

## APPENDIX C - CULTURAL HERITAGE REPORT

# Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment

## Lakelands Wastewater Pumping Station Upgrades and New Offline Storage Facility Municipal Class Environmental Assessment

### City of Brampton Regional Municipality of Peel, Ontario

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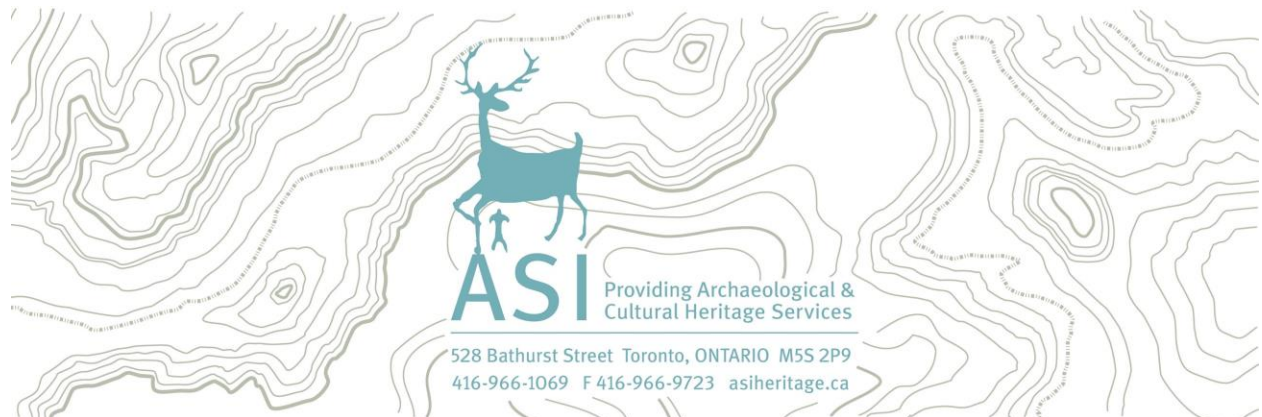
#### Final Report

Prepared for:

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Archaeological Services Inc. File: 23CH-199

January 2024 (Updated March and October 2024)



## Executive Summary

Archaeological Services Inc. was contracted by Associated Engineering Ltd. on behalf of the Regional Municipality of Peel to conduct a Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment (Cultural Heritage Report) as part of the Lakelands Wastewater Pumping Station Upgrades and New Offline Storage Facility Municipal Class Environmental Assessment. The Environmental Assessment involves the upgrading of the Lakelands Wastewater Pumping Station and the construction of a new offline storage facility. The project study area consists of the Lakelands Village subdivision bordered by Highway 410 to the northeast, Bovaird Drive East to the northwest, Williams Parkway to the south, and greenspace that creates a natural barrier between the study area and the adjacent residential area to the southwest.

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

The results of background historical research and a review of secondary source material, including historical mapping, indicate a study area with an agricultural land use history dating back to the early nineteenth to late twentieth century, and an urban land use history starting in the twenty-first century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there are no known B.H.R.s or C.H.L.s located within the study area. No additional potential B.H.R.s or C.H.L.s were identified during background research and field review.



As no B.H.R.s or C.H.L.s were identified within the Lakelands Wastewater Pumping Station Upgrades and New Offline Storage Facility study area, there are no potential impacts that require analysis or mitigation. Based on the results of the assessment, the following recommendations have been developed:

1. Should future work require an expansion of the study area then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential B.H.R.s and C.H.L.s.
2. The report should be submitted to heritage planning staff at the City of Brampton, planning staff at the Regional Municipality of Peel, 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 including the Brampton Heritage Board, the Brampton Historical Society, and the Peel Art Gallery, Museum and Archives. The final report should be submitted to the City of Brampton for their records.



## Report Accessibility Features

This report has been formatted to meet the Information and Communications Standards under the *Accessibility for Ontarians with Disabilities Act, 2005* (A.O.D.A.). Features of this report which enhance accessibility include: headings, font size and colour, 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](mailto:aveilleux@asiheritage.ca) or by phone 416-966-1069 ext. 255.



## Project Personnel

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- **Report Production:** Becca Clark
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- **Report Reviewer(s):** Kirstyn Allam and Lindsay Graves



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

**Kirstyn Allam, B.A. (Hon.), Advanced Dipl. in Applied Museum Studies**  
**Cultural Heritage Analyst, Project Manager - Cultural Heritage Division**

The Project Manager for this Cultural Heritage Report is **Kirstyn Allam** (B.A. (Hon.), Advanced Diploma in Applied Museum Studies), who is a Cultural Heritage Analyst and Project Manager within the Cultural Heritage Division. She was responsible for day-to-day management activities, including scoping and



conducting research activities and drafting of study findings and recommendations. Kirstyn Allam's education and experience in cultural heritage, historical research, archaeology, and collections management has provided her with a deep knowledge and strong understanding of the issues facing the cultural heritage industry and best practices in the field. Kirstyn has experience in heritage conservation principles and practices in cultural resource management, including three years' experience as a member of the Heritage Whitby Advisory Committee. Kirstyn also has experience being involved with Stage 1-4 archaeological excavations in the Province of Ontario. Kirstyn is an intern member of Canadian Association of Heritage Professionals.

