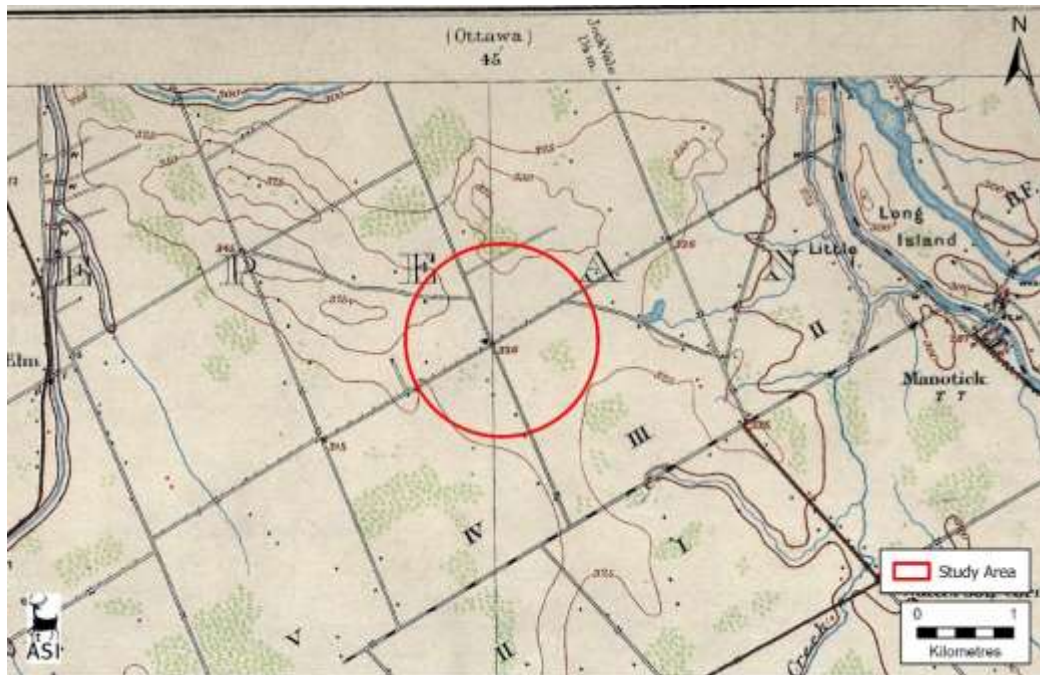


Figure 4: The study area overlaid on the 1908 topographic map of Kemptville. Base Map: Kemptville Sheet (Department of Militia and Defence, 1908)



Figure 5: The study area overlaid on the 1954 aerial photography of Ottawa. Base Plate: 452.754 and 452.753 (University of Toronto Map and Data Library & Hunting Survey Corporation Limited, 1954)



Figure 6: The study area overlaid on the 1999 aerial photography of Ottawa. Base Plate: (Ottawa Riverkeeper, 2020)

4.0 Existing Conditions

A field review of the study area was undertaken by Kirstyn Allam of Archaeological Services Inc., on 15 February 2022 to document the existing conditions of the study area from existing rights-of-way. The existing conditions of the study area are described below and captured in Plate 1 to Plate 12.

4.1 Description of Field Review

The study area is located in the City of Ottawa and is centred on the bridge that carries Barnsdale Road over Highway 416. The study area consists of the Project right-of-way (R.O.W.) with an additional 250 metre buffer around the limits of the R.O.W. The study area is generally bounded by agricultural properties, a forested area, a quarry, and a landfill.

Within the study area, Highway 416 is a divided freeway with two lanes of northbound and two lanes of southbound vehicular traffic. Barnsdale Road is an undivided two-lane east-west roadway. Barnsdale Road is carried over Highway 416 by a two-span circular voided slab post-tensioned cast-in-place concrete bridge (Plate 1) that was constructed in 1995 and was rehabilitated in 2017 (Ministry of Transportation, n.d.; Morrison Hershfield, 2021).² The bridge carries two lanes of Barnsdale Road vehicular traffic over the Highway 416. As the bridge is under 40 years old, it was not considered to have potential cultural heritage value or interest.

² The 1995 date of construction for the bridge is from the *MTO Structural Inventory* (Ministry of Transportation, n.d.) on file with A.S.I., while the Project Start Up Meeting identified the bridge's construction date as 1991 (Morrison Hershfield, 2021).





