

# Cultural Heritage Impact Assessment

## Cawthra Phase 3 Sanitary Trunk Sewer Municipal Class Environmental Assessment

### City of Mississauga, Ontario

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Prepared for:

**Arcadis**

8133 Warden Avenue, Unit 300  
Markham, ON L6G 1B3

Archaeological Services Inc. File: 23CH-185

October 2023 (Updated July 2024)



## Executive Summary

Archaeological Services Inc. (A.S.I.) was contracted by Arcadis, on behalf of the Region of Peel, to conduct a Cultural Heritage Impact Assessment (C.H.I.A.) as part of the Cawthra Phase 3 Sanitary Trunk Sewer (S.T.S.) Municipal Class Environmental Assessment.

The proposed work involves the extension of a trunk sewer using a combination of tunneling and open cut methods along Burnhamthorpe Road from Cawthra Road to Little Etobicoke Creek. Previously, the Phase 2, Schedule 'C' Class Environmental Assessment - Wastewater Capacity Improvements in Central Mississauga Cultural Heritage Screening Report (C.H.S.R.) (Golder Associates, 2020) identified four built heritage resources in the project study area:

- 1050 Burnhamthorpe Road (Designated under Part IV of the *Ontario Heritage Act*, By-law 222-78);
- 3625 Cawthra Road (Listed on Municipal Heritage Register);
- 3650 Dixie Road (Listed on Municipal Heritage Register); and
- 3700 Dixie Road (Designated under Part IV of the *Ontario Heritage Act*, By-law 160-2005).

Following review of the 2020 C.H.S.R. and review of the Cawthra Phase 3 S.T.S. M.C.E.A project footprint, it was noted that three of the four identified built heritage resources were located more than 50 metres from the project footprint. Therefore, the following three properties will not be subject to any direct or indirect adverse impacts relating to this project:

- 3625 Cawthra Road (Listed on Municipal Heritage Register);
- 3650 Dixie Road (Listed on Municipal Heritage Register); and
- 3700 Dixie Road (Designated under Part IV of the *Ontario Heritage Act*, By-law 160-2005).

As no adverse impacts were identified, a Cultural Heritage Evaluation Report and/or Heritage Impact Assessment is not required for the above noted properties.



Indirect adverse impacts to the remaining property, 1050 Burnhamthorpe Road, are possible due to potential for construction-related vibration impacts to this designated property. This was also a recommendation in the 2020 C.H.S.R. As such, this C.H.I.A. will focus on 1050 Burnhamthorpe Road. The subject property consists of a vernacular Georgian residence (known as the Copeland House) built of Credit Valley stone circa 1837, surrounded by dense tree coverage. The property is designated under Part IV of the *Ontario Heritage Act* ([By-Law 222-78](#)) (Corporation of the City of Mississauga, 1978) and is also listed on the Canadian Register of Canada's Historic Places (Canada's Historic Places, 2009).

The proposed work is not expected to result in any direct or indirect adverse impacts upon the subject property. The Copeland House is located approximately 80 metres from the proposed work and 50 metres is generally used as the threshold for construction-related vibration impacts. However, though these impacts are expected to be limited and temporary, and out of an abundance of caution, a baseline vibration assessment should be undertaken during detail design to determine potential for vibration impacts. This is recommended given the coursed stone foundation of the Copeland House, the fact that it is among the oldest extant residences in Mississauga, and its status as a designated heritage property.

The following recommendations and mitigation measures have been developed and should be implemented:

1. Construction crews should be advised of the heritage status and character-defining elements of the property at 1050 Burnhamthorpe Road East before going on site.
2. Staging and construction should be suitably planned and executed to ensure that unintended negative impacts to the character-defining elements of the property at 1050 Burnhamthorpe Road East are avoided.
3. To address the potential for indirect impacts due to construction-related vibration, a baseline vibration assessment during detail design should be undertaken to determine potential vibration impacts. Where impacts due



to vibration are anticipated, the following mitigation measure should be undertaken:

- A vibration assessment and monitoring plan should be prepared by a qualified engineer and implemented by the contractor to lessen vibration impacts related to construction.
4. This C.H.I.A. should be submitted by the proponent to heritage planning staff at the City of Mississauga and the Region of Peel, and any other interested stakeholders for review and comment.