**Becca Clark, B.A. (Hon.)**  
**Cultural Heritage Technical Writer and Researcher, Project Administrator -**  
**Cultural Heritage Division**

The Cultural Heritage Technicians for this project is **Becca Clark** (B.A. Hon., Adv. Diploma Applied Museum Studies), who is a Cultural Heritage Technical Writer and Researcher and Project Administrator within the Cultural Heritage Division. She was responsible for preparing research and technical reporting. With her educational and working background, Becca provides an understanding of Ontario history and built heritage as well as skilled research and analysis. Her time as a museum professional focused on local history in Southern Ontario and how it may be represented by objects and built heritage. In 2021, Becca researched, designed, and produced the Guelph Civic Museum's exhibition "The Origin of Fan: Folding Form and Function". She has since translated her knowledge of Southern Ontario's history into built heritage research. In 2023, she joined ASI's Cultural Heritage team as a Cultural Heritage Technician.





## Glossary

### **Built Heritage Resource (B.H.R.)**

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

### **Cultural Heritage Landscape (C.H.L.)**

Definition: "...a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Indigenous community. The area may include features such as buildings, structures, spaces, views, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association. Cultural heritage landscapes may be properties that have been determined to have cultural heritage value or interest under the *Ontario Heritage Act*, or have been included on federal and/or international registers, and/or protected through official plan, zoning by-law, or other land use planning mechanisms" (Ministry of Municipal Affairs and Housing, 2020, p. 42).

### **Known Built Heritage Resource or Cultural Heritage Landscape**

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



### **Impact**

Definition: Includes negative and positive, direct and indirect effects to an identified 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 Tourism Culture and Sport, 2006b). Indirect impacts also include potential vibration impacts (See Section 2.6 for complete definition and discussion of potential impacts).

### **Mitigation**

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

### **Potential Built Heritage Resource or Cultural Heritage Landscape**

Definition: A potential built heritage resource or cultural heritage landscape is a property that has the potential for cultural heritage value or interest. This can include properties/project area that contain a parcel of land that is the subject of a commemorative or interpretive plaque, is adjacent to a known burial site and/or cemetery, is in a Canadian Heritage River Watershed, or contains buildings or structures that are 40 or more years old (Ministry of Tourism, Culture and Sport, 2016).

### **Significant**

Definition: With regard to cultural heritage and archaeology resources, significant means “resources that have been determined to have cultural heritage value or interest. Processes and criteria for determining cultural heritage value or interest are established by the Province under the authority of the *Ontario Heritage Act*.



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

### **Vibration Zone of Influence**

Definition: Area within a 50-metre buffer of construction-related activities in which there is potential to affect an identified built heritage resource or cultural heritage landscape. A 50-metre buffer is applied in the absence of a project-specific defined vibration zone of influence based on existing secondary source literature (Carman et al., 2012; Crispino & D’Apuzzo, 2001; P. Ellis, 1987; Rainer, 1982; Wiss, 1981). This buffer accommodates the additional threat from collisions with heavy machinery or subsidence (Randl, 2001).



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## 1.0 Introduction

Archaeological Services Inc. was contracted by Associated Engineering Ltd. on behalf of the Regional Municipality of Peel to conduct a Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment (Cultural Heritage Report) as part of the Lakelands Wastewater Pumping Station Upgrades and New Offline Storage Facility Municipal Class Environmental Assessment. The purpose of this report is to present an inventory of known and potential built heritage resources (B.H.R.s) and cultural heritage landscapes (C.H.L.s), identify existing conditions of the project study area, provide a preliminary impact assessment, and propose appropriate mitigation measures.

### 1.1 Project Overview

The Lakelands Wastewater Pumping Station Upgrades and New Offline Storage Facility Municipal Class Environmental Assessment involves upgrading of the Lakelands Wastewater Pumping Station and the construction of a new offline storage facility. The project study area consists of the Lakelands Village subdivision bordered by Highway 410 to the northeast, Bovaird Drive East to the northwest, Williams Parkway to the south, and greenspace that creates a natural barrier between the study area and the adjacent residential area to the southwest.

### 1.2 Description of Study Area

This Cultural Heritage Report will focus on the project study area (Figure 1). This project study area has been defined as inclusive of those lands that may contain B.H.R.s or C.H.L.s that may be subject to direct or indirect impacts as a result of the proposed undertaking. Properties within the study area are located in the City of Brampton, Regional Municipality of Peel.







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

## 2.0 Methodology

The following sections provide a summary of regulatory requirements and municipal and regional heritage policies that guide this cultural heritage assessment. In addition, an overview of the process undertaken to identify known and potential built heritage resources 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.) (Ontario Heritage Act, R.S.O. c. O.18, [as Amended in 2023], 1990) is the primary piece of legislation that determines policies, priorities and programs for the conservation of Ontario's heritage. There are many other provincial acts, regulations and policies governing land use



planning and resource development that support heritage conservation, including:

- The *Planning Act* (Planning Act, R.S.O. 1990, c. P.13, 1990), which states that “conservation of features of significant architectural, cultural, historical, archaeological or scientific interest” is a “matter of provincial interest”. The *Provincial 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* (Environmental Assessment Act, R.S.O. c. E.18, 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 Tourism Culture and Sport, 2010) (hereinafter “*Standards and Guidelines*”) apply to properties the Government of Ontario owns or controls that have “cultural heritage value or interest” (C.H.V.I.). The *Standards and Guidelines* provide a series of guidelines that apply to provincial heritage properties in the areas of identification and evaluation; protection; maintenance; use; and disposal. For the purpose of this report, the *Standards and Guidelines* provide points of reference to aid in determining potential heritage significance in the 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 Brampton, in the Regional Municipality of Peel. Policies relating to built heritage resources and cultural heritage landscapes were reviewed from the following sources:

