



# Belfountain Dam & Headpond

Class Environmental Assessment

Technical Report 2 – Management Alternatives

Prepared for:

**Credit Valley Conservation**

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**BELFOUNTAIN DAM & HEADPOND  
CLASS ENVIRONMENTAL ASSESSMENT**

**TECHNICAL REPORT 1 – BASELINE INVENTORY**

Submitted to:

**Credit Valley Conservation**

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## 1.0 INTRODUCTION

This Technical Report constitutes the second prepared for the Belfountain Dam and Headpond Class Environmental Assessment. *Technical Report 1: Baseline Inventory* (Amec Foster Wheeler, August 2015) characterized the existing conditions within the Study Area. This report provides details on the characterization and evaluation of various management alternatives for the dam and headpond. Sections 1, 2 and 3 of this report reproduce or summarize information originally presented in Technical Report 1 including the Study Purpose, Project Team, Study Area, background, study objectives and key findings from Technical Report 1. This information has been included in Technical Report 2 so that this report may be read as a stand-alone document. Readers familiar with Technical Report 1 may wish to skip to Section 4.

### 1.1 Purpose

Amec Foster Wheeler has been retained by Credit Valley Conservation (CVC) to assess various alternatives and associated implementation options for future management of the Belfountain Dam and Headpond, under the guiding principles of the Conservation Ontario Class Environmental Assessment (Class EA) process. The Class EA will document baseline environmental conditions, establish a long-list of management alternatives, evaluate each alternative using appropriate physical, biological, cultural and socioeconomic criteria leading to the selection of the Preferred Alternative(s). Implementation options will then be developed for the Preferred Alternative, and a detailed impact and mitigation plan will be prepared. Significant public, agency and stakeholder consultation is planned for each stage of the project and input will be used to inform the process.

### 1.2 Project Team

The Amec Foster Wheeler Team includes four (4) consultants with specialists in thirteen (13) key study disciplines:

- ▶ Amec Foster Wheeler Environment & Infrastructure: Project Management, Public Consultation, Water Resources Engineering, Structural Engineering, Geotechnical Engineering, Cultural and Built Heritage, and Archaeology
- ▶ PARISH Aquatic Services, A Division of Matrix Solutions Inc.: Stream Morphology, Aquatic Ecology, Terrestrial Ecology and Sediment Quality
- ▶ Collins-Ferrara Engineering Inc: Mechanical Engineering
- ▶ Ameresco Inc.: Financial Analysis

### 1.3 Study Area

The formal Study Area is comprised of the Belfountain Dam and Headpond and the immediate surrounding area that may be impacted by implementation of management alternatives (ref. Figure 1 and 2). The Study Area contains several anthropogenic and natural features including the Belfountain Dam and Headpond, other historic structures including the ‘Yellowstone Cave’, retaining walls and building foundations, a pedestrian bridge over the dam, a large terrace

recreational area, the West Credit River and significant mature forest land. Appendix B provides a photographic catalogue depicting the Study Area in its current and historic states.

The dam is located within the Belfountain Conservation Area (BCA), which, along with the Willoughby Property and the Cox Property comprise the larger Belfountain Complex (ref. Figure 3). The closest settlement is Belfountain, a village within the Town of Caledon and the Region of Peel.

The study must also consider the dam within the context of the West Credit River watershed. The area upstream of Belfountain Dam influences the hydraulic, fluvial, aquatic and riparian conditions through the Study Area, and likewise the dam influences these factors downstream. Figure 4 illustrates the West Credit River watershed.

#### 1.4 Background

The site of the Belfountain Dam originally contained a smaller water control structure associated with a historic mill operation. Charles Mack, a wealthy Toronto manufacturer, purchased the land in 1908 with the intention to create a public recreational area. The Belfountain Dam was built in an attempt to mimic Niagara Falls and create a feature for his park, which opened to the public in 1914. The dam served as an aesthetic feature and through the generation of a headpond, enabled recreation (swimming, boating and fishing). Pre-contact aboriginal and euro-Canadian artifacts have been found on the site and nearby sites. A detailed discussion on regional and park history and archeological resources can be found in Technical Report 1, *Section 3.7 Cultural & Built Heritage* and *Section 3.8 Archaeology*.

After Mack's death the park was sold. CVC acquired Mack's Park in 1959 and began to acquire additional parcels comprising part of what is now the Belfountain Complex. CVC has made some improvements to the dam over time, however the main spillway structure remains largely original and continues to serve the same aesthetic/recreational purpose for the BCA (the dam has never provided flood control or purposed flow augmentation). The engineering aspects of the dam (hydrology, hydraulics, structural and geotechnical) are well understood from recent and formative studies. Of particular note, a recent geotechnical investigation has determined that various components of the dam do not meet current Provincial guidelines for dam stability and as such the structure now presents a safety concern that must be mitigated. A detailed discussion on the dam, previous investigations and governing legislature can be found in Technical Report 1, *Section 3.1 Formative Studies*. Additional structural and geotechnical investigations have been completed in support of the current Class EA in order to address gaps identified in previous studies and are summarized in Technical Report 1, Sections 3.2 and 3.3.

As noted, the Belfountain Dam is located on the West Credit River. The watercourse and its associated valley lands represent some unique and valuable aquatic and terrestrial habitat, much of which has adjusted over time to the presence of the dam, at least locally, along with the species it supports. Of particular note, the dam now represents a barrier to fish passage, providing protection to upstream native brook trout from downstream non-native species. Technical Report 1, Sections 3.5 and 3.6 provide characterization of *Aquatic Ecology* and *Terrestrial Ecology*. Similarly, the function of the watercourse itself has been impacted by the presence of the dam,

most significantly in the impoundment of sediment in the headpond, sediment that would have otherwise been transported downstream; Technical Report 1, *Section 3.4 Stream Morphology & Sediment* provides a discussion on these elements.

The Belfountain Dam & Headpond Class EA is being undertaken concurrently with the Belfountain Complex Management Plan (BCMP). The BCMP study area includes the three (3) properties comprising the Complex and will outline the future management plan for the Complex. Due to the complex engineering issues related to the Belfountain Dam, and given that some of the potential outcomes trigger a Conservation Ontario Class EA, it has been considered preferable and necessary to evaluate the management of the dam and headpond in a separate planning process (the current Class EA).

## **1.5 Study Objectives**

CVC has established seven (7) guiding objectives for the Class EA:

*Objective #1: Maintain a Fisheries Barrier* - Maintain a barrier between upstream brook trout and downstream non-native and invasive species.

*Objective #2: Reduce/minimize risk to visitors, staff, affected property and downstream dams*

*Objective #3: Maintain or improve the visitor experience* - Maintain the high quality visitor experience that the public expects when they visit Belfountain Conservation Area.

*Objective #4: Conserve and enhance cultural heritage attributes* - Maintain and improve the cultural heritage attributes that are representative of Belfountain Conservation Area's history as a rare example of an early 20th century park.

*Objective #5: Promote natural stream function* - Maintain and improve the natural function of the West Credit River and its ecosystem.

*Objective #6: Strive for long-term sustainability including economic viability* - Maintain or improve BCA's ability to function as an active conservation area within CVC's Core 10 Conservation Area System and as part of the Niagara Escarpment Parks and Open Space System with the resources currently available.

*Objective #7: Conserve and enhance natural heritage attributes* - Contribute to the form and function of the Study Area as well as nearby natural heritage features by maintaining or enhancing the cover of natural area.

These objectives will be considered in the development and evaluation of management alternatives. The Preferred Alternative will ultimately be required to meet the stated objectives.

## 2.0 CONSERVATION ONTARIO CLASS ENVIRONMENTAL ASSESSMENT PROCESS

### 2.1 Overview

This study is following the process outlined in the Conservation Ontario Class Environmental Assessment for Remedial Flood and Erosion Control Projects (June 2002, Amended June 2013) which is approved under the Environmental Assessment Act (1990). The Conservation Ontario Class EA process outlines mandatory principles, details of project consultation and technical requirements. A Conservation Ontario Class EA document is considered a legal document which outlines project recommendations and next steps, based on a technical assessment, to the public and to technical practitioners and agencies, who have to review and implement the findings of the study. The Class EA approach is considered a suitable means for the planning of remedial flood and erosion control projects for Conservation Authorities, because such projects:

- ▶ have a common process of planning, design, approval, construction, operation and monitoring; and,
- ▶ have a generally predictable range of effects, which, though significant enough to require environmental assessment, are generally responsive to standard mitigation measures.

It is the responsibility of the Conservation Authority to ensure that the planning process, as set out in the Class EA document, is undertaken. The projects that will be assessed are those with predictable environmental effects and proposed mitigation measures will be identified and documented. The Class EA process provides a consistent, streamlined, easily understood process for planning and implementing flood and erosion control projects. The process provides a means for the identification of issues and concerns, and the preferred means of addressing them, with due regard to environmental management, protection, and mitigation measures. The process also provides the flexibility to be tailored to the activity, taking into account the environmental setting, *public* interest, and unique situation requirements.

### 2.2 Conservation Ontario Class EA Process

The Conservation Ontario Class EA Process applies to Remedial Flood and Erosion Control Projects, which are required to protect human life and property, in previously developed areas, from an impending *flood* or *erosion* problem. The Class EA document categorizes projects according to the following groupings:

- ▶ **Riverine Flooding:** Two main causes of flooding in the riverine system are an increase in water level from a storm event or rapid snow melt, and a result of the formation of ice jams, frazil ice, or other debris in watercourses.
- ▶ **Riverine and Valley Slope Erosion:** Riverine erosion is the result of fluvial processes which are determined by the watercourses flow and the sediment mixture of the watercourses bed and banks. Bluff/bank instability problems can also occur along river or stream banks as a result of weathering, internal drainage problems, or the removal of stabilizing vegetation and soil material from the surface of the slope.
- ▶ **Shoreline Flooding:** Shoreline flooding varies from a river system because an additional component, that of wave action, must be considered in addition to increases in water

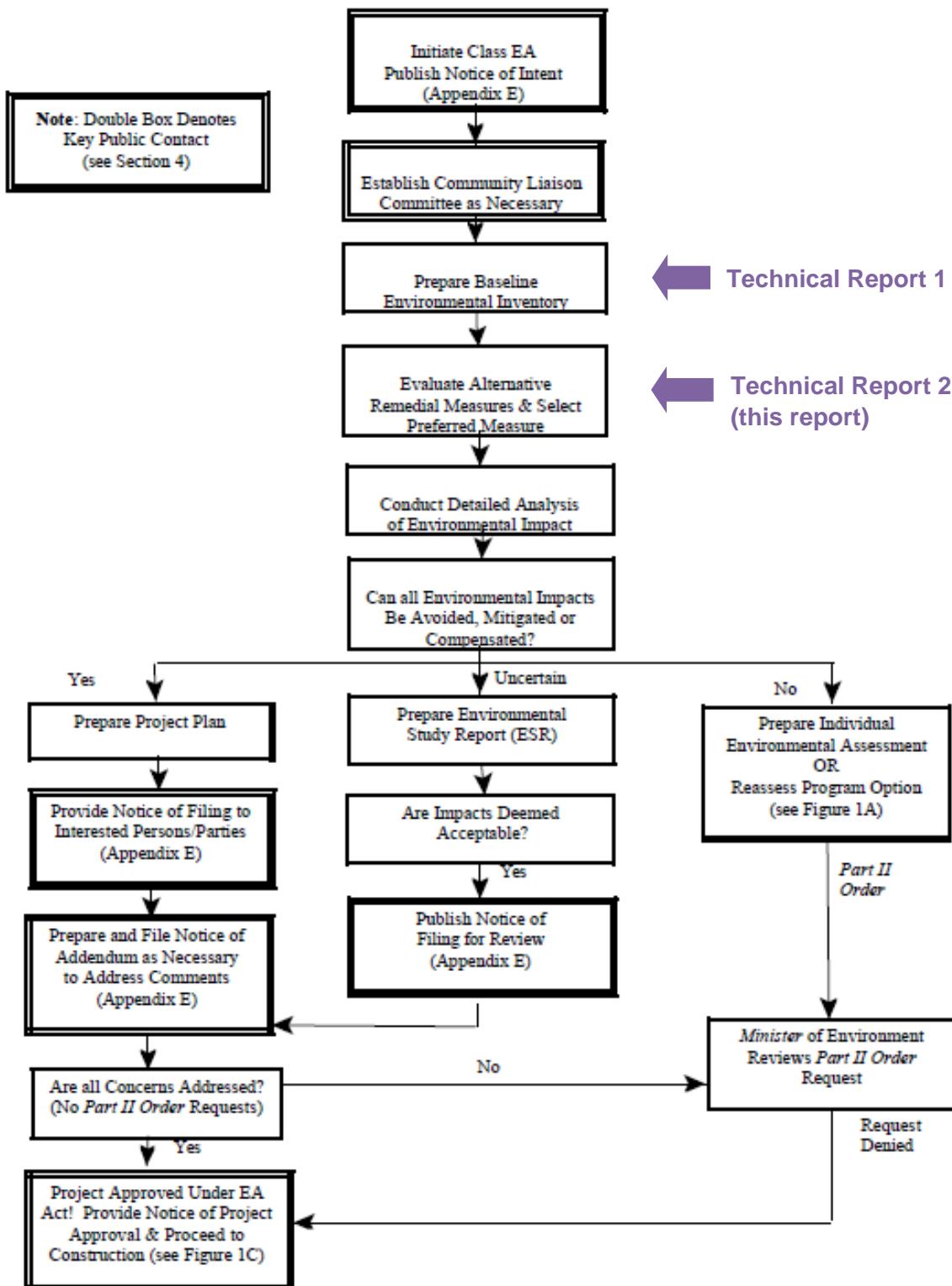
levels. The still water level plus the wave action (wave uprush/run-up, overtopping, ice accumulation) result in a final storm elevation.

- ▶ **Shoreline Erosion:** The erosion processes along the shoreline differ from those in a riverine system. Erosion is predominantly brought about by waves, currents, shore geomorphology, ice and changes in water levels. Shoreline erosion can result in deterioration of bluffs/banks, dunes, berms and beaches.

The Planning and Design process as shown in Figure 2.2.1 outlines the steps required to be undertaken by the proponent including how the Class EA process is initiated and the environmental planning and design principles that are to be employed in this process. **Technical Report 2 (this report) fulfills the fourth step shown on Figure 2.2.1.**

As part of the Class EA process the following key principles have been considered:

- ▶ *Establish a Problem and Opportunity Statement;*
- ▶ *Consult with affected parties early in and throughout the process, such that the planning process is a cooperative venture;*
- ▶ *Consider a reasonable range of alternatives, both functionally different “alternatives” and “alternative methods” of implementing the solution;*
- ▶ *Systematic evaluation of alternatives in terms of their advantages and disadvantages, to determine their net environmental effects; and,*
- ▶ *Provision of clear and complete documentation of the planning process followed, to allow “traceability” of decision-making with respect to the project.*



**Figure 2.2.1: Conservation Ontario Class Environmental Assessment for Remedial Flood and Erosion Control Projects (June 2002, Amended June 2013).**

## 2.3 Consultation Plan Overview

A Consultation Plan (Plan) has been developed for this study to support the required EA consultation activities and identify opportunities to further enhance those engagement activities with the general public, interested persons, Aboriginal communities and government agencies. This Project will need to meet the regulatory requirements of the Conservation Ontario Class EA document. The Plan (May 2015) is presented in Appendix A and the following summarizes the proposed activities.

### Notifications

The general public, interested persons, and Aboriginal communities will be informed and invited to participate in the planning and design aspects of the Project through the placement of notices in newspapers and through other means as outlined in the following.

- ▶ Notice of Intent to Undertake a Remedial Project – published in local newspapers and sent directly by mail to the project mailing list (including Aboriginal communities and contact groups) and Conservation Ontario (CO)/Ministry of the Environment and Climate Change (MOECC) Region offices. The Notice of Intent was published on **May 7, 2015** in local newspapers (Caledon Enterprise, Orangeville Banner, Erin Advocate, Georgetown Independent), posted onto the website (<http://www.creditvalleyca.ca/wp-content/uploads/2015/05/belf-dam-notice-of-intent.pdf>) and issued to interested agencies and persons (ref. Appendix A).
- ▶ Notice of Public Open House – published in local newspapers and sent directly by mail to the project mailing list (including Aboriginal communities and contact groups) and CO office. Two (2) public open houses will be held as part of the study. The open houses were held on **September 22, 2015** and **December 1<sup>st</sup>, 2015** at Caledon Ski Club.
- ▶ Notice of Filing of an Environmental Study Report – published in local newspapers and sent directly by mail to the project mailing list (including Aboriginal communities and contact groups) and CO/MOECC Region offices.
- ▶ Notice of Filing Addendum (if required) – published in local newspapers and sent directly by mail to the project mailing list (including Aboriginal communities and contact groups) and CO/MOECC Region offices
- ▶ Notice of Project Approval – sent directly by mail to the project mailing list and CO office.
- ▶ Notice of Project Completion – sent directly by mail to the project mailing list and CO/MOECC Region offices.

Notices will also be issued to individuals that have requested to be kept informed about the Project and whose names have been added to the Project Mailing List. This list will be updated as individuals identify an interest to be added or subsequently removed.

## **Community Liaison Committee**

The guidelines identify that a Community Liaison Committee (CLC) is to be formed. In the case of this Project, a Stakeholder Advisory Committee (SAC) already exists, which will assume the function of the CLC. This committee will discuss the Environmental Study Report outcomes and recommendations prior to the Notice of Filing being issued to provide input and subsequently to address comments received. CVC will consider any requests from interested individuals who may wish to join and participate in this committee. The contact list for the CLC is provided in Appendix A, along with the agency contact list and CVC Core and Review Teams.

## **Methods of Participation**

Individuals who have an interest in the Project can participate through a number of ways that CVC will make available, including:

- ▶ Reviewing copies of reports and documents;
- ▶ Providing oral and/or written comments;
- ▶ Attending information sessions to obtain information and to have questions answered;
- ▶ Meeting with CVC to discuss concerns;
- ▶ Becoming a member of CVC's contact group by adding their names to the Project Mailing List to be directly notified of future updates to the undertaking; and
- ▶ Requesting to be a member of the SAC.

## **Aboriginal Communities**

CVC recognizes the value and requirement of engaging with potentially affected First Nations and Métis communities. The variety of perspectives that these Aboriginal communities can provide to a Project, add value to the process and results. Consultation is specific to each community and can only be determined subsequent to an introductory meeting (and in some cases correspondence) to introduce CVC and the Project. Efforts will be made to ensure that First Nations and Métis communities are made aware of the Project and are given opportunity to become informed and provide input on the Project.

CVC has contacted the Ministry of Aboriginal Affairs (MAA) and Aboriginal Affairs and Northern Development Canada (AANDC) for assistance in determining which Aboriginal communities may have an interest in the Project. Subsequent, to receiving direction from the government, introductory letters and follow-up calls will be made to each community. Based on the outcomes of this initial contact, consultation with each community may include meeting with Chief and Council, community and/or providing further documentation.

## **Consultation Activities**

A variety of methods to inform and seek feedback from the general public, interested persons, Aboriginal communities and government agencies will be used. These methods include:

- ▶ **Website:** CVC will develop webpages to host information about the Project, including background, objectives, overview of safety and environmental concerns, and post Project-related documentation (such as fact sheets, presentations). The webpages can be accessed at: <https://www.creditvalleyca.ca/enjoy-the-outdoors/conservation-areas/belfountain-conservation-area/belfountain-conservation-area-management-plan/class-environmental-assessment-for-belfountain-dam-and-headpond-area/>
- ▶ **Frequently Asked Questions (FAQs):** to proactively address the anticipated questions that may arise, CVC will develop responses to these questions and make them available on the website and in hardcopy at the CA and public meetings. The FAQs can be accessed at: <http://www.creditvalleyca.ca/wp-content/uploads/2015/05/belf-dam-faq.pdf>
- ▶ **Fact Sheets:** CVC will prepare fact sheets to provide background information on the Project, its objectives and next steps. These fact sheets will be distributed to stakeholders and Aboriginal communities through email and posted to the website. The fact sheets will be made available in hard copy format at events (such as an open house, a focus group). The first fact sheet can be accessed at: <http://www.creditvalleyca.ca/wp-content/uploads/2015/05/belf-dam-factsheet.pdf>
- ▶ **Multi-Stakeholder Committee:** CVC has an established SAC that will provide a forum for in-depth discussions regarding Project issues, bring transparency to Project-related activities, and help to foster good community relations. Meeting minutes and presentations can be accessed at: <http://www.creditvalleyca.ca/enjoy-the-outdoors/conservation-areas/belfountain-conservation-area/belfountain-conservation-area-management-plan/consultation/stakeholder-advisory-committee/>
- ▶ **Open Houses:** CVC will host two community information sessions to communicate important Project information and seek feedback about attendees' Project-related priorities and interests.
- ▶ **Feedback Forms:** CVC will solicit feedback about the Project and the methods/activities used to involve the public through comment forms (hard copy and online). This feedback will be incorporated into the Project planning process. Where feedback is consistent from stakeholders, specific activities may be identified to address these concerns to ensure transparency of the process.
- ▶ **Consultation Tracking:** CVC will maintain a record of contacts with stakeholders and Aboriginal people. This record of contacts will include a summary of the event, parties involved, identify questions/concerns raised as well as responses given, commitments made and actions required.

### 3.0 SUMMARY OF TECHNICAL REPORT 1 – BASELINE INVENTORY

Establishing a Baseline Inventory involves assessing the condition and performance of the existing environment and systems within the Study Area. The following systems, or disciplines of study have been characterized because they either influence the existing problem or are required to understand potential impacts or opportunities related to mitigation alternatives:

- ▶ structural engineering
- ▶ hydrology and hydraulics
- ▶ aquatic ecology
- ▶ cultural and built heritage
- ▶ finance
- ▶ geotechnical engineering
- ▶ stream morphology
- ▶ terrestrial ecology
- ▶ archaeology

The Baseline Inventory was completed and documented in the *Belfountain Dam and Headpond Class Environmental Assessment Technical Report 1 Baseline Inventory* (Amec Foster Wheeler, August 2015). This section provides a summary of the key outcomes, constraints and opportunities that have been identified by each discipline study carried out in support of the Baseline Inventory. The items summarized are expected to influence and guide the development and evaluation of alternatives, may be important for assessing the impact of alternatives and/or are critical in developing a plan to mitigate impacts. For more information on the items summarized below, refer to the *Belfountain Dam and Headpond Class Environmental Assessment Technical Report 1 Baseline Inventory* (Amec Foster Wheeler, August 2015).

#### ***Hydrology & Hydraulics***

- ▶ Should the dam be proposed to remain, the Hazard Potential Classification (HPC) will need to be updated, including selection of the appropriate Inflow Design Flood (IDF).
- ▶ Any alteration to the performance of the dam must not have an impact on upstream or downstream property, including the Stonecutters Dam.

#### ***Structural Engineering***

- ▶ The dam spillway structure does not have the required sliding factor of safety under the usual summer and winter loading conditions (ref. Terraprobe 2013) in accordance with the Technical Bulletins (2011) issued by MNRF under the Lakes and Rivers Improvement Act. Mitigation will be required if the dam is proposed to remain.
- ▶ Based on the visual site inspection, the dam structure is in a good condition with localized poor areas of defective concrete that will require rehabilitation.
- ▶ The retaining wall along the downstream side of the north embankment (left side looking downstream) is unstable during flood or flood-earthquake combined conditions (ref. Terraprobe 2013). Mitigation will be required if the dam is proposed to remain.
- ▶ Based on the visual site inspection, the concrete retaining walls are in a fair to good condition overall with localized areas of defective concrete and undermining, which will require rehabilitation.

- ▶ The stability of the south masonry embankment could be jeopardized by the active soil erosion or slope instability of the south earth embankment. Remedial measures to stabilize the south earth embankment will be required.

▶

### ***Geotechnical Engineering***

- ▶ A test pitting investigation program has been completed to obtain information on the downstream north abutment retaining wall (left side looking downstream) backfill and overburden soil behind the backfill.
- ▶ Review of topography and manual assessment of the soil cover of the right abutment slope is required to assess the stability of the slope and assess possible alternatives.

### ***Stream Morphology***

- ▶ The change from underlying hard-rock to a softer more erodible shale likely created a natural reach break via a knick-point or substantial gradient change along the river. As such, the presence of the dam itself cannot be directly linked to the general channel characteristics within the study area (i.e., steeper gradient downstream).
- ▶ Direct effects of the dam on channel morphology can be seen in the deep scour pool immediately downstream and the accumulation of sediment and ponding of water, which acts to over widen the upstream, natural channel.
- ▶ While fine grain sediment is actively accumulating upstream of the dam and downstream sediment deprivation is likely occurring to some degree, lack of finer grain sediments located immediately downstream from the dam (as observed during field reconnaissance) could be attributed to higher flow velocities able to readily transport the particles out of the Study Area. This condition likely persists to the confluence with the main branch of the Credit River where bed slopes are reduced. Given these observations, it is difficult to predict the impact the dam may have on grainsize distributions downstream.
- ▶ Results of the RGA indicate that Study Area reaches are in a transitional state with channel widening being the predominant geomorphic process affecting the channel. Being classified as transitional indicates that the river falls below the threshold for active form adjustment. Adjustments to channel discharge, sediment load, sediment size distribution, or gradient may produce changes to overall morphology of the channel.
- ▶ Opportunities exist to improve channel dynamics, which would improve sediment transport and aquatic habitat and function (e.g. log or rock deflectors).

### ***Headpond Sediment***

- ▶ Headpond sediment is predominantly composed of fine grain silty-fine sand with some organic debris. Surficial probing indicates the top layer of unconsolidated sediment has a volume of 2500 m<sup>3</sup>. The estimated total sediment accumulated behind the dam is approximately 14,000 m<sup>3</sup>.
- ▶ Sediment quality does not pose significant implications for disposal or remediation, however some sediment quality mitigation may be required, depending on the results of more detailed sediment sampling. If the headpond sediment were to be dredged and pollutants mitigated (e.g. dilution through mixing with clean material), management and

disposal of the material could likely be done either on site (i.e., landscaping fill) or by transporting offsite for use or disposal elsewhere.

- ▶ The low level of contaminants within the samples also indicate that if the sediment remains in the channel for natural transport downstream, there would be a low risk of adverse effects to the in-stream ecosystem expected.

### **Aquatic Ecology**

- ▶ The Belfountain Dam acts as a barrier between the native brook trout (*Salvelinus fontinalis*) population upstream of the dam and the naturalized brown trout (*Salmo trutta*) and rainbow trout populations downstream, but also prevents other aquatic species, such as the Atlantic salmon (stocked upstream) and the endangered American eel, from moving upstream of the dam.
- ▶ The slow-moving waters within the headpond create a warming effect which negatively impacts coldwater fish communities and sensitive species downstream of the dam.
- ▶ Any works completed within the dam must be done in accordance with the Fisheries Act by avoiding serious harm to fish. Emphasis will be placed on ensuring no serious harm occurs to the American eel which is classified as endangered under the Ontario Species at Risk Act.

### **Terrestrial Ecology**

- ▶ The BCA contains high quality woodland and valleyland environments.
- ▶ There are several species at risk surrounding the study area which include butternut (*Juglans cinerea*), little brown myotis (*Myotis lucifugus*), northern myotis (*Myotis septentrionalis*), Jefferson salamander (*Ambystoma jeffersonianum*), eastern snapping turtle (*Chelydra serpentina*), chimney swift (*Chaetura pelagica*), Canada warbler (*Cardellina canadensis*), eastern wood peewee (*Contopus virens*), wood thrush (*Hylocichla mustelina*), and Louisiana waterthrush (*Parkesia motacilla*). The presence of these species at risk will effect when any works surrounding the dam may take place in order to avoid important timing windows.
- ▶ It has been noted by CVC that the headpond of the Belfountain Dam has limited value to wildlife; however it does provide feeding opportunities for some water forager species.

### **Cultural & Built Heritage**

- ▶ Mack Park, a part of BCA, is designated as a candidate Cultural Heritage Landscape in the Town of Caledon Cultural Heritage Inventory (BC-13 Mack's Park, BCA, 10 Credit Street).
- ▶ Numerous built heritage resources have been identified within the Study Area.
- ▶ The following recommendations are made to mitigate potential project effects on heritage resources and will be considered in the development and evaluation of alternatives:
  - i. When the preferred remediation option is selected and specific potential project impacts to heritage resources can be identified, appropriate mitigation measures should be proposed;

- ii. In general, the rehabilitation, removal, or rebuilding of the dam and the subsequent changes to the headpond should respect both the structure and the landscape as physical records of their time, place and use;
- iii. New interventions should be physically and visually compatible, but identifiable as new work;
- iv. Documentation of the existing structure should be undertaken before any rehabilitation work is done; and,
- v. Heritage interpretive signage should be created that tells the history of the site and depicts it with representative early photos of the site.

### ***Archaeology***

- ▶ Mack Park is a registered archaeological site in the Ontario Archaeological Sites Database (OASD, Site: AjHa-10).
- ▶ The Willoughby Industrial Heritage Site (AkHa-20) is within one-kilometre of the Study Area
- ▶ 88% (12.49 hectares) of the Study Area has archaeological potential and warrants Stage 2 archaeological assessment
- ▶ It is recommended that prior to land altering activities within any portion of the Study Area deemed to have archaeological potential, a Stage 2 archaeological assessment by means of test pit survey must be carried out in accordance with the Ministry of Tourism, Culture and Sport's *Standards and Guidelines for Consultant Archaeologists* (2001).

### ***Financial***

- ▶ Day use fees represent a significant portion of total program revenues and impact to visitation should therefore be considered when evaluating the management alternatives for the dam and headpond.
- ▶ With program spending generally increasing, and revenue relatively constant, the following opportunities for alternative revenue could be considered:
  - Donations and fundraising activities are becoming a good source of alternative revenue for discretionary services where the tax base is becoming increasingly constrained. Fundraising opportunities may be tied with existing annual events such as the fall Salamander Festival. New fundraising activities or special events may serve to increase awareness of the special heritage and cultural features available in the BCA, thereby also attracting more visitors to the area. Individuals with a special interest in maintaining or enhancing the natural heritage features in the conservation area may wish to consider including Credit Valley Conservation as a beneficiary in their will. These are all opportunities that are being explored through CVC's Foundation.
  - Day use fees may be able to be increased. It has been shown that the median family income within the primary trade area is significantly greater than the Ontario median family income according to 2006 Census data, which may suggest that visitors to attractions in this area may be less resistant to increases in cost.

- There may be other alternative sources of revenue (e.g. a festival that charges a premium on the day pass) that could be investigated and developed in order to raise the funding that will be necessary in order to maintain and enhance the cultural and natural heritage features under study.
- Use of a reserve may wish to be considered in order to set aside day use fee revenue in years when the number of visitors is higher than anticipated in order to offset years where the number of visitors is unexpectedly lower than usual. Since the number of visitors attending the conservation area attractions is affected most by uncontrollable weather patterns, use of a reserve would be valuable in managing the net tax impact from year to year.

## 4.0 ALTERNATIVE ASSESSMENT

This section provides an outline of potential management alternatives for the Belfountain Dam and Headpond. Although the dam and headpond are fundamentally linked (the headpond exists because of the dam), the two features can be considered separately to some extent. As such, a separate list of alternatives has been developed for the dam and the headpond with an overall consideration of linked functionality. The alternatives listed below are considered the core alternatives for each feature. Several variations on each alternative may exist.

### **Dam Alternatives**

- D1. Do Nothing*
- D2. Rehabilitate the dam*
- D3. Replace the dam*
- D4. Lower the spillway*
- D5. Decommission the dam*

### **Headpond Alternatives**

- H1. Do Nothing*
- H2. Rehabilitate the headpond*
- H3. Expand tableland into the headpond*
- H4. Convert part of headpond to wetlands*
- H5. Backfill headpond & construct channel*
- H6. Construct channel & offline pond*
- H7. Restore natural valley and channel*

In addition, a number of secondary options (e.g. fishway, trail/boardwalk improvements, etc.) have been identified; these options are generally available for all alternatives and are not considered to influence the selection of the Preferred Alternative and as such will be more fulsomely considered at the next stage of study (*Analysis of Alternative Methods for Implementation*).

### 4.1 Dam Alternatives

#### 4.1.1 Alternative D1: Do Nothing

Under this alternative, no works would be proposed and the dam would be left as it is today. This alternative is included as it is required as a baseline benchmark by the Conservation Ontario Class EA process. In some cases, ‘doing nothing’ may be the best alternative if other options have unacceptable negative effects. Figure 5 shows the Study Area under existing conditions, highlights key elements and land uses, and provides a basis for comparison to other alternatives. Previous study has determined that Belfountain Dam does not meet the structural requirements of the Lakes and Rivers Improvement Act (LRIA) that govern the design of dams and protect public safety and private property. Accordingly, ‘Do Nothing’ would not meet study *Objective #2: Reduce/minimize risk to visitors, staff, affected property and downstream dams* and as such is not a viable alternative.

#### 4.1.2 Alternative D2: Rehabilitate the dam

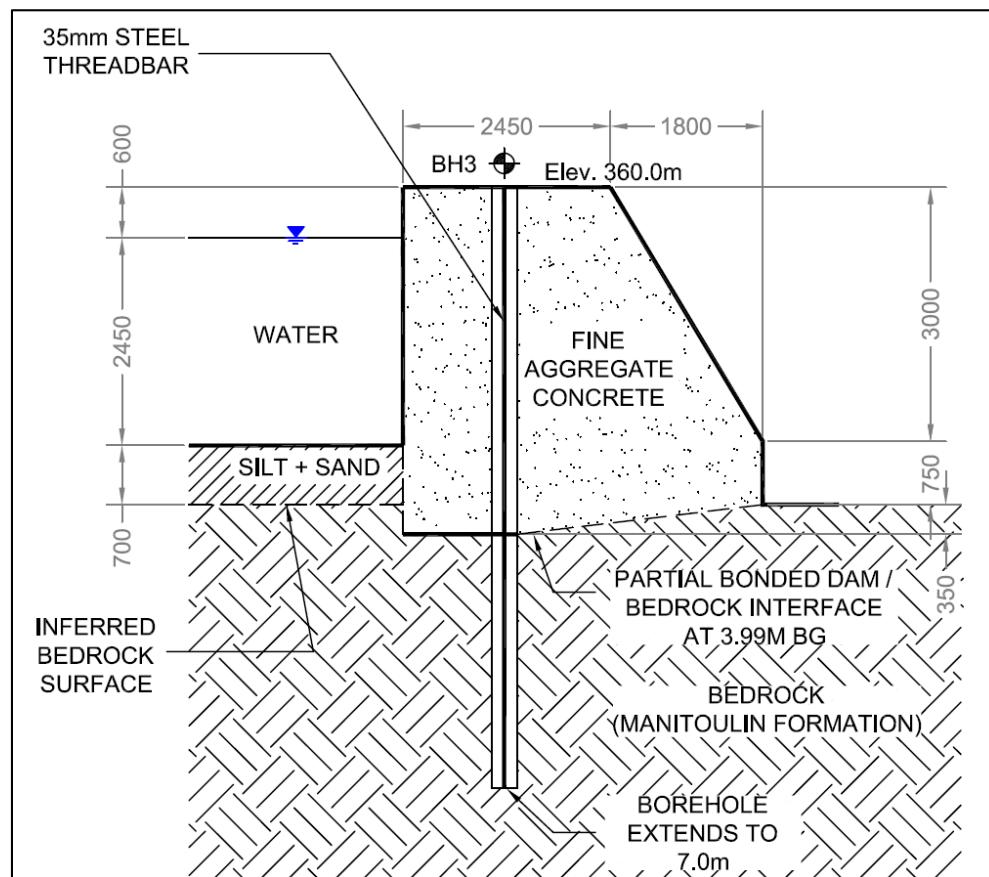
*Alternative D2: Rehabilitate the dam* would address the deficient factor-of-safety for sliding of the existing dam spillway and bring the structure into compliance with the Technical Bulletins (2011) issued by MNRF under the LRIA and address current safety concerns. If it were not for the current study and CVC was simply maintaining its dam infrastructure in accordance with provincial policy,

the works proposed under this alternative would be consistent with what CVC would be required to undertake to achieve compliance with the LRIA, in other words, ‘business as usual’. Several options to increase the resistance to sliding have been identified:

- i. Install steel shear anchors to bedrock (increases shear resistance by anchoring to competent bedrock)
- ii. Extend the spillway downstream to create a larger downstream apron (increases the mass of the structure and the sliding surface)
- iii. Extend the spillway structure into one or both of the abutments (lowers the Inflow Design Flood (IDF) level, increases the structures mass and sliding surface)
- iv. Lower the crest of the spillway (reduces loads on the structure from water and sediment)

Option *ii* and *iii* would result in relatively high capital costs and relatively high impacts to the built heritage features (retaining wall, fountain, Yellowstone Cave) and the heritage landscape adjacent to the dam. Option *iv* has been evaluated further in Section 4.1.4 as a stand-alone alternative. Option *i*, installing steel shear anchors, is considered the most viable option to rehabilitate the dam and has been advanced for this alternative.

The *Geotechnical Investigation and Dam Safety Report* (Terraprobe 2013) recommended the installation of ten (10) rock anchors to satisfy the required factor of safety of 2.0 under winter loading conditions (this assumes water levels are not reduced below the sediment level and ice loads are incurred on the structure). Each anchor would involve boring a hole through the dam to a sufficient depth into competent founding bedrock and installing a steel bar and grouting. Figure 4.1 illustrates the typical installation of a shear anchor.



**Figure 4.1: Spillway cross section with shear anchor (Terraprobe, 2013)**

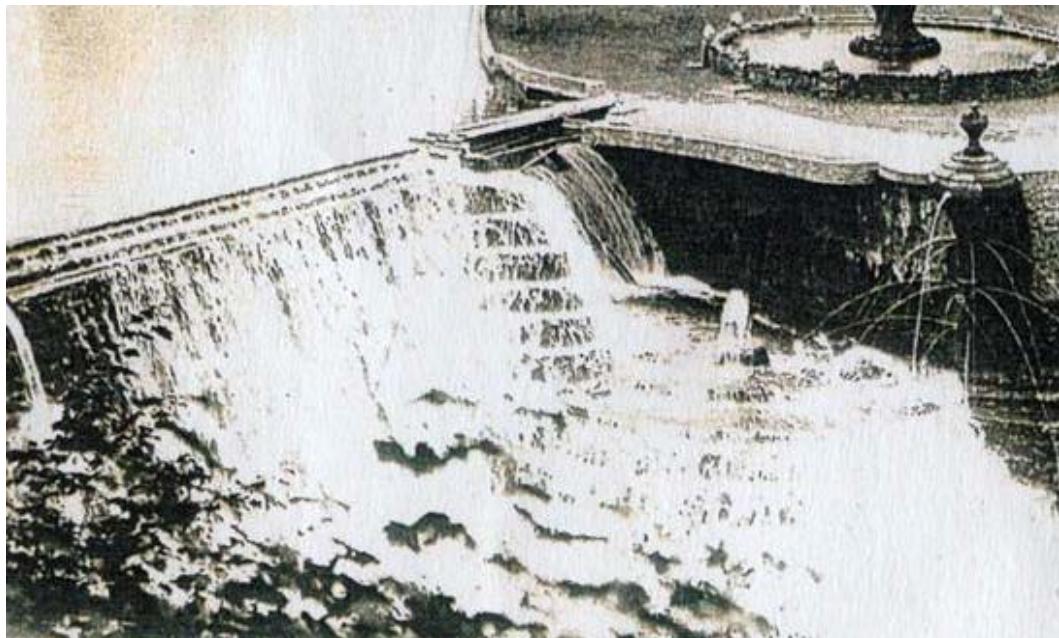
Construction of Alternative D2 would create little to no disturbance to the Study Area and accordingly would result in minimal negative effects to the physical, biological, cultural, and socioeconomic environments. Conversely, it would not provide any positive benefits related to aquatic habitat, water quality or stream function.

Under this alternative, additional works to mitigate the stability of the north retaining wall would also be required. Options and recommendations for the north retaining wall would be considered at the next stage of study if this alternative is advanced. Other minor works to address the condition of the concrete and undermining of the north retaining wall would also be required in some locations.

#### 4.1.3 Alternative D3: Replace the dam

*Alternative D3: Replace the dam* would address the deficient sliding factor-of-safety of the existing dam spillway by replacing it with a new spillway structure. Although modern engineering would be used for the core of the structure, surface treatments could be sympathetic to the original structure (e.g. grouted cobble on the downstream face of the spillway). The sluiceway structure (north side of the dam) could remain as it meets the required structural criteria. Alternatively, the outlet structure could also be replaced and redesigned to more closely match the historic structure

which included a stepped semi-circle structure that resulted in a cascade waterfall effect (ref. Figure 4.2).



**Figure 4.2: Historic photo of Belfountain Dam**

Although replacing the dam is considered a viable alternative, repairing the dam (Alternative D2) would be considered equivalent from a flood risk and safety perspective, and superior from a capital cost and heritage perspective. For these reasons, Alternative D3 has been screened and has not been included in the alternative evaluation in Section 5.

#### *4.1.4 Alternative D4: Lower the spillway*

*Alternative D4: Lower the spillway* has been identified primarily to accommodate headpond Alternative H5: *Backfill headpond and construct channel* which requires the dam be lowered in order to generate sufficient grade for a channel upstream (ref. Section 4.2.5). Figure 4.3 depicts a preliminary perspective of the relative change in spillway height required to accommodate the channel. Under this combination of alternatives, the headpond would be backfilled and the dam would no longer function as a water retaining structure, rather it would become a weir (a retaining wall with water flowing over it). Loads on the structure would be reduced by the reduction in height, though detailed structural analysis would be required to confirm that the structure meets the required factors of safety. If it does not, additional shear anchors could be installed (essentially a combination with *Alternative D2: Rehabilitate the dam*). As a weir, the structure would continue to be subject to the requirements outlined in the LRIA Technical Bulletins (MNRF, 2011), however eliminating the headpond would also eliminate the associated potential flood wave under a dam failure scenario and would therefore be expected to decrease the hazard potential of the structure. Further consultation with MNRF is required in this regard.



**Figure 4.3: Illustration of Alternative D4: Lower the spillway**

The existing sluiceway structure would no longer be required and would be decommissioned, creating the opportunity to extend the spillway to its full historic width, which is considered a potential positive effect that could balance the reduction in the spillway height. The visitor experience would remain largely the same although some of the drama of the waterfall would be reduced with its height.

Significant additional land area would be exposed between the existing edge of the headpond and the new bank of the river, presenting opportunities for repurposing the area for use as manicured tableland, pocket wetlands or restored valley lands; this is discussed further in Section 4.2.5.

Under this alternative, additional works to mitigate the stability of the north retaining wall would also be required. Options and recommendations for the north retaining wall would be considered at the next stage of study if this alternative is advanced.

#### *4.1.5 Alternative D5: Decommission the dam*

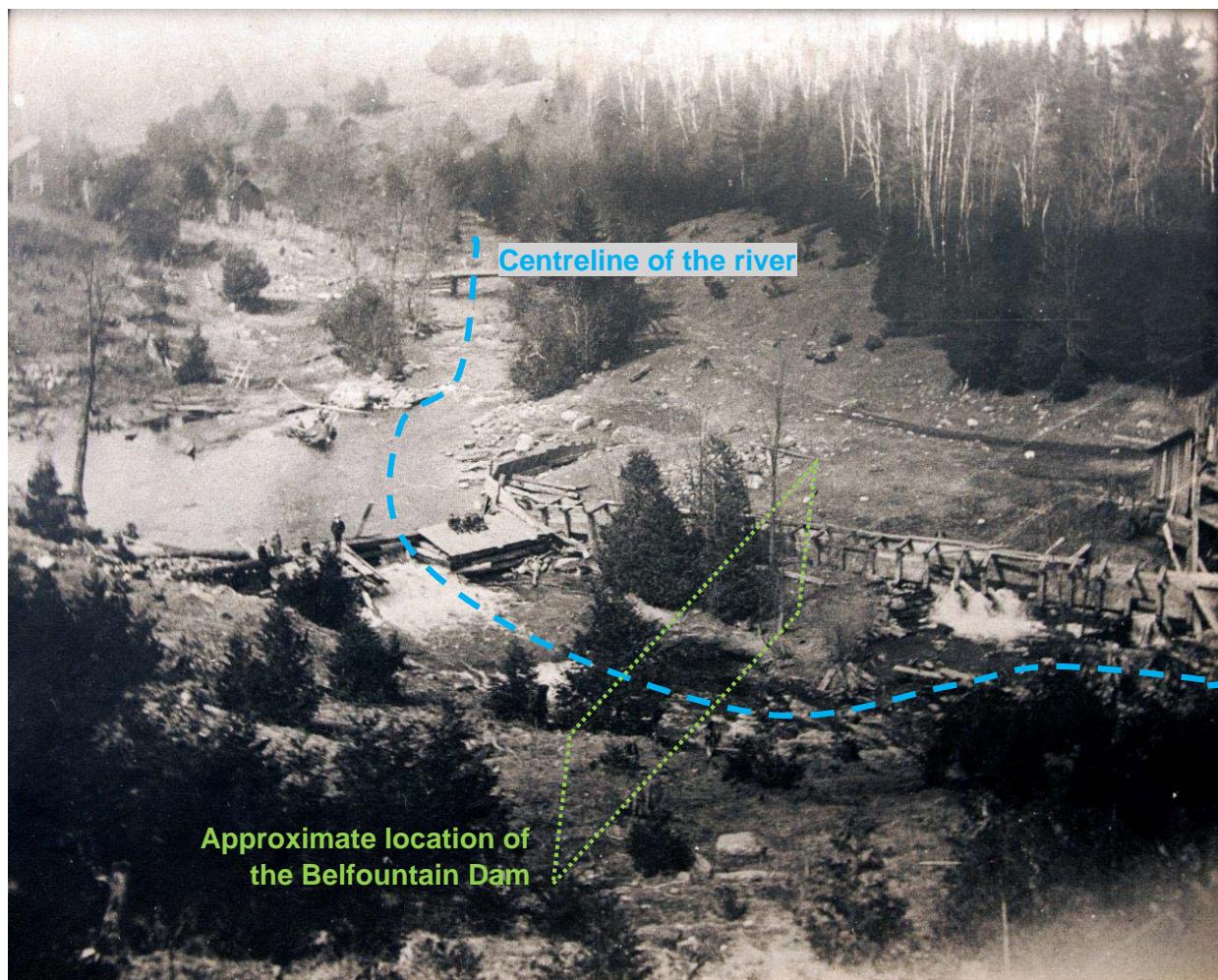
*Alternative D5: Decommission the dam* proposes to remove the Belfountain Dam to the extent that it is no longer classified as a dam under the LRIA, removing all associated requirements

including design, operation, and inspection/surveillance. Under this alternative, a sufficient length and height of the existing structure would be removed such that it no longer retains an appreciable volume of water under any flow condition, effectively eliminating the headpond. The headpond would be restored to a natural valley and river cross section and sediment removal would be required. Figure 11 provides a conceptual illustration of what the dam and headpond area would look like under this alternative.

Based on historic photographs, it is understood that a natural bedrock waterfall or rapids was present at the location of the existing dam; this historic condition could be restored. Figure 4.5 is a photo of the Study Area prior to the construction of the Belfountain Dam; a small water retaining structure is visible which serviced a mill on the right side of the photo. The centreline of the river and approximate location of the present-day Belfountain Dam are highlighted.

It is expected that the natural waterfall feature would not act as a barrier to the passage of brown trout upstream, the primary species of concern, with respect to protecting the brook trout population. In order for Alternative D5 to meet Objective 1 (*Maintain a Fisheries Barrier*), a higher barrier feature would be required. Notionally, a portion of the existing spillway with a height greater than the jumping height of brown trout could be left in place to serve this objective, as well as maintain part of the heritage feature. Consideration could also be made to leave in place a portion of the historic spillway at full height, the potential length would however be limited to 5 to 10 m as the channel width (bankfull width) in this reach of the West Credit is similar to the width of the dam (approximately 17 m +/- versus 25 m +/-).

Objective 1 is written such that it allows for the flexibility to provide passage to *native* fish species in the West Credit River. Although fisheries records are not conclusive, Atlantic salmon may have historically populated the reaches upstream of Belfountain Dam. MNRF is actively stocking Atlantic salmon upstream of the dam and MNRF staff has previously expressed interest in exploring passage options, however there is no mandate to provide passage for this species at the dam (i.e. within the Credit River Fisheries Management Plan). Atlantic salmon are understood to be capable of jumping a barrier height of 2 m +/-, while brown trout have a lower maximum jump height, thus the opportunity to provide passage for the former while maintaining a barrier for the latter is available. Accordingly, the spillway height could be lowered to such that the overall barrier (including the native bedrock scarp) is maintained at 2 m +/- or greater. It is noted that a detail fish passage assessment would be required as jump height is affected by other factors such as the presence of a pool below the barrier which allow fish to generate a greater approach speed and therefore jump height.



**Figure 4.5: Historic photo of the study area prior to the Belfountain Dam**

When the contaminated sediment is removed, some mitigation would be required before it could be used as fill on-site or on another site. The preferred mitigation method would be determined through additional sediment sampling and analysis. The option to landfill the sediment is available however this would be more costly. With the possible generation of additional land in the headpond area, combining this with headpond *Alternative H3: Expand tableland into the headpond*, would be easily accommodated. It is noteworthy though that this alternative would be a dramatic change to the Mack Park cultural heritage landscape, built heritage and the current visitor experience.

## **4.2 Headpond Alternatives**

### **4.2.1 Alternative H1: Do Nothing**

Under this alternative no works would be proposed and headpond would be left as it is today. This alternative is included in the Class EA process as in some cases, doing nothing may be the best alternative if other options have unacceptable impacts. 'Do Nothing' is a viable alternative

for the headpond, although it is not compatible with certain alternatives for the dam including *Alternative D4: Lower the spillway* and *Alternative D5: Decommission the dam*.

#### 4.2.2 Alternative H2: Rehabilitate the headpond

*Alternative H2: Rehabilitate the headpond* would primarily address the issue of accumulated sediment and provide improved shoreline treatments (ref. Figure 6).

Sediment accumulation has reduced headpond depth and has been observed to contribute to an increased density of emergent wetland-type vegetation and an increased frequency in seasonal algal blooms, possibly due to accelerated local thermal impacts. Sediment sampling and analysis has indicated that the sediment contains low concentrations of pollutants and as such, when the sediment is removed, some mitigation may be required depending on how it is managed. For example, the sediment may need to be mixed with clean fill to reduce pollutant concentrations below provincially regulated levels before it is used as fill on or off site. Landfilling is another option, however it would be more costly.

In addition to sediment removal, rehabilitation of the headpond shorelines could be considered. On the northeast side of the pond, this would involve rehabilitation of the deteriorating concrete and cobble retaining walls. Removal of select trees on the southwest shoreline could be considered to open up views of the headpond and may have the benefit of dispersing park visitors who tend to congregate in the terrace on the north shore. Tree removals would provide the opportunity to revegetate the riparian zone, however should carefully consider the extent to which the headpond will be exposed to additional solar energy and the potential to exacerbate thermal impacts. From an ecology and natural stream function perspective, there would be no long-term positive effects.

#### 4.2.3 Alternative H3: Expand tableland into the headpond

*Alternative H3: Expand tableland into the headpond* proposes to consume part of the existing headpond area to generate additional useable tableland for park visitors. This could be achieved by building new retaining walls within the existing headpond area and backfilling. Additional turfed tableland would provide additional space for park visitors on the often congested northeast side of the headpond. Figure 7 illustrates the concept on the northeast shoreline, however the option to implement this alternative on the southwest shoreline would also be available. It has been assumed that the accumulated headpond sediment would be removed as part of this alternative. This alternative is readily combined with alternatives for the dam which cause a reduction in headpond area (i.e. *Alternative D4: Lower the spillway* and *D5: Decommission the dam*). From a cultural heritage perspective, this alternative would be a departure from the original Mack Park landscape design. From the ecology and natural stream function perspective there would be not significant positive effects.

#### 4.2.4 Alternative H4: Convert headpond to wetlands

*Alternative H4: Convert headpond to wetlands* proposes to convert a portion of the existing headpond area to wetland habitat (ref. Figure 8). This would require berming or headwalls along

the headpond shoreline to create land area that is separated from the headpond but remains saturated and experiences occasional shallow ponding during seasonal periods and flood conditions (i.e. during spring melt, storms) and is suitable for aquatic plants. Typical species appropriate for wetland areas would be specified. It has been assumed that some or all of the accumulated headpond sediment would be removed as part of this alternative in order to improve the remaining open water area. Some of the sediment could be used to backfill the wetland area.

Figure 8 shows the wetland pockets on the southwest side of the headpond in order to maintain existing views of the headpond from the terrace area to the extent possible. The option to locate the wetland pockets on the northeast side would also be available. This decision should also consider the presence of the south valley slope groundwater seeps and would be made at the next stage of study if this alternative is advanced.

This alternative is readily combined with alternatives for the dam which cause a reduction in headpond area (i.e. *Alternative D4: Lower the spillway* and *D5: Decommission the dam*). From a cultural heritage perspective, this alternative would be a departure from the original Mack Park landscape design. Although some benefit to riparian habitat would be provided, no benefit to aquatic habitat would be provided. Similarly, no benefit to stream function would be provided.

#### 4.2.5 Alternative H5: Backfill headpond and construct natural channel

*Alternative H5* proposes to backfill the headpond and construct a natural channel cross section (ref. Figure 9). The existing dam would remain under this alternative and accordingly the structural issues would need to be resolved (ref. discussion in Section 4.1.4). The existing upstream river bankfull width (17 m +/-) is similar to the spillway width (20 m) and could therefore transition smoothly without a dramatic change in cross section. In order for the river to functionally pass sediment, a positive gradient is required. In order to generate this gradient the spillway crest would need to be lowered by 1 m +/-, from 359.3 m to 358.3 m. This concept would allow the full width of the existing spillway to continue to provide the existing waterfall feature however at a reduced height (from 7 m to 6 m +/-).

