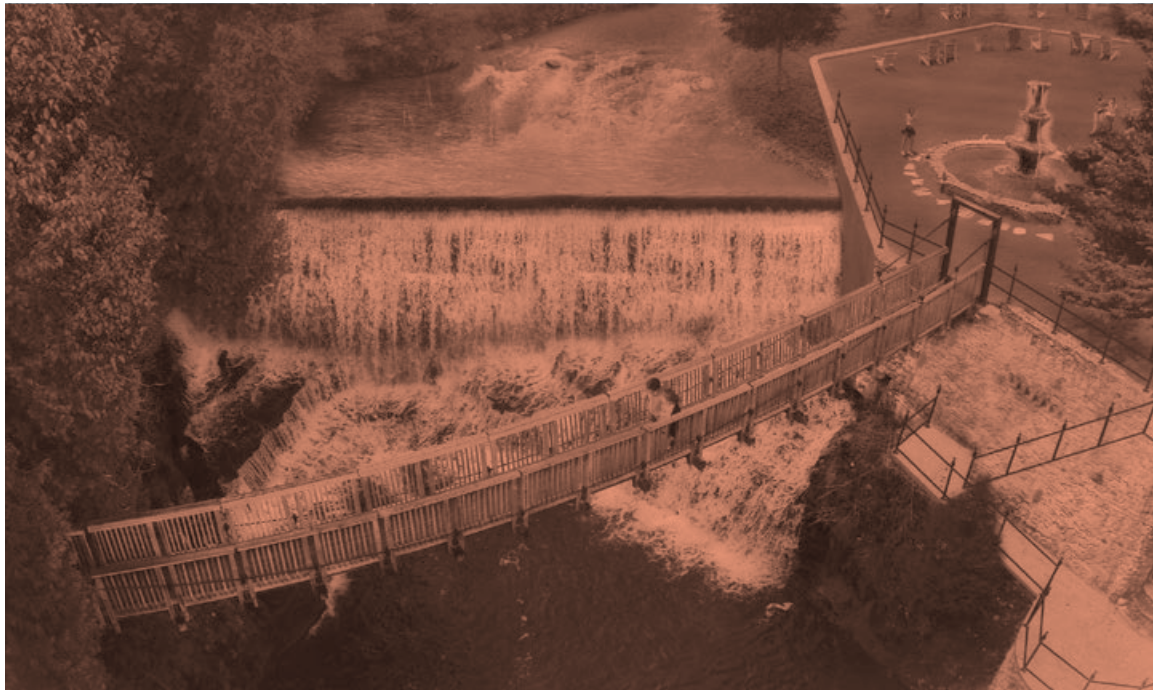
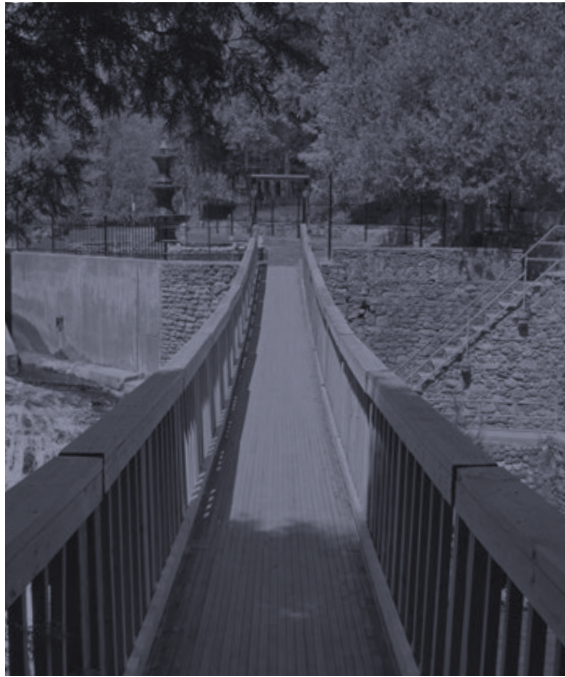
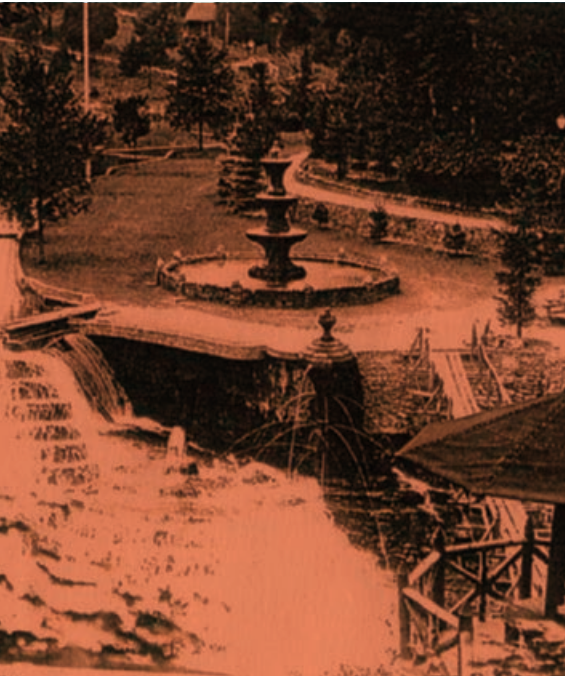


Belfountain Conservation Area Management Plan 2018



**Credit Valley
Conservation**
inspired by nature



Executive Summary

Situated on the Niagara Escarpment, in the Town of Caledon, Belfountain Conservation Area encompasses 56 hectares (138 acres). Composed of Belfountain Conservation Area proper, the Cox Property and the Willoughby Property (owned by the Ontario Heritage Trust, managed by Credit Valley Conservation), Belfountain Conservation Area is renowned for its significant natural and cultural features. Large portions of the property are identified as part of a provincial Area of Natural and Scientific Interest (ANSI) and an Environmentally Significant Area (ESA), as well as a Cultural Heritage Landscape (CHL). The West Credit River, steep slopes of the Credit River Valley, rare species, winding trail system, and the rich history and remnants of early industry, define Belfountain Conservation Area as a unique and important part of Credit Valley Conservation’s (CVC’s) conservation areas system.

Nestled in the hamlet of Belfountain, Belfountain Conservation Area has long been a popular visitor destination. The property was first opened to the public for recreation back in 1914, after a local businessman, Charles Wilson Mack, constructed his summer residence on the site and invited the public to enjoy the property. The park has been open to the public ever since, making it one of the oldest public parks on the Niagara Escarpment. As such, the site is revered by visitors as a cherished place that is held with nostalgia by generations.

As an ecologically sensitive area that also functions as a treasured visitor destination, balancing visitor use and enjoyment with the protection of natural features is a primary



objective. Planning for Belfountain Conservation Area has the added complexity and responsibility of also conserving and celebrating the site’s history and cultural heritage as well as ensuring that the proposed projects and policies support the operation of the site, while considering the context of the hamlet. The challenges with the site are many and include: aging and insufficient infrastructure, an undefined visitor experience, environmental degradation, site security, cultural heritage preservation and overall management capacity. These challenges, coupled with an assessment that identified structural and safety issues with the Belfountain Dam, provided the impetus for the management plan.

CVC initiated the management planning process in 2014 after a detailed inventory of the site’s resources, features and functions. The planning process involved three phases:

- Phase I: Background Report
- Phase II: Conceptual Ideas and Consultation (Strategic Directions)
- Phase III: Management Plan

Phase I concluded in the background report (CVC 2014a) which characterizes the conservation area and summarizes the natural, cultural and social information that was used as the foundation for decision making.

Credit Valley Conservation Board of Directors Resolution

#71/18: Approval of Belfountain Conservation Area Management Plan

Date: August 24, 2018

THEREFORE, BE IT RESOLVED THAT the report entitled “Belfountain Conservation Area Management Plan” be received and appended to the minutes of this meeting as Schedule ‘D’; and

THAT the Board of Directors approve the Belfountain Conservation Area Management Plan; and

THAT CVC staff incorporates the implementation of the Belfountain Conservation Area Management Plan into work plans; and further

THAT staff be directed to pursue various fundraising opportunities to enable implementation of the Belfountain Conservation Area Management Plan.



Phase II of the management planning process spanned from 2015 to 2018 and focused on the development and refinement of ideas and projects through consultation with the public, stakeholders and agency partners. Consultation was a major component of the planning process and it quickly became apparent that reinvesting in the status quo would not do justice to the conservation area's one-of-a-kind features or unique opportunities, nor would it serve the community and the wants and needs of visitors. A fresh, innovative vision for the property was required to not only meet its challenges, but to set the park up for success for the next century.

CVC's decision-making process to develop the final projects and policies identified for Belfountain Conservation Area is tracked in three strategic directions reports. Phase III began with consultation on the content of the final management plan and ends with the approval of this plan.

The key to the success of the management plan is finding a balance. As the main visitor destination, the day use space in Belfountain Conservation Area proper will continue to have a large recreation component, and much of the Plan focuses on creating a unique, sustainable visitor experience. Development is not proposed for the Willoughby and Cox properties and they will continue to serve important functions related to environmental protection and cultural heritage conservation.

The information captured in this plan represents the outcome of a process that achieves balance amongst dynamic objectives. The right combination of innovative, yet sympathetic projects and design choices have been carefully selected to ensure that natural systems, cultural features, social values, and management obligations are appropriately planned for and managed. The management plan is a 25 year vision and represents a generational investment that will ensure Belfountain Conservation Area's success for the next hundred years.

Acknowledgements

The management planning process is led by staff in CVC's Land Planning section of the PARCS (Property, Assets, Recreation and Conservation Area Services) division. Executing the Belfountain Conservation Area Management Plan has taken the dedication, thought and perspective of our diverse team of technical experts, partners, stakeholders, community members and the public.

Undertaking a management plan is a major endeavour, requiring strong leadership and fortitude to envision place-making. Through the contributions of the team working diligently to understand and challenge a better future, the new 25 year vision for Belfountain Conservation Area can be realized.

Thank you to all the members of the public who participated in the process. Thank you for attending public meetings, for completing feedback and online surveys, for sharing your thoughts and opinions and for making your narrative a driving force in the management plan.



We would also like to acknowledge all the parties who provided their support, expertise and participation in the development of the management plan, as well as the Belfountain Dam and Headpond Class Environmental Assessment.

Stakeholder Advisory Committee

- Belfountain Community Organization
- Belfountain Heritage Society
- Belfountain Public School
- Caledon Environmental Advisory Committee
- Caledon Hills Bruce Trail Club
- Central Counties Tourism
- Headwaters Communities in Action
- Headwaters Tourism
- Izaak Walton Fly Fishing Club
- Ministry of Natural Resources and Forestry
- Ministry of the Environment and Climate Change
- Ministry of Tourism, Culture and Sport
- Mississaugas of the Credit First Nation
- Niagara Escarpment Commission
- Ontario Federation of Anglers and Hunters
- Ontario Heritage Trust
- Region of Peel
- Town of Caledon
- Trout Unlimited

Project Consultants

- Brook McIlroy Inc.
- George Robb Architect
- GM Blue Plan Engineering
- Paul Dilse
- Sierra Planning and Management
- Terraprobe Inc.
- The Tourism Company
- Toronto Region Conservation Authority – Archaeology Resource Management Services
- Wood Environment and Infrastructure Solutions (Amec Foster Wheeler)

Project Leads, Credit Valley Conservation

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- Jesse de Jager
- Laura Rundle
- Victoria Edwards

Technical Steering Committee

Thank you to all of the staff who participated on our Technical Steering Committee. Special thanks to the staff that prepared technical reports, provided background information and comments throughout the management planning process:

- | | |
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| Dr. Deborah Martin-Downs | Lisa Grbinicek |
| Kate Burgess | Mark Thompson |
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| Jeff Payne | Susan Cooper |
| Joana Marques | Suzie Losiak |

CVC acknowledges that the land on which we gather, and the entire Credit River Watershed, is part of the Treaty Lands and Territory of the Mississaugas of the Credit First Nation. The Credit River Watershed is also part of the traditional territory of the Huron-Wendat and Haudenosaunee, and home to many First Nations, Métis, and Inuit Peoples today. Treaties made with Indigenous Peoples are enduring and include responsibilities for both parties. We affirm that this land and water is our common source of life and we must all share responsibility for its care and stewardship for now and future generations.





Our Vision

Credit Valley Conservation (CVC) is a community-based organization that is responsible for protecting, restoring and managing the natural resources of the Credit River Watershed. Located in one of the most densely populated regions of Canada, the watershed contains some of the most diverse landscapes in Southern Ontario. This diversity is exemplified in the more than 2,800 hectares (7,000 acres) that is owned or managed by CVC.

CVC’s overarching ambition is to create connections between people and nature, to nurture our communities and inspire stewardship to generate action on the ground. Our vision, set out in CVC’s Strategic Plan (CVC 2014c), guides every aspect of our work by describing what is required to sustain our quality of life:

A thriving environment that protects, connects and sustains us.

The vision is reflected in the work undertaken throughout the organization and is particularly relevant to how CVC chooses to steward its conservation areas. The system of more than 60 properties protects and conserves significant environmental and cultural features and provides visitors with unique experiences and recreational opportunities. These natural spaces are vital for achieving CVC’s vision as they function as a catalyst for watershed residents and visitors to gain a better understanding and appreciation of their local environment.

From promoting health and wellness, to protecting our environment and safeguarding against natural hazards, each conservation area provides a variety of benefits that enrich the lives of watershed residents. Several of these properties are also suitable for public enjoyment and are used for outdoor recreation activities and experiential learning opportunities. With its

outstanding natural and cultural resources, existing amenities and reputation as a desirable Niagara Escarpment park, Belfountain Conservation Area is well positioned to offer a one-of-kind experience.

Through the directions outlined in the management plan, Belfountain Conservation Area plays a vital role in supporting the realization of CVC’s vision:

Protect: the significant natural and cultural features that make Belfountain Conservation Area a unique and special place

Connect: people to the landscape by providing diverse opportunities to explore, appreciate and learn

Sustain: through wise management and investment, acknowledging that the health of our natural spaces is intrinsically linked to our own well-being

The management plan for Belfountain Conservation Area has been designed to address property-specific challenges and opportunities in the context of CVC’s Strategic Plan. The directions set out in this Plan are designed to fulfill the vision for the conservation area, while supporting the broader goals and objectives of CVC, and our local, regional and provincial partners.

How To Read This Document

This document is the final management plan for Belfountain Conservation Area. A series of reports have been produced to accompany the different phases of the management planning process. Identified below, these reports should be consulted for additional information about the conservation area, consultation efforts and the outcomes of the management planning process.

The Background Report for Belfountain Conservation Area (CVC 2014a) details the social, cultural and ecological characteristics and attributes of the property. The background report contains the baseline information summarized from CVC’s monitoring program data, research

and other studies and provides the foundation for the identification of opportunities, constraints and recommendations. It should be referred to for additional information about Belfountain Conservation Area.

Three strategic directions reports have been developed that outline the development of the projects and policies for Belfountain Conservation Area. These include:



Strategic Directions Report I for Belfountain Conservation Area (CVC 2015) outlines the draft vision, goals and objectives and provides discussion on proposed projects.



Strategic Directions Report II (CVC 2016) builds off of Strategic Directions Report I, and provides discussion on input received through consultation in regards to preliminary recommendations. Options for concept plans are also presented.



Strategic Directions Report III (CVC 2018a) identifies the recommended projects, policies and actions to be included within the management plan. This report identifies comments received through consultation and provides rationale for decision making, outlining actions that are required for management plan completion.

This document, Management Plan for Belfountain Conservation Area (2018), presents the final vision for Belfountain Conservation Area. Approval of the Belfountain Conservation Area Management Plan is required by CVC’s Board of Directors, the Niagara Escarpment Commission and the Ministry of Natural Resources and Forestry.

The Willoughby and Cox properties share a common geography with Belfountain Conservation Area proper, and as such have been included in the management planning framework. The title Belfountain Conservation Area refers to this connected complex of properties. Belfountain Conservation Area proper refers to the well-known park located at 10 Credit Street.

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B	Summary of Public Consultation Meetings (2014–2018)
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F	Complete List of Directions and Implementation Timelines
G	Construction Stages Identified for the Implementation of the Class EA
H	Infrastructure Exemption Table

LIST OF ABBREVIATIONS

ANSI	Area of Natural and Scientific Interest
BTC	Bruce Trail Conservancy
CHCP	Cultural Heritage Conservation Plan
CHL	Cultural Heritage Landscape
CPTED	Crime Prevention Through Experimental Design
CRWNHS	Credit River Watershed Natural Heritage System
CVC	Credit Valley Conservation
CVCF	Credit Valley Conservation Foundation
ELC	Ecological Land Classification
ESA	Environmentally Significant Area
HCEA	Heritage Conservation Easement Agreement
LID	Low Impact Development
MNRF	Ministry of Natural Resources and Forestry
MOECC	Ministry of the Environment and Climate Change
NEC	Niagara Escarpment Commission
NEP	Niagara Escarpment Plan
NEPOSS	Niagara Escarpment Parks and Open Space System
NHS	Natural Heritage System
NSLASP	Natural Spaces Land Acquisition and Stewardship Program
OHT	Ontario Heritage Trust
ROW	Right-of-Way
SWH	Significant Wildlife Habitat
UNESCO	United Nations Educational, Scientific and Cultural Organization



1.0 Introduction

Located in one of the most densely populated regions in Canada, the Credit River Watershed contains some of the most diverse and scenic landscapes in Southern Ontario. Credit Valley Conservation (CVC) is responsible for protecting, managing and restoring the watershed's natural resources. To this end, CVC's conservation areas system plays an important role protecting significant natural features and functions and cultural resources, as well as connecting people to nature through opportunities for appreciation and recreation.



While CVC owns or manages over 60 properties, only a handful are staffed and provide programming and recreational opportunities to visitors. The careful management of these sites is especially important to ensure that a balance between the protection of significant resources and the use and enjoyment by the public, is maintained.

The development of a property-specific management (or master) plan is widely regarded as a best practice for managing protected areas. A management plan is a document that sets out the management approach and objectives for a property and describes the framework that will be used for ongoing decision-making. The management planning process often involves an extensive review to understand the site followed by visioning exercises to imagine its future state and what the property could and should become. CVC recognizes the importance of management planning for its conservation areas, and policy direction for their development is provided in CVC's Strategic Plan (CVC 2014c) and Conservation Areas Master Strategy (CVC 2018b).

Located in the middle watershed, Belfountain Conservation Area proper is one of CVC's flagship properties, open to the public from April to October each year. The current management plan for this property was completed in 1978 (revised in 1984); it is long overdue for an updated plan. In close proximity to Belfountain Conservation Area proper, are the Willoughby

(owned by the Ontario Heritage Trust, managed by CVC) and Cox properties, and while they are not considered active parks, neither has a long-term plan guiding their management. A single management plan for these properties, collectively referred to as Belfountain Conservation Area, was needed to identify their role in CVC's conservation area system, determine management needs and directions, and plan for their desired future state.

Belfountain Conservation Area and the Willoughby Property are both identified as components of the Niagara Escarpment Parks and Open Space System (NEPOSS) in Appendix 1 of the Niagara Escarpment Plan (OMNRF 2017). The NEPOSS is a network of more than 160 publicly owned parks and open spaces located along the Niagara Escarpment that together serve to protect significant escarpment resources and provide opportunities for public access and recreation. The development of a management plan is also a requirement for NEPOSS properties under Section 3.1.5.1 of the Niagara Escarpment Plan (NEP).

The management planning process for Belfountain Conservation Area commenced in 2014 after a structural assessment of the Belfountain Dam indicated that a long-term solution for this cultural feature would need to be identified. The lack of a current management plan, lack of site accessibility, impaired riverine habitat, aging and insufficient facilities and services for visitors and lack of sustainable capital

for new investments were concerns noted by CVC staff and sparked the need for a new plan.

Visitor information surveys conducted at Belfountain Conservation Area proper in 2010 provided the initial foundation for developing alternatives to site management. Survey data revealed basic visitor demographics and distribution, and indicated that visitors generally enjoyed their visit to the conservation area. Interpretative signage, educational programming and enhanced washroom facilities were all noted as areas for improvement by visitors.

Based on the feedback received through the visitor information surveys and initial staff comments and directions, enhancing the current situation and recreational offerings at Belfountain Conservation Area was identified as the general direction for the new management plan. When CVC began its consultation with the public and stakeholders, however, it became clear that there were several additional issues that needed to be addressed. The management planning process became a platform for promoting open dialogue on the issues and opportunities impacting the park, as well as identifying solutions. Concerns with traffic congestion and parking in the hamlet of Belfountain, user conflicts, after-hours use and unsanctioned activities, conservation of heritage features, and the absence of a relationship between the community and Belfountain Conservation Area, came to light.

It became apparent that a plan that simply improved on Belfountain Conservation Area's current state was not going to do justice to the multiple issues and opportunities identified through consultation.

A new vision for Belfountain Conservation Area was required. Careful consideration went into developing a plan that re-envisioned how people use the site, their activities and how long they stay. Infrastructure to improve staff operations, traffic congestion and parking concerns and provide indoor programming space was identified. Commitments highlighting CVC's dedication to creating a space that is cherished by both visitors and the local community were developed. Moreover, all of the directions identified in the plan still needed to respect and ensure the protection and conservation of the site's significant natural and cultural resources.

This document, the Belfountain Conservation Area Management Plan (the Plan), is the result of a holistic planning process that, through extensive consultation, considered several different options and alternatives before creating a vision that best meets the needs of the conservation area while accounting for local and regional contexts. Through innovative design, programming and policy, this Plan aims to address the variety of threats and challenges identified, while also capitalizing on the area's natural strengths and opportunities.