- *City of Brampton Official Plan* (City of Brampton, 2020)
- *Region of Peel Official Plan* (Peel Region, 2022)

## 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 built heritage resources and cultural heritage landscapes, and to provide a preliminary understanding of known and potential built heritage resources and cultural heritage landscapes 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 built heritage resources and cultural heritage landscapes are subject to identification and inventory. Generally, when conducting an identification of built



heritage resources and cultural heritage landscapes within a study area, three stages of research and data collection are undertaken to appropriately establish the potential for and existence of built heritage resources and cultural heritage landscapes 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 built heritage resources and cultural heritage landscapes. The field review is also used to identify potential built heritage resources and cultural heritage landscapes 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 built heritage resource or cultural heritage landscape based on research, the Ministry screening tool, and professional expertise and best practice. In addition, use of a 40-year-old benchmark is a guiding principle when conducting a preliminary identification of built heritage resources and cultural heritage



landscapes. 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 built heritage resources and cultural heritage landscapes within the study area, the following sections present the resources that were consulted as part of this Cultural Heritage Report.

### 2.4.1 Review of Existing Heritage Inventories

A number of resources were consulted in order to identify previously identified built heritage resources and cultural heritage landscapes within the study area. These resources, reviewed on 4 January 2024, include:

- The City of Brampton's Heritage Register (City of Brampton, 2021);
- Historical maps (including historical atlases, topographic maps, and aerial photography);
- The *Ontario Heritage Act Register* (Ontario Heritage Trust, n.d.b);
- The *Places of Worship Inventory* (Ontario Heritage Trust, n.d.c);
- The inventory of Ontario Heritage Trust easements (Ontario Heritage Trust, n.d.a);
- The Ontario Heritage Trust's *An Inventory of Provincial Plaques Across Ontario*: a PDF of Ontario Heritage Trust Plaques and their locations (Ontario Heritage Trust, 2023);
- The Ontario Heritage Trust's *An Inventory of Ontario Heritage Trust-owned properties across Ontario*: a PDF of properties owned by the Ontario Heritage Trust (Ontario Heritage Trust, 2019);
- Inventory of known cemeteries/burial sites in the Ontario Genealogical Society's online databases (Ontario Genealogical Society, n.d.);



- Canada’s Historic Places website: available online, the searchable register provides information on historic places recognized for their heritage value at the local, provincial, territorial, and national levels (Parks Canada, n.d.a);
- Directory of Federal Heritage Designations: a searchable on-line database that identifies National Historic Sites, National Historic Events, National Historic People, Heritage Railway Stations, Federal Heritage Buildings, and Heritage Lighthouses (Parks Canada, n.d.b);
- Canadian Heritage River System: a national river conservation program that promotes, protects and enhances the best examples of Canada’s river heritage (Canadian Heritage Rivers Board and Technical Planning Committee, n.d.); and,
- United Nations Educational, Scientific and Cultural Organization (U.N.E.S.C.O.) World Heritage Sites (U.N.E.S.C.O. World Heritage Centre, n.d.).

## 2.4.2 Review of Previous Heritage Reporting

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

- Existing Conditions Report: Class Environment Assessment for Zone 5 Sub-Transmission Main, City of Brampton, Region of Peel (Unterman McPhail Associates, 2012)

## 2.4.3 Community Information Gathering

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

- City of Brampton Heritage Department (email communication 4 January 2024). The City was contacted to confirm that that there are no properties designated by the Municipality and no known Municipal Heritage



Properties within the study area. At the time of draft submission, no response has been received.

- The Ministry (email communication 9 January 2024). Email correspondence confirmed that there are no properties designated by the Minister and that they are not aware of any known Provincial Heritage Properties within the study area.
- The Ontario Heritage Trust (email communications 4 and 5 January 2024). A response indicated that there are no conservation easements or Trust-owned properties within the study area.
- At project start-up in December 2023, A.S.I. made a request to the proponent that any engagement with Indigenous communities undertaken as part of this project include a discussion about known or potential built heritage resources or cultural heritage landscapes that are of interest to the respective communities. No feedback was received by the time of report submission.

## 2.5 Community Engagement

The report should be submitted to the Brampton Heritage Board, the Brampton Historical Society, and the Peel Art Gallery, Museum and Archives for review and comment.

Indigenous Nations Engagement for this project is being completed by Associated Engineering Limited to Indigenous Nations that have an interest in this study area. No feedback has been received by Associated Engineering Limited regarding the Cultural Heritage Report for this project at the time of report submission (October 2024). Any feedback received will be considered and incorporated into the final report.

## 2.6 Preliminary Impact Assessment Methodology

To assess the potential impacts of the undertaking, identified built heritage resources and cultural heritage landscapes are considered against a range of possible negative impacts, based on the *Ontario Heritage Tool Kit InfoSheet #5:*



*Heritage Impact Assessments and Conservation Plans* (Ministry of Tourism Culture and Sport, 2006b). These include:

Direct impacts:

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

Indirect impacts:

- Shadows created that alter the appearance of a heritage attribute or change the viability of a natural feature or plantings, such as a garden;
- Isolation of a heritage attribute from its surrounding environment, context or a significant relationship;
- Direct or indirect obstruction of significant views or vistas within, from, or of built and natural features;
- A change in land use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces; and
- Land disturbances such as a change in grade that alters soils, and drainage patterns that adversely affect an archaeological resource.

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





potential threat from collisions with heavy machinery or subsidence (Randl, 2001).

