

TECHNICAL MEMORANDUM

To: Mr. Steven Di Pietro **RVA:** 215632.02

From: Andrew McGregor, MCIP, RPP - Senior Planner, EA & Approvals

Date: March 9, 2023

Subject: Macdonell and Allan Structures Schedule 'C' Municipal Class Environmental Assessment – Short List Technical Memorandum – Final Draft

EXECUTIVE SUMMARY

This technical memorandum is provided to review the short list of alternative solutions recommended to be carried forward for further evaluation for Phase 2 of the Macdonell and Allan Structures Class EA. The recommendations were developed in consideration of input from City staff, members of the public and Downtown business community, as well as a review of City policies and goals and include:

- **Macdonell Bridge Recommended Short List**
 - Option 1 - Do Nothing
 - Option 2 – Rehabilitation of the Structure
 - Option 3 a) – Replacement of the Entire Structure (Substructure & Superstructure)
 - Option 3 b) – Replacement of the Superstructure and Rehabilitation of the Substructure
- **Allans Dam Bridge Recommended Short List**
 - Option 1 – Do Nothing
 - Option 2 – Rehabilitation of the Structure for Pedestrians & Cyclists
 - Option 4 – Remove Bridge
 - Option 5 - Minor Rehabilitation of Bridge for Heritage Purposes Only
- **Allans Dam Spillway and Sluiceway Recommended Short List**
 - Option 1 – Do Nothing
 - Option 2 – Rehabilitate Sluiceway and Spillway
 - 4 a) – Remove Sluiceway and Spillway
 - 4 b) Remove Sluiceway and Spillway and Provide an Active Transportation Underpass

Following approval of the recommended short list, the project team will move forward with evaluation of the short-listed options, to identify a preliminary recommended solution.

1.0 BACKGROUND

The Macdonell Bridge, located on Macdonell Street over the Speed River, is a main artery for vehicles, pedestrians, and cyclists to Downtown Guelph. Constructed in 1963 and rehabilitated in 1988, **recent inspections of the Macdonell Bridge have identified the need to repair or replace the structure.** Improvements and modifications to the Allans Dam Bridge (Structure No. 131) and Allans Dam (Structure No. 320), located at the Speed River immediately south of the Macdonell Bridge are also required.

In response, the City of Guelph is undertaking a Municipal Class Environmental Assessment (Class EA) for improvements to the Macdonell Street Bridge Area, including the Macdonell Street corridor from the Woolwich/Wellington intersection to the Arthur Street/Rose Street intersection, the Macdonell Bridge (Structure No. 112), the Allans Dam Bridge (Structure No. 131), and the Allans Dam (Structure No. 320). The study will consider options for the Macdonell Street Bridge Area as a whole. This study is being conducted in accordance with the requirements of the Municipal Class Environmental Assessment (MCEA) – Schedule 'C'.

The previous iteration of this memo distributed to City staff, containing the initially recommended short-list is provided in **Appendix 1**, while a summary of the workshop is provided in **Appendix 2**. It is noted that the information in this memo, including Tables 2.1 and 3.1, have been revised based on discussion with City staff at the workshop as described in **Appendix 2**.

2.0 POLICY VISION FOR MACDONELL STREET

As planned development in the City of Guelph's Downtown continues, the need to reconstruct Macdonell Street, including the Macdonell Street Bridge, has been considered in several documents including the Downtown Secondary Plan (2012) / Consolidated Official Plan (2018), 2014 Streetscape Manual (2014), and the Transportation Master Plan (2022). These studies considered not only the measures required to address the long-term structural and transportation requirements of Macdonell Bridge, but also the function of a primary street providing access over the Speed River to the Downtown core, as described below.

Importantly, apart from the City's Official Plan policies concerning the health of the Speed River and preservation of its cultural heritage resources, the Planning Documents described below do not provide recommendations regarding the Macdonell Bridge structure (beyond the recommended cross-section and intersection configuration), the Allans Bridge, or the Allans Dam Spillway or Sluiceway.

2.1 Downtown Secondary Plan (2012) / Consolidated Official Plan (2018)

Within the City's Downtown Secondary Plan (2012), and the City's Consolidated Official Plan (2018), Macdonell Street east of Wellington Street is classified as a Primary Street, which are major roads that provide access to and through Downtown for pedestrians, transit bicycles and auto vehicles and have the following characteristics:

- Sidewalks with a minimum width of generally two metres on both sides of the street;
- Four travel lanes;
- Accommodate dedicated bicycle lanes, with the exception of sections of road where cyclists have the option of using an off-street path; and
- Parking may be permitted in the curb lanes during off-peak hours, where traffic and transit volumes allow.

2.2 2014 Streetscape Manual (2014)

Building on the 2012 Downtown Secondary Plan, the 2014 Streetscape Manual also identifies Macdonell Street east of Wellington as a Primary Street, which focus most on vehicular movement - both to and through downtown and have the following characteristics:

- Two or four travel lanes;
- Off-peak parking should be included on all Primary Streets with four lanes
- Dedicated cycling facility;
- 3.55 meter-wide sidewalks.

The manual also includes a conceptual plan for the redesign of the Wellington/Woolwich/Macdonell Intersection to better prioritize active modes of transportation.

2.3 Transportation Master Plan Update (2022)

Completed in 2022, Guelph's 2022 Transportation Master Plan (TMP) update, lays out how residents and visitors will move through the city over the next three decades. The TMP classifies Macdonell Street within the study area as a Primary Street, identifying the segment as part of the City's O-Street Spine Cycling Network (off-road protected facility - all ages and abilities).

2.4 Public

2.4.1 Feedback from the Public

During the first Open House and associated online engagement, as well as during three public engagement pop-up events held in Summer 2022, the public was asked to provide their input on goals for the Macdonell Bridge and Allan's Structures that should be considered for the study. A summary of their responses is provided below.

- Consideration of a dedicated/protected crossing to increase safety for people who walk or bike across the structures and those with accessibility needs; reduce focus on cars
- Connections of existing trails across the structures, including consideration of extending Trans Canada rail Trail under the Macdonell Bridge.
- Aesthetics and attractive design of the structures; opportunity for creating a "gateway" to downtown and acknowledge local history
- Reducing environmental harm and protecting/naturalizing the Speed River, support/enhance local wildlife and fish; consider the river's history and possible future use
- Considerations for climate change and flooding risks
- Consider hydro-electric power generation.

2.5 Summary

The vision for the Macdonell corridor as set out by these key City planning documents, as well as the public engagement completed as part of the Downtown Renewal project to date, are summarized in the table below. Note that most of the key aspects of the street cross-section including Parking, Cyclists, Transit, Number Travel Lanes, Pedestrian Realm, Public Realm, Flexibility, Street Trees, and Vehicle Speeds will be addressed in Phase 3 of the study, following the selection of the structural requirements in the current Phase 2 stage. However, these cross sectional requirements do have some bearing on which alternatives should/should not be shortlisted for further evaluation.