The river would function similarly to a natural condition, thereby largely resolving sediment transport/accumulation issues, reducing the issue of thermal impacts associated with the headpond and restabilising 150 m +/- of coldwater riverine fish habitat. With the dam remaining in place, the objective of maintaining a fisheries barrier would also be achieved. The existing sediment could be capped in place, eliminating the costs associated with removal and mitigation.

The alternative would allow much of the heritage dam structure to remain in its original character, however the loss of the headpond would be considered to have a negative effect on the cultural heritage landscape. Maintenance of the existing headpond retaining walls could act as monuments marking the historical extents of the headpond, similar to what has been done with the Mack swimming pool on the current day site. This alternative would generate substantial additional land area in the current headpond area and as such could be combined with *Alternative H3: Expand tableland into the headpond* or *Alternative H4: Convert headpond to wetlands*.

#### 4.2.6 Alternative H6: Construct channel and offline headpond

*Alternative H6: Construct channel and offline headpond* aims to combine the benefits of both keeping and removing the dam. Under this alternative, the existing dam would be modified with a lowered spillway as discussed for *Alternative H6* in Section 4.2.5. In addition, a new retaining structure would be constructed parallel to the natural channel to provide the necessary grade separation and contain the offline headpond (ref. Figure 10). It may be feasible to use an earthen berm to provide the necessary grade separation, however given the confined valley setting it has been assumed that grading would consume too much space. Conceptually, the existing sluiceway could remain as the control structure as it currently meets the requisite structural criteria; it may require modification to achieve the desired flow balancing between the natural channel and headpond.

It has been assumed the dam and headpond would be located on the north side so that the existing outlet structure could be utilized and so that the vistas of the dam, which are most visible from the terrace, would be maintained to the extent possible. The river would be located on the south side of the valley, allowing the existing groundwater seeps on the south valley wall to drain directly into the river, which may be beneficial from a water temperature perspective. It is noted that the option to locate the offline headpond on the south side would also be available.

The natural channel would be restored close to the historic profile, however the planform and cross section would become relatively constrained and would likely require armouring to some extent in order to accommodate the dam and headpond while reducing the risk of erosion to the dam, retaining walls and the south valley toe of slope.

The river would function similarly to a natural condition, thereby largely resolving sediment transport/accumulation issues, reducing the issue of thermal impacts associated with the headpond and restabilising 150 m +/- of coldwater riverine fish habitat. With the dam remaining in place, the objective of maintaining a fisheries barrier would also be achieved.

The alternative would allow much of the heritage dam structure to remain in its original character. The maintenance of a headpond feature (albeit modified) would be preferable from a cultural heritage landscape perspective. Unfortunately, the need for a grade control structure separating the channel and headpond would require a majority of the existing sediment to be removed; some volume may be useable as backfill below the channel. This alternative would have the highest capital cost.

Under this alternative, additional works to mitigate the stability of the north retaining wall would also be required. Options and recommendations for the north retaining wall would be considered at the next stage of study if this alternative is advanced.

#### 4.2.7 Alternative H7: Restore natural valley and channel

This alternative must be implemented in association with *Alternative D5* for the dam. Refer to Section 4.1.5 for a detailed discussion on the related elements of this alternative.

### 4.3 Combination of Dam and Headpond Alternatives

For the purpose of the alternative evaluation, Table 4.1 summarizes the logical combinations of dam and headpond alternatives that could be implemented. These combinations have been advanced to the alternative evaluation discussed in Section 5. For reasons discussed in Section 4.1.3, *Alternative D3: Replace the dam* has not been advanced to the evaluation. Although *Alternative D1: Do Nothing* is not considered viable, the Class EA process requires that it is evaluated as a baseline point of comparison.

Table 4.1: Combinations of Dam and Headpond Alternative	
Dam Alternative	Headpond Alternative
D1. Do Nothing	H1. Do Nothing
D2. Rehabilitate the dam	H2. Rehabilitate the headpond
D2. Rehabilitate the dam	H3. Expand the tableland
D2. Rehabilitate the dam	H4. Convert to wetlands
D4. Lower the spillway	H5. Backfill headpond and construct channel
D5. Decommission the dam	H6. Construct channel and offline headpond
	H7. Restore natural valley and channel

## 5.0 ALTERNATIVE EVALUATION AND SCREENING

In order to assess and select the Preferred Alternative(s) for the future management of the Belfountain Dam and Headpond, a systematic and transparent approach must be developed to evaluate all viable alternatives. As part of the evaluation, specific consideration has been given to the advantages and disadvantages of each alternative. The extent of impacts of each alternative, both positive and negative, have been measured within the context of the selected evaluation criteria.

### 5.1 Evaluation Criteria

As required by the Conservation Ontario, Class Environmental Assessment process, the evaluation must consider relevant criteria beyond the functional efficacy of each alternative (i.e. ability to simply address the existing dam safety problem). The various alternatives described in the previous sections have been assessed to determine their impacts and opportunities related to four (4) environments:

- |       |                                  |  |
|-------|----------------------------------|--|
| (i)   | <b>Physical Environment</b>      | - Non-biological natural or anthropogenic features and processes (e.g. flooding, stream function)  |
| (ii)  | <b>Biological Environment</b>    | - Living things and their habitats (e.g. aquatic and terrestrial species)  |
| (iii) | <b>Cultural Environment</b>      | - Resources, values and uses related to current and historic populations (e.g. built heritage, heritage landscapes, archaeology, aesthetic considerations, aboriginal interests) |
| (iv)  | <b>Socioeconomic Environment</b> | - Local community interests and all cost implications including capital, maintenance/operation, etc.   |

Within each environment, screening criteria relevant to the Study Area have been selected for the evaluation and are described in Table 5.1. A significance factor of *High*, *Moderate* or *Low* has been assigned to each criteria. The significance factor considers not only the value of the resource the criteria represents, but also how the potential for impact and impact mitigation varies across the alternatives identified. Low variability in potential impact across the alternatives may make a criteria less significant, even if the resource is highly valued. For example, archaeological resources are considered to be of *high* value and are provided provincially legislated protection, however the potential for impact to archaeological resources represented by all alternatives for the dam and headpond are considered *low*, and any predicted impact can be addressed with appropriate pre-construction mitigation, and as such this criteria is assigned a significance of *Low*.

**Table 5.1: Screening Criteria**

Environment	Criteria	Significance	Description
Physical	Natural Stream Function	High	The ability of the West Credit River to function as a natural stream through the Study Area, with consideration to impacts on downstream reaches. Considerations include sediment transport, oxygenation, habitat, etc. The dam/headpond inhibit this function.
	Watercourse Thermal Regime	High	The West Credit River is cold water fish habitat. The headpond allows for increased solar inputs which negatively affect water temperature both within the Study Area and downstream.
Biological	Maintain Fish Barrier	High	Maintain a barrier to upstream migration of non-native and invasive species for the purpose of protecting upstream brook trout populations.
	Aquatic Habitat	High	The quality and extent of habitat for brook trout and other aquatic species in the Study Area (i.e. headpond). Algae growth, sediment, and water temperature are current concerns.
	Riparian Habitat	Moderate	The quality and extent of riparian habitat within the Study Area.
	Terrestrial Habitat	Low	The quality and extent of habitat for terrestrial species within the Study Area. Jefferson Salamander, Small Brown Bat, other local significant species and the ANSI are of specific concern.
Cultural	Built Heritage Features	High	Built heritage features that may be impacted directly or indirectly by construction including the dam, retaining walls, fountain and other features.
	Cultural Landscape Heritage Features	High	Mack Park is a candidate heritage landscape and the priority would be to maintain/re-instate the character of the original landscape design.
	Archaeological /Resources	Low	The Study Area contains pre-contact Aboriginal and historic Euro-Canadian resources that must be protected from impact or mitigated where impact is unavoidable.
Socio economic	Visitor Experience	High	The BCA is considered to provide a unique combination of experiences specifically related to the dam: natural/ and anthropogenic vistas (river, waterfall and headpond), and built heritage features and access to water. Protecting these experiences and providing new experiences is a priority.
	Flood Risk and Public and Staff Safety	High	The extent of potential flood damages to life, property, environment and heritage features (including dams) downstream. The presence of a dam increases flood risk. Safety considerations and liability associated with the presence/operation of the dam/headpond including safety of park visitors and staff, and transient access to flood vulnerable areas downstream are included in this criteria. This criteria considers the ability to meet the LRIA guidelines.
	Visitor Revenue	Moderate	Revenue generated from park entrance fees
	Capital Cost	Moderate	Cost of construction associated with the alternative. Capital cost estimates have been prepared for each alternative (ref. Appendix C)

**Table 5.1: Screening Criteria**

<b>Environ- ment</b>	<b>Criteria</b>	<b>Signifi- cance</b>	<b>Description</b>
	Major Maintenance Costs	Low	Costs associated with the major maintenance requirements (e.g. sediment removal), also including the need for specialist dam safety inspections.
	Liability	Moderate	Liability associated with ownership/operation of the alternative
	Village Tourism/ Economy	Moderate	The dam/headpond are iconic to the region and a major draw for park visitors who support the village to the Belfountain village which supports the local and regional economy.
	Local Community	Moderate	The dam/headpond are a major draw for park visitors. The local community is affected by the associated traffic, parking, noise, trash, etc.

## 5.2 Alternative Evaluation

In order to evaluate the alternatives, the potential positive and negative effects of each alternative on a given criterion has been determined. Effects have been determined to be either *Positive*, *Positive/Neutral*, *Neutral*, *Negative/Neutral* or *Negative* relative to the existing (baseline) condition (or the ‘Do Nothing’ alternative). For example, *Alternative D5: Decommission the dam* would have a *positive* impact on the *Public & staff safety* criterion (i.e. it eliminates hazards around the dam and potential for dam failure), while it would have a *negative* impact on the *Built Heritage* criterion (i.e. the historic dam would be lost). The effect is deemed to be *neutral* where the alternative does not substantially change the existing condition.

Table 5.2 summarizes the evaluation of the alternatives using the criteria established in Section 5.1 above. The table provides a description of the overall effects of the alternative on each criterion and resulting evaluation ‘score’ (e.g. positive, neutral, negative). The *Summary* row indicates whether the alternative has been ‘Screened Out’ or ‘Short-listed’. Generally, if an alternative has been deemed to have significant and unjustifiable negative effects, it has been screened out. The evaluation has short-listed three (3) alternatives and screened four (4) alternatives.

The following summarizes the alternatives that were screened and why:

**D1H1: Do Nothing - SCREENED:** This study was initially triggered because the Belfountain Dam does not meet current provincial structural/safety criteria. This alternative does not address this issue and has been screened.

**D2H3: Rehabilitate the dam & expand the tableland – SCREENED:** The positive effect of increasing available space for visitors is not considered sufficient to balance the negative effect on the cultural heritage landscape and the capital cost. The exception would be if the preferred alternative advanced a natural channel through the headpond (e.g. Alternative H5 or H6) in which case this land would be available with no additional negative effect.

**D2H4: Rehabilitate the dam & convert headpond to wetlands – SCREENED:** The positive effect of creating wetland habitat is not considered sufficient to balance the negative effect on the cultural heritage landscape and the capital cost. The exception would be if the preferred alternative advanced a natural channel through the headpond (e.g. Alternative H5 or H6) in which case this land would be available with no additional negative effect.

**D5H6: Decommission the dam & restore natural valley and channel – SCREENED:** Significant and unmitigatable negative effects on the cultural (built heritage, cultural heritage) and socioeconomic (visitor experience, capital cost) environments are expected.

The remaining alternatives were considered to offer a relatively balanced level of positive and negative effects and have been short-listed for further consideration by the Study Team, agencies and the public. Tables 5.3 to 5.5 summarize the advantages and disadvantages of the each short-listed alternative. Appendix D includes visualizations or graphic renderings to depict what the short-listed alternatives may look like.

Table 5.2: Alternative Evaluation

Environment	Screening Criteria	Factor Significance	Alternative													
			D1H1: Do Nothing		D2H2: Rehabilitate the dam and headpond		D2H3: Rehabilitate the dam & expand the tableland		D2H4: Rehabilitate the dam & convert part of the headpond to wetlands		D4H5: Lower the spillway & backfill headpond & construct channel		D4H6: Lower the spillway, construct channel & offline pond		D5H7: Decommission the dam & restore natural valley and channel	
Physical	Natural Stream Function	High	Stream function impaired by headpond		Stream function impaired by headpond		Stream function impaired by headpond		Stream function impaired by headpond		Natural stream function restored		Natural stream function restored		Natural stream function restored	
	Watercourse Thermal Regime	High	Thermal impact of headpond unchanged		Thermal impact of headpond unchanged		Headpond area reduced. Thermal impact reduced		Headpond area reduced. Thermal impact reduced		Thermal impact eliminated		Thermal impact significantly reduced		Thermal impact eliminated	
Biological	Maintenance of Fish Barrier	High	Barrier maintained for all fish species		Barrier maintained for all fish species		Barrier maintained for all fish species		Barrier maintained for all fish species		Barrier maintained for all fish species		Barrier maintained for all fish species		Barrier maintained for all fish species	
	Aquatic habitat	High	No change		No significant benefit		No significant benefit		No significant benefit		Coldwater habitat restored		Coldwater habitat restored		Coldwater habitat restored	
	Riparian Habitat	Moderate	No change		No change		No change		Wetland habitat is considered positive improvement, though not native to area		Riparian habitat associated with natural channel introduced		Riparian habitat associated with natural channel introduced		Riparian habitat associated with natural channel introduced	
	Terrestrial Habitat	Low	No change		No change		No change		No change		Additional floodplain habitat		No significant change		Additional valley/floodplain habitat	
Cultural	Built Heritage Features	High	No change		Longevity of spillway improved by structural mitigation		Longevity of spillway improved by structural mitigation		Longevity of spillway improved by structural mitigation		Negative effect on spillway		Negative effect on spillway		Removal of majority of spillway	
	Landscape Heritage Features	High	No change		Headpond character restored through sediment removal		Some change to heritage landscape		Some change to heritage landscape		Loss of headpond feature in heritage landscape		Some change to heritage landscape		Loss of headpond feature in heritage landscape	
	Archaeological / Resources	Low	No effect expected		No effect expected		No effect expected		No effect expected		No effect expected		No effect expected		No effect expected	

Table 5.2: Alternative Evaluation

Environment	Screening Criteria	Factor Significance	Alternative													
			D1H1: Do Nothing		D2H2: Rehabilitate the dam and headpond		D2H3: Rehabilitate the dam & expand the tableland		D2H4: Rehabilitate the dam & convert part of the headpond to wetlands		D4H5: Lower the spillway & backfill headpond & construct channel		D4H6: Lower the spillway, construct channel & offline pond		D5H7: Decommission the dam & restore natural valley and channel	
Socioeconomic	Visitor Experience	High	No change		Aesthetics of headpond improved		Reduced crowding in fountain area. Negative effect on open water vistas		Increased opportunity for ecologic interpretation. Negative effect on open water vistas		Drama of waterfall reduced with 1 m reduction in spillway height. Loss of open water vistas		Drama of waterfall reduced with 1 m reduction in spillway height. Reduced headpond area.		Significant negative effect on waterfall drama and loss of open water vistas	
	Flood Risk and Safety	High	Deterioration of the dam over time would increase risk of failure. Alternative is not compliant with the LRIA.		LRIA criteria met. Flood hazard associated with dam failure persists. Dam and headpond (deep water) present risk to staff and park visitors		LRIA criteria met. Flood hazard associated with dam failure persists. Dam and headpond (deep water) present risk to staff and park visitors		LRIA criteria met. Flood hazard associated with dam breach eliminated. Some risk to staff/visitors associated with the waterfall.		LRIA criteria met. Flood hazard associated with dam breach eliminated. Dam and headpond (deep water) present risk to staff and park visitors		LRIA criteria met. Flood hazard associated with dam breach eliminated. Risk to staff/visitors similar to any watercourse			
	Visitor Revenue	Moderate	No change expected		No change expected		No change expected		No change expected		No change expected		No change expected		Potential for reduced visitation	
	Capital Cost	Moderate	No Cost		Moderate Cost		Moderate/High Cost		Moderate Cost		Moderate Cost		High Cost		Moderate/High Cost	
	Major Maintenance Costs	Low	No change		Future sediment removal, dam safety assessments, potential for structural repairs.		Future sediment removal, dam safety assessments, potential for structural repairs.		Future sediment removal, dam safety assessments, potential for structural repairs.		Need for sediment removal eliminated. Future safety inspections required.		Frequency/magnitude of sediment removal reduced. Future safety inspections required.		No significant capital maintenance costs expected.	
	Village Tourism/Economy	Moderate	No change		No change		No significant change		No significant change		No significant change		No significant change		Potential reduction in visitors and associated business	
	Local Community	Moderate	No change		No change		No significant change		No significant change		No significant change		No significant change		Potential reduction in visitors and associated traffic, noise, etc	
Summary			<b>Screened.</b> Not compliant with the LRIA. Does not address structural/safety issues of the existing dam		<b>Short-listed.</b> Preferred from a Cultural perspective, not preferred from a Physical or Biological perspective.		<b>Screened.</b> Positive Socioeconomic effects. Negative Cultural effects. No positive Physical/Biological effects. Opportunity for combination with Alt D4H5		<b>Screened.</b> Negative Cultural effects. No significant positive Physical/Biological effects. Opportunity for combination with Alt D4H5		<b>Short-listed.</b> Preferred from a Physical/Biological perspective. Less preferred from a Cultural perspective.		<b>Short-listed.</b> Preferred from a Physical/Biological perspective. More preferred from a Cultural perspective. Less preferred from an Economic perspective.		<b>Screened.</b> Negative Cultural and Socioeconomic effects are not considered acceptable.	
LEGEND		Positive		Positive-Neutral		Neutral		Neutral-Negative		Negative						

**Table 5.3:**  
**Alternative D2H2: Rehabilitate the dam and headpond**  
**Advantages & Disadvantages**

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>- Pond depth increases: improved aesthetics</li> <li>- No impact to cultural heritage (built or landscape)</li> </ul>	<ul style="list-style-type: none"> <li>- High maintenance cost for ongoing dredging and dam inspection</li> <li>- No improvements to natural stream function or natural heritage</li> </ul>

**Table 5.4:**  
**Alternative D4H5: Lower the spillway & backfill headpond & construct channel**  
**Advantages & Disadvantages**

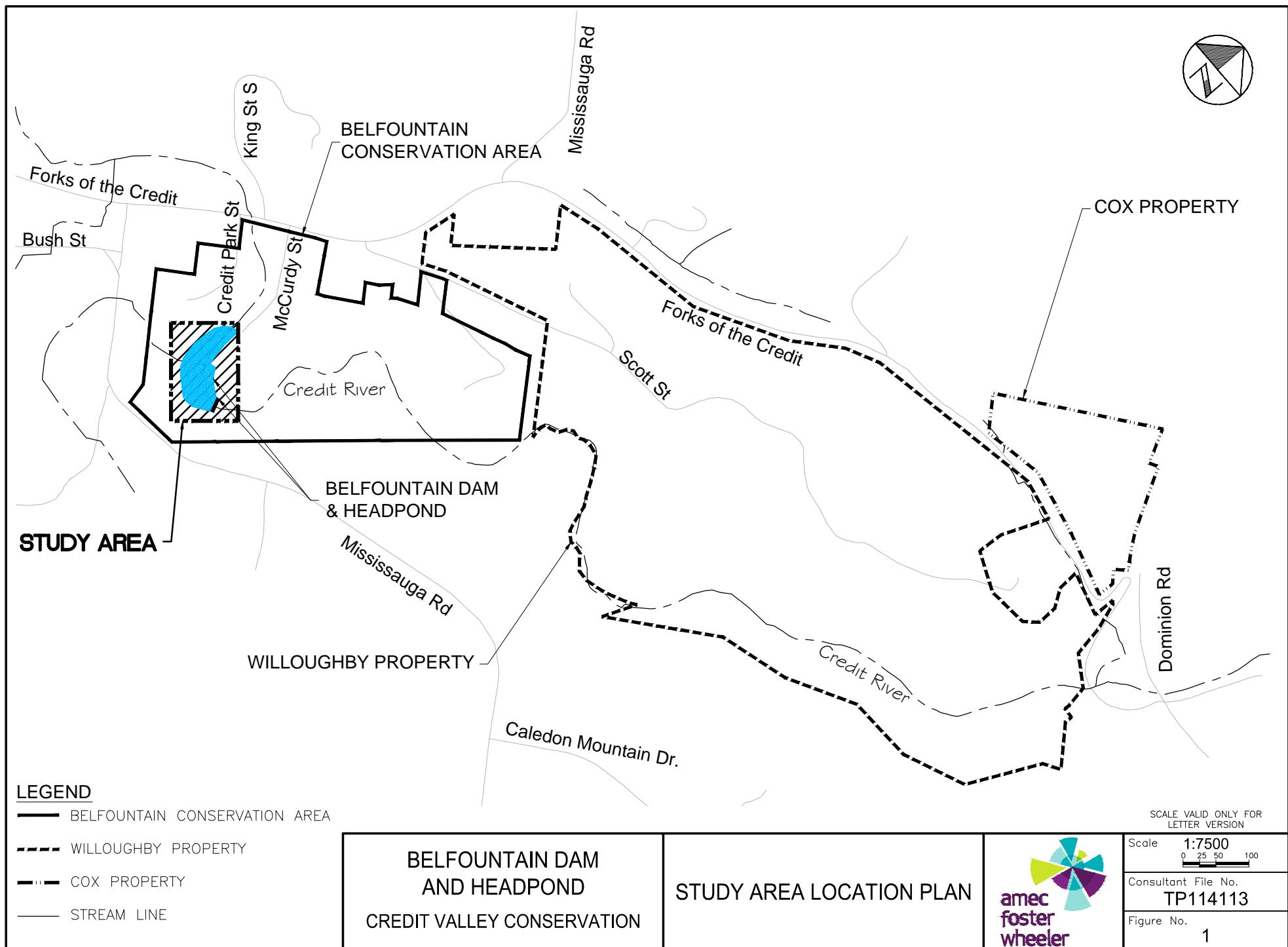
Advantages	Disadvantages
<ul style="list-style-type: none"> <li>- Flood risk reduced</li> <li>- Natural stream function enhanced</li> <li>- Aquatic &amp; riparian habitat improved</li> <li>- Headpond retained, in altered fashion</li> </ul>	<ul style="list-style-type: none"> <li>- Reduced drama (height) of waterfall</li> <li>- Impacts to built heritage</li> <li>- Change to headpond aesthetic</li> </ul>

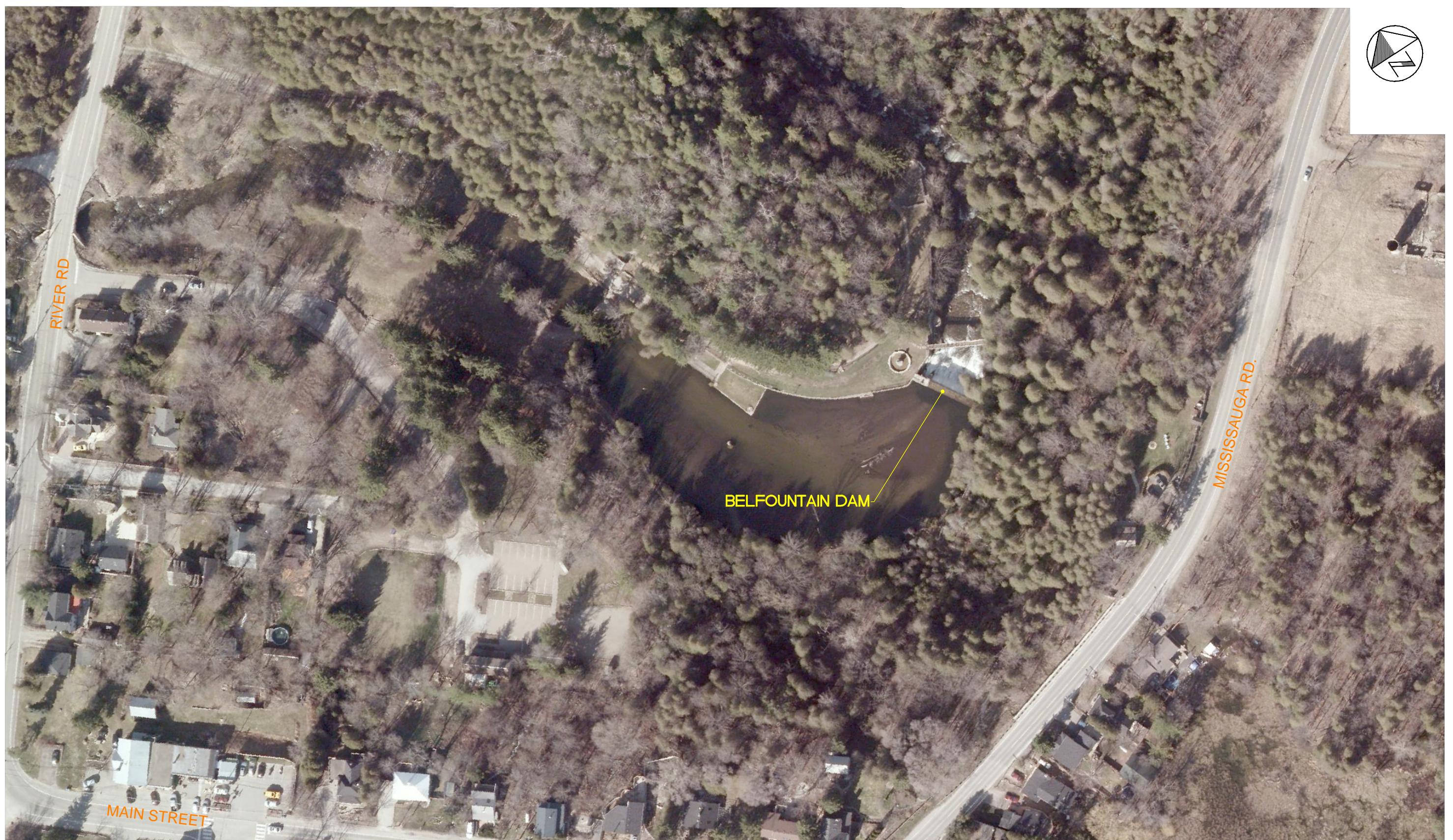
**Table 5.5:**  
**Alternative D4H6: Lower the spillway and construct channel and offline headpond**  
**Advantages & Disadvantages**

Advantages	Disadvantages
<ul style="list-style-type: none"> <li>- Flood risk reduced</li> <li>- Natural stream function enhanced</li> <li>- Aquatic &amp; riparian habitat improved</li> <li>- Headpond retained, in altered fashion</li> </ul>	<ul style="list-style-type: none"> <li>- Reduced drama (height) of waterfall</li> <li>- Impacts to built heritage</li> <li>- Change to headpond aesthetic</li> <li>- High capital cost</li> </ul>

### 5.3 Next Steps

The alternative characterization and evaluation, along with the short-listed alternatives, will be presented to the public at Public Information Centre 2 on December 1, 2015. Technical Report 2 Management Alternatives (this report) will be circulated to partner agencies. Following receipt and consideration of public and agency input, the Preferred Alternative will be selected and advanced to the next stage of study where the *preferred method for implementation* will be determined and a *detailed analysis of environmental effects* will be prepared.

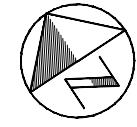




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Last Saved By: josh.seraj

Path: P:\Work\TP114113\water\dwg\July 2015\Fig-2.dwg

Plotted: 2015-07-16  
Last Saved: 2015-07-16



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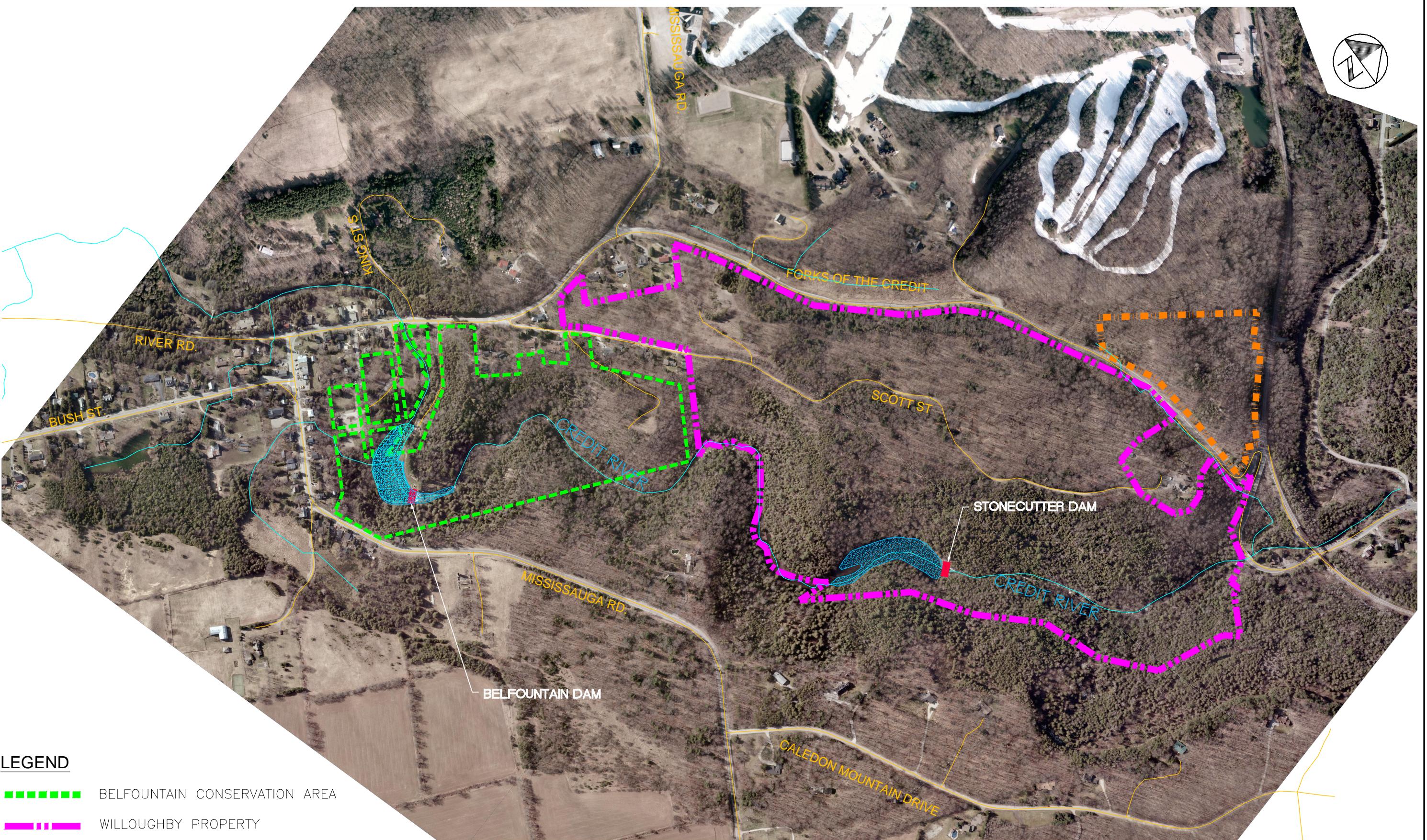
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Figure No.  
2

BELFOUNTAIN DAM AND  
HEADPOND  
CREDIT VALLEY CONSERVATION

STUDY AREA

amec  
foster  
wheeler



#### LEGEND

- BELFOUNTAIN CONSERVATION AREA
- WILLOUGHBY PROPERTY
- COX PROPERTY
- STREAM LINE
- EXISTING HEADPOND

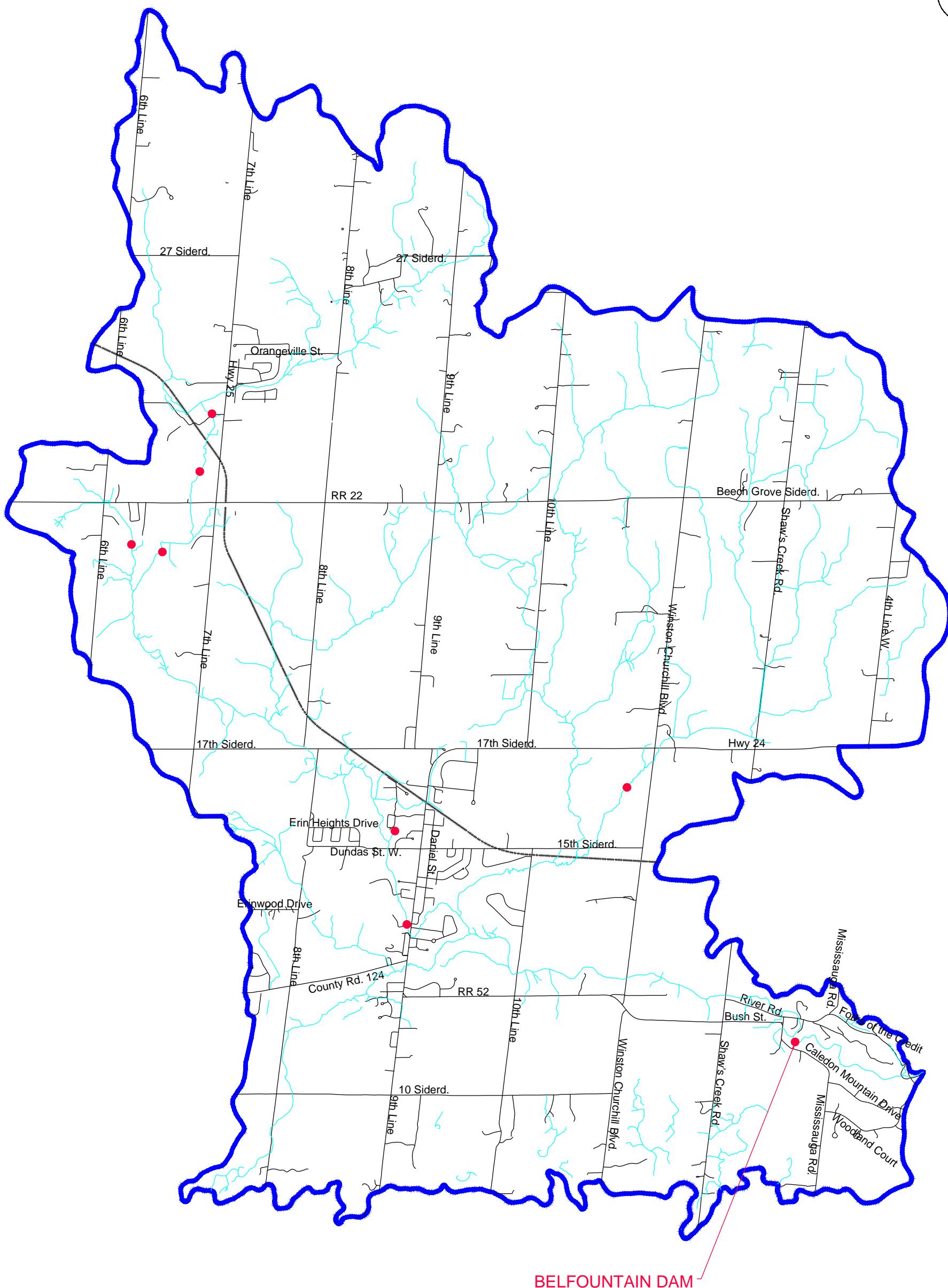
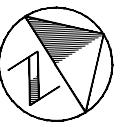
BELFOUNTAIN DAM AND  
HEADPOND  
CREDIT VALLEY CONSERVATION

BELFOUNTAIN COMPLEX

amec  
foster  
wheeler  
Consultant File No.  
TP114113  
Figure No.  
3

SCALE VALID ONLY FOR  
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#### LEGEND

- CREDIT RIVER WATERSHED BOUNDARY** (Blue line)
- WATERCOURSE** (Cyan line)
- DAM LOCATION** (Red dot)

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Consultant File No.

TP114113

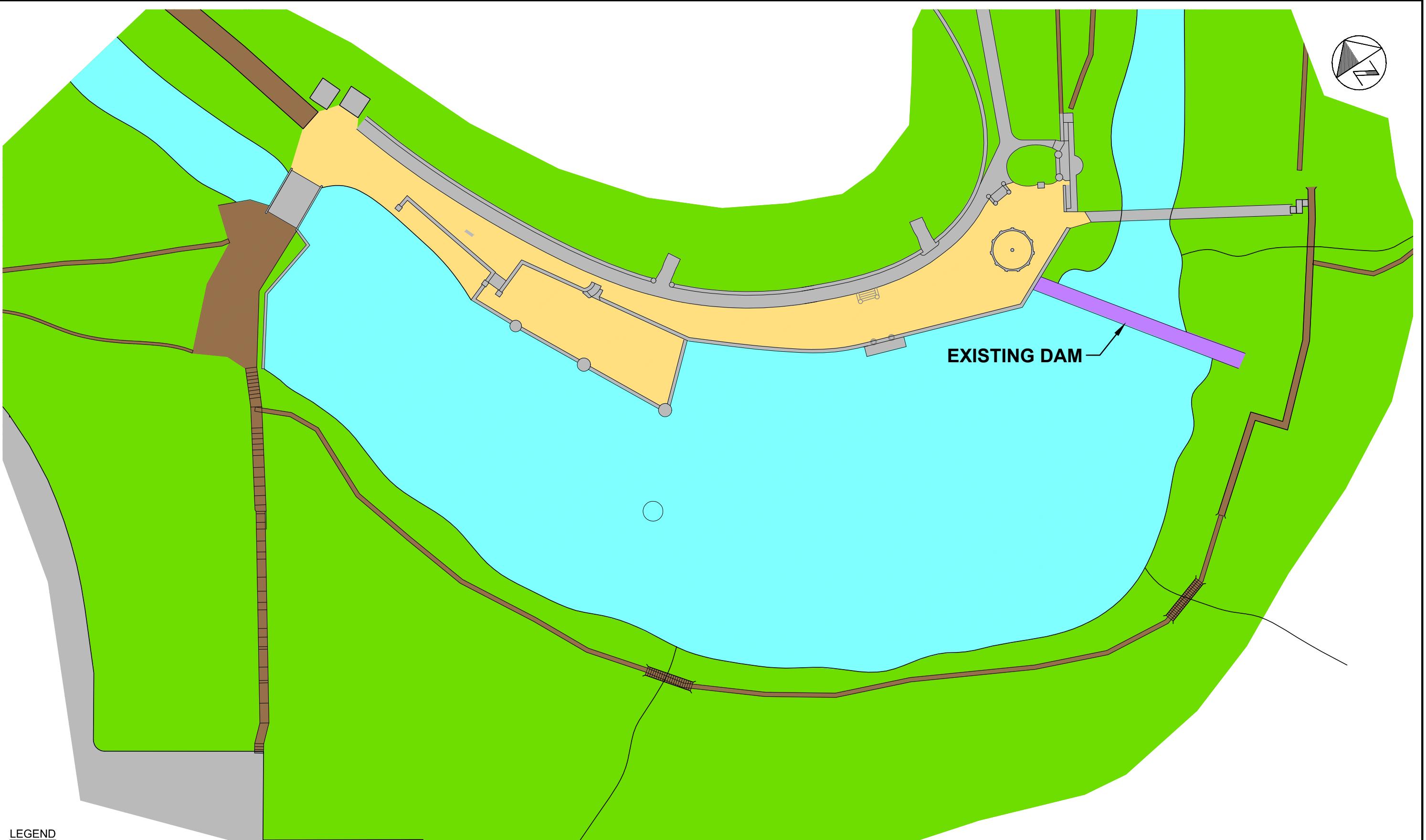
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4

BELFOUNTAIN DAM AND  
HEADPOND  
CREDIT VALLEY CONSERVATION

CREDIT RIVER  
WATERSHED BOUNDARY  
PLAN





**LEGEND**

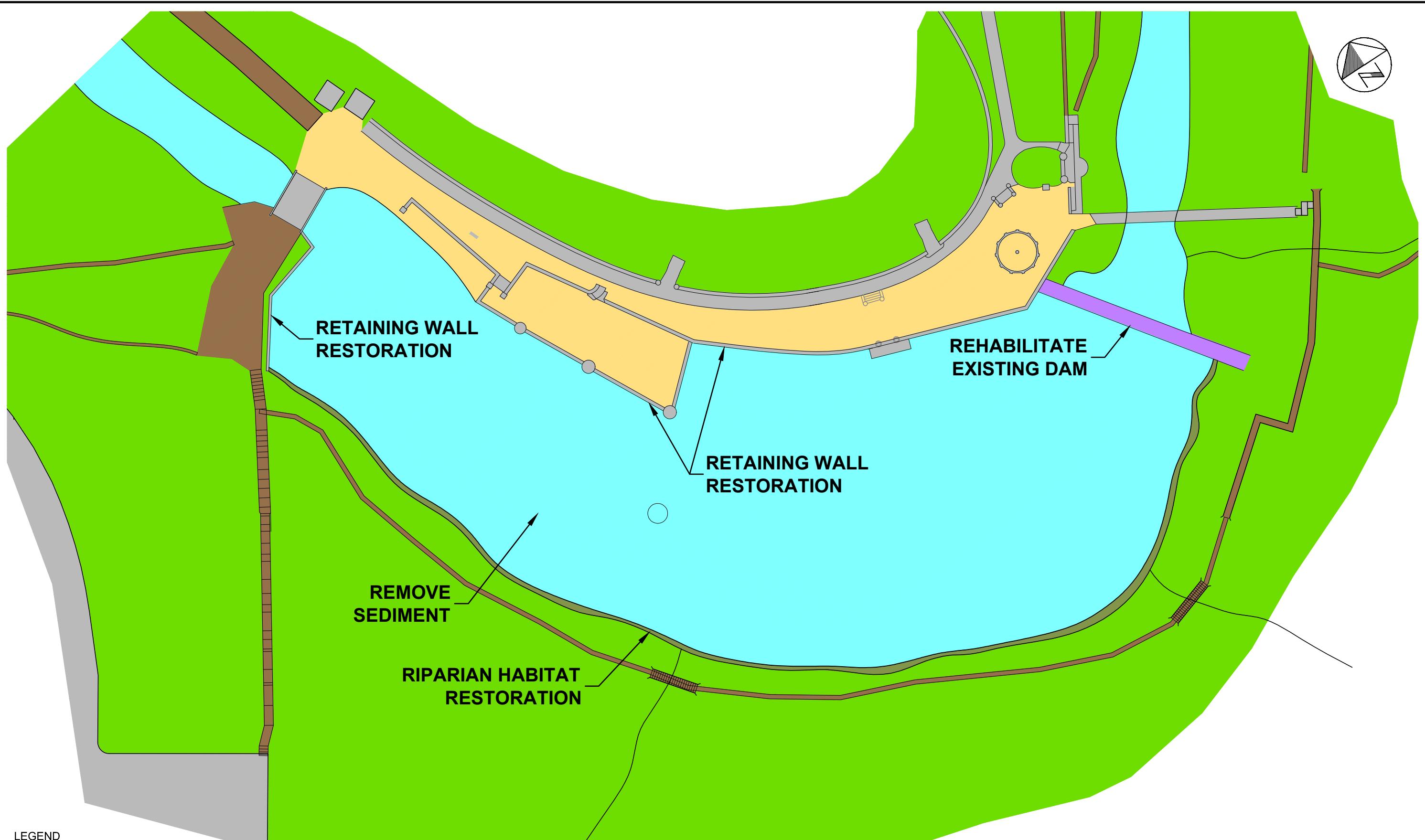
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- EXISTING TURF AREA
- EXISTING FOREST COMMUNITY
- EXISTING STRUCTURE
- EXISTING PATH/TRAIL

BELFOUNTAIN DAM AND  
HEADPOND CLASS EA  
CREDIT VALLEY CONSERVATION

ALTERNATIVE D1H1:  
DO NOTHING

  
amec  
foster  
wheeler

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Consultant File No.



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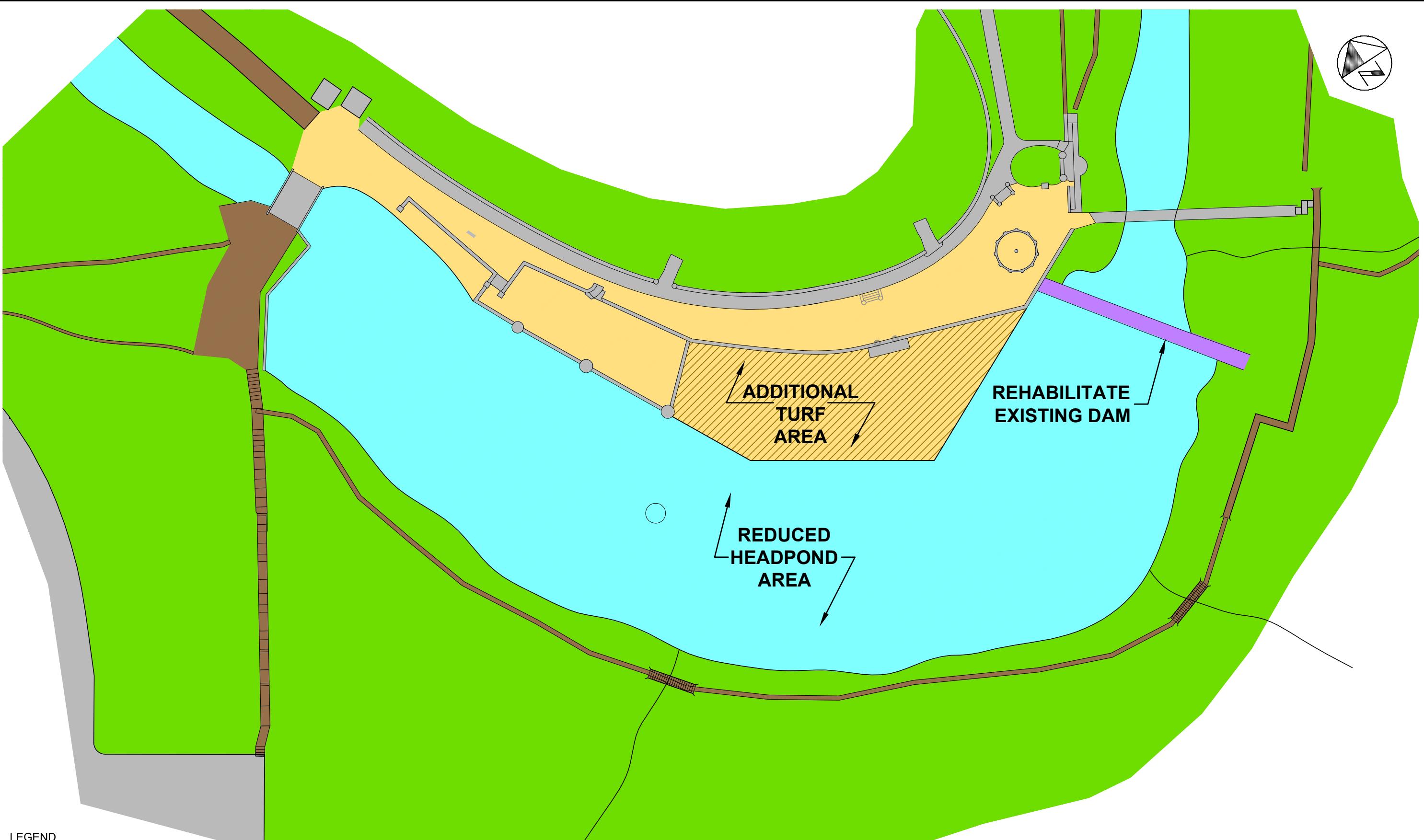
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- EXISTING FOREST COMMUNITY
- EXISTING STRUCTURE
- EXISTING PATH/TRAIL

BELFOUNTAIN DAM AND  
HEADPOND CLASS EA  
CREDIT VALLEY CONSERVATION

ALTERNATIVE D2H2:  
REHABILITATE THE DAM  
AND HEADPOND

**amec  
foster  
wheeler**

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Figure No.  
6



**LEGEND**

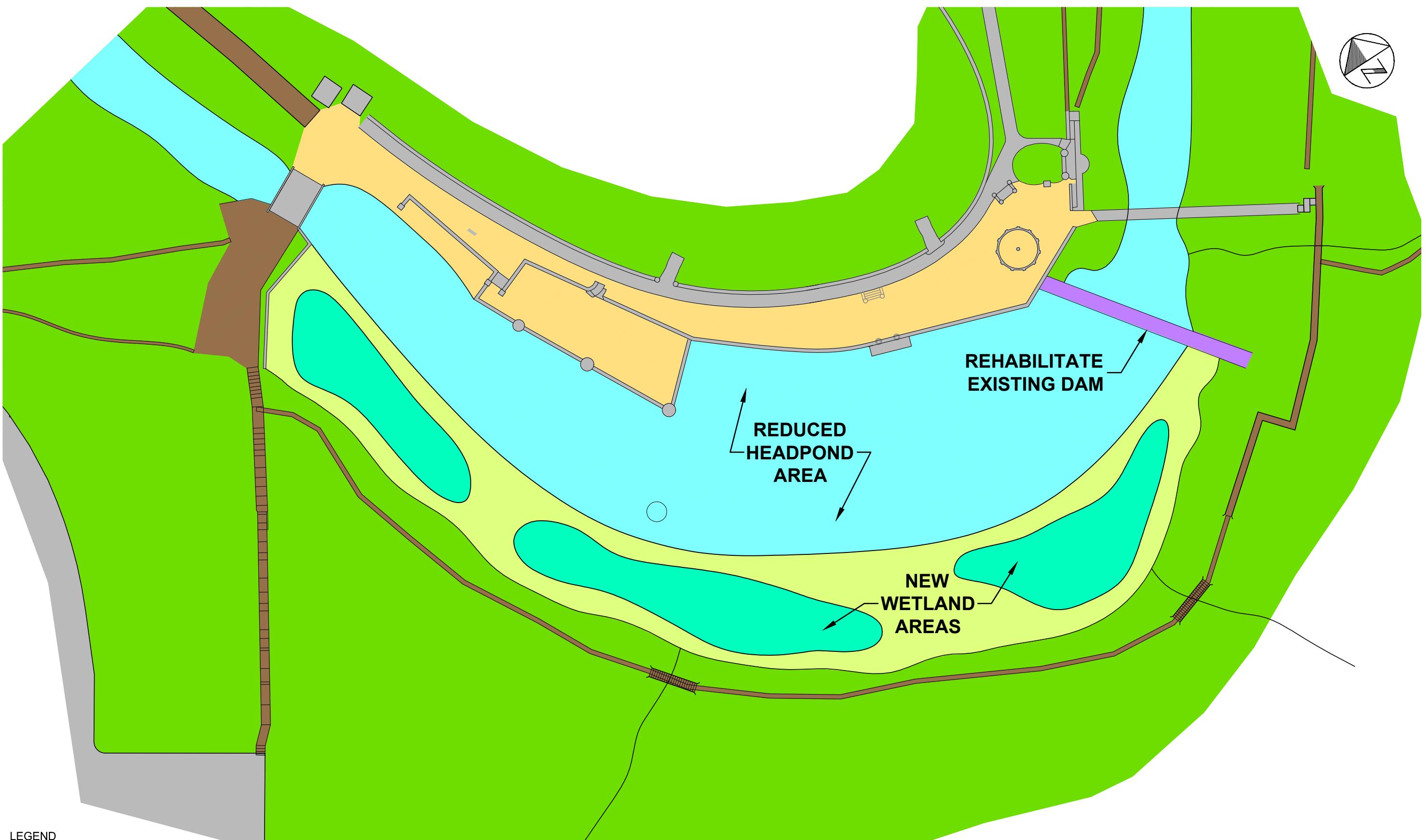
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- EXISTING FOREST COMMUNITY
- EXISTING STRUCTURE
- EXISTING PATH/TRAIL

BELFOUNTAIN DAM AND  
HEADPOND CLASS EA  
CREDIT VALLEY CONSERVATION

ALTERNATIVE D2H3:  
REHABILITATE THE DAM AND  
EXPAND THE TABLELAND



SCALE VALID ONLY FOR  
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Consultant File No.  
TP114113  
Figure No.  
7