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

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

The proposed undertaking should endeavor to avoid adversely affecting known and potential built heritage resources and cultural heritage landscapes and interventions should be managed in such a way that identified features are conserved. When the nature of the undertaking is such that adverse impacts are unavoidable, it may be necessary to implement alternative approaches or mitigation strategies that alleviate the negative effects on identified built heritage resources and cultural heritage landscapes. Mitigation is the process of lessening or negating anticipated adverse impacts and may include, but are not limited to, such actions as avoidance, monitoring, protection, relocation, remedial



landscaping, and documentation of the built heritage resource or cultural heritage landscape if to be demolished or relocated.

Various works associated with infrastructure improvements have the potential to affect built heritage resources and cultural heritage landscapes 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 South Slope physiographic region of southern Ontario. The South Slope physiographic region (Chapman & Putnam, 1984, pp. 172–174) is the southern slope of the Oak Ridges Moraine. The South Slope meets the Moraine at heights of approximately 300 metres above sea level, and descends southward toward Lake Ontario, ending, in some areas, at elevations below 150 metres above sea level. Numerous streams descend the South Slope, having cut deep valleys in the till.

Within the South Slope region are three Plain regions. The study area is located in the Peel Plain region. The Peel Plain is a level-to-undulating area of clay soil which covers an area of approximately 77,700 hectares across the central portions of the Regional Municipalities of York, Peel, and Halton. The Peel Plain has a general elevation of between 500 and 750 feet above sea level with a gradual uniform slope towards Lake Ontario. The Peel Plain is sectioned by the Credit, Humber, Don, and Rouge Rivers with deep valleys as well as a number of other streams such as the Bronte, Oakville, and Etobicoke Creeks. These valleys are in places



bordered by trains of sandy alluvium. The region is devoid of large, undrained depressions, swamps, and bogs though nevertheless the dominant soil possesses imperfect drainage (Chapman & Putnam, 1984, pp.174-176).

During the early-nineteenth century the fertile clay soils were cleared rapidly. There is evidence that the plain carried diverse and high-quality hardwood forests before near-complete deforestation took place. Once cleared, the area became known for wheat production that supplied the City of Toronto and was exported to the United States. Later, alfalfa was introduced and the area yielded excellent results for its growth alongside livestock farming. Until 1940 nearly all of the land in the Peel Plain was used for agriculture, until rapid expansion and urbanization took over (Chapman & Putnam, 1984, pp. 174-176).

## 3.2 Indigenous Land Use and Settlement

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

Between approximately 10,000-5,500 B.P., the Great Lakes basins experienced low-water levels, and many sites which would have been located on those former shorelines are now submerged. This period produces the earliest evidence of heavy woodworking 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 archaeological evidence for cemeteries dates to approximately 4,500-3,000 B.P. and is interpreted by archaeologists to be indicative of increased social



organization, investment of labour into social infrastructure, and the establishment of socially prescribed territories (Brown, 1995, p. 13; C. J. Ellis et al., 1990, 2009).

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

From the beginning of the Late Woodland period at approximately 1,000 B.P., lifeways became more similar to that described in early historical documents. Between approximately 1000-1300 Common Era (C.E.), larger settlement sites focused on horticulture begin to dominate the archaeological record. 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., archaeological research focusing on these horticultural societies note that this episodic community disintegration was no longer practised and these populations now communally occupied sites throughout the year (Dodd et al., 1990, p. 343). By the mid-sixteenth century these small villages had coalesced into larger communities (Birch et al., 2021). Through this process, the socio-political organization of these First Nations, as described historically by the French and English explorers who first visited southern Ontario, was developed. Other First



Nation communities continued to practice residential mobility and to harvest available resources across landscapes they returned to seasonally/annually.

By 1600 C.E., the Confederation of Nations were encountered by the first European explorers and missionaries in Simcoe County. In the 1640s, devastating epidemics and 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 from southern Ontario. 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.

The study area is within Treaty 19, the Ajetance Purchase, signed on October 28, 1818 between the Crown and the Mississaugas (Crown-Indigenous Relations and Northern Affairs, 2016). This treaty excluded lands within one mile on either side of the Credit River, Twelve Mile Creek, and Sixteen Mile Creeks. In 1820, Treaties 22 and 23 were signed which acquired these remaining lands, except a 200 acre parcel along the Credit River (Heritage Mississauga, 2012, p. 18).

### **3.3 Historical Euro-Canadian Township Survey and Settlement**

The first Europeans to arrive in the area were transient merchants and traders from France and England, who followed Indigenous pathways and set up trading posts at strategic locations along the well-traveled river routes. All of these occupations occurred at sites that afforded both natural landfalls and convenient access, by means of the various waterways and overland trails, into the hinterlands. Early transportation routes continued the use of existing Indigenous trails that typically followed the highlands adjacent to various creeks and rivers (Archaeological Services Inc., 2006). Early European settlements occupied similar



locations as Indigenous settlements as they were generally accessible by trail or water routes and would have been in locations with good soil and suitable topography to ensure adequate drainage.

Historically, the study area is located in the former Chinguacousy Township, County of Peel, in Lots 9 and 10 and Concession 2 East of Centre Road.

### 3.3.1 Chinguacousy Township

The township of Chinguacousy is considered by some to have been named by Sir Peregrine Maitland after the Mississauga word for the Credit River meaning “young pine”, while other scholars assert that it was named in honour of the Ottawa Chief Shinguacose, which was corrupted to the present spelling of ‘Chinguacousy,’ “under whose leadership Fort Michilimacinac was captured from the Americans in the War of 1812” (Mika & Mika, 1977; Rayburn, 1997). The township was formally surveyed in 1818, and the first Euro-Canadian settlers took up their lands later in that same year. It was recorded that the first landowners in Chinguacousy included settlers from New Brunswick, the United States, and also United Empire Loyalists with their children (Armstrong, 1985; Mika & Mika, 1977; Pope, 1877).