## 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

- **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.), Dipl. Heritage Conservation, Project Administrator - Cultural Heritage Division
- **Field Review:** Michael Wilcox, P.h.D., Historian - Cultural Heritage Division
- **Report Production:** Michael Wilcox
- **Graphics Production:** Peter Bikoulis, P.h.D., Archaeologist, Geomatics Technician – Operations Division
- **Report Reviewer(s):** Lindsay Graves and Kirstyn Allam, B.A. (Hon), Advanced Dipl. Applied Museum Studies, Cultural Heritage Analyst, Project Manager - Cultural Heritage Division

For further information on the Qualified Persons involved in this report see Appendix A.



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## 1.0 Introduction

Archaeological Services Inc. was contracted by Arcadis, on behalf of the Region of Peel, to conduct a Cultural Heritage Impact Assessment (C.H.I.A.) as part of the Cawthra Phase 3 Sanitary Trunk Sewer (S.T.S.) Municipal Class Environmental Assessment (M.C.E.A.).

### 1.1 Project Context

The proposed work involves the extension of a trunk sewer using a combination of tunneling and open cut methods along Burnhamthorpe Road from Cawthra Road to Little Etobicoke Creek. Previously, the Phase 2, Schedule 'C' Class Environmental Assessment - Wastewater Capacity Improvements in Central Mississauga Cultural Heritage Screening Report (C.H.S.R.) (Golder Associates, 2020) identified four built heritage resources in the project study area:

- 1050 Burnhamthorpe Road (Designated under Part IV of the *Ontario Heritage Act*, By-law 222-78);
- 3625 Cawthra Road (Listed on Municipal Heritage Register);
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- 3700 Dixie Road (Designated under Part IV of the *Ontario Heritage Act*, By-law 160-2005).

Following review of the 2020 C.H.S.R. and review of the Cawthra Phase 3 S.T.S. M.C.E.A project footprint, it was noted that three of the four identified built heritage resources were located more than 50 metres from the project footprint. Therefore, these three properties will not be subject to any direct or indirect adverse impacts relating to this project:

- 3625 Cawthra Road (Listed on Municipal Heritage Register);
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- 3700 Dixie Road (Designated under Part IV of the *Ontario Heritage Act*, By-law 160-2005).



As no adverse impacts were identified, a Cultural Heritage Evaluation Report and/or Heritage Impact Assessment is not required for the above noted properties.

Indirect adverse impacts to the remaining property, 1050 Burnhamthorpe Road, are possible due to potential for construction-related vibration impacts to this designated property. This was also a recommendation of the 2020 C.H.S.R. As such, this C.H.I.A. will focus on 1050 Burnhamthorpe Road. The property is designated under Part IV of the *Ontario Heritage Act* ([By-Law 222-78](#)) (Corporation of the City of Mississauga, 1978) and is also listed on the Canadian Register of Canada's Historic Places (Canada's Historic Places, 2009).

## 1.2 Description of Property

The property consists of a vernacular Georgian residence (known as the Copeland House), built of Credit Valley stone circa 1837, surrounded by dense tree coverage. It is bounded by Burnhamthorpe Road East to the north, residential properties along Autumn Harvest Drive to the east, Twinmaple Drive to the south, a residential property to the southwest, and a commercial property to the northwest (Figure 1).