2.0 Contextual View Of Belfountain Conservation Area

Belfountain Conservation Area is located on the Niagara Escarpment, a landform recognized by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as a World Biosphere Reserve. Situated in the Town of Caledon near the confluence of the Credit River and the West Credit River (the ‘Forks of the Credit’), Belfountain Conservation Area spans 56 hectares (138 acres). As depicted in Map 1 the site is made up of three separate, yet contiguous properties:

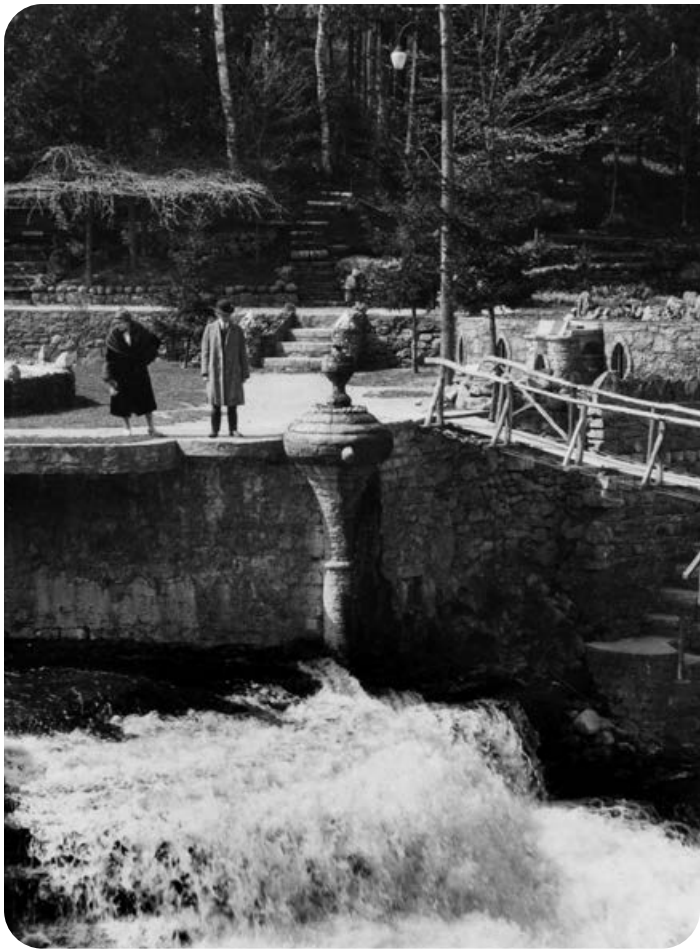
1	Belfountain Conservation Area proper (acquired by CVC in 1959)
2	Cox Property (acquired by CVC in 1987)
3	Willoughby Property (acquired by the Ontario Heritage Trust in 1986; managed by CVC since 1986).

The Willoughby Property was purchased by the Ontario Heritage Trust (OHT) in January 1986, and has been managed by CVC on behalf of OHT ever since. Two Bruce Trail side trails are located on the Willoughby Property and have been used by hikers since the 1960’s. The Cox Property was acquired by CVC in 1987, when regulations regarding hazard lands restricted the original owners from building on the site. No formal trail or visitor amenities exist on this property and it is not actively used by the public.

The significance of Belfountain Conservation Area is recognized through local and provincial designations that have been assigned to its landscape and features. The entire site is located on the Niagara Escarpment, with Belfountain Conservation Area proper and the Willoughby Property recognized as part of the NEPOSS under Part 3 of the NEP. Though it comprises only a tiny fraction of the escarpment, Belfountain Conservation Area embodies the UNESCO

designation by locally celebrating and protecting significant ecological, cultural and landform characteristics. The property is also identified as part of the Credit River Watershed Natural Heritage System (NHS), which recognizes it within a Centre for Biodiversity (a high quality natural area important for supporting biodiversity over the long term).

From a cultural perspective, the Belfountain and Credit River Gorge Cultural Heritage Landscape (CHL), as defined by the Town of Caledon (Scheinman, 2009), encompasses the majority of the site. This CHL embodies a number of historic themes important to Caledon and incorporates settlements, former milling and quarrying sites, railway heritage, recreational sites and natural areas associated with the Credit River Valley. In addition, the Willoughby Property contains a registered industrial archaeology site associated with early quarrying activities and a masonry dam, known as the Stone Cutter’s Dam. A number



Conservation Area proper came into CVC ownership, where it continues to operate as a resource for all watershed residents and visitors, supporting both protection and recreation objectives.

Belfountain Conservation Area proper exists as one of the oldest public parks on the Niagara Escarpment.

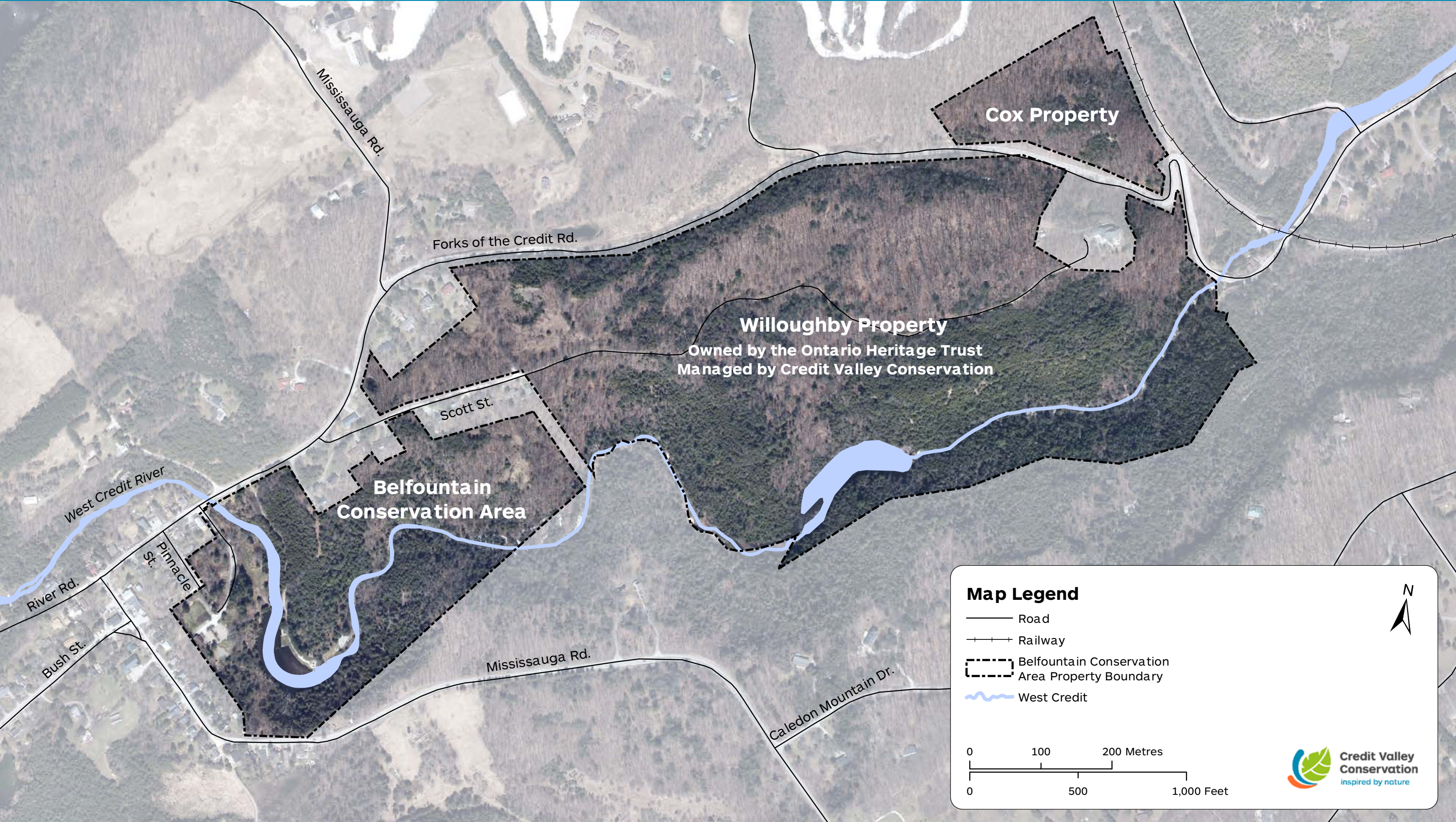
Today, it is managed as one of CVC’s core visitor destinations. Currently, the park is seasonally open to the public with staff, operational facilities and visitor amenities. On site there currently exists a gatehouse with a fee station, a workshop with a small staff office, visitor washrooms, septic servicing, potable water, a parking lot, trails and picnic facilities. The remnants of Mack’s heritage features have been preserved, however with negligible to modest upkeep and investment. Aging and inadequate infrastructure, heritage preservation, technology deficits, site security, site degradation, and visitor management and crowding are major challenges identified through the planning process.

of cultural resources within with Belfountain Conservation Area proper were also recently designated by the Town of Caledon under Part IV of the Ontario Heritage Act. These include the early twentieth century stone and concrete works including the dam, cave (grotto), bell-fountain, the concrete and suspension bridge, former sawmills and quarries, and various other trails, staircases and features.

The development of Belfountain Conservation Area proper as a recreation destination began in 1908 when a Toronto businessman, Charles Wilson Mack, purchased a parcel of land to build his summer residence. On the site, he constructed several ornamental features, such as the Belfountain dam, a bespoke fountain with a crowning bell, a system of trails, and cottages to house visitors. Under the moniker **Luckenuff**, Mack opened his property up to the public in 1914 and it has been maintained for public access ever since. In 1959, Belfountain



Map 1: Belfountain Conservation Area





2.1 A Unique Natural Environment

Belfountain Conservation Area contains a diverse landscape of forested communities with steep slopes, bedrock outcrops and isolated pockets of cultural and wetland communities. Portions of the Forks of the Credit Life Science ANSI, the Credit Forks-Devil's Pulpit ESA and Significant Woodlands (Map 2) are also contained within the park. Defining features include the Niagara Escarpment, the West Credit River, and the Credit River Valley; which together provide a diverse range of unique and significant habitat for over 500 species. Naturally occurring hazards, including flooding and erosion, are also associated with the site and greatly affect how the area may be used and developed.

Belfountain Conservation Area's unique geologic resources have shaped and influenced the natural, cultural and industrial heritage of the area. Two sequences of bedrock are present in the study area: the Queenston Formation and the Cataract Group. Of importance to note, from the Cataract Group, is the Whirlpool Formation; a bedrock type containing uniquely coloured sandstone that was extracted from quarries during the mid-nineteenth century, acting as a foundational element of industrial development and spurring settlement.

Extensive ecological inventorying and monitoring has been undertaken across the conservation area, which is detailed in the Background Report for the Belfountain Conservation Area Management Plan (CVC 2014a) and the Natural Heritage Characterization for the Belfountain Complex (CVC 2014b), and summarized in Box 1. Ninety-five per cent of the natural cover across the conservation area is forested, however the influence of previous extraction activities, remnant features and visitor use impacts can be observed on the landscape. Ecologically important areas that support biodiversity, known as Significant Wildlife Habitat, are found in various forms across the property and include rare vegetation communities, forest-interior breeding birds and the habitat of endangered and threatened species. Environmental surveys have confirmed the presence of eleven (11) Species at Risk onsite, including Jefferson Salamander, Butternut and Chimney Swift. Appendix A contains a list of all Species at Risk identified at Belfountain Conservation Area. Of the 407 unique species of flora identified, more than 100 are non-native, several of which are invasive and threaten the site's ecological integrity.

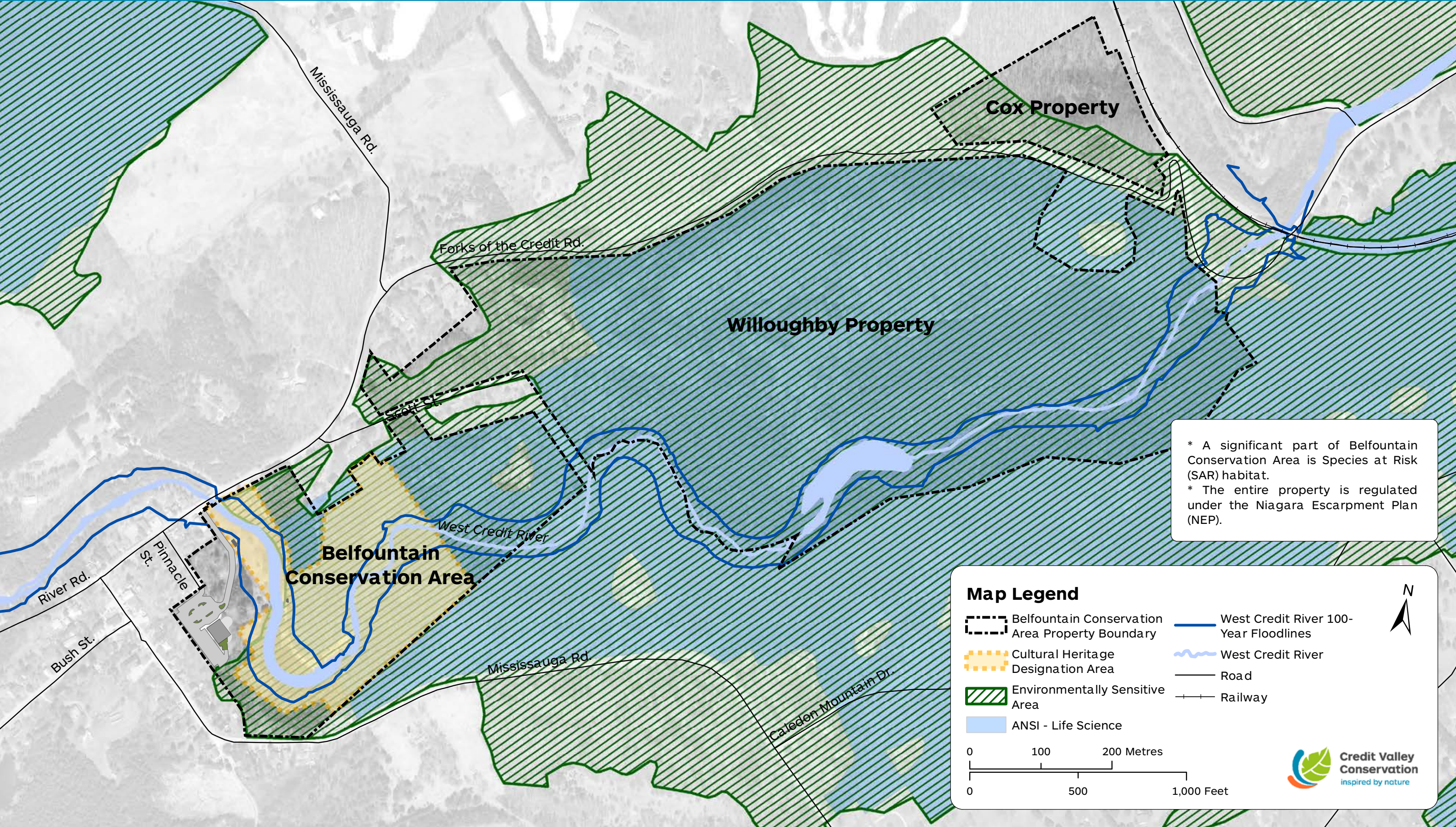
CVC's Integrated Watershed Monitoring Program has three monitoring sites in Belfountain Conservation Area: two stream sites and one forest site. These sites are part of a larger network of long-term monitoring sites used to monitor the health of ecosystems in the Credit River Watershed.

The data collected through IWMP, as well as surveys and assessments undertaken specifically for the Plan, have helped identify sensitivities, disturbances, opportunities and constraints throughout the site. The additional surveys and assessments include:

- Classification of vegetation communities following Ecological Land Classification (ELC) protocols
- Multi-season botanical inventory
- Breeding bird surveys
- Nocturnal owl surveys
- Vernal pool surveys
- Bat monitoring surveys
- Odonata (dragonfly and damselfly) surveys
- Significant Wildlife Habitat evaluation
- Species at Risk mapping
- Extensive research and review of relevant documents and reports

Box 1: Environmental Inventories and Assessments

Map 2: Ecological Designations and Policy Features





The western branch of the Credit River traverses the site, with its cold waters nourished by high groundwater outputs. Thirteen species of fish have been identified, including Brook Trout, Atlantic Salmon and Brown Trout, all of which are sought after by anglers.

The river is dissected by three structures, the Belfountain Dam in Belfountain Conservation Area proper, and the Stone Cutter's Dam and a concrete weir on the Willoughby Property. The Belfountain Dam, the largest of the three structures, is impassable to fish and acts as a partition, separating native Brook Trout from introduced species downstream. The dam's headpond warms the water, reducing water quality and impacting coldwater species. The implications on the coldwater fishery, and cultural significance of the dam, have been a catalyst for decision making during the planning process. Criteria were deliberated upon through a Conservation Ontario Class Environmental Assessment for Remedial Flood and Erosion Control Projects (Class EA), as outlined in the series of accompanying reports (AFW 2015a, 2015b, 2016, 2017). The identified

solution balances desired outcomes for heritage conservation, visitor experience and environmental restoration.

Belfountain Conservation Area has high groundwater recharge and discharge rates, making it hydrologically important as well as vulnerable to contamination. Numerous groundwater seepages and springs can be observed throughout the site, and several contribute to actively forming tufa deposits. Tufa is a rare form of limestone that signifies one of the more spectacular natural rarities within the property.

Belfountain Conservation Area is a heavily constrained site from a physical, environmental and regulatory perspective and protecting its significant ecological resources and biodiversity is a priority. Protecting significant environmental features and conserving the form and function of the landscape has been a major consideration of the Plan. Actions to drive environmental protection are built as a foundation of site design and operating principles.

2.2 A Fascinating History

The history of Belfountain Conservation Area and its landscape is rich, interesting, and well-documented. Culturally, this property is representative of major themes in land use in the Forks of the Credit area, and its narrative history generates multiple fascinating stories within its compact footprint on the Niagara Escarpment. Its standing features, ruins and archaeological remains can interpret four themes in the history of the Credit River Watershed:

1	Indigenous Use (until 1818)
2	Milling, Quarrying and Village Development (1818 to 1908)
3	Mack's Park and 'Luckenuf' Era (1909 to 1945)
4	Conservation Authorities and the Public Lands Movement (1946 to Present)

2.2.1 INDIGENOUS USE

The earliest human use of the site that has become Belfountain Conservation Area is currently unknown. However, the seven registered archaeological sites of Native cultural origin that have been identified within three kilometres of the conservation area and the conservation area's location along the West Credit River, indicate the likelihood of a long history of human occupation on the land dating from about 5,000 years ago to about 1400 A.D.

Belfountain Conservation Area and surrounding lands are the traditional territories of the Huron-Wendat, later the Haudenosaunee (Iroquois), the Métis, and most recently, the Mississaugas of the Credit. Before the start of colonialism and European settlement, the Credit River Watershed belonged in the territory of the Mississague (Mississauga) people who had moved down into Southern Ontario from their original homeland north of Lake Superior and Lake Huron in the early 1700s. The Mississague,



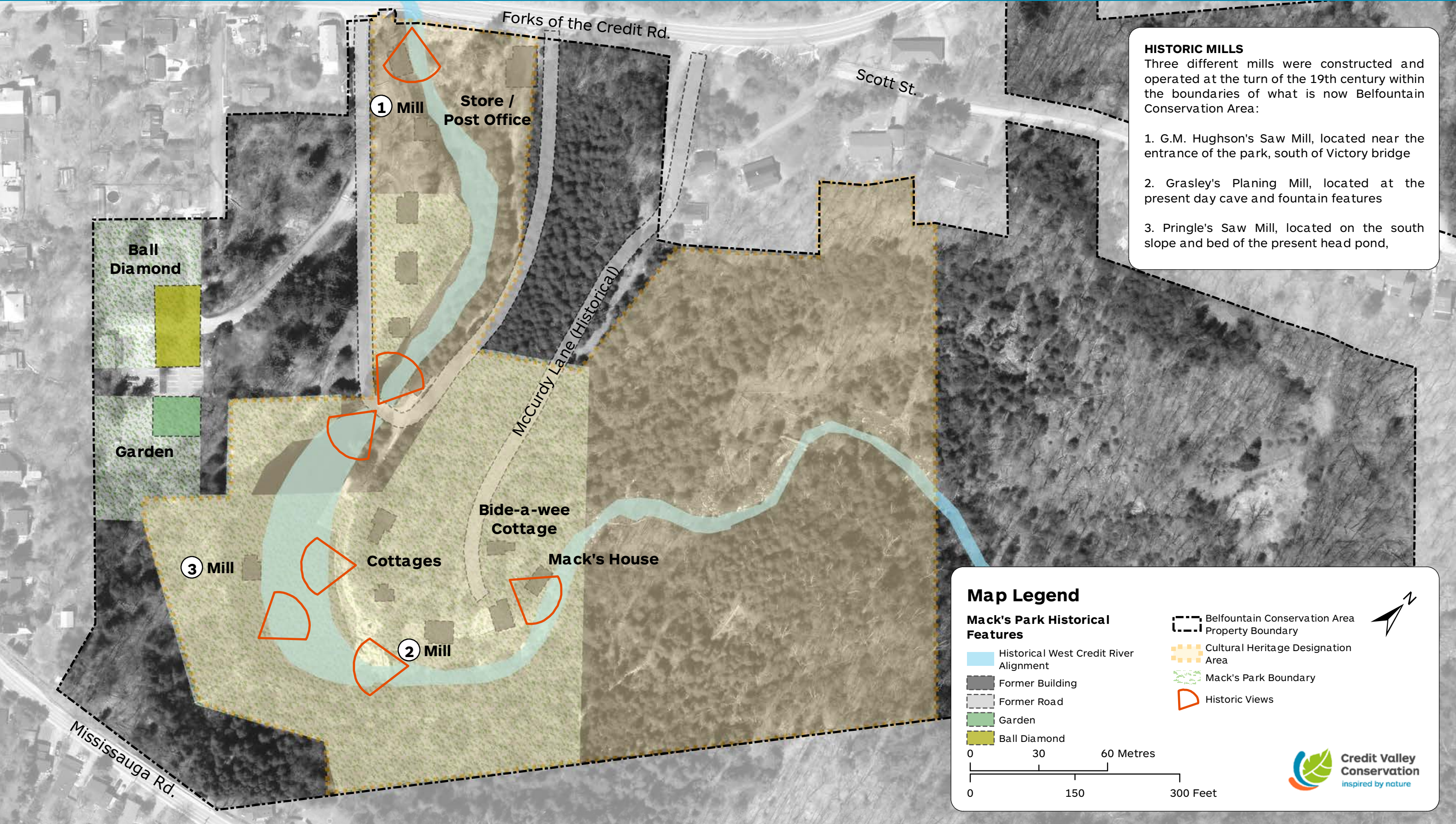
Ojibway-speaking Anishinaabeg, moved around the land to fish, hunt and trap as well as trade pelts with European fur traders for their products. Following the American Revolutionary War, the British government's re-settlement plans resulted in dispossessing the Mississaugas (and other Native people near the American border) of their fishing, hunting and harvesting grounds. The representative of the British government negotiated Treaty No.19 (Ajetance Treaty) with representatives of the Mississague Nation for surrender of the interior of the Mississague Tract, of which Belfountain Conservation Area is now a part.