Due to the small population of the newly acquired tract, Chinguacousy was initially amalgamated with the Gore of Toronto Township for political and administrative purposes. In 1821, the population of the united townships numbered just 412. By 1837, the population of the township had reached an estimated 1,921. The numbers grew from 3,721 in 1842 to 7,469 in 1851. Thereafter the figures declined to 6,897 in 1861, and to 6,129 by 1871 (Pope, 1877; Walton, 1837). Chinguacousy Township was the largest in Peel County and was described as one of the best settled townships in the Home District. It contained excellent, rolling land which was timbered mainly in hardwood with some pine intermixed, and was known for excellent wheat production. The township contained one grist mill and seven sawmills. By 1851, this number had increased to two grist mills and eight sawmills (Smith, 1846, 1851).



Many small villages and hamlets were established in Chinguacousy in the 1850's including Victoria, Tullamore, Terra Cotta, Cheltenham, Snelgrove and Campbell's Cross. Mono Road and Huttonsville were established later, having registered plans established by 1880 and 1894 respectively. From 1861 to 1881 the population of Chinguacousy was greater than that of Toronto Township (Charters, 1967).

Urbanization in Chinguacousy became apparent in the post-war wave of industrial expansion. The use of Bramalea as a satellite city created a population boom in the 1960's to accommodate the families of industrial workers (Charters, 1967).

In 1974, part of the township was amalgamated with the City of Brampton, and the remainder was annexed to the Town of Caledon (Armstrong, 1985; Mika & Mika, 1977; Pope, 1877; Rayburn, 1997; Smith, 1846).

### 3.3.2 City of Brampton

The land of Brampton was originally owned by Samuel Kenny. Kenny sold this land to John Elliot who cleared the land, laid it out into village lots, and named it Brampton. By 1822 Brampton began to be populated and in 1845 the settlement gained a large influx of Irish immigrants leading to its incorporation as a village in 1852. At this point, Brampton had spread across Etobicoke Creek with three bridges spanning it, had seven churches, five schools, a distillery, a cooperage, and a potashery. In 1858 Brampton was connected with the Grand Trunk Railway. This allowed the founding of two major industries in Brampton, the Haggert Foundry and the Dale Estate Nurseries; Dale Estate Nurseries remained the largest employer in the city until the 1940's. By the 1860s, Brampton had a population of 1627 and became the County Town. In 1867 a courthouse was constructed, and Brampton was incorporated as a town in 1873. The population remained fairly static until the late 1940s and 1950s when rapid population growth in Toronto led to widespread changes in the landscape. New subdivisions developed during this time and in the 1950s Bramalea was created. Called "Canada's first satellite city", Bramalea was a planned community built to



accommodate 50,000 people by integrating houses, shopping centres, parks, commercial business, and industry.

In 1974 the City of Brampton was formed as a result of the amalgamation of Chinguacousy Township, Toronto Gore Township, the Town of Brampton, and part of the Town of Mississauga. In the 1980s and 1990s, development spread further with large subdivisions developed on lands formerly used for farming (City of Brampton 2017; Mika and Mika 1977:250-251).

### 3.4 Review of Historical Mapping

The 1859 *Tremaine Map of the County of Peel* (Tremaine, 1859) and the 1877 *Illustrated Historical Atlas of the County of Peel* (Pope, 1877) were examined to determine the presence of historical features within the study area during the nineteenth century (Figure 2 Figure 3). Historically, the study area is located on Lot 9 to Lot 10, Concession 2 East in the former Township of Chinguacousy, County of Peel.

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

The 1859 map of the County of Peel shows the study area in a rural agricultural setting with no development or topography (Figure 2). It is notable, however, that the current day Bovaird Drive East and Highway 410 follow the same alignment as





the original lot boundaries. The 1877 map of the County of Peel presents two private residences and evidence of multiple orchards on the two properties that the study area covers. Nearby are other private residences on large swaths of land, a schoolhouse, and a church. Two of the subject area's boundaries are cleared roads that reflect the northeast to southwest and northwest to southeast alignment of modern day Bovaird Street East and Highway 410, respectively (Figure 3).

In addition to nineteenth-century mapping, historical topographic mapping and aerial photographs from the twentieth century were examined. This report presents the 1909 topographic map of Brampton (Department of Militia and Defence, 1909), a 1954 aerial photograph of the City of Brampton (Hunting Survey Corporation Limited, 1954), and the 1994 topographic map of Brampton (Department of Energy, Mines and Resources, 1994) (Figure 4 to Figure 6).

The 1909 topographic map shows little change from the 1877 map of the County of Peel (Figure 4). Two stone/brick houses are represented in approximately the same location as on the 1877 map of the County of Peel and none have been added to the study area. The roads that make up the study area boundary remain in the same alignment and are identified in the legend as unmetalled roads. Vegetation and marshland are represented around the perimeter of the study area. The 1954 aerial photograph of the study area indicates dense vegetation around the northwest end of the study area and along the southwest border (Figure 5). The remainder of the study area is agricultural properties and the study area itself continues to be within a rural agricultural context. Between 1954 and 1994, a significant amount of development occurs within the study area. Two artificial ponds and the artificial Lakelands Lake can be seen in the 1994 topographic map of Brampton with pathways around the ponds and lake (Figure 6). The waterbodies were potentially the result of the aggregate extraction from the previous Franceschini Gravel Pit and earlier roads may have been access roads to the pit. The road lining the northeast border of the study area is identified as Highway 410, a major transportation route. Outside of the study area, a notable



amount of commercial, institutional and residential development is recorded in all directions.