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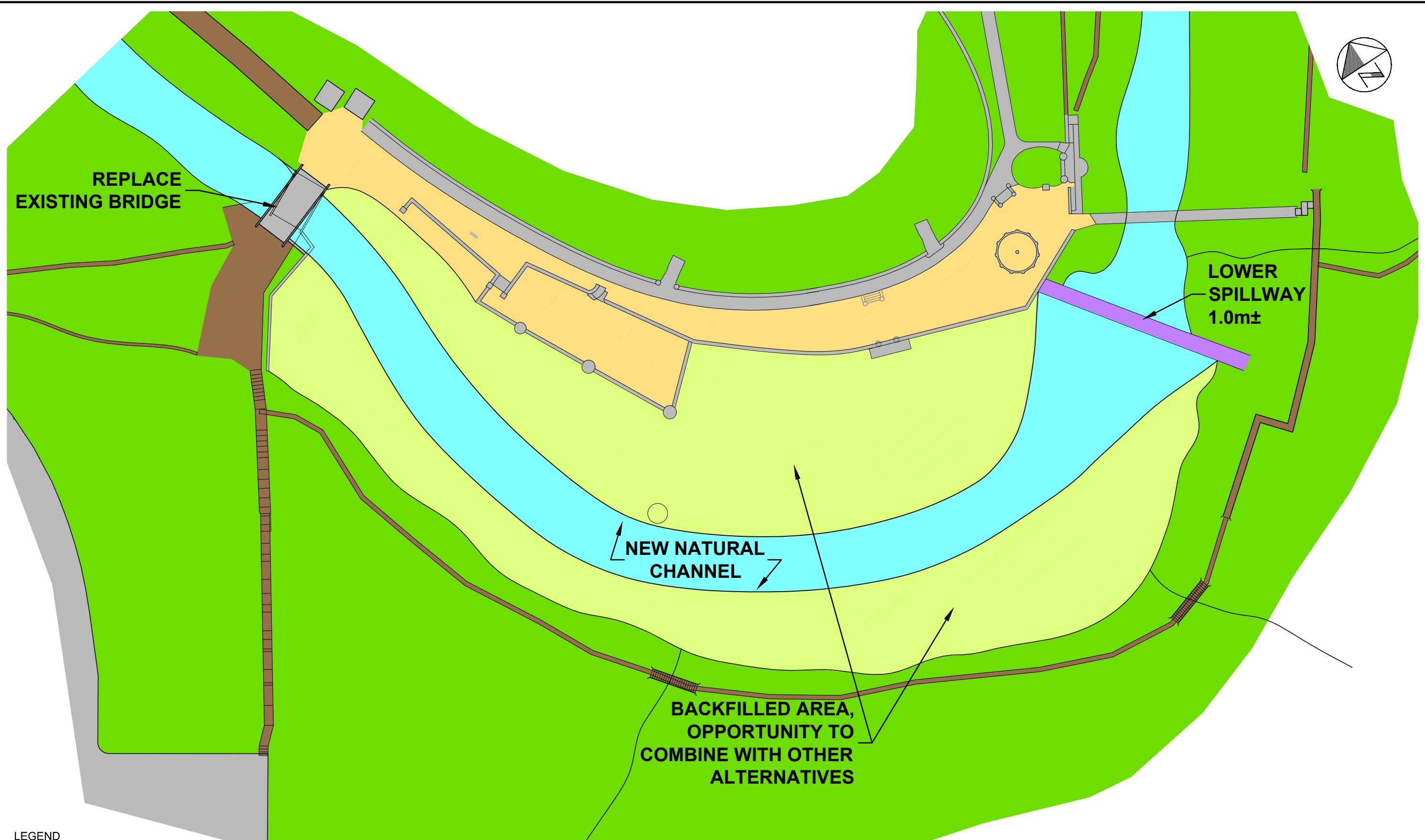
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- EXISTING TURF AREA
- EXISTING FOREST COMMUNITY
- EXISTING STRUCTURE
- EXISTING PATH/TRAIL

BELFOUNTAIN DAM AND  
HEADPOND CLASS EA  
CREDIT VALLEY CONSERVATION

ALTERNATIVE D2H4:  
REHABILITATE THE DAM AND  
CONVERT PORTION OF HEADPOND  
TO WETLAND AREAS

**amec  
foster  
wheeler**

SCALE VALID ONLY FOR  
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TP114113  
Figure No.  
8



**LEGEND**

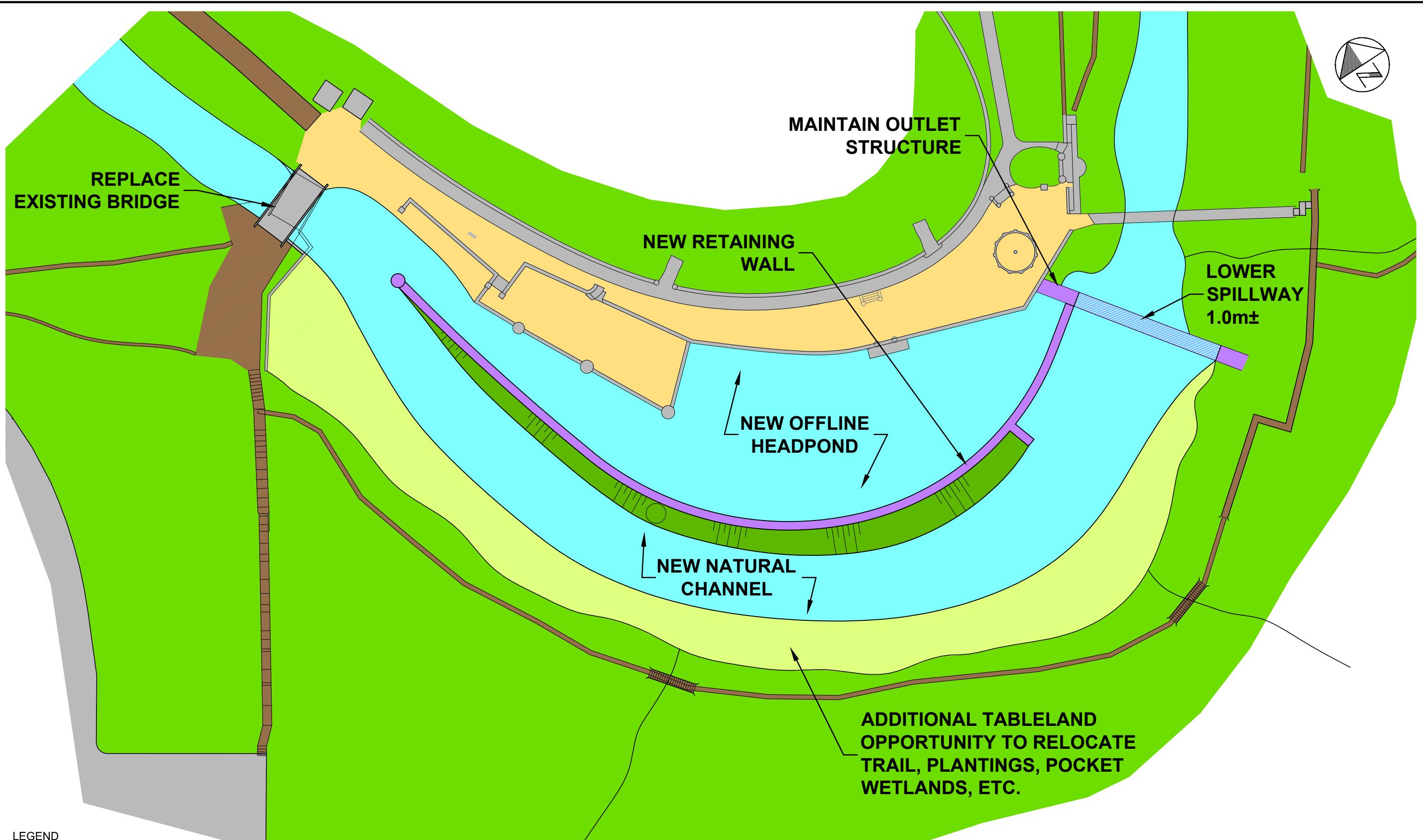
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- EXISTING TURF AREA
- EXISTING FOREST COMMUNITY
- EXISTING STRUCTURE
- EXISTING PATH/TRAIL

BELFOUNTAIN DAM AND  
HEADPOND CLASS EA  
CREDIT VALLEY CONSERVATION

ALTERNATIVE D4H5:  
LOWER THE SPILLWAY AND  
BACKFILL THE HEADPOND AND  
CONSTRUCT CHANNEL

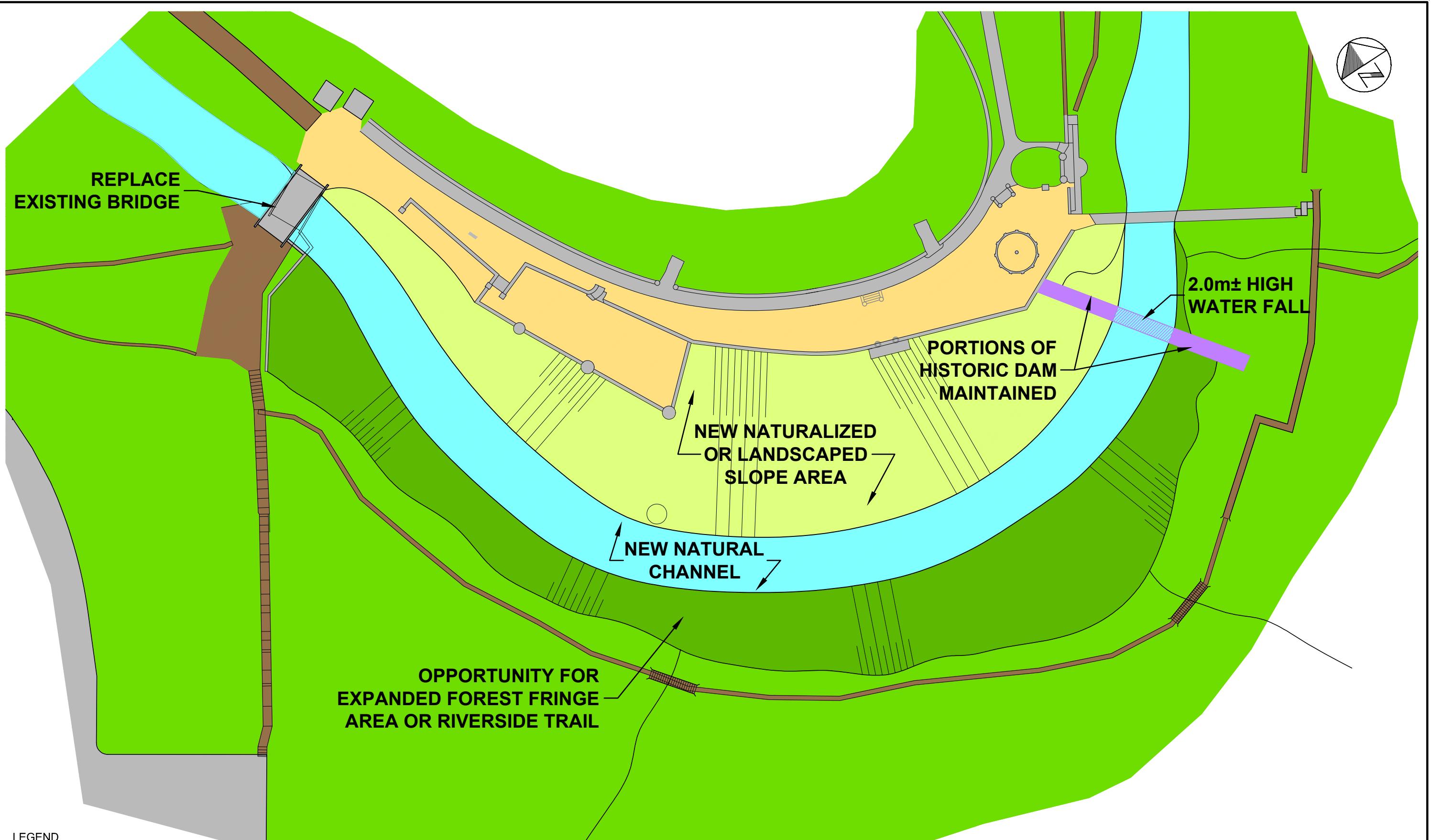
amec  
foster  
wheeler

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**LEGEND**

- EXISTING HEADPOND AREA
- EXISTING TURF AREA
- EXISTING FOREST COMMUNITY
- EXISTING STRUCTURE
- EXISTING PATH/TRAIL



**LEGEND**

- EXISTING HEADPOND AREA
- EXISTING TURF AREA
- EXISTING FOREST COMMUNITY
- EXISTING STRUCTURE
- EXISTING PATH/TRAIL

BELFOUNTAIN DAM AND  
HEADPOND CLASS EA  
CREDIT VALLEY CONSERVATION

ALTERNATIVE D5H7:  
DECOMMISSION THE DAM AND  
RESTORE NATURAL VALLEY  
AND RIVER

**amec  
foster  
wheeler**

SCALE VALID ONLY FOR  
24"x36" VERSION  
Scale 1:250  
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Consultant File No.  
TP114113  
Figure No.  
11

## **Appendix ‘A’**

### **Public Consultation**

## **Notice of Commencement**

# Belfountain Dam and Headpond

## Conservation Ontario Class Environmental Assessment - Notice of Intent

### THE STUDY

Credit Valley Conservation (CVC) has begun a study of the Belfountain dam and headpond, located within Belfountain Conservation Area in the Town of Caledon (see map). The dam does not currently meet all structural and safety standards. The study will be conducted at the same time as the ongoing Belfountain Complex Management Plan to determine the preferred management alternative for the dam and headpond in the context of the greater Belfountain Complex (Belfountain Conservation Area and the neighbouring Willoughby and Cox properties).

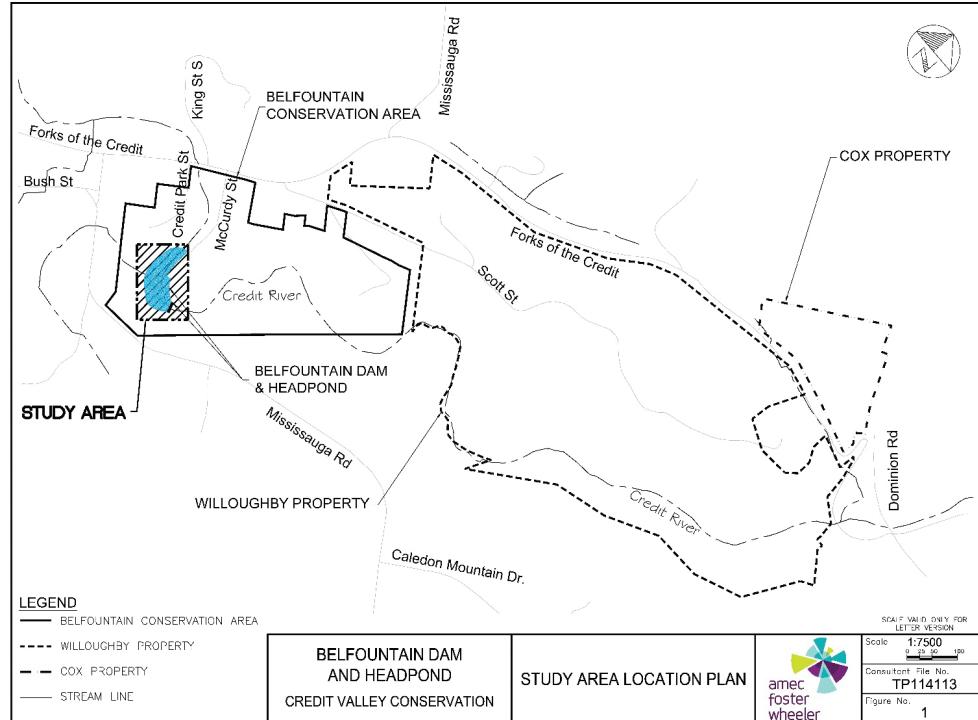
### THE PROCESS

The study is being conducted in accordance with Conservation Ontario's procedures outlined in the Class Environmental Assessment for Remedial Flood and Erosion Control Projects (Class EA). The Class EA process includes public and agency consultation, characterization of the study area and evaluation of alternatives. It looks at potential environmental, social and economic effects of the preferred alternative and identifies measures to mitigate any adverse impacts.

CVC invites you to participate in the study. If you wish to provide comments, ask questions or receive information, please contact one of the project representatives identified below. Information on the project is available at [www.creditvalleyca.ca](http://www.creditvalleyca.ca). Additional consultation opportunities will be made available as the study progresses.

Credit Valley Conservation  
Ms. Laura Rundle  
Conservation Lands Planner  
1255 Old Derry Road  
Mississauga, Ontario, L5N 6R4  
905-670-1615 ext.535  
[lrundle@creditvalleyca.ca](mailto:lrundle@creditvalleyca.ca)

Amec Foster Wheeler  
Environment & Infrastructure  
Mr. Ron Scheckenberger, M.Eng., P.Eng., Project Manager  
3215 North Service Road, P.O. Box 220  
Burlington, Ontario, L7N 3G2  
905-335-2353 • 1-866-751-2353  
[ron.scheckenberger@amecfw.com](mailto:ron.scheckenberger@amecfw.com)



	Name	Organization	Email	Phone Number	Address
1	Judy Mabee	Belfountain Community Organization	judy.mabee@gmail.com		
2	Sarah Bohan	Belfountain Heritage Society	sarah.bohan@belfountainheritage.com		
3	Steve Goyeche	Belfountain Heritage Society – Alternate	sgoyeche@rogers.com		
5	TBD	Belfountain Public School			
6	Adrie Lamers	Caledon Environmental Advisory Committee	adrielamers@hotmail.com		
7	Carol Sheppard	Caledon Hills Bruce Trail Club	4sheppard@rogers.com		
8	Valerie Arnold-Judge	Caledon Chamber of Commerce	vjudge@rogers.com		
9	Mike Ewaschuk	Credit River Anglers Association	mewaschuk@live.ca		
10	Dave Orr	Credit Valley Conservation	dorr@creditvalleyca.ca		
11	Shawn Verge	Credit Valley Conservation – Alternate	sverge@creditvalleyca.ca		
12	Susan Robertson	Credit Valley Heritage Society	Sul_robe@hotmail.com		
13	Dave Dyce	Headwaters Communities in Action	mddyce@xplornet.com		
14	Chris Broom	Headwaters Communities in Action – Alternate	chris_broom@hotmail.com		
15	Michele Harris	Hills of Headwaters	michele@thehillsofheadwaters.com		
16	Don Arthurs	Izaac Walton Fly Fishing Club	drarthurs@sympatico.ca		
17	Kellie McCormack	Niagara Escarpment Commission	Kellie.mccormack@ontario.ca		
18	Anne Marie Lawrence	Niagara Escarpment Commission	Annemarie.lawrence@ontario.ca		
19	Mark Heaton	Ministry of Natural Resources and Forestry	Mark.heaton@ontario.ca		
20	Susan Cooper	Ministry of Natural Resources and Forestry	Susan.cooper@ontario.ca		
21	Kendrick Doll	Ontario Heritage Trust	kendrick.doll@ontario.ca		
22	Mike Toutant	Ontario Parks	mike.toutant@ontario.ca		
23	Tim Marchand	Ontario Parks – Alternate	tim.marchand@ontario.ca		
24	Janet Wong	Region of Peel - Alternate	Janet.wong@peelregion.ca		
25	Gino Dela Cruz	Region of Peel - Alternate	Gino.delacruz@peelregion.ca		

Belfountain Dam and Headpond  
Class Environmental Assessment  
Stakeholder Group Contact List

16/07/2015

26	Liz Brock	Region of Peel - Alternate	Liz.brock@peelregion.ca
27	Tina Fernandes	Town of Caledon (Parks)	Tina.fernandes@caledon.ca
28	Tim Manley	Town of Caledon (Planning)	Tim.manley@caledon.ca
29	Sally Drummond	Town of Caledon	sally.drummond@caledon.ca
30	Brian Greck	Trout Unlimited – Greg Clark Chapter	briangreck@rogers.com
31	Steve Copelan	Trout Unlimited – Greg Clark Chapter	
32	TBD	Upper Credit Field Naturalists	TBD

Core Team

Name	Organization	Email	Phone Number	Address
1 Jon Clayton	Credit Valley Conservation Authority	JClayton@creditvalleyca.ca		
2 Charlotte Cox	Credit Valley Conservation Authority	ccox@creditvalleyca.ca		
3 Jesse DeJager	Credit Valley Conservation Authority	JDeJager@creditvalleyca.ca		
4 Bill Lidster	Credit Valley Conservation Authority	JDeJager@creditvalleyca.ca		
5 Liam Marray	Credit Valley Conservation Authority	LMarray@creditvalleyca.ca		
6 Bob Morris	Credit Valley Conservation Authority	BMorris@creditvalleyca.ca		
7 Sherwin Watson-Leung	Credit Valley Conservation Authority	SWatson-Leung@creditvalleyca.ca		
8 David Wells	Credit Valley Conservation Authority	DWells@creditvalleyca.ca		
9 Jeff Wong	Credit Valley Conservation Authority	JWong@creditvalleyca.ca		
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12 Kate Burgess	Credit Valley Conservation Authority	KBurgess@creditvalleyca.ca		
13 Joana Marques	Credit Valley Conservation Authority	JMarques@creditvalleyca.ca		
14 Eric Baldin	Credit Valley Conservation Authority	EBaldin@creditvalleyca.ca		
15 Scott Sampson	Credit Valley Conservation Authority	SSampson@creditvalleyca.ca		
16 Mark Thompson	Credit Valley Conservation Authority	MThompson@creditvalleyca.ca		
17 Jennifer Sylvester	Credit Valley Conservation Authority	JSylvester@creditvalleyca.ca		
18 Shawn Verge	Credit Valley Conservation Authority	SVerge@creditvalleyca.ca		

19 Kate Hayes Credit Valley Conservation Authority KHayes@creditvalleyca.ca  
20 Rizwan Haq Credit Valley Conservation Authority rhaq@creditvalleyca.ca

Commenting Team

Name	Organization	Email	Phone Number	Address
1 Sandy Camplin	Credit Valley Conservation Authority	SCamplin@creditvalleyca.ca		
2 Annabel Krupp	Credit Valley Conservation Authority	AKrupp@creditvalleyca.ca		
3 Rod Krick	Credit Valley Conservation Authority	RKrick@creditvalleyca.ca		
4 David Orr	Credit Valley Conservation Authority	DOrr@creditvalleyca.ca		
5 Yasmine Slater	Credit Valley Conservation Authority	YSlater@creditvalleyca.ca		
6 Eric Mailloux	Credit Valley Conservation Authority	EMailoux@creditvalleyca.ca		
7 David Beaton	Credit Valley Conservation Authority	DBeaton@creditvalleyca.ca		
8 Charlie Brady	Credit Valley Conservation Authority	CBrady@creditvalleyca.ca		
9 Kerry Mulchansingh	Credit Valley Conservation Authority	KMulchansingh@creditvalleyca.ca		
10 Courtney Alexander	Credit Valley Conservation Authority	CAlexander@creditvalleyca.ca		
11 Mike Puddister	Credit Valley Conservation Authority	MPuddister@creditvalleyca.ca		
12 Andrew Kett	Credit Valley Conservation Authority	AKett@creditvalleyca.ca		
13 Baljit Sharma	Credit Valley Conservation Authority	BSharma@creditvalleyca.ca		
14 Roy Mosher	Credit Valley Conservation Authority	RMosher@creditvalleyca.ca		
15 Heather Marcks	Credit Valley Conservation Authority	HMarcks@creditvalleyca.ca		

Belfountain Dam and Headpond  
 Class Environmental Assessment  
 Agency Contact List

Jurisdiction	Agency	Contact	Title	Email	Phone	Address
First Nations / Federal	Aboriginal Affairs and Northern Development Canada Consultation & Aboriginal Affairs and Northern Development Canada Consultation & Accommodation Unit	email only		CAU-UCA [CAU-UCA@aadnc-aandc.gc.ca		10 Wellington Street, 5H - 5th Floor Gatineau, QC K1A 0H4
First Nations / Provincial	Ministry of Aboriginal Affairs Consultation Unit Aboriginal Relations and Ministry Partnership Division					160 Bloor Street East, Toronto, ON M7A 2E6
Federal	Department of Fisheries and Oceans	Mr. Brent Valere	Senior Fisheries Protection Program Biologist	brent.valere@dfo-mpo.gc.ca	(905) 336-4914	867 Lakeshore Road, P.O. Box 5050 Burlington, ON L2R 4A6
Provincial	Ministry of Agriculture Food and Rural Affairs	Mr. David Cooper	Manager, Environmental and Land Use Policy	david.cooper@ontario.ca		Ontario Government Bldg 1 Stone Rd W, 3rd Flr Guelph ON N1G4Y2
Provincial	Ministry of the Environment and Climate Change	Ms. Amanda Graham	Environmental Resource Planner & EA Coordinator	amanda.graham@ontario.ca	416.326.5745	Central Region Technical Support Section Air, Pesticides & Environmental Planning Place Nouveau, 9th Flr 5775 Yonge St Toronto, ON M2M4J1
Provincial	Ministry of Tourism, Culture & Sport	Ms. Rosi Zirger	Heritage Planner	rosi.ziger@ontario.ca		401 Bay Street, Suite 1700, 17th Floor Toronto, ON M7A 0A7

Belfountain Dam and Headpond  
Class Environmental Assessment  
Agency Contact List

Provincial	Ministry of Natural Resources and Forestry	Mr. Paul Heeney	District Manager	paul.heeney@ontario.ca	905.713.7372	Aurua District 50 Bloomington Road Aurora, ON L4G 0L8
Provincial	Niagara Escarpment Commission	Ms. Tara Spears	Planner	tara.spears@ontario.ca	905.877.7815	232 George Street Georgetown, ON L7G 4B1
Municipal	Town of Caledon	Mr. Tim Manley	Senior Policy Planner	Tim.manley@caledon.ca		6311 Old Church Road Caledon, ON L7C 1J6
Municipal	Region of Peel	Ms. Janet Wong	Planner	Janet.wong@peelregion.ca		10 Peel Centre Drive, Suite A and B, Brampton, ON L6T 4B9,

**PIC #1**

# **PUBLIC CONSULTATION**

## **BELFOUNTAIN CONSERVATION AREA**

### **CLASS EA AND MANAGEMENT PLAN**

Credit Valley Conservation is hosting a public open house to present the Environmental Assessment (Class EA) information for the Belfountain dam and headpond as well as management plan concepts for the Belfountain Complex.

The management plan will guide the management of resources and the use of the conservation area. The open house will include a presentation with opportunities to review the concepts and provide feedback.

For more information, visit:

**[www.creditvalleyca.ca/bcmp](http://www.creditvalleyca.ca/bcmp)**

**Tuesday, September 22, 2015  
6 to 9 p.m.**

Presentation from 6:30 to 7:30 p.m.

**Caledon Ski Club**

17431 Mississauga Road  
Caledon, Ontario, L7K 0E9

**Contact:** 905-670-1615 ext. 535  
or [lrundle@creditvalleyca.ca](mailto:lrundle@creditvalleyca.ca)



## Belfountain Dam and Headpond Class Environmental Assessment

September 22, 2015



### Who is Amec Foster Wheeler?

- Amec Foster Wheeler was retained by CVC to carry out the Belfountain Dam and Headpond Class Environmental Assessment
- The Amec Foster Wheeler 'Team' includes professionals specializing in all relevant aspects of the project:
  - Planning
  - Engineering
  - Natural sciences
  - Heritage & archaeology
  - Public consultation



Present today:  
Aaron Brouwers  
Ron Scheckenberger  
Heather Dearlove  
Mary Kelly



## Outline

- Study Need, Purpose and Approach
- Study Area
- Class Environmental Assessment Process
- Study Objectives
- Baseline Inventory
- Preliminary Long-list of Alternatives
- Next Steps



## Study Need, Purpose & Approach

Why is the study required?

What will it achieve?

How will it achieve it?



## Study Need

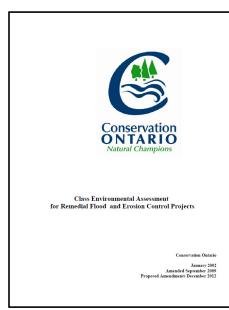
- The need for this study was identified in a previous evaluation of the dam's safety which revealed Belfountain Dam does not meet all of the current provincial standards for safety
- Although the dam could simply be repaired, other management options are available that require additional study of several important factors including:
  - Park visitors
  - Cultural heritage
  - Natural heritage
  - Economics
  - And more






## Study Need

- CVC is a public body, and as such certain activities must be planned in accordance with the *Environmental Assessment Act*
- Under the Act, CVC is required to undertake a *Conservation Ontario, Class Environmental Assessment for Remedial Flood and Erosion Control* (Class EA)



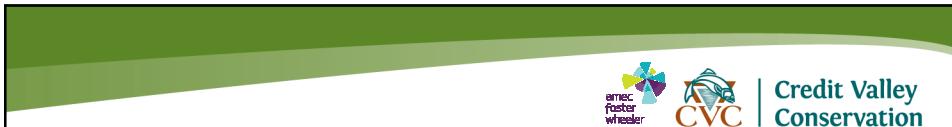


## Study Purpose & Approach

- The **purpose** is to determine how to manage the Belfountain Dam and Headpond in the future
- The **approach** used will be the Class EA process:
  1. Document baseline environmental conditions
  2. Establish a long-list of management alternatives
  3. Evaluate each alternative using appropriate physical, biological, cultural and socioeconomic criteria
  4. Select the preferred management alternative for the Belfountain Dam & Headpond



## Study Area



**Credit Valley Conservation**

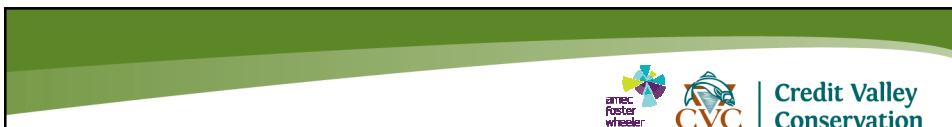
**Study Area**

- The formal Study Area is comprised of the following components:
  - Belfountain Dam
  - Headpond
  - the immediate surrounding area within the Belfountain Conservation Area that may be impacted by the various management alternatives



2014-09-01 14:20

2014-09-01 14:21



**Credit Valley Conservation**

**Study Area**



BELFOUNTAIN DAM

Mississauga Road

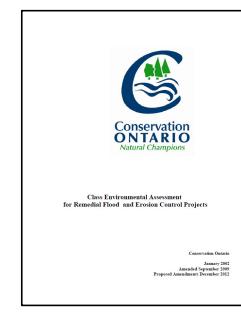


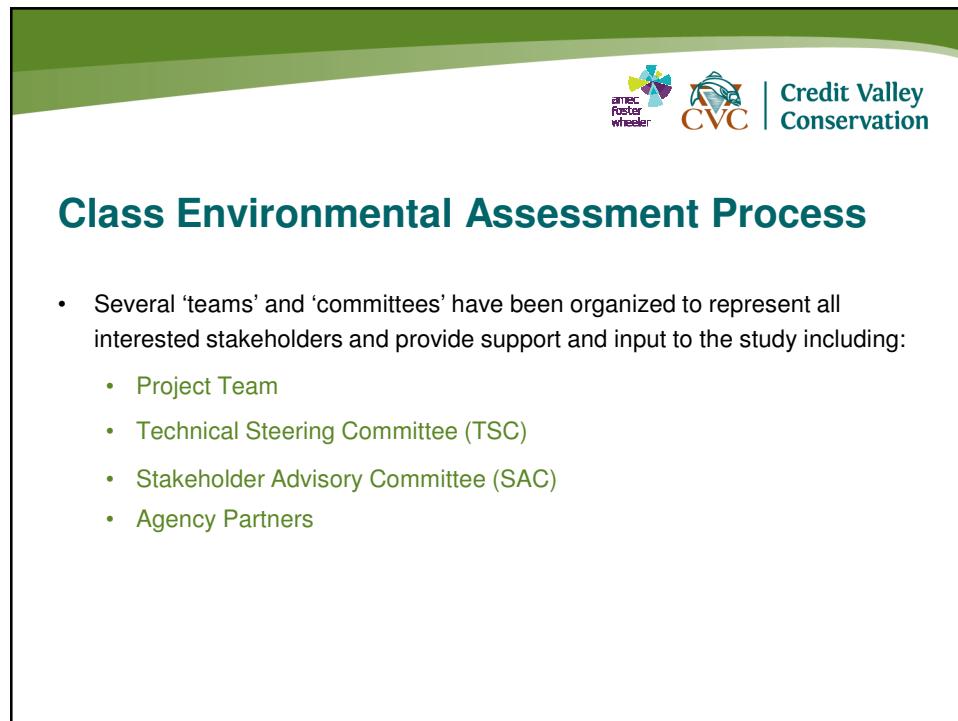
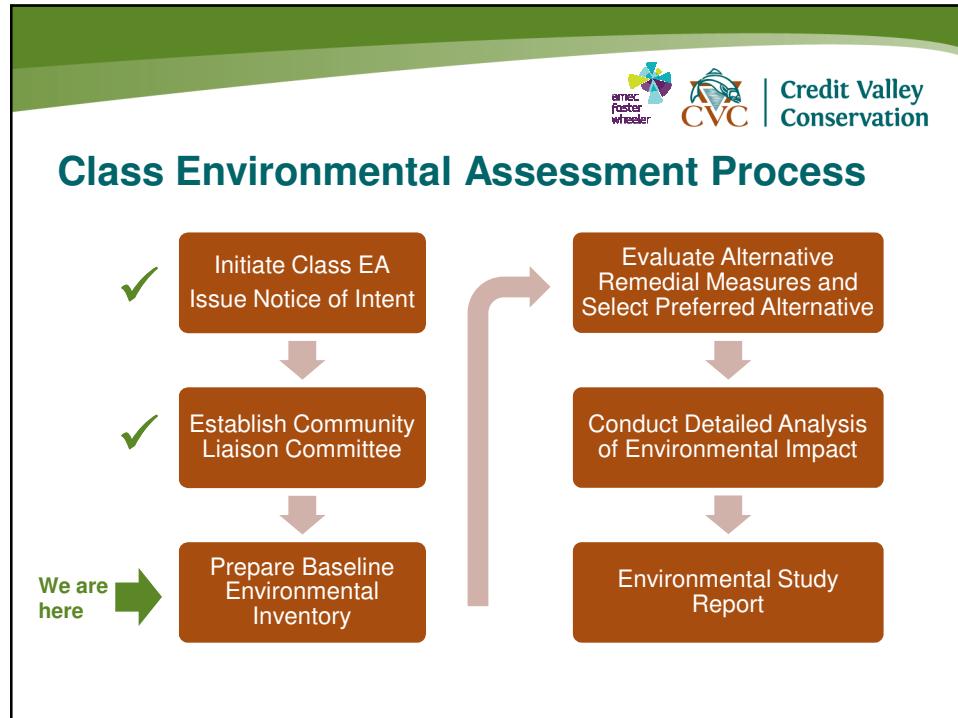
## Class Environmental Assessment Process



## Class Environmental Assessment Process

- This study follows: Conservation Ontario's Class Environmental Assessment for Remedial Flood and Erosion Control Projects
- The process provides a project planning and design framework for proponents (Conservation Authorities like CVC) to ensure they meet the requirements of the Provincial *Environmental Assessment Act*
- Consultation with all stakeholders including the public and agency partners at all stages







## Study Objectives

What will the preferred alternative need to achieve?



## Study Objectives

- 1) *Maintain a fisheries barrier between upstream Brook Trout and downstream invasive and non-native species*
- 2) *Reduce/minimize risk to visitors, staff and affected property*
- 3) *Maintain or improve the visitor experience*
- 4) *Conserve and enhance cultural heritage attributes*
- 5) *Promote natural stream function*
- 6) *Strive for long-term sustainability including economic viability*
- 7) *Conserve and enhance natural heritage attributes*



## Baseline Inventory

A summary of existing conditions and background information



## Baseline Inventory

- Nine (9) component technical studies have been completed:

### 1. Hydrology and Hydraulics

- River flows and levels



Flow over the dam



Flow in the river

### 2. Structural Engineering

- Stability of the dam & retaining walls



Dam and retaining wall



Concrete deterioration



## Baseline Inventory

- Nine (9) component technical studies have been completed:

### 3. Geotechnical Engineering

- Soils
- Slope stability



Test pitting behind  
north retaining wall

### 4. Stream Morphology and Sediment

- Creek processes



West Credit River



Sediment in the  
headpond

## Baseline Inventory

- Nine (9) component technical studies have been completed:

### 5. Aquatic Ecology

- Water species  
and their habitat



Brook trout



Brown trout

### 6. Terrestrial Ecology

- Land species  
and their habitat



Species at Risk:  
Jefferson  
Salamander



## Baseline Inventory

- Nine (9) component technical studies have been completed:

### 7. Cultural & Built Heritage

- Representations of past human activity: *structures, landscapes*



Mack Park  
(early 1900's)

### 8. Archaeology

- Representation of past human populations: *artifacts*



Archeological potential in Belfountain CA



## Baseline Inventory

- Nine (9) component technical studies have been completed:

### 7. Financial Analysis

- Park revenue & operating costs
- Capital & maintenance cost of preferred alternative



## Preliminary Long-list of Alternatives



## Preliminary Long List of Alternatives

- A long list of potential alternatives to address the issues/objectives has been developed for the **Dam** and **Headpond** separately
- Additional sub-options also identified which include variations in the core alternatives
- Additional ‘complementary options’ are aimed at meeting study objectives but would not be fundamental to the solution and could be ‘added’ to the alternatives:
  - Example: Fish Ladder
- It is important to note that the respective alternatives, depending on their scope, may also have some overlap with the Belfountain Complex Management Plan



## Preliminary Long List of Alternatives

### Dam Alternatives

- 1. Do Nothing**
- 2. Repair dam**
  - i. In-kind
  - ii. Restore dam to historic condition
- 3. Replace dam**
  - i. In-kind
  - ii. Restore dam to historic condition
  - iii. Relocate
- 4. Modify Dam (Lower spillway)**
- 5. Decommission the dam and naturalize the river**
  - i. Full
  - ii. Partial (leave portion of structure)
- 6. Offline dam and natural channel**



## Preliminary Long List of Alternatives

### Headpond Alternatives

- 1. Do Nothing**
- 2. Rehabilitate existing headpond**
- 3. Expand table land**
- 4. Convert to wetland**
- 5. Natural channel (dependent on dam)**
- 6. Offline pond/wetland (dependent on dam)**





## Preliminary Long List of Alternatives

### Complementary Options

1. Fish ladder
2. Trail/boardwalk improvements, new lookouts
3. Water wheel, water ram
4. Sediment removal
5. Built heritage protection/mitigation/compensation
6. Natural heritage enhancement options
7. Etc.



*\* Some of these element may be realized through the  
Belfountain Complex Management Plan*



## Next Steps



## Next Steps

- Characterize the alternatives
- Evaluate the alternatives
- Select a preliminary preferred alternative
- Public Information Centre #2 – November 2015



## Questionnaire & Presentation Boards

## Belfountain Dam and Headpond Class Environmental Assessment

September 22, 2015

**Study Area**



The formal Study Area is comprised of the Belfountain Dam; Headpond, and the immediate surrounding area within the Belfountain Conservation Area

**Legend:**

- BELFOUNTAIN CONSERVATION AREA
- WILLOUGHBY PROPERTY
- STATE HIGHWAY
- EXISTING HEADZONE



## Study Need, Area and Purpose and Approach

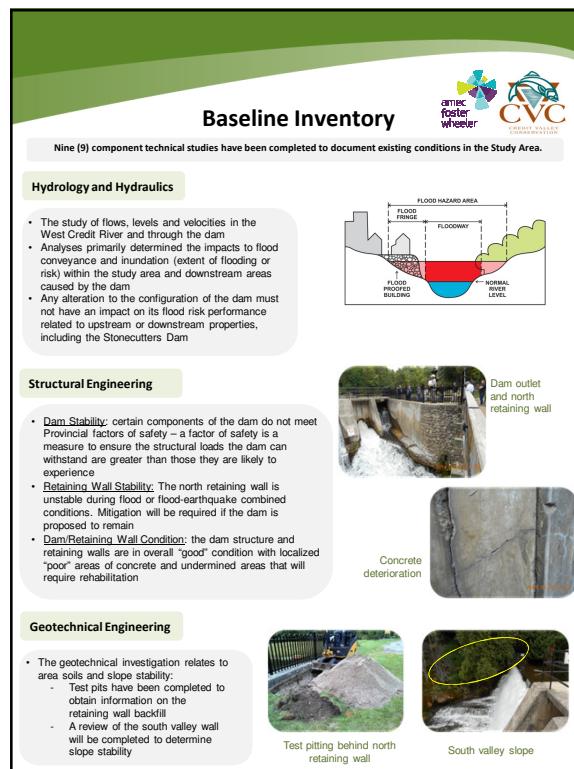
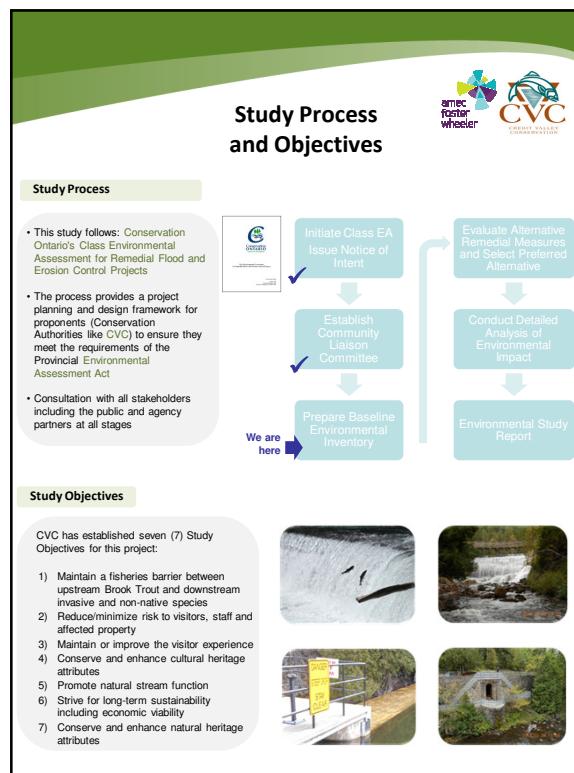
**Study Need**

- The need for this study was identified in a previous evaluation of the dam's safety which revealed **Belfountain Dam does not meet all of the current provincial standards for safety**
- Although the dam could simply be repaired, other management options are available that require additional study of several important factors including:
  - Park visitors
  - Cultural heritage
  - Natural heritage
  - Erosion control
  - And more
- CVC is a public body, and as such certain activities **must** be planned in accordance with the *Environmental Assessment Act*
- Under the Act, CVC is required to undertake a *Conservation Ontario, Class Environmental Assessment for Remedial Flood and Erosion Control (Class EA)*

**Study Purpose and Approach**

- The purpose is to determine how to manage the Belfountain Dam and Headpond in the future using the Class EA approach
- The approach applies the Class EA process, and will:
  - Document baseline environmental conditions
  - Establish a long-list of management alternatives
  - Evaluate each alternative using appropriate physical, biological, cultural and socioeconomic criteria
  - Select the preferred management alternative for the Belfountain Dam & Headpond



**Baseline Inventory**

Nine (9) component technical studies have been completed to document existing conditions in the Study Area.

### Stream Morphology

- The study of stream stability and sediment transport within the West Credit River and how it is impacted by the dam
- The primary impacts of the dam include:
  - Creation of a deep scour pool downstream of the dam
  - Accumulation of sediment in the headpond upstream
  - Widening of the upstream river
- Opportunities exist to improve channel dynamics, which would improve sediment transport and aquatic habitat and function

### Aquatic Ecology

- The study of aquatic (water) species and their habitats
- The dam acts as a barrier and protects the native brook trout population upstream from the more competitive brown trout population downstream
- The dam also prevents other species, such as alewife and the endangered American eel, from moving upstream of the dam
- The slow-moving water within the headpond has the potential to create a warming effect which could negatively impact cold-water fish communities and sensitive species downstream of the dam

### Terrestrial Ecology

- The study of terrestrial (land) species and their habitats
- The Belfountain Conservation Area contains high quality woodland and valleyland environments
- There are several "Species at Risk" surrounding the study area including Jefferson Salamander, little brown bat, and others

**Baseline Inventory**

Nine (9) component technical studies have been completed to document existing conditions in the Study Area.

### Archaeology

- Study Area has significant (88% of the area) archaeological potential
- Two known archaeological sites are registered in the Ontario Archaeological Sites Database: Mack Park (A/Ha-10) and Willoughby Industrial Heritage Site (A/Ha-20)
- If these areas would be disturbed as a result of the preferred alternative further archaeological investigations would be required

### Cultural and Built Heritage

- Belfountain Dam and Headpond were constructed in the early 1900's by a wealthy Toronto business man, Charles Mack, to recreate Niagara Falls as part of Mack Park
- Town of Caledon has designated Mack Park as a Cultural Heritage Landscape
- Numerous built heritage resources have been identified within the Study Area including the dam, Yellowstone Cave, various walls and pathways, etc.
- Alternatives will consider how to manage potential effects on heritage resources

### Headpond Sediment Analysis

- Headpond fills naturally fills with sediment
- Sediment sampling conducted to determine sediment volume and quality
  - Volume: approx. 2,500 cubic metres (equivalent to Olympic swimming pool)
  - Quality: low level contaminants (no significant implication to remedial/cleanup of sediment or to stream ecosystem)

### Finance

- Day use fees represent 60%+/- of total program revenues
- The balance of funding is raised from taxes
- The dam is understood to be a major draw for visitors
- Capital and maintenance costs of the preferred alternative must also be considered

## Preliminary Long-List of Alternatives

**Dam Alternatives**

1. Do Nothing
2. Repair dam
  - i. In-kind
  - ii. Restore dam to historic condition
3. Replace dam
  - i. In-kind
  - ii. Restore dam to historic condition
  - iii. Relocate
4. Modify Dam (Lower spillway)
5. Decommission (remove) the dam and naturalize the river
  - i. Full
  - ii. Partial (leave portion of structure)
6. Offline dam and natural channel

The dam could be repaired, replaced or lowered. It could look as it does today, or be restored to a condition more similar to the original.

**Headpond Alternatives**

1. Do Nothing
2. Rehabilitate existing headpond
3. Expand table land into headpond
4. Convert to wetland
5. Natural channel (dependent on dam)
6. Offline pond/wetland (dependent on dam)

**Complementary Options**

1. Sediment removal
2. North retaining wall stability mitigation
3. Built heritage protection/mitigation/compensation
4. Natural heritage enhancement options
5. Dam aesthetics
6. Fish ladder
7. Trail/boardwalk improvements, new lookouts
8. Headpond bridge
9. Water wheel, water ram

Example of Offline Pond: Mount Abon Pond - Henton

OFFLINE DAM, NATURAL CHANNEL

COMPLEMENTARY OPTIONS

Fish ladder Water wheel  
Sediment in the headpond Historic lookout

## Next Steps and How to Submit Comments

**Next Steps**

- Consider and incorporate comments from the public
- Characterize the alternatives
- Develop criteria and evaluate the alternatives
- Select a preliminary preferred alternative
- Public Information Centre #2 – November 2015

**How to Submit Comments**

You can complete a comment form and submit it to the Study Team today. Or send your comments to either of the contacts provided below by:

- Mail
- Phone
- Fax
- e-mail

**Please submit comments no later than October 7, 2015**

Initiate Class EA, Issue Notice of Intent

Evaluate Alternative Remedial Measures and Select Preferred Alternative

Establish Community Liaison Committee

Conduct Detailed Analysis of Environmental Impact

Prepare Baseline Environmental Inventory

Environmental Study Report

Credit Valley Conservation  
Ms. Conservation Lands Planner  
1255 Old Derry Road  
Mississauga, Ontario, L5N 6R4  
Tel: (905) 670.1615 ext.535  
email: [lunde@creditvalley.ca](mailto:lunde@creditvalley.ca)

Amec Foster Wheeler Environment & Infrastructure  
Mr. Ron Scheckenberger, M.Eng., P.Eng.  
Project Manager  
3215 North Service Road, P.O. Box 220  
Burlington ON L7N 3G2  
Tel: 905.335.2353  
Toll Free: 1.866.751.2353  
Email: [ron.scheckenberger@amecfw.com](mailto:ron.scheckenberger@amecfw.com)

**Thank you for your participation!**

# **Questionnaire & Comment Sheet**

## **Public Consultation Session**

Thank you for attending CVC's public consultation session for the Belfountain Complex Management Plan and Class Environmental Assessment. Your feedback is important to us and is an integral part of both the Management Plan and Class Environmental Assessment processes.

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### **PLEASE PRINT**

Name/Association: \_\_\_\_\_

E-mail: \_\_\_\_\_

Address: \_\_\_\_\_

Municipality: \_\_\_\_\_

Postal Code: \_\_\_\_\_

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**Please return completed questionnaires to any member of the Study Team during the meeting or to the following contacts after the meeting:**

**Credit Valley Conservation**  
Ms. Laura Rundle  
Conservation Lands Planner  
1255 Old Derry Road  
Mississauga, Ontario, L5N 6R4  
Tel: (905) 670.1615 ext.535  
email: [lrundle@creditvalleyca.ca](mailto:lrundle@creditvalleyca.ca)

**Amec Foster Wheeler**  
**Environment & Infrastructure**  
Mr. Ron Scheckenberger, M.Eng., P.Eng.  
Project Manager  
3215 North Service Road, P.O. Box 220  
Burlington ON L7N 3G2  
Tel: 905.335.2353  
Toll Free: 1.866.751.2353  
Email: [ron.scheckenberger@amecfw.com](mailto:ron.scheckenberger@amecfw.com)

**Please ensure that your questionnaire is in the mail no later than Wednesday, October 7<sup>th</sup>, 2015.**

## **Questionnaire #1 - Belfountain Dam & Headpond Class EA**

CVC is undertaking a Conservation Ontario Class Environmental Assessment (Class EA) to determine how best to manage the Belfountain Dam and Headpond in the future. A Class EA must follow a specific process that can be summarized with the following steps:

1. Document the Baseline Inventory (background information) & identify the problem
2. Evaluate alternative solutions and select a preferred alternative
3. Conduct a detailed analysis of environmental impact

At this time, the baseline inventory (Step 1) has been completed, and development of the alternatives (Step 2) has begun but is not yet completed. Public consultation is integral component of a Class EA and public input will be considered at every step.

Please note that this questionnaire is specific to the Belfountain Dam and Headpond Class EA; a separate questionnaire has been provided in your package regarding the Belfountain Complex Management Plan.

CVC has established seven (7) Study Objectives for this project. The preferred alternative for the Belfountain Dam and Headpond will be required to meet these objectives.

<b>Objective</b>	<b>Ranking</b>
1) <i>Maintain a fisheries barrier between upstream Brook Trout and downstream invasive and non-native species</i>	
2) <i>Reduce/minimize risk to visitors, staff and affected property</i>	
3) <i>Maintain or improve the visitor experience</i>	
4) <i>Conserve and enhance cultural heritage attributes</i>	
5) <i>Promote natural stream function</i>	
6) <i>Strive for long-term sustainability including economic viability</i>	
7) <i>Conserve and enhance natural heritage attributes</i>	

1. Please rank the objectives (1 to 7) in order of importance to you in the space provided above. Place a '1' beside the most important, '2' beside the second most important, etc.

## **Questionnaire #1 - Belfountain Dam & Headpond Class EA**

2. Are there other objectives you think the Class Environmental Assessment should consider? Why? (These should be specific to the dam and headpond)

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3. What is your vision for the Belfountain Dam and Headpond?

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## **Questionnaire #1 - Belfountain Dam & Headpond Class EA**

4. The presentation and poster boards provide the Baseline Inventory (background information) for the study area under various technical study categories. **Is there any information that you think is important to the study that the Study Team may not be aware of?** This could be problems you've observed in the study area, wildlife observations, or other relevant information.

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## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Forecourt:** Please let us know what you think about the concepts for the forecourt (entrance and lower picnic area):

5. What is your preferred option for the forecourt? \_\_\_\_\_

6. Why? \_\_\_\_\_

7. What features do you particularly like or dislike in the forecourt?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Pedestrian Entry-way						
Accessible Drop-off Area						
River Access						
Bike Parking						
Accessible Trail						
Defined Picnic Spaces						
Flexible Picnic Spaces						
Shoreline & Inland Plantings						

9. Do you have any other thoughts or comments about the forecourt area?

## **Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans**

**Visitor Centre and Parking:** Please let us know what you think about the concepts for the visitor centre and parking area:

10. What is your preferred option for the visitor centre and parking area? \_\_\_\_\_

11. Why? \_\_\_\_\_

12. What features do you particularly like or dislike in the visitor centre and parking area?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Drop off area/Entry plaza						
Increased Parking Spaces						
Overflow Parking Area						
New Visitor Centre & Workshop (One Building)						
New Visitor Centre & Existing Workshop (Two Buildings)						

13. Do you have any other thoughts or comments about the visitor centre and parking area?

## **Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans**

**Hillside Garden:** Please let us know what you think about the concepts for the hillside garden (upper picnic area):

14. What is your preferred option for the hillside garden? \_\_\_\_\_

15. Why? \_\_\_\_\_

16. What features do you particularly like or dislike in the hillside garden?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Picnic Pods						
Accessible Trail						
Forest Trail						
Footpath						
Removal of Existing Staircase						
Reconstruction of Existing Staircase						

17. Do you have any other thoughts or comments about the hillside garden?

## **Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans**

**Portico:** Please let us know what you think about the concepts for the portico (pumphouse, bridge area):

18. What is your preferred option for the portico? \_\_\_\_\_

19. Why? \_\_\_\_\_

20. What features do you particularly like or dislike in the portico?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Existing building retrofitted with accessible washroom						
Lawn with informal seating						
Covered deck with informal seating						
Riverside deck						

21. Do you have any other thoughts or comments about the portico?

## **Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans**

22. Do you have any ideas for special events or activities that would be a good fit for Belfountain Conservation Area?

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23. Please use the following space to ask any other questions you may have and the Study Team will provide a response within the following weeks. You can also use this space to provide general comments:

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# Public Consultation Session Summary

## Belfountain Complex Management Plan & Class Environmental Assessment

### Fall 2015

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## **Consultation Overview**

Credit Valley Conservation (CVC) has committed to hosting public consultation sessions at key points during the planning process for the Belfountain Complex Management Plan and Class Environmental Assessment for the Belfountain Dam and Headpond (Class EA). Public consultation provides an opportunity to both inform interested parties about the project as well as consult on recommendations and proposals. The project's Stakeholder Advisory Committee and agency partners are also involved in providing input and feedback into the plan.