2.2.2 MILLING, QUARRYING AND VILLAGE DEVELOPMENT

The west part of Caledon Township was opened for settlement in 1820 after the first surveys were completed by Samuel Ryckman in 1818-1820. Settlement on the lands that make up Belfountain Conservation Area began around 1825 and centred on water power use, with establishment of a grist mill by William Frank, and later Johnathan McCurdy.

Lots were first laid out in 1846 and expanded by further survey in 1853; this settlement pattern still underlies the road and lot fabric of the conservation area. By 1859 the village was developing into a farm service centre and more mills were established. Within the conservation area's current boundaries, three different mills were constructed and operated until the turn of the 19th century, as depicted in **Map 3**.

Map 3: Mack's Park Historical Features





The milling and saw mill use of the property led to wide scale deforestation of the area and industrial use of the site. The economic transition from early industrial and farm service to rural and residential uses followed the closure of the mills in the village.

The lands that are now the Willoughby and Cox properties were once the site of heavy quarrying activities. From the 1840's through to the 1860's,

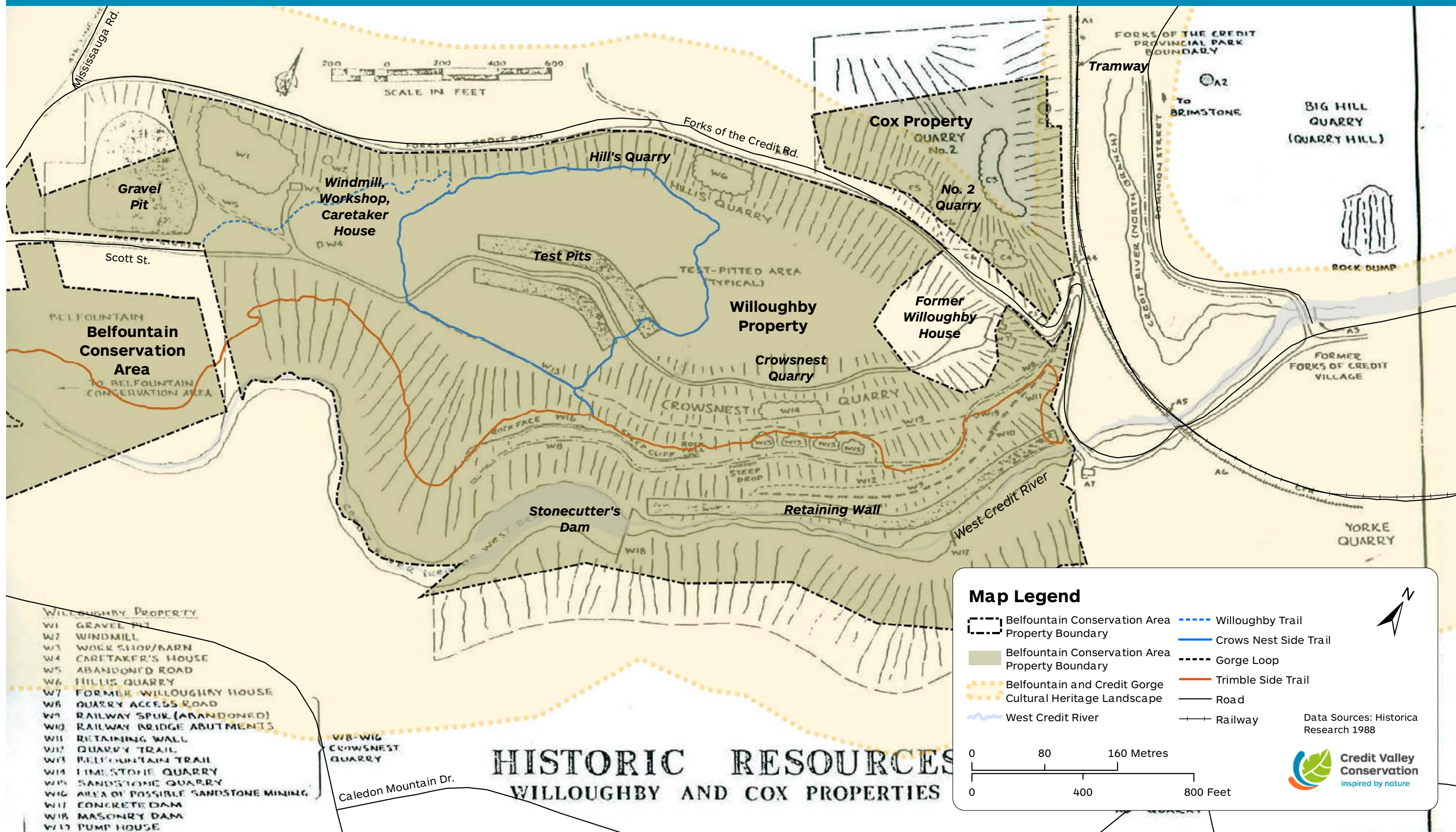
the economic potential of the exposed sandstone formations in this area of the Niagara Escarpment were being recognized. It was not until the Credit Valley Railway opened in 1879 that the minerals could be exploited as there was now a route to market. Multiple quarries were opened along the valley walls to extract the sandstone deposits; their locations along with the related rail spurs and dams are shown in **Map 4**. The sandstone from these quarries was



used in the construction of many prominent buildings including the Queen's Park legislative buildings in Toronto, where the distinctive brown tint of the credit valley sandstone is prominent. Due to the steep valleys, an aerial tramway system was used to lower quarried stone down to the rail lines; this extremely rare use of transport method is of provincial significance in industrial heritage.

The region's industrial heritage is reflected in the remnant dams, the lime kiln ruins, the quarry faces, and the spur line bench cuts into the sides of the valley. While nature has reclaimed large portions of this area, the scarred earth and remnant features offer a tantalizing view into the industrial past of the Forks of the Credit area.

Map 4: Willoughby and Cox Properties - Historical Features



2.2.3 MACK’S PARK ERA

In 1908, Charles Wilson Mack (1858-1942) discovered the site for his summer home on what is now Belfountain Conservation Area proper, during a drive through the countryside north of Toronto. Head of C.W. Mack Ltd., a rubber stamp manufacturing firm which he had established in 1892, Mack could afford an automobile when very few owned one. His dream was to build a beautiful home and invite the public to it for their enjoyment; his desire was for the park to be “a feast of beauty for eye and mind.”

Mack and his wife, Addie Madella, lived at the Belfountain bungalow they built in 1909 overlooking the river gorge from spring until fall each year; and in 1933 it became their principal home. Year after year, they made improvements to the landscape surrounding their bungalow. Their property, christened **Luckenuf** after a motto of Mack’s (“To make lots of money you have to have enough luck”) soon acquired the moniker ‘Mack’s Park’ with free access given to the public. Mack’s paradoxical aims in developing **Luckenuf** as both a calm retreat for him and his wife, and a beautiful and peaceful place they could share with the public, were motivated by their religious convictions and the early twentieth century belief that parks, gardening and nature study were ways of remedying social ills. This benevolence extended to vacation opportunities where young professional women in the city were allowed to stay for free in a summer cottage named **Bide-a-wee** on the hill near Mack’s home.

Mack needed a local tradesman to carry out his beautification project. Samuel Western Brock (1873-1944) was ideal for the job. His parents, pioneers Robert Western Brock and Jane, raised him in Belfountain. He lived with his family close by on Pinnacle Street. He had worked as a miner in the quarries and could handle explosives for blasting rock. He was also capable of building the dam across the river, making the fanciful stone structures Mack desired, fitting the structures with plumbing, and, it is assumed, building the rustic wooden structures that complemented the

C.W. Mack was known for his fastidious and rigid nature. Free access to Mack’s Park came with its own set of rules:

- Men were asked to wear tops
- Women were asked to wear skirts or dresses rather than pants
- No bathing was allowed on Sundays
- Smoking was prohibited
- Visitors were asked to be quiet and orderly and to keep off the private grounds, and to injure nothing anywhere in the park

Box 2: Mack’s Park Rules

stonework. Mack hired Samuel Brock six months every year, starting in 1910; he was still assisting Mack in 1937.

The remarkable structures (the ‘bell’ fountain, dam, ‘Yellowstone’ cave, swing bridge) represent an achievement of vernacular interpretation of the English Garden Picturesque landscape. Made entirely of local stone and wood, they are a testament to the vision and skill of both Mack and Brock, and represent one of the most interesting built landscapes in the Credit River Watershed.

In 1942, at the age of 83, Mack passed away leaving his estate to his widow Addie. It was Mack’s wish that the park continue to be cared for and appreciated after his death.

2.2.4 CONSERVATION AUTHORITY AND PUBLIC LANDS ERA

CVC’s landmark 1956 Credit Valley Report (ODPD 1956), the foundational document which studied the Credit River Watershed and outlined bold actions for conservation, recommended that the entire Forks of the Credit area be brought into public ownership to establish a massive multi-use



conservation area for enjoyment and recreation in the most scenic area of the watershed. In 1959, CVC purchased the core of the Mack’s Park area (known as Belfountain Park in the intervening years since his passing) from William Rodger, who along with an earlier owner, had tried to make a commercial venture of the park. This purchase represented the establishment of Belfountain Conservation Area.

CVC moved quickly to secure adjacent parcels and to develop the conservation area.

In 1961, plans for modifications to the dam were drawn up to add a sluiceway (control structure) and to enhance the stability of the wing walls, as well as to reconstitute the old wire and cedar bridge with a modern and safely engineered swing bridge. Later, in 1969, a new master plan for the park was created that recommended changes to improve visitor experiences and services. This plan was partially implemented the following year and included a new parking lot in the upper field area, a gatehouse, washrooms located on the east side of the concrete bridge, and the removal of Mack’s home which was dilapidated but still serving as the park superintendent’s residence. **Bide-a-wee** cottage was to be retained and improved as it was serving as a museum operated by the Women’s Institute (a pre-cursor to the Peel Archives), however, in 1971 the museum closed and **Bide-a-wee**, having suffered fire damage, was torn down two years later. Later additions to the park included a modest workshop and

washroom building, signage and seasonal water servicing improvements.

In the 1980’s, following the establishment of the Niagara Escarpment Planning and Development Act, provincial funds were made available for acquisition of the most outstanding and important pieces of the escarpment for protection and public enjoyment. The Ontario Heritage Foundation (now OHT) worked with CVC to acquire the Willoughby Property as well as the neighbouring Cox Property. Trail development in partnership with the Bruce Trail Conservancy (BTC) followed.

While the full realization of the original 1956 recommendation for the massive Forks of the Credit Conservation Area never materialized, key properties such as Belfountain Conservation Area as well as provincial lands (Forks of the Credit Provincial Park) are an important legacy of the far sighted vision of the early conservation authority and public lands movement in Ontario.

The interesting narratives of Belfountain Conservation Area represent an as yet unrealized opportunity to interpreting the major themes of human land use in the Forks of the Credit area of the Credit River Watershed. The rich history, unique stories and outstanding physical environments are the area’s greatest assets and providing visitors with a full and fascinating experience of this history is a key output of the objectives within this Plan.

2.3 A Beloved Place

Belfountain Conservation Area proper earns the status of an iconic destination as it is a cherished place that is held with nostalgia, and legacy experiences are shared by loved ones with recommendations for future visits. The park lies within close proximity to major urban centres, making it popular with day-trippers. Visitors seek out the park as an outlet to enhance their life and escape their daily routine. They enjoy spending time connecting with their friends and family in a beautiful setting; and note the physical, mental and social health gains.

For the past several decades, visitation has shown consistent usage, with annual numbers held in the range of approximately 25,000, and visitation peaking during the fall colour season (generally late September to mid-October).

Recent data however, has shown a spike in visitation, pulling away from historic use (Figure 1). Over the past five years, an average annual 13 per cent increase in visits has been observed. This is likely a result of urbanization and population growth within the Greater Toronto Area. A noted shift in visitation occurring earlier and more consistently throughout the operating season has resulted in spring and summer weekends becoming increasingly busy (Figure 2). As urbanization continues, it is expected that shifting demographics and patterns of increased use will continue.

Visitor origins are predominately from the urban centres of Brampton, Mississauga and Toronto, with secondary cohorts of visitors from Orangeville and Caledon. During the fall colour

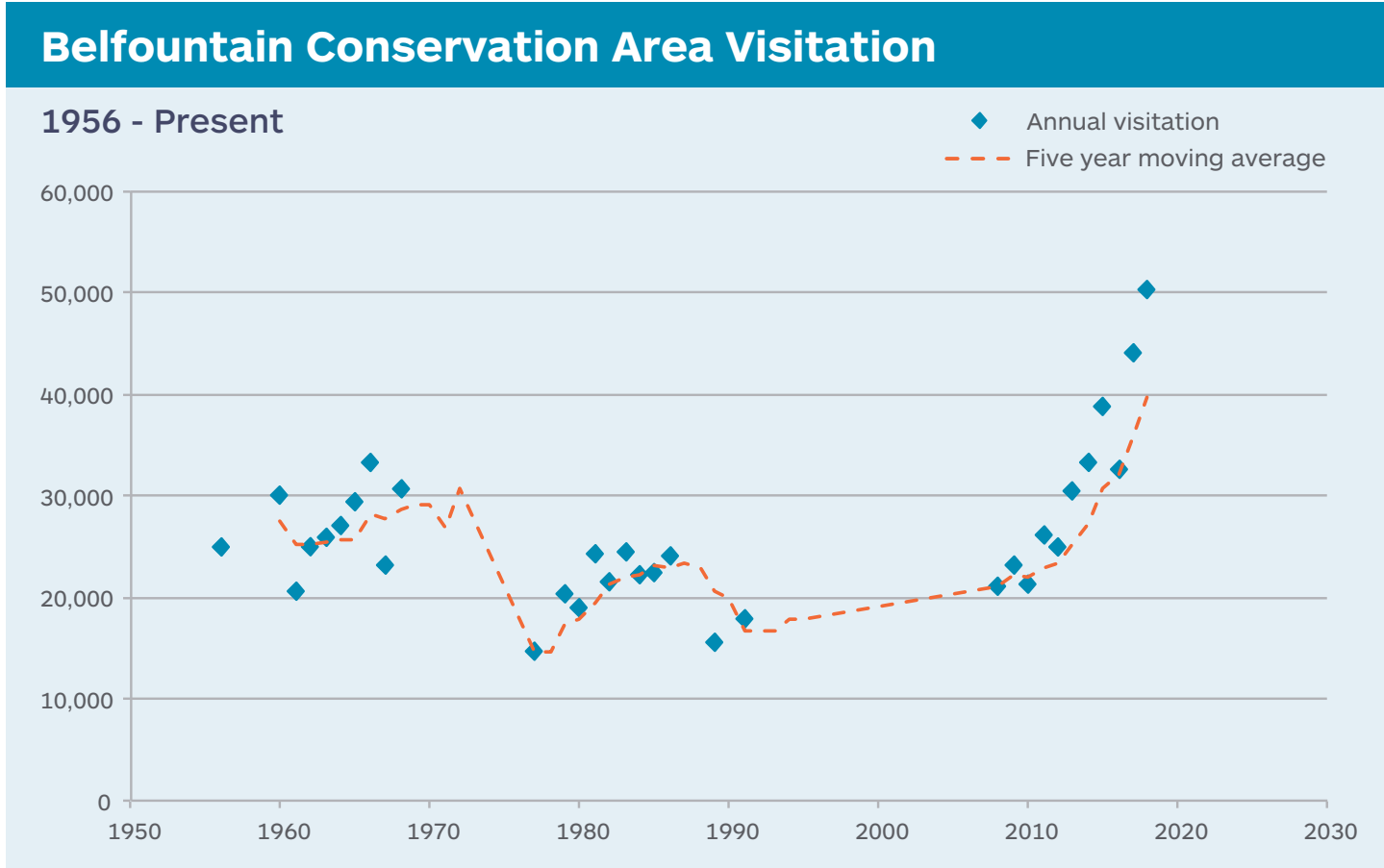


Figure 1: Belfountain Conservation Area Historic Visitation (1956-Present)

Belfountain Conservation Area

Daily visitation by gatehouse receipt, 2017

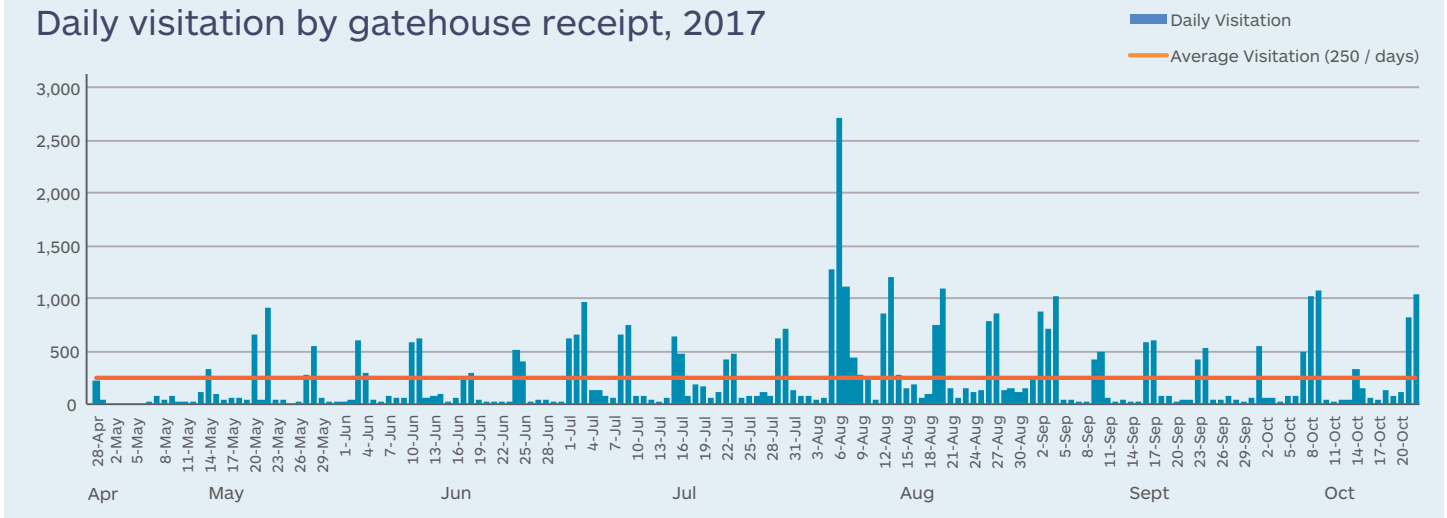
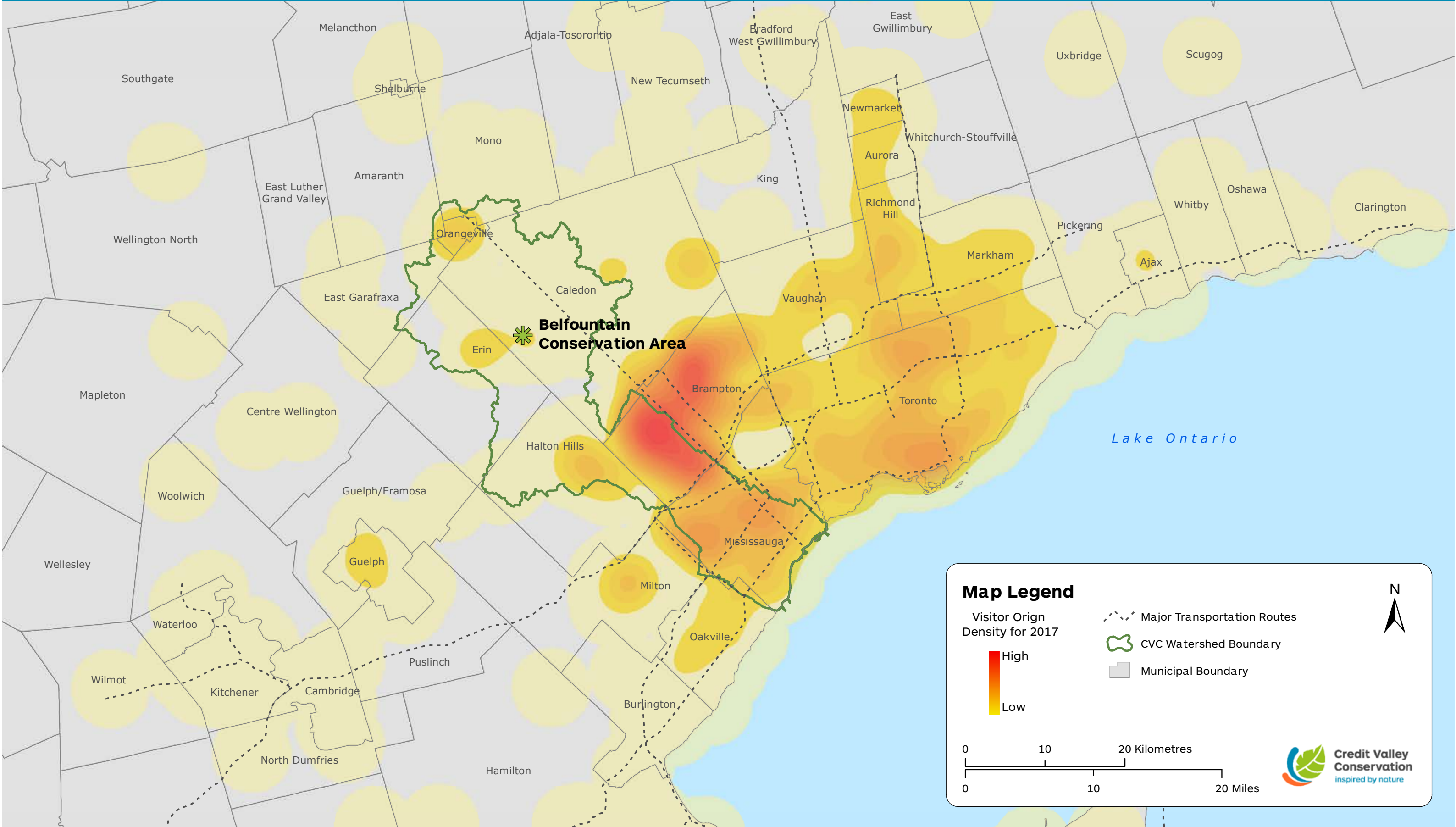


Figure 2: Belfountain Conservation Area Visitation by Gatehouse Receipt 2017

season, visitors travel from a wider distribution area across Southern Ontario. Postal code analysis indicates that the majority of visitors travel less than 60 minutes (50 kilometers) from their home, making the park a reasonable and attractive destination. Most visitors travel with their family, are repeat users or have heard about the park through word of mouth or social media. The average visitor is likely in a small group, enjoying nature by hiking, picnicking or just relaxing and taking in the scenery (CVC 2010).