Table 2.1 – Macdonell Street Vision

Planning Document	Downtown Secondary Plan (2012)	Streetscape Manual (2014)	Transportation Master Plan (2022)	Public Outreach – Downtown Renewal (2022)
Parking	<ul style="list-style-type: none"> Parking may be permitted in the curb lanes during off-peak hours, where traffic and transit volumes allow 	<ul style="list-style-type: none"> Off-peak parking in curb lanes 	<ul style="list-style-type: none"> No comment, refers to updating the Downtown Parking Master Plan (underway, no recommendations) 	<ul style="list-style-type: none"> NA
Cyclists	<ul style="list-style-type: none"> Accommodate dedicated bicycle lanes, with the exception of sections of road where cyclists have the option of using an off-street path 	<ul style="list-style-type: none"> Dedicated cycling facility 	<ul style="list-style-type: none"> On-Street Spine Cycling Network (off-road protected facility to accommodate all ages and abilities) 	<ul style="list-style-type: none"> Strong support for cyclist facilities (emphasis on safety)
Transit	<ul style="list-style-type: none"> Transit priority street (signal priority and queue-jumping lanes) 	<ul style="list-style-type: none"> Transit facilities including seating, shelters, waste receptacles, lighting and route information located in the Planting and Site Furnishing Zone or in bump outs / curb extensions 	<ul style="list-style-type: none"> No recommendations (not part of Transit Priority Network) 	<ul style="list-style-type: none"> Desire for transit to be accommodated in design
Travel Lanes	<ul style="list-style-type: none"> Four travel lanes (no width specified) 	<ul style="list-style-type: none"> Four travel lanes Two 3.35-meter-wide inner travel lanes Two 3.5-meter wide curb lanes that accommodate travel and off-peak parking 	<ul style="list-style-type: none"> 4 lane arterial 	<ul style="list-style-type: none"> Maintaining connections for all road users, particularly those who walk or cycle
Pedestrian Realm	<ul style="list-style-type: none"> Sidewalks with a minimum width of two metres on both sides of the street 	<ul style="list-style-type: none"> 3.55-meter-wide pedestrian clearways on both sides of the street 	<ul style="list-style-type: none"> No recommendations (not part of Pedestrian Priority Network) 	<ul style="list-style-type: none"> Desire for safe, attractive environment for pedestrians
Public Realm / Flexibility	<ul style="list-style-type: none"> Not a primary streetscape 	<ul style="list-style-type: none"> Not identified as a flexible street 	<ul style="list-style-type: none"> Classified as Downtown Primary Street (subject to recommended Complete Streets Design Guide) 	<ul style="list-style-type: none"> Aesthetics and beautification as a "gateway" to downtown Protecting the heritage or character of the area
Street Trees	<ul style="list-style-type: none"> Street trees on both side 	<ul style="list-style-type: none"> Either silva cells or open pit planters. 	<ul style="list-style-type: none"> Enhance the public realm with street trees and other amenities to encourage a sense of community 	<ul style="list-style-type: none"> Desire for street trees
Vehicle Speeds	<ul style="list-style-type: none"> Major road that provides access to and through Downtown for pedestrians, transit bicycles and auto vehicles. 	<ul style="list-style-type: none"> Focus on vehicular movement - both to and through downtown 	<ul style="list-style-type: none"> Classified as Downtown Primary Street with no explicit recommended speed limit 	<ul style="list-style-type: none"> Desire for maintaining the flow of vehicle traffic.

3.0 MACDONELL BRIDGE

Under Phase 2 of the Class EA process, all reasonable solutions to address the problem and opportunity statement will be considered, including the “Do Nothing” alternative. The sections below document the long list of alternative solutions considered, and preliminary recommendations for the short list for the Macdonell Bridge.

The long list of options summarized below were presented for input to the public at the first Public Open House held November 2, 2022, and were distributed to City staff for review within the Alternative Solutions Preliminary Technical Memorandum (April 19, 2022). Please refer to these documents for further information on the alternative options, as required.

Under Phase 3 of the Class EA, a range of design concepts to implement the preferred solution (as identified in Phase 2), including cross-section(s) and intersection alignments will be evaluated based on functionality and impacts to the surrounding environment.



Exhibit 3-1: Macdonell Bridge Aerial View



Exhibit3-2: Macdonell Bridge Aerial View

3.1 Macdonell Bridge Long List Options

The long list of options summarized below were presented for input to the public at the first Public Open House held November 2, 2022, and were distributed to City staff for review within the Alternative Solutions Preliminary Technical Memorandum (April 19, 2022).

1) Do Nothing: The Macdonell Bridge would remain as is, with no improvements undertaken. This alternative is required to be considered under the Municipal Class EA planning process as a baseline for the comparison of alternative solutions.

2) Rehabilitation of the Structure: Undertake repairs to the existing structure of Macdonell Bridge. Accommodation of all modes of travel including active transportation would be considered during Phase 3 of the EA.

3 a) Replacement of the Entire Structure (Substructure & Superstructure): Demolish and remove the existing structure and complete replacement of the Macdonell Bridge structure. Span, hydraulic requirements and all modes of travel including active transportation would be considered during Phase 3 of the EA.

3 b) Replacement of the Superstructure and Rehabilitation of the Substructure: Replacement of the superstructure, and rehabilitation of the substructure of the Macdonell Bridge. The

superstructure reinforced concrete slab would be removed, then the substructure would be rehabilitated and modified to support a new superstructure. This option assumes that the existing abutments and center pier could be reused after significant rehabilitation and modification to accommodate the new superstructure. Accommodation of all modes of travel including active transportation on the new superstructure would be considered during Phase 3 of the EA.

4. Keep Existing Bridge for Pedestrians and Cyclists Only: Permanently close Macdonell Bridge to vehicular traffic and maintain the existing bridge as a pedestrian and cyclist crossing.

5. Remove Existing Bridge / Redirect Traffic to Another Crossing: Removal of the structure and permanent closure of the Macdonell Bridge to vehicular, pedestrian, and cyclist traffic. Vehicular, pedestrian and cyclist traffic redirected to other crossings.

3.2 Macdonell Bridge Recommended Short-List

The table below summarizes how each option described above aligns with the policy documents completed by the City and discussed in Table 2.1, as well as preliminary technical considerations regarding the structural and cultural heritage considerations.

Table 3.1 - Review of Macdonell Bridge Long Listed Options

	1 - Do Nothing	2 – Rehabilitation of the Structure	3 a) – Replacement of the Entire Structure (Substructure & Superstructure)	3 b) – Replacement of the Superstructure and Rehabilitation of the Substructure	4 – Keep Existing Bridge for Pedestrians and Cyclists Only	5 – Remove Existing Bridge / Redirect Traffic to Another Crossing
TMP Goals	Does not align with TMP Goals. 	Somewhat aligns with TMP Goals. 	Fully aligns with TMP Goals. 	Fully aligns with TMP Goals. 	Does not align with TMP Goals. 	Does not align with TMP Goals. 
Secondary Plan Goals	Somewhat aligns with Secondary Plan Goals. 	Somewhat aligns with Secondary Plan Goals. 	Aligns with Secondary Plan Goals. 	Somewhat aligns with Secondary Plan Goals. 	Does not align with Secondary Plan Goals. 	Does not align with Secondary Plan Goals. 
Structural Requirements	Does not address Structural Requirements. 	Somewhat addresses Structural Requirements. 	Fully addresses Structural Requirements. 	Somewhat addresses Structural Requirements. 	Does not address Structural Requirements. 	Does not address Structural Requirements. 
Cultural Heritage Considerations	NA	NA	NA	NA	NA	NA
Natural Environmental Goals	Somewhat aligns with Natural Environmental Goals. 	Somewhat aligns with Natural Environmental Goals. 	Somewhat aligns with Natural Environmental Goals. 	Somewhat aligns with Natural Environmental Goals. 	Somewhat aligns with Natural Environmental Goals. 	Somewhat aligns with Natural Environmental Goals. 
Desired by Public	Not desired by public. 	Desired by public. 	Some public support. 	Some public support. 	Some public support. 	Not desired by public. 
Preliminary Recommendation	Required to be Carried Forward	Recommended to be Carried Forward	Recommended to be Carried Forward	Recommended to be Carried Forward	Not Recommended to be Carried Forward	Not Recommended to be Carried Forward

3.2.1 Macdonell Bridge Recommended Short List

Table 3.2 summarizes the options to be moved forward for further evaluation, in consideration of input from City staff, as well as a summary of the original recommended short-list discussed at the workshop as described in Appendix 2.

Table 3.2 - Original vs. Revised Recommendation (Macdonell Bridge)

Option	Original Recommendation	Updated Recommendation
1 - Do Nothing	Required to be carried forward	Required to be carried forward
2 – Rehabilitation of the Structure	Recommended to be carried forward	Recommended to be carried forward
3 a) – Replacement of the Entire Structure (Substructure & Superstructure)	Recommended to be carried forward	Recommended to be carried forward
3 b) – Replacement of the Superstructure and Rehabilitation of the Substructure	Recommended to be carried forward	Recommended to be carried forward
4 – Keep Existing Bridge for Pedestrians and Cyclists Only	Not recommended to be carried forward	Not recommended to be carried forward
5 – Remove Existing Bridge / Redirect Traffic to Another Crossing	Not recommended to be carried forward	Not recommended to be carried forward

4.0 ALLANS DAM BRIDGE

4.1 Allans Dam Bridge Long List Options

The long list of options summarized below were presented for input to the public at the first Public Open House held November 2, 2022, and were distributed to City staff for review within the Alternative Solutions Preliminary Technical Memorandum (April 19, 2022).

1) Do Nothing: No improvements to address structural deficiencies and other repairs identified in recent inspections of the Allans Dam Bridge. This alternative does not address the problem statement. The structure would continue to deteriorate, and would remain blocked off to vehicles, pedestrians, and cyclists. This alternative is required to be considered under the Municipal Class EA planning process as a baseline for the comparison of alternative solutions.