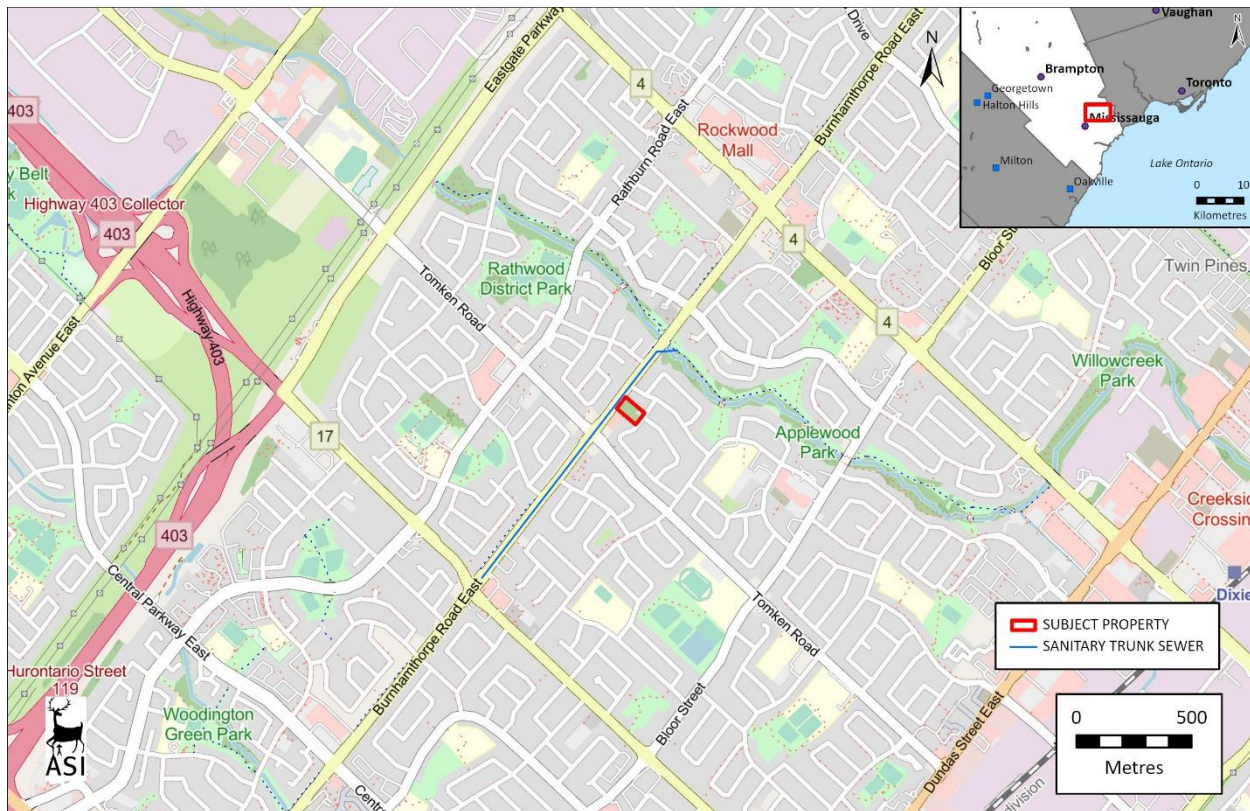


Figure 1: Location of the Copeland House at 1050 Burnhamthorpe Road East (Base Map: ©OpenStreetMap and contributors, Creative Commons-Share Alike License (CC-BY-SA))

### 1.3 Approach to Cultural Heritage Impact Assessment Report

The scope of this C.H.I.A. is in accordance with the *City of Mississauga Official Plan (2023)*, the *City of Mississauga’s Heritage Impact Assessment Terms of Reference (City of Mississauga, n.d.)*, and the *Ontario Heritage Tool Kit (Ministry of Culture, 2006)*.

This C.H.I.A. provides the following:

- A Statement of Cultural Heritage Value, including heritage attributes;
- A discussion of the existing conditions of the subject property;
- A description of the proposed development;
- An impact assessment;



- A discussion of alternatives and mitigation measures;
- A summary of community engagement; and
- Recommendations.

## 2.0 Statement of Cultural Heritage Value

The following Statement of Cultural Heritage Value is taken from Schedule 'A' to By-Law 222-78: Reasons for the designation of the "Copeland House" at 1050 Burnhamthorpe Road East:

The "Copeland House" is recommended for designation on the architectural grounds that it is a well-preserved and attractive example of a vernacular Georgian House. Built of Credit Valley stone, it also represents a building material once common but now rare. Historically, it is an interesting example of a settler's "second house"; the solid more comfortable house that a family would build once they had established themselves successfully on the land. Believed to have been built in the 1820's by Thomas Copeland, it is one of the oldest houses still standing in Mississauga today. The fact that it remained in the hands of the Copeland family for more than [a] century provides additional interest (Corporation of the City of Mississauga, 1978).