Increased visitation trends for Belfountain Conservation Area align with findings observed across the region, as Caledon is a growing draw for tourists. Visitors are intrigued by the rural landscape, scenic driving routes, quaint hamlets, local businesses, cultural offerings and recreational destination points. Map 5 shows visitor origin concentrations based on postal codes collected at Belfountain Conservation Area proper’s gatehouse during the 2017 operating season.

Map 5: Visitor Origin Concentrations



The draw of Belfountain Conservation Area, and the surrounding landscape, is not without consequence. Of specific concern in recent years, the popularity of intensive activities such as large group picnics and day-camping¹ has grown, contributing to crowding and low visitor turn-over. The social and health benefits of such an activity reflect the positive influence that parks can have on individual well-being; however they do not exist without an added set of capacity and operational pressures. Crowding, user conflict, and site erosion due to overuse of the grounds are noted visitor impacts, and as such changes to the visitor experience have been a key consideration driving Plan decisions.

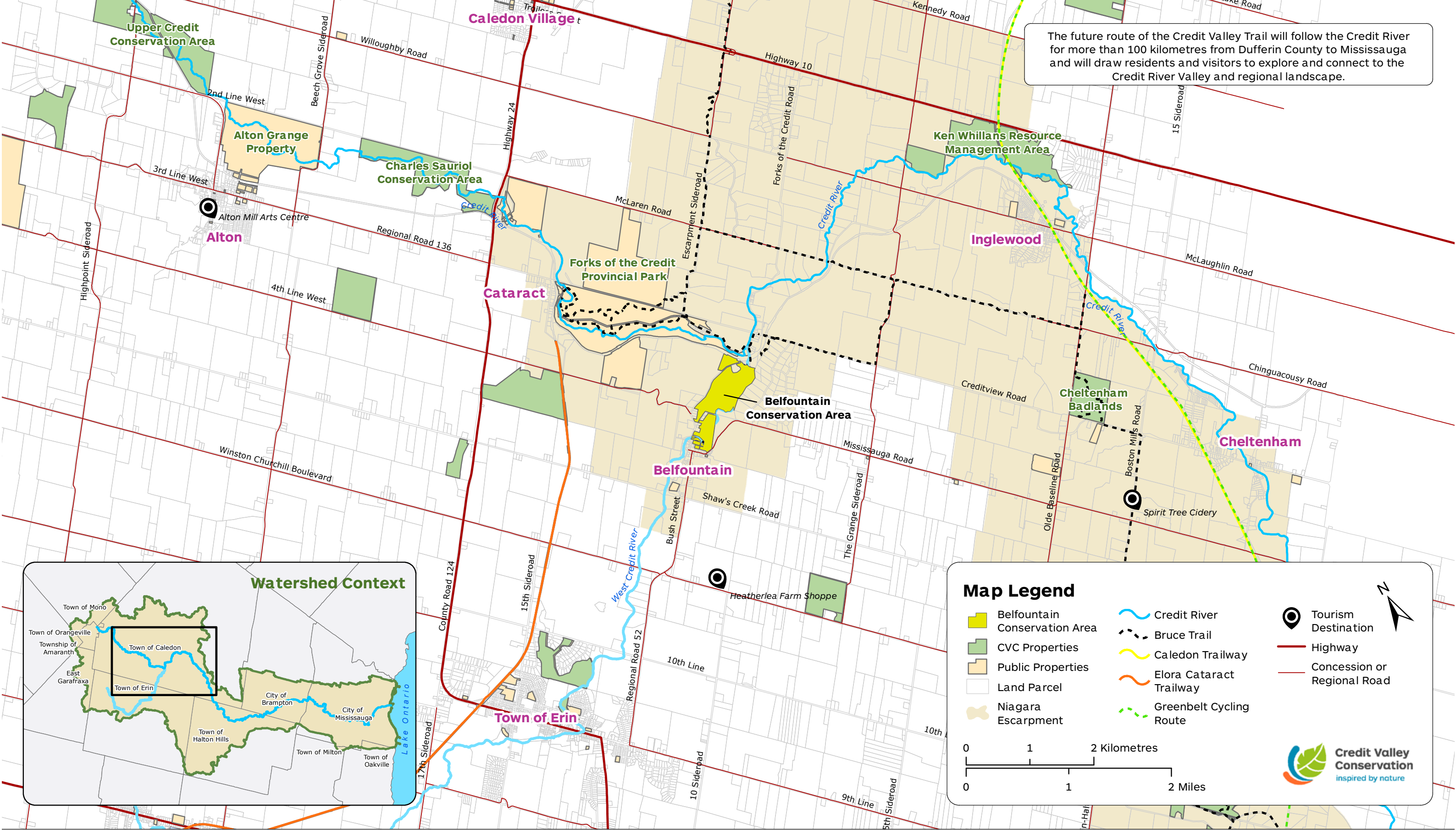
Tourism-related challenges are also being experienced within the hamlet of Belfountain. During peak visitor days, traffic, parking and vehicle congestion is increasingly problematic. The demand on local roads, amenities and resources exceeds capacity, negatively reflecting on the tourism experience and affecting the quality of life of local residents. Community impacts related to security, vandalism, protection of property and concerns over eroding environmental and cultural heritage protection have all been discovered and explored through the management plan process.

Map 6 illustrates tourist destinations and points of interest in the surrounding area. Belfountain Conservation Area acts as an important destination within Caledon, and visitor programming and amenities need to be modernized and strategically integrated with the region's broader tourism framework.

¹ Day-camping is defined as an activity that involves a moderate to large visitor group that sets out equipment; such as tents, barbeques, and games, with the intent to stay for the majority of the day



Map 6: Regional Tourism Context



2.4 Policy Context

Belfountain Conservation Area is managed under multiple layers of policy. The policy context guides the development of the Plan and lays the groundwork for land management by outlining everything from the fundamental purpose of conservation lands and CVC’s role as a land manager, to policies that direct specific activities and development. The key policies that have influenced decision making, site design, and the approval process for the Plan are outlined below.

The multiple, overlapping layers of internal, municipal and provincial policy provide the framework on which the goals, recommendations and directions of the Plan have been structured. Integrating the requirements and insight from policy, provides confidence that the ideas and directions are appropriate and aligned with broader land use planning objectives.



2.4.1 PROVINCIAL LEGISLATION

Provincial legislation directs the management of CVC lands from a variety of perspectives:

Conservation Authorities Act (2018)

The Conservation Authorities Act provides the means by which the province and municipalities can join together to form a conservation authority. The Conservation Authorities Act also provides conservation authorities with the powers to make regulations regarding authority owned lands and provides support for enforcement to address unsanctioned uses or activities.

Provincial Policy Statement (2014)

The Provincial Policy Statement under the Planning Act recognizes the natural, social and cultural benefits of Ontario’s parks and greenspaces and sets the foundation for regulating the development and use of land.

Niagara Escarpment Planning and Development Act (1973)

The Niagara Escarpment Planning and Development Act and the NEP (OMNRF 2017) provide the impetus for protection of the Niagara Escarpment and a consistent management framework for NEPOSS. The NEPOSS Planning Manual (OMNR 2012) outlines the process to be undertaken in preparing master/management plans for NEPOSS. Part 3 of the NEP applies directly to the NEPOSS, of which Belfountain Conservation Area proper and the Willoughby Property are identified as components. NEPOSS objectives are outlined in **Box 3**. The NEP (OMNRF 2017) also dictates how a site may be developed.

Endangered Species Act (2007)

The Endangered Species Act identifies which species are at risk in Ontario and provides tools to reduce the impact of human activity and encourage protection and recovery activities. An

The NEPOSS is a provincially coordinated system that secures and protects significant Niagara Escarpment features and scenic landscapes, and provides the public with opportunities for compatible recreation across the escarpment. The objectives of the NEPOSS are:

- 1 To protect the Niagara Escarpment’s natural heritage resources and conserve its cultural heritage resources;
- 2 To provide opportunities for outdoor education and recreation;
- 3 To provide for public access to the Niagara Escarpment;
- 4 To complete a public system of major parks and open spaces through land acquisition and Master/Management planning;
- 5 To secure a permanent route for the Bruce Trail;
- 6 To protect and enhance the natural environment of the Niagara Escarpment, including the protection of natural heritage and hydrologic features and functions;
- 7 To support tourism by providing opportunities on public land for discovery and enjoyment by Ontario’s residents and visitors;
- 8 To provide a common understanding and appreciation of the Niagara Escarpment; and
- 9 To show leadership in supporting and promoting the principles of the Niagara Escarpment’s UNESCO World Biosphere Reserve designation through sustainable park planning, ecological management, community involvement, environmental monitoring, research and education.

Box 3: NEPOSS Objectives

authorization may be required for development or site alteration within Species at Risk habitat.

Environmental Assessment Act (1990)

The Environmental Assessment Act (EA Act) applies to public bodies, including conservation authorities, and concerns specific types of projects, such as flood and erosion protection. The EA Act outlines a planning and decision making process to ensure that all environmental impacts are considered before project planning begins. The Belfountain Dam and Headpond

Class EA was undertaken in accordance with the EA Act. It is not expected that any additional projects within the property will require this level of planning in the near future.

Lakes and Rivers Improvement Act (2017)

The Lakes and Rivers Improvement Act (LRIA) provides authority to the MNRF to govern the design, construction, operation, maintenance and safety of dams in Ontario. An LRIA permit will be required for the implementation of the works associated with the Belfountain Dam.

Public Lands Act (2017)

The Public Lands Act (PLA) provides authority to the MNR to manage provincial crown lands. The West Credit River, as it runs through Belfountain Conservation Area, is crown land. A PLA permit will be required for the implementation of the channelization works associated with the Class EA.

A variety of other broadly scoped provincial legislation provides high-level guidance to the Plan. These include the Accessibility for Ontarians with Disabilities Act (AODA 2005), the Conservation Lands Act (1990), and the Ontario Heritage Act (1990); the policies and themes of which have been incorporated into the planning process.

2.4.2 MUNICIPAL PLANNING AND POLICIES

Municipal policies and strategies guide the Plan's overall directions and recommendations. Official Plans interpret provincial legislation within a regional context and provide the long-term strategic policy framework for guiding a community's growth.

The directions for Belfountain Conservation Area align with the objectives and policies identified in the Official Plans for the Region of Peel (2016), and the Town of Caledon (2018). A variety of other municipal reports and strategies, such as the Town of Caledon's Tourism Strategy, were also consulted during the development of the Plan.

2.4.3 CVC STUDIES, STRATEGIES AND POLICIES

CVC's conservation areas system is managed under the guidance of key documents that provide the framework for its land acquisition, management and planning programs.

Strategic Plan (2015)

CVC's Strategic Plan (CVC 2015), along with other internal strategies, form the foundation for sustainable management across the watershed, which is achieved, in part, through



the appropriate management of CVC's conservation areas.

Conservation Areas Master Strategy (2018)

CVC's Conservation Areas Master Strategy (CVC 2018b) is the strategic framework outlining the high level directions for CVC's conservation areas system. This document confirms the need for management plans for CVC conservation areas.

Conservation Lands Management Manual (2012)

The Conservation Lands Management Manual (CVC 2012) contains the policies and procedures that guide day-to-day actions and long term strategic vision; ensuring that CVC lands are managed with consistency, relevancy and appropriateness.

Ontario Regulation 160/06 (1990)

From a development perspective, Ontario Regulation 160/06 - Development, Interference with Wetlands and Alterations to Shorelines and Watercourses, is administered by CVC, and prevents or restricts development in regulated areas, which include portions of CVC owned lands.

3.0 Plan Development: A Balanced Approach

The planning process undertaken for Belfountain Conservation Area was comprehensive; not only was a detailed Plan developed, but a Conservation Ontario Class Environmental Assessment for Remedial and Flood Control Projects (Class EA) was also nested into the planning framework (Figure 3).



The Plan was developed under Part 3 of the NEP (OMNRF 2017) using the NEPOSS Planning Manual (OMNR 2012), which outlines the process that an agency should follow to produce a Plan for a NEPOSS property. Based on the specific needs of Belfountain Conservation Area, including concerns raised early in the consultation process and the simultaneous undertaking of the Class EA, it was decided that the Plan would need to exceed the requirements of the NEPOSS Manual in order to adequately understand, evaluate and address the needs for Belfountain Conservation Area.

Through smart policy and thoughtful design, this Plan directs how Belfountain Conservation Area will be physically reshaped to protect important features, while also providing a more meaningful visitor experience. Implementing the Plan means redefining how people use the property; and it acknowledges CVC's renewed commitment to its management. The theme of balance underlies every decision point; from utilizing heritage inspiration in landscape design and architecture, to incorporating habitat into built features, and integrating elements that are sympathetic to the area's significance and contextual landscape.

The Plan for Belfountain Conservation Area will have a 25 year horizon, making it essential that the vision for the property is relevant, achievable and strikes an appropriate balance between objectives by acknowledging the needs of

the visiting public, community neighbours and CVC operations.

3.1 Management Plan Process

The management planning process for Belfountain Conservation Area launched in 2014, after a detailed inventory phase. The compilation of work undertaken through this planning process represents a diligent effort to understand the intricate fabric of the site, and envision a remodeled park for the next generation. Belfountain Conservation Area has been studied and considered more than any other piece of land in CVC's history.

This Plan represents the third management plan to be completed for Belfountain Conservation Area proper. Preceding the current work, the first management plan was released in 1969 to guide early development onsite. An updated plan was developed in 1978 and revised in 1984. 2018 marks the first time that the Willoughby and Cox properties have been integrated into the planning and management framework.

The management planning process included three phases of work: background research, strategic direction development, and final decision making. A summary of this work is provided below.

PHASE I – BACKGROUND STUDIES AND RESEARCH

Phase I is a compilation of baseline investigations and relevant site information. The background phase plays an important role in situation analysis and identifies the opportunities and constraints associated with the study area.

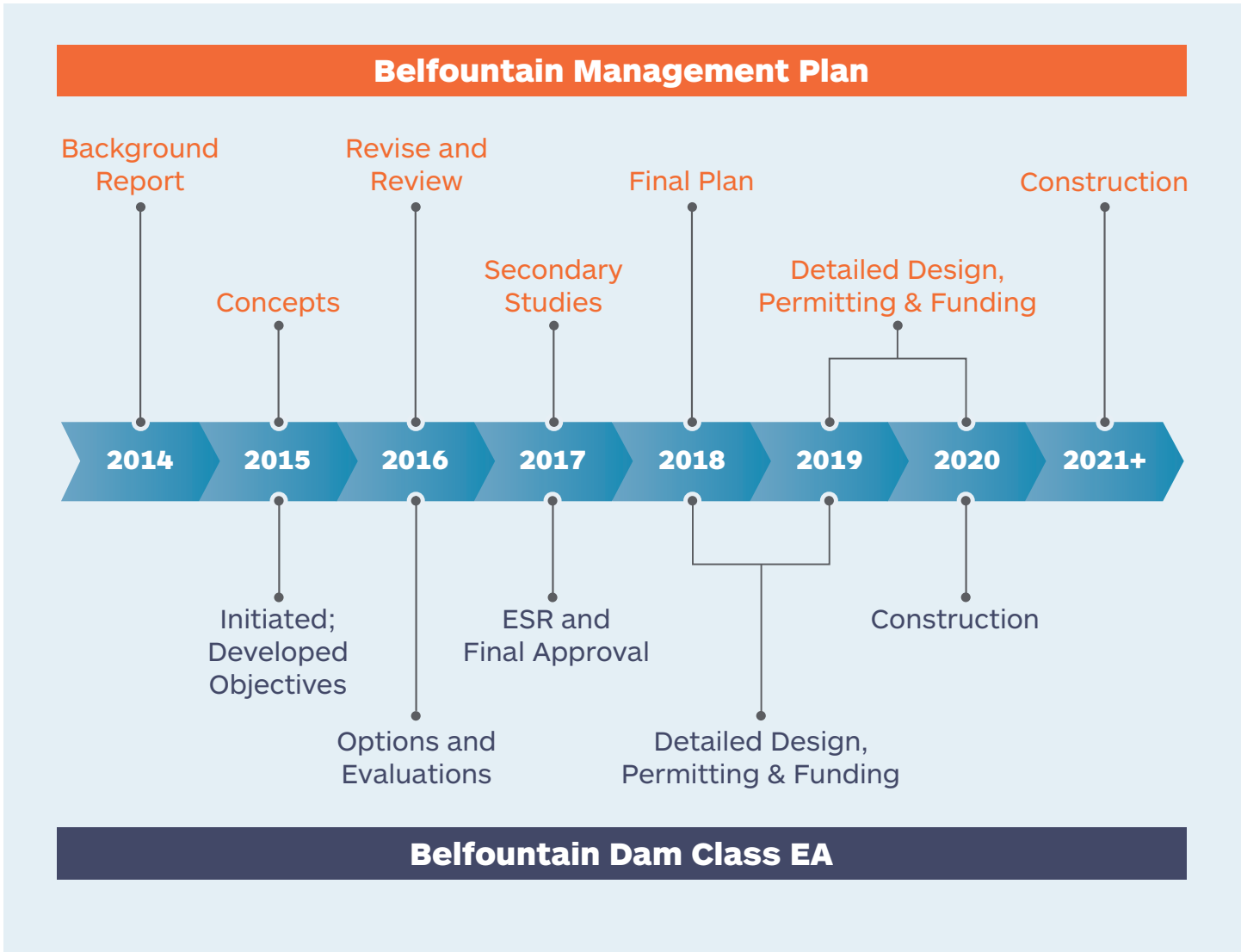
All aspects of Belfountain Conservation Area were taken into account, including the natural heritage, cultural heritage, existing infrastructure and resources, programming, policies, planning initiatives, and the role of visitors and the local community. The background report (CVC 2014a) constitutes a summary of the information used to

inform decision making and should be consulted for additional information about the property. The detailed environmental inventory of the property is captured in the natural heritage characterization report (CVC 2014b).


PHASE II – STRATEGIC DIRECTIONS

Phase II involves the development and refinement of ideas and projects through consultation with the public, stakeholders and various agency partners. The series of strategic directions reports synthesizes the input received through consultation, and documents CVC’s decision making process.

Figure 3 : Parallel Planning Process Framework




The reports prepared in the strategic directions phase tracks decision making and provides the rationale for the selection and prioritization of management recommendations. Three reports have been prepared:




Strategic Directions Report I (CVC 2015):

outlines the draft guiding statements, identifies actionable directives to achieve the objectives and provides discussion on proposed projects.



Strategic Directions Report II (CVC 2016):



builds off of Strategic Directions Report I, and provides discussion on input received through consultation in regards to preliminary recommendations. Options for concept plans and various project plans are presented.



Strategic Directions Report III (CVC 2018a):

builds off of Strategic Directions Report II, by identifying the recommended projects, policies and actions to be carried through to the management plan. This report continues the dialogue of outcomes from public consultation, and provides rationale for decision making, outlining actions that are required for Plan completion.

Several additional bodies of accompanying work were also undertaken during the strategic directions phase, including:

-  Heritage Designation Study for Belfountain Conservation Area (George Robb Architect 2017)
-  Tourism Opportunities Assessment for Belfountain Conservation Area (Sierra Planning and Management and the Tourism Company 2017)
-  Belfountain One Water Feasibility Study (GM BluePlan Engineering Limited 2018)

The content and recommendations of these studies are reflected in the Strategic Directions Report III (CVC 2018a) and have influenced the content and directions of this Plan.

PHASE III – MANAGEMENT PLAN

Phase III is the final management plan. The Plan incorporates the results of the strategic directions phase and presents the final vision and actions for Belfountain Conservation Area.