2) Rehabilitate Bridge for Pedestrians / Cyclists: Undertake repairs to the existing structure of Allans Dam Bridge to accommodate pedestrians and cyclists only. Vehicles continue to be

accommodated on the Macdonell Bridge. Accommodation of all modes of travel including active transportation would be considered during Phase 3 of the EA.

3) Replace Bridge for Pedestrians / Cyclists: Replacement of the structure with a new bridge, designed specifically for pedestrian and cyclist traffic. Vehicles continue to be accommodated on the Macdonell Bridge.

4) Remove Bridge: Permanent closure and removal of the structure. Vehicles, pedestrians and cyclists are continued to be accommodated on the Macdonell Bridge, as well as the planned Ward to Downtown pedestrian Bridge adjacent to the study area. Retaining portions of the bridge only for viewing platforms and/or for heritage purposes to be considered in Phase 3.

5) Minor Rehabilitation of Bridge for Heritage Purposes Only (Added Following Workshop): Continued minimal required bridge maintenance as part of the City's responsibility as a Heritage registered property. Bridge remains closed for pedestrians, cyclists, and vehicles.



Exhibit 4-1: Allans Dam Bridge



Exhibit 4-2: Allans Dam Bridge Closure

4.2 Allans Dam Bridge Long List Options

The table below summarizes how each option described above aligns with the policy documents completed by the City and discussed in Table 2.1. The table has been revised based on staff input gained through the long list to short-list workshop.

Table 4.1 - Review of Allans Dam Bridge Long Listed Options

	1 - Do Nothing	2 – Rehabilitation of the Structure for Pedestrians & Cyclists	3 - Replace Bridge for Pedestrians & Cyclists	4 – Remove Bridge	5 - Minor Rehabilitation of Bridge for Heritage Purposes Only
TMP Goals	Aligns with TMP Goals (if pedestrians and cyclists accommodated on Macdonell Bridge). 	Aligns with TMP Goals (if pedestrians and cyclists accommodated on Macdonell Bridge). 	Aligns with TMP Goals (if pedestrians and cyclists accommodated on Macdonell Bridge). 	Aligns with TMP Goals (if pedestrians and cyclists accommodated on Macdonell Bridge). 	Aligns with TMP Goals (if pedestrians and cyclists accommodated on Macdonell Bridge). 
Secondary Plan Goals	NA	NA	NA	NA	NA
Structural Requirements	Does not address Structural Requirements. 	Somewhat addresses Structural Requirements. 	Fully addresses Structural Requirements. 	Fully addresses Structural Requirements. 	Somewhat addresses Structural Requirements. 
Cultural Heritage Goals	Does not align with Cultural Heritage Goals. 	Somewhat aligns with Cultural Heritage Goals. 	Does not align with Cultural Heritage Goals. 	Does not align with Cultural Heritage Goals. 	Aligns with Cultural Heritage Goals. 
Natural Environmental Goals	Does not align with Natural Environmental Goals. 	Does not align with Natural Environmental Goals. 	Does not align with Natural Environmental Goals. 	Fully aligns with Natural Environmental Goals. 	Somewhat aligns with Natural Environmental Goals. 
Desired by Public	Not desired by public. 	Desired by public. 	Some public support. 	Not desired by public. 	NA (Not presented at PIC)
Preliminary Recommendation	Required to be Carried Forward	Recommended to be Carried Forward	Not Recommended to be Carried Forward	Recommended to be Carried Forward	Recommended to be Carried Forward

4.2.1 Allans Dam Bridge Recommended Short List

Table 4.2 summarizes the options to be moved forward for further evaluation, in consideration of input from City staff, as well as a summary of the original recommended short-list discussed at the workshop as described in Appendix 2.

Table 4.2 - Original vs. Revised Recommendation (Allans Dam Bridge)

Option	Original Recommendation	Updated Recommendation
1 - Do Nothing	Required to be carried forward	Required to be carried forward
2 – Rehabilitation of the Structure for Pedestrians & Cyclists	Recommended to be carried forward	Recommended to be carried forward
3 - Replace Bridge for Pedestrians & Cyclists	Recommended to be carried forward	Not recommended to be carried forward
4 – Remove Bridge	Recommended to be carried forward	Recommended to be carried forward – <i>could include viewing platform</i>
5 - Minor Rehabilitation of Bridge for Heritage Purposes Only	Not included	Recommended to be carried forward

5.0 ALLANS DAM SPILLWAY AND SLUICeway

5.1 Allans Dam Spillway and Sluiceway Long List Options

The long list of options summarized below were presented for input to the public at the first Public Open House held November 2, 2022, and were distributed to City staff for review within the Alternative Solutions Preliminary Technical Memorandum (April 19, 2022). The images below are intended to provide context on the function of each of the sluiceway and spillway respectively.

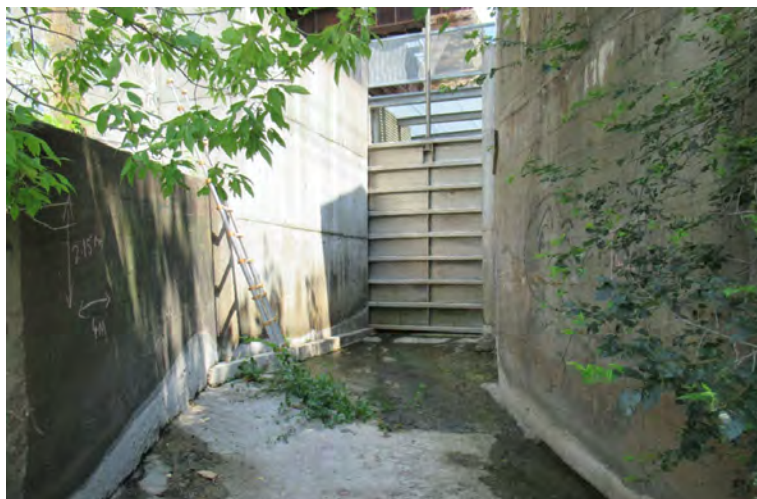


Exhibit 5-1: The sluiceway is a concrete channel with a metal gate to carry excess water.



Exhibit 5-2 The spillway forms a weir to control the Speed River elevation, previously used for the now-removed Allan's Mill

- 1) **Do Nothing:** No improvements to address structural deficiencies and other repairs identified in recent inspections of the structure. This alternative is required to be considered under the Municipal Class EA planning process as a baseline for the comparison of alternative solutions.
- 2) **Rehabilitate Sluiceway and Spillway:** Complete rehabilitation of the existing sluiceway and spillway. Speed River elevation continues to be controlled by the spillway, with operations on sluiceway extended.
- 3) **Remove Sluiceway and Rehabilitate Spillway:** Removal of the sluiceway and rehabilitation of spillway. Speed River elevation continues to be controlled by existing spillway, with no sluiceway operations.

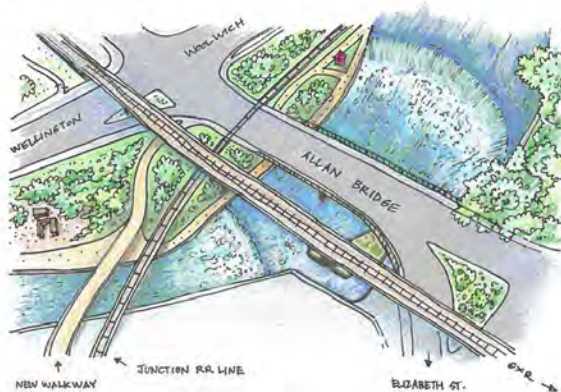
4) a) **Remove Sluiceway and Spillway:** Complete removal of the existing sluiceway and spillway, with no introduction of a replacement structure. Speed River elevation is no longer controlled, with significant impacts to the hydraulic elevation upstream. Retaining portions of the sluiceway only for heritage purposes to be considered in Phase 3.

4) b) **Option 4a) plus provide an Active Transportation Underpass (Added Following Workshop):** Construction of a new active transportation underpass connecting the Trans Canada Rail Trail underneath the Macdonell Bridge.

5) **Remove Sluiceway and Spillway and Build a New Dam Upstream:** Construction of a new dam upstream of the existing structure and Macdonell bridge followed by the removal of the existing sluiceway and spillway. Speed River elevation is controlled by the new spillway, and sluiceway operations continue.