The Copeland House was added to the Register of Canada's Historic Places in 2009 (Canada's Historic Places, 2009). At that time, the following Statement of Significance was added:

### **DESCRIPTION OF HISTORIC PLACE**

The Copeland House is located at 1050 Burnhamthorpe Road East on the south side of Burnhamthorpe Road East, west of Autumn Harvest Drive in the City of Mississauga. The two storey sandstone residence was constructed circa 1837.



The property was designated by the City of Mississauga in 1978 for its heritage value under Part IV of the Ontario Heritage Act (By-law 222-78).

## **HERITAGE VALUE**

The Copeland House is a well preserved example of an early settler's permanent home which was often built once a settler had established themselves on their property. Research suggests that the residence was built by master mason, Thomas Poole, for the Copeland family in 1837. Interestingly, the house remained in the Copeland family for more than a century.

The Copeland House is a good representation of Georgian architecture. The two storey residence has a medium pitched gable roof and a simple cornice. The arrangement of the windows and door create a symmetrical three bay front typical of Georgian architecture. Overall the Georgian stylistic touches create an impression of strength and solidity. The Georgian style is reinforced by the use of local Credit Valley sandstone which is now rare, although at one time it was a very common building material.

Sources: City of Mississauga By-law 222-78; City of Mississauga Heritage Register Report; City of Mississauga, Heritage Structure Report, October 6, 1977.

## **CHARACTER-DEFINING ELEMENTS**

Character defining elements that contribute to the heritage value of the Copeland House include the:

- two storey Credit Valley sandstone exterior
- medium pitched gable roof





- three bay facade
- coursed stone foundation
- two over two paned, double hung sash windows
- three square-headed, two over two paned, double-hung sash windows
- central entrance with plain wood surround
- flat arch above windows and doors
- setting within a generous landscape adds to the scenic quality of the home

### 3.0 Assessment of Existing Conditions

A field review of the subject property was undertaken by Michael Wilcox of Archaeological Services Inc., on 19 October 2023 to document the existing conditions of the subject property from existing rights-of-way. Note that three older photographs of the Copeland House on the subject property are provided below because dense tree coverage during field review prevented a clear view of the residence.

The subject property is bounded by Burnhamthorpe Road East to the north, residential properties along Autumn Harvest Drive to the east, Twinmaple Drive to the south, a residential property to the southwest, and a commercial property to the northwest (Figure 2).

The northern property boundary features a grassy boulevard between the road and the sidewalk, which runs adjacent to a grey chain link fence for the length of the property, except for a wooden gate which allows access to the driveway (Plate 1 to Plate 4). An approximately four-foot-high concrete block retaining wall was visible along the north boundary, west of the driveway (Plate 5). The eastern property boundary features wood fencing associated with the western border of the property at 3696 Twinmaple Drive and the rear boundaries of properties along Autumn Harvest Drive (Plate 6). The southern property boundary features an old wooden fence, chain link fencing, and dense trees (Plate 7 and Plate 8). The western property boundary features a grey chain link fence as well as shrubs and trees (Plate 9 and Plate 10).



The property features a vernacular Georgian residence (known as the Copeland House), which was built of Credit Valley stone circa 1837. The house, which was only partially visible on the day of the site visit due to the property's dense tree coverage, is located at the southeast corner of the property, approximately 80 metres back from Burnhamthorpe Road East, at the end of a long straight driveway. A stone garage and one other outbuilding were also visible from the right-of-way (Plate 11). Three additional historic photos show the front of the house as it appeared in 1968, 1989, and 2002 (Plate 12 to Plate 14).

A diverse mix of coniferous and deciduous trees, as well as what may be a remnant apple orchard, constitute the vast majority of the property (Plate 15 to Plate 17).

