Macdonell and Allan's Structures Schedule 'B' Municipal Class Environmental Assessment

Project File Report

Draft

July 3, 2025

Prepared for:

RVA

CITY OF Guelph
Making a Difference

EXECUTIVE SUMMARY

R.V. Anderson Associates Limited ('RVA') was retained by the City of Guelph ('City') to complete a Schedule 'B' Municipal Class Environmental Assessment (MCEA) for the Macdonell Bridge Area, which includes the Macdonell Street corridor from the Woolwich Street/Wellington Street intersection to the Arthur Street/Rose Street intersection, the Macdonell Bridge, the Allan's Bridge, and the Allan's Dam Spillway & Sluiceway (the 'Study'). This Study considered options for the Macdonell Bridge Area as a whole.

The purpose of the Study was to identify the preferred alternative solution for the replacement, potential removal and/or rehabilitation of the Macdonell and Allan's Structures, achieve community consensus on the preferred alternative solution and design concept, and develop a design and cross-section that implements a Complete Streets approach, providing an accessible and safe environment for all modes of transportation to a revitalized Downtown Guelph.

This Project File Report (PFR) documents the results of the Class EA process. As part of the Study, several technical studies were completed to assess the existing conditions and potential impacts of the alternatives being considered. Studies included: Traffic Assessment, Natural Environment Assessment, Stage 1 Archaeological Assessment, Cultural Heritage Assessments, Geotechnical and Hydrogeological Investigations, and a Hydraulic Analysis. The findings of these studies were incorporated into the evaluation of alternative solutions and are summarized in this PFR.

Class EA Phase 1 – Problem / Opportunity Statement

The need and justification for this EA Study was developed from the results of the Ontario Structure Inspection Manual (OSIM) inspection reports for each of the structures. In accordance with Phase 1 requirements of the MCEA process for a Schedule 'C' project, a "Problem / Opportunity Statement" was prepared following the assessment of existing conditions within the Study Area to identify the various problems and opportunities to be addressed throughout the study.

The Study Problem / Opportunity Statement developed for the Macdonell and Allan's Structures Class EA is comprised of the following key elements:

- Address the structural deficiencies of the deteriorating structures, as identified by recent and ongoing bridge inspections;
- Address the hydraulic capacity requirements of the structures;

- Enhance road safety, operations, and connectivity for vehicles, pedestrians, cyclists, and transit to support the community building goals of the City; and
- Investigate the feasibility of constructing the Ward to Downtown Bridge to provide a safe and direct line for pedestrians and cyclists through St. Patrick's Ward into Downtown Guelph (added later to the Class EA Study following City's cancellation of previously tendered bridge).

Class EA Phase 2 – Alternative Solutions

Alternative solutions where developed for each of the 4 structures to address the structural concerns and improve connectivity over the Speed River. The alternatives are listed below with the preferred solution emphasized in bold.

Macdonell Bridge

1. Do Nothing
2. Rehabilitate Entire Structure
3. Rehabilitate Entire Structure and Widen the Deck
4. Replace Entire Structure for Vehicular Traffic Only
5. **Replace Entire Structure to Accommodate Active Transportation on North Side**

Allan's Bridge

1. Do Nothing
2. Minor Rehabilitation of Bridge for Heritage Purposes Only
3. Replace Superstructure for Pedestrians and Cyclists
4. **Remove Bridge**

Allan's Dam Sluiceway and Spillway

1. Do Nothing
2. **Rehabilitate Spillway and Sluiceway**
3. Remove Spillway and Sluiceway
4. Remove Spillway and Sluiceway and Build a New Dam Upstream with an Active Transportation Underpass

Ward to Downtown Pedestrian Bridge

1. Do Nothing
2. Construct the 2023 Tendered Bridge
3. **Construct a Simplified Bridge Adjacent to the South Side of the GJR Bridge**
4. Construct a Simplified Bridge Adjacent to the North Side of the GJR Bridge

Impacts, Mitigation and Monitoring

The key impacts associated with the implementation of the proposed design concept and general mitigation required have been identified. In addition to the mitigation measures identified in the report, additional work will be required to be completed prior to construction. During detailed design, findings from the Class EA will be confirmed through additional investigations, planning, and consultation with the key interested parties and technical agencies.