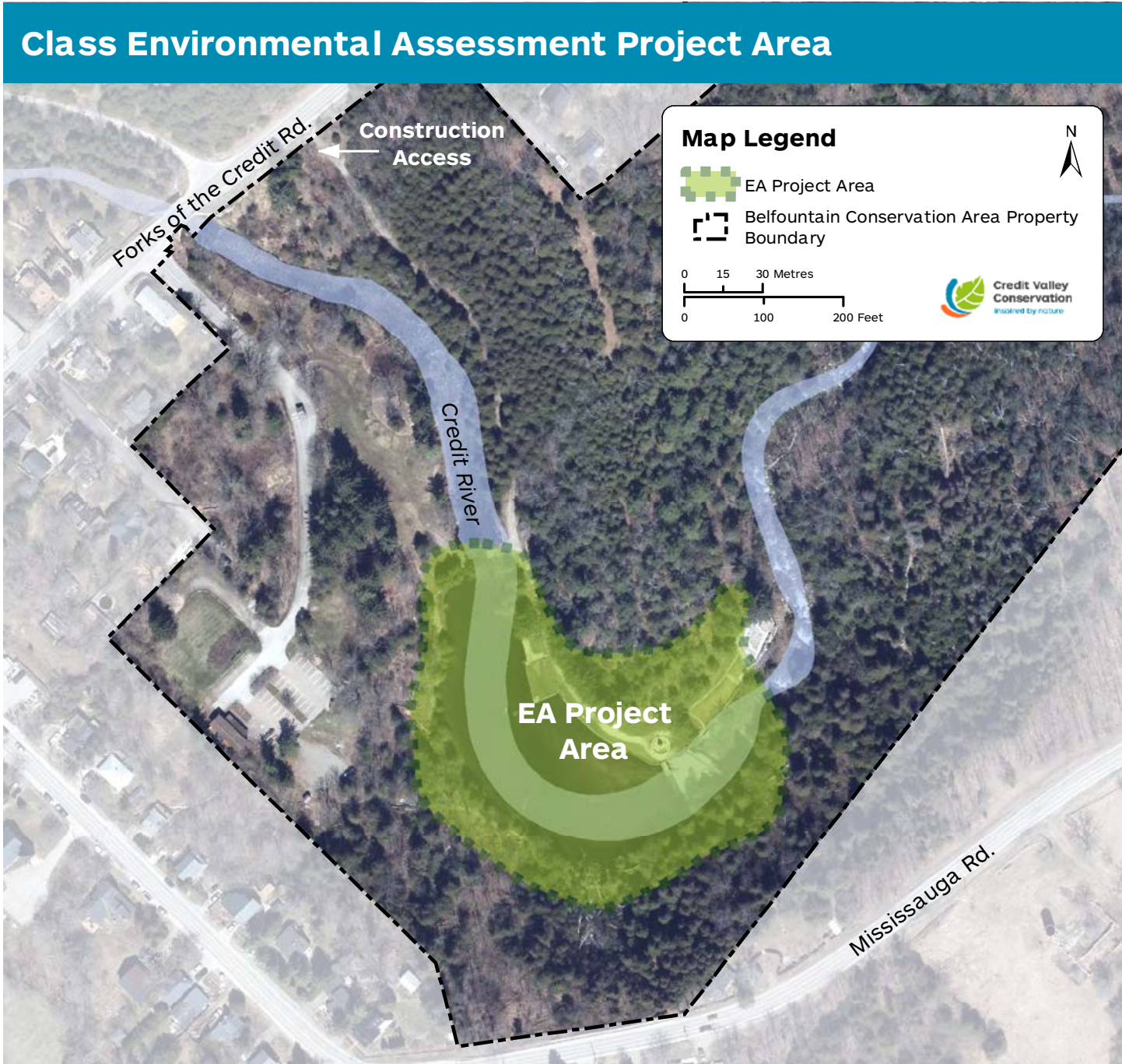
The series of reports that accompany the management planning process forms a package of information detailing the characteristics of the property, how recommendations were developed and the transformation of those recommendations into policies, projects and programming initiatives. The reports should be consulted for additional information about the conservation area, consultation efforts, and the outcomes of the management planning process.

3.2 Belfountain Dam and Headpond Class Environmental Assessment

CVC initiated the Belfountain Dam and Headpond Class EA in 2015 to address safety concerns and environmental impacts associated with the dam, headpond and related infrastructure. Figure 4 displays the Class EA project area within Belfountain Conservation Area proper.

The need for the Class EA was triggered in response to the identification of structural deficiencies with the Belfountain Dam. The Class EA was scoped to address safety hazards, while also integrating responsible solutions for the long-standing issues associated with the

Figure 4: Class Environmental Assessment Project Area



headpond that has been filling with an accumulation of sediment.

The Class EA process was concluded in 2017, with the approval of the preferred alternative by Ministry of the Environment and Climate Change (MOECC). The preferred alternative includes lowering the dam spillway by 1–1.5 metres, removing the sluiceway and creating a naturalized channel through the headpond. The approved project addresses health and safety concerns with the dam, environmental impacts associated with the headpond and meets key objectives related to natural and cultural heritage and visitor experience.

A thorough consultation process was undertaken as part of the Class EA and overall consensus and support for project implementation was achieved across CVC staff, technical experts, agency partners, stakeholders and community members. Further details of the preferred alternative and Class EA process are available in the report series for the project (see Works Cited and Referenced).

3.3 Consultation Summary

Consultation was an integral component of both the management plan and Class EA process. The complexities of the site, coupled with vested interests from the local community, technical professionals and agency requirements necessitated an open and responsive planning approach.

CVC worked with local residents, community partners, consultants and technical experts to vision, refine and realize the goals for developing the Plan. The final iteration of the Plan has incorporated over 1,000 comments received from the community, stakeholders, partners, and staff. Feedback has been taken seriously, impacting policy changes, design considerations, and operational practice.

Measures for consultation were multifaceted, and integrated a range of perspectives into the planning process.

TECHNICAL STEERING COMMITTEE

CVC established a committee of staff experts from across CVC to participate on the Technical Steering Committee. Representatives from park operations, conservation land planning, ecology, fisheries, water resources, hydrogeology, engineering, plan review, education, stewardship,

restoration, and senior management contributed to the Plan by guiding the background studies and research phase, and supporting exercises to vision and refine the outcomes for Belfountain Conservation Area. Additional one-on-one meetings with technical leads were also held in order to support Plan development. **Table 1**

Table 1: Summary of Consultation Activities

Year	Consultation Activities	Technical Steering Committee	Stakeholder Advisory Committee	Public Consultation
2014	Management Plan Launch	•	•	•
2014	Visioning Exercise	•	•	
2014	Class EA Criteria Development	•		
2014	SWOT Analysis	•	•	
2014	Site Tour		•	
2014	CVC Staff Open House			•
2015	Concept Plan Feedback	•	•	•
2015	On-site Information Booth			•
2015	Class EA Launch			•
2015	Guiding Statements Feedback	•	•	
2015	Class EA Objectives Workshop	•	•	
2016	Class EA Preferred Alternative Consensus Workshop	•	•	
2016	Industry Partner Brainstorming Workshop			•
2016	Class EA Preferred Alternative			•
2016	Concept Design Workshop		•	
2017	Cultural Heritage Workshop	•		
2018	On-site Information Booth			•
2018	One Water Study Design Charrette	•		
2018	Final Management Plan Vision		•	•

provides a summary of activities that the Technical Steering Committee participated in over the course of the planning process.

STAKEHOLDER ADVISORY COMMITTEE (SAC)

The SAC was initiated at the start of the Plan as an advisory group. The membership of the SAC reflected several different community groups including the Belfountain Community Organization, Belfountain Heritage Society and Caledon Hills Bruce Trail Club. The SAC acted as a forum to maintain open communication and gather stakeholder feedback. Eleven (11) SAC meetings were held between 2014 and 2018. Meetings were focused on providing updates, soliciting feedback, and building consensus; key consultation activities are summarized in **Table 1**.

PARTNER AND AGENCY CONSULTATION

Partner and agency consultation was held to ensure that Plan outcomes align with external policy and contribute positively towards future partnership development and programming options. Partner and agency consultation was held with: Niagara Escarpment Commission (NEC), Ministry of Natural Resources and Forestry (MNRF), Town of Caledon, Region of Peel, and the OHT. Additional meetings were targeted with local community organizations, Indigenous communities, local businesses, park management professionals and technical experts.

PUBLIC AND VISITOR CONSULTATION

Public and visitor consultation was completed during each phase of Plan development. The public was engaged on six separate occasions throughout the course of the management planning process. The format for public consultation included: open houses, question and answer sessions, a design workshop and drop-in sessions. Conservation area visitors were tied into the planning process through on-site information sessions. A visitor information survey was also completed during the background phase, the results of which are summarized in the background report (CVC 2014a).



Specific details and outcomes of consultation are documented in summary notes and minutes from committee and partner meetings (available on CVC’s website www.cvc.ca/bcmp). Appendix B provides details about each of the public consultation meetings that were completed throughout the management planning process. The strategic directions report series (I, II, III) also includes a narrative on consultation outcomes with implications for Plan directives.

As Belfountain Conservation Area functions as both a neighbourhood greenspace and a regional destination, the community perspective and visitor experience is often at odds. Contention exists, and local residents indicated regional issues like traffic, parking, noise, security and tourism can have a negative impact on their lives. A broad range of perspectives were heard from the community during consultation including how visitors are vital to sustaining local businesses, employment and tourism. **Table 2** provides an overview of the key issues heard during the planning process and how they have been addressed within this Plan. The insights gleaned through consultation brought forward important challenges and opportunities that had to be sorted and realized with appropriate solutions identified.

Table 2: Key Consultation Issues and Discussion

Key Issue	Discussion
Parking and Traffic Congestion	<p>Parking and traffic congestion within the hamlet was a major concern identified by the local community. It has been a difficult subject to address within the Plan because the impacted area is outside CVC’s jurisdiction and involves tourists and other drivers not associated with Belfountain Conservation Area. The following policies have been identified to help alleviate this issue:</p> <ul style="list-style-type: none">• Programming that encourages a shorter stay and visitation during off-peak times• Increased parking capacity within the conservation area• The removal of large group picnics and day-camping to encourage shorter visitor stays <p>The Plan Commitments (Section 5.2) also demonstrate CVC’s dedication to working with our partners toward a resolution for this issue.</p>
Crowding and Visitor Capacity	<p>The increase in visitation observed over the past few years (Figure 1) is consistent with trends seen across the Greater Toronto Area and Ontario. CVC is challenged with managing visitation to a relatively small park while providing equitable access to all watershed residents and visitors.</p> <p>Through this Plan, the impacts of visitation will be better managed to reduce impact on the environment, cultural resources and the community. Examples of this include:</p> <ul style="list-style-type: none">• New trails and improved infrastructure to keep people away from sensitive habitat• Developing new facilities to better manage water and wastewater• Programming that encourages a shorter stay and visitation during off-peak times• The removal of large group picnics and day-camping to encourage shorter visitor stays

Key Issue	Discussion
Vandalism and Security	<p>A safe and secure site is a key consideration of the Plan. Trespassing, afterhours activities and vandalism are concerns in the park as well as in the hamlet. Solutions to prevent and deter these activities are outlined in Section 6.3.3 and include:</p> <ul style="list-style-type: none">• The front entrance gate will be moved closer to the road to improve sight lines and deter parking after hours• More staff presence: with the development of a new visitor centre, staff will be onsite year-round and better able to monitor and manage after-hours use and unsanctioned activities• Crime Prevention through Environmental Design principles will be integrated into site design• Continued communication with the Ontario Provincial Police, neighbouring landowners and local community to monitor and prevent trespassing and illegal activities• Illegal activities will be dealt with seriously and handled as a matter of priority.
Conservation of Cultural Heritage	<p>The conservation and celebration of cultural resources is a Plan objective (Section 5.3) and CVC recently worked with the Town of Caledon to designate the cultural resources of Belfountain Conservation Area proper. The Plan includes:</p> <ul style="list-style-type: none">• Directions to develop a Cultural Heritage Conservation Plan that outlines a monitoring and maintenance schedule for Mack’s Park features• Directions for mitigation measures, when a cultural feature needs to be removed or modified (e.g. the headpond)• Opportunities for interpretation and educational programming focused on the site’s history• Integration of Mack’s character and English Picturesque Landscape style into site design
Low Impact Development	<p>The importance of low impact development, including the incorporation of sustainable technologies and water and energy efficient buildings, was discussed. These comments are reflected in the design of the projects outlined in Section 6.0, as well as the Infrastructure Design and Construction Principles (Section 4.3).</p>

Table 2: Key Consultation Issues and Discussion continued...

Key Issue	Discussion
Interpretation and Education	<p>The lack of site interpretation or any formal educational programming onsite was identified as a missed opportunity. Given Belfountain Conservation Area’s significant natural and cultural resources, interpretation is needed to provide a better visitor experience and celebrate the site’s importance. Section 6.5 outlines CVC’s policies related to programming objectives and opportunities.</p>
Environmental Protection	<p>Protection of significant natural features and functions is a Plan objective (Section 5.3). Every aspect of the Plan considers the environment, and where development is identified, considerations to reduce impacts and incorporate environmentally sustainable design have been made. Examples of this include:</p> <ul style="list-style-type: none">• More than 95 per cent of Belfountain Conservation Area is zoned as Nature Reserve (Section 4.2)• The Infrastructure Design and Construction Principles (Section 4.3) provided detailed direction on environmental protection• The naturalization of the West Credit River and removal of the headpond improves significant coldwater habitat• The development of a site-specific Invasive Species Strategy• Interpretive and educational programming focused on the area’s natural heritage
Public and Private Events	<p>The potential impacts associated with events, such as noise, increased traffic, and litter were a concern for many. The scope of the public and private events that may be permitted at Belfountain Conservation Area is discussed in Section 6.5. The criteria used to evaluate whether a private event will be permitted onsite is described in Section 6.5.5.</p>

Key Issue	Discussion
Community Engagement	<p>The lack of connection to Belfountain Conservation Area that many residents voiced early in the consultation process triggered discussion on how to better engage with the local community. Suggestions received to nurture this relationship are reflected in the Plan, including:</p> <ul style="list-style-type: none">• Free park access to local residents (Section 6.3.2.1)• Opportunities for partnering to develop and provide onsite programming• Continued consultation and engagement during the detailed design of the visitor centre (Section 7.8.1)• Potential for more formal relationship development in the form of a ‘Friends of’ group
Aging and Insufficient Infrastructure	<p>Much of the visitor infrastructure in Belfountain Conservation Area proper can be considered aging or insufficient. This is especially true of the existing washroom facilities and parking lot. CVC operations staff also deal with a lack of space for staff and storage. The projects identified in Section 6.2 have been carefully considered to improve existing or prescribe new infrastructure that is required to meet the Plan objectives.</p>
Potential Impacts to Groundwater	<p>Concerns over the potential impact of the new visitor centre on the local water table were brought forward. CVC retained a consultant (Terraprobe Inc.) to undertake a study to determine potential groundwater impacts. Their report (Geotechnical Engineering Report: Belfountain Conservation Area 2018) determined no impact given the directional flow of the aquifer toward the West Credit River and away from the hamlet.</p>

Reinventing the visitor experience and improving community relations by curtailing negative impacts are key considerations that are closely intertwined. Balancing these considerations, while ensuring equitable access, environmental protection, and conservation of local history, has been the cornerstone for balancing competing objectives. It was noted that compared to feedback received earlier in the process, the final consultation series had an optimistic tone.

Overall, a positive consensus exists, showing that the vision and concepts of the Plan have been well received. Staff reflections show confidence that the public, stakeholders, visitors and partners understand the changes that are being proposed and are generally supportive of the direction that management for Belfountain Conservation Area will take.



4.0 Classification and Zoning

Conservation area classification and zoning supports CVC’s goal of managing a diverse system of conservation areas. Classification and zoning ensures that development and recreational activities are focused at properties and in areas that are most suited for a particular use.

Property classification provides high level direction regarding the role of each property within CVC’s conservation area system as well as within the NEPOSS. All conservation areas within CVC’s jurisdiction fall into one of five classes: Nature Reserve, Natural Environment, Recreation, Resource Management, or Access. This is very similar to the classification framework identified in Section 3.1.4 of the NEP (OMNRF 2017); however CVC does not have any Cultural Heritage class properties at this time.

CVC’s zoning framework closely aligns with the NEPOSS zones outlined in Section 3.1.5 of the NEP (OMNRF 2017) with the exception of a few small wording changes and the addition of a Special Management Zone. CVC’s Natural Heritage Appreciation Zone also supports slightly different activities than the NEP’s Natural Environment Zone. These changes reflect current challenges and opportunities associated with conservation planning at the watershed level.

4.1 Classification

The classifications for the three properties that make up Belfountain Conservation Area are as follows:

4.1.1 BELFOUNTAIN CONSERVATION AREA PROPER: RECREATION CLASS

Belfountain Conservation Area proper has provided generations of visitors with a unique escarpment experience. While it will not offer intensive recreation activities, as do many parks within this class, recreation is ingrained in the character of this park. Recreation refers to any leisure activity that is undertaken for fun or enjoyment that occurs outside of work. For Belfountain Conservation Area proper, recreation is associated with outdoor activities, such as walking, fishing, hiking and passively discovering the unique natural features and character of the site. This Plan proposes a distinct visitor experience that focuses on interpretation and discovery, appreciation, and passive leisure pursuits.

Recreation class parks are described as some of the best recreational environments along the escarpment. Such parks occur naturally or are capable of being developed to provide a wide variety of outdoor recreation opportunities in attractive escarpment surroundings.

Development in these areas provides the facilities and amenities required for a wide variety of day use activities. While more intensive activities may be permitted, they need to be suited to the natural character of the park. Development will occur in appropriate zones within the property and be conducted in an environmentally sustainable manner.

As a recreation class conservation area, Belfountain Conservation Area proper plays an important role as a greenspace provider where people can feel close to nature, engage in a variety of activities and develop a deep sense of appreciation for our natural spaces, as well as the natural and cultural resources of the watershed.

4.1.2 WILLOUGHBY PROPERTY: NATURAL ENVIRONMENT

The Willoughby Property contains spectacular views of the Credit River Valley and a variety of unique historical remnants related to the site’s early industrial practices. While many of these features, such as the Stone Cutter’s Dam, are inaccessible to the public, others, such as the Crowsnest Quarry, can be observed from one of two Bruce Trail side trails that traverse the property.

The protection and conservation that the natural and cultural resources on the Willoughby Property’s warrant, combined with its connection to the Bruce Trail, confirm its status as a Natural Environment class park.

Natural Environment class parks are characterized by the diversity of outstanding natural heritage, cultural features and landscape resources. Management of these areas is directed toward protection of these features and may provide high quality outdoor recreation activities.

4.1.3 COX PROPERTY: NATURAL ENVIRONMENT

With similar natural, cultural and scenic resources as the Willoughby Property, though with the absence of a trail system, the Cox Property is also classified as a Natural Environment class park (see definition in Section 4.1.2, above).

Located at the hairpin turn on the Forks of the Credit Road, the location of the Cox Property makes public access difficult and unsafe. While it does not provide any recreational opportunities, it has significant interpretive value that will be recognized and communicated with visitors in Belfountain Conservation Area proper.

The Cox Property is currently identified as part of the Willoughby Property in Appendix 1 of the NEP (OMNRF 2017). It should be identified as a separate park from the Willoughby Property, which is owned by the OHT and only managed by CVC, as well as from Belfountain Conservation Area proper, which is a Recreation class park.



4.2 Zoning

Property zoning focuses on development, programming and restoration activities in appropriate areas. Each zone represents an area that has distinct management needs based on:

- Existing natural heritage features and restoration opportunities
- Existing cultural heritage features and management intent
- Visitor needs and access
- Suitability for sustainable development
- Opportunities for recreation and interpretation

CVC has defined five management zones: Nature Reserve, Natural Environment, Cultural Heritage, Special Management and Development. CVC has divided the Development zone into three sub-zones; Access, Operations and Recreation, to better reflect the specific attributes associated with each. Development-Access and Development-Recreation zones have been identified for Belfountain Conservation Area. Development-Operations zones are reserved for areas dedicated to CVC operations and are

not accessible to the public. While the staff area in the visitor centre is not accessible to the public, the remainder of the building is; this area has been zoned as Development-Recreation, accordingly.

Special Management zones (SMZ) identify areas that require specific or long-term management. The only SMZ in Belfountain Conservation Area is the Scott Street Right-of-Way (ROW). It has been identified as a SMZ because it provides a non-exclusive, permanent, ingress/egress route to a private residence; a function that requires specific management policies.

Appendix C provides detailed descriptions and outlines the specific permissible uses for each zone. Zoning will be managed according to the objectives of the conservation area, CVC policy and applicable municipal and provincial policy.

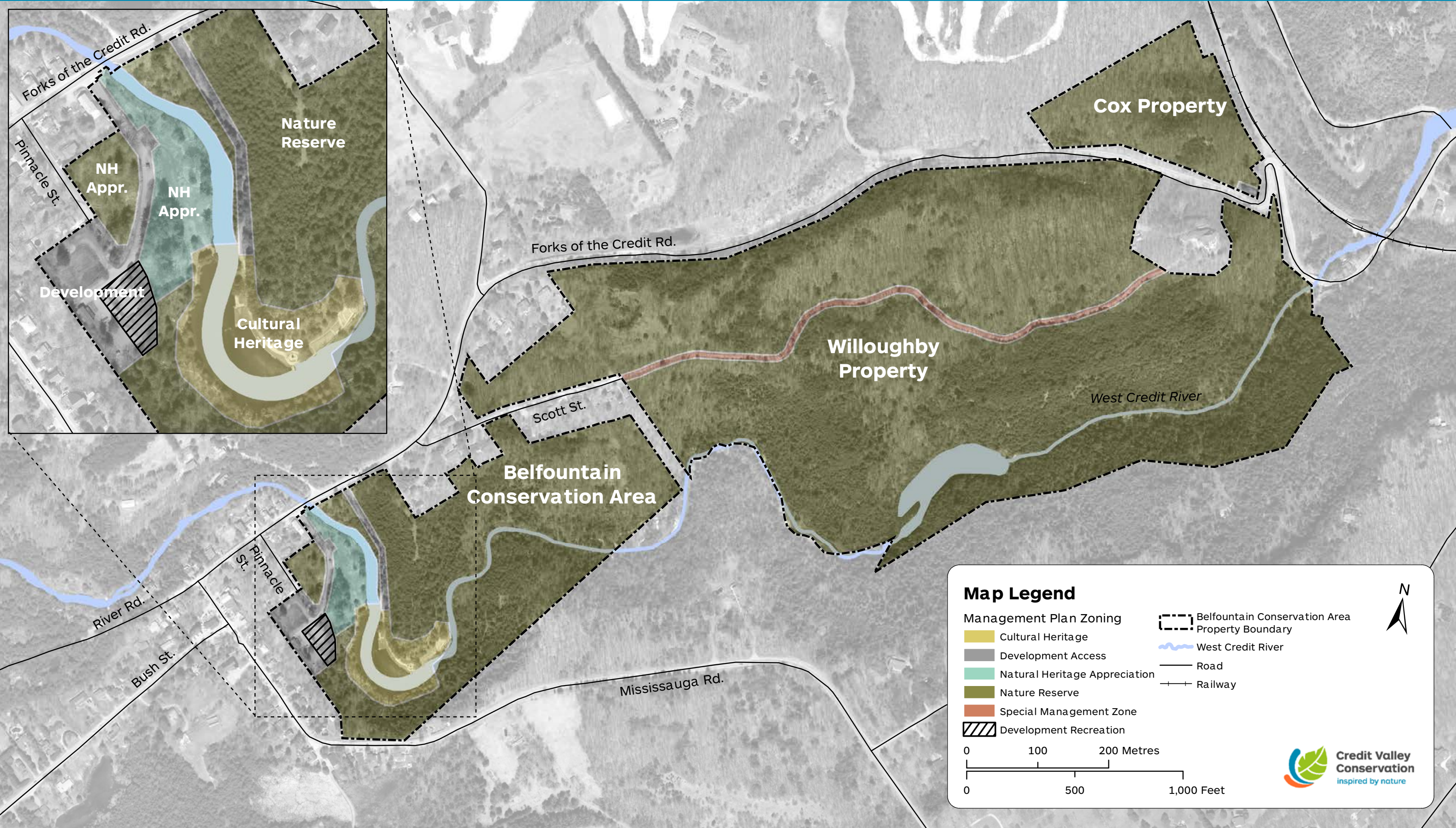
Zone descriptions and priorities for Belfountain Conservation Area are identified in **Table 3**, **Map 7** provides locational context.