5) b) **Option 5a) plus provide an Active Transportation Underpass:** Construction of a new active transportation underpass connecting the Trans Canada Rail Trail underneath the Macdonell Bridge. Construction of a new dam upstream of the existing structure and Macdonell bridge followed by the removal of the existing sluiceway and spillway. Speed River elevation is controlled by the new spillway, and sluiceway operations continue.

Aerial View



Robin Baird Lewis / Studio One © 2017

View from below Allan Bridge



Robin Baird Lewis / Studio One © 2017

Exhibit 5-3: 5) b) Option 5a) plus provide an Active Transportation Underpass (Guelph Coalition for Active Transportation Renderings)

5.2 Allans Dam Spillway and Sluiceway Recommended Short-List

The table below summarizes how each option described above aligns with the policy documents completed by the City and discussed in **Table 2.1**.

Table 5.1 - Review of Allans Dam Spillway and Sluiceway Long Listed Options

	1 - Do Nothing	2 – Rehabilitate Sluiceway and Spillway	3 - Remove Sluiceway and Rehabilitate Spillway	4 a) – Remove Sluiceway and Spillway	4 b) Remove Sluiceway and Spillway and Provide an Active Transportation Underpass	5 a) – Remove Sluiceway and Spillway and Build a New Dam Upstream	5 b) – Remove Sluiceway and Spillway and Build a New Dam Upstream with an Active Transportation Underpass
TMP Goals	NA	NA	NA	NA	Supports TMP General Goals. 	NA	Supports TMP General Goals.
Secondary Plan Goals	NA	NA	NA	NA	NA	NA	NA
Structural Requirements	Does not address Structural Requirements. 	Fully address Structural Requirements. 	Fully address Structural Requirements. 	Fully address Structural Requirements. 	Fully address Structural Requirements. 	Fully address Structural Requirements. 	Fully address Structural Requirements.
Cultural Heritage Considerations	Does not align with Cultural Heritage Goals. 	Somewhat with Cultural Heritage Goals. 	Does not align with Cultural Heritage Goals. 	Does not align with Cultural Heritage Goals. 	Does not align with Cultural Heritage Goals. 	Does not align with Cultural Heritage Goals. 	Does not align with Cultural Heritage Goals.
Natural Environmental Goals and Permitting	Does not align with Natural Environmental Goals. 	Does not align with Natural Environmental Goals. 	Does not align with Natural Environmental Goals. 	Fully aligns with Natural Environmental Goals. 	Fully aligns with Natural Environmental Goals. 	Does not align with Natural Environmental Goals. 	Does not align with Natural Environmental Goals.
Desired by Public	Not desired by public. 	Desired by public. 	Desired by public. 	Some public support. 	Some public support. 	Some public support. 	Some public support.
Preliminary Recommendation	Required to be Carried Forward	Recommended to be Carried Forward	Not Recommended to be Carried Forward	Recommended to be Carried Forward	Recommended to be Carried Forward	Not Recommended to be Carried Forward	Not Recommended to be Carried Forward

5.2.1 Allans Dam Spillway and Sluiceway Recommended Short List

Table 5.2 summarizes the options to be moved forward for further evaluation, in consideration of input from City staff, as well as a summary of the original recommended short-list discussed at the workshop as described in Appendix 2.

Table 5.2 - Original vs. Revised Recommendation (Allans Dam Spillway and Sluiceway)

Option	Original Recommendation	Updated Recommendation
1 - Do Nothing	Required to be carried forward	Required to be carried forward
2 – Rehabilitate Sluiceway and Spillway	Recommended to be carried forward	Recommended to be carried forward
3 - Remove Sluiceway and Rehabilitate Spillway	Recommended to be carried forward	Not recommended to be carried forward
4 a) – Remove Sluiceway and Spillway	Recommended to be carried forward	Recommended to be carried forward – <i>explore possibility retain heritage elements of sluiceway</i>
4 b) Remove Sluiceway and Spillway and Provide an Active Transportation Underpass	Not included	Recommended to be carried forward
5 a) – Remove Sluiceway and Spillway and Build a New Dam Upstream	Not recommended to be carried forward	Not recommended to be carried forward
5 b) – Remove Sluiceway and Spillway and Build a New Dam Upstream with an Active Transportation Underpass	Not recommended to be carried forward	Not recommended to be carried forward

6.0 EVALUATION OF SHORT-LISTED OPTIONS

Following approval of the recommended short-list as set out in this memo by the City, the project team will move forward with evaluation of the short-listed options, to identify a preliminary recommended solution.

The evaluation of alternative solutions will be completed based on criteria that represent the broad definition of the environment as described in the EA Act. The general evaluation criteria to be used in evaluating the alternative solutions are outlined in Table 6.1 -. The criteria to be considered for each of the categories are described in detail in the in the Alternative Solutions Preliminary Technical Memorandum.

The project team will comparatively rank each alternative solution from least desirable to most desirable, for each of the criteria described above, to determine the preliminary preferred solution(s).

Table 6.1 - Evaluation Criteria

Evaluation Criteria	Description of Evaluation Criteria
Structural and Technical	Does the alternative adequately address the technical structural requirements of the project?
Traffic Operations & Safety	How will the alternative serve the existing and future vehicular, pedestrian and cycling traffic needs?
Socio-Economic Environment	What impacts will the alternative have on the local community?
Natural Environment and Climate Change	How does the alternative affect existing vegetation, water quality, fisheries/wildlife and habitat? Does the alternative address climate change?
Cultural Heritage / Archaeological	Will the alternative affect archaeological, cultural heritage resources or Indigenous communities?

The evaluation of the short-listed options, including the preliminary recommendation(s) will be presented to the Downtown Guelph Businesses, followed by the public, at the Second Public Open House. The input received from the business stakeholders and members of the public will help to confirm the preliminary preferred solution.

APPENDIX 1

LONG-LIST TO SHORT-LIST WORKSHOP TECH MEMO AND MATERIALS



TECHNICAL MEMORANDUM

To: Mr. Steven Di Pietro **RVA:** 215632.02

From: Andrew McGregor, MCIP, RPP - Senior Planner, EA & Approvals

Date: February 16, 2023

Subject: Macdonell and Allan Structures Schedule 'C' Municipal Class Environmental Assessment – Long List to Short List Workshop Technical Memorandum

1.0 BACKGROUND

The Macdonell Bridge, located on Macdonell Street over the Speed River, is a main artery for vehicles, pedestrians, and cyclists to Downtown Guelph. Constructed in 1963 and rehabilitated in 1988, **recent inspections of the Macdonell Bridge have identified the need to repair or replace the structure.** Improvements and modifications to the Allans Dam Bridge (Structure No. 131) and Allans Dam (Structure No. 320), located at the Speed River immediately south of the Macdonell Bridge are also required.

In response, the City of Guelph is undertaking a Municipal Class Environmental Assessment (Class EA) for improvements to the Macdonell Street Bridge Area, including the Macdonell Street corridor from the Woolwich/Wellington intersection to the Arthur Street/Rose Street intersection, the Macdonell Bridge (Structure No. 112), the Allans Dam Bridge (Structure No. 131), and the Allans Dam (Structure No. 320). The study will consider options for the Macdonell Street Bridge Area as a whole. This study is being conducted in accordance with the requirements of the Municipal Class Environmental Assessment (MCEA) – Schedule 'C'.

This technical memorandum is provided to review the Phase 2 Class EA long list of alternative solutions and provide preliminary recommendations of a short list of a maximum of 4 options (not including Do Nothing) for a robust evaluation for the Macdonell Bridge, Allans Dam Bridge, and Allans Dam Sluiceway.

The preliminary recommended short list outlined in this memorandum will be discussed with City staff at the workshop scheduled on Thursday February 23, 2023, from 1:00 p.m. to 3:00 p.m., in Meeting

TECHNICAL MEMORANDUM

Room C at Guelph City Hall. As such, it is **critical** that City staff review the technical memorandum, as well as the display boards in **Appendix 1**, prior to the workshop.

Following input from the City staff, the project team will move forward with evaluation of the short-listed options, to identify a preliminary recommended solution.

2.0 POLICY VISION FOR MACDONELL STREET

As planned development in the City of Guelph's Downtown continues, the need to reconstruct Macdonell Street, including the Macdonell Street Bridge, has been considered in several documents including the Downtown Secondary Plan (2012) / Consolidated Official Plan (2018), 2014 Streetscape Manual (2014), and the Transportation Master Plan (2022). These studies considered not only the measures required to address the long-term structural and transportation requirements of Macdonell Bridge, but also the function of a primary street providing access over the Speed River to the Downtown core, as described below.