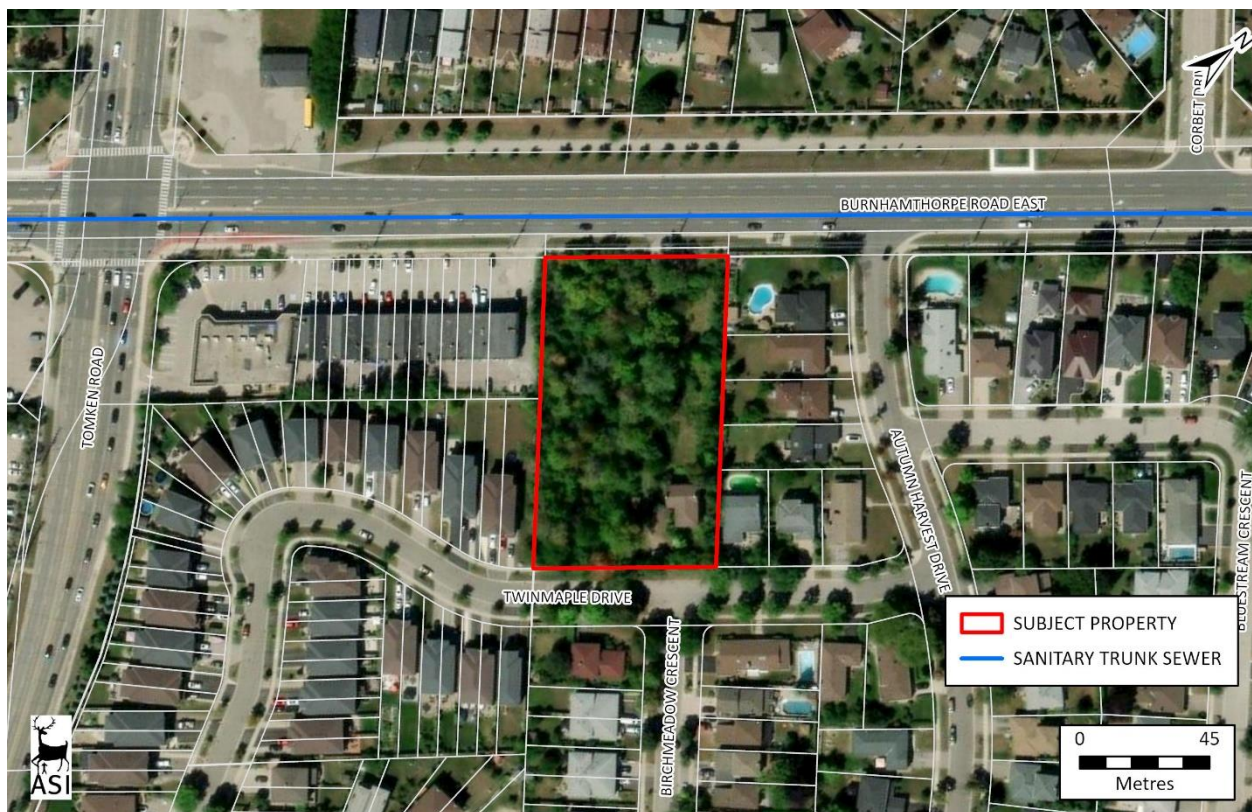


Figure 2: Aerial view of the proposed work and the Copeland House at 1050 Burnhamthorpe Road East (Base Map: Google Earth)





Plate 1: Entrance drive to subject property at 1050 Burnhamthorpe Road East, looking south (A.S.I., 2023)



Plate 2: The northern boundary of the subject property, adjacent to Burnhamthorpe Road East, looking west (A.S.I., 2023)





Plate 3: The northern boundary of the subject property, adjacent to Burnhamthorpe Road East, looking east from entrance driveway (A.S.I., 2023)



Plate 4: The northern boundary of the subject property, adjacent to Burnhamthorpe Road East, looking east from northwestern boundary (A.S.I., 2023)