Figure 2: The study area overlaid on the 1859 *Map of the County of Peel* (Tremaine, 1859).



Figure 3: The study area overlaid on the 1877 *Illustrated Historical Atlas of the County of Peel* (Pope, 1877).

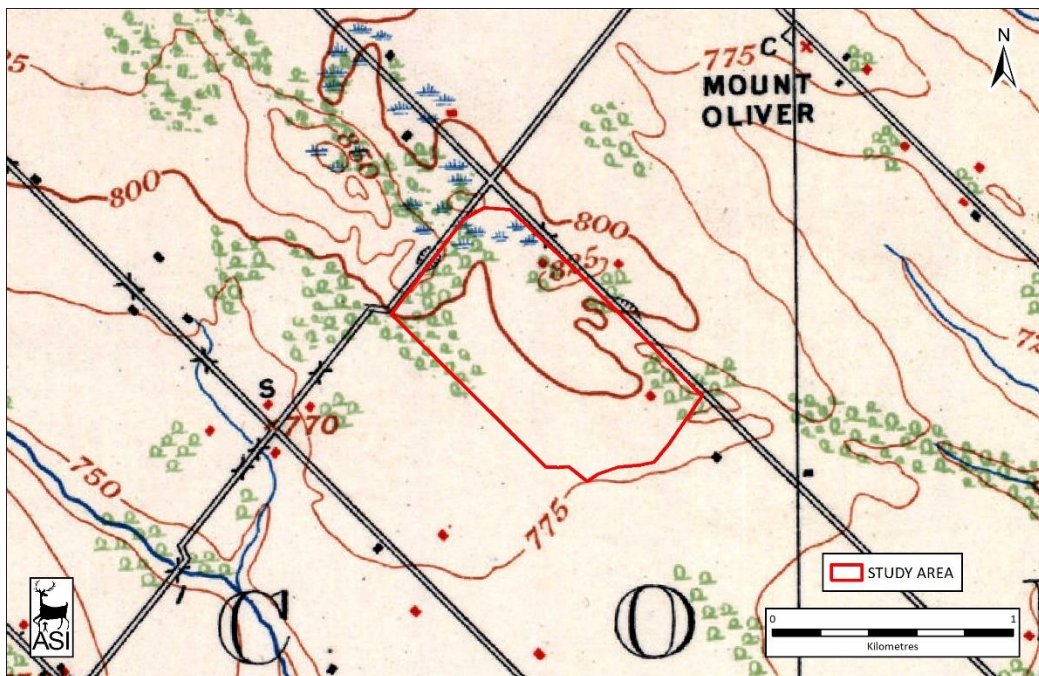


Figure 4: The study area overlaid on the 1909 topographic map of Brampton (Department of Militia and Defence, 1909).

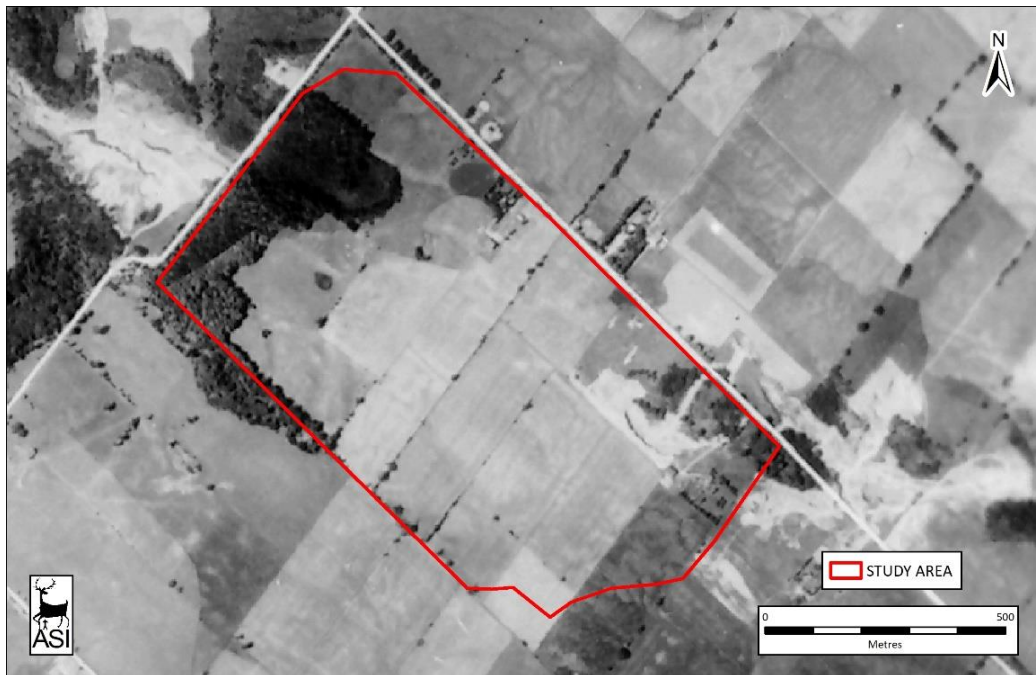


Figure 5: The study area overlaid on the 1954 aerial image of Brampton (Hunting Survey Corporation Limited, 1954).