Importantly, apart from the City's Official Plan policies concerning the health of the Speed River and preservation of its cultural heritage resources, the Planning Documents described below do not provide recommendations regarding the Macdonell Bridge structure (beyond the recommended cross-section and intersection configuration), the Allans Bridge, or the Allans Dam Spillway or Sluiceway.

2.1 Downtown Secondary Plan (2012) / Consolidated Official Plan (2018)

Within the City's Downtown Secondary Plan (2012), and the City's Consolidated Official Plan (2018), Macdonell Street east of Wellington Street is classified as a Primary Street, which are major roads that provide access to and through Downtown for pedestrians, transit bicycles and auto vehicles and have the following characteristics:

- Sidewalks with a minimum width of generally two metres on both sides of the street;
- Four travel lanes;
- Accommodate dedicated bicycle lanes, with the exception of sections of road where cyclists have the option of using an off-street path; and
- Parking may be permitted in the curb lanes during off-peak hours, where traffic and transit volumes allow.

2.2 2014 Streetscape Manual (2014)

Building on the 2012 Downtown Secondary Plan, the 2014 Streetscape Manual also identifies Macdonell Street east of Wellington as a Primary Street, which focus most on vehicular movement - both to and through downtown and have the following characteristics:

- Two or four travel lanes;
- Off-peak parking should be included on all Primary Streets with four lanes
- Dedicated cycling facility;
- 3.55 meter-wide sidewalks.

The manual also includes a conceptual plan for the redesign of the Wellington/Woolwich/Macdonell Intersection to better prioritize active modes of transportation.

2.3 Transportation Master Plan Update (2022)

Completed in 2022, Guelph's 2022 Transportation Master Plan (TMP) update, lays out how residents and visitors will move through the city over the next three decades. The TMP classifies Macdonell Street within the study area as a Primary Street, identifying the segment as part of the City's O-Street Spine Cycling Network (off-road protected facility - all ages and abilities).

2.4 Public

2.4.1 Feedback from the Public

During the first Open House and associated online engagement, as well as during three public engagement pop-up events held in Summer 2022, the public was asked to provide their input on goals for the Macdonell Bridge and Allan's Structures that should be considered for the study. A summary of their responses is provided below.

- Consideration of a dedicated/protected crossing to increase safety for people who walk or bike across the structures and those with accessibility needs; reduce focus on cars
- Connections of existing trails across the structures, including consideration of extending Trans Canada rail Trail under the Macdonell Bridge.
- Aesthetics and attractive design of the structures; opportunity for creating a "gateway" to downtown and acknowledge local history
- Reducing environmental harm and protecting/naturalizing the Speed River, support/enhance local wildlife and fish; consider the river's history and possible future use
- Considerations for climate change and flooding risks
- Consider hydro-electric power generation.

2.5 Summary

The vision for the Macdonell corridor as set out by these key City planning documents, as well as the public engagement completed as part of the Downtown Renewal project to date, are summarized in the table below. Note that most of the key aspects of the street cross-section including Parking, Cyclists, Transit, Number Travel Lanes, Pedestrian Realm, Public

Realm, Flexibility, Street Trees, and Vehicle Speeds will be addressed in Phase 3 of the study, following the selection of the structural requirements in the current Phase 2 stage. However, these cross sectional requirements do have some bearing on which alternatives should/should not be shortlisted for further evaluation.

Table 2.1 – Macdonell Street Vision

Planning Document	Downtown Secondary Plan (2012)	Streetscape Manual (2014)	Transportation Master Plan (2022)	Public Outreach Downtown Renewal (2022)
Parking	<ul style="list-style-type: none"> Parking may be permitted in the curb lanes during off-peak hours, where traffic and transit volumes allow 	<ul style="list-style-type: none"> Off-peak parking in curb lanes 	<ul style="list-style-type: none"> No comment, refers to updating the Downtown Parking Master Plan (underway, no recommendations) 	<ul style="list-style-type: none"> NA
Cyclists	<ul style="list-style-type: none"> Accommodate dedicated bicycle lanes, with the exception of sections of road where cyclists have the option of using an off-street path 	<ul style="list-style-type: none"> Dedicated cycling facility 	<ul style="list-style-type: none"> On-Street Spine Cycling Network (off-road protected facility to accommodate all ages and abilities) 	<ul style="list-style-type: none"> Strong support for cyclist facilities (emphasis on safety)
Transit	<ul style="list-style-type: none"> Transit priority street (signal priority and queue-jumping lanes) 	<ul style="list-style-type: none"> Transit facilities including seating, shelters, waste receptacles, lighting and route information located in the Planting and Site Furnishing Zone or in bump outs / curb extensions 	<ul style="list-style-type: none"> No recommendations (not part of Transit Priority Network) 	<ul style="list-style-type: none"> Desire for transit to be accommodated in design
Travel Lanes	<ul style="list-style-type: none"> Four travel lanes (no width specified) 	<ul style="list-style-type: none"> Four travel lanes Two 3.35-meter-wide inner travel lanes Two 3.5-meter wide curb lanes that accommodate travel and off-peak parking 	<ul style="list-style-type: none"> 4 lane arterial 	<ul style="list-style-type: none"> Maintaining connections for all road users, particularly those who walk or cycle
Pedestrian Realm	<ul style="list-style-type: none"> Sidewalks with a minimum width of two metres on both sides of the street 	<ul style="list-style-type: none"> 3.55-meter-wide pedestrian clearways on both sides of the street 	<ul style="list-style-type: none"> No recommendations (not part of Pedestrian Priority Network) 	<ul style="list-style-type: none"> Desire for safe, attractive environment for pedestrians
Public Realm / Flexibility	<ul style="list-style-type: none"> Not a primary streetscape 	<ul style="list-style-type: none"> Not identified as a flexible street 	<ul style="list-style-type: none"> Classified as Downtown Primary Street (subject to recommended Complete Streets Design Guide) 	<ul style="list-style-type: none"> Aesthetics and beautification as a "gateway" to downtown Protecting the heritage or character of the area
Street Trees	<ul style="list-style-type: none"> Street trees on both side 	<ul style="list-style-type: none"> Either silva cells or open pit planters. 	<ul style="list-style-type: none"> Enhance the public realm with street trees and other amenities to encourage a sense of community 	<ul style="list-style-type: none"> Desire for street trees
Vehicle Speeds	<ul style="list-style-type: none"> Major road that provides access to and through Downtown for pedestrians, transit bicycles and auto vehicles. 	<ul style="list-style-type: none"> Focus on vehicular movement - both to and through downtown 	<ul style="list-style-type: none"> Classified as Downtown Primary Street with no explicit recommended speed limit 	<ul style="list-style-type: none"> Desire for maintaining the flow of vehicle traffic.

3.0 MACDONELL BRIDGE

Under Phase 2 of the Class EA process, all reasonable solutions to address the problem and opportunity statement will be considered, including the “Do Nothing” alternative. The sections below document the long list of alternative solutions considered, and preliminary recommendations for the short list for the Macdonell Bridge.

The long list of options summarized below were presented for input to the public at the first Public Open House held November 2, 2022, and were distributed to City staff for review within the Alternative Solutions Preliminary Technical Memorandum (April 19, 2022). Please refer to these documents for further information on the alternative options, as required.

Under Phase 3 of the Class EA, a range of design concepts to implement the preferred solution (as identified in Phase 2), including cross-section(s) and intersection alignments will be evaluated based on functionality and impacts to the surrounding environment.



Exhibit 3-1: Macdonell Bridge Aerial View



Exhibit3-2: Macdonell Bridge Aerial View

3.1 Macdonell Bridge Long List Options

1) Do Nothing: The Macdonell Bridge would remain as is, with no improvements undertaken. This alternative is required to be considered under the Municipal Class EA planning process as a baseline for the comparison of alternative solutions.

2) Rehabilitation of the Structure: Undertake repairs to the existing structure of Macdonell Bridge. Accommodation of all modes of travel including active transportation would be considered during Phase 3 of the EA.

3 a) Replacement of the Entire Structure (Substructure & Superstructure): Demolish and remove the existing structure and complete replacement of the Macdonell Bridge structure. Span, hydraulic requirements and all modes of travel including active transportation would be considered during Phase 3 of the EA.