Plate 5: Concrete block retaining wall along northern boundary of subject property, looking northwest from the entrance driveway (A.S.I., 2023)



Plate 6: Wood fencing separating the eastern boundary of subject property with the western boundary of 3696 Twinmaple Drive, looking north from the southeast boundary (A.S.I., 2023)





Plate 7: The southern boundary of the subject property, looking west along Twinmaple Drive (A.S.I., 2023)

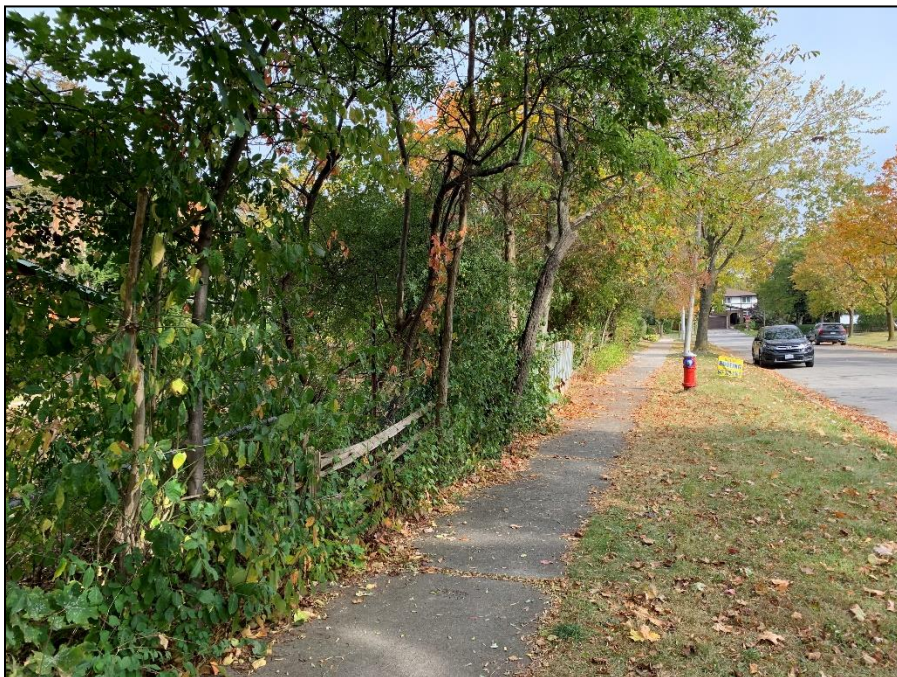


Plate 8: The southern boundary of the subject property, looking east along Twinmaple Drive (A.S.I., 2023)





Plate 9: The western boundary of the subject property, looking north from southwestern boundary (A.S.I., 2023)



Plate 10: The western boundary of the subject property, looking south from northwestern boundary (A.S.I., 2023)





Plate 11: The residence and garage on the subject property, looking north from Twinmaple Drive (A.S.I., 2023)



Plate 12: The residence on the subject property in 1968, looking south (City of Mississauga, 2019)



Plate 13: The residence on the subject property in 1989, looking south (City of Mississauga, 2019)



Plate 14: The residence on the subject property in 2002, looking south (Heritage Mississauga, 2002)





Plate 15: Dense tree coverage on the subject property  
(A.S.I., 2023)