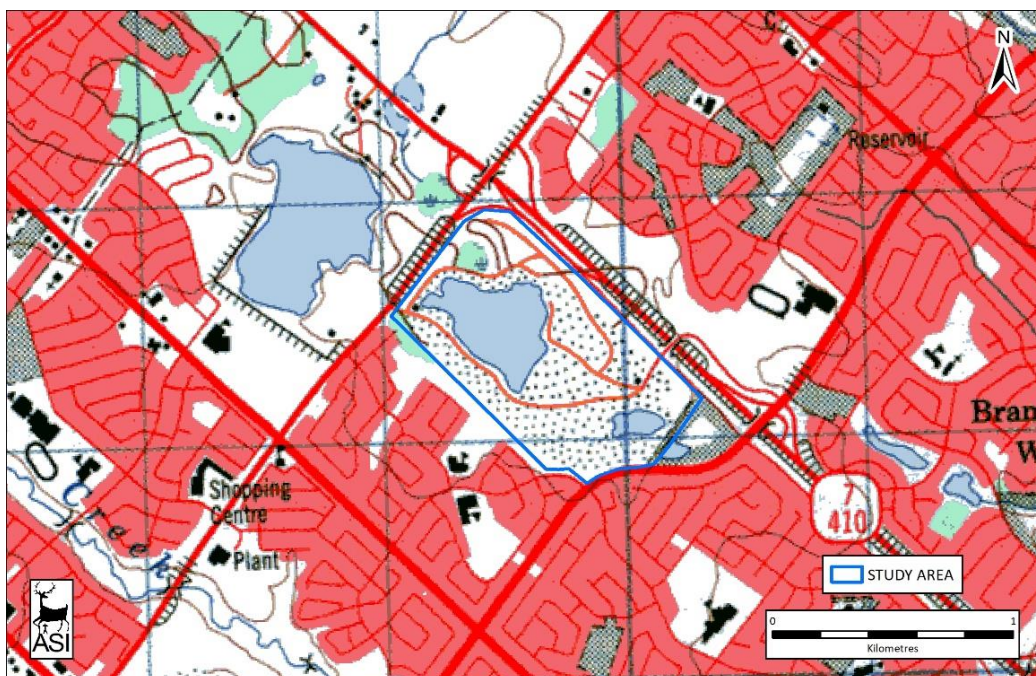


Figure 6: The study area overlaid on the 1994 topographic map of Brampton (Department of Energy, Mines and Resources, 1994).

## 4.0 Existing Conditions

A field review of the study area was undertaken by Kirstyn Allam and Becca Clark, both of Archaeological Services Inc., on 17 January 2024 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 10. Plate locations are mapped in Figure 7.

### 4.1 Description of Field Review

The study area consists of a residential subdivision known as Lakelands Village. The subdivision was built in two phases, the first of which was in construction in 2004. Both phases were completed by 2006 (based on a review of aerial imagery). Within the subdivision is a public park with two artificial ponds and a larger lake referred to as Lakelands Lake. The northeast edge of the study area is bordered by Highway 410, the northwest edge of the study area is bordered by Bovaird Drive East (Plate 1), the southeast edge of the study area is bordered by Williams Parkway (Plate 2), and the southwest edge of the study area is bordered by vegetation. Southlake Boulevard and Stonelake Avenue cut through the suburb and branch off into numerous residential roads. The roads are generally two-lane paved residential streets lined with homes built in the early 2000s (Plate 3 to Plate 6). The streets are wide and feature concrete sidewalks. At the centre of the subdivision is Lakelands Village Park, a public park with a playground and paved walking trails surrounding the artificial ponds and lake (Plate 7 to Plate 10).



Plate 1: View facing southeast from the intersection of Bovaird Drive East and Southlake Boulevard. The northwest entrance to the Lakelands Village subdivision is visible (A.S.I., 2024).



Plate 2: View looking east along Williams Parkway from its intersection with Southlake Boulevard (A.S.I., 2024).



Plate 3: Taken at the southwest corner of Southlake Boulevard and Stonelake Avenue facing east. The archway that marks one entrance to the Lakelands Village Park is visible beyond the crosswalk (A.S.I., 2024).



Plate 4: Facing south from Southlake Boulevard over a small open space at the park's northeast entrance (A.S.I., 2024).



Plate 5: Facing northwest on Stoneylake Avenue (A.S.I., 2024).





Plate 6: Facing southeast on Harbourtown Crescent, a residential street off Southlake Boulevard (A.S.I., 2024).



Plate 7: Facing south over a pedestrian bridge that crosses the two ponds (A.S.I., 2024).



Plate 8 : Facing west over the lake from an intersection of walking trails at the eastern corner of the park (A.S.I., 2024).



Plate 9: Facing west through the southeastern entrance to the Lakelands Village Park (A.S.I., 2024).



Plate 10: Facing the rear of the residential properties along Southlake Boulevard over Lakelands Lake, looking south (A.S.I., 2024).