The first public consultation session for this project was held in December, 2014 to formally announce the project and seek initial ideas for the Complex and comments related to early proposals. The second round of consultation for this project was held in September and early October, 2015 and focused on introducing the Class EA and presenting early design concepts for Belfountain Conservation Area. The consultation schedule for the second round of consultation included a formal evening public meeting as well as onsite consultation that involved setting up a booth for four days in Belfountain Conservation Area to reach out to the public.

This summary focuses on CVC's second round of public consultation for the Belfountain Management Plan and Class EA (September and October 2015) and is organized into four main components:

- 1. Overview of Public Meeting**
- 2. Overview of Onsite Consultation**
- 3. Summary of Questions and Discussion**
  - 3.1. Summary of Question and Answer Period at the Public Meeting (September 22, 2015)**
  - 3.2. Summary of Discussion and Feedback Received (verbal)**
  - 3.3. Questionnaire Responses and Results**
- 4. Next Steps**

The meeting agenda for the public meeting held on September 22<sup>nd</sup> is included in this report as Attachment A. The questionnaire is included as Attachment B.

This summary was put together by Credit Valley Conservation staff. It is not intended to provide a verbatim transcript; rather it reflects key feedback received. **If you have any suggested edits, please send them to Laura Rundle at [lrundle@creditvalleyca.ca](mailto:lrundle@creditvalleyca.ca) by Monday, November 17<sup>th</sup>, 2015**, after which point the summary will be finalized and posted on CVC's website.

## **1. Overview of Public Meeting**

On Tuesday, September 22, 2015 approximately 50 people attended the public consultation session for Belfountain Complex Management Plan and Class EA. Forty-six individuals signed-in at the event and the postal codes collected during registration indicate that the vast majority of individuals were from Belfountain, although a few attendees were from the broader Caledon area, Halton Hills and Orangeville.

**Public Consultation Meeting Details**

Date: Tuesday, September 22<sup>nd</sup>, 2015

Time: 6p.m. to 9p.m.

Presentation: 6:30p.m. to 7:30p.m.

Location: Caledon Ski Club, 17431 Mississauga Road Caledon, ON

The purpose of the meeting was to present the preliminary concept designs for Belfountain Conservation Area as well as to introduce the Class EA and the preliminary work done to date. The input received during the first round of public consultation (December, 2014) and how it has or will be integrated in the Management Plan, or addressed, was also discussed.

The evening was separated into three main components:

- 1) PowerPoint presentation
- 2) Question & answer period
- 3) Public review the project posters and one-on-one or small group discussions with staff

The agenda for the public meeting is located in Attachment A. Each participant was provided with a questionnaire (Attachment B) to help focus how questions and comments were received.

Staff from Credit Valley Conservation, Amec-Foster Wheeler (firm retained to undertake Class EA) and Brook McIlroy (firm retained to develop concept plans and architectural sketches), were available to discuss the project and answer questions. The materials that were discussed and presented during the public meeting are available on CVC's website: <http://www.creditvalleyca.ca/enjoy-the-outdoors/conservation-areas/belfountain-conservation-area/belfountain-conservation-area-management-plan/consultation/public-information-session-september-22-2015/>

## 2. Overview of Onsite Consultation

Consultation took place onsite at Belfountain Conservation Area from 10am to 4pm on the following dates:

- Saturday, September 26<sup>th</sup> (as part of the Salamander Festival)
- Sunday, September 27<sup>th</sup>
- Friday, October 2<sup>nd</sup>
- Saturday, October 3<sup>rd</sup>

Over the course of the four days, CVC staff discussed the Management Plan and Class EA, in varying levels of detail with approximately 70 individuals. Several people took surveys and materials and about twenty provided their contact information indicating that they were interested in receiving updates, learning more or becoming more involved in the planning process.

As can be expected, conversations with different individuals and groups varied widely based on individual interests and concerns. General comments and feedback received (verbal), have been included in section 3.2., which also contains verbal feedback received during the public meeting.

### **3. Summary of Questions and Discussion**

This section contains an overview of the questions and feedback that were received through consultation events as well as through completed questionnaires. **It is important to note, with the exception of section 3.1., that CVC's responses to the comments and input received are not included in this summary.** A disposition table identifying all comments and how they will be addressed, will be included in an upcoming report.

#### **3.1. Summary of Question and Answer Period at the Public Meeting (Sept 22, 2015)**

One of the three main components of the public meeting on September 22, 2015 was a question and answer period. Questions have been bolded; answers from staff are recorded in *italics*. Note that in some cases, similar questions have been grouped together.

- **What is the purpose of the new visitor centre?** *A new visitor centre would provide much needed indoor space at Belfountain Conservation Area. It would contain updated washroom facilities, an area for interpretation and educational displays and an area that could be used for educational and special events. Space for CVC operations (staff office, equipment storage), could remain in the existing building or be incorporated into a new building.*
- **Will one visitor centre take over as opposed to several small buildings?** *Yes, one space could work. No more than two buildings are proposed in the main development area (the existing workshop and washroom facilities may or may not be separate from the proposed visitor centre).*
- **How much will the management plan cost? What is the budgeting process?** *We won't have a final cost identified for the management plan until preferred options (including the size and placement of features), is selected. The budgeting process may involve asking for special levy funds from our municipal partners, applying for grants and funds that become available and fundraising through the CVC Foundation. Depending on available funding, a phased approach may be utilized to implement the Plan over several years. Conversely, if a large amount of money is available, we may try to complete the project in a short period of time.*
- **What is the intent of the expansion and enhancement of Belfountain Conservation Area? Is it to generate additional revenue for CVC?** *The main purpose of the planning process is to deal with existing issues onsite and enhance what already exists. Revenue generation has not been a focus of the planning process. Though revenue is important for maintaining the conservation area (decreases have not been incorporated) revenue is not an objective of the facilities.*
- **Generation of revenue would likely be derived from increased facilities and amenities.** *The purpose of enhancing facilities and amenities is to increase visitor experience and alleviate concerns that have been identified through the planning process (e.g. parking, traffic). Revenue may increase based on increased fees to support infrastructure development.*
- **Some community members are more impacted than others. We have concerns with traffic, visitors, noise, trash left in the village. Bus traffic and school buses during the week also cause noise. We need to consider better noise mitigation and site lines for neighbours. What are you going to do for those of us living here?** *We are trying to address many of these comments through the management plan. Several will relate to the development of new policies, such policies about the*

*number of buses that can be permitted onsite at one time. We are also working to try to alleviate some of the broader concerns regarding traffic and parking with our agency partners.*

- **What considerations do you have for buffers around the parking lot?** Once a preferred alternative is selected, we will be able to make recommendations for buffers around the parking area. Generally, these concepts indicate a 5m buffer between the parking area and boundary line. Please let us know your comments.
- **Parking and traffic is the issue here. What is the alternative if we do not increase the parking in the conservation area?** Increasing the parking area in Belfountain Conservation Area will alleviate some of the parking issues in Town. CVC is working with the Town of Caledon, Region of Peel and other partner agencies to identify additional solutions to these problems. These include utilizing additional parking areas on the weekend (for example, Belfountain Public School), using signage to better direct visitors vs regular traffic, exploring a shuttle service on weekends and marketing strategies.
- **Vandalism is a huge concern.** We are aware that any concepts that are selected will have to be managed effectively. Part of this involves working with our partner agencies, such as the Ontario Provincial Police and the municipalities. Security and enforcement are also key items that will be addressed in the management through internal policy development.
- **Current visitor traffic on weekends and during the weekdays is a huge concern. How many people visit each day? How many visitors do you have per year? If we keep building, more people will come.** Over the past several years, our visitation has generally remained consistent (25,000 – 30,000 people per year). Visitation has increased in 2015 (an estimated 10% - 15% increase from 2014 as of September 2015). We are unsure exactly what has caused this increase, but assume that it is a number of factors, including general population growth and perhaps radio commercials featuring the Belfountain area (Mazda). We are exploring ways to better manage this, including encouraging off-peak visitation and managing visitation on weekends.
- **Why are you closing the unsanctioned trails in the Complex?** Unsanctioned or unauthorized trails refer to trails that are not maintained by CVC. These include trails that access the water and contribute to degradation and the spread of invasive species. These do not include the Trimble Trail, Crow's Nest Loop, the Pond Trail or the Gorge Loop Trail – these are all sanctioned trails that are important to conservation area visitors and operations. The Right-of-Way located on the Willoughby Property is owned by the Ontario Heritage Trust; they are addressing the use of this area.
- **What is the future water source of the visitor centre?** A well will likely be the future water source of a new visitor centre. Once the preferred option is selected, we will look into the quality and quantity of water from a local well to ensure that maintain the building is feasible.

### **3.2. Summary of Discussion and Feedback Received (verbal)**

The feedback below was shared by participants (verbally) to staff during the poster review portion of the public meeting, as well as through onsite consultation in Belfountain Conservation Area. CVC responses are not provided to each individual comment in this summary report; feedback for each response will be included in a report that thoroughly details all of the comments received. Please note that some of these comments are similar topics to the questions received (section 3.1.)

### **Visitation and Capacity Comments**

- Why doesn't CVC just close the gates when the park is full?
- Develop a parking app to be able to tell people to go away when there is no more parking because the park is closed.
- Why keep the park open at all?
- Biggest problem within Belfountain Conservation Area is flow – getting visitors to disburse around the site and not just stay near the entrance.
- Resident noted that they had visited High Park and was disappointed that they had a reservation only for picnic sites. She now understands why such a policy would be implemented and encourages a similar policy for BCA.
- Control the borders. Everybody who enters should pay.
- CVC should have a yearly capacity for visitors, and when that is reached, the park should be closed for the rest of the year.
- This park really needs more parking.

### **Vandalism and Safety Comments**

- Onsite security is important – residents feel that the conservation area is contributing negatively to the overall safety of the community. CVC needs to make a plan to address this.
- Site security is a concern, particularly to those that border the conservation area. This presents a concern not only to the conservation area but for their property as well.
- Entrance needs a gate at the road as people park on the dead end section of road at night to access the park after hours. Teenagers mostly and they ruin things
- Gates need to be moved to the front entrance to deter vandals
- You should install permanent picnic tables that are cemented into the ground – this will help with accessibility. They also won't be thrown into the river.

### **Activities and Programming Comments**

- Don't do picnics at all because they are low value. Picnics do not benefit the local community or businesses.
- Don't allow buses in at all; buses are noisy and block traffic
- Potential programming for a visitor centre could include: ideas around culture, arts, music, and food. Events that the community could participate in and that CVC could generate some revenue from. This could include local food nights, cooking demonstrations, local wine/cider/beer tastings and pairings, etc.
- Residents would like to see a plan identifying exactly what is proposed for the visitor centre.
- Develop Belfountain CA only for hikers and picnickers; they seem to be the ones using the site the most.
- I love the Salamander Festival – you need to have more events like this.

### **Class EA Comments**

- Resident had been coming to Belfountain CA since they were a kid – would love to be able to swim in the headpond again.
- It will be very interesting to see how the outcome of the Class EA for Belfountain compares to the EA for the Erin dam.
- Getting Atlantic Salmon up should not be an objective in the Class EA.
- Resident was not supportive of removing Brown Trout below the Dam.

### **Community Relationship Comments**

- Residents once felt welcome at the conservation area and were proud to live within walking distance of this gem. When CVC withdrew friendship passes and insisted on charging residents, they felt they were no longer welcome. With the new change in policy re active transportation, there was little done to communicate this to the community and believe they found out by accident which undermined the very purpose of this initiative.
- Connecting with local eateries, wine makers, bakers, etc. is very important. Promote local businesses. People become frequent day tripper to entire area.
- CVC should report park usage to residents –report/time/dates/activities (monthly/weekly/weekend)
- The lack of investment in the site has led to its slow deterioration which has diminished resident's faith that CVC is a responsible land manager of this site.

### **Other Comments**

- Noise is a major problem. How can we mitigate noise with design techniques? Maybe having an inside space would reduce some noise, but operational change might be needed to (idling of buses, etc.).
- It's nice to see that CVC wants to put money into Belfountain Conservation Area – it is long overdue.
- Area of sloped land north of gatehouse should be left as is. There is an old hunter's cottage in there that is a hidden gem. Forest provides privacy to neighbouring properties.
- Sustainable elements of the landscape plan should be considered carefully as they are a big maintenance commitment and need sufficient funding for upkeep.
- All consultants and CVC staff should visit the park on a Saturday at 2pm in the summer to get a true idea of how busy it can be.
- If the park continues to be overrun with visitors, then newly renewed landscapes will be ruined quickly.
- My wife and I own road frontage on a local road not far from the Belfountain park entrance. I am wondering if the Credit Valley Conservation would be interested in acquiring the larger part of our property or the whole property with the house seeing as there are many changes going on in park and with parking. You could have additional parking, overflow parking or a pavilion park area etc. The home would also make a great visitor or classroom learning centre.
- Visitor first came to Belfountain CA from Guelph for a field trip in 1956. Sad to see some of the old cottages go overtime, but happy to see that CVC plans to pay respect to some of Mack's original features.
- Any investment that is made is only temporary – it will only be degraded by visitors.
- I don't think that many of the residents would be interested in supporting the gardens like they used to – CVC should look for other volunteers.
- It's nice to hear that accessibility is a main element – using the driveway to get down to the picnic area is too difficult and steep.

### **3.3. Questionnaire Responses and Results**

This section includes the comments and feedback received from the completed questionnaires that were distributed both during the public meeting as well as during onsite consultation. In total, thirteen completed questionnaires were received. The raw responses have been included in the summary for informational purposes only. CVC has not prepared comments for each individual response in this summary report; comments will be addressed in detail in a future report.

## Class EA Questions (Questionnaire #1)

1. Please rank the objectives (1 to 7) in order of importance to you in the space provided above. Place a '1' beside the most important, '2' beside the second most important, etc.

The objectives have been organized by level of importance as indicated by the tabulated questionnaire results:

1. Promote natural stream function
  2. Conserve and enhance natural heritage attributes
  3. Maintain a fisheries barrier between upstream Brook Trout and downstream invasive and non-native species
  4. Conserve and enhance cultural heritage attributes
  5. Strive for long-term sustainability including economic viability
  6. Reduce/minimize risk to visitors, staff and affected property
  7. Maintain or improve the visitor experience
2. Are there other objectives you think the Class Environmental Assessment should consider? Why? (These should be specific to the dam and headpond)
    - We cannot stop the river so we should eventually have some idea of decommissioning
    - Keep the dam and headpond intact
    - Nope
    - I haven't visited Belfountain in the spring, but if the flora natural to the area aren't currently there, I suggest adding them
    - We don't feel qualified to offer suggestions for rehabilitation, so we must rely on scientific and professional data and expertise
    - Fix What's Broken. I see no need to reimagine what is at present a unique and special feature – water running over the dam, mossy rocks, fronted by the suspension bridge that connects to the Pond Loop Trail
    - Naturalize stream/river by removing/lowering the spillage. Keep some type of barrier to keep invasive species at bay. Preserve tufa deposits are an important plant habitat due to porosity.
    - I note that #6 suggests that striving for long-term sustainability must include economic viability. Sustainability is an economic, social and environmental concept, so naturally it includes economic concerns. Question: Whose economic viability is being referenced? The CVC? The Hamlet of Belfountain? Please clarify.
    - Other objectives that the Class EA should consider? Yes. Maintain or improve the community's experience. This is a modification of #3, but one that I believe holds equal merit. We are living in the headwaters of the Credit, and the dam and headpond are part of our immediate environment. The local community's experience is definitely critical.
    - We do not have additional objectives to contribute, as we believe the objective to "Promote natural stream function" includes minimizing the thermal and sediment impacts of the Headpond on the river downstream, which is our most significant concern.
  3. What is your vision for the Belfountain Dam and Headpond?
    - Naturalization
    - That the dam and headpond be maintained; kept functional
    - A natural environment capable of supporting native species
    - Visitor experience should not be a factor in these infrastructure decisions. What is the best solution for affected species and the natural landscape?

- Conservation of this unique and special feature with repairs and enhancements limited to what is necessary for maintaining the fisheries barriers, considering any downstream implications and ensuring visitor safety
- Potential use of the headpond in winter for skating
- To strive for sustainability, both environmental and economic
- Naturalize same for better long-term environmental habitat.
- To preserve/conserve the natural and cultural aspects of the same. To preserve history and heritage for our children and future generations.
- Vision for the dam and headpond? I want it to be upgraded for safety purposes, and I want a healthy fisheries and local terrestrial environment. In order to provide you with a more specific vision, I will need to better understand the pros and cons of each of the options identified.
- Recognizing their heritage and social value, as well as their role in partitioning the upper West Credit River, we would envision the Dam and Headpond contributing optimized habitat to downstream fishes (Including Atlantic Salmon through their life cycle), leading to improved fishing opportunities within existing fishing regulations. We also see Belfountain CA remaining as an important stocking site for Atlantic Salmon restoration in the Credit River.

*4. The presentation and poster boards provide the Baseline Inventory (background information) for the study area under various technical study categories. **Is there any information that you think is important to the study that the Study Team may not be aware of?** This could be problems you've observed in the study area, wildlife observations, or other relevant information.*

(This information will be included in both the Class EA and Management Plan disposition tables, as it relates to both/either of these projects).

- Nope
- We have noticed fewer wildlife sightings in the past few years, as numbers of visitors increase. We've now opted to hike in a less fragile area to do our part (Island Lake).
- Degradation of the site due to excessive numbers of visitors – both environmental and property degradation are occurring. More security could help. A cap on the number of visitors would also be very helpful in reducing the problems around garbage and vandalism.
- Draft Background Report dated February 2014 contains reference to "carrying capacity" in section 4.2.2, however figures were not provided.
- Park rules and regulations – are there posted rules and regulations? If no, there should be. Please refer to Algonquin Park Rules and regs available on their website as they are an amazing example.
- Looks quite comprehensive
- In terms of the baseline inventory, I walk through the park on a regular basis and I am not aware of any other additional information that I can contribute at this time.
- In our review of the Baseline Inventory we noted an emphasis on providing fish passage for Atlantic Salmon and American Eel, and would comment that the need for either of these species to have access beyond the Belfountain Dam is extremely limited. The number of returning Atlantic Salmon adults is currently low, and even with increased returns in the future there is expected to be adequate spawning habitat between the Norval fishway and the Cataracts/Belfountain Dam. American Eel numbers in the Credit River are even lower, and the key bottlenecks for the species in Lake Ontario are external to the Credit River. Additionally, fishways are expensive to install and operate as a means to gate fish in perpetuity. The existing fishways at Streetsville and Norval are only being minimally operated now for the selective passage of fish, and gating fish at a third location would further strain staff resources for a very limited gain. Should information on historic access, recovery strategies, or fish numbers change, then upstream fish passage should be reviewed once more, but we do not feel it is critical at this time. We would like to add, however, that any modifications to the Dam and Headpond should also take into account the need for downstream migration of fishes such as smelting Atlantic Salmon or Rainbow Trout or the downstream movement of non-migratory fishes.

## Management Plan Questions (Questionnaire #2)

5. What is your preferred option for the forecourt?



*Additional Responses:*

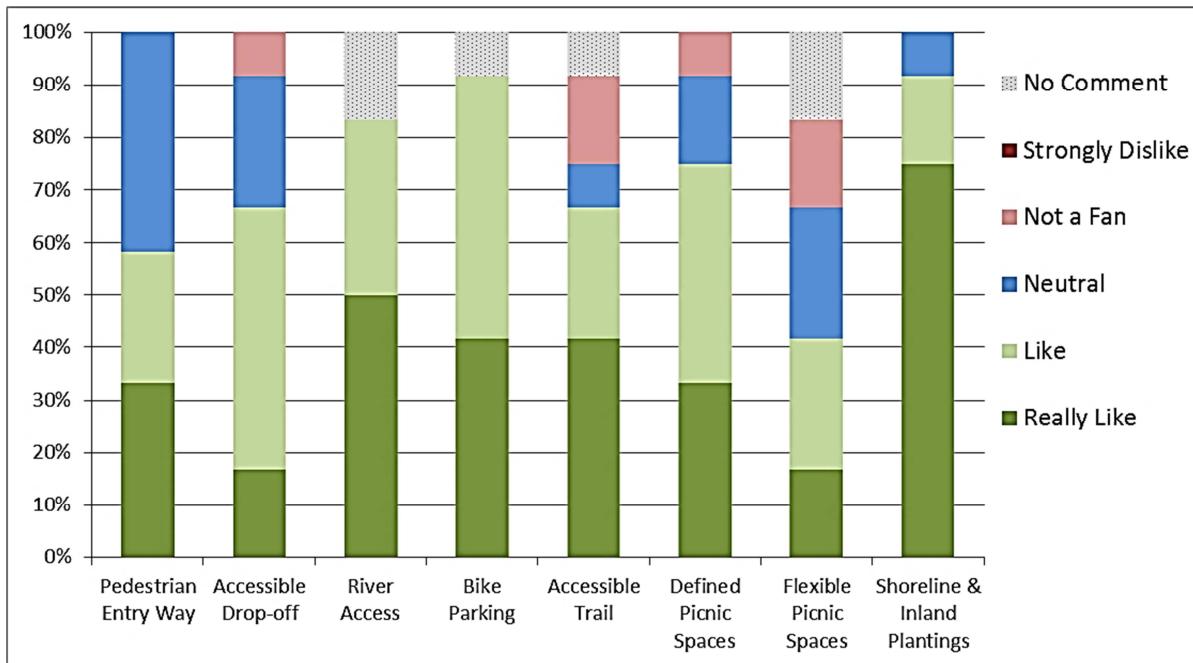
- Do not increase parking
- Option #2, except that the picnic area is reduced
- Very defined and controlled picnic area
- I don't care about any of the options for the forecourt. They are all the same.
- The forecourt is where we stage our school visits in the CA and is very popular with the classes. Based on our use of the area, as well as an interest in rehabilitating the stream bank while still providing access to parts of the river, Options 1 or 2 would be the preferred options.

6. Why do you prefer this option?

- CVC should not be a "money maker" – wrong priority
- (Option 1) Moderate shoreline and inland planting
- (Option 1) Accessibility and maximum shoreline planting
- (Option 2) Minimal impact, reduced picnic zones to keep numbers in check, ecologically sound
- (Option 2) To prevent littering and set tone for environmental sustainability
- (Option 2) Least environmental impact
- (Option 1) Defined picnic area, bike parking
- They are all the same, just variations of a theme.
- I think the river access rocks are hilarious. They will not stop people from entering elsewhere. Look at other facilities across Canada, and you will see evidence that that has not worked.

7. What features do you particularly like or dislike in the forecourt?

The graph below indicates how survey respondents reacted to the different features identified in the forecourt.

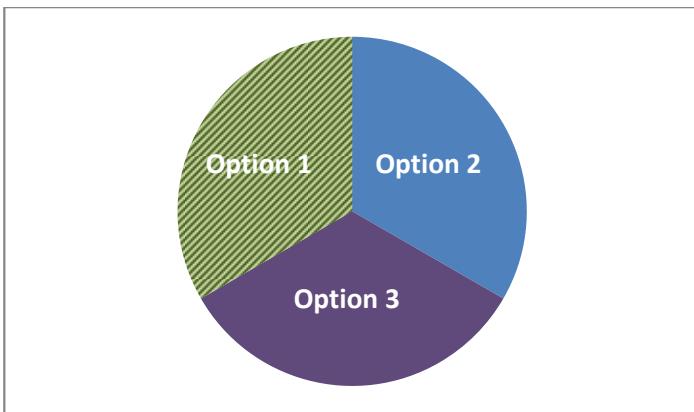


#### *Additional Comments:*

Component	Comments
Pedestrian Entry Way	- should be on west, opposite side of road - a given
Accessible Drop-off	- appropriate to picnic/shore use - should be one way
River Access	- (like) if shoreline is protected with native plantings - defined boundary; - I think the river access rocks are hilarious. They will not stop people from entering elsewhere. Look at other facilities across Canada, and you will see evidence that that has not worked.
Bike Parking	- encourage low impact visitation
Accessible Trail	- low impact development, permeable pavers - not feasible in this location - environmental trail designers, landscape architects, should be involved in all trails - should not be paved-packed - small gravel or limestone works well and is better for drainage
Defined Picnic Spaces	- Reduce - with a few flexible spaces - all options for defined picnic space is an increase in area
Flexible Picnic Spaces	- I don't know what this is - fewer in number and choice of sites - creates more space for potential garbage
Shoreline & Inland Plantings	- ensures limited access to river - native restoration critical to protect natural environment - seems more natural

<p><i>9. Do you have any other thoughts or comments about the forecourt area?</i></p>	<ul style="list-style-type: none"> <li>- The vision of an English garden unsuitable to this natural area despite Mack heritage, as they would be difficult and costly to create and maintain</li> <li>- We volunteered years ago to clean-up and plant the gardens from the entrance, parking area and fountain. Watering and weeding maintenance was not very successful. Annual plants and design not appropriate to site</li> <li>- Yes to riparian restoration and native plantings. Include a defined trail through this to limit risk of degradation of planted area. There may be additional strategies to provide for protecting the planted areas?</li> <li>- I agree that the forecourt should be a welcoming place. Bike parking? Bikes park at the coffee shop, not the park. I rarely see anyone using a bike to get to the park. The defined picnic spaces may be cute, and with sufficient plantings, may actually allow for some biodiversity of habitat in the heavily used visitor area.</li> </ul>
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*10. What is your preferred option for the visitor centre and parking area?*



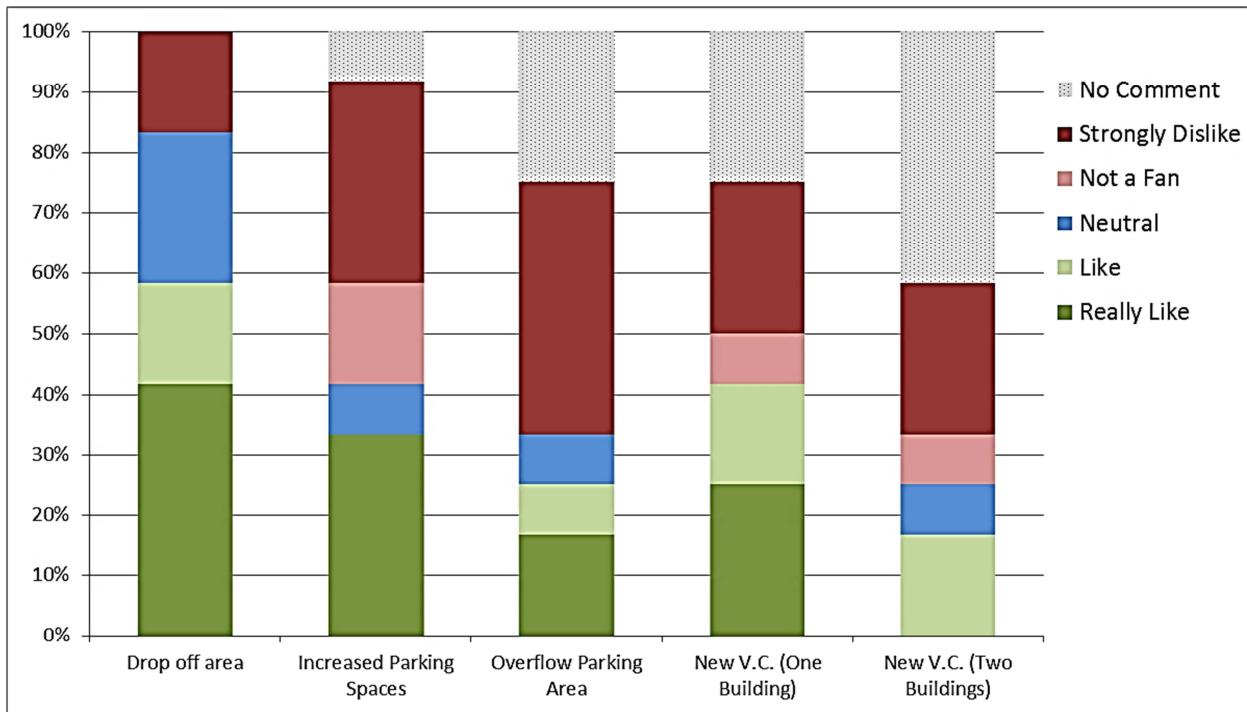
*Additional Responses:*

- Definitely not increased parking
- Less, not more parking
- No increase in parking
- It is not clear if all options offered a bus-only exit or only Option 1, but as our visits almost always include one or more school buses, the smooth and safe movement of buses and students in this area is an important feature for us and a bus-only exit would enhance that.
- I prefer NOT to have a visitor centre.

*11. Why do you prefer this option?*

- Keep it natural, CVC should not be a money maker
- (Option 1) Limits regular public access to currently used area
- (Option 2) Most parking
- Parking must be minimized to ease excessive noise, traffic and environmental impact
- There are too many visitors already
- (Option 3) Option is increased by only 4 spaces
- (Option 2) Increased Parking
- This is an expenditure that does not make sense to me. It will increase visitation, increase damage to the park, and quite honestly, I think it is a waste of money. A covered place for visitors would be welcome, I am sure, but it does not have to be a large visitor centre. A consideration – why not take the old pumphouse out and put a covered structure there. You can add displays about the headpond, dam and history there. But do not build a visitor centre.

*12. What features do you particularly like or dislike in the visitor centre and parking area?*

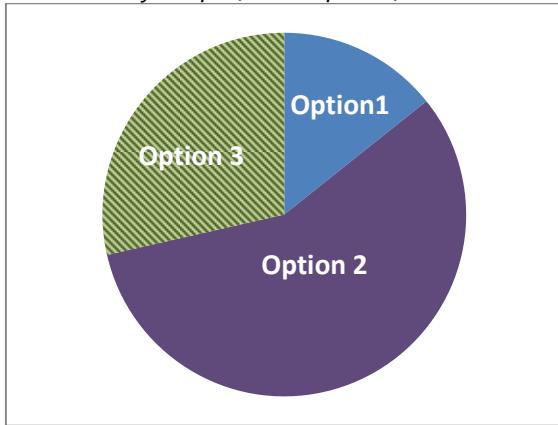


*Additional Comments:*

Component	Comments
Drop off area	- Seems natural flow
Increased Parking Spaces	- Keep the park in a natural setting - Not appropriate for such a small, fragile area so close to the hamlet - Since parking/traffic is a big issue in Belfountain - this would help manage those issues. People will not stop coming - the residents need to focus on managing volume
Overflow Parking Area	- more pavement is not appropriate in this fragile area - not necessary with option
New V.C. (One Building)	- Depends on the size - far too large for a small park
New V.C. (Two Buildings)	- 2 buildings ok but large visitor centre is completely out of scale (500 sq. ft.!) - limit size of visitor centre to accommodate interpretive info and seminar space, not large events - makes more sense to have it under one roof - environmentally, economically, etc.
13. Do you have any other thoughts or comments about the visitor centre and parking area?	- "If you build it, they will come". This is the problem – too many thoughtless visitors The building should be as "green" as possible - Additional parking will not relieve car issues in the Hamlet. In town, as soon as one car leaves, another occupies the space – all summer long. Build it and they will come is not the answer. - One of your objectives in a previous stakeholder handout says "protect and enhance ecological diversity". This must trump visitor augmentation and experience. The conservation plan should be about conservation, not tourism. - Consider a wooded buffer zone between parking area and neighbours

	<p>Maintain operations centre if "it ain't broke"</p> <ul style="list-style-type: none"> <li>- Location of visitor centre in option 1 – offers view; is prominent and welcoming to visitors arriving by car</li> <li>- Mississauga Rd does not have the width or sight lines in this area to allow for tour buses and drop off locations</li> <li>- Do not increase parking spaces. Look to your plans and put caps on the number of people visiting the park. Encourage off-peak visitation. Do what you are already suggesting but do not increase parking. "If you build it they will come"...the same will happen with a visitor centre and with increased parking.</li> <li>- Is the existing workshop up to code? If it is, then use it, but upgrade it and put an addition on it to create a positive working space for staff, and increase number of washrooms.</li> </ul>
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14. What is your preferred option for the hillside garden?



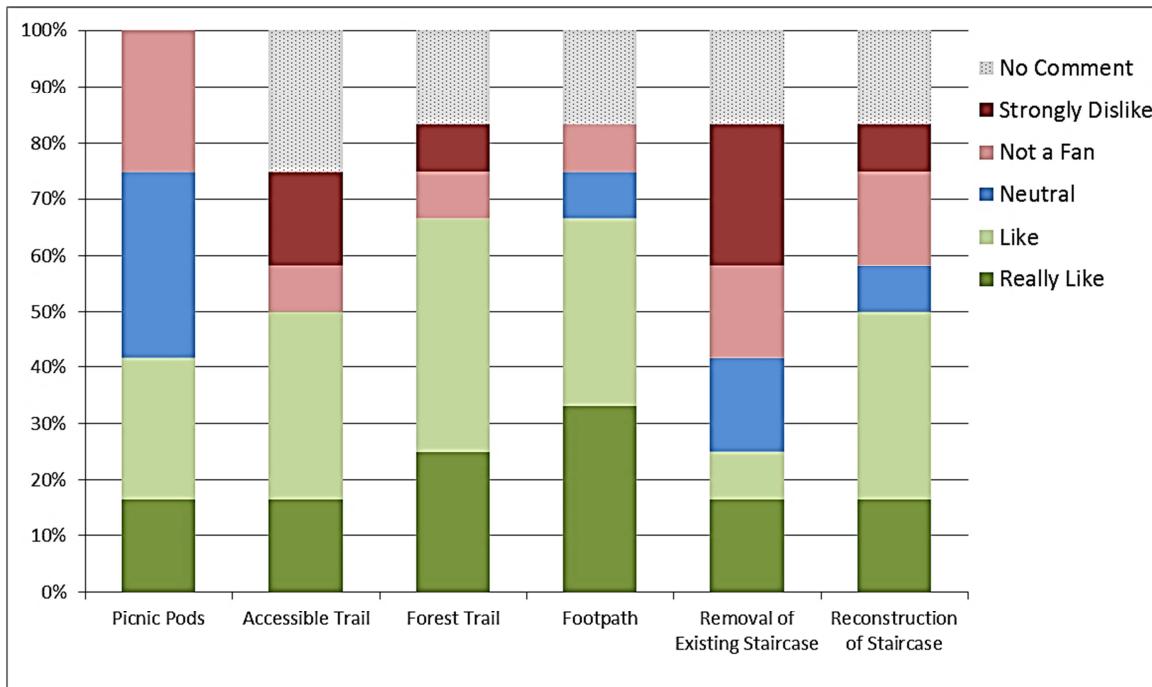
Additional Responses:

- Good idea to upgrade
- I have no preferred option for the hillside garden.
- While we do not generally use the hillside garden as a picnic area, when we have students out with us we do use it as a pathway down to the forecourt that is safely away from vehicles on the driveway. With that in mind, while also recognizing the potential for naturalizing the slope, we support Option 2 because of its accessible ramp. While rare, we occasionally have students requiring wheelchair access at the CA.

15. Why do you prefer this option?

- Enhances the overall concept of the park
- (Option 2) Stair integration through middle of zigzag walkway path
- (Option 2) Accessibility – though the picnic spaces are too close to the stairs – not private enough
- (Option 3) Least impact to the natural site while rehabilitating eroded area. No additional building on site is preferable
- (Option 1) Least environmental impact
- (Option 2) Path design and accessibility
- They all look the same, as I have noted. Erosion is always going to happen, so ensure limited erosion through effective landscaping

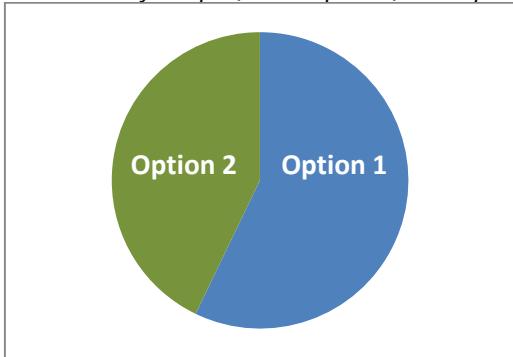
16. What features do you particularly like or dislike in the hillside garden?



#### *Additional Comments:*

Component	Comments
Picnic Pods	- define area; nice - small but intimate
Accessible Trail	- far too intrusive for the topography - Desirable for strollers, walkers and wheelchairs, but is it practical for this slope? - too damaging to the slope - fabulous; - I like an accessible trail...if investments are going to be made in this park, having some kind of accessibility option is worthwhile.
Forest Trail	- too formal - too damaging to the slope - located elsewhere on trail system perhaps
Footpath	- more informal and stylistically appropriate for this small parkette; - a marked trail in a location deemed acceptable by a landscape architect; allow maximum walking through area
Removal of Existing Staircase	- allows for leisurely walks
Reconstruction of Staircase	- Pedestrians should assume liability issues - safe, easy access without creating an additional footprint - is it necessary? Does it become high maintenance and costly?
<i>17. Do you have any other thoughts or comments about the hillside garden?</i>	- Good idea - Option 3, thankfully does not show a building "less is more". Defined areas that remain natural looking are much more sympathetic to the area. - Option 1 – offers the most picnic pods, nicely separated and sited in the landscape and accessed by the trail - Add "you are here" trail map - No

18. What is your preferred option for the portico?



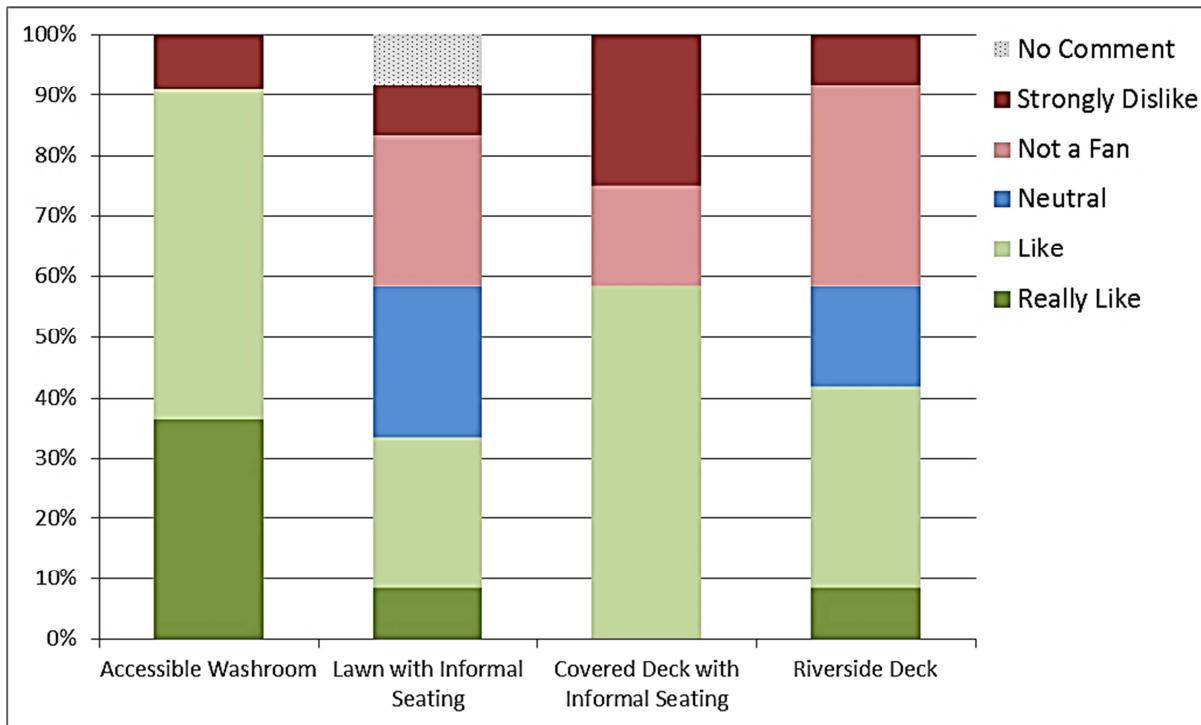
Additional Responses:

- Keep in line with country/culture design (presentation photo)
- Upgrade pumphouse and bridge area
- Option 2 – but with some covered seating
- N/A
- We would support Option 1 as it has no new impact on the west side of the river, allowing for increased naturalization there while still providing new amenities at the portico on the east side of the river.

19. Why do you prefer this option?

- Enhances park
- (Option 1) Uses current infrastructure and footprint
- I don't see the purpose of the circular area in front of covered seating in Option 1.
- (Option 2) Minimizes infrastructure, less formal – in keeping with the park's small acreage
- (Option 1) Uses existing building, accessible restroom conveniently located, interpretive and wayfinding info
- Less construction
- (Option 1) Encourages crossing water and creates anticipation of trails, etc.
- Very similar

20. What features do you particularly like or dislike in the portico?



*Additional Comments:*

Component	Comments
Accessible Washroom	- Less costly, perhaps use existing
Lawn with Informal Seating	- It's a park! - allows one to sit on mother earth
Covered Deck with Informal Seating	- Bring your own lawn chair/blankets this would also reduce theft/vandalism if there are no chairs to throw in the river - allows for rainy days or those with limited mobility
Riverside Deck	
21. Do you have any other thoughts or comments about the portico?	<ul style="list-style-type: none"> <li>- Keep it, restore it to historic standards</li> <li>- This park should be as natural and un-construed as possible owing to its small size and fragility. Encourage a low impact, natural experience of walking, observing nature and natural elements rather than creating a man-made tourist theme park. Minimal landscapes, minimal signage = maximum value</li> <li>- Many benches burnt and/or thrown into pond/river in the past – even the bridge downstream badly vandalized soon after construction. How is this policed!</li> <li>- The construction of a covered deck/riverside deck is a ridiculous waste of funds.</li> <li>- Concerns are water supply for toilets – would solution include using water (rain) from roof tops, collecting it, storing it and using for flushing? Drinking water could be accessible in visitor centre if required. Most hikers bring drinking water along.</li> <li>- If a Visitor Centre is needed, then use this site as a place to do interpretation. Have the covered space here, but don't make it too large or it will overwhelm the site. Do not offering "programming". This is not a</li> </ul>

provincial park and we don't need to interpret everything.

22. Do you have any ideas for special events or activities that would be a good fit for Belfountain Conservation Area?

- Keep them small, quiet; no late nights/after dark
- Naturalist meetings; school groups for science projects
- Restrict events that increase noise; loud music – no wedding receptions please
- An event in spring – similar to the Salamander Festival
- Salamander festival be the weekend (2 days)
- Kids fishing event at Belfountain
- More volunteer opportunities – I would love to be involved
- Workshops
- Yoga in the park
- Low-impact environmental (nature) walks, studies, guided educational?
- Not a location for weddings, film shoots, large gatherings owing to the fragility of the size of the parkette
- Excerpt from previous objectives handout "mitigate impacts of human activities such as visitor use..." - this should be respected. Manage non-native invasive species. Maintain or improve amount of natural cover. Monitor, maintain and enhance habitat for species at risk.
- Winter skating on the pond
- I see this park as a centre for experiencing and learning about the natural and environmental aspects of the Niagara Escarpment and Credit River watershed and World Biosphere Reserve and not as a venue for weddings, conferences and commercial events
- Hiking is always enjoyable but I don't go when it is packed with noisy, littering and unappreciative of nature tourists
- Get park rangers that eject litterers and people who are combative, disruptive. Enforce rules and regulations, including afterhours vandals
- Guided hikes (partner with salamander festival)
- Concerts in the park (partner with Melville White Church Music Programs)
- I think you need partner activities with Belfountain existing celebrations. Show good will and motivation to work with the community.
- Not right now.
- In addition to our annual stocking and education activities, we have had several formal Atlantic Salmon events at the CA in the past, and hope to have more.

23. Please use the following space to ask any other questions you may have and the Study Team will provide a response within the following weeks. You can also use this space to provide general comments:

- Security cameras (night time), video surveillance
- Do not be afraid to charge a significant fee for park usage, especially for special functions
- Weekend security dictates a more enforced/enforceable way of keeping out after-hour non-desirables
- Keep the park in a natural state
- Electronic billboard size signage at outskirts of park to inform visitors of heavy usage days that park is at capacity.
- As a resident of Belfountain, I am upset about the proposed expansion of the conservation area – no additional parking spaces should be added – it will not alleviate the parking and congestion in the village. There are far too many people allowed in the park at peak times. The majority of visitors do not care about educational info etc. They just want a green spot to get far away from their homes in Brampton/Mississauga, though school groups would benefit from the educational aspect, many visitors have no respect for the environment – tossing garbage and dirty diapers in the village. Obstructing safe entry to our driveways and extra parking spaces will not help.
- Extra parking will just bring in more people. The water/wells in Belfountain are already compromised. The residents in Belfountain should have respect from the CVC we need to be listened to. Not just have meetings here. I fear plans will go ahead despite the impact on this changing village.

- You guys do a great job. Many thanks!
- Thank-you! Staff on site on Sept 27 were excellent – very knowledgeable and enthusiastic, clearly love their work.
- How do you expand with added infrastructure to accommodate or foster expected growth without seriously degrading or destroying this iconic small jewel?
- Is the CVC's mandate conservationism or tourism? This site is too fragile to be exploited.
- Unsanctioned use is a huge issue. Excessive rowdiness, noise and even smoke have been witnessed/heard from our property across the valley. How can this be monitored/ policed?
- The dam and headpond reconstruction will be very costly and presumably is the priority, surely. The definition of iconic needs to be addressed in the context of this unique situation.
- The proximity of the Belfountain hamlet creates a very unique situation in terms of traffic, traffic noise and pollution, water issues and land use encroachment.
- Rural life in this area is becoming increasingly compromised. Would the CVC commit to helping concerned citizens preserve this fabulous setting and help protect it from severe urban pressures that have threatened this fragile area.
- Visitor's experience of the natural environment is not enhanced by the crowds that amusement and theme parks attract. The parking area and park itself are not large enough to support huge numbers of visitors and events. Any enhancement to the facility should recognize and correspond in scale to the site's real visitor capacity. This would mean downsizing the scale of the proposed visitor's centre and enforcing capacity limits for the picnics, events and buses.
- Recommendations re: Gardens. 1) native species maintained in a somewhat English garden aesthetic where formal beds might be considered. 2) Native species planted to replicate natural woodland and meadow and riparian habitats 3) the plan should incorporate commitment to funds and maintenance that are not dependent on volunteers from the community. A sustainable plan requires a high level of expertise, coordination and time commitment.
- Make more picnic pods all around the park – off the trails on both sides of the pond and river. Make them as unobtrusive as possible, giving the feeling of a touch of privacy/remoteness/natural uniqueness, while providing each with its unobtrusive view of some feature (river, pond, falls, rapids – a Big challenge!). To accomplish this in the forecourt make the picnic pods by the river, semi hidden with surrounding natural plantings. One space should be left to encourage and welcome walkers to the river's edge.
- The info centre by the parking lot should have a partially covered deck with a "window" looking over a portion of the pond – not to expose the around the pond picnic sites.
- Admission: free walk-in policy encourages people to clog the village with packed cars. What about free admission for walk-ins with a postal code beginning with (LXXXX) or a Bruce Trail membership card. Admit all cyclists free. Cars -\$15 with one adult, \$10 with two adults, \$5 with three adults, Free with 4 adults or some such incentives.
- Thanks for trying to get it right.
- What is the carrying capacity for the park?
- What is the budget allocated for these repairs, renovations and improvements?
- Does the EA provide details of visitor impact detrimental to the environment?
- Has the safety issue for pedestrians been resolved for the Willoughby/OHT owned property?
- Can Ontario Parks, Provincial Parks and Conservation Reserve Act regulations be adopted, specifically regarding visitor capacity and ecological capacity?
- Ecological integrity re: increased # of bathrooms on septic facilities does the EA take into effect existing figures or projected figures and the proximity of the new bathrooms to the river?
- Pavilions, visitor centre, capacity dictated by compliance with building code and Ontario Fire code. Based on the square footage will visitors to the park be capped at the capacity of the visitors centre?
- What about designating # of visitors by # of parking spaces with additional # of pedestrian visitors allowed based on a total figure (that figure being ecologically sustainable).
- There was a concern raised about the size of the visitor/interpretive centre. Some folks were against 5,000 sq. ft. if building is used for washrooms, CVC office space and interpretive centre, perhaps a 'blue print' of space allocations would be more helpful. Can the building be 1.5 stories to reduce its footprint perhaps? Should it have vending machines with water bottles which would allow the water source for flushing to come from collected rain water supplemented from river flow?

## Additional Comments

- Talk to stewardship about signs/birdhouses for participating in programs
- I am a long time resident of Caledon, and I cherish its grace and elegance. I understand why people from more urban locations choose to visit the Belfountain Conservation Area. It is a small, lovely site that is close to Toronto, Mississauga and other parts of the GTA. As I heard your Chief Administration Officer explain at the recent Public Meeting, it is the jewel in the crown of the Credit Valley Conservation. It is my hope that you and all the CVC staff intend on keeping it that way. As I review the feedback received and management policies document, I see that a lot of hard work is being put into addressing many of the issues that are faced daily at the CA. I do have a number of comments and questions, however, that I will include here.
- With respect to the Questionnaire #2, my first statement is that all the options are basically the same, with small changes. So I will not bother you with specifics about preferred options. What I am most curious about is why this work is being considered? Why does the facility require new landscaping? I am certain there will need to be some work following the EA work, but why sink all sorts of money into creating a new landscape? Would it not be preferable to sink that money into restoring the ecological integrity of the site? I would recommend installing features that restore and maintain EI, rather than upgrade the look of the site...which in turn will attract more visitors and continue to damage the EI.
  - Why does the CVC wish to increase visitation?
  - Why does the CVC want to build a visitor centre
  - Why does the CVC believe a visitor centre is needed? (not wanted, but needed)
  - Why does the CVC want to increase parking inside the park? (I am well aware of parking issues in the hamlet, but I don't understand why that would be the concern of the CVC).

## Summary of Key Themes

The following points reflect the key themes that emerged through participants' questions and comments. Note that these key themes are numbered for reference only.

1. Many participants felt that the traffic caused by the current level of visitors to Belfountain Conservation Area was creating impacts on the Hamlet of Belfountain and other nearby residential communities.
2. Some participants indicated confusion over the purpose and use of the proposed visitor centre.
3. Some participants indicated concern over vandalism and after-hours activities that sometimes take place in Belfountain Conservation Area.
4. Several participants stated that they were in agreement with many of the projects, in general, but were concerned over increased visitation and traffic.
5. Some participants indicated that they were happy to see effort going into the management of the Complex.

## **Attachment A. Meeting Agenda**

### **Belfountain Complex Management Plan and Class Environmental Assessment Public Information Centre**

**Date:** September 22, 2015

**Time:** 6:00 pm – 9:00 pm

**Location:** Caledon Ski Club - 17431 Mississauga Rd, Caledon, ON L7K 0E9

#### **Draft Agenda:**

Time	Topic	Lead
6:00pm – 6:30pm	<b>Registration &amp; Welcome</b> - Review of poster boards	CVC
6:30pm – 6:35pm	<b>Welcome and Thank-you</b>	CVC
6:35pm – 6:45pm	<b>Presentation</b> Belfountain Complex - Project Review Overview	CVC
6:45pm – 7:00pm	Belfountain Dam and Headpond Class EA - Introduction and Overview	AMEC-FW
7:00pm – 7:10pm	Belfountain Management Plan - Guiding Statements & Management Policies	CVC
7:10pm – 7:25pm	Belfountain Conservation Area Concept Plans	BMI
7:25pm – 7:30pm	Thank you and Next Steps	CVC
7:30pm – 7:45pm	<b>Open Q&amp;A Period</b>	AMEC-FW, CVC
7:45pm – 9:00pm	<b>Review of Poster Boards</b>	All

#### **Acronyms**

**CVC:** Credit Valley Conservation

**AMEC-FW:** Amec Foster Wheeler (Consultant retained to undertake Class Environmental Assessment on the Belfountain Dam and Headpond)

**BMI:** Brook McIlroy Inc. (Landscape architecture firm retained to develop concepts and designs for the Belfountain Complex)

**Attachment B: Questionnaire**

# **Questionnaire & Comment Sheet**

## **Public Consultation Session**

Thank you for attending CVC's public consultation session for the Belfountain Complex Management Plan and Class Environmental Assessment. Your feedback is important to us and is an integral part of both the Management Plan and Class Environmental Assessment processes.

**PLEASE PRINT**

Name/Association:

E-mail:

Address:

Municipality:

Postal Code:

**Please return completed questionnaires to any member of the Study Team during the meeting or to the following contacts after the meeting:**

**Credit Valley Conservation**

Ms. Laura Rundle  
Conservation Lands Planner  
1255 Old Derry Road  
Mississauga, Ontario, L5N 6R4  
Tel: (905) 670.1615 ext.535  
email: lrundle@creditvalleyca.ca

**Amec Foster Wheeler**

**Environment & Infrastructure**  
Mr. Ron Scheckenberger, M.Eng., P.Eng.  
Project Manager  
3215 North Service Road, P.O. Box 220  
Burlington ON L7N 3G2  
Tel: 905.335.2353  
Toll Free: 1.866.751.2353  
Email: ron.scheckenberger@amecfw.com

**Please ensure that your questionnaire is in the mail no later than  
Wednesday, October 7<sup>th</sup>, 2015.**

CVC is undertaking a Conservation Ontario Class Environmental Assessment (Class EA) to determine how best to manage the Belfountain Dam and Headpond in the future. A Class EA must follow a specific process that can be summarized with the following steps:

1. Document the Baseline Inventory (background information) & identify the problem
2. Evaluate alternative solutions and select a preferred alternative
3. Conduct a detailed analysis of environmental impact

At this time, the baseline inventory (Step 1) has been completed, and development of the alternatives (Step 2) has begun but is not yet completed. Public consultation is integral component of a Class EA and public input will be considered at every step.

Please note that this questionnaire is specific to the Belfountain Dam and Headpond Class EA; a separate questionnaire has been provided in your package regarding the Belfountain Complex Management Plan.

