



To: COUNCIL

Meeting Date: 5/30/2023

Subject: Hespeler Pedestrian Bridge Municipal Class Environmental Assessment

Submitted By: Kevin De Leebeeck, Director of Engineering

Prepared By: Matt Holland, Project Engineer

Report No.: 23-228-CD

File No.: A/01159-20

Wards Affected: Ward 1
Ward 2

RECOMMENDATIONS:

THAT Report 23-228-CD, Hespeler Pedestrian Bridge Municipal Class Environmental Assessment be received;

AND THAT Council authorize staff to finalize the Municipal Class Environmental Assessment Project File including authorization for staff to post the Notice of Study Completion for the public review period;

AND FURTHER THAT additional funding of \$70,000 be added to existing Capital Project A/01159-20 from the Development Charge Road Reserve Fund in order to complete the required Stage 2 Archaeological Assessment.

EXECUTIVE SUMMARY:

Purpose

- To provide Council information regarding the work that has been completed on the Hespeler Pedestrian Bridge Municipal Class Environmental Assessment, Schedule B.
- To request Council's authorization to finalize the Project File and post the Notice of Study Completion for the 30-day public review period.

Key Findings

- A Municipal Class Environmental Assessment, Schedule B, was completed to evaluate the preferred location of a proposed new pedestrian bridge over the Speed River and corresponding trail connection in the Hespeler area of Cambridge.
- The identified preferred alternative is for a bridge crossing the Speed River approximately 20 meters west of the existing Silknet Dam on land that has been previously disturbed. The corresponding trail on the north side of the Speed River will connect to the existing Mill Run Trail. The trail connection to the south travels across private properties 215 and 241 Queen Street West.

Financial Implications

- Additional funding of \$70,000 from the Development Charge Road Reserve Fund is required to undertake Stage 2 Archaeological Assessment work to be completed under existing project A/01159-20.

STRATEGIC ALIGNMENT:

- Strategic Action; or
 Core Service

Objective(s): GETTING AROUND - Emphasize connectivity and active transportation choices to help people travel in and beyond the city without a car

Strategic Action: Promote and develop more transportation options

Program: Active Transportation Network

Core Service: Active Transportation Planning

The new bridge and corresponding trail connection will provide an All Ages and Abilities active transportation option for people to cross the Speed River and enjoy the surrounding areas in Hespeler. This strategic opportunity was identified in the Cambridge Cycling Master Plan (2020).

BACKGROUND:

Introduction

The City of Cambridge retained WSP E&I Canada to complete a Schedule B Municipal Class Environmental Assessment (EA) to evaluate options for a new active transportation connection across the Speed River in Hespeler. The bridge crossing and

trail connection were identified as an opportunity as part of the City's Cycling Master Plan (2020).

The Study Area is broadly defined as the Speed River and lands abutting the Speed River between the Mill Run Trail to the north and Queen Street West to the south. The study limits extend east of the existing CN Railway bridge and west up to the Hespeler Wastewater Treatment plant. Options being evaluated include trail connections through private property, primarily on the South side of the River. The Study Area is shown in **Figure 1** below.