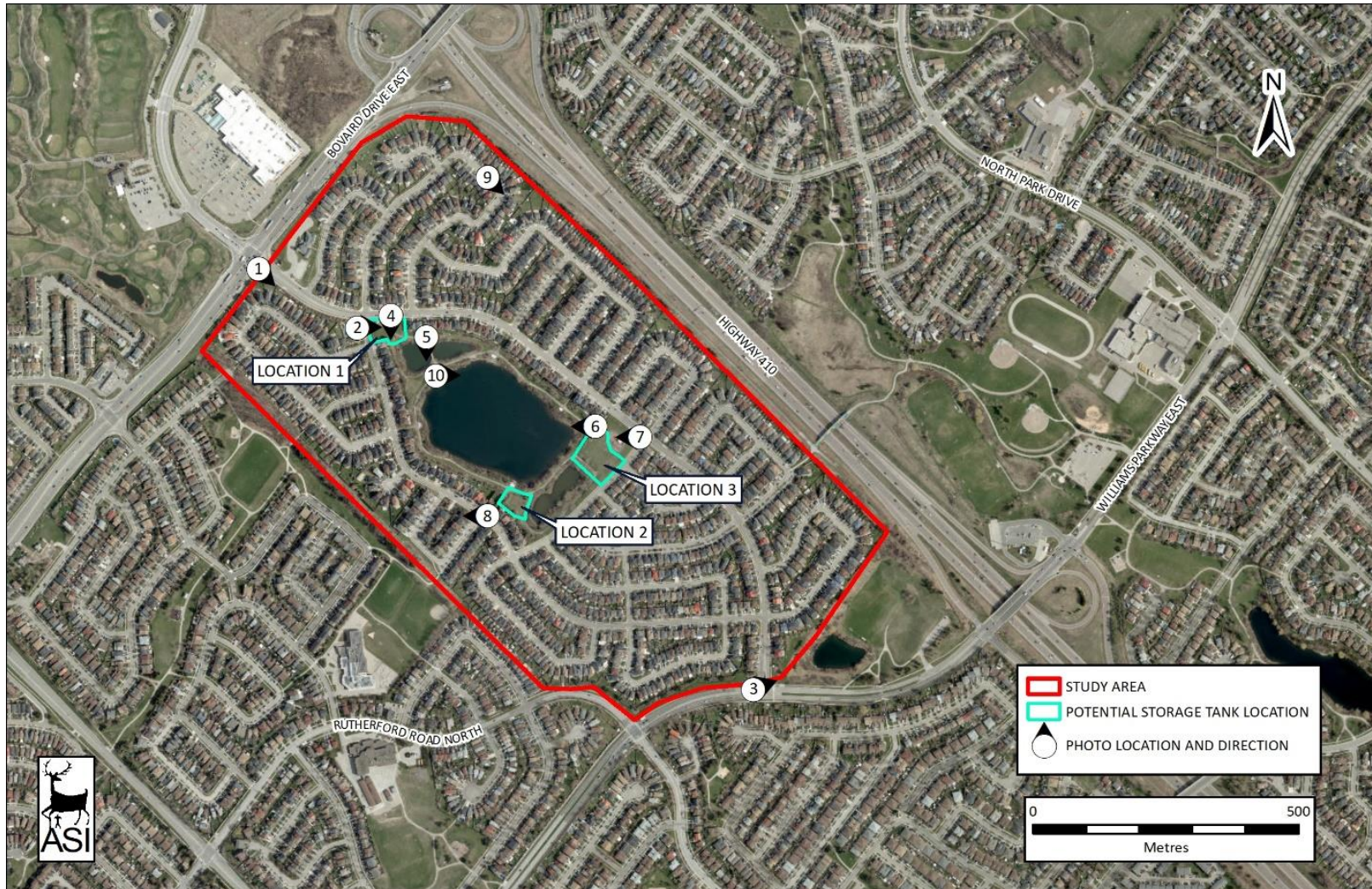


Figure 7: Aerial view of the study area, photo locations, and potential locations of the new offline wastewater storage tank (Google Earth, 2024).

## 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, no potential built heritage resources or cultural heritage landscapes were identified within the study area. No additional built heritage resources or cultural heritage landscapes were identified during background research and field review.

## 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 proposed undertaking for the Lakelands Wastewater Pumping Station study area consists of the upgrading of the Lakelands Wastewater Pumping Station and the construction of a new offline storage facility in the Lakelands Village subdivision. The project involves three specific areas around the stormwater management ponds and public spaces comprised within Lakelands Village Park, as potential sites for the construction of an offline wastewater storage tank (Figure 7).

The three proposed locations are as follows:

- Potential Storage Tank Location 1 - located in the northern portion of Lakelands Village Park, southeast of the Southlake Boulevard and Stoneylake Avenue intersection.
- Potential Storage Tank Location 2 - located in the southwestern portion of Lakelands Village Park, north of the Stoneylake Avenue and Deep Sea Drive intersection.



- Potential Storage Tank Location 3 - located in the southeastern portion of Lakelands Village Park, northwest of the Southlake Boulevard and Deep Sea Drive intersection.

## 5.2 Analysis of Potential Impacts

As no built heritage resources or cultural heritage landscapes were identified within the Lakelands Wastewater Pumping Station Upgrades and New Offline Storage Facility study area, there are no potential impacts that require analysis or mitigation.

## 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 agricultural land use history dating back to the early nineteenth to late twentieth century, and an urban land use history starting in the twenty-first century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there are no known built heritage resources (B.H.R.s) and no known cultural heritage landscapes (C.H.L.s) in the Lakelands Wastewater Pumping Station Upgrades and New Offline Storage Facility study area. No additional potential B.H.R.s or C.H.L.s were identified during the background information review and fieldwork.

### 6.1 Key Findings

No known or potential B.H.R.s and C.H.L.s were identified within the study area.

### 6.2 Recommendations

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

1. Should future work require an expansion of the study area then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential B.H.R.s and C.H.L.s.



2. The report should be submitted to heritage planning staff at the City of Brampton, planning staff at the Regional Municipality of Peel, 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 including the Brampton Heritage Board, the Brampton Historical Society, and the Peel Art Gallery, Museum and Archives. The final report should be submitted to the City of Brampton for their records.

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