Plate 1: View from south of the bridge carrying Barnsdale Road over Highway 416, looking north (Google Streetview 2021).

To the east of Highway 416, the area south of Barnsdale Road is primarily agricultural while the former agricultural area to the north of the road is currently under development for a residential subdivision (15 February 2022). To the west of Highway 416, a quarry is located to the north of Barnsdale Road within the study area and to the south of Barnsdale Road a utilities company, an outdoor storage property, and forested areas are within the study area.

Located to the east of the bridge crossing is Borriskane Road, a rural paved two-lane roadway lined with rural properties. Some of these properties are part of the *Barrhaven South Urban Expansion Area* (2018) and were under construction at the time of field review. The road generally travels north-south parallel to Highway 416, with a curve to the west just north of Barnsdale Road.

Located to the west of the bridge crossing and to the north of Barnsdale Road is Trail Road, a rural paved two-lane roadway lined with a large quarry property to the west and south of the road and a landfill to the north of the road. From Barnsdale Road, Trail Road curves eastwards before traveling in a north-south

alignment parallel to Highway 416, for approximately 300 metres. Trail Road then travels in a general northwest-southeast alignment.

Located to the west of the bridge crossing and to the south of Barnsdale Road is William McEwen Drive, a rural paved two-lane roadway featuring rural properties along its western side. From Barnsdale Road, William McEwen Drive curves eastwards before traveling in a north-south alignment parallel to Highway 416.

Located to the east of the study area is Viewbank Road, a rural paved two-lane roadway with rural and agricultural properties along both sides of the road. The properties on the western side of Viewbank Road fall within the study area. Viewbank Road is a rural paved two-lane roadway and travels in a north-south alignment for approximately 200 metres south of Barnsdale Road and then travels in a general northwest-southeast alignment.



Plate 2: View of Highway 416 from William McEwen Drive, looking east (A.S.I., 2022).



Plate 3: View from south of the bridge, looking north towards the bridge over Highway 416 (A.S.I., 2022).



Plate 4: View from north of the bridge, looking south toward the bridge over Highway 416 (A.S.I., 2022).



Plate 5: View of Barnsdale Road, looking west-southwest. Agricultural property along the southern side (left) and former agricultural along the northern side (right) (A.S.I., 2022).



Plate 6: View of Barnsdale Road from Borrisokane Road, looking west-southwest to the bridge (A.S.I., 2022).



Plate 7: View of Barnsdale Road from Trail Road, looking east-northeast towards the bridge (A.S.I., 2022).



Plate 8: View of Barnsdale Road, looking east-northeast. The quarry is along the northern side (left) and the outdoor storage property is along the southern side (right) (A.S.I., 2022).



Plate 9: View of Borrisokane Drive, looking north (A.S.I., 2022).



Plate 10: View of Trail Road, looking southeast (A.S.I., 2022).



Plate 11: View from Trail Road south to the quarry (A.S.I., 2022).



Plate 12: View of William McEwen Drive, looking north (A.S.I., 2022).




Plate 13: Looking southeast along Viewbank Road (A.S.I., 2022).

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

Based on the results of the background research and field review, one potential cultural heritage landscape (C.H.L.) was identified within the study area. The C.H.L. was identified during background research and field review. Information on this potential C.H.L. is presented below in Table 1. See Figure 7 for mapping showing the location of the identified C.H.L.

Table 1: Inventory of Potential Cultural Heritage Landscape within the Study Area

Feature I.D.	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential C.H.V.I.	Photographs/ Digital Image
C.H.L. 1	Farmscape	4144 Viewbank Road ³	Potential C.H.L. – Identified during background research and field review	The farmscape is located along the western side of Viewbank Road to the south of Barnsdale Road with the western border of the property adjacent to Highway 416. The potential heritage attributes include the one-and-a-half storey residence, barns and outbuildings, long driveway, mature trees, and distinctive agricultural field pattern. The residence was partially obscured from the right-of-way by vegetation. The residence appears to have a rectangular footprint with rear addition and is clad in siding. A building may be visible in the location of the extant residence on the 1954 aerial photograph (Figure 5).	 <p data-bbox="2076 1024 2890 1104">Plate 14: View to the farmscape at 4144 Viewbank Road (A.S.I., 2022).</p>

³ This property is also addressed as 4134 Viewbank Road on the *geoOttawa* website (City of Ottawa, 2022).