CVC has established seven (7) Study Objectives for this project. The preferred alternative for the Belfountain Dam and Headpond will be required to meet these objectives.

Objective	Ranking
1) <i>Maintain a fisheries barrier between upstream Brook Trout and downstream invasive and non-native species</i>	
2) <i>Reduce/minimize risk to visitors, staff and affected property</i>	
3) <i>Maintain or improve the visitor experience</i>	
4) <i>Conserve and enhance cultural heritage attributes</i>	
5) <i>Promote natural stream function</i>	
6) <i>Strive for long-term sustainability including economic viability</i>	
7) <i>Conserve and enhance natural heritage attributes</i>	

1. Please rank the objectives (1 to 7) in order of importance to you in the space provided above. Place a '1' beside the most important, '2' beside the second most important, etc.

2. Are there other objectives you think the Class Environmental Assessment should consider? Why? (These should be specific to the dam and headpond)

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3. What is your vision for the Belfountain Dam and Headpond?

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4. The presentation and poster boards provide the Baseline Inventory (background information) for the study area under various technical study categories. **Is there any information that you think is important to the study that the Study Team may not be aware of?** This could be problems you've observed in the study area, wildlife observations, or other relevant information.

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**Forecourt:** Please let us know what you think about the concepts for the forecourt (entrance and lower picnic area):

5. What is your preferred option for the forecourt? \_\_\_\_\_

6. Why? \_\_\_\_\_

7. What features do you particularly like or dislike in the forecourt?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Pedestrian Entry-way						
Accessible Drop-off Area						
River Access						
Bike Parking						
Accessible Trail						
Defined Picnic Spaces						
Flexible Picnic Spaces						
Shoreline & Inland Plantings						

9. Do you have any other thoughts or comments about the forecourt area?

**Visitor Centre and Parking:** Please let us know what you think about the concepts for the visitor centre and parking area:

10. What is your preferred option for the visitor centre and parking area? \_\_\_\_\_

11. Why? \_\_\_\_\_

12. What features do you particularly like or dislike in the visitor centre and parking area?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Drop off area/Entry plaza						
Increased Parking Spaces						
Overflow Parking Area						
New Visitor Centre & Workshop (One Building)						
New Visitor Centre & Existing Workshop (Two Buildings)						

13. Do you have any other thoughts or comments about the visitor centre and parking area?

**Hillside Garden:** Please let us know what you think about the concepts for the hillside garden (upper picnic area):

14. What is your preferred option for the hillside garden? \_\_\_\_\_

15. Why? \_\_\_\_\_

16. What features do you particularly like or dislike in the hillside garden?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Picnic Pods						
Accessible Trail						
Forest Trail						
Footpath						
Removal of Existing Staircase						
Reconstruction of Existing Staircase						

17. Do you have any other thoughts or comments about the hillside garden?

**Portico:** Please let us know what you think about the concepts for the portico (pumphouse, bridge area):

18. What is your preferred option for the portico? \_\_\_\_\_

19. Why? \_\_\_\_\_

20. What features do you particularly like or dislike in the portico?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Existing building retrofitted with accessible washroom						
Lawn with informal seating						
Covered deck with informal seating						
Riverside deck						

21. Do you have any other thoughts or comments about the portico?

22. Do you have any ideas for special events or activities that would be a good fit for Belfountain Conservation Area?

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23. Please use the following space to ask any other questions you may have and the Study Team will provide a response within the following weeks. You can also use this space to provide general comments:

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## **Attachment C. Consultation Images**



**Public Consultation Session - September 22 2015**

## **Dearlove, Heather**

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**Subject:** FW: Belfountain CA EA comments deadline

-----Original Message-----

From: Rundle, Laura [mailto:[LRundle@creditvalleyca.ca](mailto:LRundle@creditvalleyca.ca)]

Sent: September-21-15 12:20 PM

Thank you for your email.

I am sorry to hear that you are unable to attend any of our consultation sessions. Please note, however, that there are several opportunities to participate in the process and provide feedback. Our website will be updated with the presentation and questionnaire for this round of consultation shortly. I will send you the link once everything has been organized and posted. I will also keep your email on file to notify you of our next round of consultation.

If you or any of your local contacts would prefer to meet onsite to discuss the project, we are happy to arrange that as well. September is pretty busy with consultation, but my schedule opens up in October. I've found that meeting onsite is often the best way to discuss the details of a project.

Please do not hesitate to contact me if you have any questions.

Thank you,

Laura Rundle  
Conservation Lands Planner | Credit Valley Conservation  
905.670.1615 ext 535 | 1.800.668.5557  
[lrundle@creditvalleyca.ca](mailto:lrundle@creditvalleyca.ca) | creditvalleyca.ca

Sent: September 21, 2015 11:51 AM

To: Rundle, Laura

Subject: Belfountain CA EA comments deadline

Hello Laura,

The Belfountain CA planning process and EA review has just come to our attention, as has tomorrow night's public meeting. Unfortunately as of right now I don't believe myself or our other program staff can attend tomorrow, or this weekend or next at the CA itself, but the OFAH would like to provide comments. We are active in the watershed with the Atlantic Salmon program as well as having members who fish the river, and Belfountain is where we bring most of our classroom hatchery participants in the spring to release their school-raised Atlantic Salmon.

When would you need us to have comments submitted by? I'm hoping to look over the materials in the next few days and then discuss with other staff and some of our members local to the Credit River.

J

2015 OCT 07 15:34 2452

## **Questionnaire & Comment Sheet**

### **Public Consultation Session**

Thank you for attending CVC's public consultation session for the Belfountain Complex Management Plan and Class Environmental Assessment. Your feedback is important to us and is an integral part of both the Management Plan and Class Environmental Assessment processes.

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#### **PLEASE PRINT**

Name/Association:

E-mail:

Address:

Municipality:

Postal Code:

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**Please return completed questionnaires to any member of the Study Team during the meeting or to the following contacts after the meeting:**

**Credit Valley Conservation**  
Ms. Laura Rundle  
Conservation Lands Planner  
1255 Old Derry Road  
Mississauga, Ontario, L5N 6R4  
Tel: (905) 670.1615 ext.535  
email: lrundle@creditvalleyca.ca

**Amec Foster Wheeler**  
**Environment & Infrastructure**  
Mr. Ron Scheckenberger, M.Eng. P.Eng.  
Project Manager  
3215 North Service Road, P.O. Box 220  
Burlington ON L7N 3G2  
Tel: 905.335.2353  
Toll Free: 1.866.751.2353  
Email: ron.scheckenberger@amecfw.com

**Please ensure that your questionnaire is in the mail no later than  
Wednesday, October 7<sup>th</sup>, 2015.**

## Questionnaire #1 - Belfountain Dam & Headpond Class EA

CVC is undertaking a Conservation Ontario Class Environmental Assessment (Class EA) to determine how best to manage the Belfountain Dam and Headpond in the future. A Class EA must follow a specific process that can be summarized with the following steps:

1. Document the Baseline Inventory (background information) & identify the problem
2. Evaluate alternative solutions and select a preferred alternative
3. Conduct a detailed analysis of environmental impact

At this time, the baseline inventory (Step 1) has been completed, and development of the alternatives (Step 2) has begun but is not yet completed. Public consultation is integral component of a Class EA and public input will be considered at every step.

Please note that this questionnaire is specific to the Belfountain Dam and Headpond Class EA; a separate questionnaire has been provided in your package regarding the Belfountain Complex Management Plan.

CVC has established seven (7) Study Objectives for this project. The preferred alternative for the Belfountain Dam and Headpond will be required to meet these objectives.

Objective	Ranking
1) <i>Maintain a fisheries barrier between upstream Brook Trout and downstream invasive and non-native species</i>	2
2) <i>Reduce/minimize risk to visitors, staff and affected property</i>	6
3) <i>Maintain or improve the visitor experience</i>	1
4) <i>Conserve and enhance cultural heritage attributes</i>	5
5) <i>Promote natural stream function</i>	3
6) <i>Strive for long-term sustainability including economic viability</i>	1
7) <i>Conserve and enhance natural heritage attributes</i>	4

1. Please rank the objectives (1 to 7) in order of importance to you in the space provided above. Place a '1' beside the most important, '2' beside the second most important, etc.

## **Questionnaire #1 - Belfountain Dam & Headpond Class EA**

2. Are there other objectives you think the Class Environmental Assessment should consider? Why? (These should be specific to the dam and headpond)

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3. What is your vision for the Belfountain Dam and Headpond?

- to strive for sustainability, both environmental and economic

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## Questionnaire #1 - Belfountain Dam & Headpond Class EA

4. The presentation and poster boards provide the Baseline Inventory (background information) for the study area under various technical study categories. Is there any information that you think is important to the study that the Study Team may not be aware of? This could be problems you've observed in the study area, wildlife observations, or other relevant information.

Degradation of the site due to excessive numbers of visitors - both environmental and property degradation are occurring. More security could help. A cap on the number of visitors would also be ~~recommendable~~ very helpful in reducing the ~~environmental~~ problems around garbage and vandalism.

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Forecourt:** Please let us know what you think about the concepts for the forecourt (entrance and lower picnic area):

5. What is your preferred option for the forecourt? Very defined and controlled parking area

6. Why? No prevent + differing & set tone for environment + sustainability

7. What features do you particularly like or dislike in the forecourt?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Pedestrian Entry-way	✓					
Accessible Drop-off Area	✓					
River Access		✓				
Bike Parking	✓					
Accessible Trail	✓					
Defined Picnic Spaces	✓					
Flexible Picnic Spaces		✓				
Shoreline & Inland Plantings	✓					

9. Do you have any other thoughts or comments about the forecourt area?

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

Visitor Centre and Parking: Please let us know what you think about the concepts for the visitor centre and parking area:

10. What is your preferred option for the visitor centre and parking area? No visitor centre/parking

11. Why? There are too many visitors already

12. What features do you particularly like or dislike in the visitor centre and parking area?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Drop off area/Entry plaza						
Increased Parking Spaces						
Overflow Parking Area						
New Visitor Centre & Workshop (One Building)						
New Visitor Centre & Existing Workshop (Two Buildings)						

13. Do you have any other thoughts or comments about the visitor centre and parking area?

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Hillside Garden:** Please let us know what you think about the concepts for the hillside garden (upper picnic area):

14. What is your preferred option for the hillside garden? \_\_\_\_\_

15. Why? \_\_\_\_\_

16. What features do you particularly like or dislike in the hillside garden?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Picnic Pods						
Accessible Trail						
Forest Trail						
Footpath						
Removal of Existing Staircase						
Reconstruction of Existing Staircase						

17. Do you have any other thoughts or comments about the hillside garden?

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**Portico:** Please let us know what you think about the concepts for the portico (pumphouse, bridge area):

18. What is your preferred option for the portico? \_\_\_\_\_

19. Why? \_\_\_\_\_

20. What features do you particularly like or dislike in the portico? \_\_\_\_\_

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Existing building retrofitted with accessible washroom	<input checked="" type="checkbox"/>					
Lawn with informal seating	<input checked="" type="checkbox"/>					
Covered deck with informal seating			<input checked="" type="checkbox"/>			
Riverside deck				<input checked="" type="checkbox"/>		

21. Do you have any other thoughts or comments about the portico? \_\_\_\_\_

## **Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans**

**22. Do you have any ideas for special events or activities that would be a good fit for Belfountain Conservation Area?**

**23. Please use the following space to ask any other questions you may have and the Study Team will provide a response within the following weeks. You can also use this space to provide general comments:**

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# **Questionnaire & Comment Sheet**

## **Public Consultation Session**

CUCA OCT 13 15 AM 12:52  
Thank you for attending CVC's public consultation session for the Belfountain Complex Management Plan and Class Environmental Assessment. Your feedback is important to us and is an integral part of both the Management Plan and Class Environmental Assessment processes.

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### **PLEASE PRINT**

Name/Association

E-mail:

Address:

Municipality:

Postal Code:

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CVC has established seven (7) Study Objectives for this project. The preferred alternative for the Belfountain Dam and Headpond will be required to meet these objectives.

Objective	Ranking
1) Maintain a fisheries barrier between upstream Brook Trout and downstream invasive and non-native species	1
2) Reduce/minimize risk to visitors, staff and affected property	6
3) Maintain or improve the visitor experience	7
4) Conserve and enhance cultural heritage attributes	3
5) Promote natural stream function	4
6) Strive for long-term sustainability including economic viability	5
7) Conserve and enhance natural heritage attributes	2

1. Please rank the objectives (1 to 7) in order of importance to you in the space provided above. Place a '1' beside the most important, '2' beside the second most important, etc.

**Questionnaire #1 - Belfountain Dam & Headpond Class EA**

2. Are there other objectives you think the Class Environmental Assessment should consider? Why? (These should be specific to the dam and headpond)

- Naturalize the Stream / River by removing or lowering the Spillway.
- keep some type of barrier to keep invasive species at bay.
- Preserve TUFF Deposits, reduce causes of damage as Tufa deposits are an important plant habitat due to porosity.

3. What is your vision for the Belfountain Dam and Headpond?

- Naturalize same for better long term environmental sustainability.

## Questionnaire #1 - Belfountain Dam & Headpond Class EA

4. The presentation and poster boards provide the Baseline Inventory (background information) for the study area under various technical study categories. Is there any information that you think is important to the study that the Study Team may not be aware of? This could be problems you've observed in the study area, wildlife observations, or other relevant information.

- ① Draft Background report dated February 2014 contains reference to "Carrying Capacity" in section 4.2.2, however no figures were provided.
- ② Park Rules & Regulations; are there posted rules and regulations? If no, there should be. Please refer to Algonquin Park Rules & Regs, available on their website as an amazing example.

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Forecourt:** Please let us know what you think about the concepts for the forecourt (entrance and lower picnic area):

5. What is your preferred option for the forecourt? Option 2

6. Why? Least Environmental Impact

7. What features do you particularly like or dislike in the forecourt?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Pedestrian Entry-way	X					
Accessible Drop-off Area	X					
River Access						
Bike Parking	X					
Accessible Trail		X				Environmental Trail designs Landscape Architects suggest be included in all trails.
Defined Picnic Spaces		X				All options for defined space is an increased area.
Flexible Picnic Spaces	X					
Shoreline & Inland Plantings	X					

9. Do you have any other thoughts or comments about the forecourt area?

Existing currents of visitor conflict could easily be addressed by capping the number of visitors to an environmental and socially responsible number.

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Visitor Centre and Parking:** Please let us know what you think about the concepts for the visitor centre and parking area:

10. What is your preferred option for the visitor centre and parking area? OPTION 3

11. Why? Parking is increased only by 4 spaces.

12. What features do you particularly like or dislike in the visitor centre and parking area?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Drop off area/Entry plaza					X	
Increased Parking Spaces					X	
Overflow Parking Area					X	
New Visitor Centre & Workshop (One Building)		X				
New Visitor Centre & Existing Workshop (Two Buildings)					X	

13. Do you have any other thoughts or comments about the visitor centre and parking area?

Mississauga Rd does not have the width or sight lines in this area to allow for four buses and drop off locations.

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Hillside Garden:** Please let us know what you think about the concepts for the hillside garden (upper picnic area)

14. What is your preferred option for the hillside garden?

OPTION 3

15. Why?

Least environmental impact.

16. What features do you particularly like or dislike in the hillside garden?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Picnic Pods				X		
Accessible Trail					X	To damaging to the slope.
Forest Trail					X	To damaging to the slope.
Footpath					X	A marked trail in a location deemed acceptable by Landscaping.
Removal of Existing Staircase					X	
Reconstruction of Existing Staircase				X		

17. Do you have any other thoughts or comments about the hillside garden?

Add you are here Trail map.

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Portico:** Please let us know what you think about the concepts for the portico (pumphouse, bridge area):

18. What is your preferred option for the portico? OPTION 2

19. Why? Less "Construction"

20. What features do you particularly like or dislike in the portico?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Existing building retrofitted with accessible washroom		X				
Lawn with informal seating					X	It's a Park!
Covered deck with informal seating					X	Free your own lawn chairs or blankets towels! This will also reduce 'litter' & vandalism if there are no chairs to throw in the river.
Riverside deck					X	

21. Do you have any other thoughts or comments about the portico?

The construction of a covered deck / riverside deck is a ridiculous waste of funds.

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

22. Do you have any ideas for special events or activities that would be a good fit for Belfountain Conservation Area?

- Hiking is always enjoyable but I don't go when it is packed with noisy littering tourists and unappreciative of nature tourists.
  - Great Park Rangers that eject litterers & people who are combative, disruptive. Enforce rules & Regulations, including after hours vandals!
23. Please use the following space to ask any other questions you may have and the Study Team will provide a response within the following weeks. You can also use this space to provide general comments:
- 
- ① What is the carrying capacity for the park?
  - ② What is the Budget Allocated for these repairs, renovations & improvements?
  - ③ Does the EPA provide details of visitor impact detrimental to the environment?
  - ④ Has the safety issue for pedestrians been resolved for the Wolloverby/BOHT owned property?

③ Can Ontario Parks, Provincial Parks & Conservation-Reserve Act (CPPRA) regulations be adopted, specifically regarding visitor capping vs. Ecological Integrity?

⑥ Ecological Integrity and Increased # of Bathrooms on Septic Facilities, does the EA take into affect existing figures or projected figures & the proximity of the new bathrooms to the River?

⑦ Pavilions, Visitor Centre Capacity is dictated by Compliance with the Building Code & Ontario Fire Code. Based on the square footage will visitors to the pavilion be capped at the capacity of the visitors centre?

⑧ What about designating # of visitors by # of parking spaces, which an additional ~~#~~ based on a total of pedestrian visitors allowed ecologically sustainable figure? (That figure being ecological)

## **Questionnaire & Comment Sheet**

### **Public Consultation Session**

Thank you for attending CVC's public consultation session for the Belfountain Complex Management Plan and Class Environmental Assessment. Your feedback is important to us and is an integral part of both the Management Plan and Class Environmental Assessment processes.

---

#### **PLEASE PRINT**

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**Please return completed questionnaires to any member of the Study Team during the meeting or to the following contacts after the meeting:**

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1255 Old Derry Road  
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**Amec Foster Wheeler**  
**Environment & Infrastructure**  
Mr. Ron Scheckenberger, M.Eng. P.Eng.  
Project Manager  
3215 North Service Road, P.O. Box 220  
Burlington ON L7N 3G2  
Tel: 905.335.2353  
Toll Free: 1.866.751.2353  
Email: ron.scheckenberger@amecfw.com

**Please ensure that your questionnaire is in the mail no later than  
Wednesday, October 7<sup>th</sup>, 2015.**

## Questionnaire #1 - Belfountain Dam & Headpond Class EA

CVC is undertaking a Conservation Ontario Class Environmental Assessment (Class EA) to determine how best to manage the Belfountain Dam and Headpond in the future. A Class EA must follow a specific process that can be summarized with the following steps:

1. Document the Baseline Inventory (background information) & identify the problem
2. Evaluate alternative solutions and select a preferred alternative
3. Conduct a detailed analysis of environmental impact

At this time, the baseline inventory (Step 1) has been completed, and development of the alternatives (Step 2) has begun but is not yet completed. Public consultation is integral component of a Class EA and public input will be considered at every step.

Please note that this questionnaire is specific to the Belfountain Dam and Headpond Class EA; a separate questionnaire has been provided in your package regarding the Belfountain Complex Management Plan.

CVC has established seven (7) Study Objectives for this project. The preferred alternative for the Belfountain Dam and Headpond will be required to meet these objectives.

Objective	Ranking
1) <i>Maintain a fisheries barrier between upstream Brook Trout and downstream invasive and non-native species</i>	4
2) <i>Reduce/minimize risk to visitors, staff and affected property</i>	2
3) <i>Maintain or improve the visitor experience</i>	6
4) <i>Conserve and enhance cultural heritage attributes</i>	7
5) <i>Promote natural stream function</i>	3
6) <i>Strive for long-term sustainability including economic viability</i>	5
7) <i>Conserve and enhance natural heritage attributes</i>	1

1. Please rank the objectives (1 to 7) in order of importance to you in the space provided above. Place a '1' beside the most important, '2' beside the second most important, etc.

## Questionnaire #1 - Belfountain Dam & Headpond Class EA

2. Are there other objectives you think the Class Environmental Assessment should consider? Why? (These should be specific to the dam and headpond)

Fix what's broken.

I see no need to re-imagine what is at present a unique and special feature - water rushing over the dam I know my words, pointed by the suspension bridge that connects to the Pond Loop Trail

3. What is your vision for the Belfountain Dam and Headpond?

- Conservation of this unique and special feature, with repairs & enhancements limited to what is necessary for maintaining the fisheries barrier, considering downstream implications, and ensuring visitor safety.
- Potential use of the Headpond in winter for skating.

## **Questionnaire #1 - Belfountain Dam & Headpond Class EA**

4. The presentation and poster boards provide the Baseline Inventory (background information) for the study area under various technical study categories. **Is there any information that you think is important to the study that the Study Team may not be aware of?** This could be problems you've observed in the study area, wildlife observations, or other relevant information.

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Forecourt:** Please let us know what you think about the concepts for the forecourt (entrance and lower picnic area):

5. What is your preferred option for the forecourt? /

6. Why?

7. What features do you particularly like or dislike in the forecourt?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Pedestrian Entry-way			✓			
Accessible Drop-off Area			✓			
River Access	✓		✓			
Bike Parking	✓					
Accessible Trail						
Defined Picnic Spaces	✓					
Flexible Picnic Spaces	With new double spaces					
Shoreline & Inland Plantings	✓					Yes to riparian restoration and native plantings.

9. Do you have any other thoughts or comments about the forecourt area?

Include a defined trail through this to limit risk of degradation of planted area. There may be additional strategies to promote for protecting the planted areas.

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Visitor Centre and Parking:** Please let us know what you think about the concepts for the visitor centre and parking area:

10. What is your preferred option for the visitor centre and parking area? \_\_\_\_\_

11. Why? \_\_\_\_\_

12. What features do you particularly like or dislike in the visitor centre and parking area?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Drop off area/Entry plaza	✓					
Increased Parking Spaces	✓					
Overflow Parking Area	✓					
New Visitor Centre & Workshop (One Building)						
New Visitor Centre & Existing Workshop (Two Buildings)		✓				Limit size of visitors center to accommodate Interpretive Information & Summer Space, NOT large events.

13. Do you have any other thoughts or comments about the visitor centre and parking area?

- Consider a needed buffer zone between parking area & neighbours
- Maintain existing Operations centre if "it aint broke"
- Location of visitor centre in Option 1 - off road view
  - is prominent & welcoming to visitors arriving by car

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Hillside Garden:** Please let us know what you think about the concepts for the hillside garden (upper picnic area):

14. What is your preferred option for the hillside garden? /

15. Why? \_\_\_\_\_

16. What features do you particularly like or dislike in the hillside garden?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Picnic Pods	✓					
Accessible Trail						Desirable for visitors, including individuals with disabilities.
Forest Trail	✓					
Footpath						
Removal of Existing Staircase						
Reconstruction of Existing Staircase	✓					

17. Do you have any other thoughts or comments about the hillside garden?

Option 1 - Offer the most picnic pods, nicely separated and sited in the landscape, and accessed from the trail.

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

Portico: Please let us know what you think about the concepts for the portico (pumphouse, bridge area):

18. What is your preferred option for the portico? \_\_\_\_\_

19. Why? *More accessible building entrance* \_\_\_\_\_

20. What features do you particularly like or dislike in the portico? \_\_\_\_\_

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Existing building retrofitted with accessible washroom	✓					
Lawn with informal seating			✓			
Covered deck with informal seating		✓				
Riverside deck			✓			

21. Do you have any other thoughts or comments about the portico? \_\_\_\_\_

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

22. Do you have any ideas for special events or activities that would be a good fit for Belfountain Conservation Area?

- I believe this park can be a centre for experiencing & learning about the natural & environmental aspects of Niagara Scenic and Credit River watershed and World Biosphere Reserve and NOT as a venue for weddings, conferences & other commercial events.

23. Please use the following space to ask any other questions you may have and the Study Team will provide a response within the following weeks. You can also use this space to provide general comments:

- Visitors' experience of a natural environment is not enhanced by the crowds that amusement and theme parks attract. The parkland area itself does not have enough to support large numbers of visitors & events. Any enhancement to the facility should recognize & respond in scale to the park's real visitor capacity.

This would mean downgrading the scale of the proposed visitors' Centre & enforcing capacity limits for picnics, events and buses.

Additional Comments on Jervis

## Recommendations re Gardens:

- native species maintained in a somewhat English garden aesthetic where formal beds might be considered, and
- native species planted to replicate natural woodland and meadow ~~habitats~~ and riparian habitats
- The plan should incorporate commitment to funds and maintenance that are NOT dependent on volunteers from the community.  
A sustainable plan requires a high level of expertise, coordination and time commitment.

More...

Make more picnic nodes all around the park.

- off the trails, on both sides of the pond and the river.

- make them as unobtrusive as possible, giving the feeling of a touch of privacy/remote ness/natural uniqueness while providing each with its unobstructive view of some feature - river, pond, falls, rapids. - A BIG CHALLENGE

- to accomplish this in the forecourt make the picnic pods by the river, semi hidden with surrounding natural plantings. One space should be left to encourage & welcome walkers to the river's edge.

The info-centre by the parking lot should have a partially covered deck with a "window" looking over a portion of the pond. - not to expose the around the pond picnic sites.

ADMISSION: free walk-in policy encourages people to clog the village with parked cars.

What about free admission for walk-ins with a postal code beginning with (L-----) or a Bruce Trail membership card.  
Admit all cyclists for free.

Cars - \$15 with one adult \* 10 with 2 adults \* 5 with three, FREE with 4 adults  
OR some such incentive.

Thanks for trying to get it right.

Bob

## **Questionnaire & Comment Sheet**

### **Public Consultation Session**

Thank you for attending CVC's public consultation session for the Belfountain Complex Management Plan and Class Environmental Assessment. Your feedback is important to us and is an integral part of both the Management Plan and Class Environmental Assessment processes.

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## Questionnaire #1 - Belfountain Dam & Headpond Class EA

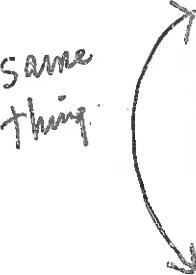
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Objective	Ranking
1) <i>Maintain a fisheries barrier between upstream Brook Trout and downstream invasive and non-native species</i>	1
2) <i>Reduce/minimize risk to visitors, staff and affected property</i>	2
3) <i>Maintain or improve the visitor experience</i>	5
4) <i>Conserve and enhance cultural heritage attributes</i>	4
5) <i>Promote natural stream function</i>	3
6) <i>Strive for long-term sustainability including economic viability</i>	7
7) <i>Conserve and enhance natural heritage attributes</i>	6

1. Please rank the objectives (1 to 7) in order of importance to you in the space provided above. Place a '1' beside the most important, '2' beside the second most important, etc.

## **Questionnaire #1 - Belfountain Dam & Headpond Class EA**

2. Are there other objectives you think the Class Environmental Assessment should consider? Why? (These should be specific to the dam and headpond)

I haven't visited Belfountain in the spring but if the flora natural to the area aren't currently there, I suggest adding them.

3. What is your vision for the Belfountain Dam and Headpond?

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## **Questionnaire #1 - Belfountain Dam & Headpond Class EA**

4. The presentation and poster boards provide the Baseline Inventory (background information) for the study area under various technical study categories. **Is there any information that you think is important to the study that the Study Team may not be aware of?** This could be problems you've observed in the study area, wildlife observations, or other relevant information.

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## Questionnaire #1 - Belfountain Complex Management Plan – Concept Plans

**Forecourt:** Please let us know what you think about the concepts for the forecourt (entrance and lower picnic area):

5. What is your preferred option for the forecourt? Option 2, except that the picnic area is reduced.
6. Why? Accessibility and Max Shoreline and planting

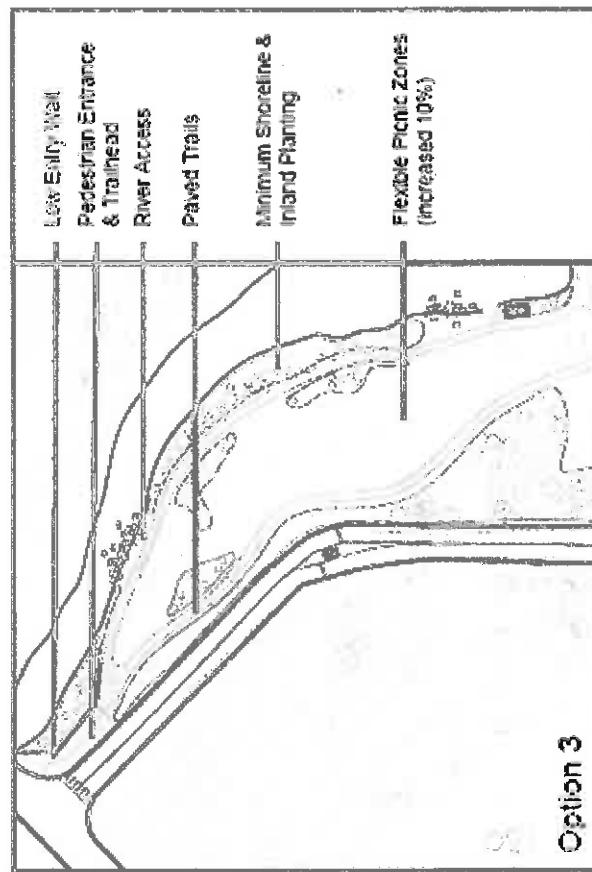
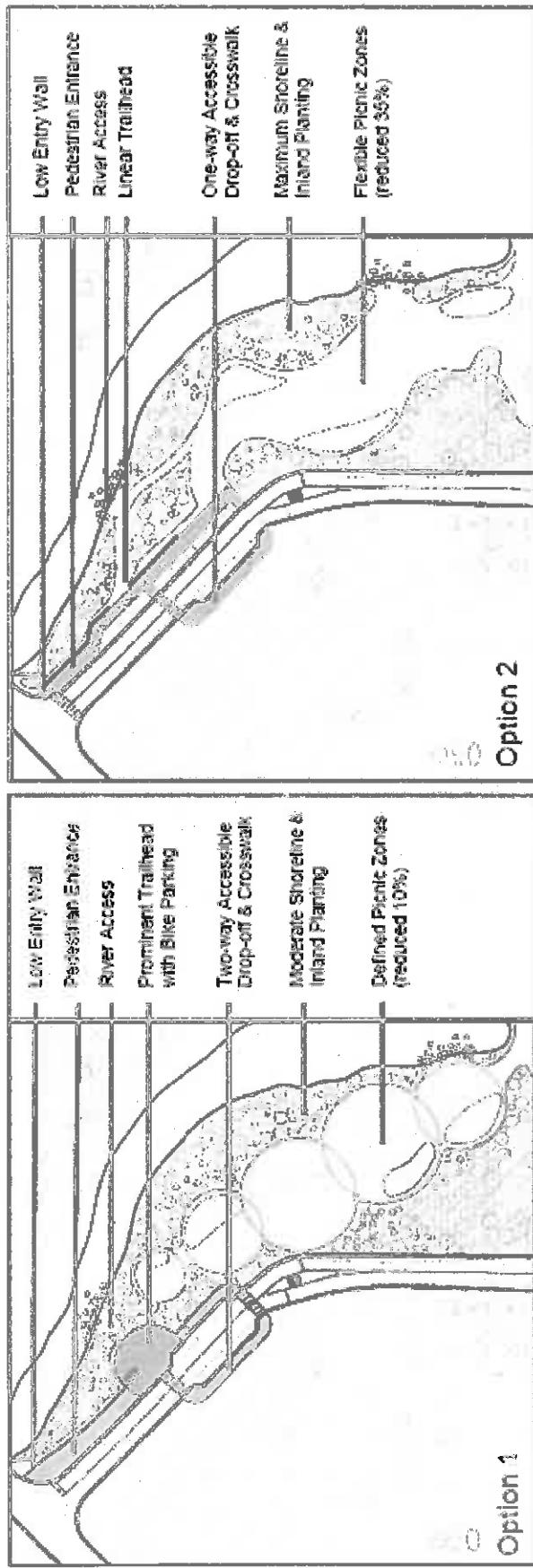
7. What features do you particularly like or dislike in the forecourt?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Pedestrian Entry-way	✓					
Accessible Drop-off Area	✓	✓				
River Access						
Bike Parking	✓					
Accessible Trail	✓					
Defined Picnic Spaces	✓					
Flexible Picnic Spaces						I don't know what this is,
Shoreline & Inland Plantings	✓					

9. Do you have any other thoughts or comments about the forecourt area?

\_\_\_\_\_

## Questionnaire #1 - Belfountain Complex Management Plan – Concept Plans



**Key Design Considerations:**

- \* Entry Experience
- \* Pedestrian & Cyclist Access
- \* Accessible Drop-off/Pick-up
- \* Define Picnic Area
- \* Formalize Water Access
- \* Naturalization

**Select Comments & Feedback received to date:**

- CVC needs to enhance onsite accessibility including infrastructure, signage and programming
- We need to better define the picnic areas to reduce conflict and enhance the natural features through river and inland planting
- You should provide a designated river access to reduce trampling along the shoreline
- Riverbank restoration should be considered a high priority for this area
- Make sure off or fine buildings and features maintain a consistent theme
- Enhancing the visitor flow is important in order to address confusion and orient visitors throughout the property

**Forecourt**

## Questionnaire #1 - Belfountain Complex Management Plan – Concept Plans

**Visitor Centre and Parking:** Please let us know what you think about the concepts for the visitor centre and parking area:

10. What is your preferred option for the visitor centre and parking area? Option 2

11. Why? Most parking

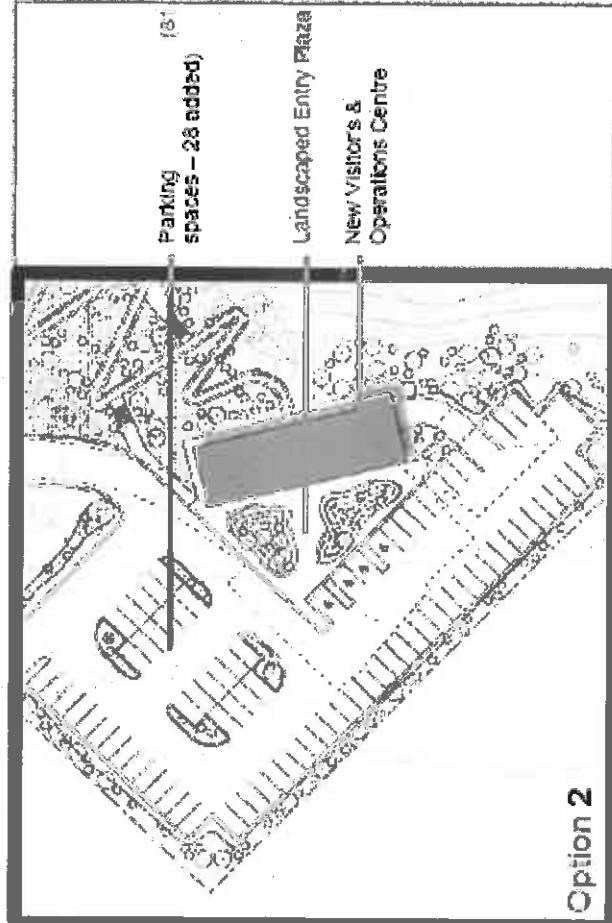
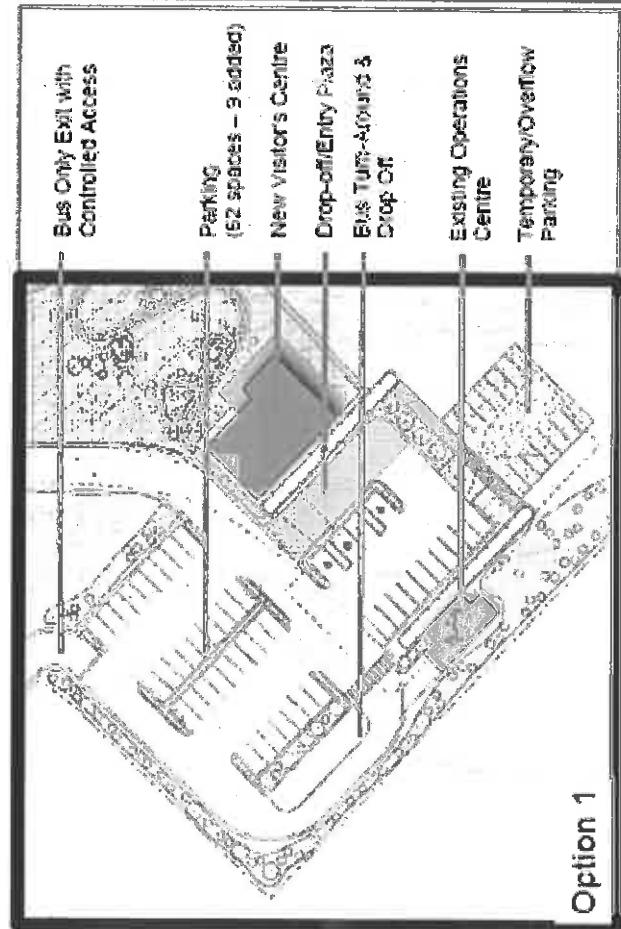
12. What features do you particularly like or dislike in the visitor centre and parking area?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Drop off area/Entry plaza	✓					
Increased Parking Spaces	✓					
Overflow Parking Area						
New Visitor Centre & Workshop (One Building)	✓					
New Visitor Centre & Existing Workshop (Two Buildings)						

13. Do you have any other thoughts or comments about the visitor centre and parking area?

*The building should be "green" as possible.*

## Questionnaire #1 - Belfountain Complex Management Plan – Concept Plans



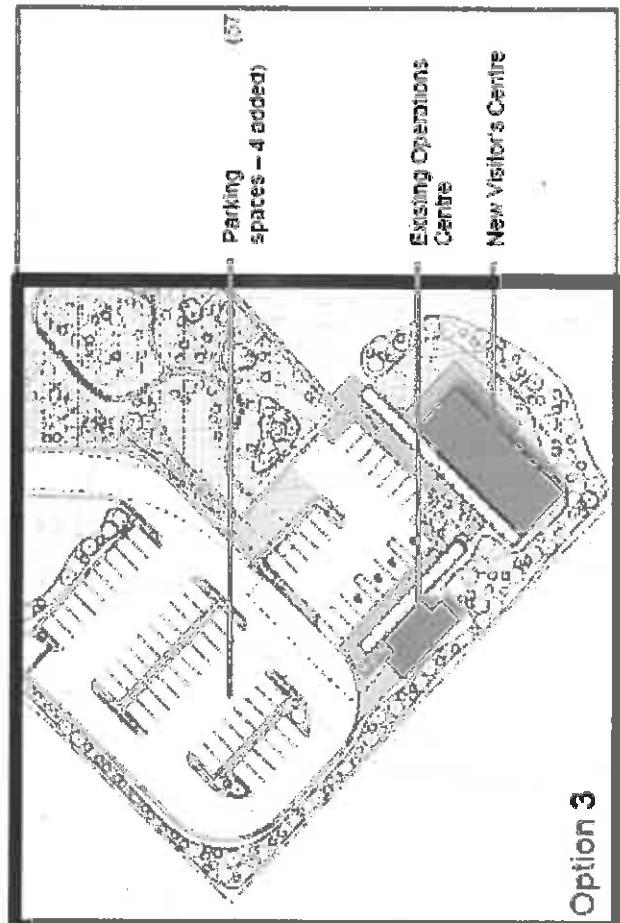
**Select Comments & Feedback received to date:**

**Key Design Considerations:**

- Visitor Centre as Gateway
- Increase Parking Capacity
- Safety
- Optimize Operations
- Scenic Views
- Define Picnic Areas
- Restore Slope
- Naturalization

CVC needs to use space more efficiently and maximize parking

- This area should improve visitor flow and the visitor experience – CVC will consider the area with too many buildings
- Consider adding covered spaces/shelter for inclement weather
- Add more parking to help alleviate traffic congestion within the Hamlet
- Provide a bus turnaround and parking for school buses
- CVC needs to provide information to help educate about the property
- This area needs to be accessible!



# Visitor Centre & Parking

## Questionnaire #1 - Belfountain Complex Management Plan – Concept Plans

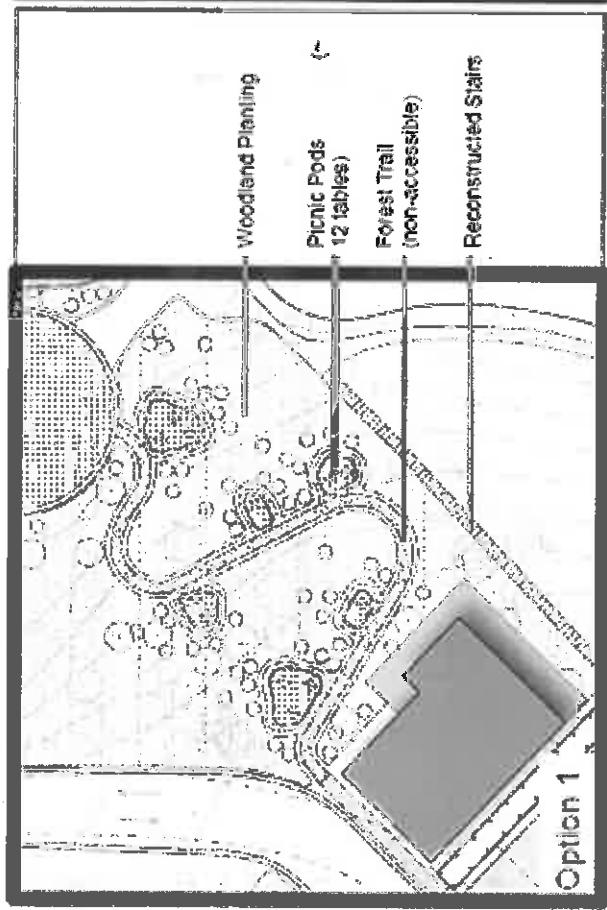
**Hillside Garden:** Please let us know what you think about the concepts for the hillside garden (upper picnic area):

14. What is your preferred option for the hillside garden? \_\_\_\_\_ *Option 2*
15. Why? *Accessibility - through the picnic spaces are too close to the stairs - not private enough.*
16. What features do you particularly like or dislike in the hillside garden?

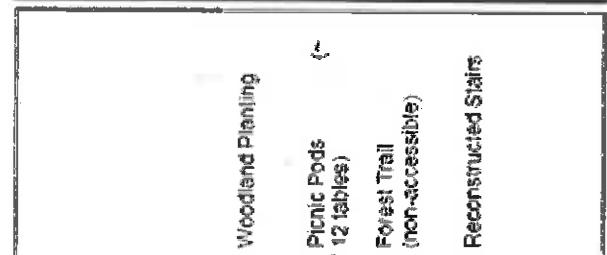
Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Picnic Pods				✓		
Accessible Trail	✓					
Forest Trail	<i>Wk</i>			✓		
Footpath						
Removal of Existing Staircase		✓				
Reconstruction of Existing Staircase					✓	

17. Do you have any other thoughts or comments about the hillside garden?

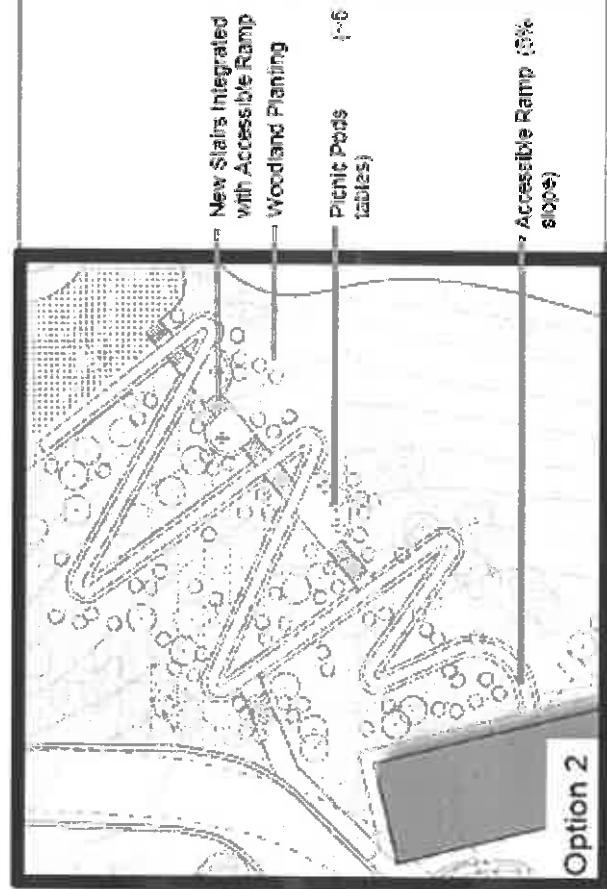
## Questionnaire #1 - Belfountain Complex Management Plan – Concept Plans



Option 1



Option 2



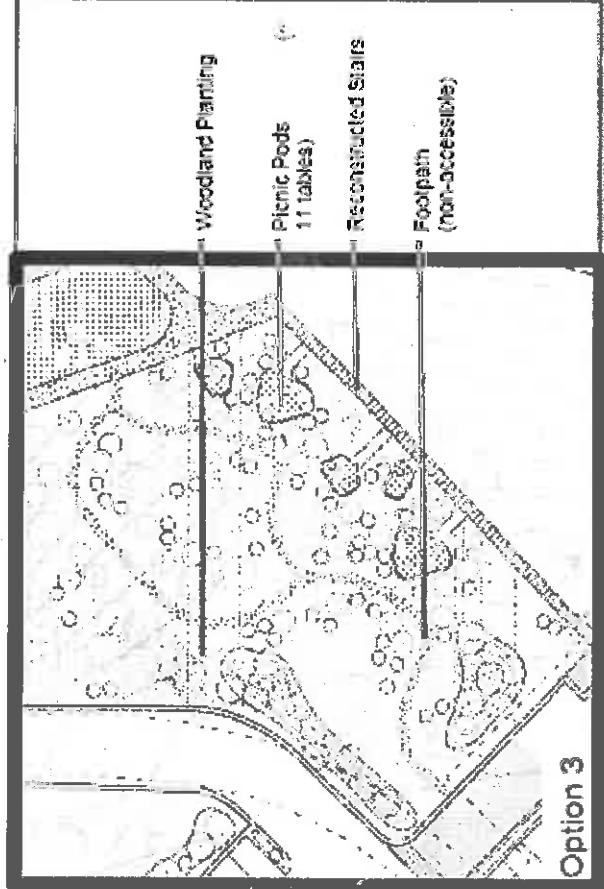
Option 3

### Key Design Considerations:

- Define areas for family/individual picnics
- Restore Slope
- Scenic Views
- Naturalization
- Define Picnic Areas

### Select Comments & Feedback received to date:

- Define areas for family/individual picnics
- A pavilion in this area would crowd it
- This area should help guide visitors throughout property
- The stairs are awful – please reconstruct the stairs
- Make a trail from the upper picnic area to lower day-use area to provide safe passage and reduce trampling of tree roots
- This would be a good location for gardens



Hillside

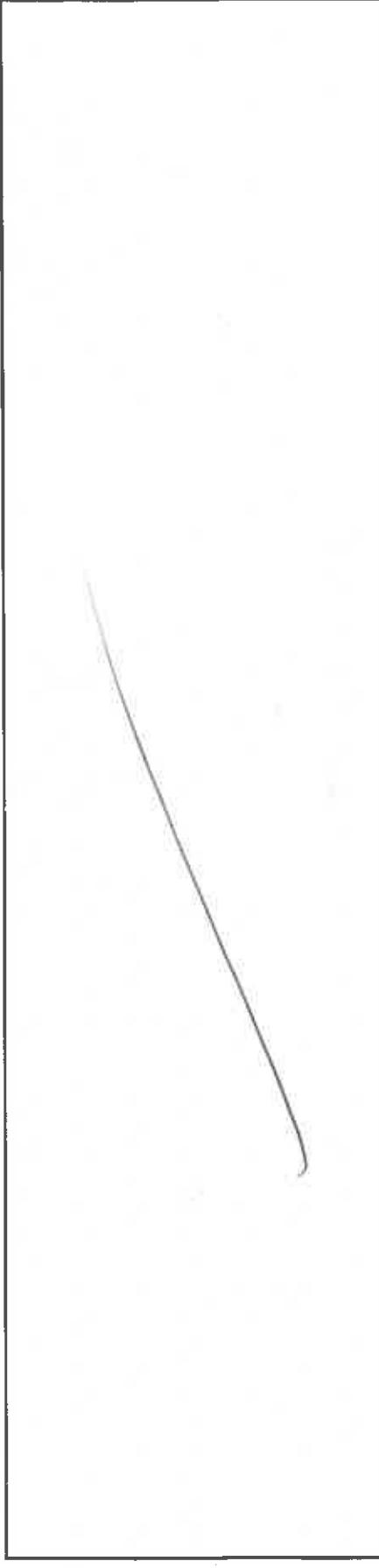
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**Portico:** Please let us know what you think about the concepts for the portico (pumphouse, bridge area):

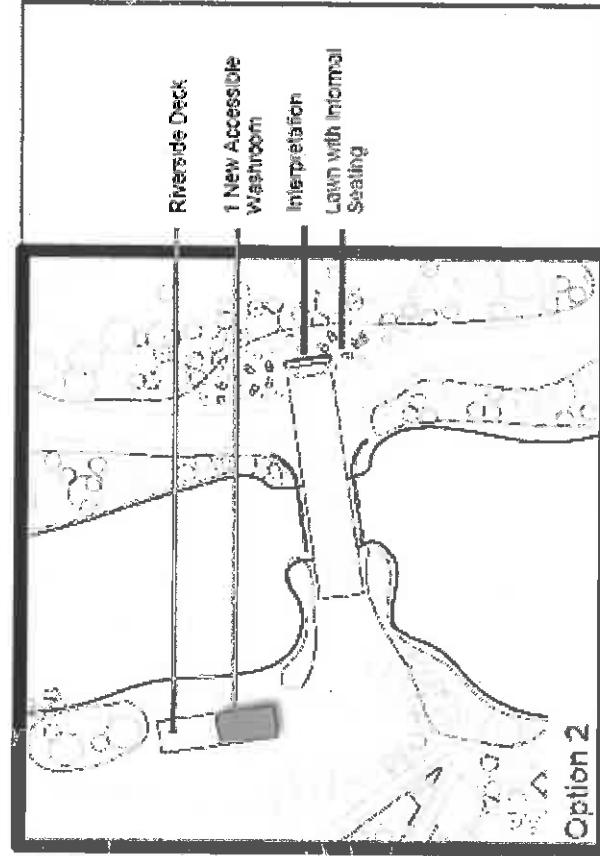
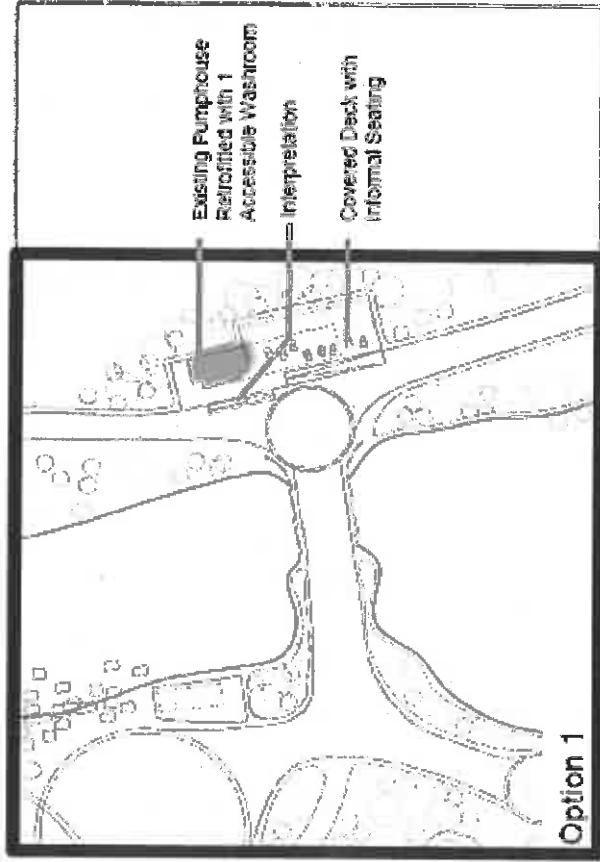
18. What is your preferred option for the portico? Option 2, but with some covered seating.
19. Why? I don't see the purpose of the circular area in front of covered seating in Option 1.
20. What features do you particularly like or dislike in the portico?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Existing building retrofitted with accessible washroom		✓				
Lawn with informal seating		✓				
Covered deck with informal seating		✓				
Riverside deck			✓			

21. Do you have any other thoughts or comments about the portico?



## Questionnaire #1 - Belfountain Complex Management Plan – Concept Plans

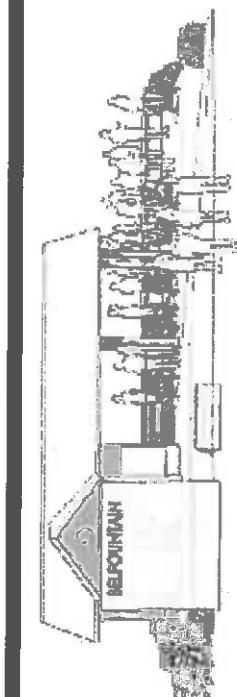


### Key Design Considerations:

- Prominent Gateway Site
- Visual Connection
- Interpretive Node
- Enhance Pumphouse
- Activate River Crossing

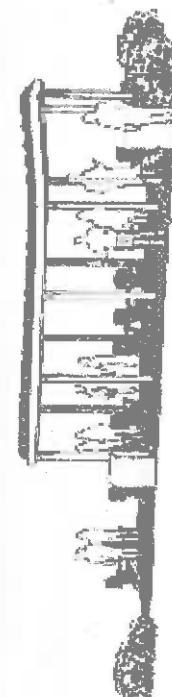


Accessible Restroom with Covered Deck



- Select Comments & Feedback received to date:**
- Consider adding covered space/shelter from inclement weather
  - Guide visitor flow throughout property
  - Consider adding washroom facilities closer to interior park features
  - Add interpretation and site feature information
  - Add rest areas
  - Enhance site and feature accessibility including infrastructure, signage and programming

Riverside Deck



**Portico**

**BrookMcIlroy/**

**Credit Valley  
Conservation**

## **Questionnaire #1 - Belfountain Complex Management Plan – Concept Plans**

**22. Do you have any ideas for special events or activities that would be a good fit for Belfountain Conservation Area?**

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**23. Please use the following space to ask any other questions you may have and the Study Team will provide a response within the following weeks. You can also use this space to provide general comments:**

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*Thank you! Staff on site on Sept. 27 were excellent –  
Very knowledgeable and enthusiastic, clearly love their work.*

---

# **Questionnaire & Comment Sheet**

## **Public Consultation Session**

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## Questionnaire #1 - Belfountain Dam & Headpond Class EA

CVC is undertaking a Conservation Ontario Class Environmental Assessment (Class EA) to determine how best to manage the Belfountain Dam and Headpond in the future. A Class EA must follow a specific process that can be summarized with the following steps:

1. Document the Baseline Inventory (background information) & identify the problem
2. Evaluate alternative solutions and select a preferred alternative
3. Conduct a detailed analysis of environmental impact

At this time, the baseline inventory (Step 1) has been completed, and development of the alternatives (Step 2) has begun but is not yet completed. Public consultation is integral component of a Class EA and public input will be considered at every step.