3 b) Replacement of the Superstructure and Rehabilitation of the Substructure: Replacement of the superstructure, and rehabilitation of the substructure of the Macdonell Bridge. The superstructure reinforced concrete slab would be removed, then the substructure would be rehabilitated and modified to support a new superstructure. This option assumes that the

existing abutments and center pier could be reused after significant rehabilitation and modification to accommodate the new superstructure. Accommodation of all modes of travel including active transportation on the new superstructure would be considered during Phase 3 of the EA.

4. Keep Existing Bridge for Pedestrians and Cyclists Only: Permanently close Macdonell Bridge to vehicular traffic and maintain the existing bridge as a pedestrian and cyclist crossing.

5. Remove Existing Bridge / Redirect Traffic to Another Crossing: Removal of the structure and permanent closure of the Macdonell Bridge to vehicular, pedestrian, and cyclist traffic. Vehicular, pedestrian and cyclist traffic redirected to other crossings.

3.2 Macdonell Bridge Preliminary Recommended Short-List (For Discussion)

The table below summarizes how each option described above aligns with the policy documents completed by the City and discussed in **Table 2.1**, as well as preliminary technical considerations regarding the structural and cultural heritage considerations.

Table 3.1 - Preliminary Review of Macdonell Bridge Long Listed Options

	1 - Do Nothing	2 – Rehabilitation of the Structure	3 a) – Replacement of the Entire Structure (Substructure & Superstructure)	3 b) – Replacement of the Superstructure and Rehabilitation of the Substructure	4 – Keep Existing Bridge for Pedestrians and Cyclists Only	5 – Remove Existing Bridge / Redirect Traffic to Another Crossing
TMP Goals	Does not align with TMP Goals. 	Somewhat aligns with TMP Goals. 	Fully aligns with TMP Goals. 	Fully aligns with TMP Goals. 	Does not align with TMP Goals. 	Does not align with TMP Goals. 
Secondary Plan Goals	Somewhat aligns with Secondary Plan Goals. 	Somewhat aligns with Secondary Plan Goals. 	Aligns with Secondary Plan Goals. 	Somewhat aligns with Secondary Plan Goals. 	Does not align with Secondary Plan Goals. 	Does not align with Secondary Plan Goals. 
Structural Requirements	Does not address Structural Requirements. 	Somewhat addresses Structural Requirements. 	Fully addresses Structural Requirements. 	Somewhat addresses Structural Requirements. 	Does not address Structural Requirements. 	Does not address Structural Requirements. 
Cultural Heritage Considerations	NA	NA	NA	NA	NA	NA
Natural Environmental Goals	Somewhat aligns with Natural Environmental Goals. 	Somewhat aligns with Natural Environmental Goals. 	Somewhat aligns with Natural Environmental Goals. 	Somewhat aligns with Natural Environmental Goals. 	Somewhat aligns with Natural Environmental Goals. 	Somewhat aligns with Natural Environmental Goals. 
Desired by Public	Not desired by public. 	Desired by public. 	Some public support. 	Some public support. 	Some public support. 	Not desired by public. 
Preliminary Recommendation	Required to be Carried Forward	Recommended to be Carried Forward	Recommended to be Carried Forward	Recommended to be Carried Forward	Not Recommended to be Carried Forward	Not Recommended to be Carried Forward

3.2.1 Preliminary Recommended Short List

The preliminary recommended short-list includes a wide variety of options including options ranging from shared-use lanes to fully separated cyclist facilities and includes:

- Do Nothing (Required to be carried forward)
- Rehabilitate the Bridge
- Replacement of the entire bridge.
- Replacement of the superstructure (deck, railing etc.), and rehabilitation of the substructure (piers, abutments etc.).

Options **not recommended to be carried forward** for full evaluation include:

- Keep Existing Bridge for Pedestrians and Cyclists Only
- Remove Bridge

4.0 ALLANS DAM BRIDGE

4.1 Allans Dam Bridge Long List Options

1) Do Nothing: No improvements to address structural deficiencies and other repairs identified in recent inspections of the Allans Dam Bridge. This alternative does not address the problem statement. The structure would continue to deteriorate, and would remain blocked off to vehicles, pedestrians, and cyclists. This alternative is required to be considered under the Municipal Class EA planning process as a baseline for the comparison of alternative solutions.

2) Rehabilitate Bridge for Pedestrians / Cyclists: Undertake repairs to the existing structure of Allans Dam Bridge to accommodate pedestrians and cyclists only. Vehicles continue to be accommodated on the Macdonell Bridge. Accommodation of all modes of travel including active transportation would be considered during Phase 3 of the EA.

3) Replace Bridge for Pedestrians / Cyclists* (Added Following PIC #1): Replacement of the structure with a new bridge, designed specifically for pedestrian and cyclist traffic. Vehicles continue to be accommodated on the Macdonell Bridge.

4) Remove Bridge: Permanent closure and removal of the structure. Vehicles, pedestrians and cyclists are continued to be accommodated on the Macdonell Bridge, as well as the planned Ward to Downtown pedestrian Bridge adjacent to the study area.



Exhibit 4-1: Allans Dam Bridge























Exhibit 4-2: Allans Dam Bridge Closure

4.2 Allans Dam Bridge Preliminary Recommended Short-List (For Discussion)

The table below summarizes how each option described above aligns with the policy documents completed by the City and discussed in **Table 2.1**, as well as preliminary technical considerations regarding the structural and cultural heritage considerations.

Each of the four options developed for the Allans Dam Bridge are recommended to be carried forward for full evaluation.

Table 4.1 - Preliminary Review of Allans Dam Bridge Long Listed Options

	1 - Do Nothing	2 – Rehabilitation of the Structure for Pedestrians & Cyclists	3 - Replace Bridge for Pedestrians & Cyclists	4 – Remove Bridge
TMP Goals	Does not align with TMP Goals. 	Fully aligns with TMP Goals. 	Fully aligns with TMP Goals. 	Somewhat aligns with TMP Goals (if pedestrians and cyclists accommodated on Macdonell Bridge). 
Secondary Plan Goals	NA	NA	NA	NA
Structural Requirements	Does not address Structural Requirements. 	Somewhat addresses Structural Requirements. 	Fully addresses Structural Requirements. 	Fully addresses Structural Requirements. 
Cultural Heritage Goals	Does not align with Cultural Heritage Goals. 	Somewhat aligns with Cultural Heritage Goals. 	Does not align with Cultural Heritage Goals. 	Does not align with Cultural Heritage Goals. 
Natural Environmental Goals	Somewhat aligns with Natural Environmental Goals. 	Somewhat aligns with Natural Environmental Goals. 	Somewhat aligns with Natural Environmental Goals. 	Somewhat aligns with Natural Environmental Goals. 
Desired by Public	Not desired by public. 	Desired by public. 	Some public support. 	Not desired by public. 
Preliminary Recommendation	Required to be Carried Forward	Recommended to be Carried Forward	Recommended to be Carried Forward	Recommended to be Carried Forward

5.0 ALLANS DAM SPILLWAY AND SLUICEWAY

5.1 Allans Dam Spillway and Sluiceway Long List Options

1) Do Nothing: No improvements to address structural deficiencies and other repairs identified in recent inspections of the structure. This alternative is required to be considered under the Municipal Class EA planning process as a baseline for the comparison of alternative solutions.

2) Rehabilitate Sluiceway and Spillway: Complete rehabilitation of the existing sluiceway and spillway. Speed River elevation continues to be controlled by the spillway, with operations on sluiceway extended.

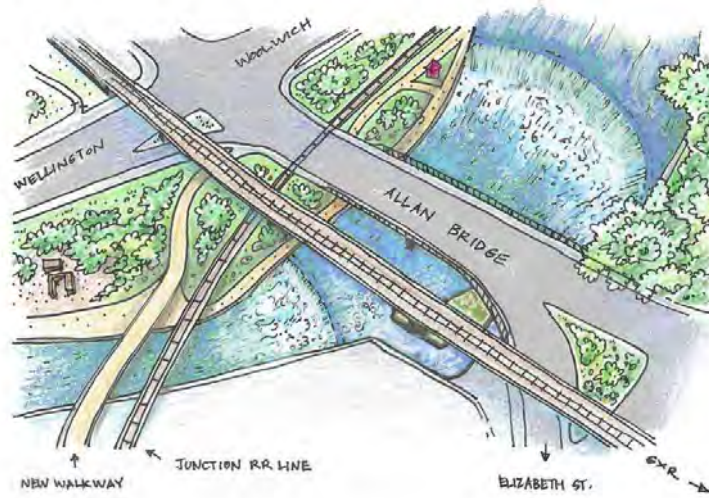
3) Remove Sluiceway and Rehabilitate Spillway: Removal of the sluiceway and rehabilitation of spillway. Speed River elevation continues to be controlled by existing spillway, with no sluiceway operations.