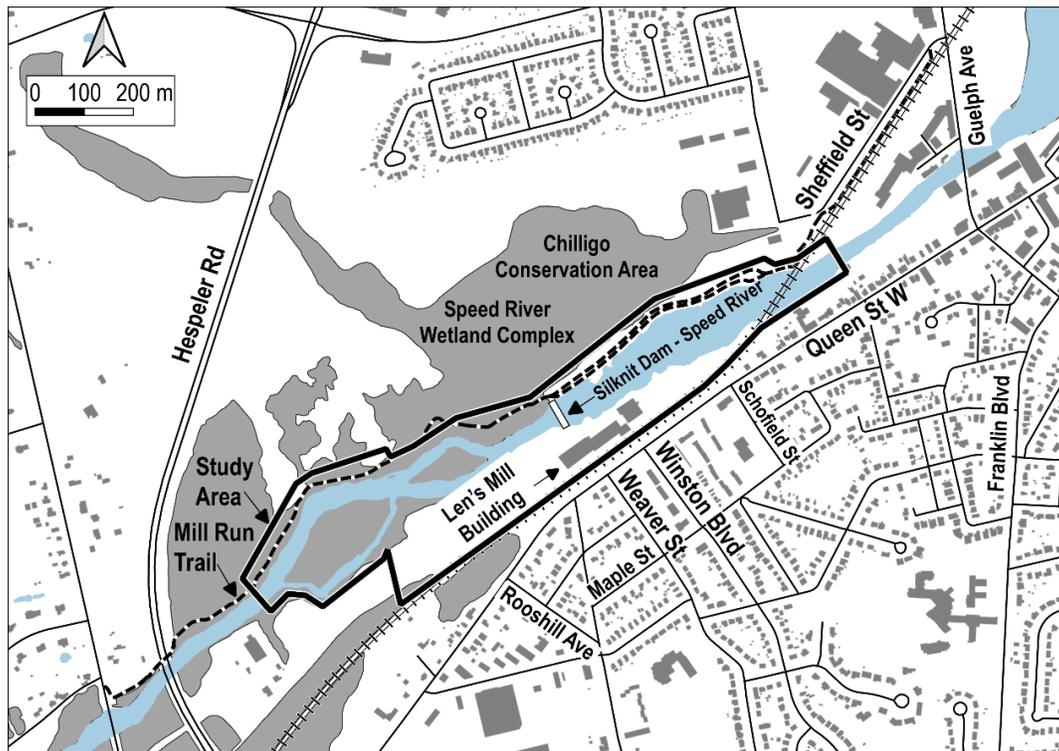


Figure 1: Study Area

Project Justification and Need

The City's Cycling Master Plan (CMP), completed in 2020, identified an opportunity for a new pedestrian link by bridge to be established across the Speed River in Hespeler as shown in **Figure 2**. The plan outlined a crossing in the general area of Winston Boulevard. The new crossing would meet broader City goals including sustainability, Greenhouse Gas reductions, connection to the natural environment, and enhancing community health, safety, and quality of life.



Figure 2: Excerpt of Figure 12 from the Cambridge Cycling Master

The CMP notes that this proposed crossing falls under Strategy 1B, which is an action to improve existing and develop new active transportation grade separated crossings over watercourses, rail, and major roads. This new active transportation infrastructure was noted as a medium-term priority to be completed in the next 5 to 10 years.

The primary justification for a new crossing in the Study Area is to address barriers in the Hespeler active transportation network and implement an All Ages and Abilities connection. The closest crossing alternative is located at Guelph Avenue and is considered to be a constrained corridor. The CMP also notes that the bridge would improve network connectivity from the Mill Run Trail to the new proposed multi-use Hespeler Trail that would run parallel to Queen Street West along the south shore of the Speed River. There is a separate ongoing detailed design project for this portion of the proposed Hespeler Trail.

A new bridge crossing would improve the safety of students living in the Hespeler area who attend Centennial Public School and Jacob Hespeler Secondary School. During consultations it was confirmed through a Miovision pedestrian count that a large number of people, including students, were using the existing CN Railway bridge to cross the Speed River. This is considered trespassing by CN Railway and is unsafe. A new bridge in this area would provide a safe designated crossing for people looking to cross the Speed River.

The Study Area is in close proximity to the Hespeler downtown core and there are two new developments that are in early planning stages within the Study Area. Secondary effects of a new crossing in this area would include an increase in tourism to the Hespeler core area and the creation of additional recreational opportunities.

ANALYSIS:

Considerations and Constraints

Prior to proceeding with evaluating bridge and trail location alternatives, some key considerations and constraints were identified. Some examples identified during the initial background review, consultations, and block screening included:

- **All Ages and Abilities:** Any proposed alternative must be All Ages and Abilities friendly as identified in the Cycling Master Plan.
- **Environmental Considerations:** Minimizing environmental impact is a priority. The Speed River and Chilligo Conservation Area are both located in the Study Area. Early in the EA process it was identified that it would be preferred to avoid a pier in the Speed River to minimize environmental impacts, floodplain impacts, cost increases, and length of bridge span required.
- **CN Railway:** CN is opposed to any new at-grade crossings. Above grade and below grade crossing of CN Railway were reviewed and screened out early in the project. A crossing east of the existing CN bridge crossing was also screened out. It was determined to not be feasible or practical due to the existing topography, floodplain limitations, vertical clearance requirements, and not being All Ages and Abilities friendly.
- **Indigenous Nations:** Indigenous Nations hold the Speed River and surrounding area as a place of past and present cultural importance. The project team received valuable feedback throughout the consultation process to incorporate into decision making.
- **Private Property:** All alternatives will impact private property on the south side of the Speed River. New site development plans will impact options for the trail location.
- **Existing Topography:** The existing grades in the Study Area must be considered to ensure all proposed options are feasible. There are several streams, tributaries, storm outlets, and challenging topography at the east end of the 211 Queen St W property.
- **Cost:** The estimated cost of alternative solutions was a key consideration.
- **Other Considerations:** Other key considerations include social environment, cultural environment, technical considerations, utilities, security, lighting, structure maintenance, winter maintenance, and more.

Alternative Options and Comparison

After completing an extensive background review and factoring in all considerations, a total of seven options were identified in addition to the “Do Nothing” alternative. All alignments are shown together in **Figure 3**.

1. **Alternative 1A & 1B:** Includes a trail connection starting at the intersection of Queen Street West and Winston Boulevard and connecting with the Mill Run Trail approximately 280 metres west of the Silknit Dam. Both trail alignments cross the Speed River at the same location. The main difference between the two alternatives is the configuration of the trail connection alignment through private property.
2. **Alternative 2A & 2B:** Alternatives 2A and 2B include a trail connection starting at the intersection of Queen Street West and Winston Boulevard and connecting with the Mill Run Trail approximately 100 metres west of the Silknit Dam. Both trail alignments cross the Speed River at the same location. The main difference between the two alternatives is the configuration of the trail connection alignment through private property.
3. **Alternative 3A & 3B:** Alternative 3A and 3B include a trail connection starting at the intersection of Queen Street West and Winston Boulevard and connecting with the Mill Run Trail approximately 20 metres west of the Silknit Dam. The main difference between the two alternatives is the configuration of the trail connection alignment through private property.
4. **Alternative 4:** Alternative 4 includes a trail connection starting at the intersection of Queen Street West and Winston Boulevard and connecting with Mill Run Trail approximately 145 metres east of the Silknit Dam. This alternative proposes a trail connection that would replace the proposed sidewalk adjacent to the parking lot that is being proposed as part of the Phase 2 of the future development at 211-215 Queen Street West.