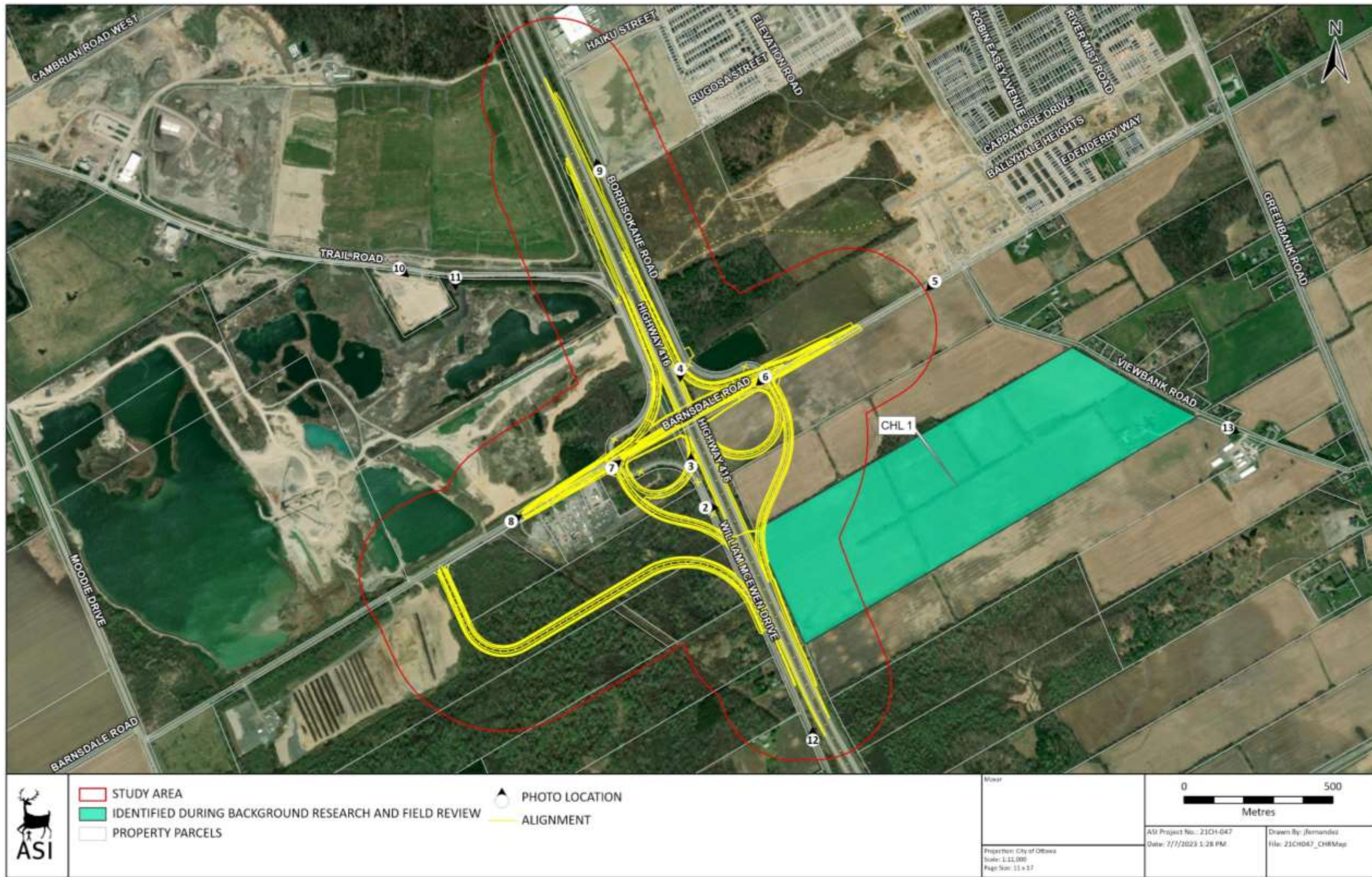


Figure 7: Location of Identified Cultural Heritage Landscape (C.H.L.) in the Study Area with the Proposed Alignment of the Interchange Improvements

5.0 Preliminary Impact Assessment

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

5.1 Description of Proposed Undertaking

The Project involves the construction of a new interchange around the intersection of Highway 416 and Barnsdale Road. The proposed interchange would accommodate traffic movements in all directions by providing entry and exit from both the northbound and southbound lanes of Highway 416. The interchange is intended to address increased traffic demands and improve operational and safety concerns (MTO, 2022).