Minor changes to zone boundaries resulting from site level planning will not require an amendment to this Plan.

Table 3: Zone Descriptions and Functions in the Belfountain Conservation Area

Zone Type	Total Size Acres (%)	Function	Summary of Permitted Uses
Nature Reserve	130.6 ac (93.6%)	Includes the most sensitive natural heritage features and areas that require careful management to ensure long-term protection.	Management activities may include protection and restoration based activities. Visitor uses are limited or restricted. Development is generally restricted to trails, necessary signs, interpretive facilities (where warranted), temporary research facilities and conservation practices. Development and repair or replacement of essential services may be permitted.
Natural Heritage Appreciation	2.4 ac (1.7%)	Contains scenic landscapes and representative natural heritage features in which minimum development is permitted to support recreational activities that have minimal impacts on the escarpment environment.	Management activities may include protection and restoration based activities. Passive, trail based recreation and limited active recreation opportunities are permitted. These include trails, water-based play and various types of events. Development related to recreation and management activities, such as washrooms, is permitted in identified areas.
Cultural Heritage	2.9 ac (2.1%)	Contains cultural heritage resources that require management to ensure their long-term conservation.	Management activities may include protection and restoration of both natural and cultural heritage features. Infrastructure development is focused on trails, interpretive facilities and other structures to support appropriate recreation and educational opportunities.
Special Management	2.1 ac (1.5%)	Identifies areas that require specific stipulations, policies, or long-term management.	The only SMZ in Belfountain Conservation Area, the driveway on the Willoughby Property provides an ingress/egress function for a Scott Street residence, and will continue to be managed for this function.
Development	1.5 ac (1.1%)	Areas designated to provide access, orientation, recreational or operational facilities (e.g. visitor centres, maintenance centres, parking lots, etc.).	Infrastructure development is concentrated in these areas. At Belfountain Conservation Area, this is limited to driveways and parking areas, as well as buildings that provide visitor amenities and operational facilities.

Map 7: Belfountain Conservation Area Zoning



4.3 Infrastructure Design and Construction Principles

The Infrastructure Design and Construction Principles describe CVC’s approach to implementing the Plan. The principles, reflect many of the comments received during consultation about how the site should be managed and developed. They serve to ensure that the conservation area’s history and environmental features are not eroded, but instead highlighted, celebrated and explicitly incorporated into site design. Aligning with CVC’s zoning framework (Section 4.2 and Appendix C), these principles are intended to provide site level direction while detailed design and construction planning are being undertaken. These principles are specific for development within Belfountain Conservation Area.



The implementation of the Plan will respect the following principles:
Vegetation removal will be minimal; where removal is necessary, compensation planting will be required
Buffers around sensitive ecological features are maintained and as feasible established
Where applicable, development will abide by the timing windows of species that may be affected
As much as possible, features will be located outside of the floodplain. Items located in the floodplain will be designed to withstand and/or accommodate regional flood events
Gardens are planted with native species, where feasible, and promote natural functions
Wildlife-friendly features (such as bat boxes, pollinator gardens and false chimneys for Chimney Swift) are incorporated into site design where possible
Historic viewsapes and aesthetics are maintained; sign placement, equipment storage, and infrastructure development are carefully placed so as not to cause visual distractions
Vandal-proof design is integrated into site plans and building materials
Infrastructure, including trails, bridges, buildings, and rest areas are appropriately designed with accurate reference to the English Picturesque Landscape style
Procurement practices provide a favourable advantage to environmentally responsible products, services and companies
Engineered solutions will be incorporated into building design to ensure the highest standard of structural integrity
Green building design principles are incorporated into infrastructure, landscaping and development projects





5.0 Guiding Statements

The guiding statements for Belfountain Conservation Area outline CVC’s vision, commitments and objectives for the property. Together they describe CVC’s high level aspirations for the conservation area, the desired future scenario and how it will be achieved. Figure 5 illustrates the hierarchical relationship between the guiding statements and how the specific directions identified ultimately support the vision.

Figure 5: Hierarchy and Interrelation of Guiding Statements



5.1 Vision

Set on the Niagara Escarpment with stunning views of the Credit River Valley, Belfountain Conservation Area’s rich history embodies the evolving landscape of the Forks of the Credit, in Caledon. For over 100 years, the historic Mack’s Park features of Belfountain Conservation Area has offered a quintessential public park experience to generations of visitors who have come to discover and enjoy the spectacular scenery and fascinating heritage.

Belfountain Conservation Area will continue to be an iconic destination for families seeking to discover, understand, and form a connection with its unique landscape and history. People from across Southern Ontario will come here to escape their daily routines, be inspired, feel close to nature and experience the enduring curiosities of a century-old park.

Through the actions and investments outlined in this Plan we will celebrate the area’s importance and its spirit, while ensuring that the unique natural and cultural heritage of the conservation area is conserved. We intend to honour

Belfountain’s rich history and ecological importance, while affirming the conservation area’s vitality and relevance as an iconic destination for visitors for the next 100 years.

THE VISION FOR BELFOUNTAIN CONSERVATION AREA IS

Belfountain Conservation Area is a unique and fascinating fusion of nature and history, where generations of people will discover the iconic escarpment and Credit River Valley landscape and where the curiosities of a century-old park will continue to inspire love and connection to this special place.




5.2 Our Commitments

The Plan seeks to revitalize the conservation area by prescribing projects and policies designed to achieve a future scenario that balances public use and enjoyment with the protection of significant natural and cultural heritage, while also serving as an engaged and considerate neighbour.

The success of the Plan will be measured by how well it responds to the key issues raised through the site investigations and consultation process, or drivers, which sparked the need for a new management plan.

MANAGEMENT PLAN DRIVERS INCLUDE:
Impaired riverine and aquatic habitat
Significant habitats and policy restrictions
Safety/condition of the dam and related infrastructure
Increasing and poorly accommodated regional visitation
Lack of appreciation and investment in the Mack’s Park cultural heritage features
Vehicle traffic and unsanctioned parking in the hamlet of Belfountain
User conflicts
Unfocused visitor experience
Aging and insufficient facilities and services for visitors
Lack of sustainable revenue for new capital investments
Lack of formal connection to the local community or local tourism

These drivers have shaped the direction and development of the Plan. They have informed CVC’s guiding commitments, and serve as the foundation for which the Plan will be evaluated. CVC’s guiding commitments, through the Plan, are:

-  To provide a captivating visitor experience that communicates the site’s narratives, and accentuates Belfountain Conservation Area’s unique cultural heritage
-  To be an engaged community partner that works alongside our neighbours and colleagues to mitigate parking and traffic concerns and facilitate an ongoing conversation about conservation area management
-  To be a committed landowner; we know that Belfountain Conservation Area is a special place and we will ensure that the investments made reflect its unique natural and cultural heritage and that care is taken for its ongoing maintenance

5.3 Objectives

The vision and commitments are supported by five objectives that describe what the Plan will accomplish and how success will be measured.



PROTECT
Protect and enhance biodiversity and significant natural heritage features and functions of Belfountain Conservation Area



CONSERVE
Conserve and celebrate the unique cultural heritage of Belfountain Conservation Area



CONNECT
Promote the unique identity of Belfountain Conservation Area, and cultivate its connection with the local community, region and tourism partners



SUSTAIN
Employ innovative, viable solutions to ensure a well-managed, safe conservation area that is financed through secure, sustainable means



EXPERIENCE
Provide visitors with opportunities for sustainable and accessible recreation and to discover, appreciate and experience Belfountain Conservation Area



6.0 Directions

The Plan directions describe the specific projects, such as a piece of capital infrastructure, programming decisions or policy approaches that together will achieve the vision, commitments and objectives for Belfountain Conservation Area. The development of the directions was guided

by the findings in the background report (CVC 2014a), the zoning framework for Belfountain Conservation Area (Section 4.2), the broader objectives of CVC, the NEPOSS, and regional partners, and informed through extensive public, stakeholder, partner and agency consultation.

Table 4 summarizes the relationship between the guiding statements (vision, goal, and objectives), the desired outcomes for the Plan and its directions. Given the nature of many of the directions, they often support multiple, or all, of the objectives and many of the outcomes.



Table 4: Directions and Desired Outcomes

Our Vision			Our Commitments		
Belfountain Conservation Area is a unique and fascinating fusion of nature and history, where generations of people will discover the iconic escarpment and Credit River Valley landscape and where the curiosities of a century-old park will continue to inspire love and connection to this special place.			1) To provide a captivating visitor experience that communicates the site’s narratives, and accentuates Belfountain Conservation Area’s unique cultural heritage		
2) To be an engaged community partner that works alongside our neighbours and colleagues to mitigate parking and traffic concerns and facilitate an ongoing conversation about conservation area management			3) To be a committed landowner; we know that Belfountain Conservation Area is a special place and we will ensure that the investments made reflect its unique natural and cultural heritage and that care is taken for its ongoing maintenance		
	Protect	Conserve	Connect	Sustain	Experience
Objectives What we aim to accomplish	Protect and enhance biodiversity and significant natural heritage features and functions of Belfountain Conservation Area.	Conserve and celebrate the unique cultural heritage of Belfountain Conservation Area.	Promote the unique identity of Belfountain Conservation Area and cultivate its connection with the local community, region and tourism partners.	Employ innovative, viable solutions to ensure a well-managed, safe conservation area that is financed through secure, sustainable means.	Provide visitors with opportunities for sustainable and accessible recreation and to discover, appreciate and experience Belfountain Conservation Area.
Outcomes The desired results	Significant natural features and functions are protected. As much as possible, impacts to natural features are avoided or minimized. Restoration initiatives improve and enhance significant stream, wetland and terrestrial systems. Adaptive site management and the best natural resource management practices are employed. Water resources are conserved and managed for no net impact through innovative servicing.	Cultural heritage features are maintained and function as focal points for visitors. Programming and interpretation reflects the site's history and heritage resources. New development and landscaping in Belfountain Conservation Area proper reflects the heritage and character of Mack’s Park in the English Picturesque landscape style.	Belfountain Conservation Area is regarded as a desirable destination within Caledon for families and all visitors. Relationships with the Belfountain Hamlet, its rural character, community and heritage are cultivated and nurtured. The significance and unique identity of the conservation area is recognized by our partners. Infrastructure enhancements denote Belfountain Conservation Area as a special and unique place for outdoor recreation, nature appreciation and heritage celebrations.	Property and facilities are safe and secure. Conservation area operations are financed through secure, sustainable and innovative means. Essential facilities and amenities serve the needs of visitors and staff. A defined visitor experience promotes a higher turnover rate. Improved facilities and capacity for special events and programming. Traffic and parking concerns associated with visitors are diminished.	People of all ages, interests and abilities are able to enjoy Belfountain Conservation Area. Visitors of varied ages and interests experience meaningful opportunities for natural and cultural heritage appreciation. The property's trail system provides varied experiences for trail users of all ages and abilities. Visitors have opportunities to explore and discover the area through self-guided opportunities and programming.
Implement Management Plan: Infrastructure Construction					
Directions What’s required to achieve the outcomes	Lower the Belfountain Dam and create a naturalized channel. Develop and implement a detailed Restoration Plan. Manage non-native invasive species through a site specific strategy. Develop and implement a Salt Management Plan for the new parking area. Integrate ‘One Water’ servicing solution for new infrastructure. Monitor seeps, springs and rare Tufa formations. Monitor the health of the environment in the conservation area and apply adaptive management. Integrate Species at Risk and habitat planning into infrastructure elements (e.g. visitor centre Chimney Swift habitat; minimal curbing for salamander movement). Minimal lighting based on International Dark Sky guidelines.	Prioritize the monitoring and maintenance of cultural features. Invest in the restoration and protection of the cave, fountain and stonework based on a Cultural Heritage Conservation Plan. Maintain historic viewscales; ensure signage and infrastructure are unobtrusive. Develop an interesting and engaging cultural heritage interpretative program. Implement the Infrastructure Design and Construction Principles and consult on detailed design of key elements to ensure they are historically sympathetic. Integrate Parks Canada’s ‘Standards and Guidelines for the Conservation of Historic Places in Canada’ into conservation decision-making. Offer unique Belfountain and Mack’s Park literature and branded items for sale.	Identify strategic, mutually beneficial partnerships with our regional tourism partners. Celebrate the park as a unique component within the Niagara Escarpment UNESCO World Biosphere Reserve. Look for opportunities to develop physical linkages between the conservation area, hamlet and the surrounding landscape. Develop a “Friends of” partnership that scopes and organizes fundraising initiatives and events. Promote opportunities for outreach including hosting neighbourhood events, providing free access for local residents and offering reduced fees for visitor centre rentals. Offer local businesses a first-right-of-refusal for potential partnerships for concession sales. Develop and implement a Construction Communications Plan to manage disruptions to park use during implementation of the Plan.	Work with our partners to alleviate traffic congestion and parking pressure during peak times across the Belfountain area. Assess events to evaluate impacts, including noise and traffic, and identify mitigation measures. Inventory, assess, monitor and schedule land care needs. Prioritize property surveillance and enforcement and resolve encroachments. Routinely monitor and maintain dams and related infrastructure. Create an endowment fund that will be accessible for major maintenance and long-term land care needs. Create a defined visitor experience and circulation route. Ensure signage and site infrastructure promotes circulation and complements the visitor experience. Implement a new fee schedule that includes surge pricing and off-peak incentives. Work with the CVC Foundation to develop a Fundraising Strategy to implement the Plan.	Assess and monitor the current trail system; develop a Trail Plan and implement upgrades, closures and re-routes as required. Schedule programs and events that appeal to a wide audience during off-peak times. Work with the community and our partners to host the annual Salamander Festival. Work with the community and our partners to design interpretive materials and programming. Develop interesting, dynamic displays for interpretive programming in the visitor centre. Where practical, ensure all new visitor amenities and materials meet or exceed current accessibility standards (AODA). Integrate a flexible, affordable pricing structure into the new fee schedule. Consider client needs and language diversity when preparing materials and programming.

6.1 Belfountain Conservation Area Visitor Experience

The visitor experience, and connecting people to the conservation area, is a fundamental aspect of this Plan and several of the directions are focused on improvements and enhancements in this area. The main recreational experience is focused in a 2 ha (5 acre) portion of Belfountain Conservation Area proper that encompasses the Development, Cultural Heritage and Natural Environment zones (Map 7). Accordingly, infrastructure development related to visitor and operational services has been concentrated in this area.

Map 8 illustrates the conceptual plan for Belfountain Conservation Area proper and highlights the series of experiences, views and features that visitors can expect on their journey. The features themselves are described in detail throughout this section (Section 6.0). **Map 8** depicts their importance, from a visitor experience perspective, and describes how the elements function in relation to each other.

Map 8: Belfountain Conservation Area Concept Plan



- | | |
|-------------------------------|---------------------------|
| 1. Front Entrance | 9. Pond Loop Trail |
| 2. Gatehouse | 10. Washroom |
| 3. Parking Lot | 11. Lily Pond |
| 4. Visitor Centre | 12. Heritage Gardens |
| 5. Hillside Garden | 13. Belfountain Dam |
| 6. Riverwalk and Day Use Area | 14. Heritage Features |
| 7. Wayfinding Hub | 15. Mack's Cottage Trails |
| 8. Arched Bridge | 16. Terrace |

Belfountain Conservation Area Visitor Features

1 Front Entrance: Visitors arrive at Belfountain Conservation Area by foot, bicycle or vehicle. They are greeted by a low, linear stone wall with a sign welcoming them to the park. Existing trees and shrubs provide a limited yet enticing view of the river, and along with the wall, direct visitors. Grade separated curbs delineate pedestrian and vehicular traffic.

2 Gatehouse: The new gatehouse provides an area for gathering away from the main road during busy times. The automated pay system controls fee interactions, and staff is present during peak times to provide customer service. Two accessible washrooms are available, but are not the focal point and are hidden by a vine-covered trellis.

3 Parking Lot: Visitors arriving by car will find parking in an easily navigable lot. Drop off laybys for cars and buses are provided directly adjacent to the visitor centre, as are accessible parking spaces, and electrical vehicle parking spaces.

4 Visitor Centre: The visitors centre serves as the primary focus for BCA's interpretative displays and programming. A large terrace overlooking the hillside garden provides an opportunity for visitors to gather at the beginning or end of a visit, while the building itself screens the park from the parking lot, acting as a gateway to the rest of the property.

5 Hillside Garden: The path to and from the visitor center is an accessible meandering trail that switches back over the tree covered hill a number of times. The uphill side of the path is a stone wall that resembles the site's original stone terracing. At each switchback a small landing allows for a momentary pause. Existing mature trees shade the path while new native shade plantings provide seasonal interest.

6 Riverwalk and Day Use Area: An accessible path promotes visitor circulation in the day use area, while the large lawn continues to provide opportunities for programming and events. Wading and water play in the river are facilitated through two water access locations.

7 Wayfinding Hub: Whether accessing Belfountain by foot through the front entrance, or from the pathway down the Hillside Garden, the majority of visitors will pass through the circulation hub located west of the arched bridge. Accompanied by a fire pit and low seating area, wayfinding signage will direct visitors to the different areas, trails, and park features, allowing them to decide the path of their journey.

8 Arched Bridge: The new arched bridge will provide an elevated view both up and down the river and towards the heritage gardens. The bridge recalls bridges from English picturesque landscapes, and is a key location for visitors to have their photos taken.

9 Pond Loop Trail: The duff trail has been replaced with a boardwalk that takes visitors into the forest before leading them to platforms overlooking the river and heritage gardens. The platforms provide rest areas and align with gardens on the opposite shore of the river, visually joining the two sides.

10 Washroom: The pumphouse has been renovated into a single washroom facility to service hikers and visitors enjoying the heritage gardens.

11 Lily Pond: The lily pond gives visitors an alternate and more contemplative water experience. Interpretative signage speaks to the history of the pool and boathouse previously located at this site.

12 Heritage Gardens: The Belfountain dam's existing headpond will be replaced by a naturalized channel and the new landform that is created will knit seamlessly together with the existing landscape. The area features a curved path, raised planting beds, gentle steps, and a landscape that orients views across the river. The headpond's cement retaining wall has also been incorporated into the landscape, providing interest to the terrain.

13 Belfountain Dam: The historic Belfountain Dam will remain in its location, but will be lowered to facilitate the flow of the new channel. The sluiceway will be removed and the dam's spillway will be increased to its original width. The bespoke façade topping the spillway will be re-established.

14 Heritage Features: The most prominent of Mack's Park features include the fountain, cave and swing bridge, all of which contribute to Belfountain's iconic viewscape. These features embody Mack's Park character and their revitalization and maintenance is essential to the visitor experience.

15 Mack's Cottage Trails: The collection of short trails encircling the foundation of Bide-a-wee cottage has been formalized to allow visitors to discover these unique features. The historic steps and stonework will be restored and subtle interpretative signage denotes their significance.

16 Terrace: The terrace, the site of Mack's original bungalow, was reconstructed in 2015 after a structural failure. The terrace now features an accessible ramp, and its unique site overlooking the Credit River Valley is accentuated by a cantilevered platform, reminiscent of an original look-out.

The Plan directions have been organized into six categories:

1	Infrastructure Development
2	Conservation Area Management and Operations
3	Environmental Restoration and Natural Resource Management
4	Recreation and Programming
5	Community Connections
6	Cultural Heritage Restoration and Management

The directions outlined below are specific and action-oriented to deliver the desired outcomes for Belfountain Conservation Area (as defined in **Table 4**). They represent the major policies and projects for the conservation area, but are not concrete; events and interpretive programs may adjust as new opportunities become available or as trends change. Proposed infrastructure design is conceptual, and the detailed design process will refine these elements and may result in slight variations to exact location or style depending on focused site-level study and iterative review. The directions, however, will guide all conservation area undertakings, along with site management and development.



6.2 Infrastructure Development Directions

Much of Belfountain Conservation Area’s existing infrastructure is aging and in need of reinvestment or decommissioning. While maintenance is routinely undertaken, many facilities, such as the washrooms, are inadequate to accommodate current and forecasted future uses and operational needs. To realize the vision and fulfill the objectives for Belfountain Conservation Area, new infrastructure as well as upgrades to existing structures is required.

Sustainable development is a key consideration of this Plan. In conjunction with CVC’s general land management policies (CVC 2012) and the Infrastructure Design and Construction Principles

(Section 4.3), the directions guide how the conservation area will be managed. Approaches to avoid, minimize and mitigate impacts will be outlined during the construction planning phase.

The infrastructure proposed for Belfountain Conservation Area is described in detail in the following sections:

6.2.1 CLASS EA IMPLEMENTATION: HERITAGE GARDENS

The features and projects associated with the preferred alternative for the Belfountain Dam and Headpond Class EA (Section 3.2) were approved by the MOECC in late 2017. The approved alternative includes lowering the dam by 1-1.5 metres, filling in the headpond and creating a naturalized channel.

The removal of the headpond and resulting naturalization of the river will create a new landform, the design of which has been

integrated into the existing cultural area; this area is referred to as the ‘Heritage Gardens’ and is part of the Phase I project area as outlined in Section 7.2. Extensive landscaping and strategically designed site furnishings are proposed to create a modern, engaging space that fits seamlessly into the Mack’s Park aesthetic (**Figure 6, Figure 7**). The specific project requirements for the Class EA, as well as the new elements identified for the Heritage Gardens, are described in the following sections.

Figure 6: Extent of Heritage Gardens (Class EA Area)



6.2.1.1 BELFOUNTAIN DAM

Located at the approximate site of a mid-nineteenth century mill dam, the Belfountain Dam was constructed in the early twentieth century as part of Charles Wilson Mack’s renovation of *Luckenuf*. As determined by the Class EA, the dam’s spillway will be lowered by 1-1.5 metres. The dam has a river stone façade that creates a unique cascade effect, mimicking a ‘miniature Niagara Falls’; this has cultural value and will be maintained and replicated as the dam is modified. The sluiceway, built by CVC in the 1960’s to control water flow, will also be removed and the spillway will be widened to its original width (**Figure 7, Figure 8**) with geometry options to potentially restore some of the step cascades from the Mack era.