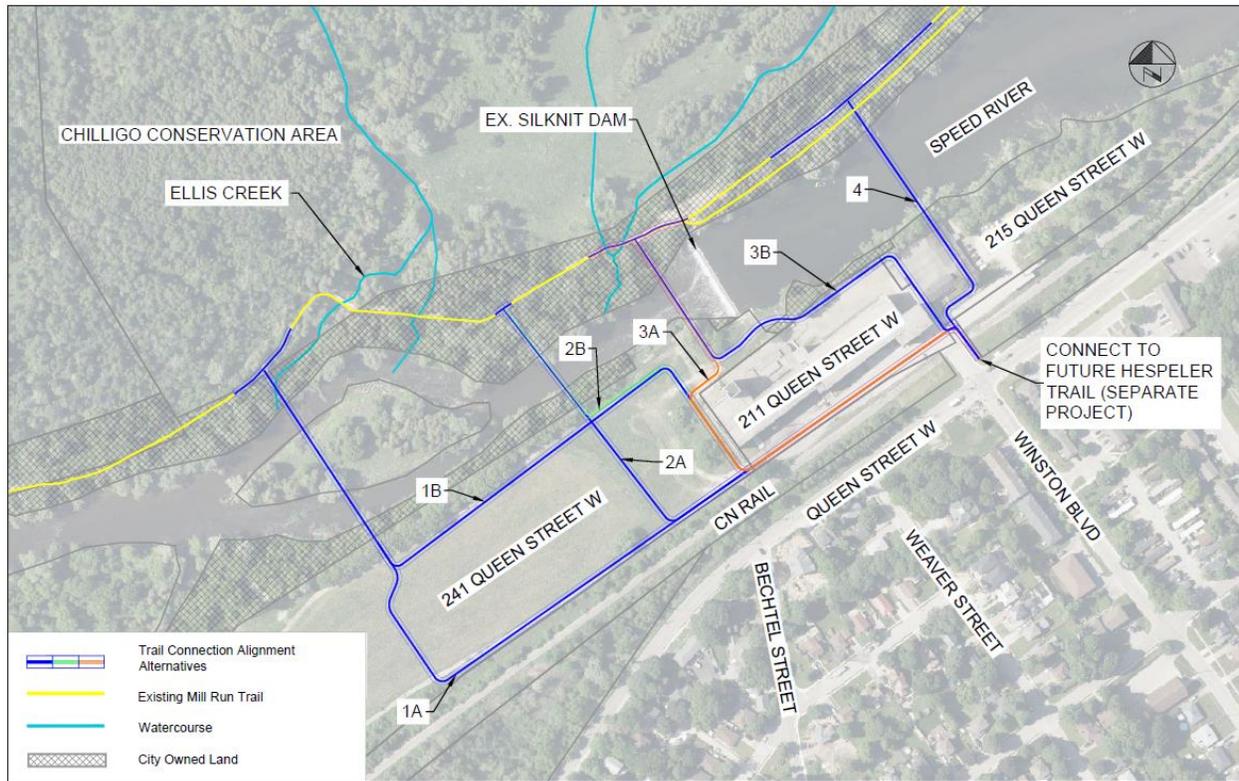


Figure 3: All Alternative Alignments Shown

Preferred Alignment

Based on the evaluation presented in Table 6 of the Project File Report (**Appendix A**), Alternative 3A has been identified as the preliminary preferred bridge crossing and corresponding trail connection alignment. The proposed trail alignment includes a 3 meter wide multi-use trail connection starting at the intersection of Queen Street West and Winston Boulevard and connecting with the Mill Run Trail approximately 20 metres west of the Silknit Dam. It runs in a westerly direction from its starting point and then in a northerly direction immediately west of the existing Lens Mill building until it meets with the Mill Run Trail. This alignment has a trail length of approximately 375 metres and will require a bridge span of approximately 57 metres. A conceptual rendering of the proposed bridge location is shown in **Figure 4**.



Figure 4: Rendering of Proposed Bridge Location

The proposed bridge will not require a pier for the structure and will be constructed as a single span. This alignment maintains a gradient ratio of 1:20 (5%) at the trail approach to the bridge on the north side of Speed River. To the south side, both alignments maintain the existing ground profile, which is flat. This is consistent with the requirements outlined in City's Facility Accessibility Design Manual (City of Cambridge, 2014).

In addition, the proposed trail alignment utilizes areas immediately downstream of the Silknet Dam that were previously disturbed and where vegetation as well as tree removal has already occurred. The approach to the proposed bridge location, north of the Speed River, was previously disturbed in 2017 with the installation of a temporary bridge as part of the Hespeler Trunk Sanitary Sewer Rehabilitation project.

Private property requirements are outlined in the Property Plan located in the Project File Report. The proposed trail connection follows an existing easement through the 211-215 Queen St W property. Additional property will be required from 241 Queen St W at the property boundary with 215 Queen St W to accommodate the trail connection and bridge abutments on the south side of the Speed River. Any proposed development structures are required to be setback a minimum of 3 meters from property line. The preferred alignment poses the least amount of encumbrance to any site development plans. The bridge abutments and trail connection on the north side of the Study Area are located on City property.

Preferred Structure

Three different bridge structure alternatives were developed including Bowstring Arch Truss Bridge, Parallel Chord Truss Bridge, and a Steel Girder Bridge. Each structure type was evaluated based on technical considerations, social and economic environment, and natural environment. During consultations with stakeholders and during public engagement, the Study Team noted a preference for structures with an aesthetic appeal. The ideal outcome would be to have the bridge become more of a destination and tourism draw for the area. Bowstring Arch Truss and Parallel Chord Truss both scored equally in evaluation; however, the Bowstring Arch Truss was carried forward as the preferred due to its aesthetic appeal.

EXISTING POLICY / BY-LAW(S):

There is no existing policy/by-law.