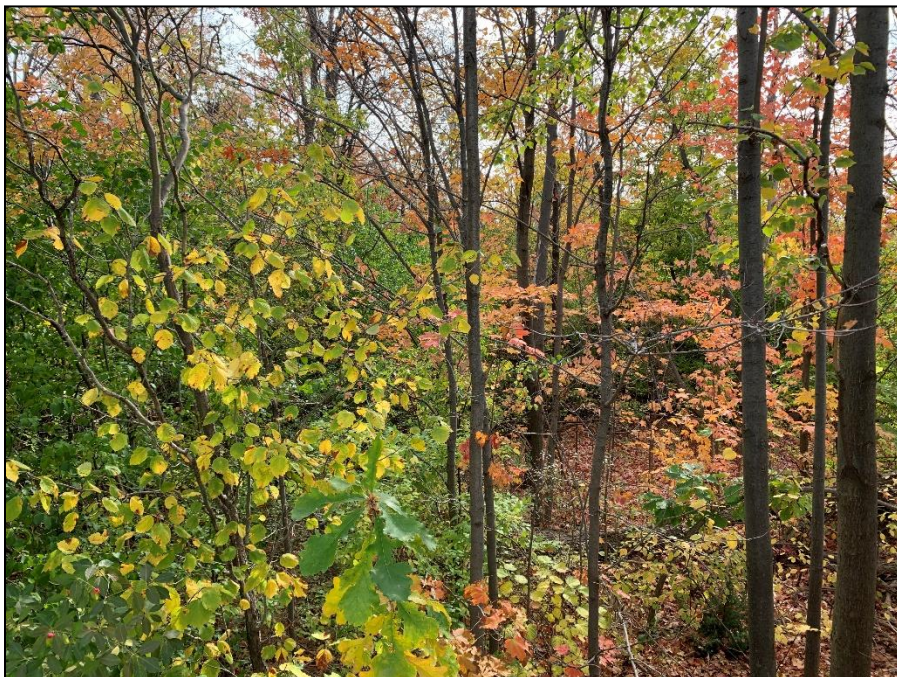


Plate 16: Dense tree coverage on the subject property (A.S.I.,  
2023)





Plate 17: Apple trees on the subject property, looking south (A.S.I., 2023)

## 4.0 Description and Purpose of Proposed Activity

The proposed work involves the extension of a trunk sewer using a combination of tunneling and open cut methods along Burnhamthorpe Road East from Cawthra Road to Little Etobicoke Creek. The proposed work is part of the larger Region of Peel Wastewater Capacity Improvements Class Environmental Assessment (E.A.) work, which is being undertaken to service growth and relieve capacity constraints in the Central Mississauga area. Furthermore, the Class E.A. work is designed to increase the conveyance capacity of key trunk sewers; provide operational flexibility for sewer maintenance, inspection, and emergency operations; meet appropriate levels of service; and address wet weather issues (GM BluePlan, 2022).

## 5.0 Impact Assessment

This Cultural Heritage Impact Assessment (C.H.I.A.) is intended to assess the impact of the proposed work on the cultural heritage value of the subject property at 1050 Burnhamthorpe Road East, and based on those findings, recommend appropriate conservation and/or mitigation measures.

The proposed work is anticipated to be implemented through tunnelling methods under this section of Burnhamthorpe Road East, within the existing public road right-of-way, to the north of the subject property (see Figure 2). Launch shaft/compound areas are not located in the vicinity of the subject property.

To assess the potential impacts of the proposed works on the cultural heritage value of the subject property, the identified character-defining elements outlined in Section 2.0 were considered against a range of possible impacts. These impacts are outlined in the *Ontario Heritage Toolkit* (Ministry of Culture, 2006) and include:

- Destruction of any, or part of any, significant heritage attributes or features;
- Alteration to the historic fabric and appearance;
- Shadow impacts on the appearance of a heritage attribute or an associated natural feature or plantings, such as a garden;
- Isolation of a heritage attribute from its surrounding environment, context or a significant relationship;
- Impact on significant views or vistas within, from, or of built and natural features;
- A change in land use where the change in use may impact the property's cultural heritage value or interest;
- Land disturbances such as a change in grade that alters soils, and drainage patterns that may affect a cultural heritage resource.

Based on these criteria, the following provides a discussion of how the property's cultural heritage value will be impacted by the proposed development.

The proposed installation of a trunk sewer using tunneling methods under Burnhamthorpe Road East to the north of the subject property is not expected to result in any direct or indirect adverse impacts upon this heritage resource. The residence on the property, Copeland House, is located approximately 80 metres from the proposed work. 50 metres is generally used as the threshold for construction-related vibration impacts (Carman et al., 2012; Crispino & D'Apuzzo, 2001; Ellis, 1987; Rainer, 1982; Wiss, 1981). However, though these impacts are expected to be limited and temporary, out of an abundance of caution, a baseline vibration assessment should be undertaken during detail design to determine potential for vibration impacts. This is recommended given the coursed-stone foundation of the Copeland House, the fact that it is among the oldest extant residences in Mississauga, and its status as a designated heritage property.