Post-implementation, a dam safety review will be undertaken and new floodline mapping will be

developed. The Operations, Maintenance and Surveillance Manual and Emergency Preparedness Plan for the Belfountain Dam will be regularly updated, as appropriate.

6.2.1.2 NEW LANDFORM: HERITAGE GARDENS

The new landform will be developed by infilling the existing headpond with natural material and creating a naturalized channel. Located on the northwest section of the current headpond, this new land will be approximately 1,600 m² (17,000 ft²) in size. The Heritage Gardens will feature a variety of new elements designed to integrate the new landform with the existing park. While the new land is intended for passive visitor use, it will be located in the floodplain of the new river channel and all of the features and elements described below will be designed to accommodate periodic flooding.

Figure 7: Artistic Rendering of Belfountain Dam and Heritage Gardens





Figure 8: The Dam's Spillway will be lowered and Sluiceway will be removed

6.2.1.2.1 STONE SEATING WALL

A low, sinuous stone wall will function as a point of interest and the primary seating area in the Heritage Gardens (**Figure 9**). The wall will resemble the historic terraces onsite. Low stone steps will orient visitors toward the river and provide contemplative rest areas. Varying wall elevations are designed to ensure that flood events will be conveyed over the land form and modeling at detailed design will confirm performance and influence final designs.

6.2.1.2.2 LILY POND

The concrete foundation of Mack's swimming pool currently exists as a lawn area. The old pool will be excavated and replaced with an offline lily pond. The lily pond will playfully celebrate Mack's history, while also gently paying homage to the removed headpond, providing visitors with an alternate, calm water experience.

6.2.1.3 CONCRETE PEDESTRIAN BRIDGE

The concrete bridge crossing the West Credit River in the day use area will be removed to accommodate the naturalization of the river channel. It will be replaced with an arched bridge that aligns with the English Picturesque Landscape style. Besides providing a unique vantage point and fitting in with the Mack's Park theme, the arch will also permit vessel access, a requirement of the Beds of Navigable Waters Act (1990). The bridge will be placed slightly down stream of the existing structure to accommodate the increased span required. Bridge loading is intended to match weight requirements for light duty vehicles used in park operations. CVC's Technical Guidelines for Pedestrian Bridge Crossings (CVC 2007) will also inform bridge design.

6.2.1.4 POND LOOP TRAIL

The Pond Loop is a 230 m trail that follows the edge of the existing headpond. The dirt portion of the Pond Loop Trail will be replaced with a 130 m raised boardwalk to better accommodate site accessibility and protect sensitive habitat. Built above the 25-year floodline, the boardwalk will be between 2-3 m in width and feature two look-out points with views over the river. The look-out platforms will each be between 45 m² – 60 m².

The existing 100 m boardwalk and stair structure that connects to the swing bridge is also nearing the end of its life cycle and will be replaced at the same time to ensure design continuity and functionality. Accessible surface and grades will be maintained to the greatest possible extent to allow AODA compliance to the southern look-out platform.

Figure 9: Conceptual Design of Heritage Gardens





Figure 10: Visitor Centre - View from Front of Building

6.2.2 VISITOR CENTRE

The new visitor centre will replace the existing 75 m² (800 ft²) workshop and provide enhanced space for conservation area operations and visitor amenities, as well as room for indoor interpretive displays and programming. Placement of the building has been carefully selected to maximize the parking area and focus development away from sensitive habitat, while respecting the geotechnical stability and character of the valley slope. The layout encourages visitor flow and takes advantage of the best views of the valley providing meaningful elements for the visitor experience. The visitor centre will be developed as a conservation showpiece, utilizing innovative, green technologies and sustainable practices with particular focus on water conservation and innovate wastewater servicing using ‘One Water’ concepts (Section 6.3.4).

The building’s aesthetic pays tribute to the design of Mack’s original onsite cottage and uses landscaping to blend into the site. Reflecting the true nature of the conservation area, the visitor centre is a thoughtfully designed building incorporating sustainable technologies and natural materials with Mack’s traditional style and character (Figure 10).

The size of the visitor centre is expected to be approximately 550 m² (5,900 ft²) divided into three separate functions: staff and site operations; dedicated space for visitor amenities, including washrooms and vending; and flexible space that will feature interpretive displays and provide for programming. Accompanying the building is a large outdoor terrace and a wrap-around porch with trellising, which has precedent in the historic cottage designs. Figure 11 provides a schematic of the interior layout of the future visitor centre.

The building features large windows that overlook the conservation area (Figure 12). The building is one storey, with a low roofline, making it approximately 7.5 m in height (Figure 13). It will include representative natural materials, in keeping with historic precedents, and approximately 50 per cent of the rooftop will feature a green, or living, roof. Sustainable technologies and site-specific planning at the detailed design phase will result in a low impact, energy efficient, and wildlife-friendly building that

fits in within the intimate environment of the conservation area.

The building has been conceptually designed with flexibility in mind; a folding partition provides options for the main event space to be separated into two rooms. A stacking glass wall along the southern side of the event space permits the area to be open and accessible for visitors, or closed off to accommodate programming and events.

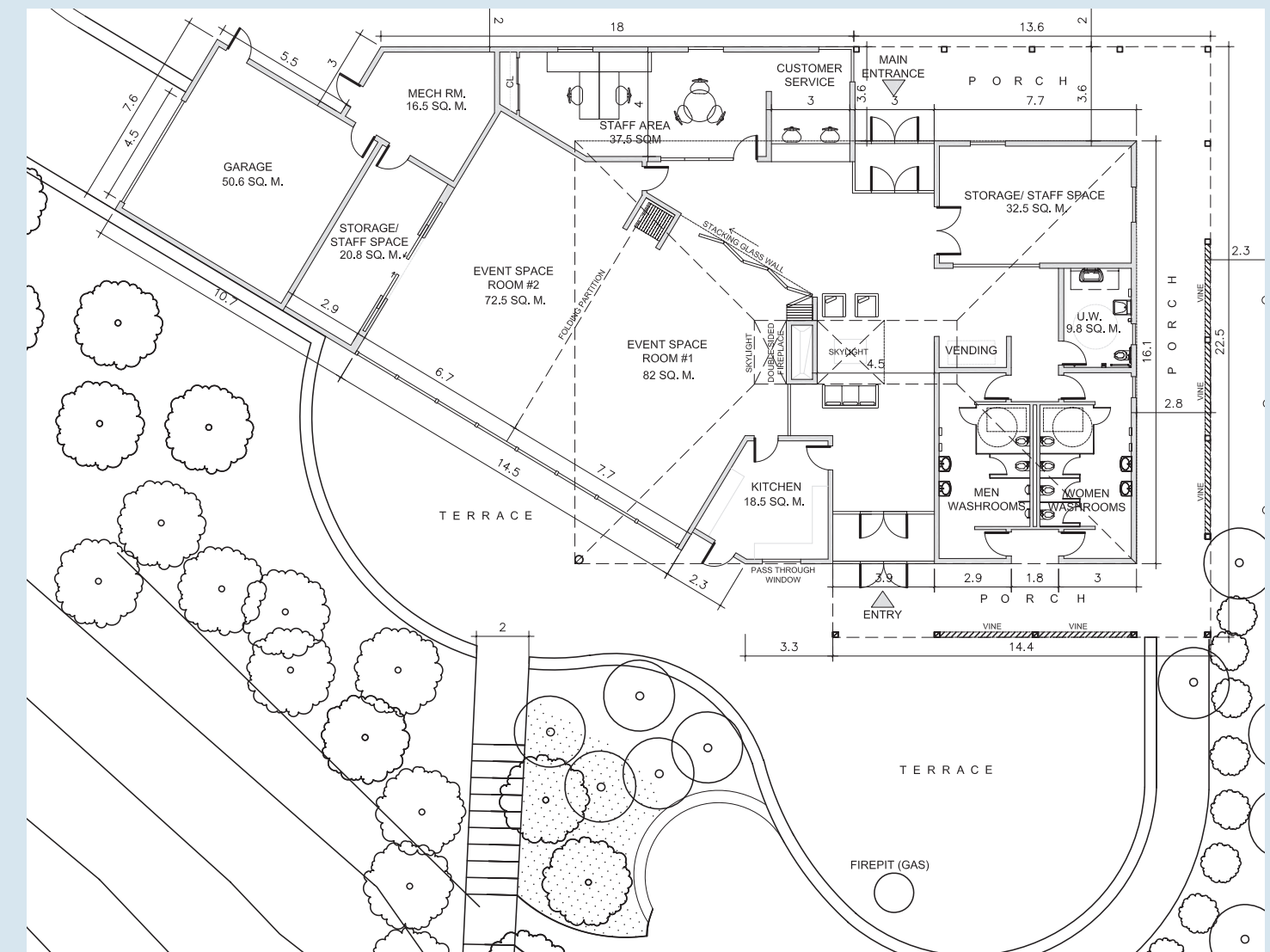


Figure 11: Proposed Interior Layout of the Visitor Centre



Figure 12: Visitor Centre – Artistic Rendering of Back of Building



Figure 14: Proposed Gatehouse – Artistic Rendering of from Front Entrance

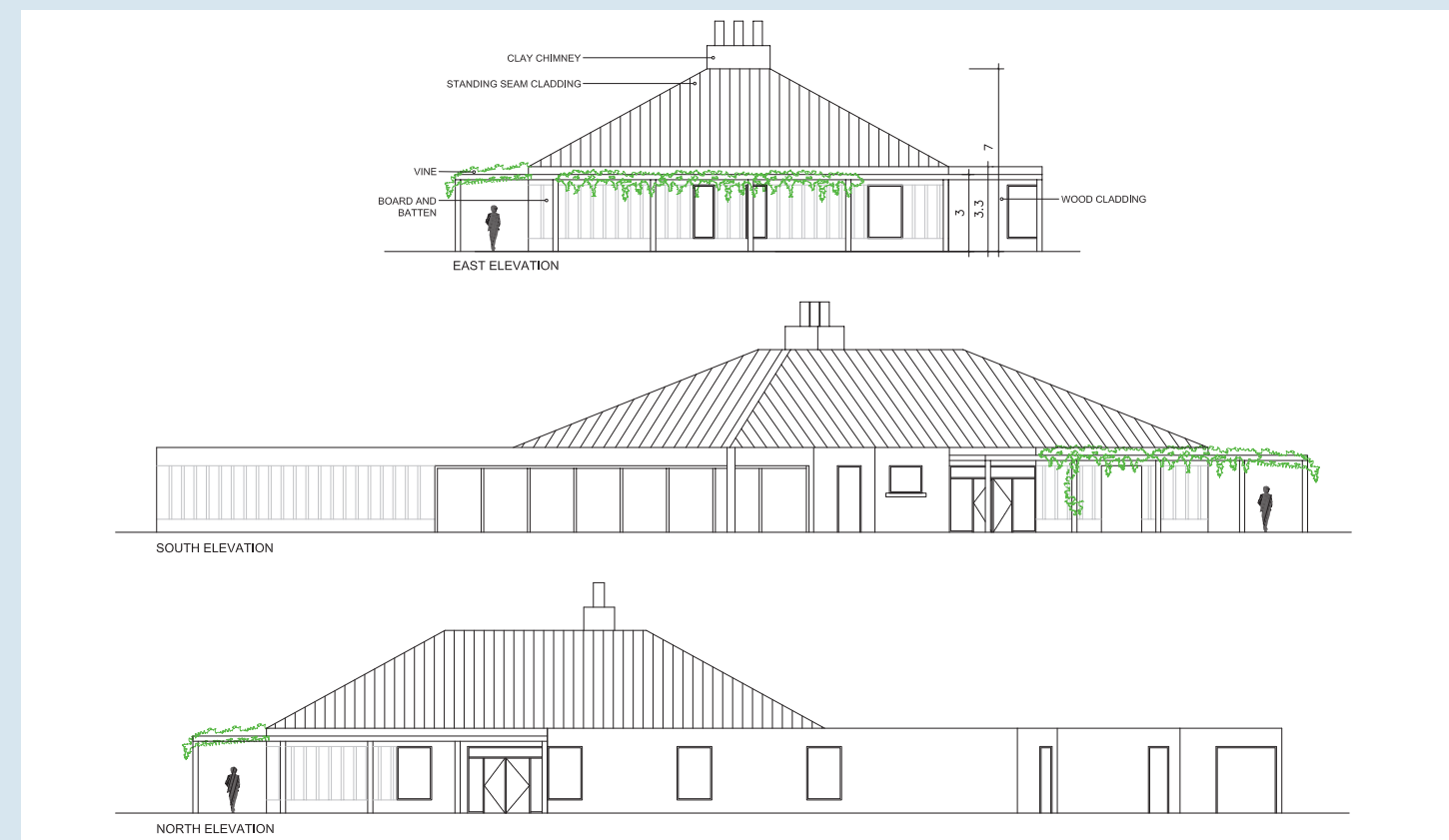


Figure 13: Visitor Centre Elevation

6.2.2.1 CONCESSION

The new visitor centre provides an opportunity to sell food, beverage and merchandise to visitors. CVC will be looking to partner with local businesses to showcase their food, beverages and other products. Depending on interest and product range, CVC may enter into an agreement with one or more local businesses.

Merchandise may also be sold. This may include local goods as well as CVC products, such as Belfountain-specific art, books, gifts, maple syrup and historic souvenirs.

6.2.3 GATEHOUSE

The existing gatehouse was built in the 1990's and is situated in the centre of the driveway. The gatehouse is small and functions as the main point for customer service interactions and fee collection. It lacks charm and curb appeal, as well as the technology required to address challenges related to visitor service and vehicular flow.

The entire front entrance of Belfountain Conservation Area proper, including the gatehouse, has been completely re-envisioned to better accommodate and direct vehicular and pedestrian access (**Figure 14**). The new gatehouse blends into the landscape and will be located on the east side of the driveway. At approximately 75 m² and 3 m tall, it will include a customer service space as well as two accessible washrooms (**Figure 15**). In an effort to alleviate pressure from tourists using washroom facilities in town, the washrooms will be available to both conservation area visitors and local tourists without charge. Water and wastewater servicing will be integrated with the servicing for the visitor centre.

The fee collection function will be redirected to an automated pay system (Section 6.3.2), allowing gatehouse staff to focus on their customer service role. During non-peak times, staff can focus on customer service activities in the visitor centre, and the gatehouse can remain unstaffed.

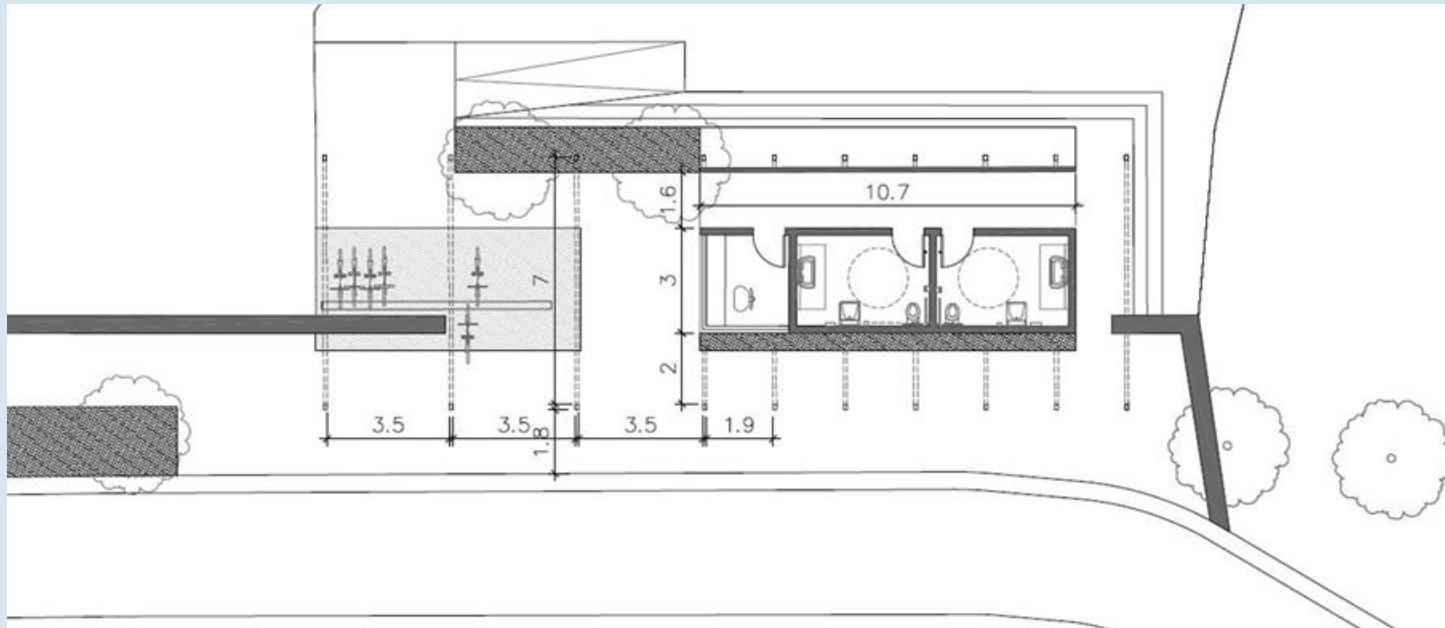


Figure 15: Proposed Gatehouse Layout

6.2.4 PARKING LOT

Belfountain Conservation Area currently has two small parking lots that together safely accommodate approximately 45 vehicles. Improving parking efficiency and capacity has been a key consideration for this Plan.

The proposed parking lot design will:

-  Increase size from 2,000 m² to 3,300 m²
-  Increase parking capacity to approximately 78 designated spaces
-  Designated accessible and green vehicle parking spaces
-  Provide access and sufficient turnaround radius for emergency vehicles
-  Incorporate a lay-by area for cars and buses

The parking area will be comprised of pavement and incorporate Low Impact Development (LID) principles and wildlife friendly design. While the layout of the parking lot has been finalized, studies to confirm stormwater management design are still underway. Minimal curbing will be

used to facilitate wildlife movement across the parking area (Figure 16).

CVC managed parking facilities are not proposed for the Willoughby or Cox properties because of the lack of appropriate space and limited need.

6.2.4.1 SNOW AND SALT MANAGEMENT

The visitor centre and parking lot are intended to be open throughout the year and considerations for snow and salt management are important. A Salt Management Plan that identifies best practices about the use of salt and other materials for snow and ice management will be developed.

6.2.5 STONE STAIRCASE AND HILLSIDE PATHWAY

The existing staircase is the main path of travel for visitors from the parking lot to the day use area (Map 11). Much like the swing bridge, the staircase is considered a designated heritage feature, because even though it is not the original staircase, a staircase has existed in the same location, in one form or another, since the era of Mack's Park. The staircase will be rebuilt in its

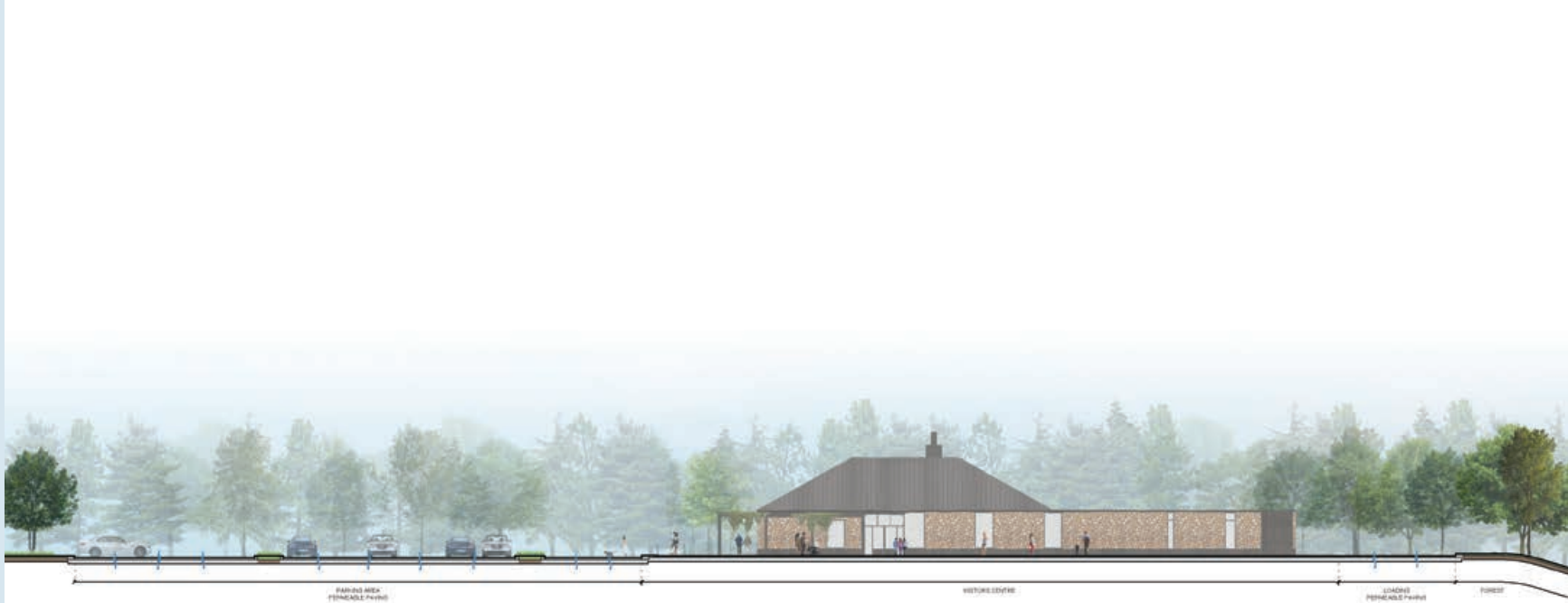


Figure 16: Section Rendering of Parking Lot

existing location. The length-to-rise step ratio will be improved, enhancing safety and visitor momentum, while maintaining important heritage design elements.




A path down the hillside will be developed to provide an accessible route from the parking lot and visitor centre to the rest of the conservation area. To accommodate accessibility standards, the pathway will feature an extensive use of switchbacks. This new 250 m trail will be 2-3 m wide and it will feature a small landing at each switchback in order to provide adequate rest areas. Key detailed design considerations will include retention of trees, protection of root zones, restoration and integration of the existing heritage stone steps and walls.