FINANCIAL IMPACT:

During completion of the Stage 1 Archaeological Assessment, it was identified that a Stage 2 Assessment would be required prior to detailed design. A Stage 2 Archaeological Assessment requires \$70,000 in additional funding to existing Capital Project A/001159-20 from the Development Charge Road Reserve Fund. If the outcome of the Stage 2 assessment is the requirement for Stage 3 and 4 then additional budget may be required as part of the detailed design project (A/01159-30).

The existing detailed design project (A/01159-30) has an estimated cost of \$521,000 and was approved as part of the 2023 Capital budget. The construction costs are estimated to be \$4,216,000 as included in the current Capital Budget forecast for the year 2026.

PUBLIC VALUE:

Sustainability

This project supports the Public Value Principle of Sustainability by promoting alternate modes of transportation and thereby reducing reliance on vehicular travel. The proposed connection is part of an opportunity identified in the City's Cycling Master Plan. The proposed crossing and trail connection addresses a gap in the City's active transportation network by linking the Mill Run Trail to the proposed new Hespeler multi-use trail and the rest of the active transportation network.

ADVISORY COMMITTEE INPUT:

Cambridge Accessibility Advisory Committee (CAAC)

The CAAC was consulted through the circulation of the Project File Report with the preferred alternative being put forward for comment. A meeting was held to review the alternatives and the preferred option where feedback was provided. The CAAC was generally in support of the project and what was being proposed. In addition, the committee will be consulted during the Detailed Design phase.

Cambridge Cycling and Trails Advisory Committee (CCTAC)

The CCTAC was consulted through the circulation of the Project File Report with the preferred alternative being put forward for comment. The committee provided some written comments to the Study Team and were generally in support of the preferred alternative. CCTAC has also ranked this project within the top ten active transportation priorities in both 2021 and 2022. The committee will be consulted during the Detailed Design phase.

Cambridge Environmental Advisory Committee (CEAC)

The CEAC was consulted through the circulation of the Project File Report with the preferred alternative being put forward for comment. The committee provided written comments to the Study Team. The committee reviewed the project materials and are generally supportive of the project. Their opinion of the assessment of alternatives is that it appears to be comprehensive and considered the technical, social, environmental, cultural, and financial aspects. The CEAC is supportive of the fact that the preferred alternative 3A does not require a pier for the bridge structure and has the lowest impact on the environment. The CEAC was also involved in the review of the scoped Environmental Impact Study. The committee will be consulted during the Detailed Design phase.

Cambridge Municipal Heritage Advisory Committee (MHAC)

MHAC was circulated the Project File Report with the preferred alternative being put forward for committee information. The file was circulated for the May 18, 2023, committee meeting.

PUBLIC INPUT:

A key part of the Municipal Class EA process is the need for consultation early and throughout. At project initiation a project website was established on both the City of Cambridge's website and the Engage Cambridge website. A study contact list was established and kept up to date for distribution of any notices or information.

Consultations were conducted with stakeholders such as Indigenous Nations, Grand River Conservation Authority, CN Railway, local area schools, Region of Waterloo, City of Cambridge, Hespeler BIA, property owners, Cambridge Accessibility Advisory Committee, Cycling and Trails Advisory Committee, and Environmental Advisory Committee. Meetings and other forms of consultation were conducted with these groups at various points during the EA process to help inform the decision of a preferred alternative. In addition to consultations with stakeholders, the general public was also consulted and presented the preferred alternative for feedback. A full summary of all consultations can be found in Section 9 of the Project File Report (**Appendix A**).