Please note that this questionnaire is specific to the Belfountain Dam and Headpond Class EA; a separate questionnaire has been provided in your package regarding the Belfountain Complex Management Plan.

CVC has established seven (7) Study Objectives for this project. The preferred alternative for the Belfountain Dam and Headpond will be required to meet these objectives.

Objective	Ranking
1) <i>Maintain a fisheries barrier between upstream Brook Trout and downstream invasive and non-native species</i>	3
2) <i>Reduce/minimize risk to visitors, staff and affected property</i>	5
3) <i>Maintain or improve the visitor experience</i> <small><i>lesser environmental impact</i></small>	7
4) <i>Conserve and enhance cultural heritage attributes</i>	6
5) <i>Promote natural stream function</i>	2
6) <i>Strive for long-term sustainability including economic viability</i> <small><i>natural</i></small>	4
7) <i>Conserve and enhance natural heritage attributes</i>	1

1. Please rank the objectives (1 to 7) in order of importance to you in the space provided above. Place a '1' beside the most important, '2' beside the second most important, etc.

## Questionnaire #1 - Belfountain Dam & Headpond Class EA

2. Are there other objectives you think the Class Environmental Assessment should consider? Why? (These should be specific to the dam and headpond)

We don't feel qualified to offer suggestions for rehabilitation, so we must rely on scientific + professional data + expertise

3. What is your vision for the Belfountain Dam and Headpond?

Visitor experience should not be a factor in these infrastructure decisions. What is the best solution for affected species and the natural landscape?

**Questionnaire #1 - Belfountain Dam & Headpond Class EA**

4. The presentation and poster boards provide the Baseline Inventory (background information) for the study area under various technical study categories. Is there any information that you think is important to the study that the Study Team may not be aware of? This could be problems you've observed in the study area, wildlife observations, or other relevant information.

We have noticed fewer mule deer sightings in the past few years, as the numbers of visitors increase. We now opt to hike in a less fragile area to do our part. (Island Lake)

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Forecourt:** Please let us know what you think about the concepts for the forecourt (entrance and lower picnic area):

5. What is your preferred option for the forecourt? OPTION 2

6. Why? Mixed impact; reduced picnic zones to keep numbers in check; more ecologically sound

7. What features do you particularly like or dislike in the forecourt?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Pedestrian Entry-way			✓			a given
Accessible Drop-off Area						appropriate for picnic /shore use
River Access		✓				If shoreline is protected with native planting
Bike Parking		✓				-encourages low-impact visitation
Accessible Trail						-not feasible in this location (topography)
Defined Picnic Spaces		✓				
Flexible Picnic Spaces	✓					fewer in number - choice of site
Shoreline & Inland Plantings	✓					native restoration critical to protect natural environment

9. Do you have any other thoughts or comments about the forecourt area?

- a) The idea of an English Garden unsuitable to this natural area despite the Mack heritage as they would be very difficult & costly to create and maintain
- b) We volunteered years ago, to clean up & plant the gardens from the entrance, partially due to the fountain (messy maintenance issues, annual plant design not appropriate to site, losses not well addressed)

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Visitor Centre and Parking:** Please let us know what you think about the concepts for the visitor centre and parking area:

10. What is your preferred option for the visitor centre and parking area? 3

11. Why? Parking must be managed to reduce excessive noise, traffic & environmental impact.

12. What features do you particularly like or dislike in the visitor centre and parking area?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Drop off area/Entry plaza			✓			
Increased Parking Spaces					✓	not appropriate for such a small, fragile area, so close to the hamlet
Overflow Parking Area					✓	"more pavement is not appropriate in the natural area"
New Visitor Centre & Workshop (One Building)					✓	far too large for small park
New Visitor Centre & Existing Workshop (Two Buildings)	?	?	?	?	?	Visitor centre is completely out of scale for this site.

13. Do you have any other thoughts or comments about the visitor centre and parking area?

(5000 sq. ft !)

1. Additional parking will NOT relieve car issues in the hamlet. In town, as

down as one car leaves, another occupies the space – All summer long, “Build it and they will come!” is not an answer.

2. One of your objectives in a previous stakeholder haulout, say: “Protect & enhance ecological diversity.” This MUST TRUMP visitor augmentation in person! “

This conservation plan should be about conservation not tourism.

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Hillside Garden:** Please let us know what you think about the concepts for the hillside garden (upper picnic area):

14. What is your preferred option for the hillside garden? 3

15. Why? least impact to the natural site while rehabilitation process area  
- No additional building structure on site is preferable

16. What features do you particularly like or dislike in the hillside garden?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Picnic Pods			✓			defines area
Accessible Trail				✓		too intrusive for the topography
Forest Trail				✓		too formal
Footpath	✓					more informal + aesthetically appropriate for the "appreciated, natural" palette
Removal of Existing Staircase					✓	
Reconstruction of Existing Staircase	✓					safe, easy access without creating an additional footprint
17. Do you have any other thoughts or comments about the hillside garden?	<p><i>Option 3 Thankfully, does not show a building. Less is more! Defined areas that remain natural looking, are much more sympathetic to the area.</i></p>					

7

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Portico:** Please let us know what you think about the concepts for the portico (pumphouse, bridge area):

18. What is your preferred option for the portico? 2

19. Why? Minimize impact, less formal - in keeping with park's overall theme

20. What features do you particularly like or dislike in the portico?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Existing building retrofitted with accessible washroom					✓	Too large + formal
Lawn with informal seating			Y			Maintenance time for grass (lawn?) & chairs inside washroom
Covered deck with informal seating					✓	Too large, too uniform architecturally - Not a skyline
Riverside deck		✓				Not too large. Native planting a must.

21. Do you have any other thoughts or comments about the portico?

along edge of river

This park should be as natural & uncontrolled as possible owing to its small size and fragility. Encourage a low impact, natural experience of walking, observing native & non-native elements rather than creating a man-made theme park.

- g. minimal hedges/scrubs, minimal signage  $\Rightarrow$  maximum value

\* many Hemitia Hurst &/or. throw into pond/river in the past  
- even the bridge downstream easily washed away after a storm

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

22. Do you have any ideas for special events or activities that would be a good fit for Belfountain Conservation Area?

① How impact environmental (nature) works, studies, guided education?   
② Not a location for weddings, film shoots, large gatherings, during  
to the frequency & size of this "package".  
③ Exempt from previous "objectives" (Strategic Objectives say: "you're  
mitigate impacts of human activities, such as visitors use . . . .") words  
This should be reflected

a) Manage non-native invasive species  
b) Manage native species  
c) Maintain improved and natural over  
d) monitor, maintain, enhance habitat for species at risk.  
23. Please use the following space to ask any other questions you may have and the Study Team will provide a response  
within the following weeks. You can also use this space to provide general comments:

- 
1. How do you expand with added infrastructure to accommodate or foster expected growth without seriously degrading or destroying this iconic "small jewel?"
  2. Is the CVC's mandate conservation or tourism? This site is too fragile to be exploited
  3. Unauthorised use is a huge issue. Excessive noise, noise + even smoke have been witnessed / heard from our property across the valley. Who can this be monitored / policed?

The dam & headpond reconstruction will be very costly and presumably is the priority, surely. The definition of "iconic" needs to be addressed in the context of this unique situation.

The proximity of the Beef Mountain hamlet creates a very unique situation in terms of traffic, traffic noise and pollution, water issues and land use encroachment.

Rural life in this area is becoming increasingly compromised. Would the CVC commit to helping concerned citizens preserve this fabulous setting and help protect it from severe urban pressures that have threatened this fragile area?

I have included the following  
edited excerpt I presented to Caledon  
Council last year as a delegate

We understand that the tourism industry is a tremendous growth industry. It can generate significant economic revenue for the Region

We also understand that the quality of the environment, both natural and man-made, is essential to tourism. However, tourism's relationship with the environment is very complex. It involves many activities that can have adverse effects.

I would now like to explore three main environmental impacts of tourism taken from a 2001 United Nations Environmental Program Paper and relate them specifically to our area of discussion.

#### A. The Natural Environment

The paper says: Tourism can put enormous pressure on an area and lead to impacts such as, # 1: soil erosion, (and we clearly see this at the Cheltenham Badlands), #2: increased pollution (in our area, excessive noise and emissions from motorcycles and cars, especially on the Forks of the Credit Rd., now that it has been "improved", and excessive garbage left behind on the Badlands and on area roads) #3:natural habitat loss and increased pressure on endangered species, (in the Belfountain area, the rare Jefferson salamander), #4: heightened vulnerability to forest fires (we find evidence in the burnt logs found in the Belf. park and on nearby Bruce trails), and #5tourism often puts a heavy strain on water resources, (and we know that the hamlet has very limited water for its own residents as per the survey conducted last Spring.)

#### B. Pollution

We have touched on air, noise and light pollution as a major despoiler of the natural areas, rivers, scenic areas and roadsides, so I move on to...

#### C. Physical Impacts

The U.N. paper goes on to say that the numbers of people using the same trails over and over contribute to trampled vegetation, soil erosion and a loss of biodiversity. In our specific case, the Belf Conser. Area is a small, fragile eco-system under increased pressure to accommodate many more paying customers with so-called value-added amenities. The history of vandalism at this park is already of great concern, (picnic tables thrown into the river, attempts to burn the bridges, etc.), and the means by which it can be patrolled, very limited to non-existent.

At a CVC Stakeholders workshop, on the Belf Complex Plan, it was noted that the park was a "haven for species diversity, unspoiled due to accessibility challenges." Let me repeat that...unspoiled due to accessibility challenges. Why then, are <sup>we</sup> changing something that is working? Buried in the CVC discussion handout was the following question: Do we need change on this site? One of the options to circle was: No change is a relevant option. And yet we seem to be moving on toward expansion,

I would like to share the National Geographic Geo-tourism definition and excerpts from their Charter.

They define geo-tourism as tourism that sustains or enhances the geological character of a place- its environment, culture, aesthetics, heritage and well-being of its residents. Three of their 13 principles are as follows:

a) Under protection and enhancement of destination appeal, they say: Encourage businesses to sustain natural habitats, heritage sites, aesthetic appeal and local culture. Prevent degradation by KEEPING VOLUMES OF TOURISTS WITHIN ACCEPTABLE LIMITS.

Surely our leaders, counsellors, our consultants are aware of the groundswell of concerned citizens in rural Ontario as we take on the fight to preserve our beloved countryside. And isn't this what we desire of our citizenry...involved, impassioned, knowledgeable, tireless and dedicated people willing to share their ideas and give of their time to preserve our heritage to make this a better place?

This isn't nimbyism, this is genuine stewardship!

Thank you for taking the time  
to consider our input.

# ONTARIO FEDERATION OF ANGLERS & HUNTERS

P.O. Box 2800, 4601 Guthrie Drive, Peterborough, Ontario K9J 8L5  
Phone: (705) 748.6324 • Fax: (705) 748.9577 • Visit: [www.ofah.org](http://www.ofah.org) • Email: [ofah@ofah.org](mailto:ofah@ofah.org)



Ontario Conservation Centre

OFAH File: 420  
October 7, 2015

Laura Rundle  
Conservation Lands Planner  
Credit Valley Conservation  
1255 Old Derry Road  
Mississauga, Ontario  
L5N 6R4

Dear Ms. Rundle:

**Subject: OFAH Comments on Belfountain Complex Management Plan and Class Environmental Assessment**

On behalf of the Ontario Federation of Anglers and Hunters (OFAH), its 100,000 members, subscribers and supporters, and 725 member clubs, we are pleased to provide comments on the Belfountain Complex Management Plan and Class Environmental Assessment related to the Belfountain Dam and Headpond.

As you may know, the OFAH is a lead partner with the province in the Lake Ontario Atlantic Salmon Restoration Program, which stocks production Atlantic Salmon from a provincial hatchery below the Belfountain Dam, and school- and club-raised Atlantic Salmon in smaller numbers above the dam. Specific to the school program, the OFAH and partners such as the Toronto Zoo bring students each year with their school-raised Atlantic Salmon to the Belfountain Conservation Area (CA). There, the students release the fish into the river, operating under a stocking permit from the Ministry of Natural Resources and Forestry and with the permission of Credit Valley Conservation. Approximately 10-20 visits are made each year, and the schools are visiting from Brampton, Mississauga, Orangeville, Erin, and Caledon. The students often also have a picnic in the CA, walk the trail, and visit the CA's sites. During some trips, the students have planted trees/shrubs or pulled garlic mustard as part of a planned activity with Credit Valley Conservation staff. Outside of the Atlantic Salmon program, OFAH members also have an interest in fishing in and downstream of the CA.

With that background in mind, we would like to provide comments specific to our interests in Belfountain, using the questionnaire provided to the public as guidance.

#### ***OFAH Ranked Priorities for the Study Objectives:***

1. Promote natural stream function.
2. Maintain a fisheries barrier between upstream Brook Trout and downstream invasive and non-native species.
3. Reduce/minimize risk to visitors, staff, and affected property.
4. Conserve and enhance natural heritage attributes.
5. Conserve and enhance cultural heritage attributes.
6. Maintain or improve the visitor experience.
7. Strive for long-term sustainability including economic viability.

We do not have additional objectives to contribute, as we believe the objective to “Promote natural stream function” includes minimizing the thermal and sediment impacts of the Headpond on the river downstream, which is our most significant concern.

***Vision for the Belfountain Dam and Headpond:***

Recognizing their heritage and social value, as well as their role in partitioning the upper West Credit River, the OFAH would envision the Dam and Headpond contributing optimized habitat to downstream fishes (including Atlantic Salmon through their life cycle), leading to improved fishing opportunities within existing fishing regulations. We also see the Belfountain CA remaining as an important stocking site for Atlantic Salmon restoration in the Credit River.

***Other Information for the Study Team:***

In our review of the Baseline Inventory we noted an emphasis on providing fish passage for Atlantic Salmon and American Eel, and would comment that the need for either species to have access beyond the Belfountain Dam is extremely limited. The number of returning Atlantic Salmon adults is currently low, and even with increased returns in the future, there is expected to be adequate spawning habitat between the Norval fishway and the Cataracts/Belfountain Dam. American Eel numbers in the Credit River are even lower, and the key bottlenecks for the species in Lake Ontario are external to the Credit River.

Additionally, fishways are expensive to install and operate as a means to gate fish in perpetuity. The existing fishways at Streetsville and Norval are only being minimally operated now for the selective passage of fish, and gating fish at a third location would further strain staff resources for very limited gain. Should information on historic access, recovery strategies, or fish numbers change, then upstream fish passage should be reviewed once more, but we do not feel it is critical at this time.

We would like to add, however, that any modifications to the Dam and Headpond should also take into account the need for downstream migration of fishes such as smolting Atlantic Salmon or Rainbow Trout, or the downstream movement of non-migratory fishes.

***Belfountain Complex Management Plan – Forecourt Concept Plans:***

The forecourt area is where we stage our school visits in the CA and is a very popular area with the classes. Based on our use of the area, as well as an interest in rehabilitating the stream bank while still providing access to parts of the river, Options 1 or 2 would be the preferred options.

***Belfountain Complex Management Plan – Visitor Centre and Parking Concept Plans:***

It was not clear if all options offered a bus-only exit or only Option 1, but as our visits almost always include one or more school buses, the smooth and safe movement of buses and students in this area is an important feature for us and a bus-only exit would enhance that.

***Belfountain Complex Management Plan – Hillside Garden Concept Plans:***

While we generally do not use the hillside garden as a picnic area, when we have students out with us we do use it as a pathway down to the forecourt that is safely away from vehicles on the driveway. With that

use in mind, while also recognizing the potential for naturalizing the slope, we support Option 2 because of its accessible ramp. While rare, we do occasionally have students requiring wheelchair access at the CA.

***Belfountain Complex Management Plan – Portico Concept Plans:***

We would support Option 1 as it has no impact on the west side of the river, allowing for increased naturalization there while still providing new amenities at the portico site on the east side of the river.

Thank you for the opportunity to provide comments on the Class Environmental Assessment and Belfountain Complex Management Plan. In addition to our annual stocking and education activites, we have had several formal Atlantic Salmon events at the CA in the past, and hope to have more. If there are outreach events in the CA where environmental NGOs are invited to have displays or host activities, please keep the OFAH and the Atlantic Salmon program in mind.

Please let me know if you have any questions or comments about our feedback to the plan and Environmental Assessment. I can be reached at 705-748-6324 Ext. 237 or [chris\\_robinson@ofah.org](mailto:chris_robinson@ofah.org).

Yours in Conservation,



Chris Robinson, M.Sc.  
OFAH Atlantic Salmon Program Coordinator

/cjr

cc: Matt DeMille, OFAH Manager, Fish and Wildlife Services  
Tom Brooke, OFAH Fisheries Biologist

# **Questionnaire & Comment Sheet**

## **Public Consultation Session**

Thank you for attending CVC's public consultation session for the Belfountain Complex Management Plan and Class Environmental Assessment. Your feedback is important to us and is an integral part of both the Management Plan and Class Environmental Assessment processes.

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### **PLEASE PRINT**

Name/Association:

E-mail:

Address:

Municipality:

Postal Code:

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**Please return completed questionnaires to any member of the Study Team during the meeting or to the following contacts after the meeting:**

**Credit Valley Conservation**  
Ms. Laura Rundle  
Conservation Lands Planner  
1255 Old Derry Road  
Mississauga, Ontario, L5N 6R4  
Tel: (905) 670.1615 ext.535  
email: [lrundle@creditvalleyca.ca](mailto:lrundle@creditvalleyca.ca)

**Amec Foster Wheeler  
Environment & Infrastructure**  
Mr. Ron Scheckenberger, M.Eng. P.Eng.  
Project Manager  
3215 North Service Road, P.O. Box 220  
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Tel: 905.335.2353  
Toll Free: 1.866.751.2353  
Email: [ron.scheckenberger@amecfw.com](mailto:ron.scheckenberger@amecfw.com)

**Please ensure that your questionnaire is in the mail no later than  
Wednesday, October 7<sup>th</sup>, 2015.**

## Questionnaire #1 - Belfountain Dam & Headpond Class EA

CVC is undertaking a Conservation Ontario Class Environmental Assessment (Class EA) to determine how best to manage the Belfountain Dam and Headpond in the future. A Class EA must follow a specific process that can be summarized with the following steps:

1. Document the Baseline Inventory (background information) & identify the problem
2. Evaluate alternative solutions and select a preferred alternative
3. Conduct a detailed analysis of environmental impact

At this time, the baseline inventory (Step 1) has been completed, and development of the alternatives (Step 2) has begun but is not yet completed. Public consultation is integral component of a Class EA and public input will be considered at every step.

Please note that this questionnaire is specific to the Belfountain Dam and Headpond Class EA; a separate questionnaire has been provided in your package regarding the Belfountain Complex Management Plan.

CVC has established seven (7) Study Objectives for this project. The preferred alternative for the Belfountain Dam and Headpond will be required to meet these objectives.

Objective	Ranking
1) <i>Maintain a fisheries barrier between upstream Brook Trout and downstream invasive and non-native species</i>	6
2) <i>Reduce/minimize risk to visitors, staff and affected property</i>	5
3) <i>Maintain or improve the visitor experience</i>	3
4) <i>Conserve and enhance cultural heritage attributes</i>	1
5) <i>Promote natural stream function</i>	7
6) <i>Strive for long-term sustainability including economic viability</i>	4
7) <i>Conserve and enhance natural heritage attributes</i>	2

1. Please rank the objectives (1 to 7) in order of importance to you in the space provided above. Place a '1' beside the most important, '2' beside the second most important, etc.

**Questionnaire #1 - Belfountain Dam & Headpond Class EA**

2. Are there other objectives you think the Class Environmental Assessment should consider? Why? (These should be specific to the dam and headpond)

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3. What is your vision for the Belfountain Dam and Headpond?

• TO PRESERVE / CONSERVE THE  
NATURAL + CULTURAL ASPECTS  
OF SAME. TO PRESERVE HISTORY  
+ HERITAGE FOR OUR CHILDREN  
+ FUTURE GENERATIONS.

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**Questionnaire #1 - Belfountain Dam & Headpond Class EA**

4. The presentation and poster boards provide the Baseline Inventory (background information) for the study area under various technical study categories. **Is there any information that you think is important to the study that the Study Team may not be aware of?** This could be problems you've observed in the study area, wildlife observations, or other relevant information.

LOOKS QUITE COMPREHENSIVE

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## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Forecourt:** Please let us know what you think about the concepts for the forecourt (entrance and lower picnic area):

5. What is your preferred option for the forecourt? \_\_\_\_\_ / \_\_\_\_\_

6. Why? Definable picnic area, Bike parking.

7. What features do you particularly like or dislike in the forecourt?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Pedestrian Entry-way	X				X	Smooth & flat surface.
Accessible Drop-off Area				X		Definable parking.
River Access	X					
Bike Parking	X					Shared lot, etc.
Accessible Trail	X					Pathway – parking.
Defined Picnic Spaces	X					Defined picnic areas make for better facilities.
Flexible Picnic Spaces			X			Space more flexible.
Shoreline & Inland Plantings	X					Some nice planting.

9. Do you have any other thoughts or comments about the forecourt area?

Shared lot.  
Lots of shade.  
Lots of trees.

More trees.

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Visitor Centre and Parking:** Please let us know what you think about the concepts for the visitor centre and parking area:

10. What is your preferred option for the visitor centre and parking area? 2

11. Why? increased parking

12. What features do you particularly like or dislike in the visitor centre and parking area?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Drop off area/Entry plaza	X					SENDS NATURE FLOW SINCE PARKING/TRAFFIC IS A BIG ISSUE
Increased Parking Spaces	X					NOT NECESSARY WITH OPTION.
Overflow Parking Area						
New Visitor Centre & Workshop (One Building)	X					MAKES MORE SENSE TO HAVE IT UNDER ONE
New Visitor Centre & Existing Workshop (Two Buildings)				X		

13. Do you have any other thoughts or comments about the visitor centre and parking area?

ECONOMICALLY  
ENVIRONMENTALLY  
ETC

→ IN BIZ FOUNDATION - THIS WOULD HELP MANAGE THOSE ISSUES.  
PERCENTAGE WHICH NOT STOP COMMERCIAL - THE RESIDENTIAL NEED TO FORCES OF  
MANAGING VOLUME.

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Portico:** Please let us know what you think about the concepts for the portico (pumphouse, bridge area):

18. What is your preferred option for the portico? \_\_\_\_\_ /

19. Why? *Entire place needs a makeover & changes, A better look!*

20. What features do you particularly like or dislike in the portico? *Like the trees, etc.*

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Existing building retrofitted with accessible washroom	✓					<i>Less cluttered appearance</i>
Lawn with informal seating		✓				<i>Allows access to grassy area without climbing</i>
Covered deck with informal seating		✓				<i>Allows shade and shelter</i>
Riverside deck					✗	<i>Reduced visibility from bridge</i>

21. Do you have any other thoughts or comments about the portico?

<i>Overall looks like a very nice place to be</i> <i>Cloudy skies make it even more interesting</i> <i>From rooftop, looks like a nice view</i> <i>4 AM, 6 AM, 7 AM, 8 AM, 9 AM, 10 AM, 11 AM, 12 PM, 1 PM, 2 PM, 3 PM, 4 PM, 5 PM, 6 PM, 7 PM, 8 PM, 9 PM, 10 PM, 11 PM, 12 AM</i> <i>Wet weather makes things difficult</i>
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## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Hillside Garden:** Please let us know what you think about the concepts for the hillside garden (upper picnic area):

14. What is your preferred option for the hillside garden? 2

15. Why? PATH DOES NOT + ACCESSIBILITY.

16. What features do you particularly like or dislike in the hillside garden?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Picnic Pods	<input checked="" type="checkbox"/>					NE - SIMPLE BUT INTIMATE
Accessible Trail	<input checked="" type="checkbox"/>					FABULOUS
Forest Trail						ROCKED ELSEWHERE ON TRAIL SYSTEM FORMS
Footpath	<input checked="" type="checkbox"/>					BROWW MAXIMUM WORKING THROUGH AREA
Removal of Existing Staircase	<input checked="" type="checkbox"/>					Allows for LEISURELY WALK
Reconstruction of Existing Staircase						IS IT NECESSARY?

17. Do you have any other thoughts or comments about the hillside garden?

DOES IT BECOME  
HIGH MAINTENANCE  
& COSTLY

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

22. Do you have any ideas for special events or activities that would be a good fit for Belfountain Conservation Area?

• GUIDED HIKES (PARTNER IN SAMAUDER FESTIVAL?)  
• CONCERTS IN THE PARK (PARTNER WITH MELVILLE WHITE CHURCH MUSIC PROGRAM)  
IT THINK YOU NEED TO PARTNER ACTIVITIES WITH BELFOUNTAIN EXISTING CELEBRATIONS. SHOWS 6000 WILL & A MOTIVATION TO WORK WITH THE COMMUNITY.

23. Please use the following space to ask any other questions you may have and the Study Team will provide a response within the following weeks. You can also use this space to provide general comments:

THERE WAS A CONCERN RAISED ABOUT THE SIZE OF THE VISITOR INTERPRETIVE CENTRE. SOME FOLKS WERE AGAINST AT 5000 SQ FT. IF BUNKERS IS USED FOR CLASSROOMS, COULD OFFICE SPACE + INTERPRETIVE CENTRE PERHAPS A "BLUEROOF" OF SPACE ALLOCATION WOULD BE MORE APPROPRIATE. CAN THE BUILDING BE 1 1/2 STOREYS TO REDUCE IT'S FOOT PRINT PERHAPS. SHOULD IT HAVE VARIOUS MEASURES TO LOWER BOTTOM -

Witter nicht mehr thut es mir sonder mehr  
Fest mit mir zu kommen Frey und er ist nicht  
Witter & Schröpfer und sie sind  
Froed

**Dearlove, Heather**

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**Subject:** FW: Questionnaire and Comments  
**Attachments:** CVC input.docx; ATT00001.htm

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**From:**  
**Sent:** October 5, 2015 9:46 AM  
**To:** Rundle, Laura  
**Subject:** Questionnaire and Comments

Hi Laura;

I have attached a note to you regarding my comments for the Belfountain Complex Management Plan and Class EA. I want to make sure you are aware that my comments are directed at the CVC and not to yourself. I admire your work and your dedication, and appreciate your involvement in this activity very much. I think you are well suited to this position and you are doing a terrific job, given the sensitivities of the local community. So thank you.

My concerns lie in this development. I am disappointed that the CVC is planning on making significant changes to the site because I do not understand the need. Perhaps there is data or information to which I am not privy, but from what is accessible to me, I still do not understand why there needs to be such financial investment in the park beyond meeting the EA requirements.

Thank you for the opportunity to provide comments.

The information contained in this Credit Valley Conservation electronic message is directed in confidence solely to the person(s) named above and may not be otherwise distributed, copied or disclosed including attachments. The message may contain information that is privileged, confidential and exempt from disclosure under the Municipal Freedom of Information and Protection and Privacy Act and by the Personal Information Protection Electronic Documents Act. The use of such personal information except in compliance with the Acts, is strictly prohibited. If you have received this message in error, please notify the sender immediately advising of the error and delete the message without making a copy. Thank you.

Hi Laura;

Thanks for chatting with me briefly during the Salamander Festival.

I am a long time resident of Caledon, and I cherish its grace and elegance. I understand why people from more urban locations choose to visit the Belfountain Conservation Area. It is a small, lovely site that is close to Toronto, Mississauga and other parts of the GTA. As I heard your Chief Administration Officer explain at the recent Public Meeting, it is the jewel in the crown of the Credit Valley Conservation.

It is my hope that you and all the CVC staff intend on keeping it that way. As I review the feedback received and management policies document, I see that a lot of hard work is being put into addressing many of the issues that are faced daily at the CA. I do have a number of comments and questions, however, that I will include here.

Here are my responses to the Questionnaire #1.

1. My ranked objectives are as follows: 7, 5, 1, 6, 2, 4, 3  
I note that #6 suggests that striving for long-term sustainability must include economic viability. Sustainability is an economic, social and environmental concept, so naturally it includes economic concerns. Question: Whose economic viability is being referenced? The CVC? The Hamlet of Belfountain? Please clarify.
2. Other objectives that the Class EA should consider? Yes. Maintain or improve the community's experience. This is a modification of #3, but one that I believe holds equal merit. We are living in the headwaters of the Credit, and the dam and headpond are part of our immediate environment. The local community's experience is definitely critical.
3. Vision for the dam and headpond? I want it to be upgraded for safety purposes, and I want a healthy fisheries and local terrestrial environment. IN order to provide you with a more specific vision, I will need to better understand the pros and cons of each of the options identified.
4. In terms of the baseline inventory, I walk through the park on a regular basis and I am not aware of any other additional information that I can contribute at this time.

With respect to the Questionnaire #2, my first statement is that all the options are basically the same, with small changes. So I will not bother you with specifics about preferred options. What I am most curious about is why this work is being considered? Why does the facility require new landscaping? I am certain there will need to be some work following the EA work, but why sink all sorts of money into creating a new landscape? Would it not be preferable to sink that money into restoring the ecological integrity of the site? I would recommend installing features

that restore and maintain EI, rather than upgrade the look of the site...which in turn will attract more visitors and continue to damage the EI.

5. I don't care about any of the options for the forecourt. They are all the same
6. They are all the same, just variations of a theme.
7. I think the river access rocks are hilarious. They will not stop people from entering elsewhere. Look at other facilities across Canada, and you will see evidence that that has not worked.
8. I don't see a question #8
9. I agree that the forecourt should be a welcoming place. Bike parking? Bikes park at the coffee shop, not the park. I rarely see anyone using a bike to get to the park. The defined picnics spaces may be cute, and with sufficient plantings, may actually allow for some biodiversity of habitat in the heavily used visitor area.
10. I prefer NOT to have a visitor centre.
11. This is an expenditure that does not make sense to me. It will increase visitation, increase damage to the park, and quite honestly, I think it is a waste of money. A covered place for visitors would be welcome, I am sure, but it does not have to be a large visitor centre. A consideration – why not take the old pumphouse out and put a covered structure there. You can add displays about the headpond , dam and history there. But do not build a visitor centre.
12. Do not increase parking spaces. Look to your plans and put caps on the number of people visiting the park. Encourage off-peak visitation. Do what you are already suggesting but do not increase parking. "IF YOU BUILD IT THEY WILL COME" ...the same will happen with a visitor centre and with increased parking.
13. Is the existing workshop up to code? If it is, then use it, but upgrade it and put an addition on it to create a positive working space for staff, and increase number of washrooms.
14. I have no preferred option for the hillside garden.
15. They all look the same, as I have noted. Erosion is always going to happen, so ensure limited erosion through effective landscaping
16. I like an accessible trail...if investments are going to be made in this park, having some kind of accessibility option is worthwhile.
17. No
18. N/A
19. Very similar
20. No comment
21. If a Visitor Centre is needed, then use this site as a place to do interpretation. Have the covered space here, but don't make it too large or it will overwhelm the site. Do not offering "programming". This is not a provincial park and we don't need to interpret everything.
22. Not right now.
23.
  - a. Why does the CVC wish to increase visitation?

- b. Why does the CVC want to build a visitor centre
- c. Why does the CVC believe a visitor centre is needed? (not wanted, but needed)
- d. Why does the CVC want to increase parking inside the park? (I am well aware of parking issues in the hamlet, but I don't understand why that would be the concern of the CVC).

## **Dearlove, Heather**

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**From:** Brouwers, Aaron  
**Sent:** September-25-15 9:28 AM  
**To:** Dearlove, Heather  
**Subject:** FW: Belfountain CA EA comments deadline  
**Attachments:** Belfountain PIC#1 Final\_with concept plans.docx

For the file

-----Original Message-----

From: Rundle, Laura [mailto:LRundle@creditvalleyca.ca]  
Sent: September-25-15 8:29 AM  
To: 'Chris Robinson' <chris\_robinson@ofah.org>  
Cc: Burgess, Kate <KBurgess@creditvalleyca.ca>; Baldin, Eric <EBaldin@creditvalleyca.ca>; Brouwers, Aaron <aaron.brouwers@amec.com>  
Subject: RE: Belfountain CA EA comments deadline

Good morning Chris,

I hope that this email finds you well.

CVC's website has been updated with the presentation and posters from Tuesday's consultation session. They can be accessed here: <http://www.creditvalleyca.ca/enjoy-the-outdoors/conservation-areas/belfountain-conservation-area/belfountain-conservation-area-management-plan/consultation/public-information-session-september-22-2015/>

I have attached a copy of the questionnaire that was distributed at the consultation session. We are asking for the completed forms to be returned by Wednesday, October 7th. If you would like to provide comments in another format (e.g. letter, etc.), we are more than happy to accept that as well. The questionnaire contains questions about both the management plan and the Class EA; please feel free to provide feedback on one or both projects.

Please feel free to contact me if you have any questions or require any clarification on the online content or the questionnaire.

Thank you,

Laura Rundle  
Conservation Lands Planner | Credit Valley Conservation  
905.670.1615 ext 535 | 1.800.668.5557  
lrundle@creditvalleyca.ca | creditvalleyca.ca

-----Original Message-----

From: Rundle, Laura  
Sent: September 21, 2015 12:20 PM  
To: 'Chris Robinson'  
Cc: Burgess, Kate; Baldin, Eric; 'Brouwers, Aaron'  
Subject: RE: Belfountain CA EA comments deadline

Hi Chris,

Thank you for your email.

I am sorry to hear that you are unable to attend any of our consultation sessions. Please note, however, that there are several opportunities to participate in the process and provide feedback. Our website will be updated with the presentation and questionnaire for this round of consultation shortly. I will send you the link once everything has been organized and posted. I will also keep your email on file to notify you of our next round of consultation.

If you or any of your local contacts would prefer to meet onsite to discuss the project, we are happy to arrange that as well. September is pretty busy with consultation, but my schedule opens up in October. I've found that meeting onsite is often the best way to discuss the details of a project.

Please do not hesitate to contact me if you have any questions.

Thank you,

Laura Rundle  
Conservation Lands Planner | Credit Valley Conservation  
905.670.1615 ext 535 | 1.800.668.5557  
[lrundle@creditvalleyca.ca](mailto:lrundle@creditvalleyca.ca) | [creditvalleyca.ca](http://creditvalleyca.ca)

-----Original Message-----

From: Chris Robinson [mailto:[chris\\_robinson@ofah.org](mailto:chris_robinson@ofah.org)]  
Sent: September 21, 2015 11:51 AM  
To: Rundle, Laura  
Subject: Belfountain CA EA comments deadline

Hello Laura,

The Belfountain CA planning process and EA review has just come to our attention, as has tomorrow night's public meeting. Unfortunately as of right now I don't believe myself or our other program staff can attend tomorrow, or this weekend or next at the CA itself, but the OFAH would like to provide comments. We are active in the watershed with the Atlantic Salmon program as well as having members who fish the river, and Belfountain is where we bring most of our classroom hatchery participants in the spring to release their school-raised Atlantic Salmon.

When would you need us to have comments submitted by? I'm hoping to look over the materials in the next few days and then discuss with other staff and some of our members local to the Credit River.

Yours in Conservation,  
Chris

Chris Robinson, M.Sc.  
OFAH Atlantic Salmon Restoration Program Coordinator Ontario Federation of Anglers and Hunters  
4601 Guthrie Drive, PO Box 2800  
Peterborough ON, K9J 8L5  
Phone: (705) 748-6324 Ext. 237  
E-mail: [chris\\_robinson@ofah.org](mailto:chris_robinson@ofah.org)  
Web: <http://www.bringbackthesalmon.ca>  
Facebook: <http://www.facebook.com/ontariosalmon> ([ontariosalmon](#))  
Twitter: [@ontariosalmon](http://twitter.com/ontariosalmon)

If you have not already done so, please visit [www.ofah.org/enews](http://www.ofah.org/enews) and sign up for our email list to stay connected with the OFAH.

Visit us online at [www.ofah.org](http://www.ofah.org)

Follow us on Twitter @ofah

Find us on Facebook - Ontario Federation of Anglers and Hunters

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# **Questionnaire & Comment Sheet**

## **Public Consultation Session**

Thank you for attending CVC's public consultation session for the Belfountain Complex Management Plan and Class Environmental Assessment. Your feedback is important to us and is an integral part of both the Management Plan and Class Environmental Assessment processes.

---

### **PLEASE PRINT**

Name/Association:

E-mail:

Address:

Municipality:

Postal Code:

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**Please return completed questionnaires to any member of the Study Team during the meeting or to the following contacts after the meeting:**

**Credit Valley Conservation**  
Ms. Laura Rundle  
Conservation Lands Planner  
1255 Old Derry Road  
Mississauga, Ontario, L5N 6R4  
Tel: (905) 670.1615 ext.535  
email: [lrundle@creditvalleyca.ca](mailto:lrundle@creditvalleyca.ca)

**Amec Foster Wheeler**  
**Environment & Infrastructure**  
Mr. Ron Scheckenberger, M.Eng. P.Eng.  
Project Manager  
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Burlington ON L7N 3G2  
Tel: 905.335.2353  
Toll Free: 1.866.751.2353  
Email: [ron.scheckenberger@amecfw.com](mailto:ron.scheckenberger@amecfw.com)

**Please ensure that your questionnaire is in the mail no later than  
Wednesday, October 7<sup>th</sup>, 2015.**

## Questionnaire #1 - Belfountain Dam & Headpond Class EA

CVC is undertaking a Conservation Ontario Class Environmental Assessment (Class EA) to determine how best to manage the Belfountain Dam and Headpond in the future. A Class EA must follow a specific process that can be summarized with the following steps:

1. Document the Baseline Inventory (background information) & identify the problem
2. Evaluate alternative solutions and select a preferred alternative
3. Conduct a detailed analysis of environmental impact

At this time, the baseline inventory (Step 1) has been completed, and development of the alternatives (Step 2) has begun but is not yet completed. Public consultation is integral component of a Class EA and public input will be considered at every step.

Please note that this questionnaire is specific to the Belfountain Dam and Headpond Class EA; a separate questionnaire has been provided in your package regarding the Belfountain Complex Management Plan.

CVC has established seven (7) Study Objectives for this project. The preferred alternative for the Belfountain Dam and Headpond will be required to meet these objectives.

Objective	Ranking
1) <i>Maintain a fisheries barrier between upstream Brook Trout and downstream invasive and non-native species</i>	2
2) <i>Reduce/minimize risk to visitors, staff and affected property</i>	6
3) <i>Maintain or improve the visitor experience</i>	7
4) <i>Conserve and enhance cultural heritage attributes</i>	1
5) <i>Promote natural stream function</i>	3
6) <i>Strive for long-term sustainability including economic viability</i>	4
7) <i>Conserve and enhance natural heritage attributes</i>	5

1. Please rank the objectives (1 to 7) in order of importance to you in the space provided above. Place a '1' beside the most important, '2' beside the second most important, etc.

## **Questionnaire #1 - Belfountain Dam & Headpond Class EA**

2. Are there other objectives you think the Class Environmental Assessment should consider? Why? (These should be specific to the dam and headpond)

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3. What is your vision for the Belfountain Dam and Headpond?

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## **Questionnaire #1 - Belfountain Dam & Headpond Class EA**

4. The presentation and poster boards provide the Baseline Inventory (background information) for the study area under various technical study categories. **Is there any information that you think is important to the study that the Study Team may not be aware of?** This could be problems you've observed in the study area, wildlife observations, or other relevant information.

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

Forecourt: Please let us know what you think about the concepts for the forecourt (entrance and lower picnic area):

5. What is your preferred option for the forecourt? \_\_\_\_\_

6. Why? \_\_\_\_\_

7. What features do you particularly like or dislike in the forecourt?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Pedestrian Entry-way				<input checked="" type="checkbox"/>		
Accessible Drop-off Area				<input checked="" type="checkbox"/>		
River Access						
Bike Parking						
Accessible Trail		<input checked="" type="checkbox"/>				
Defined Picnic Spaces		<input checked="" type="checkbox"/>				REduced
Flexible Picnic Spaces						
Shoreline & Inland Plantings		<input checked="" type="checkbox"/>				

9. Do you have any other thoughts or comments about the forecourt area?

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Visitor Centre and Parking:** Please let us know what you think about the concepts for the visitor centre and parking area:

10. What is your preferred option for the visitor centre and parking area? DEFINITELY NOT INCREASED

11. Why? \_\_\_\_\_

12. What features do you particularly like or dislike in the visitor centre and parking area?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Drop off area/Entry plaza			✓			
Increased Parking Spaces				✓		
Overflow Parking Area				✓		
New Visitor Centre & Workshop (One Building)					DEPENDS ON THE SIZE	
New Visitor Centre & Existing Workshop (Two Buildings)			✓			

13. Do you have any other thoughts or comments about the visitor centre and parking area?

*IF YOU BUILD IT, THEY WILL COME! THIS IS THE PROBLEM, TOO MUCH TRAFFICLESS VISITORS*

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Hillside Garden:** Please let us know what you think about the concepts for the hillside garden (upper picnic area):

14. What is your preferred option for the hillside garden? \_\_\_\_\_

15. Why? \_\_\_\_\_

16. What features do you particularly like or dislike in the hillside garden?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Picnic Pods		✓				
Accessible Trail		✓				
Forest Trail		✓				
Footpath		✓				
Removal of Existing Staircase				✓		
Reconstruction of Existing Staircase	✓					

17. Do you have any other thoughts or comments about the hillside garden?

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

Portico: Please let us know what you think about the concepts for the portico (pumphouse, bridge area):

18. What is your preferred option for the portico? KKK is more rustic design

19. Why?

20. What features do you particularly like or dislike in the portico?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Existing building retrofitted with accessible washroom		✓				
Lawn with informal seating		✓	✓			
Covered deck with informal seating		✓	✓			
Riverside deck		✓	✓			

21. Do you have any other thoughts or comments about the portico?

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

22. Do you have any ideas for special events or activities that would be a good fit for Belfountain Conservation Area?

KEEPER TOWER SMALL / LOUTER / AND ANGIE PROJECTS / AFIELD PARK

23. Please use the following space to ask any other questions you may have and the Study Team will provide a response within the following weeks. You can also use this space to provide general comments:

KEEP END SECURITY PICTURES & MORE ENFORCED / REINFORCED  
WEAP DE KEEPS OUT AGGRESSIVE UNDESIRABLES ! FEROCIOUS FENCES  
AROUND THE LUDWIG PARK (last answer)

# **Questionnaire & Comment Sheet**

## **Public Consultation Session**

Thank you for attending CVC's public consultation session for the Belfountain Complex Management Plan and Class Environmental Assessment. Your feedback is important to us and is an integral part of both the Management Plan and Class Environmental Assessment processes.

---

### **PLEASE PRINT**

Name/Association

E-mail:

Address:

Municipality:

Postal Code:

---

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Ms. Laura Rundle  
Conservation Lands Planner  
1255 Old Derry Road  
Mississauga, Ontario, L5N 6R4  
Tel: (905) 670.1615 ext.535  
email: [lrundle@creditvalleyca.ca](mailto:lrundle@creditvalleyca.ca)

**Amec Foster Wheeler**  
**Environment & Infrastructure**  
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Tel: 905.335.2353  
Toll Free: 1.866.751.2353  
Email: [ron.scheckenberger@amecfw.com](mailto:ron.scheckenberger@amecfw.com)

**Please ensure that your questionnaire is in the mail no later than  
Wednesday, October 7<sup>th</sup>, 2015.**

## Questionnaire #1 - Belfountain Dam & Headpond Class EA

CVC is undertaking a Conservation Ontario Class Environmental Assessment (Class EA) to determine how best to manage the Belfountain Dam and Headpond in the future. A Class EA must follow a specific process that can be summarized with the following steps:

1. Document the Baseline Inventory (background information) & identify the problem
2. Evaluate alternative solutions and select a preferred alternative
3. Conduct a detailed analysis of environmental impact

At this time, the baseline inventory (Step 1) has been completed, and development of the alternatives (Step 2) has begun but is not yet completed. Public consultation is integral component of a Class EA and public input will be considered at every step.

Please note that this questionnaire is specific to the Belfountain Dam and Headpond Class EA; a separate questionnaire has been provided in your package regarding the Belfountain Complex Management Plan.

CVC has established seven (7) Study Objectives for this project. The preferred alternative for the Belfountain Dam and Headpond will be required to meet these objectives.

Objective	Ranking
1) <i>Maintain a fisheries barrier between upstream Brook Trout and downstream invasive and non-native species</i>	2
2) <i>Reduce/minimize risk to visitors, staff and affected property</i>	7
3) <i>Maintain or improve the visitor experience</i>	6
4) <i>Conserve and enhance cultural heritage attributes</i>	4
5) <i>Promote natural stream function</i>	1
6) <i>Strive for long-term sustainability including economic viability</i>	5
7) <i>Conserve and enhance natural heritage attributes</i>	3

1. Please rank the objectives (1 to 7) in order of importance to you in the space provided above. Place a '1' beside the most important, '2' beside the second most important, etc.

## Questionnaire #1 - Belfountain Dam & Headpond Class EA

2. Are there other objectives you think the Class Environmental Assessment should consider? Why? (These should be specific to the dam and headpond)

We cannot stop the river,  
so we should eventually  
have some idea of decommissioning.

3. What is your vision for the Belfountain Dam and Headpond?

naturalization

**Questionnaire #1 - Belfountain Dam & Headpond Class EA**

4. The presentation and poster boards provide the Baseline Inventory (background information) for the study area under various technical study categories. **Is there any information that you think is important to the study that the Study Team may not be aware of?** This could be problems you've observed in the study area, wildlife observations, or other relevant information.

1. *Leucosia* *leucostoma* *leucostoma*  
2. *Leucosia* *leucostoma* *leucostoma*  
3. *Leucosia* *leucostoma* *leucostoma*  
4. *Leucosia* *leucostoma* *leucostoma*  
5. *Leucosia* *leucostoma* *leucostoma*

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

Forecourt: Please let us know what you think about the concepts for the forecourt (entrance and lower picnic area):

5. What is your preferred option for the forecourt? \_\_\_\_\_

6. Why? \_\_\_\_\_

7. What features do you particularly like or dislike in the forecourt? \_\_\_\_\_

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Pedestrian Entry-way		<input checked="" type="checkbox"/>				
Accessible Drop-off Area		<input checked="" type="checkbox"/>				
River Access		<input checked="" type="checkbox"/>				
Bike Parking		<input checked="" type="checkbox"/>				
Accessible Trail		<input checked="" type="checkbox"/>				
Defined Picnic Spaces		<input checked="" type="checkbox"/>				
Flexible Picnic Spaces		<input checked="" type="checkbox"/>				
Shoreline & Inland Plantings		<input checked="" type="checkbox"/>				

9. Do you have any other thoughts or comments about the forecourt area?

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Visitor Centre and Parking:** Please let us know what you think about the concepts for the visitor centre and parking area:

10. What is your preferred option for the visitor centre and parking area? \_\_\_\_\_

11. Why? \_\_\_\_\_

12. What features do you particularly like or dislike in the visitor centre and parking area?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Drop off area/Entry plaza		✓				
Increased Parking Spaces				✓		
Overflow Parking Area		✓				
New Visitor Centre & Workshop (One Building)	✓					
New Visitor Centre & Existing Workshop (Two Buildings)						

13. Do you have any other thoughts or comments about the visitor centre and parking area?

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Hillside Garden:** Please let us know what you think about the concepts for the hillside garden (upper picnic area):

14. What is your preferred option for the hillside garden? \_\_\_\_\_

15. Why? \_\_\_\_\_

16. What features do you particularly like or dislike in the hillside garden?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Picnic Pods		✓				
Accessible Trail						
Forest Trail		✓				
Footpath						
Removal of Existing Staircase						
Reconstruction of Existing Staircase		✓				

17. Do you have any other thoughts or comments about the hillside garden?

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Portico:** Please let us know what you think about the concepts for the portico (pumphouse, bridge area):

18. What is your preferred option for the portico? \_\_\_\_\_

19. Why? \_\_\_\_\_

20. What features do you particularly like or dislike in the portico? \_\_\_\_\_

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Existing building retrofitted with accessible washroom						
Lawn with informal seating						
Covered deck with informal seating						
Riverside deck						

21. Do you have any other thoughts or comments about the portico? \_\_\_\_\_

## **Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans**

22. Do you have any ideas for special events or activities that would be a good fit for Belfountain Conservation Area?

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23. Please use the following space to ask any other questions you may have and the Study Team will provide a response within the following weeks. You can also use this space to provide general comments:

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*security cameras (night time) video surveillance*

*Do not be afraid to charge a significant fee for park usage especially special functions.*

## **Dearlove, Heather**

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**Subject:** FW: Belfountain Management Plan - Feedback and Thank-you

**From:** Rundle, Laura [<mailto:LRunle@creditvalleyca.ca>]

**Sent:** September-24-15 1:59 PM

**Cc:** Baldin, Eric <[EBaldin@creditvalleyca.ca](mailto:EBaldin@creditvalleyca.ca)>; Burgess, Kate <[KBurgess@creditvalleyca.ca](mailto:KBurgess@creditvalleyca.ca)>; Brouwers, Aaron <[aaron.brouwers@amec.com](mailto:aaron.brouwers@amec.com)>

**Subject:** Belfountain Management Plan - Feedback and Thank-you

Good afternoon,

Thank you for attending the public consultation session for the Belfountain Complex Management Plan & Class EA that took place on Tuesday, September 22<sup>nd</sup> at the Caledon Ski Club.

The comments and feedback that were provided during the session will be incorporated into the next phase of the management planning process. If you did not submit a completed questionnaire, but what like to, please do so by Wednesday, October 7<sup>th</sup>. The presentation and posters from Tuesday evening are now located on CVC's website: <http://www.creditvalleyca.ca/enjoy-the-outdoors/conservation-areas/belfountain-conservation-area/belfountain-conservation-area-management-plan/consultation/public-information-session-september-22-2015/>.

Please note that we will be putting together a short report highlighting the questions and comments received during this round of consultation. This will be sent to you by email in early October, once our onsite consultations at Belfountain Conservation Area are complete.

Thank you again for your interest and participation in the Belfountain Complex Management Plan. Please feel free to contact me if you have any questions, require clarification, or would like to discuss any aspect of this project in detail.

Kind regards,

Laura

**Laura Rundle**

Conservation Lands Planner | Credit Valley Conservation

905.670.1615 ext 535 | 1.800.668.5557

[LRunle@creditvalleyca.ca](mailto:LRunle@creditvalleyca.ca) | [creditvalleyca.ca](http://creditvalleyca.ca)

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# **Questionnaire & Comment Sheet**

## **Public Consultation Session**

Thank you for attending CVC's public consultation session for the Belfountain Complex Management Plan and Class Environmental Assessment. Your feedback is important to us and is an integral part of both the Management Plan and Class Environmental Assessment processes.

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**Environment & Infrastructure**  
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**Please ensure that your questionnaire is in the mail no later than  
Wednesday, October 7<sup>th</sup>, 2015.**

## Questionnaire #1 - Belfountain Dam & Headpond Class EA

CVC is undertaking a Conservation Ontario Class Environmental Assessment (Class EA) to determine how best to manage the Belfountain Dam and Headpond in the future. A Class EA must follow a specific process that can be summarized with the following steps:

1. Document the Baseline Inventory (background information) & identify the problem
2. Evaluate alternative solutions and select a preferred alternative
3. Conduct a detailed analysis of environmental impact

At this time, the baseline inventory (Step 1) has been completed, and development of the alternatives (Step 2) has begun but is not yet completed. Public consultation is integral component of a Class EA and public input will be considered at every step.

Please note that this questionnaire is specific to the Belfountain Dam and Headpond Class EA; a separate questionnaire has been provided in your package regarding the Belfountain Complex Management Plan.

CVC has established seven (7) Study Objectives for this project. The preferred alternative for the Belfountain Dam and Headpond will be required to meet these objectives.