## 6.0 Considered Alternatives and Mitigation Measures

To conserve the cultural heritage value of the property at 1050 Burnhamthorpe Road East and to mitigate against potential unintended impacts of the proposed development upon the property's character-defining elements (including its stone foundation), the following conservation and mitigation measures are proposed:

1. Construction crews should be advised of the heritage status and character-defining elements of the property at 1050 Burnhamthorpe Road East before going on site.
2. Staging and construction should be suitably planned and executed to ensure that unintended negative impacts to the character-defining elements of the property at 1050 Burnhamthorpe Road East are avoided.
3. To address the potential for indirect impacts due to construction-related vibration, a baseline vibration assessment during detail design should be undertaken to determine potential vibration impacts. Where impacts due to vibration are anticipated, the following mitigation measure should be undertaken:
  - a. A vibration assessment and monitoring plan should be prepared by a qualified engineer and implemented by the contractor to lessen vibration impacts related to construction.

## 7.0 Summary of Community Engagement

The following individuals, groups, and/or organizations were contacted with inquiries regarding the heritage status and for information concerning the subject property and any additional adjacent built heritage resources or cultural heritage landscapes:



- Paula Wubbenhorst, Senior Heritage Coordinator, City of Mississauga (email communication 17 October 2023). Email correspondence confirmed that the subject property is designated by the City of Mississauga and provided a Heritage Structure Report from 1977 which informed the heritage designation. No adjacent heritage properties were identified.
- Matthew Wilkinson, Heritage Mississauga (email communication 17, 25, and 26 October 2023). Email correspondence provided information about the Copeland family and provided photographs of the residence from c. 1965 and 2002.

This report should be submitted to heritage planning staff at the City of Mississauga and the Region of Peel for review and comment. Following review, staff should determine if they are aware of additional information that should be taken into account in the assessment of impacts, identification of mitigation measures, or implementation. Any feedback will be considered and incorporated into the report, where appropriate. The final report should be submitted to the City of Mississauga for archival purposes.

## 8.0 Recommendations

Based on the property's determined cultural heritage value and a thorough review of the proposed development plans, the proposed work is not expected to result in any direct or indirect adverse impacts upon the subject property. Copeland House is located approximately 80 metres from the proposed work and 50 metres is generally used as the threshold for construction-related vibration impacts. However, though these impacts are expected to be limited and temporary, and out of an abundance of caution, a baseline vibration assessment should be undertaken during detail design to determine potential vibration impacts. This is recommended given the coursed stone foundation of the Copeland House, the fact that it is among the oldest extant residences in Mississauga, and its status as a designated heritage property.



The following recommendations and mitigation measures have been developed and should be implemented:

1. Construction crews should be advised of the heritage status and character-defining elements of the property at 1050 Burnhamthorpe Road East before going on site.
2. Staging and construction should be suitably planned and executed to ensure that unintended negative impacts to the character-defining elements of the property at 1050 Burnhamthorpe Road East are avoided.
3. To address the potential for indirect impacts due to construction-related vibration, a baseline vibration assessment during detail design should be undertaken to determine potential vibration impacts. Where impacts due to vibration are anticipated, the following mitigation measure should be undertaken:
  - A vibration assessment and monitoring plan should be prepared by a qualified engineer and implemented by the contractor to lessen vibration impacts related to construction.
4. This Cultural Heritage Impact Assessment should be submitted by the proponent to heritage planning staff at the City of Mississauga, the Region of Peel, and any other interested stakeholders for review and comment.



## 9.0 References

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## Appendix A: 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.

**Michael Wilcox, P.h.D.**

**Historian - Cultural Heritage Division**

The report writer for this report is **Michael Wilcox** (P.h.D., History), who is a historian within the Cultural Heritage Division. He was responsible for preparing and contributing to background historical research, reviewing existing heritage



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