4) Remove Sluiceway and Spillway: Complete removal of the existing sluiceway and spillway, with no introduction of a replacement structure. Speed River elevation is no longer controlled, with significant impacts to the hydraulic elevation upstream.

5) a) Remove Sluiceway and Spillway and Build a New Dam Upstream: Construction of a new dam upstream of the existing structure and Macdonell bridge followed by the removal of the existing sluiceway and spillway. Speed River elevation is controlled by the new spillway, and sluiceway operations continue.

5) b) Option 5a) plus provide an Active Transportation Underpass* (Added Following PIC #1): Construction of a new active transportation underpass connecting the Trans Canada Rail Trail underneath the Macdonell Bridge. Construction of a new dam upstream of the existing structure and Macdonell bridge followed by the removal of the existing sluiceway and spillway. Speed River elevation is controlled by the new spillway, and sluiceway operations continue.

Aerial View



Robin Baird Lewis / Studio One © 2017

View from below Allan Bridge



2017 © RL

Robin Baird Lewis / Studio One © 2017

5.2 Allans Dam Spillway and Sluiceway Preliminary Recommended Short-List (For Discussion)

The table below summarizes how each option described above aligns with the policy documents completed by the City and discussed in Table 2.1.



Exhibit 5-1: The sluiceway is a concrete channel with a metal gate to carry excess water.



Exhibit 5-2: The spillway forms a weir to control the Speed River elevation, previously used for the now-removed Allan's Mill

Table 5.1 - Preliminary Review of Allans Dam Spillway and Sluiceway Long Listed Options

	1 - Do Nothing	2 – Rehabilitate Sluiceway and Spillway	3 - Remove Sluiceway and Rehabilitate Spillway	4 – Remove Sluiceway and Spillway	5) a) – Remove Sluiceway and Spillway and Build a New Dam Upstream	5) b) – Remove Sluiceway and Spillway and Build a New Dam Upstream with an Active Transportation Underpass
TMP Goals	NA	NA	NA	NA	NA	NA
Secondary Plan Goals	NA	NA	NA	NA	NA	NA
Structural Requirements	Does not address Structural Requirements. 	Fully address Structural Requirements. 	Fully address Structural Requirements. 	Fully address Structural Requirements. 	Fully address Structural Requirements. 	Fully address Structural Requirements. 
Cultural Heritage Considerations	Does not align with Cultural Heritage Goals. 	Somewhat with Cultural Heritage Goals. 	Does not align with Cultural Heritage Goals. 	Does not align with Cultural Heritage Goals. 	Does not align with Cultural Heritage Goals. 	Does not align with Cultural Heritage Goals. 
Natural Environmental Goals and Permitting	Somewhat aligns with Natural Environmental Goals. 	Somewhat aligns with Natural Environmental Goals. 	Somewhat aligns with Natural Environmental Goals. 	Fully aligns with Natural Environmental Goals. 	Does not align with Natural Environmental Goals. 	Does not align with Natural Environmental Goals. 
Desired by Public	Not desired by public. 	Desired by public. 	Desired by public. 	Some public support. 	Some public support. 	Some public support. 
Preliminary Recommendation	Required to be Carried Forward	Recommended to be Carried Forward	Recommended to be Carried Forward	Recommended to be Carried Forward	Not Recommended to be Carried Forward	Not Recommended to be Carried Forward

5.2.1 Preliminary Recommended Short List

The preliminary recommended short-list includes a wide variety of options including options ranging from shared-use lanes to fully separated cyclist facilities and includes:

- Do Nothing (Required to be carried forward)
- Rehabilitate Sluiceway and Spillway
- Remove Sluiceway and Rehabilitate Spillway
- Remove Sluiceway and Spillway

Options **not recommended to be carried forward** for full evaluation include:

- Remove Sluiceway and Spillway and Build a New Dam Upstream
- Remove Sluiceway and Spillway and Build a New Dam Upstream with an Active Transportation Underpass

6.0 EVALUATION OF SHORT-LISTED OPTIONS

Following input from the City staff at the workshop February 23rd, the project team will move forward with evaluation of the short-listed options, to identify a preliminary recommended solution.

The evaluation of alternative solutions will be completed based on criteria that represent the broad definition of the environment as described in the EA Act. The general evaluation criteria to be used in evaluating the alternative solutions are outlined in **Table 6.1** -. The criteria to be considered for each of the categories are described in detail in the in the Alternative Solutions Preliminary Technical Memorandum.

The project team will comparatively rank each alternative solution from least desirable to most desirable, for each of the criteria described above, to determine the preliminary preferred solution(s).

Table 6.1 - Evaluation Criteria

Evaluation Criteria	Description of Evaluation Criteria
Structural and Technical	Does the alternative adequately address the technical structural requirements of the project?
Traffic Operations & Safety	How will the alternative serve the existing and future vehicular, pedestrian and cycling traffic needs?
Socio-Economic Environment	What impacts will the alternative have on the local community?
Natural Environment and Climate Change	How does the alternative affect existing vegetation, water quality, fisheries/wildlife and habitat? Does the alternative address climate change?
Cultural Heritage / Archaeological	Will the alternative affect archaeological, cultural heritage resources or Indigenous communities?

The evaluation of the short-listed options, including the preliminary recommendation(s) will be presented to the Downtown Guelph Businesses, followed by the public, at the Second Public Open House. The input received from the business stakeholders and members of the public will help to confirm the preliminary preferred solution.

APPENDIX 2

**LONG-LIST TO SHORT-LIST WORKSHOP
SUMMARY**



Meeting Summary

Downtown Renewal – Macdonell and Allan Structures Class EA: Long-List to Short-List Workshop

Date: February 23, 2023

Location: Zoom Meeting

Time: 1:00 to 3:00 PM

Chair: Susan Hall, LURA Consulting

Attendees:

City staff: Reg Russwurm, Laura Bragues, Andrew Miller, Leanne Warren, Jennifer Juste, Timea Filer, Robin Gerus, Paul Gray, Karen Chan, Jason Elliott, Stephen Robinson, Rory Templeton, Christine Chapman, Kate Berry, Dave Beaton, Gwen Zhang, David deGroot, Steven Di Pietro, Stacey Laughlin

Consultant team: Andrew McGregor, Connor MacIsaac, Stanley Pijl, Natalie Welch, Matt Di Maria, David O’Sullivan, Melissa Gallina, Susan Hall

Purpose:

- Review the “long list” of alternative solutions (options) presented at Open House #1 (Macdonell and Allan Structures)
- Build staff understanding of options within the context of higher-order planning documents and other City priorities/drivers/goals
- Pare down the “long-list” of options, to a “short-list” to move forward for a future robust evaluation
- General acceptance of options for further evaluation

Welcome & Introductions

Reg Russwurm, City of Guelph, welcomed attendees and outlined the meeting’s purpose. Susan Hall, LURA, reviewed the agenda and the meeting format. Andrew McGregor, RVA, provided a review of the options for the Macdonell and Allan Structures (as presented in the pre-meeting Technical Memo).

Workshop Overview

The workshop consisted of three main components, which were repeated for the Macdonell and Allan Structures.

1. In small groups, staff discussed the “preliminary review tables” (see **Appendix A**). Groups were asked to discuss whether the consultant’s preliminary review aligned with their understanding of the key drivers (i.e., the TMP, Secondary Plan, etc.). Staff were asked to flag items they wanted to discuss with the full group.

2. As a full group, the consultant team reviewed the flagged items and facilitated an open discussion. The team responded to clarifying questions, as required.
3. Finally, the group was tasked with narrowing down the short-list to move forward for future evaluation. The options were narrowed down through a facilitated plenary discussion.

Feedback received from staff is summarized below.