Objective	Ranking
1) <i>Maintain a fisheries barrier between upstream Brook Trout and downstream invasive and non-native species</i>	4
2) <i>Reduce/minimize risk to visitors, staff and affected property</i>	5
3) <i>Maintain or improve the visitor experience</i>	7
4) <i>Conserve and enhance cultural heritage attributes</i>	1
5) <i>Promote natural stream function</i>	2
6) <i>Strive for long-term sustainability including economic viability</i>	6
7) <i>Conserve and enhance natural heritage attributes</i>	3

1. Please rank the objectives (1 to 7) in order of importance to you in the space provided above. Place a '1' beside the most important, '2' beside the second most important, etc.

### Questionnaire #1 - Belfountain Dam & Headpond Class EA

2. Are there other objectives you think the Class Environmental Assessment should consider? Why? (These should be specific to the dam and headpond)

Keep the dam & headpond intact

3. What is your vision for the Belfountain Dam and Headpond?

That the dam & headpond be maintained; kept functional

## **Questionnaire #1 - Belfountain Dam & Headpond Class EA**

4. The presentation and poster boards provide the Baseline Inventory (background information) for the study area under various technical study categories. Is there any information that you think is important to the study that the Study Team may not be aware of? This could be problems you've observed in the study area, wildlife observations, or other relevant information.

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Forecourt:** Please let us know what you think about the concepts for the forecourt (entrance and lower picnic area):

5. What is your preferred option for the forecourt? Do not increase parking
6. Why? CVC should not be a "money maker" → work privately!

7. What features do you particularly like or dislike in the forecourt?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Pedestrian Entry-way			✓			
Accessible Drop-off Area			✓			
River Access	✓	✓				
Bike Parking	✓	✓				
Accessible Trail			✓			
Defined Picnic Spaces		✓				
Flexible Picnic Spaces		✓				
Shoreline & Inland Plantings	✓					

9. Do you have any other thoughts or comments about the forecourt area?

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Visitor Centre and Parking:** Please let us know what you think about the concepts for the visitor centre and parking area:

10. What is your preferred option for the visitor centre and parking area? less natural parking

11. Why? Keep natural CMC should not be a人工 park!

12. What features do you particularly like or dislike in the visitor centre and parking area?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Drop off area/Entry plaza			X			
Increased Parking Spaces				X		
Overflow Parking Area				X		
New Visitor Centre & Workshop (One Building)				X		{ Keep the park natural setting }
New Visitor Centre & Existing Workshop (Two Buildings)				X		

13. Do you have any other thoughts or comments about the visitor centre and parking area?

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

**Hillside Garden:** Please let us know what you think about the concepts for the hillside garden (upper picnic area):

14. What is your preferred option for the hillside garden? good idea to upgrade

15. Why? Enhances the overall concept of picnic

16. What features do you particularly like or dislike in the hillside garden?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Picnic Pods				X		
Accessible Trail		✓				
Forest Trail		✓				
Footpath		✓				
Removal of Existing Staircase				X		
Reconstruction of Existing Staircase				X		protection should assume liability issues

17. Do you have any other thoughts or comments about the hillside garden?

good idea

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

Portico: Please let us know what you think about the concepts for the portico (pumphouse, bridge area):

18. What is your preferred option for the portico? upgrade pump house & bridge area

19. Why? enhance people

20. What features do you particularly like or dislike in the portico?

Item	Really Like	Like	Neutral	Not a Fan	Strongly Dislike	Comments
Existing building retrofitted with accessible washroom		✓				
Lawn with informal seating				X		
Covered deck with informal seating				X		
Riverside deck			X			

21. Do you have any other thoughts or comments about the portico?

*keep it true to historic standards*

## Questionnaire #2 - Belfountain Complex Management Plan – Concept Plans

22. Do you have any ideas for special events or activities that would be a good fit for Belfountain Conservation Area?

naturalist meetings; school groups for natural sciences projects

RESTRICT ~~NO~~ EVENTS THAT INVOKE NOISE; LOUD MUSIC  
NO WEDDING RECEPTIONS Please

This park should not be a "money maker" for the CVC

23. Please use the following space to ask any other questions you may have and the Study Team will provide a response within the following weeks. You can also use this space to provide general comments:

keep the park in a natural state

BELLS ROCK BILLBOARDS SIZE SIGNAGE AT OUTSKIRS OF PARK  
TO INFORM VISITORS ON HEAVY USAGE DAYS THAT PARK IS AT  
CAPACITY

## **Dearlove, Heather**

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**Subject:** FW:  
**Attachments:** September 20 cvc.docx

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**From:** Martin-Downs, Deborah  
**Sent:** September 21, 2015 1:00 PM  
**To:** Rundle, Laura; Baldin, Eric; Thompson, Mark  
**Cc:** Payne, Jeff  
**Subject:** FW: Nando

For your information. I do not intend to prepare another response on behalf

**Deborah Martin-Downs**  
Chief Administrative Officer | Credit Valley Conservation  
905.670.1615 ext 235 | C: 416.399.6050 | 1.800.668.5557  
[dmartin-downs@creditvalleyca.ca](mailto:dmartin-downs@creditvalleyca.ca) | [creditvalleyca.ca](http://creditvalleyca.ca)

**From:**  
**Sent:** September 21, 2015 9:28 AM  
**To:** Martin-Downs, Deborah  
**Subject:** Nando

Good Morning  
I am having a technical failure message from [redacted] email address. Would you pass on the attached letter and include an invitation to attend the CVCA meeting at the ski club tomorrow?  
Thanks  
Steve

The information contained in this Credit Valley Conservation electronic message is directed in confidence solely to the person(s) named above and may not be otherwise distributed, copied or disclosed including attachments. The message may contain information that is privileged, confidential and exempt from disclosure under the Municipal Freedom of Information and Protection and Privacy Act and by the Personal Information Protection Electronic Documents Act. The use of such personal information except in compliance with the Acts, is strictly prohibited. If you have received this message in error, please notify the sender immediately advising of the error and delete the message without making a copy. Thank you.

September 20, 2015

Thank you very much for your reassuring letter of July 14 stating that no decisions have been made on the Mack Park Dam and the outcome of the Dam is not predetermined. I hope you can appreciate that the first two proposed objectives appear to be in conflict:

1. Conserve and enhance the ecological and unique natural heritage features and functions of the Belfountain Complex.
2. Conserve and enhance the unique heritage attributes of the Belfountain Complex.

The uninitiated may get this opinion from the numerous self-descriptions the CVCA gives of itself:

“environmental organization dedicated to protecting, restoring, managing the natural resources of the Credit River watershed”

“CVC is a community based environmental organization dedicated to conserving, restoring, developing and managing natural resources on a watershed basis.”

The CVCA does not promote itself as a dedicated to the protecting, restoring and developing cultural heritage.

Public statements regarding the Mack’s Dam have not been encouraging:

“we do not recommend rebuilding the dam...” 2002 Management Plan/ Credit River Fisheries  
“Long term, removing the dam maybe cheapest.” Meeting #5 Stakeholders Advisory Committee 2001  
“The dam should be removed.” 2003 consultant’s report

In your letter you stated the six proposed objectives of the Belfountain Complex. Reading the CVCA’s website it mentions the Guiding Principles, Goals and Objectives for a Natural Heritage System:

“A system made up of natural heritage features and areas and linkages intended to provide connectivity and support natural processes which are necessary to maintain biological and geological diversity, viable populations of indigenous species and ecosystems.”  
Can you see where someone may think this would be incompatible with a heritage site like Mack’s Dam?

I appreciate the CVCA is talking to a variety of stakeholders. Certainly if you were only preaching to the converted like other ecological groups or special interest groups like Trout’s Unlimited or Izaak Walton Fly Fishing Club (Bring back the brookies), I would be concerned.

Recently the Belfountain area has had negative experiences with consultative meetings. In the case of the Badlands and the Willoughby trail, meetings were held and then the agency went ahead and did what it wanted.

The CVCA has a history in this area of developing rural “parks” like Terra Cotta, Upper Credit, and Island Lake. The Belfountain Complex is attempting to develop in Belfountain, essentially doing, which has the potential of being disruptive to our community.

The CVCA website has no qualms in stating its power lies in the Conservation Authorities Act and Provincial Policy Statement 2014, and is somewhat shielded from Municipal and Ministry of Natural Resources in planning and management. I thought this meant the CVCA can do what it wanted but I now realize that should the community oppose some or all of the Belfountain Complex that Caledon town council can take appropriate action with the Honourable Minister of Natural Resources and Forestry, Bill Mouro as well as other measures.

Thank you again for writing to me and your interest in heritage conservation.

Sincerely,

# **Stakeholder Advisory Committee Meeting Minutes**

**Belfountain Complex Management Plan - Stakeholder Advisory Committee**  
**Meeting # 6: Notes**

**Date:** Thursday May 28th, 2015 **Time:** 6:00 – 8:15 **Location:** Terra Cotta Conservation Area

**Meeting Attendees:**

Organization	Committee Member
Belfountain Community Organization	Judy Mabee
Belfountain Heritage Society	Steve Goyeche
Headwaters Communities in Action	Dave Dyce
Town of Caledon	Sally Drummond
Trout Unlimited	Steve Copeland
Credit Valley Conservation	Eric Baldin
Credit Valley Conservation	Laura Rundle
Credit Valley Conservation – Meeting Administration	Kate Burgess

**Meeting Purpose:**

1. Learn about the Belfountain Dam and Headpond Class Environmental Assessment, its objectives and potential management alternatives
2. Share feedback, Q & A

**Agenda Items:**

Topic	Discussion	Actions
Introductions	<u>Stakeholder Advisory Committee Terms of Reference</u> <ul style="list-style-type: none"><li>• Meeting agendas, minutes and presentations are now posted on CVC's website in addition to Management Plan and Dam and Headpond Class Environmental Assessment (Class EA) documents<ul style="list-style-type: none"><li>◦ Website: <a href="http://www.creditvalleyca.ca/enjoy-the-outdoors/conservation-areas/belfountain-conservation-area/belfountain-conservation-area-management-plan/consultation/stakeholder-advisory-committee/">http://www.creditvalleyca.ca/enjoy-the-outdoors/conservation-areas/belfountain-conservation-area/belfountain-conservation-area-management-plan/consultation/stakeholder-advisory-committee/</a></li></ul></li></ul>	
Belfountain Complex Management Plan Update & Study Background	<u>Belfountain Complex Management Plan Update</u> <ul style="list-style-type: none"><li>• Concept Plans and Preliminary Drawings: CVC has hired consultant Brook McIlroy (BM) to prepare three (3) concept plans for each project area as well as major infrastructure projects. Comments received to date have been consolidated and forwarded to BM for</li></ul>	Next meeting is scheduled for Thursday, August 6 <sup>th</sup>

	<p>consideration in designs.</p> <ul style="list-style-type: none"> <li>• Upcoming Dates: <ul style="list-style-type: none"> <li>○ June/July: Draft concepts</li> <li>○ July/August: Strategic Directions: Phase II with finalized goals, objectives and introduction to concept plans</li> <li>○ August: Share concept plans with SAC and gather feedback. <b>Next meeting is scheduled for Thursday August 6<sup>th</sup>.</b></li> <li>○ September: Public Consultation for Management Plan and Dam &amp; Headpond Class EA</li> </ul> </li> </ul> <p><u>Belfountain Dam and Headpond Class EA Study Background</u></p> <ul style="list-style-type: none"> <li>• Previous management plans identified headpond as an area that required mitigation (1969, 1978)</li> <li>• CVC worked with a consultant to complete a Headpond Study which followed a Class EA process (2001). The preferred alternative was not supported by CVC and the project was to be postponed until a management plan was completed (2003).</li> <li>• A Dam Safety Review identified need for Class EA (2013).</li> <li>• CVC staff worked to identify key objectives for the dam and headpond (2014).</li> <li>• CVC hired consultant AMEC Foster Wheeler to lead Class EA study (2015). Their staff and/or sub-consultants will be on site throughout the year undertaking works associated with the study e.g. geotechnical survey.</li> </ul>	
Study Purpose, Process and Approach	<p><u>Purpose</u></p> <ul style="list-style-type: none"> <li>• Need for study was identified in a Dam Safety Review when it was determined that the Belfountain Dam does not meet all current provincial standards for safety under the Lakes and Rivers Improvement Act.</li> <li>• CVC being a public body is required to undertake a Conservation Ontario, Class EA for Remedial Flood and Erosion Control which establishes a planning and approval process.</li> </ul> <p><u>Process</u></p> <ul style="list-style-type: none"> <li>• Characterization of study area</li> <li>• Consultation with public and agency partners;</li> <li>• Evaluation of preferred alternatives</li> <li>• Determination of potential impacts of proposed alternative;</li> <li>• Identification of measures and actions to mitigate possible negative impacts;</li> <li>• Timelines:</li> </ul>	

	<ul style="list-style-type: none"> <li>○ May 2015: Notice of Intention</li> <li>○ May 28, 2015: SAC Workshop</li> <li>○ September 2015: Public Information Centre No. 1</li> <li>○ November 2015: Public Information Centre No. 2</li> <li>○ May 2016: Review of Final Report</li> </ul> <p><u>Approach</u></p> <ul style="list-style-type: none"> <li>• Technical Studies</li> <li>• Relevant Legislation and Roles of Agencies</li> </ul>	
Study Objectives	<p><u>Study Objectives</u></p> <ul style="list-style-type: none"> <li>• CVC held an internal workshop with staff to develop consensus on objectives to guide study and future management of Dam and Headpond (2014)</li> <li>• Objectives must address key issues and be measurable</li> <li>• CVC provided an overview of the seven (7) objectives;</li> <ol style="list-style-type: none"> <li>1. Maintain a barrier between upstream Brook Trout and downstream non-native and invasive species</li> <li>2. Reduce/minimize risk to visitors, staff and affected property</li> <li>3. Conserve and enhance cultural heritage attributes</li> <li>4. Promote natural stream function</li> <li>5. Strive for long-term sustainability including economic viability</li> <li>6. Conserve and enhance natural heritage attributes</li> <li>7. Maintain or improve visitor experience</li> </ol> </ul>	
Possible Management Alternatives	<p><u>Management Alternatives</u></p> <ul style="list-style-type: none"> <li>• Alternatives will be characterized by the study team considering; <ul style="list-style-type: none"> <li>○ How it would function</li> <li>○ Impacts/benefits to natural environment</li> <li>○ Impacts/benefits to social environment</li> <li>○ Capital and operating cost</li> </ul> </li> <li>• All possible Alternatives will be evaluated (scored) based on criteria that will measure its ability to meet study objectives. Evaluation matrix will be provided to SAC for feedback.</li> <li>• Some alternatives have sub-options as there may be multiple ways to achieve the alternative</li> <li>• Feedback</li> <li>• <u>Belfountain Dam</u>: All management alternatives will be evaluated in this study however; seven (7) key possible alternatives identified for dam include; <ol style="list-style-type: none"> <li>1. Do nothing</li> </ol> </li> </ul>	

	<ul style="list-style-type: none"> <li>2. Repair to improve safety</li> <li>3. Restore Dam to 1908 condition</li> <li>4. Lower/modify crest of slope</li> <li>5. Re-build (as is 2015 configuration)</li> <li>6. Rebuild off-line (move/shift location)</li> <li>7. Remove/decommission</li> </ul> <ul style="list-style-type: none"> <li>• <b>Headpond:</b> All management alternatives will be evaluated in this study however; five (5) key alternatives have been identified for the headpond;           <ul style="list-style-type: none"> <li>1. Do nothing</li> <li>2. Dredge sediment</li> <li>3. Restore natural channel through headpond in combination with               <ul style="list-style-type: none"> <li>a. Offline pond; or</li> <li>b. Wetland or other natural area; or</li> <li>c. Conversion to land and additional recreation space</li> </ul> </li> </ul> </li> </ul>	
Discussion	<p><u>SAC Objectives Workshop Questions &amp; Discussion</u></p> <ol style="list-style-type: none"> <li>1. Are there any questions as to why the study is necessary?           <ul style="list-style-type: none"> <li>• None</li> </ul> </li> <li>2. Are there any questions as to why the study needs to follow the Class EA approach?           <ul style="list-style-type: none"> <li>• None</li> </ul> </li> <li>3. Does everyone understand the various opportunities available to the SAC and public to provide input?           <ul style="list-style-type: none"> <li>• Yes</li> </ul> </li> <li>4. Does anyone have any information that could be valuable to the component technical studies?           <ul style="list-style-type: none"> <li>• Headpond restoration and dam enhancements were undertaken in the 1980's, adding a bottom draw feature to the existing dam. This positively impacted the downstream water temperature (by an estimated 6C) and reduced sedimentation in the headpond. At this time, the river also took its natural course through the headpond.</li> <li>• It was noted that several mills were located in the near vicinity, including within BCA.</li> </ul> </li> <li>5. Does anyone have questions about the many provincial and federal agencies that will participate in and review the study?           <ul style="list-style-type: none"> <li>• Q: Why is Niagara Escarpment Commission (NEC) not listed? A: CVC is working with NEC to determine what role they will have in this study.</li> </ul> </li> </ol>	<p><b>CVC</b> to explore 1980's works on the dam further, and determine if any images from this project exist.</p>

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|---|--|
| <p>6. Are there any other problems associated with the Dam and Headpond you would like to identify?</p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p>7. Which objectives do you think are most important?</p> <ul style="list-style-type: none"> <li>• Objective 1: Maintain a fish barrier <ul style="list-style-type: none"> <li>○ Though I am supportive of the Atlantic Salmon reintroduction program, I also want to see the partition maintained. Brook Trout are in decline and need protection. If a fish ladder is needed to assist with select species transportation, we could support it.</li> </ul> </li> <li>• Objective 2: Reduce/minimize risk to visitors, staff, and affected property <ul style="list-style-type: none"> <li>○ Minimizing risk is an important consideration</li> </ul> </li> <li>• Objective 3: Conserve and enhance cultural heritage attributes <ul style="list-style-type: none"> <li>○ Cultural heritage features in park are important and visitors need an opportunity to appreciate them.</li> <li>○ The dam itself is not visually appealing. If the dam requires work, consider how to enhance this cultural heritage feature to make it more esthetically pleasing. E.g. when considering options for the dam, consider how the control component of the structure (right side) can be better integrated into the landscape.</li> <li>○ Removal of pond would alter Cultural Heritage Landscape, completely change what we have, good bad or ugly. If you retain half the features, it may lesson impact.</li> </ul> </li> <li>• Objective 4: Promote natural stream function. <ul style="list-style-type: none"> <li>○ Health of river is very important. In stream temperatures, natural stream function, and natural heritage features of the Niagara Escarpment should be preserved. That said, the pond is a draw for visitors and balance between naturalizing stream/pond and maintaining an aesthetically pleasing water feature will be difficult. Creative solutions are required to meet all of these objectives.</li> <li>○ Native species within river need support throughout their lifecycle. River must be in the best condition it can be to support the health of species that are there.</li> <li>○ Naturalization should be considered to provide more tree canopy and shade</li> </ul> </li> <li>• Objective 5: Strive for long-term sustainability including economic viability</li> </ul> |  |
|---|--|

	<ul style="list-style-type: none"> <li>○ Belfountain CA is special and unique...if cost is an issue, consider raising tariffs instead of not being able to afford to do what you need to do. I prefer higher fees to an inferior solution.</li>   <li>● Objective 7: Maintain or improve visitor experience           <ul style="list-style-type: none"> <li>○ Maintaining waterfall feature is important, and is a draw for visitors (sight and sound)</li> <li>○ Consider providing better access to experience natural and cultural heritage features but in a manner that does not negatively impact the features themselves. E.g. new lakeside trail in Orangeville with bridges and boardwalks over water. The pond loop trail is an opportunity to do this with elevated boardwalk and lookouts which prevents impacting the features and landscape.</li> <li>○ Integration with the local community, looking at recreational opportunities that may currently be lacking. E.g. Palgrave pond provides skating/pond hockey opportunities in winter.</li> <li>○ If we were to incorporate a fish ladder, a public viewing area/platform presents a unique educational opportunity.</li> <li>○ Some of the more visitor experience enhancements for the dam and headpond are more likely to be addressed through the management plan rather than the EA, but is a consideration when looking at options.</li> <li>○ Visitor experience is not the most important thing...highest priority is natural heritage and if there are opportunities that will not be at a cost to species, I support it. I don't want the public at risk.</li> <li>○ Biggest issue is getting a balance between naturalizing so the river and ponds are attractive to people. Walking in for first time, pond is a nice feature that draws people.</li> <li>○ We talked about a lot of projects in the park to enhance visitor experience, perhaps you want to consider adding to the dam EA objectives to add enhancements from a visitor experience perspective. Opportunity to go above and beyond,</li> </ul> </li> </ul> <p>8. Does anyone have any other objectives that could be considered (specific to the dam/headpond)?</p> <ul style="list-style-type: none"> <li>● Sediment transfers and in stream temperatures are main concerns</li> <li>● Objectives look great. Looking at Palgrave pond, community wanted to maintain feature,</li> </ul>	
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ice skating in winter...interesting to look at how they designed that. I understand they designed it to be a bypass pond which maintains pond feature, bridge on hwy 50 there is some fish viewing area by the fish ladder, very unique and educational. What were their objectives? What were their lessons learned? Are there any other factors that should be considered in measuring the objectives?

9. Are there any other alternatives that should be considered for the dam or headpond?
  - Maintain waterfall is not an objective and is an important for visitor experience. The EA will look at all possible alternatives; some may not meet any of our objectives. Keeping the dam in tact will be evaluated.
10. Are there any questions about the process of evaluating the alternatives?
  - Difficult to prioritize between objectives.

#### General Discussion

How are criteria and objectives prioritized?

- Health and safety is always an upmost priority however; as an example, we may have to give a little on visitor satisfaction in order to gain more ecologically.

Objective 1 can be controversial. Should this objective be discussed?

- CVC has determined these to be their objectives. There are several ideas on types of barriers, there are a few sub-options

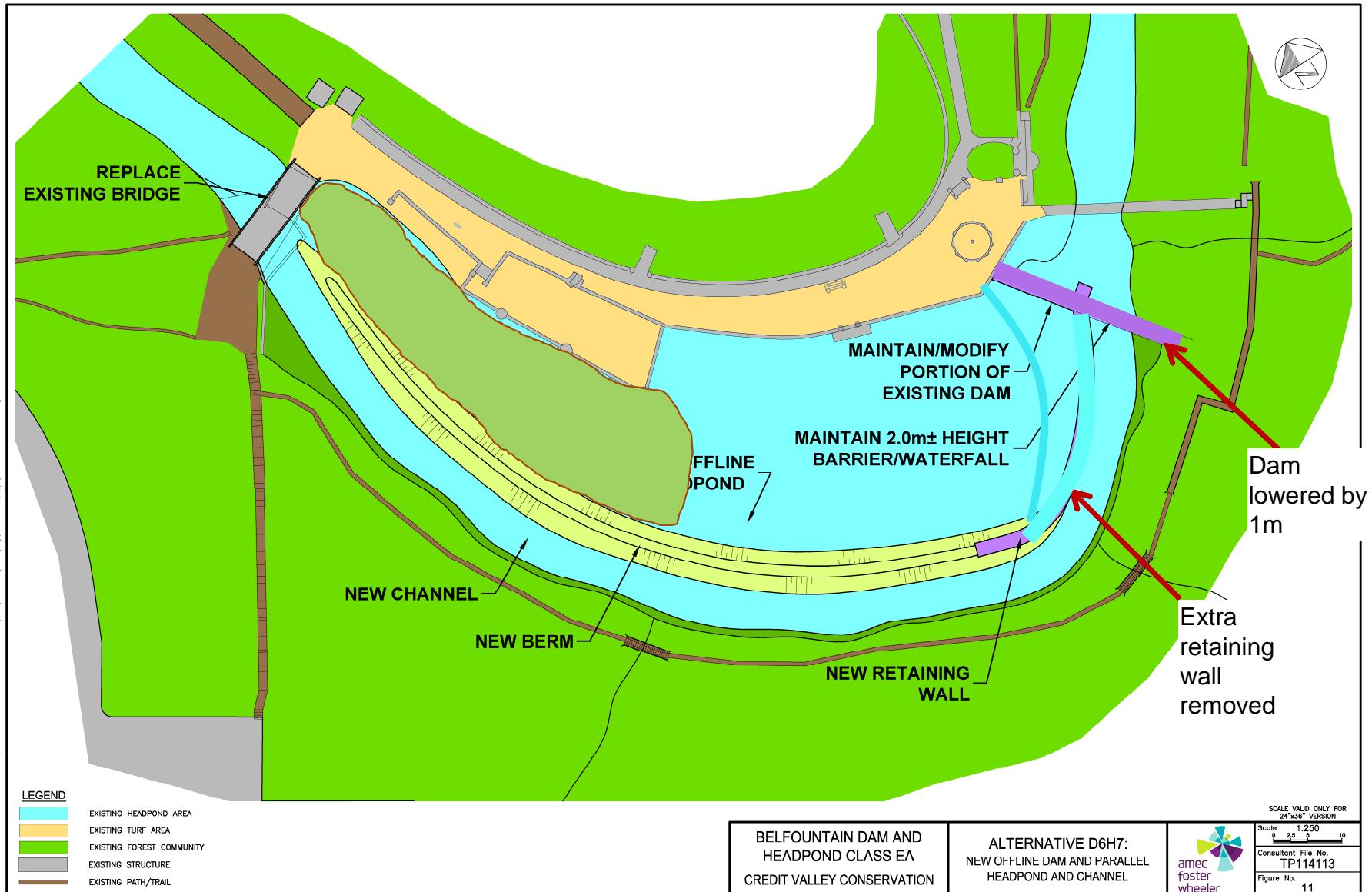
Is the sediment in the headpond contaminated?

- A previous study deemed it safe for park use (2003), however we are in the process of resampling to determine if any parameters have changed.

There is potential to make the dam a more attractive structure and enhance cultural heritage experience, some options may include:

- Situate control function away from the dam or have it better integrated into landscape.
- Enhance access to the waterfall with boardwalk with lookouts.
- Consider feasibility of building a water ram, takes water upstream. No electricity, strictly mechanical.
- Consider adding a non-operational water wheel to highlight the history of the dam and saw mill

	<ul style="list-style-type: none"> <li>If a fish ladder is a preferred alternative, there is an opportunity to build a viewing area</li> </ul> <p>What was the dam's pre-1908 condition? What is the difference between pre-1908 condition and after Mack's improvements?</p> <ul style="list-style-type: none"> <li>It is not confirmed, but it is believed that the pre-1908 dam was lower.</li> </ul> <p>At what point does EA become integrated with management plan?</p> <ul style="list-style-type: none"> <li>Anticipate preferred alternative by November and will integrate into concept plans</li> <li>EA objectives are aligned with the management plan objectives.</li> </ul> <p>What is the potential to locate where the old mills or other cultural heritage features?</p> <ul style="list-style-type: none"> <li>Any areas that are identified as having moderate to high archaeological potential will be investigated further. A Cultural Heritage Background Study noted that potential may be impaired as a lot of cottages and modern interventions were created by Charles Mach.</li> </ul>	
Next Steps	<ol style="list-style-type: none"> <li>Concept Plans and Preliminary Drawings: CVC expects draft concept plans in June/July.</li> <li>Strategic Directions Report: Phase II with finalized goals, objectives and introduction to concept plans is expected in July/August.</li> <li>Public Consultation: CVC and AMEC Foster Wheeler will host a public consultation on both the management plan and the dam and headpond EA in September.</li> <li>Next Meeting: The next meeting is tentatively scheduled for Thursday August 6<sup>th</sup>. CVC will confirm the date and location for our next meeting in the coming weeks.</li> </ol>	<b>CVC</b> to send notification for next SAC meeting, tentatively scheduled for <b>Thursday August 6th</b> .



**Belfountain Complex Management Plan - Stakeholder Advisory Committee**  
**Meeting # 7: Notes**

**Date:** Thursday September 3rd, 2015 **Time:** 6:00 p.m. – 8:30 p.m. **Location:** Terra Cotta Conservation Area

**Meeting Attendees:**

Organization	Committee Member
Belfountain Community Organization	Ian McCallum
Belfountain Heritage Society	Steve Goyeche
Town of Caledon, Heritage Caledon	Barbara MacKenzie
Credit Valley Conservation	Mark Thompson
Credit Valley Conservation	Laura Rundle
Credit Valley Conservation	Joana Marques
Credit Valley Conservation – Meeting Administration	Kate Burgess

**Meeting Purpose:**

1. Review of Belfountain Dam and Headpond Class EA – Baseline Inventory Report
2. Review Belfountain Conservation Area Draft Concept Plans
3. Discussion on providing feedback and input

**Agenda Items:**

Topic	Discussion	Actions
Belfountain Dam and Headpond Class EA	<p>We are currently very early in the Study process. Work to date has included data gathering for Baseline Inventory Report and developing study objectives.</p> <ul style="list-style-type: none"><li>• AMEC Foster Wheeler, consultant hired to lead Study, has completed the Baseline Inventory Report which will be sent to SAC members and posted on CVC's website. Key findings include:<ul style="list-style-type: none"><li>○ <u>Sediment</u>: estimated sediment volume is 2500m<sup>3</sup> comprised of intermittent layers of silt, fine sand and organic matter. Sediment quality does not pose implications for disposal or remediation and does not pose threat to downstream transport</li><li>○ <u>Stream Morphology</u>: Change in geology at Dam (bedrock to shale). Downstream</li></ul></li></ul>	<p><b>CVC</b> to circulate copies of the EA Baseline Inventory Report and Cultural Heritage Evaluation to SAC Members.</p>

	<p>characteristics are a result of both the dam and geology. Channel widening is major geomorphic process. Headpond associated with accumulation of sediment and overwidening of upstream section. Lack of fine sediments located downstream could be attributed to high velocity flows (absence of dam may not improve downstream sediment quality)</p> <ul style="list-style-type: none"> <li>○ <u>Ecology</u>: High quality woodland and valleyland environments with several Species at Risk (terrestrial and aquatic) in the area (measures need to be taken if any construction is required). Pond has limited value to wildlife and is warming the water throughout the reach</li> <li>○ <u>Dam Structural Analysis</u>: Overall, dam structure is generally in good condition but does not meet current safety factors – mitigation will be required if the dam remains. North retaining wall is unstable during flood or flood-earthquake conditions and will require mitigation if dam remains</li> <li>● AMEC Foster Wheeler has also completed the Cultural Heritage Evaluation Report which will be sent to SAC members and posted on CVC's website. Key findings include: <ul style="list-style-type: none"> <li>○ Importance of Dam and Headpond</li> <li>○ Mack Park &amp; Willoughby Industrial Heritage Site are registered archaeological sites</li> <li>○ New interventions must be visually and physically compatible</li> <li>○ Thorough documentation is required for any alterations to features</li> </ul> </li> </ul>	
Belfountain Complex Management Plan Strategic Directions Stage 2	<p>We are currently in the Strategic Directions phase of the Management Plan. The Stage 1 report (completed in December 2014) outlined the draft vision, goals, objectives, and strategic directions for the Belfountain Complex. We are currently finalizing the Stage 2 report which discusses comments received on the ideas presented in the Stage 1 report, highlights major themes and presents draft concept plan options.</p> <p><u>Major Themes</u></p> <ul style="list-style-type: none"> <li>● <u>Parking &amp; Traffic</u>: Traffic congestion during the fall colours season, parking within the community and walking to BCA, connectivity between the Hamlet and BCA</li> <li>● <u>CA Capacity</u>: Exploring programs to promote weekday/off-peak visitation, operational policies that limit picnic reservation sizes and require reservations for larger groups; event size/season/duration will be limited, promote other conservation areas, ongoing environmental and property monitoring.</li> <li>● <u>Working with our Partners</u>: Working with the Region and Town to address traffic</li> </ul>	<p><b>CVC</b> is finalizing the draft Strategic Directions: Stage 2 Report and will circulate to SAC Members</p>

	<p>congestion issues with several solutions are possible (parking, signage, travel routes, etc.). Short-term (2015) will focus on data collection related to local tourism. Long-term will develop plans and strategies cohesively (Tourism, Active Transportation, etc.)</p> <ul style="list-style-type: none"> <li>• <u>Aesthetics:</u> Gardens, signage, interpretive methods, ancillary features (benches, picnic tables, rest areas)</li> </ul>	
Belfountain Complex Management Plan Concept Plans	<ul style="list-style-type: none"> <li>• Brook McIlroy, consultant hired to create concept plans, has reviewed comments received to date with respect to the first public consultation, Technical Steering Committee and SAC and prepared draft concept plans and architectural sketches for each of the project areas outlined in the Strategic Directions: Stage 1 Report</li> <li>• Feedback on these draft concept plans will guide development of final concept plans which will be presented later in the 2015.</li> </ul>	<b>CVC</b> to circulate a survey to SAC Members to gather feedback on draft concept plans.
Discussion & Comments	<p><u>EA</u></p> <p><u>Themes: Congestion</u></p> <ul style="list-style-type: none"> <li>• Congestion trends within the Hamlet have changed over time. 5 years ago, congestion was a problem during fall colours whereas now congestion is a problem on all nice weekends through summer/fall.</li> <li>• Emergency planning within Conservation Area and Hamlet should be considered as parking along roadways and traffic can impede emergency services</li> <li>• Growth in urban centres (e.g. Brampton) and new development planned for Belfountain has/will change demands on Belfountain Conservation Area</li> <li>• Reservations should be considered for all events (picnic, buses) and park admission to limit park capacity. It would be helpful to calculate how many people are coming/going on a daily basis understanding this is difficult with multiple entrances to property (Bruce Trail, Vehicle, Pedestrian, Pinnacle Street).</li> <li>• Concern over degradation of environment caused by current visitor capacity in Belfountain Conservation Area. Concept plans attempt to address concerns with significant restoration, improved visitor flow and better delineation of walkways to prevent trampling. Ongoing environmental monitoring will continue through CVC's Lands Monitoring Program.</li> </ul> <p><u>Concept Plans (General)</u></p> <ul style="list-style-type: none"> <li>• Ensure design materials (e.g. building facades) are keeping with Mack's Park, more rustic</li> </ul>	

	<p>than modern</p> <ul style="list-style-type: none"> <li>Consider use of dry stone masonry technique to maintain character of stone walls. This technique is unique and common in this area of Caledon</li> <li>Ideas are generally supported by SAC aside from the use of day-use space for picnics. CVC noted picnic reservations make up a large portion of revenues.</li> </ul> <p><u>Forecourt (Combination of Project Areas 1 and 3)</u></p> <ul style="list-style-type: none"> <li>Proposed Accessible Drop-off area is beneficial for visitors needing to drop off people/items for their events/picnics</li> <li>Providing visitors with a designated access to the Credit River is a good idea, for kids especially, but caution must be taken for visitor safety e.g. if adding stepping stones in river, may be a slip hazard when wet</li> <li>Continued use of picnic areas for picnicking should not be a component of tourism. Consider discontinuing picnics at BCA and add more themed events e.g. Art in the Park. Large group events can be directed to other parks e.g. Island Lake CA and Terra Cotta CA.</li> </ul> <p><u>Visitors Centre and Hillside Garden (Combination of Project Areas 1 and 2)</u></p> <ul style="list-style-type: none"> <li>Concept plans do not provide a significant increase in parking capacity. At present there are 45 parking spaces. Concept plan options range from 59-68 parking spaces which may accommodate existing and new uses e.g. visitors centre</li> <li>Some concept plans consider a bus only exit onto Pinnacle Street which will likely not be well received by residents of Pinnacle Street. The Consultant looked at best use of space, function and traffic flow. This idea has not been explored by CVC.</li> <li>The Accessible Trail from the Visitor's Centre to the lower level is a good idea but not sure this feature will integrate well in the Escarpment environment. Preference is to provide accessible access via Accessible Drop-off presented in Forecourt concepts.</li> </ul> <p><u>Bridgehead and Portico (Project Area 4)</u></p> <ul style="list-style-type: none"> <li>Accessible washrooms and seating in this location is a good idea and are currently lacking at BCA.</li> </ul>	
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	<p><u>Heritage Gardens (Project Area 5)</u></p> <ul style="list-style-type: none"> <li>• Mack's Park is one part of the cultural history in this area. McCurdy's Mills once located on site and the Credit Rivers milling history could also be an interesting story to interpret.</li> <li>• Consider integrating a mill structure with water play feature (water shoot)</li> <li>• Consider an Invasive Species demonstration garden that shows different species recognizing maintenance of this garden would be required to contain species.</li> <li>• Knot garden or maze garden could be a fun activity for families/children</li> <li>• Belfountain Heritage Society is planning walking tours within the Hamlet and having BCA as a stop on the tour would be beneficial.</li> <li>• Previous SAC comments recommended a trail over a channelized berm and perhaps adding a mill or fish ladder near the dam. Presenting the draft concept plan for this area at the public consultation may cause confusion as designs will be impacted by the EA preferred alternative.</li> </ul>	
Questions and Answers throughout meeting	<p><u>Dam and Headpond EA</u></p> <p>Q: Has sediment ever been removed from the headpond?  A: Yes. Periodically, CVC has removed silt. The exact date and when this last occurred is not known.</p> <p>Q: Is water quality considered in your objectives?  A: Yes. Water quality is considered under the "Promote natural stream function" objective. Improvements (cooling) to the water temperature is a main consideration.</p> <p>Q: Are aesthetics part of the criteria in evaluating and selecting a preferred alternative for the EA?  A: Yes. Aesthetics, though not a specific criteria, will be considered under the Visitor Experience objective. BCA features will be visually consistent and will honour the built cultural heritage.</p> <p><u>Management Plan</u></p> <p>Q: Is a traffic study planned for this area?  A: CVC is working in partnership with the Region of Peel, Town of Caledon and Ontario Heritage Trust to study traffic and congestion within the West Caledon area that includes both Belfountain</p>	

	<p>and the Badlands. The Region of Peel has collected commuter traffic data in the past and will be collecting additional traffic data this fall that includes weekend and holiday counts. The Town of Caledon will also be undertaking a survey of visitors to this area this fall.</p> <p>Q: How is park capacity determined?</p> <p>A: Currently, the parking lot limits park capacity though walk-ins are still welcome. The park capacity exceeds those that can enter via parking on site. CVC determine capacity by the number of individuals on the property at one time, not over the course of a single day.</p> <p>Q: Do you know how many people visit the park daily?</p> <p>A: CVC records how many people visit Belfountain Conservation Area each day; we are working to create an annual average to include in the Stage II Report. Currently, we are able to estimate monthly averages using a combination of gate house receipts and data from our trail counters.</p> <p>Q: Do weddings currently take place at BCA?</p> <p>A: Yes. Currently wedding ceremonies and wedding pictures take place under an Events Permit that stipulates the permit requirements e.g. maximum attendance. On average we have between 5 – 7 weddings per year.</p> <p>Q: Where is the septic proposed to be relocated?</p> <p>A: Options are being explored and may include being situated within the proposed Visitor's Centre. There is also a small piece of land northeast of the current location.</p> <p>Q: Is CVC mandated to make sites and facilities accessible?</p> <p>A: The visitor centre will be accessible. Though CVC is not mandated to make our conservation area trails accessible, Ontario's <i>Accessibility for Ontarians with Disabilities Act</i> requires that new infrastructure (including) consider accessibility wherever possible.</p> <p>Q: Has CVC established a budget for implementing the concept plans and EA preferred alternative?</p> <p>A: The consultants working on the concept plans have provided some very preliminary estimates but we have not gotten to the detailed design stage. That will take place after a final concept plan is determined.</p>	
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	<p>Q: What is the long-term schedule for implementation of the concept plans?  A: CVC has not yet determined an implementation schedule which will accompany the final management plan. This will be influenced by identifying opportunities for funding (grants, revenues, etc). Implementation will likely take place over several (2 – 5) years.</p> <p>Q: What is the “water play area” noted in Heritage Gardens Option 2?  A: This idea stems from this area’s original use as a boathouse and swimming pool and “reactivating” this space to honour its heritage. This feature could include flagstone with jets that shoot water.</p>	
Future Meeting and Next Steps	<p><b>Public Consultation</b></p> <ul style="list-style-type: none"> <li>CVC is hosting a Public Information Centre on the on Tuesday September 26<sup>th</sup>, at the Caledon Ski Club from 6:30 – 9:00 p.m. Information will be presented on the Dam and Headpond EA and Draft Concept Plans for Belfountain Conservation Area.</li> </ul> <p><b>Concept Plan Evaluation</b></p> <ul style="list-style-type: none"> <li>CVC will send SAC Members a survey questionnaire to evaluate and seek feedback on the Draft Concept Plans</li> </ul> <p><b>November Meeting</b></p> <ul style="list-style-type: none"> <li>Discussion on comments received on Draft Concept Plans for management plan</li> <li>Presentation of Alternatives Evaluation and Preferred Alternative for dam and headpond</li> </ul>	Next meeting is tentatively scheduled for <b>Thursday, November 5<sup>th</sup></b> .

## **Belfountain Complex Management Plan - Stakeholder Advisory Committee**

### **Meeting # 8: Notes**

**Date:** Thursday November 5<sup>th</sup>, 2015 **Time:** 6:30 p.m. – 9:00 p.m. **Location:** Belfountain Public School

#### **Meeting Attendees:**

<b>Organization</b>	<b>Committee Member</b>
Belfountain Community Organization	Ian McCallum
Belfountain Community Organization	Judy Mabee
Belfountain Heritage Society	Steve Goyeche
Credit Valley Conservation	Shawn Verge
Headwaters Community In Action	Dave Dyce
Isaac Walton Fly Fishing Club	Bob Kuehnbaum (on behalf of Don Arthurs)
Ministry of Natural Resources and Forestry	Mark Heaton
Ministry of Natural Resources and Forestry	Susan Cooper
Niagara Escarpment Commission	Lisa Grbinicek
Ontario Federation of Anglers and Hunters	Chris Robinson
Region of Peel	Gino Dela Cruz
Town of Caledon	Sally Drummond
Trout Unlimited	Brian Greck
Trout Unlimited	Mike Warrian
Credit Valley Conservation	Eric Baldin
Credit Valley Conservation	Laura Rundle
Credit Valley Conservation – Meeting Administration	Kate Burgess

#### **Meeting Purpose:**

1. Belfountain Complex Management Plan Update
2. Review of Belfountain Dam and Headpond Class Environmental Assessment Alternatives Evaluation

#### **Handouts:**

1. Class EA Technical Report 2 – Management Alternatives (sent via email in advance of meeting)
2. Alternatives Visuals
3. Updated Table 5.3: Objective Screening

## **Agenda Items:**

*Please note that responses to questions/comments are highlighted in blue italics.*

Topic	Discussion	Actions
Belfountain Complex Management Plan Update	<p><u>Public Consultation #2</u></p> <ul style="list-style-type: none"><li>• Public Consultation held Tuesday September 22<sup>nd</sup>, Caledon Ski Club where approximately 46 individuals registered. Information presented on feedback received to date, draft concept plans for four key project areas and an overview of the Belfountain Dam and Headpond Class Environmental Assessment (Class EA)</li><li>• On site consultation at Belfountain Conservation Area September 26, 27 and October 2,3. Approximately 70 conversations and 20 email addresses collected.</li><li>• 14 completed questionnaires were submitted. Key themes presented.</li><li>• Report summarizing consultations and feedback is available on CVC's website.</li></ul>	<b>CVC</b> to post Consultation Report on CVC's website November 17 <sup>th</sup> , 2015.
Belfountain Dam and Headpond Class Environmental Assessment	<p><u>General</u></p> <ul style="list-style-type: none"><li>• MNRF staff indicated that previous dam inspections indicated there was water breaching around the south contact point from weir that hasn't been represented in either the Technical Report 1 – Baseline Inventory or Technical Report 2 – Management Alternatives. <i>A leak around the right abutment was reported in previous dam safety reports, however it was confirmed that it did not impact the stability of the dam.</i></li><li>• Technical Report 2 – Management Alternatives does not explain impacts and benefits downstream with each alternative. It was noted that the cold water springs that feed into the headpond mask the true thermal impacts which will be realized downstream.</li><li>• It was discussed that the key driver of this Class Environmental Assessment is that it is a flood and erosion control project (Conservation Ontario Class EA), not a habitat improvement project. What distinguishes the Conservation Ontario Class EA (Remedial Flood and Erosion Control) from a MNRF Class EA (Resource Stewardship and Facility Development) is the impetus for the project.</li></ul>	