In November 2022, the Technically Preferred Alternative (T.P.A.) was selected and presented as part of the Public Information Centre No. 2, which includes the subject study area in this report. The T.P.A. was Alternative 5: Parclo AB South Side Loops (Morrison Hershfield, 2022).

Implementation of the T.P.A. would also require the realignment or closure of the following municipal roads:

- Trail Road: closed north of the interchange with cul-de-sac constructed.
- William McEwen Road: realigned further west along Barnsdale Road.
- Borrisokane Road: Kilbirnie Drive to be extended as a replacement route for Borrisokane Road traffic to access Barnsdale Road via Greenbank Road (Morrison Hershfield, 2022).
 - The Kilbirnie Drive Extension, is part of a subdivision/development and the impacts associated with this roadway will be considered under the development process rather than this project (email communication 6 July 2023).

5.2 Analysis of Potential Impacts

The potential impacts of the proposed undertaking were evaluated according to Ministry of Citizenship and Multiculturalism's (M.C.M.'s) *Information Bulletin 3: Heritage Impact Assessments for Provincial Heritage Properties* (2017). Table 2 outlines the potential impacts on the identified C.H.L. within the study area.



Table 2: Impacts to Known and Potential B.H.R.s and C.H.L.s and Proposed Mitigations

Feature I.D.	Location/Name	Heritage Status and Recognition	Description of potential impacts and sensitivities	Proposed Mitigations and Next Steps
C.H.L. 1	4144 Viewbank Road ⁴	Potential C.H.L. – Identified during background research and field review	<p>The northwestern edge of this C.H.L. is located within the proposed right-of-way (R.O.W.) and a portion of the property has the potential to be displaced as a result of encroachment.</p> <p>The proposed R.O.W. is over 100 metres away from the house and encroaches approximately 36 metres on to the northwestern corner of the property.</p>	<p>A cultural heritage evaluation report (C.H.E.R.) to determine cultural heritage value or interest (C.H.V.I.) is required based on the current alignment. The C.H.E.R. is to be completed as soon as possible and prior to completion of the E.A. process.</p> <p>Should the C.H.E.R. determine that the property retains C.H.V.I., a resource-specific heritage impact assessment (H.I.A.) should be conducted to assess potential impacts to the resource, and recommend appropriate mitigation measures.</p>

⁴ This property is also addressed as 4134 Viewbank Road on the *geoOttawa* website (City of Ottawa, 2022).

5.3 Conclusions and Next Steps

This Cultural Heritage Resource Assessment Report (C.H.R.A.R.) has documented the baseline cultural heritage conditions within the C.H.R.A.R. study area and includes a historical summary of the development of the C.H.R.A.R. study area, an inventory of known and potential B.H.R.s and C.H.L.s, and a preliminary impact assessment along with recommendations for mitigations and next steps. One property within the study area (C.H.L. 1) was identified as having potential C.H.V.I. C.H.L. 1 is a rural farmscape located at 4144 Viewbank Road.

Based on the preliminary designs provided June 2023, and as presented in Table 2 above, the proposed new interchange improvements will result in direct impacts to C.H.L. 1 through encroachment onto the northwest corner of the property. As such the following next steps are recommended:

1. A C.H.E.R. is required for C.H.L. 1 as it is identified as being potentially negatively impacted by the Recommended Plan. The C.H.E.R. is to be completed as soon as possible and within the Environmental Assessment (E.A.) process.
2. If C.H.L. 1 is found to have C.H.V.I. through a C.H.E.R. and continues to be negatively impacted as a result of the Project, then a H.I.A. will be undertaken prior to the completion of detailed design.
3. A copy of the H.I.A. and other heritage reports for this Project, should be provided to M.C.M. and other interested parties for review and comment.
4. All heritage reports are to be completed in accordance with the Standards and Guidelines (2010) and Ministry of Transportation, Ontario's cultural heritage conservation policy and process by a Qualified Person as defined in the Standards and Guidelines.
5. Should future work require an expansion or alteration of the study area, the additional area or change should be studied by a qualified heritage professional to confirm the impacts of the proposed work on potential B.H.R.s and C.H.L.s.



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