Staff Input

Macdonell Bridge

Feedback on Options

- **Option 1 – Do Nothing**
 - No comments
- **Option 2 – Rehabilitation of the Structure**
 - Revisit alignment with TMP goals
 - Core TMP goal is to provide a protected cycling facility here, if not included, it does not align with TMP
 - Consultant team noted that this option does allow for a slightly wider deck, which could be used to support the cycling network
- **Option 3a – Replacement of the Entire Structure (Substructure & Superstructure)**
 - No comments
- **Option 3b – Replacement of the Superstructure and Rehabilitation of the Substructure**
 - No comments
- **Option 4 – Keep Existing Bridge for Pedestrians and Cyclists Only**
 - Support for removing option
- **Option 5 – Remove Existing Bridge / Redirect Traffic to Another Crossing**
 - Support for removing option

General Comments

- Streetscape Manual has a drawing of this area which should be acknowledged
- Desire to widen the public realm (for cycling) in this area
- Consider climate change and alignment with mitigation goals
- Timelines for each option will need to be considered
- Desire to consider nearby intersections
 - Confirmation that these are within the larger study area
 - Note that Wellington is a truck route
- Macdonell bridge is not a built heritage resource

Feedback on Short-List

The group agreed on the following options to be moved forward for a robust evaluation.

Option	Original Recommendation	Updated Recommendation
1	Required to be carried forward	
2	Recommended to be carried forward	
3a	Recommended to be carried forward	
3b	Recommended to be carried forward	
4	Not recommended to be carried forward	
5	Not recommended to be carried forward	

Allans Dam Bridge

Feedback on Options

- **Option 1 – Do Nothing**
 - Continued bridge maintenance is part of the City's responsibility as a Heritage registered property
 - Avoid "demolition by neglect"
 - Support for creating an additional option of Minor Rehabilitation of Bridge for Heritage Purposes Only (Added as Option 5 Following Workshop)
- **Option 2 – Rehabilitation of the Structure for Pedestrians & Cyclists**
 - Surprised that this option is on the table
 - Previously thought that this structure could not be rehabilitated
 - City's engineering team is proceeding with this option through the EA process due to cultural heritage importance
 - Support for ASI's evaluation of rehabilitation from a heritage perspective
- **Option 3 – Replace Bridge for Pedestrians & Cycles**
 - Less of a priority as it does not retain cultural heritage value
- **Option 4 – Remove Bridge**
 - Removal will not be popular given public opinion
 - Interest in retaining part of the bridge as a viewing platform to support cultural heritage aspect

General Comments

- Potential political/optics issue with keeping this bridge in addition to the new Ward to Downtown bridge
 - Communications and messaging will be important if we have two active transportation bridges so close together
- Alignment with TMP depends on the outcome of Macdonell bridge
 - As long as there are connections for all ages and abilities, it doesn't matter if it is here or at Macdonell bridge
 - Allans Dam bridge provides different connections than the planned Ward to Downtown bridge
- Cultural heritage value is the location and crossing as one of the earliest across the Speed Rive
 - The bridge itself is not necessarily the value
- Natural Environmental goals need to be reassessed across all options
 - All should be red with the exception of Option 4, which should be green

Feedback on Short-List

The group agreed on the following options to be moved forward for a robust evaluation.

Option	Original Recommendation	Updated Recommendation
1	Required to be carried forward	
2	Recommended to be carried forward	
3	Recommended to be carried forward	
4	Recommended to be carried forward	–
5	Not included (New Option)	

Allans Spillway & Sluiceway

Feedback on Options

- **Option 1 – Do Nothing**
 - No comments
- **Option 2 – Rehabilitate Sluiceway & Spillway**
 - No comments
- **Option 3 – Remove Sluiceway & Rehabilitate Spillway**
 - Desire to review ASI findings with respect to cultural heritage value
- **Option 4 – Remove Sluiceway & Spillway**
 - Environmental improvements of this option would be massive

- Suggestion to consider active transportation underpass as part of this option
- Update to “remove sluiceway & spillway, but retain heritage elements of sluiceway”
- Desire to review ASI findings with respect to cultural heritage value
- **Option 5a – Remove Sluiceway & Spillway and Build a New Dam Upstream**
 - Approval for building a new dam will be very difficult
 - Consider moving the dam further upstream
- **Option 5b – Remove Sluiceway & Spillway and Build a New Dam Upstream with an Active Transportation Underpass**
 - TMP staff noted that this option would support TMP Goals, although the trail was not recommended in TMP, and the crossing was not identified as a barrier for improvement in the TMP
 - Approval for building a new dam will be very difficult
 - GCAT will want this option to be evaluated
 - Support for creating a separate option for the active transportation underpass, that can be combined with other alternatives, such as Option 4 (pending technical review)
 - Added as Option 6 Following Workshop

General Comments

- Desire to retain historical aspects of sluiceway for viewing purposes
 - Heritage importance is the original elements (i.e., original stonework)
- Natural Environment goals need to be reassessed
 - Options 1, 2, 3 should be red in terms of Natural Environmental goal alignment
 - Discussion on possibility of including a fish ladder (minimal benefit)
- Desire for more information on the relative complexity, timing and cost of various options
- Discussion on impacts of removing the spillway and/or sluiceway
 - How would water levels be impacted?
 - Would there be sufficient headroom for an active transportation underpass?
- Pay attention to intersection design to improve active transportation experience

Feedback on Short-List

The group agreed on the following options to be moved forward for a robust evaluation.

Option	Original Recommendation	Updated Recommendation
1	Required to be carried forward	
2	Recommended to be carried forward	

Option	Original Recommendation	Updated Recommendation
3	Recommended to be carried forward	forward
4	Recommended to be carried forward	Recommended to be carried forward – <i>explore possibility of active transportation underpass & retain heritage elements of sluiceway</i>
5a	Not recommended to be carried forward	Not recommended to be carried forward
5b	Not recommended to be carried forward	Not recommended to be carried forward
6	Not included (New Option)	Recommended to be carried forward

Next Steps and Closing Remarks

Reg and Susan thanked staff for participating in the session. Staff were encouraged to share additional feedback after the meeting via email. Feedback will be used by the project team to proceed with a more robust evaluation of the short-listed options. Additional opportunities for staff engagement will be made available as the project progresses.

Macdonell and Allan Structures Municipal Class Environmental Assessment Studies

Long List to Short List Workshop – Information Package

February 23, 2023



Creating a place for everyone.

Macdonell Bridge Long List

1. **Do Nothing:** No improvements.
2. **Rehabilitate the Bridge:** Undertake repairs to the existing bridge.
3. **Replace the Bridge**
 - a) Replacement of the entire bridge.
 - b) Replacement of the superstructure (deck, railing etc.), and rehabilitation of the substructure (piers, abutments etc.).
4. **Keep Existing Bridge for Pedestrians and Cyclists Only:** Close bridge to vehicular traffic. Bridge becomes pedestrian and cyclist crossing only.
5. **Remove Bridge:** Remove the bridge and redirect vehicular, pedestrian and cyclist traffic to other crossings.



2a) Macdonell Bridge Aerial View



2b) Macdonell Bridge

Allans Dam Bridge Long List

1. **Do Nothing:** No improvements. Bridge continues to deteriorate.
2. **Rehabilitate Bridge for Pedestrians & Cyclists:** Fix the bridge where it is deteriorating and re-open for pedestrians and cyclists only.
3. **Replace Bridge for Pedestrians & Cyclists:** Replacement of the structure with a new bridge for pedestrians and cyclists only
4. **Remove Bridge:** Permanent closure and removal of the bridge.



3a) Allans Dam Bridge



3b) Allans Dam Bridge Closure

Allans Dam Sluiceway & Spillway Long List

1. **Do Nothing:** No improvements. Sluiceway and spillway continue to deteriorate.
2. **Rehabilitate Sluiceway and Spillway:** Undertake necessary repairs to the existing sluiceway and spillway.
3. **Remove Sluiceway and Rehabilitate Spillway:** Speed River elevation continues to be controlled by existing spillway, with no sluiceway operations.
4. **Remove Sluiceway and Spillway:** Complete removal of the existing sluiceway and spillway. Speed River elevation is no longer controlled.
5. **Remove Sluiceway and Spillway**
 - a) **Build a New Dam Upstream:** Speed River elevation is controlled by a new dam.
 - b) **Build a New Dam Upstream with an Active Transportation Underpass*:** Construction of a new active transportation underpass connecting the Trans Canada Rail Trail underneath the Macdonell Bridge. Speed River elevation is controlled by a new dam.

* Added to long list following feedback at PIC #1



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4a) The sluiceway is a concrete channel with a metal gate to carry excess water.



4b) The spillway forms a weir to control the Speed River elevation, previously used for the now-removed Allan's Mill.