Consultation Summary

- A Notice of Study Commencement for the project was published on June 28, 2021, and sent out to agencies, Indigenous Nations, stakeholders, and a printed notice was advertised in the local newspaper.
- A project website was maintained for the duration of the project on the City of Cambridge website at <https://www.cambridge.ca/en/learn-about/hespeler-pedestrian-bridge-and-trail.aspx> that included contact information on the City and consultant project leads. An Engage Cambridge page was located at <https://www.engagewr.ca/hespeler-pedestrian-bridge>, which also served as the platform for an engagement survey.
- A Public Engagement Survey and Information Centre was hosted from August 29, 2022, to September 19, 2022. Project documents and a survey were made available through a link on the Engage Cambridge website.
- Notices of the engagement opportunity were mailed and/or emailed out to stakeholders, approval agencies, and Indigenous Nations.
- Two separate signage boards were placed to notify the public of this engagement opportunity. One was located at the intersection of Queen Street W. and Winston Blvd. for passing motorists and pedestrians. The other was located at the trail head for the Mill Run Trail on the north side by the existing parking lot.
- Other marketing efforts included letters, emails, newspaper ad, and social media campaign.
- The Public Engagement Survey and Information Centre received 271 responses.
- The survey results had 83% of respondents agreeing with the result of the evaluation leading to the selection of preferred Alternative 3A.
- 92% of respondents agreed with the selection of a Bowstring Arch Truss for the preferred bridge structure type.
- 93% of respondents stated that they would use the bridge and corresponding trail as presented in Alternative 3A at varying frequencies.
- Staff received a variety of comments with most in support of the preferred option, while also providing suggestions for consideration. A detailed summary table of

all responses can be found in Appendix J of the Project File Report (**Appendix A**).

INTERNAL / EXTERNAL CONSULTATION:

- Early consultations with Indigenous Nations was a priority. A full summary of all consultations can be found in Section 9.5 of the Project File Report (**Appendix A**). The following Indigenous Nations were consulted at key stages of the Study:
 - Six Nations of the Grand River (SNGR);
 - Haudenosaunee Confederacy Chiefs Council - Represented by the Haudenosaunee Development Institute (HDI)
 - Mississaugas of the Credit First Nation (MCFN);
- Representatives of Mississaugas of the Credit First Nation, Six Nations of the Grand River, and Haudenosaunee Confederacy Chiefs Council were invited to participate in the Stage 1 Archaeological field surveys and environmental field studies.
- Review agencies consulted during this Study included the following. Detailed information is available in Section 9.6 of the Project File Report (**Appendix A**):
 - Ministry of Environment, Conservation and Parks
 - Ministry of Natural Resources and Forestry
 - Ministry of Citizenship and Multiculturalism
 - Ministry of Heritage, Sports, Tourism and Culture Industries
 - Regional Municipality of Waterloo
 - Grand River Conservation Authority
- City Staff consulted during the study included Engineering, Recreation & Culture, Parks, Legal, Property, Planning, and Communications.
- CN Railway was consulted at various points in the EA process including to highlight the Study Team's confirmation of an existing safety concern present on their property.
- Private property owners of 211-215 Queen Street West and 241 Queen St West were consulted throughout the EA process. A full summary is available in Section 9.5 of the Project File Report (**Appendix A**).
- The Study Team participated in one of the Hespeler Village Business Improvement Area's monthly meetings to obtain feedback on trail alignment and bridge location alternatives from board members.

CONCLUSION:

The proposed pedestrian bridge and corresponding trail connection creates an opportunity to strengthen the City's active transportation network, provide a safe crossing for residents and students, and create a new tourism destination in the Hespeler area. The project compliments an existing design project for a new multi-use trail with an alignment parallel to Queen Street West from Guelph Avenue to Winston Boulevard.

A number of crossing and trail alignment alternatives were reviewed through the Municipal Class EA (Schedule B) process. The preferred Alternative 3A is a trail connection starting at the intersection of Queen Street West and Winston Boulevard and connecting with the Mill Run Trail approximately 20 metres west of the Silknit Dam.

The Municipal Class EA Study was completed as per the guidelines set out under the Environmental Protection Act by the Ministry of Environment, Conservation and Parks. City Council's endorsement would allow the Notice of Study Completion to be published and the Project File Report to be shared publicly for a 30-day comment period, following which the study phase of the project would be completed.

REPORT IMPACTS:

Agreement: **No**

By-law: **No**

Budget Amendment: **Yes**

Policy: **No**

APPROVALS:

This report has gone through the appropriate workflow and has been reviewed and or approved by the following as required:

Director

Deputy City Manager

Chief Financial Officer

City Solicitor

City Manager

ATTACHMENTS:

1. 23-228-CD Appendix A – EA Project File Report and Appendices
2. 23-228-CD Appendix B – Confidential Legal Services Advice