	<p><i>To help clarify this discussion, an excerpt from the CO Class EA has been included below. Section 3.3 of the CO Class EA states:</i></p> <p><i>Conservation Authorities recognize that it is important to ensure that the planning and design of remedial flood and erosion control projects reflect a concern for ecosystems. This requires that emphasis be placed not only on the prevention and mitigation of environmental impacts but also on environmental enhancement. The following principles endeavour to promote these goals. They shall be applied when implementing the planning and design process for remedial flood and erosion control projects.</i></p> <ul style="list-style-type: none"> <li>- <i>Remedial project design shall strive to re-establish, maintain or enhance the natural function (both biological and physical) and appearance of the watercourse or shoreline and associated features (floodplain, valley, wetlands, beaches etc.) while recognizing and preserving existing cultural and archaeological features of significance in the project's study area.</i></li> </ul> <p>CVC's objectives for the project align with the spirit of this planning process.</p> <ul style="list-style-type: none"> <li>• Need common ground on dimensions of dam – MNRF's interpretation is that it is 7.5 meters high dam to riverbed (report states 4.85m).</li> </ul> <p><i>The actual dam is 4.85 m high, of which 4.65 m is visible above bedrock on the downstream side (0.2 m is embedded). On the downstream side, the native bedrock scarp adds additional drop in the centre of the channel, and a 'cascade' on the banks that eventually reaches the same drop. The estimated height of the overall waterfall is about 2 m +/-, putting the total 'waterfall' height 6 to 7 m. From an engineering perspective the dam is 4.85 m; the waterfall is higher.</i></p> <p><i>It's good that this was brought up; the public is likely more interested in the waterfall height (drama of waterfall), rather than the dam itself.</i></p> <p><b><u>Study Objectives</u></b></p> <ul style="list-style-type: none"> <li>• Objective #1: Maintain a Fisheries Barrier needs further clarification. Is the intention to deter movement of downstream species upstream, deter movement of upstream downstream or both?</li> </ul> <p><i>The intention of this objective is to deter the movement of downstream species upstream. Measures to deter the movement of upstream species downstream will not be considered.</i></p>	
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	<ul style="list-style-type: none"> <li>• Objective #1: There was some discussion on what constitutes a "barrier". If the dam were to be decommissioned (full), a barrier may still remain given height differential between underlying bedrock and riverbed at the base of the dam. <i>If the dam is completely removed, the bedrock waterfall may be 2 to 2.5 m in height. It will have continuous 'cascades', however, that could permit the passage of larger fish. A detailed survey and barrier assessment would be required to confirm.</i></li> <li>• Discussion on how CVC intends to resolve the issue of competing objectives as Alternatives Evaluation is very subjective. Ultimately, CVC may have to prioritize objectives.</li> <li>• Atlantic Salmon passage is not a concern to the fish organizations present as they would like a partition in place to protect Brook Trout. If you enable passage of Atlantic Salmon, you may enable passage of Rainbow Trout though likely in low numbers. The barrier needs to be a minimum of 2 metres with no plunge pool to jump up from.</li> <li>• Fish ladders are expensive to operate and can be controversial. They have been installed in several areas where they were intended to facilitate movement of native fish species but now also end up permitting non-native species movement as well.</li> <li>• The large open water vista is what makes the headpond culturally significant, as well as contact with water. Reduction in open water e.g. maintaining an offline pond is a significant visual impact and a small offline pond will not pay homage to its cultural heritage. Maintaining some kind of contact with water is still possible and could be incorporated into the Alternatives and Management Plan concepts.</li> </ul> <p><u>Alternatives Evaluation</u></p> <ul style="list-style-type: none"> <li>• There was some confusion on how each alternative was scored and why total scores did not add up. CVC clarified that each criteria score was multiplied by a numeric value based on Factor Significance. The Factor Significance considers not only the value of the resource the criteria represents, but also how the potential for impact and impact mitigation varies across the alternatives</li> </ul>	
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	<p>identified (see Section 5.0 in Technical Report 2 – Management Alternatives).</p> <ul style="list-style-type: none"> <li>The group discussed the idea of incorporating quantitative analysis where possible to determine measurable benefits/impacts of each alternative. It was acknowledged that it is difficult to determine which alternative will best meet objectives and how each alternative will impact screening criteria (e.g. How will each alternative impact <i>Watercourse Thermal Regime</i> in headpond and downstream?) Hard numbers are required to measure and understand the true benefits and true impacts of each alternative.</li> </ul> <p><i>CVC discussed this conversation with Amec Foster Wheeler, regarding what is standard for the Class EA process in terms of modelling potential impacts (positive and negative): Providing hard data would require detailed monitoring and modelling for each alternative would be difficult and expensive. It's unlikely that this data would change the selection of the preferred alternative.</i></p> <ul style="list-style-type: none"> <li>There was some concern that there isn't equal representation of Screening Criteria and Factor Significance related to study objectives e.g. 5 natural heritage (2 high, 1 moderate, 2 lower) vs 3 cultural heritage (2 high, 1 lower). <i>In the matrix, there are 6 physical/biological criteria versus 5 cultural/social criteria. There are also 4 economic criteria. The 2 final criteria (Village Tourism, Local Community) have negligible influence on the 'scores'. Note that all natural heritage criteria are correlated, while cultural/social/economic are not.</i></li> <li>There was some concern that the evaluation is too subjective and can be easily manipulated to achieve a desired outcome. <i>Noted. Subjectivity is unavoidable given some criteria are not directly measurable, or measuring them is out of scope (Several of CVC's objectives are qualitative and subjective (visitor experience, for instance)). The matrix is designed to be as objective as possible. If a specific 'score' or 'significance' is considered unfair, we can review. This is why we are readily seeking comments and feedback.</i></li> <li>The inclusion of cost in the Screening Criteria was meant to show financial impact of each alternative. Cost is not the only (or most important) criteria to selecting the preferred alternative. It may mean that we have to be creative</li> </ul>	
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	<p>when it comes to implementing that alternative. Capital cost and ongoing operating and maintenance cost are separate criteria.</p> <p><u>Alternatives</u></p> <p><i>D2H2: Rehabilitate Dam and Headpond</i></p> <ul style="list-style-type: none"> <li>• It was noted that "rehabilitate" should be clearly defined.</li> <li>• It was noted that rehabilitating the dam to meet LRIA standards will be a significant impact and may not be supported by the MNRF. Further discussion on the feasibility of this alternative is required. Anchoring may be needed horizontally in addition to anchoring vertically into bedrock.</li> </ul> <p><i>Comment is noted, however anchoring horizontally has not be reported or identified in previous studies on the dam.</i></p> <ul style="list-style-type: none"> <li>• Ongoing maintenance of headpond may not be financially sustainable if dredging is needed every 3-5 years. It is currently unknown how quickly the headpond would fill up with sediment but this would be determined in a maintenance plan</li> <li>• Concern related to impacts on aquatic environment was noted - ongoing dredging as a deeper pond will result in a bigger reservoir of warm water.</li> </ul> <p><i>D2H3: Rehabilitate Dam and Expand Tableland</i></p> <ul style="list-style-type: none"> <li>• There was some discussion on what the tableland would be used for e.g. additional lawn area though no plans have been determined at this point.</li> </ul> <p><i>D2H4: Rehabilitate Dam and Convert Portion of Headpond to Wetland</i></p> <ul style="list-style-type: none"> <li>• Is maintaining a wetland sustainable long-term as they can trap sediment? <i>Maintenance plan for both wetland and structural elements will be required. It is noted that a portion of the current headpond could be considered wetland where emergent vegetation is present.</i></li> <li>• In terms of wetland, a marsh may be more appropriate vs swamp.</li> </ul> <p><i>D4H5: Lower the Spillway and Backfill Headpond and Construct Channel</i></p>	
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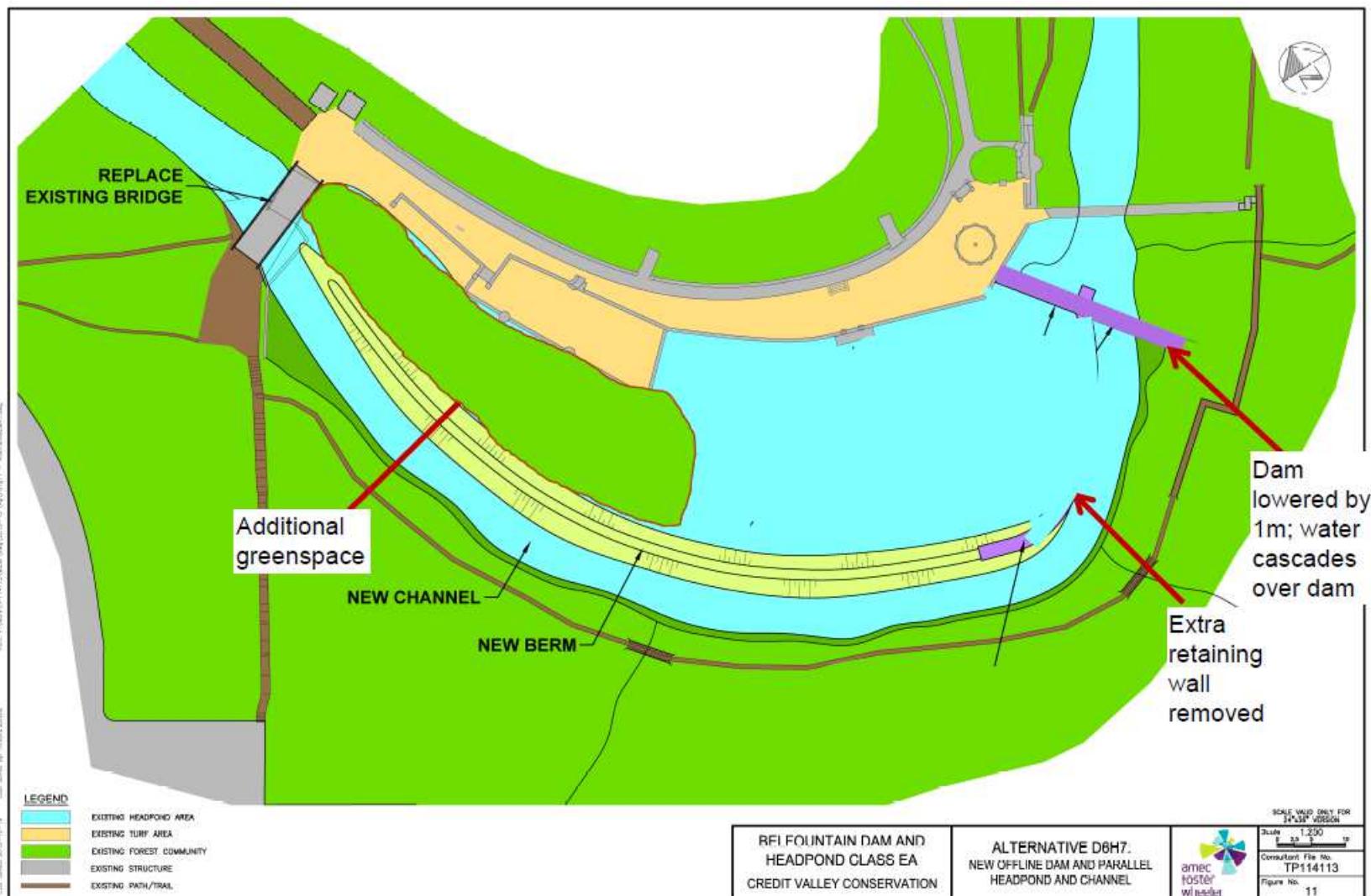
	<ul style="list-style-type: none"> <li>MNRF noted the dam may need to be lowered more than a metre given gradient upstream to facilitate movement of coarse material in addition to water.  <i>Amec noted that lowering the dam 1 m is would reduce the impacts to cultural heritage (a weir would be maintained and the 1960's sluice gate would be removed) and still maintains a desirable flow of water. Preliminary gradient is approximately .5% and would support the movement of fine sediments.</i> </li> <li>It was thought that the dam must remain to maintain a fisheries barrier however; MNRF noted there may be sufficient elevation change between bedrock to the riverbed to maintain a barrier.  <i>If the dam is completely removed, the bedrock waterfall may be 2 to 2.5 m in height. It will have continuous 'cascades', however, that could permit the passage of larger fish. A detailed survey and barrier assessment would be required to confirm.</i> </li> <li>Reduction in headpond is a significant visual impact and a small offline pond will not pay homage to its cultural heritage. Maintaining some kind of contact with water is still possible and should be incorporated.</li> </ul> <p><i>D5H6:Decommission Dam and Restore Natural Valley and River</i></p> <ul style="list-style-type: none"> <li>There was some discussion on what constitutes dam "decommissioning", full and partial. If the stop logs are removed but dam remains, is the dam considered to be decommissioned?  <i>If the structure retains water during a flood, it is a dam (within reason). With stop logs removed, flood levels would be much lower, but still higher than if the spillway was removed (would require MNRF consultation).</i> </li> <li>Reduction in pond width so water is moving faster will help with sediment transport.</li> <li>Concern that removal of both the headpond and dam will effectively remove the site's cultural heritage attributes. The removal of the headpond may be supported for ecological reasons however; retaining a cascading waterfall feature is important. There is potential to retain dam abutments and interpret history of these features to try to mitigate lost cultural heritage, however all of the original features would be lost.</li> </ul>	
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	<p><i>D6H7: New Offline Dam and Parallel Headpond and Channel</i></p> <ul style="list-style-type: none"> <li>• This alternative will likely be the most challenging from a permitting and design perspective.</li> <li>• Alternative preserves the headpond and creates a channel to mitigate ecological impacts. Concern that perceived high cost and design constraints may hinder this alternative's feasibility.</li> <li>• In this alternative, consideration is given to retain the portion of the dam that contains the original structure rather than the 1984 modification.</li> <li>• There was a question regarding why the channel is a hardened structure vs an earth filled berm. <i>Given the confined valley setting, earth grading would consume too much space and a hardened structure (retaining wall) would most likely have to be used.</i></li> <li>• Potential to explore experiential elements such as maintaining a trail on the berm (if health and safety is manageable) was a preference</li> </ul> <p>A potential new alternative was developed and discussed.  <i>Amec's engineers took a look at the sketch; it appears to be feasible. They have incorporated the concept into a new alternative, which will be presented to the public. The original concept may be introduced in the next phase of the study as further evaluation is necessary.</i></p> <p>New Alternative: D5H7 (Attempt at sketch included as Appendix A). Amec have included some of the concepts in an additional alternative, which will be present to the public (Appendix B).</p> <p>Key points included:</p> <ul style="list-style-type: none"> <li>• The west end of the headpond is filled in; river is channelized about 2/3 the length of the headpond</li> <li>• New retaining wall in (D6H7) is removed (berm remains); this would create a back water pond area (pond width is retained but length is shortened considerably)</li> <li>• Spillway is lowered by 1m to support natural stream function</li> </ul>	<p><b>CVC</b> to discuss this concept with Amec Foster Wheeler to determine feasibility.</p>
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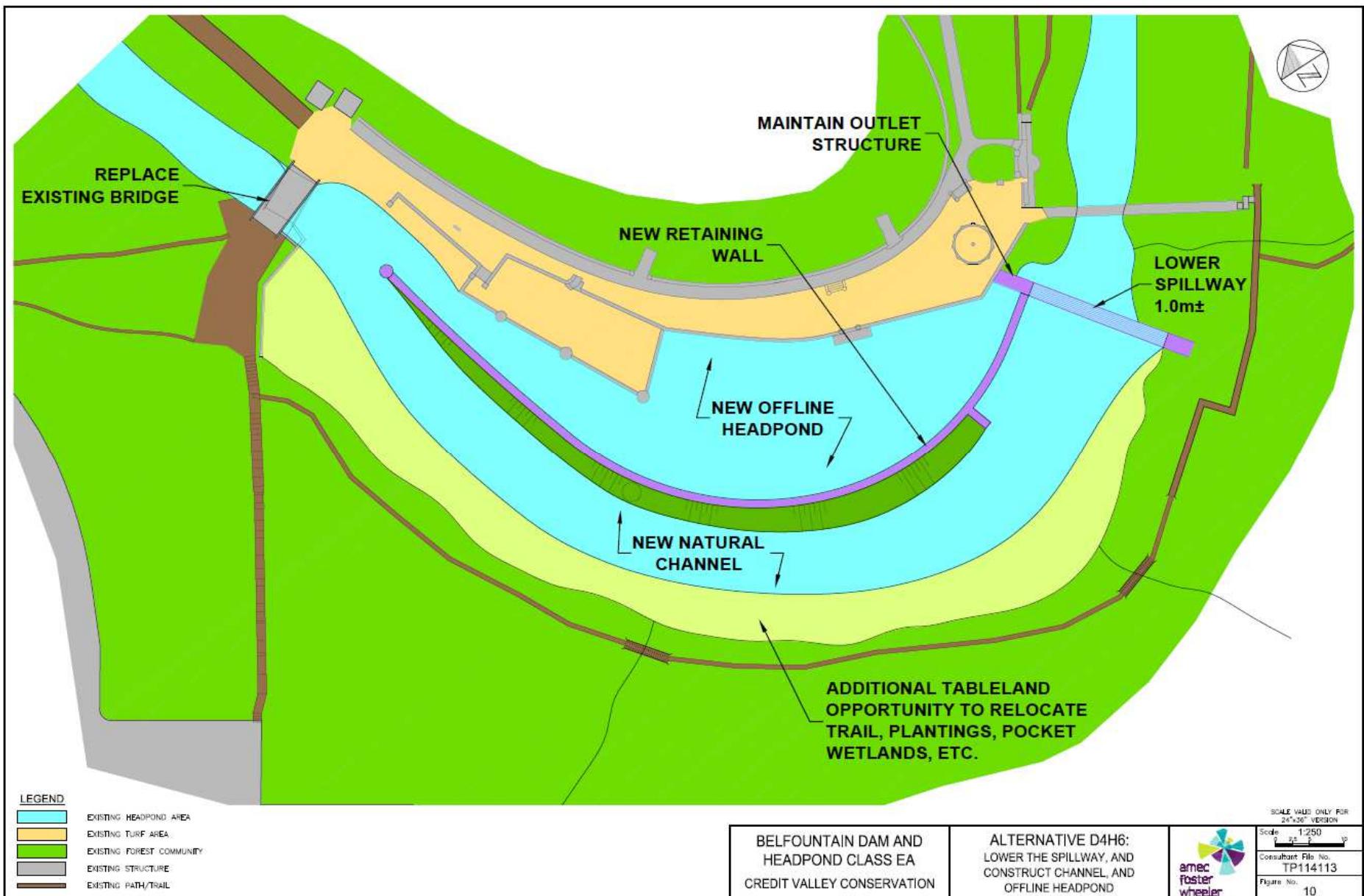
Questions and Answers throughout meeting	<p>Q: What are impacts to cultural heritage if headpond is reduced?  A: <i>The large open water vista is what makes it culturally significant, as well as contact with water. Reduction in open water e.g. maintaining an offline pond is a significant visual impact and a small offline pond will not pay homage to its cultural heritage. Maintaining some kind of contact with water is still possible and could be incorporated into the Alternatives and Management Plan concepts.</i></p> <p>Q: How would significant changes to the headpond be received by Belfountain residents and the public?  A: <i>Communicating the ecological impacts of maintaining a large on-line pond within a cold water system is a key message that may help to garner support of the public and Belfountain residents.</i></p> <p>Q: Are the studies conducted to date including for the Technical Report 1 – Baseline Inventory sufficient in order to assess alternatives? E.g. dam structural assessment, sediment quality, water temperature upstream vs downstream of dam?  A: <i>Many of these studies are summarized in the Baseline Inventory Report (and appendices). Additional information is contained in previous reports and studies. As a preferred alternative advances, a detailed analysis of environmental impacts will necessitate further studies.</i></p> <p>Q: Was the headpond drained during the investigations for the Technical Report 1 – Baseline Inventory?  A: <i>No. The headpond was not drained at that time, however studies were conducted on the dam, retaining walls and headpond. The last time the pond was drained was approximately 10 years ago.</i></p> <p>Q: What were the results of the sediment analysis?  A: <i>Preliminary soil analysis indicates that contaminants are low, and are generally what would be expected (e.g. hydrocarbons (gasoline). A more refined sediment analysis will need to be undertaken in the next phase in order to determine how to dispose of or repurpose the sediment.</i></p> <p>Q: How will each alternative impact ice jams e.g. if weir is narrowed?  A: <i>Not sure at this time however; the next phase of the study will assess impacts of preferred alternative on all factors.</i></p>	
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Future Meetings and Next Steps	<p><b>Public Consultation</b></p> <ul style="list-style-type: none"> <li>CVC is hosting a Public Information Centre on Tuesday December 1<sup>st</sup>, 2015, at the Caledon Ski Club from 6:00 – 9:00 p.m. Information will be presented on the short-list of Dam and Headpond EA alternatives with a brief update on the Belfountain Complex Management Plan.</li> </ul> <p><b>Strategic Directions Report: Stage II</b></p> <ul style="list-style-type: none"> <li>CVC is finalizing the Strategic Directions Report: Stage II. CVC will circulate this report to SAC as well as post it on the website.</li> </ul> <p><b>Next SAC Meeting</b></p> <p>Tentatively set for Thursday February 4<sup>th</sup>, 2016. Discussion will focus on Strategic Directions Report: Stage III, which includes decisions on management recommendations, policies, and will discuss how comments received were integrated/addressed.</p>	<p><b>CVC</b> will circulate Strategic Directions Report: Stage II to SAC for comments.</p>
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## Appendix A



## Appendix B



## **Appendix ‘B’**

### **Photographic Reconnaissance**

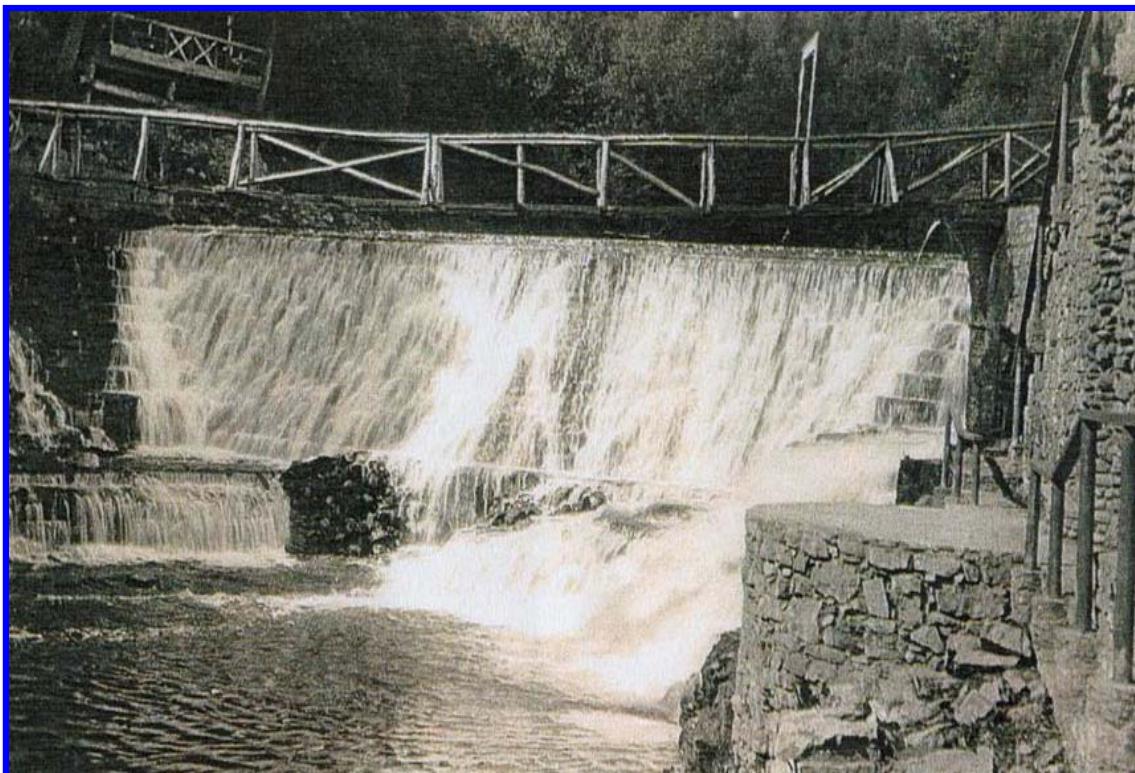
**BELFOUNTAIN DAM & HEADPOND  
APPENDIX B**

Belfountain Dam Looking Upstream from the Credit River



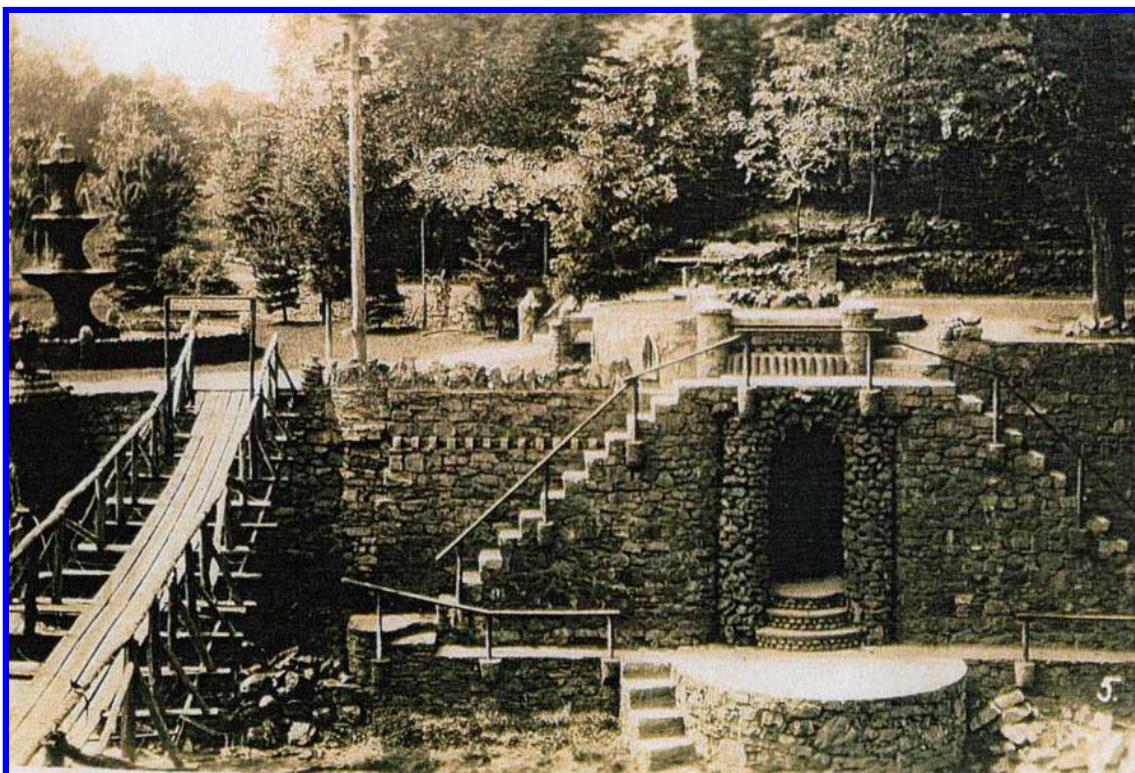
**BELFOUNTAIN DAM & HEADPOND  
APPENDIX B**

**Belfountain Dam Looking Upstream from north bank**



**BELFOUNTAIN DAM & HEADPOND  
APPENDIX B**

**North retaining wall and entrance to cave**



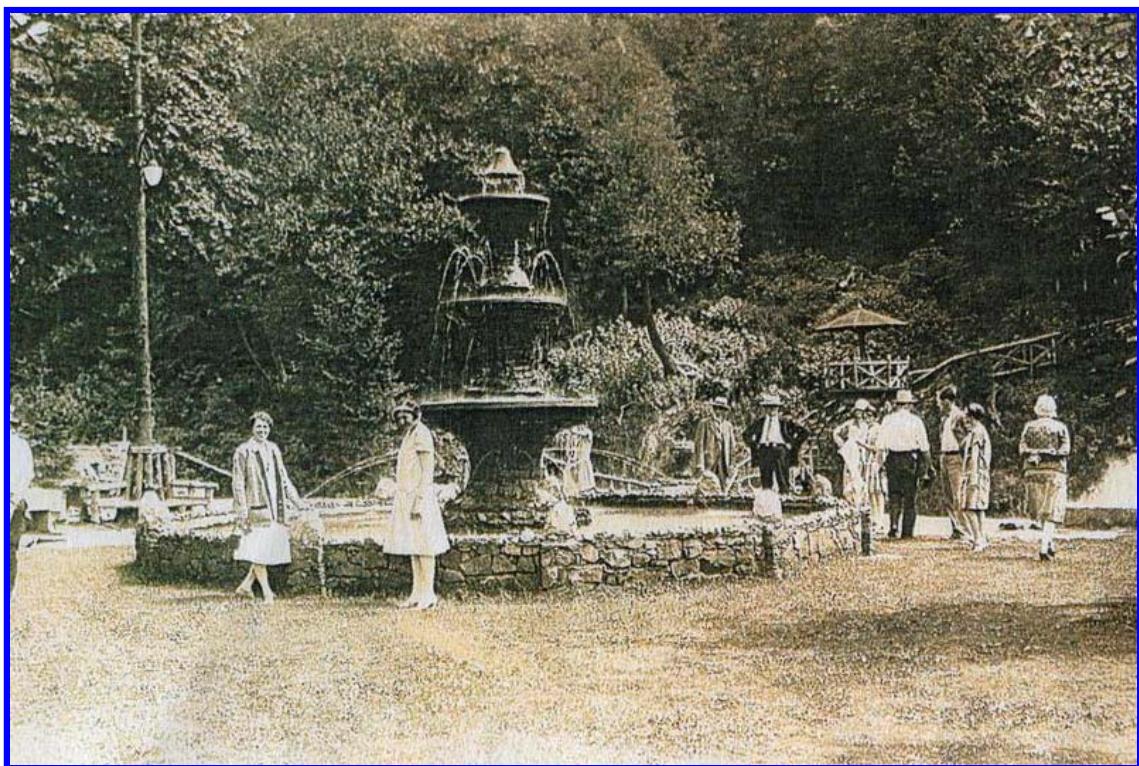
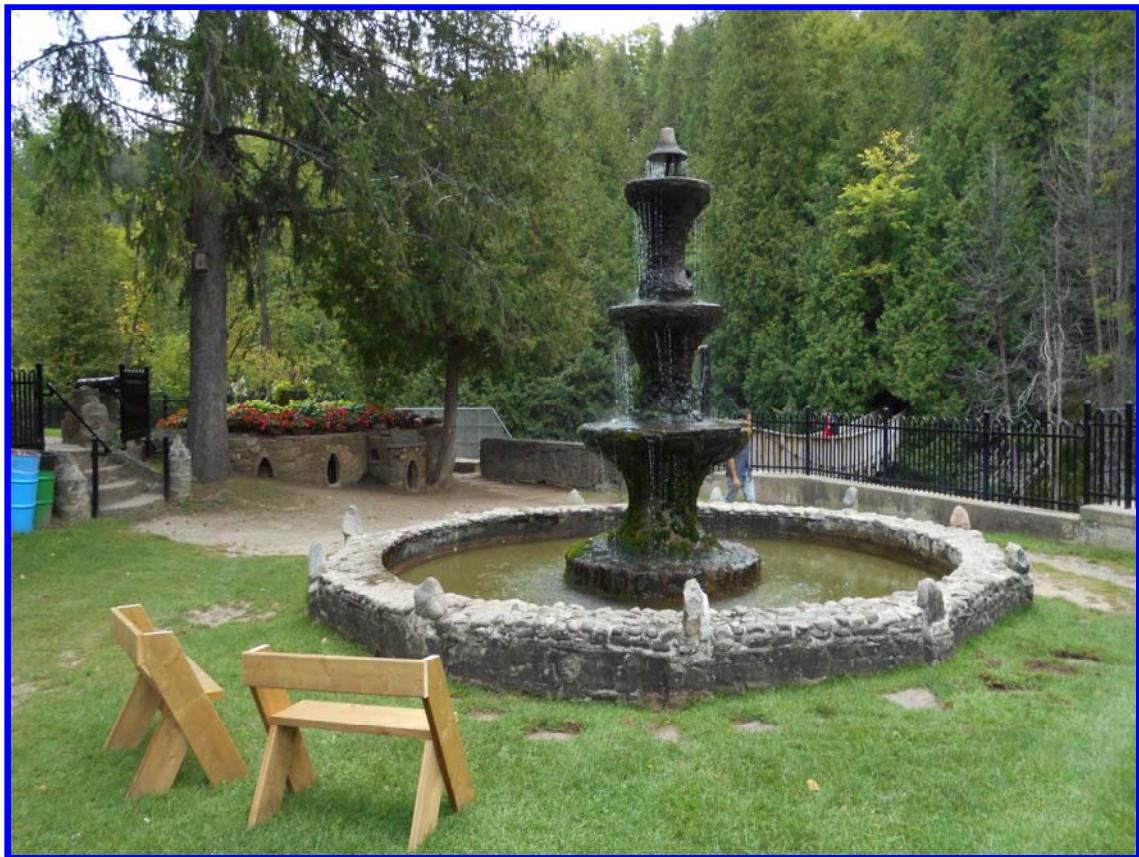
**BELFOUNTAIN DAM & HEADPOND  
APPENDIX B**

**Yellowstone Cave and garden**



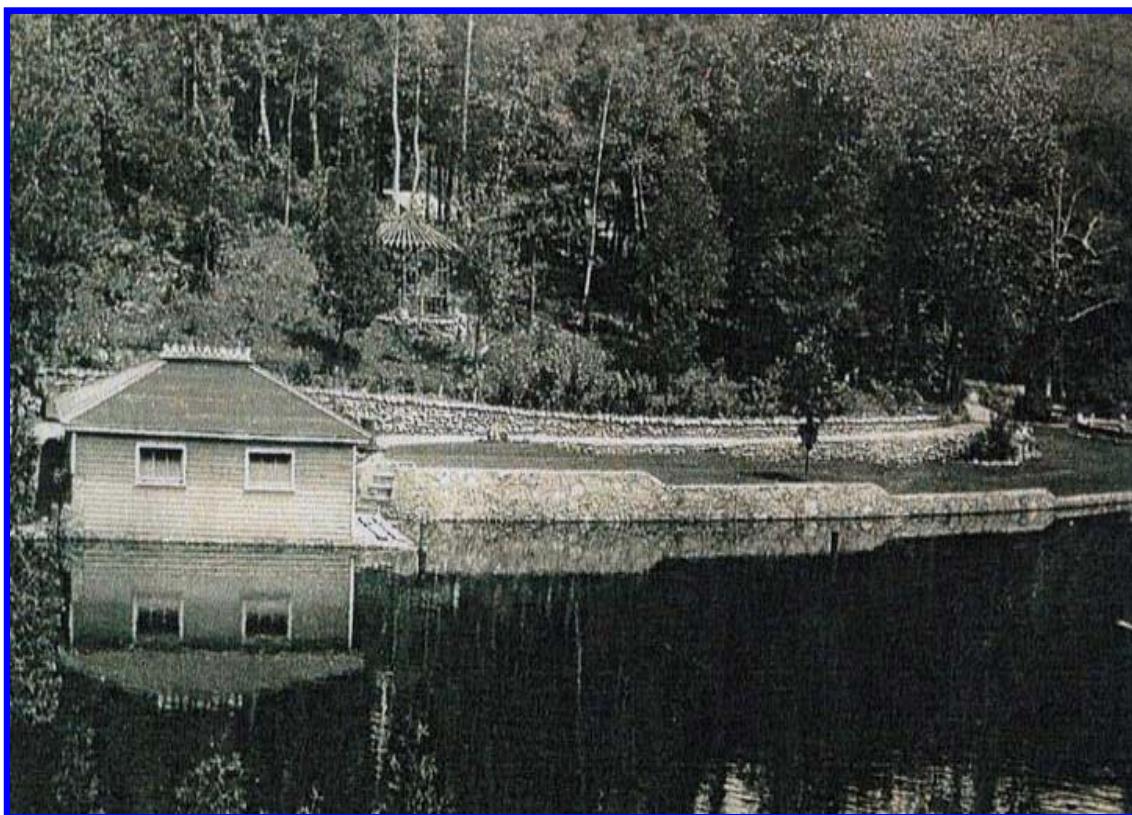
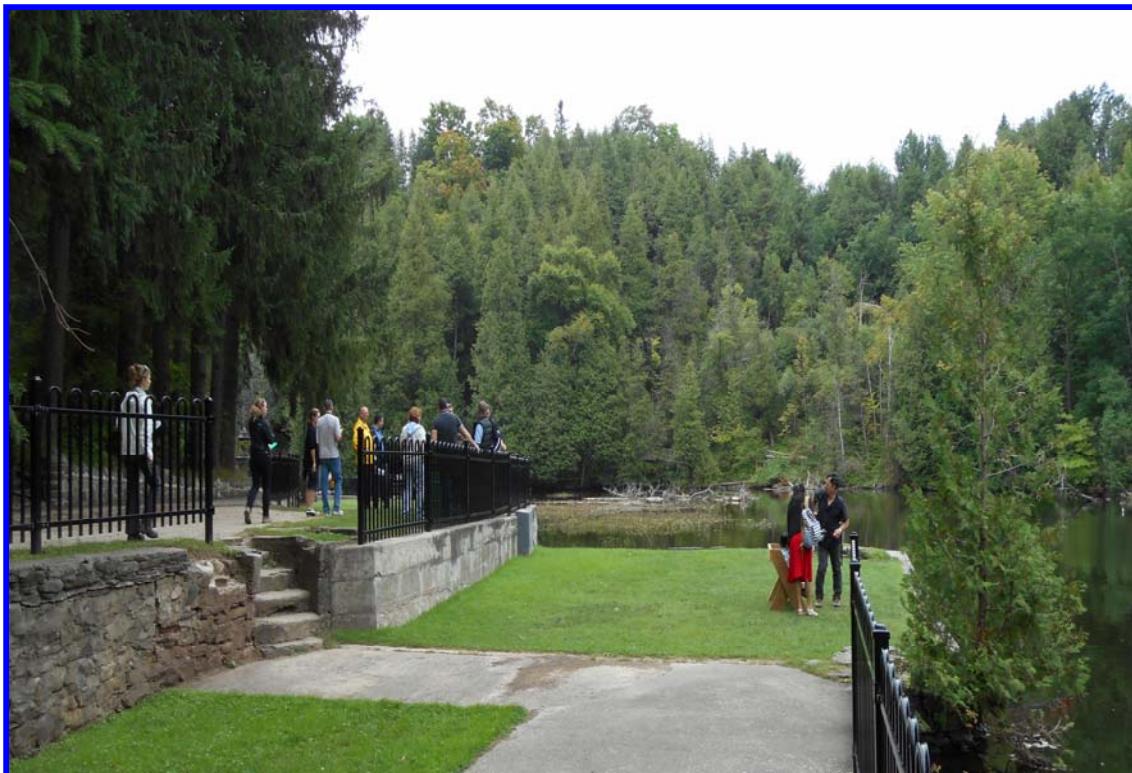
**BELFOUNTAIN DAM & HEADPOND  
APPENDIX B**

**Belfountain**



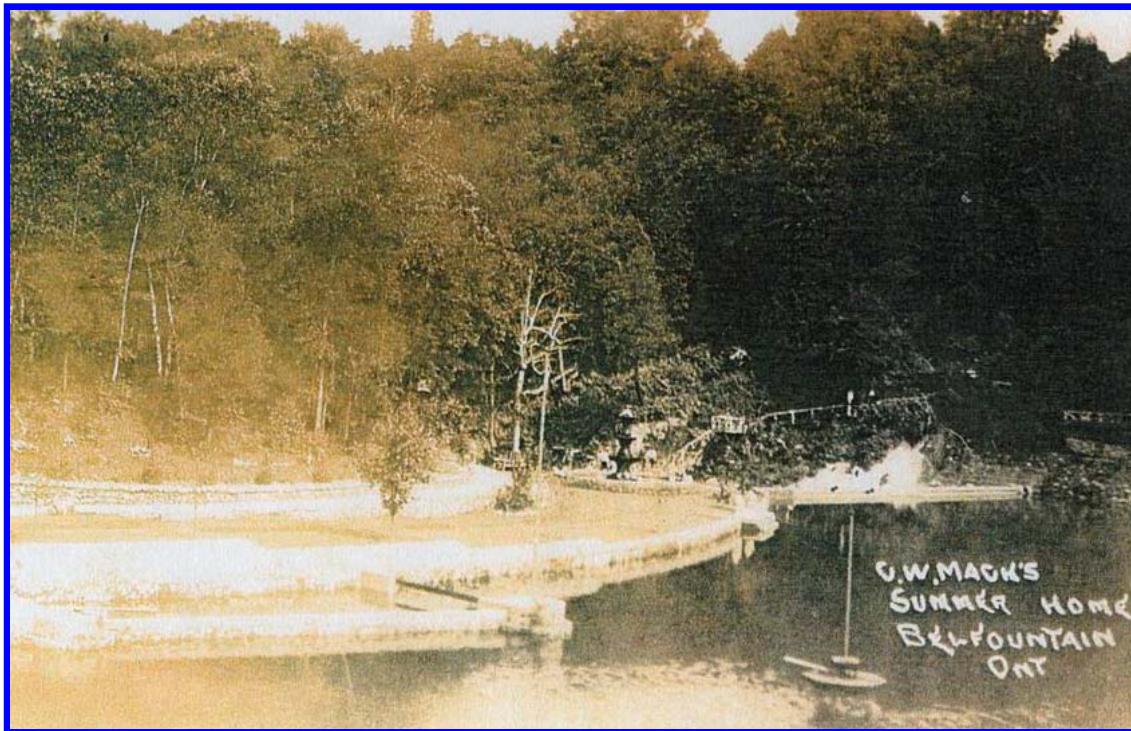
**BELFOUNTAIN DAM & HEADPOND  
APPENDIX B**

**North terrace area**



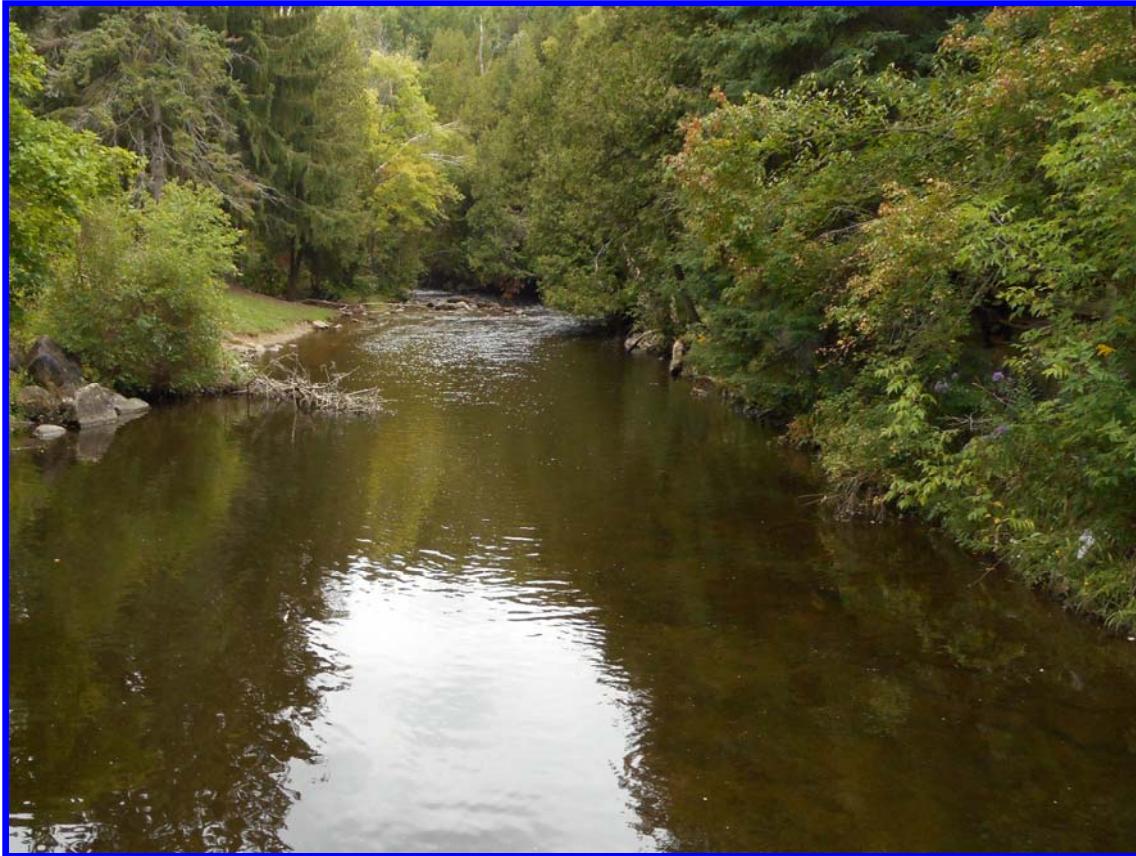
**BELFOUNTAIN DAM & HEADPOND  
APPENDIX B**

**Headpond and north retaining walls looking downstream**



**BELFOUNTAIN DAM & HEADPOND  
APPENDIX B**

**West Credit River looking upstream, upstream of the headpond**



## **Appendix ‘C’**

### **Cost Estimates**

Belfountain Dam and Headpond Class EA						
Alternative D2H2: Rehabilitate the Dam and Headpond						
Conceptual Cost Estimate						
ITEM NO.	ITEM	UNIT	EST. QTY.	UNIT PRICE	TOTAL	
	<b>General</b>					
1	Mobilization	LS	1	\$30,000	\$30,000	
2	Construction Access	LS	1	\$30,000	\$30,000	
3	Dewatering & Erosion & Sediment Controls	LS	1	\$150,000	\$150,000	
	<b>Subtotal General</b>				<b>\$210,000</b>	
	<b>Dam</b>					
4	Install shear anchors	EA	10	\$10,000	\$100,000	
5	Mitigate south abutment seepage (pressure grouting)	LS	1	\$50,000	\$50,000	
6	Rehabilitation work (concrete, south abutment & north retaining wall toe erosion)	LS	1	\$50,000	\$50,000	
7	Rehabilitate north retaining wall (anchoring)	LS	1	\$50,000	\$50,000	
	<b>Subtotal Dam</b>				<b>\$250,000</b>	
	<b>Headpond</b>					
8	Sediment removal and disposal	m³	10000	\$40	\$400,000	
9	Rehabilitation of existing retaining walls	m	100	\$1,000	\$100,000	
10	Restoration of south shoreline	m	175	\$300	\$52,500	
	<b>Subtotal Headpond</b>				<b>\$552,500</b>	
	<b>Subtotal</b>				<b>\$1,012,500</b>	
11	Engineering, Environmental, Landscaping Design (10%)					\$101,250
12	Contingency (30%)					\$303,750
13	HST (13%)					\$184,275
	<b>Total</b>				<b>\$1,601,775</b>	

**ITEM NO. ASSUMPTIONS**

- 1 Allowance
- 2 Allowance
- 3 Lack floodplain area adjacent to headpond may restrict feasibility for fluming resulting in need to stage sediment removal. Alternative is dredging. Both options costly.
- 4 Unit cost of anchors installed as part of investigation by Terraprobe (2013)
- 5 Allowance. Work is completed while headpond is dewatered
- 6 Allowance
- 7 5 anchors, 6 m long, \$1500/m
- 8 Disposal as clean fill. Higher than average unit cost considering logistical issues (remove site; limited access/staging area may allow only 1 truck on site at once) and material issues (possible need to mix with other bulk source to achieve engineering/environmental requirements). 14,000 m³ total sediment, assume 4000 m³ can be left in place.
- 9 Allowance for concrete rehabilitation, and localized replacement where deterioration is advanced
- 10 Plantings, trail work, etc

Belfountain Dam and Headpond Class EA					
Alternative D2H3: Rehabilitate the Dam and Expand the Tableland					
Conceptual Cost Estimate					
ITEM	ITEM	UNIT	EST.	UNIT	TOTAL
NO.			QTY.	PRICE	
	<b>General</b>				
1	Mobilization	LS	1	\$30,000	\$30,000
2	Construction Access	LS	1	\$30,000	\$30,000
3	Dewatering & Erosion & Sediment Controls	LS	1	\$150,000	\$150,000
	<b>Subtotal General</b>				<b>\$210,000</b>
	<b>Dam</b>				
4	Install shear anchors	EA	10	\$10,000	\$100,000
5	Rehabilitate south abutment	LS	1	\$50,000	\$50,000
6	Rehabilitation work (concrete, south abutment & north retaining wall toe erosion)	LS	1	\$50,000	\$50,000
7	Rehabilitate north retaining wall (anchoring)	LS	1	\$50,000	\$50,000
	<b>Subtotal Dam</b>				<b>\$250,000</b>
	<b>Headpond</b>				
8	Sediment removal and disposal	m³	8000	\$40	\$320,000
9	Rehabilitation of existing retaining walls	m	100	\$500	\$50,000
10	Restoration of south shoreline	m	175	\$300	\$52,500
11	Fill borrow	m³	1000	\$15	\$15,000
12	Topsoil & seed	m²	600	\$10	\$6,000
13	New concrete retaining wall (4 m high)	m³	200	\$1,500	\$300,000
	<b>Subtotal Headpond</b>				<b>\$743,500</b>
	<b>Subtotal</b>				<b>\$1,203,500</b>
14	Engineering, Environmental, Landscaping Design (10%)				\$120,350
15	Contingency (30%)				\$361,050
16	HST (13%)				\$219,037
	<b>Total</b>				<b>\$1,903,937</b>

**ITEM NO. ASSUMPTIONS**

- 1 Allowance
- 2 Allowance
- 3 Lack floodplain area adjacent to headpond may restrict feasibility for fluming resulting in need to stage sediment removal. Alternative is dredging. Both options costly.
- 4 Unit cost of anchors installed as part of investigation by Terraprobe (2013)
- 5 Allowance. Work is completed while headpond is dewatered
- 6 Allowance
- 7 5 anchors, 6 m long, \$1500/m  
Disposal as clean fill. Higher than average unit cost considering logistical issues (remove site; limited access/staging area may allow only 1 truck on site at once) and material issues (possible need to mix with other bulk source to achieve engineering/environmental requirements). 14,000 m³ total sediment, assume 6000 m³ can be left in place or used as backfill.
- 8 Allowance for concrete rehabilitation, and localized replacement where deterioration is advanced. Relatively lower cost as portion of wall where new tableland is proposed is proposed to remain in place but no longer structural.
- 9 Plantings, trail work, etc
- 10 Tableland area 525 m², 3.5 m fill depth. 1000 m³ from borrow, balance from sediment. Higher than market rate due to site location
- 11 Typical
- 12 Concrete volume: 70 m long wall, 4 m high, 0.3 m wide, cantilever base of similar geometry

Belfountain Dam and Headpond Class EA					
Alternative D2H4: Rehabilitate the Dam and Convert Headpond to Wetlands					
Conceptual Cost Estimate					
ITEM NO.	ITEM	UNIT	EST. QTY.	UNIT PRICE	TOTAL
	<b>General</b>				
1	Mobilization	LS	1	\$30,000	\$30,000
2	Construction Access	LS	1	\$30,000	\$30,000
3	Dewatering & Erosion & Sediment Controls	LS	1	\$150,000	\$150,000
	<b>Subtotal General</b>				<b>\$210,000</b>
	<b>Dam</b>				
4	Install shear anchors	EA	10	\$10,000	\$100,000
5	Rehabilitate south abutment	LS	1	\$50,000	\$50,000
6	Rehabilitation work (concrete, south abutment & north retaining wall toe erosion)	LS	1	\$50,000	\$50,000
7	Rehabilitate north retaining wall (anchoring)	LS	1	\$50,000	\$50,000
	<b>Subtotal Dam</b>				<b>\$250,000</b>
	<b>Headpond</b>				
8	Sediment removal and disposal	m³	8000	\$40	\$320,000
9	Rehabilitation of existing retaining walls	m	100	\$1,000	\$100,000
10	Restoration of south shoreline	m	180	\$300	\$54,000
11	Berm separating wetland from headpond c/w erosion control	m³	1000	\$15	\$15,000
12	Wetland Plantings	LS	1	\$20,000	\$20,000
	<b>Subtotal Headpond</b>				<b>\$509,000</b>
	<b>Subtotal</b>				<b>\$969,000</b>
13	Engineering, Environmental, Landscaping Design (10%)				\$96,900
14	Contingency (30%)				\$290,700
15	HST (13%)				\$176,358
	<b>Total</b>				<b>\$1,532,958</b>

**ITEM NO. ASSUMPTIONS**

- 1 Allowance
- 2 Allowance
- 3 Lack floodplain area adjacent to headpond may restrict feasibility for fluming resulting in need to stage sediment removal. Alternative is dredging. Both options costly.
- 4 Unit cost of anchors installed as part of investigation by Terraprobe (2013)
- 5 Allowance. Work is completed while headpond is dewatered
- 6 Allowance
- 7 5 anchors, 6 m long, \$1500/m  
Disposal as clean fill. Higher than average unit cost considering logistical issues (remove site; limited access/staging area may allow only 1 truck on site at once) and material issues (possible need to mix with other bulk source to achieve engineering/environmental requirements). 14,000 m3 total sediment, assume 6000 m3 can be left in place or used in wetlands.
- 8 Allowance for concrete rehabilitation, and localized replacement where deterioration is advanced
- 9 Plantings, trail work, etc
- 10 1000 m3 borrow, balance from sediment
- 11 Allowance

Belfountain Dam and Headpond Class EA					
Alternative D4H5: Lower the spillway & backfill headpond & construct channel					
Conceptual Cost Estimate					
ITEM NO.	ITEM	UNIT	EST. QTY.	UNIT PRICE	TOTAL
	<b>General</b>				
1	Mobilization	LS	1	\$30,000	\$30,000
2	Construction Access	LS	1	\$30,000	\$30,000
3	Dewatering & Erosion & Sediment Controls	LS	1	\$100,000	\$100,000
	<b>Subtotal General</b>				<b>\$160,000</b>
	<b>Dam</b>				
4	Install shear anchors	EA	8	\$10,000	\$80,000
5	Rehabilitate south abutment	LS	1	\$50,000	\$50,000
6	Rehabilitation work (concrete, south abutment & north retaining wall toe erosion)	LS	1	\$50,000	\$50,000
7	Rehabilitate north retaining wall (anchoring)	LS	1	\$50,000	\$50,000
8	Lower spillway crest	LS	1	\$100,000	\$100,000
	<b>Subtotal Dam</b>				<b>\$330,000</b>
	<b>Headpond</b>				
9	Sediment removal and disposal	m³	2000	\$50	\$100,000
10	Fill borrow	m³	9000	\$10	\$90,000
11	Construct natural channel	m	150	\$1,000	\$150,000
12	Rehabilitation of existing retaining walls	m	100	\$500	\$50,000
13	Restoration of south shoreline	m	180	\$300	\$54,000
14	Floodplain planting and seeding	m²	3500	\$15	\$52,500
15	Headpond pedestrian bridge (20 m span)	LS	1	\$120,000	\$120,000
	<b>Subtotal Headpond</b>				<b>\$616,500</b>
	<b>Subtotal</b>				<b>\$1,106,500</b>
16	Engineering, Environmental, Landscaping Design (10%)				\$110,650
17	Contingency (30%)				\$331,950
18	HST (13%)				\$201,383
	<b>Total</b>				<b>\$1,750,483</b>

**ITEM NO. ASSUMPTIONS**

- 1 Allowance
- 2 Allowance
- 3 Lack floodplain area adjacent to headpond may restrict feasibility for fluming resulting in need to stage backfilling. Cost savings for fill placement vs. sediment removal due to expected reduction in construction duration
- 4 Unit cost of anchors installed as part of investigation by Terraprobe (2013). Assume reduced number of anchors due to reduced spillway
- 5 Allowance. Work is completed while headpond is dewatered
- 6 Allowance
- 7 5 anchors, 6 m long, \$1500/m
- 8 50 m³ concrete/masonry removal, 1000/m³; Pour new cap, \$1500/m³
- 9 Disposal as clean fill. Higher than average unit cost considering logistical issues (remove site; limited access/staging area may allow only 1 truck on site at once) and material issues (possible need to mix with other bulk source to achieve engineering/environmental requirements). Cost premium over other alternatives due to reduced volume. 14,000 m³ total sediment, assume 12,000 m³ can be left in place.
- 10 Headpond area 4500 m², 2 m fill depth average.
- 11 Significant rock assumed (conservative)
- 12 Allowance for concrete rehabilitation, and localized replacement where deterioration is advanced. Relatively lower cost as backfill will reduce loads on wall.
- 13 Plantings, trail work, etc
- 14 Typical
- 15 Prefabricated steel span plus abutments. Pedestrian and small vehicle loads only.

Belfountain Dam and Headpond Class EA					
Alternative D4H6: Lower the spillway, backfill headpond & construct channel and offline pond					
Conceptual Cost Estimate					
ITEM NO.	ITEM	UNIT	EST. QTY.	UNIT PRICE	TOTAL
	<b>General</b>				
1	Mobilization	LS	1	\$30,000	\$30,000
2	Construction Access	LS	1	\$30,000	\$30,000
3	Dewatering & Erosion & Sediment Controls	LS	1	\$150,000	\$150,000
	<b>Subtotal General</b>				<b>\$210,000</b>
	<b>Dam</b>				
4	Install shear anchors	EA	8	\$10,000	\$80,000
5	Rehabilitate south abutment	LS	1	\$50,000	\$50,000
6	Rehabilitation work (concrete, south abutment & north retaining wall toe erosion)	LS	1	\$50,000	\$50,000
7	Rehabilitate north retaining wall (anchoring)	LS	1	\$50,000	\$50,000
8	Lower spillway crest	LS	1	\$100,000	\$100,000
	<b>Subtotal Dam</b>				<b>\$330,000</b>
	<b>Headpond</b>				
9	Sediment removal and disposal	m³	8000	\$40	\$320,000
10	New 3 m +/- retaining wall	m³	300	\$1,500	\$450,000
11	Fill borrow	m³	5000	\$10	\$50,000
12	Construct natural channel	m	150	\$1,000	\$150,000
13	Rehabilitation of existing retaining walls	m	100	\$500	\$50,000
14	Restoration of south shoreline	m	175	\$300	\$52,500
15	Headpond pedestrian bridge (20 m span)	LS	1	\$120,000	\$120,000
	<b>Subtotal Headpond</b>				<b>\$1,192,500</b>
	<b>Subtotal</b>				<b>\$1,732,500</b>
16	Engineering, Environmental, Landscaping Design (10%)				\$173,250
17	Contingency (30%)				\$519,750
18	HST (13%)				\$315,315
	<b>Total</b>				<b>\$2,740,815</b>

**ITEM NO. ASSUMPTIONS**

- 1 Allowance
- 2 Allowance
- 3 Lack floodplain area adjacent to headpond may restrict feasibility for fluming resulting in need to stage sediment removal. Alternative is dredging. Both options costly.
- 4 Unit cost of anchors installed as part of investigation by Terraprobe (2013). Assume reduced number of anchors due to reduced spillway
- 5 Allowance. Work is completed while headpond is dewatered
- 6 Allowance
- 7 5 anchors, 6 m long, \$1500/m
- 8 50 m3 concrete/masonry removal, 1000/m3; Pour new cap, \$1500/m3  
Disposal as clean fill. Higher than average unit cost considering logistical issues (remove site; limited access/staging area may allow only 1 truck on site at once) and material issues (possible need to mix with other bulk source to achieve engineering/environmental requirements). 14,000 m3 total sediment. Sediment must be temporarily removed for construction of retaining wall. Portion can be used to backfill channel. Assume 6000 m3 stays on site.
- 9 Concrete volume: 150 m long wall, avg 3 m high, 0.3 m wide, cantilever base of similar geometry
- 10 Channel area 3000 m2, 1.5 m fill depth average (3.5 m at dam reducing to zero)
- 11 Significant rock assumed (conservative)
- 12 Allowance for concrete rehabilitation, and localized replacement where deterioration is advanced. Relatively lower cost as backfill will reduce loads on wall.
- 13 Plantings, trail work, etc
- 14 Prefabricated steel span plus abutments. Pedestrian and small vehicle loads only.

Belfountain Dam and Headpond Class EA					
Alternative D5H7: Decommission the dam & restore natural valley and channel					
Conceptual Cost Estimate					
ITEM NO.	ITEM	UNIT	EST. QTY.	UNIT PRICE	TOTAL
	<b>General</b>				
1	Mobilization	LS	1	\$30,000	\$30,000
2	Construction Access	LS	1	\$30,000	\$30,000
3	Dewatering & Erosion & Sediment Controls	LS	1	\$150,000	\$150,000
	<b>Subtotal General</b>				<b>\$210,000</b>
	<b>Dam</b>				
4	Decommission Dam	m <sup>3</sup>	350	\$300	\$105,000
	<b>Subtotal Dam</b>				<b>\$105,000</b>
	<b>Headpond</b>				
5	Sediment removal and disposal <sup>1</sup>	m <sup>3</sup>	14000	\$35	\$490,000
6	Construct natural channel	m	150	\$1,000	\$150,000
7	Valley restoration and planting	m <sup>2</sup>	3500	\$30	\$105,000
8	Rehabilitation of existing retaining walls	m	100	\$1,000	\$100,000
9	Headpond pedestrian bridge (20 m span)	LS	1	\$120,000	\$120,000
	<b>Subtotal Headpond</b>				<b>\$965,000</b>
	<b>Subtotal</b>				<b>\$1,280,000</b>
10	Engineering, Environmental, Landscaping Design (10%)				\$128,000
11	Contingency (30%)				\$384,000
12	HST (13%)				\$232,960
	<b>Total</b>				<b>\$2,024,960</b>

**ITEM NO. ASSUMPTIONS**

- 1 Allowance
- 2 Allowance
- 3 Lack floodplain area adjacent to headpond may restrict feasibility for fluming resulting in need to stage sediment removal. Alternative is dredging. Both options costly.
- 4 25 m long, 4.8 m high, 2 m wide crest + 1.8/2 m downstream embankment
- 5 Disposal as clean fill. Higher than average unit cost considering logistical issues (remove site; limited access/staging area may allow only 1 truck on site at once) and material issues (possible need to mix with other bulk source to achieve engineering/environmental requirements). 14,000 m<sup>3</sup> total sediment removal. Reduced rate relative to other alternatives due to quantity.
- 6 Significant rock assumed (conservative)
- 7 Typical
- 8 Allowance for concrete rehabilitation, and localized replacement where deterioration is advanced.
- 9 Prefabricated steel span plus abutments. Pedestrian and small vehicle loads only.

## **Appendix ‘D’**

### **Visualizations**



**BrookMcIlroy**  
Option D2H2  
Rehabilitate the Dam  
and Headpond



**BrookMcIlroy**

**Option D4H5**

Lower the Spillway, Backfill the  
Heapond and Construct Channel



**BrookMcIlroy**

**Option D4H6**

Lower the Spillway and Construct  
Channel and Offline Headpond