6.2.6 WASHROOM FACILITIES

The existing washroom facilities are located in the workshop building and are not adequate during peak visitation times and are beyond their design life.

Modernized, sustainable washroom facilities are required to accommodate current and projected

use levels, meet accessibility objectives, and promote a welcoming, family-friendly atmosphere. **New washrooms are planned at three locations in Belfountain Conservation Area:**

-  Visitor Centre: four-unit male and female washrooms, and one family washroom
-  Gatehouse: two accessible washrooms
-  Pumphouse: a single stall vault toilet

Washroom servicing will be based on an innovative 'One Water' approach (Section 6.3.4) which will maximize water conservation, balance the water and waste water flows associated with peak visitation periods, and maintain a very high treatment quality to protect natural features.

6.2.7 SIGNAGE AND INTERPRETATION

Comprehensive interpretive and wayfinding information is critical to the visitor experience. Interpretive information does not currently exist onsite, and wayfinding signage is limited to the main kiosk and Bruce Trail markers.

A Signage Plan will be developed that takes into account Belfountain Conservation Area’s unique environment and the importance of providing information in an aesthetically-fitting, unobtrusive manner. Alternatives to traditional signage will be explored, including utilizing paved markers and plaques, printed and digital guides, and displays within the visitor centre.

Interpretive information will focus on both natural and cultural heritage. The accessible trails will feature child-appropriate signage and themes to encourage learning and exploration for the entire family. Dynamic displays will be showcased within the visitor centre and will contain a wide range of content featuring the site’s unique narratives, interesting and significant features and the history of the Niagara Escarpment.

CVC will continue to work with the OHT and the BTC to identify and install wayfinding markers and other necessary signage along the Bruce Trail side trails.

6.2.8 TERRACE

Overlooking the Credit River Valley, the three-tiered terrace is located on the original site of Mack’s cottage. Reconstructed in 2015 after a slope failure, the terrace now features an accessible ramp and is anchored into bedrock. The existing heritage stone was salvaged and used to rebuild the structure.

Nearby trees provide little shading and options for a seasonal shade system will be explored.

A cantilevered lookout reminiscent of some of Mack’s original follies is also planned (Figure 17). The lookout will pay homage to some of the site’s lost features and provide a unique view of the valley and West Credit River. The terrace has been designated as one of Belfountain Conservation Area’s defining heritage features and the design of these enhancements will complement the style of the terrace. The lookout will be a covered structure (Figure 18), approximately 10 m² and materiality will match the existing terrace.

The terrace will continue to function as an amphitheatre to be used for outdoor programming, educational workshops and events.

6.2.9 LIGHTING

Lighting will be minimal and installed only where required for safety purposes and in accordance with Crime Prevention Through Environmental Design (CPTED) principles.

The importance of maintaining dark night skies for both wildlife and neighbours is recognized, and the following International Dark Sky lighting principles will be applied:

- Minimize the amount of illumination: lighting fixtures and wattage will be reduced as much as possible
- Minimize the area of illumination: lighting will be focused in the parking lot and around the visitor centre; fixtures will be aimed downward to prevent glare
- Minimize the duration of illumination: lights will remain on only when the visitor centre is open
- Minimize the amount of ‘cold’ wavelength illumination: ‘warm’ colour bulbs will be used for outdoor fixtures; LED and high pressure sodium bulbs will be used where appropriate

6.2.10 COMMEMORATIVE BENCH PROGRAM

CVC’s Commemorative Bench Program does not apply to Belfountain Conservation Area. Site furnishings, such as benches, will be specifically developed for Belfountain Conservation Area, and may include customized wood and stone benches similar to Mack’s traditional fixtures.

Future interest in a commemorative program may warrant exploring options for appropriate markers, such as engraved pavers, or etched planks on the boardwalk or bridge.

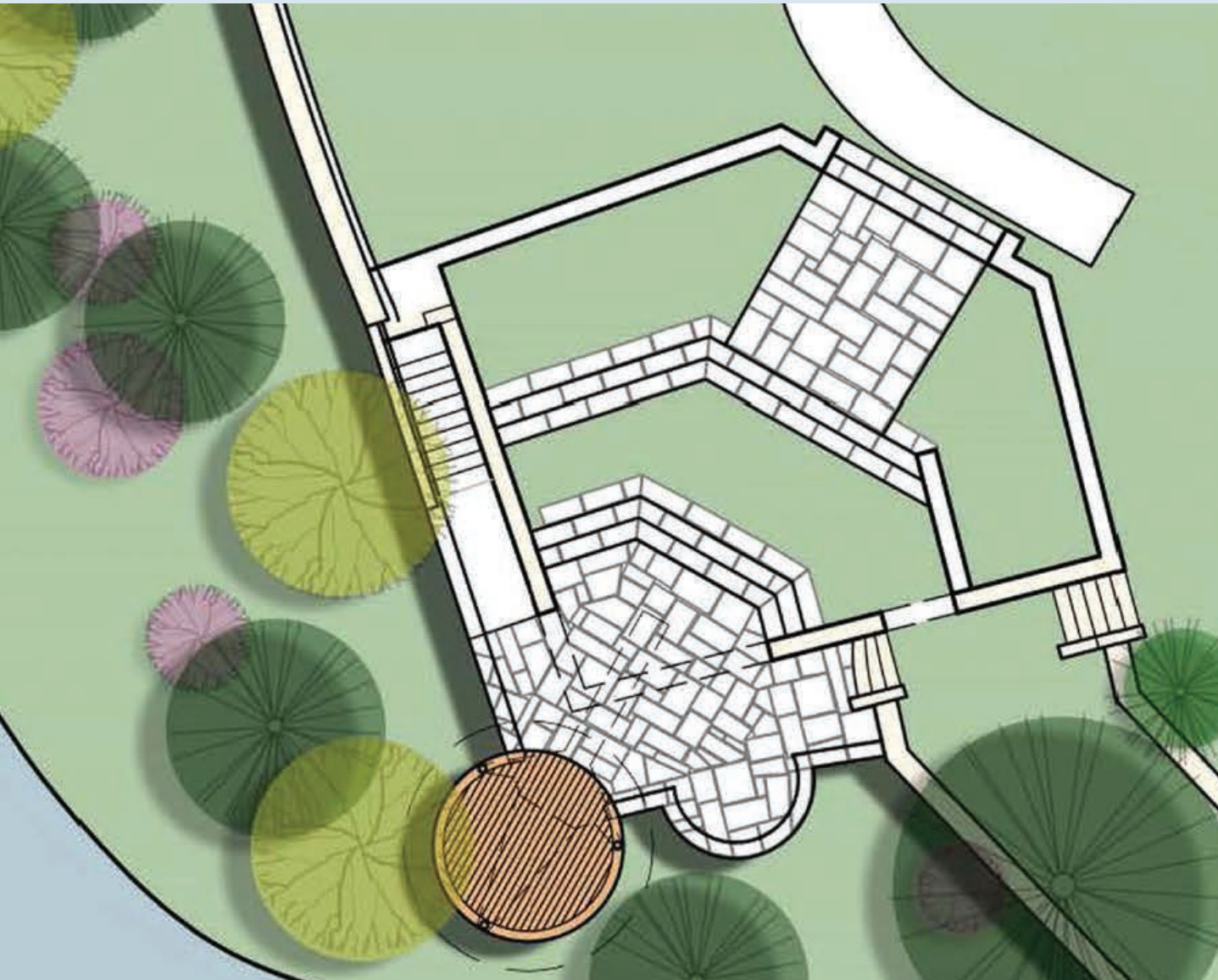


Figure 17: Plan View of Cantilevered Lookout on Terrace



Figure 18: New Cantilevered Lookout on Terrace

6.2.11 STONE CUTTER’S DAM AND CONCRETE WEIR

The Stone Cutter’s Dam and the Concrete Weir are both identified as key heritage features associated with the provincially significant Willoughby Property (Map 9). The design and materials of the two structures, their contribution to the viewscape, and the sound of the rushing waters of the West Credit River were all identified as attributes that embody the cultural value of the property itself. The Credit River Valley is incredibly steep in this location and public access to these features is not provided.

A Statement of Significance has been developed for the Willoughby Property (OHT 2014) that contains the management intent and outlines the objectives for the Stone Cutter’s Dam and Concrete Weir. Given the provincial significance of these structures, the OHT is responsible for their ongoing management.

Map 9: Location of Stone Cutter’s Dam and Concrete Weir

6.2.12 PEDESTRIAN BRIDGES

Three pedestrian bridges cross the West Credit River in the conservation area:

- Concrete bridge (discussed as part of the Class EA in Section 6.2.1.3)
- Swing bridge
- Steel and wood footbridge on the Gorge Loop Trail

The swing bridge and the concrete bridge are designated cultural features. The swing bridge and the footbridge on the Gorge Loop Trail will continue to be monitored and maintained, and will be replaced when required.

6.2.13 RIVER ACCESS

Two river access areas have been identified along the west side of the river. Visitors may fish, wade, and play in the river in a designated area that is sufficiently upstream from the Belfountain Dam.

The remaining riparian area, including portions of the riverbank that are currently used to access the river, will be planted and restored.

6.3 Conservation Area Operations and Management

Belfountain Conservation Area will remain an operational, active conservation area. Changes will be made to allow the site to be open to the public year-round.

General operational elements that are not discussed here are guided through corporate policy, in order to maintain consistency across CVC’s conservation areas system.



6.3.1 SITE ACCESS

Belfountain Conservation Area has several access points:

Primary Access Location:

- The principle access for both visitors and staff is the main driveway off of Forks of the Credit Road

Secondary Access Locations:

- A maintenance road located off Forks of the Credit Road on the east side of the river that is utilized for site operations and set-up for special events only
- A vehicle entry point located at the end of Pinnacle Street that is used for maintenance and service vehicles only; it is not open to the public
- A pedestrian only entry point located on Forks of the Credit Road that provides access to the Trimble Trail
- A pedestrian only access located off of Scott Street that provides access to the Crowsnest Side Trail. In this area a new, short access trail will be developed (Willoughby Bypass Trail, Section 6.5.7.3) in order to enhance site security and manage visitor activity in the area

Tertiary Access Locations:

- Maintenance accesses off of Scott Street provide access to the northern portion of Belfountain Conservation Area. Given the difficult terrain, access from this area to the rest of the site is not feasible
- A small operations access located off the Forks of the Credit Road on the Cox Property is also maintained

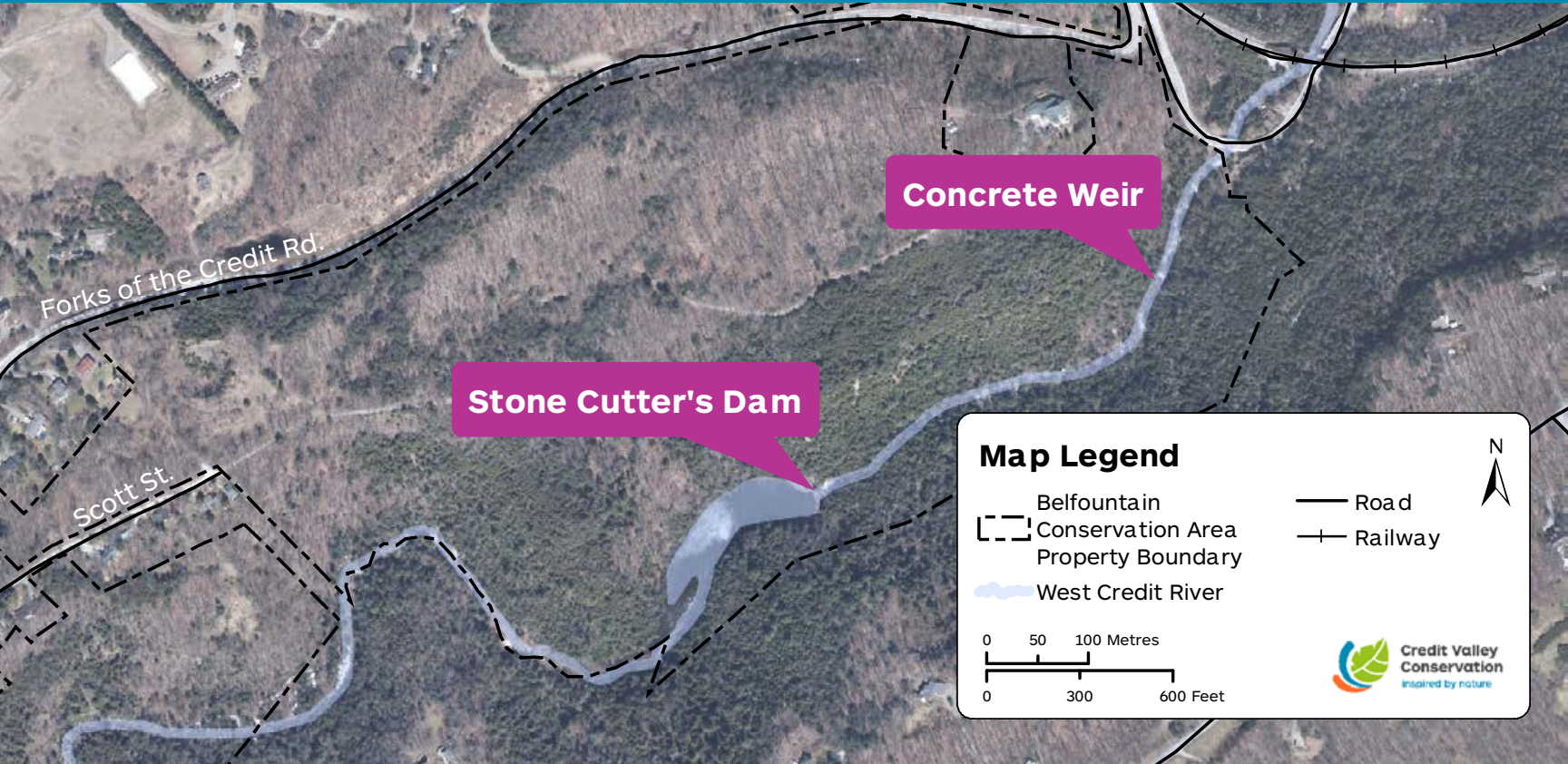
The authorized access locations listed above will continue to be maintained. All other access points will be considered unsanctioned and will be closed and monitored for trespassing.

6.3.2 AUTOMATED PAY SYSTEM

An automated pay system will be installed near the gatehouse in order to increase efficiency of point-of-sale transactions. This new system will allow staff more time to spend interacting with visitors while the automated system manages fee transactions.

The automated system will also provide much needed flexibility for implementing an adaptable fee schedule that can incentivise off-peak use and encourage visitor turnover.

Map 9: Stone Cutter's Dam and Concrete Weir



6.3.2.1 FEE SCHEDULE

A fee schedule, specific to Belfountain Conservation Area will be developed. With the adoption of a new automated pay system, a per-vehicle fee approach will be used rather than an entrance fee. **The new fee schedule will:**

- Identify CVC’s general approach for determining visitor fees and implementing the fee schedule
- Identify when lower visitor fees will apply to encourage visitation during off-season, off-peak times
- Describe free access policies: local community members and classes from the Belfountain Public School will continue to enjoy free access
- Define active transportation policy: walk-in traffic (visitors that park in the hamlet) will still pay a visitor fee; cyclists will not
- Describe fees associated with access for special events

6.3.3 SECURITY AND ENFORCEMENT

The resolution of issues related to unsanctioned uses, boundary line encroachments, security and illegal activities will be managed and addressed through CVC’s Enforcement Program and through partnerships with the OPP and local community.

Enforcement tactics related to correcting unsanctioned activities and behaviours will focus on an ‘education first’ approach before resorting to a more regimented method, such as ticketing.

Park design also represents an important role improving site security. CPTED principles will be integrated into site layout and design. **CPTED principles include:**

- Natural Surveillance (incorporating measures to improve visibility and sight lines)
- Natural Access Control (the selective placement of features such as entrances, exits, and lighting to control site access)
- Natural Territorial Enforcement (the refinement of space to create a sense of occupancy and ownership)

Examples of CPTED principles that will be incorporated into site design include moving the front entrance gate closer to the road to prevent after-hours parking and improved site lines from the new visitor centre.

6.3.4 SERVICING AND RELATED INFRASTRUCTURE

CVC’s philosophy to servicing Belfountain Conservation Area is one of sustainability and innovation. The development envelope in Belfountain Conservation Area proper is small and constrained by natural features. A thoughtful and innovative approach to water and wastewater servicing is required to meet environmental targets and conform to site restrictions (**Map 10**).

Water and wastewater servicing will be guided by a ‘One Water’ approach to water management. A ‘One Water’ approach promotes the use of all water within a servicing system, including drinking water, wastewater and stormwater, be managed to mimic the water cycle. This approach aims to reduce water use to the greatest extent possible, reuse and recycle water onsite and ensures that the local water table is not impacted.

While Belfountain Conservation Area’s water and wastewater servicing system will be fully developed during the detailed design phase, preliminary directions identify a target usage rate

of 5L per visitor, a 75 per cent reduction from the 20L per visitor rate that is commonly used for park facilities. **The system will also feature:**

- Advanced wastewater technology
- Onsite water recycling and filtration
- Flow balancing techniques to manage peak and seasonal usage patterns

6.3.4.1 WATER SERVICING

Water for the visitor centre and the gatehouse washrooms will be supplied by a combination of spring water and water from Belfountain Conservation Area’s well. The spring that currently supplies water to CVC’s workshop will continue to fulfill this role. The onsite well is low-yielding and options for water storage tanks that continually refill are being explored. Studies have determined that increased water usage from these two sources will not impact the water quality or quantity of the local water table or any residential wells (Terraprobe Inc. 2018).

6.3.4.2 WASTEWATER SERVICING

The current septic system for the washroom facilities is located in the turfed area west of the existing parking facilities. Built in the early 1990’s, it is reaching the end of its expected lifespan.

CVC will develop an entirely new wastewater management system. Washrooms requiring wastewater servicing will be located at both the gatehouse and visitor centre. The existing septic system will be decommissioned and relocated. **Map 10** indicates two potential configurations for the new septic field, subject to the outcome of detailed design. The principles of CVC’s ‘One Water’ approach will see wastewater servicing incorporate a septic field, and other technologies that are designed to reduce waste outputs, reduce greywater and ensure that strict nitrogen discharge targets of a strict 3 mg/L are met.

6.3.4.3 NETWORK CONNECTIONS

Business telephone lines are currently installed in the workshop and gatehouse, and will be integrated into the new buildings.

Belfountain Conservation Area has poor network coverage. There is often weak, irregular internet and cellular reception. CVC is exploring options to improve network coverage, which is necessary for daily operations, including the new automated pay system.

6.3.4.4 HYDRO

Electricity for Belfountain Conservation Area, and all CVC conservation areas, is supplied by Alectra Utilities offset by Bullfrog Power, which uses only renewable energy sources.

The existing buildings onsite, including the gatehouse, workshop and pumphouse, all have hydro. Conduit was also installed at the terrace when construction was undertaken in 2015. Hydro and outlets will be brought to the main day use area, heritage gardens, parking lot and bridge to support future operations and programming options.

6.3.5 ASSET NAMING

The naming of assets, including buildings, trails and other features, will be done in accordance with CVC’s Asset and Event Naming Guideline and correspond with the natural, social and cultural features and history of the site.

Existing names, such as the Pond Loop Trail, may be confusing to visitors after the headpond is decommissioned. Naming or renaming assets will be carried out at a later date, once implementation is underway or complete.

Map 10: Servicing Constraints



6.4 Environmental Restoration and Natural Resource Management

As the objectives for Belfountain Conservation Area illustrate, the protection of ecologically significant features is a management priority. Restoration and environmental management activities are guided by corporate policy and industry standards.



6.4.1 CREDIT RIVER WATERSHED NATURAL HERITAGE SYSTEM (CRWNHS)

Belfountain Conservation Area is located in the CRWNHS and contains high functioning and supporting woodlands, valleylands and wetlands; it is also identified as part of a Centre for Biodiversity, areas that contain high quality natural heritage features important for supporting biodiversity over the long term.

The protection and management of the property’s natural features, as part of the CRWNHS is essential for the long-term function and resilience of the watershed’s health. High functioning features are identified within Nature Reserve zones (**Map 7**). Restoration activities such as tree planting and removing the online pond will enhance corridor connectivity and improve ecological health.

6.4.2 GEOLOGY AND HYDROGEOLOGY

The unique environment of the Niagara Escarpment supports striking physiographic, geological and hydrogeological features, such as bedrock outcrops, talus slopes and springs. Previous land uses, specifically the quarrying industry that excavated limestone and sandstone in the mid-nineteenth century, significantly impacted the area’s topography, the impact of which can still be observed, and will be interpreted, throughout the conservation area.

The water and wastewater servicing study has identified both shallow groundwater (spring) and deep groundwater (well) water sources for operational and visitor uses. With high potential for groundwater recharge and discharge features, including the West Credit River and defined seepage areas, development and activities will be focused away from Belfountain Conservation Area’s significant hydrogeological resources.

6.4.2.1 SEEPS, SPRINGS AND TUFAS

Seepage areas and springs can be found throughout Belfountain Conservation Area, and tend to alter their routes down the escarpment each year. These features are fed by groundwater and provide habitat for numerous species, while also benefitting the local fishery by discharging cold water into the West Credit River.

Seeps and springs are also responsible for Tufa, a provincially and nationally rare type of limestone that forms where calcium precipitates out of groundwater seepages. Active tufa formations are noticeable on the north-facing slopes along the Pond Loop Trail and Swing Bridge. Tufa formations create unique habitats for a variety of species, and the formations existing in Belfountain Conservation Area are thought to be some of the largest in Ontario.

Development will avoid and minimize impacts to these features, to the greatest extent possible. The new boardwalk along the Pond Loop Trail (Section 6.2.1.4), for example, will mitigate impacts to seeps and springs along the current trail route. Detailed design during implementation of the Class EA will avoid impacts by carefully considering each feature and the interdependency of these features with each other and the larger ecosystem.

6.4.3 SIGNIFICANT WILDLIFE HABITAT

Various Significant Wildlife Habitat (SWH), including habitat for forest interior breeding birds, seeps and springs, and talus slopes have been identified throughout the conservation area. These areas are located in Nature Reserve zones (**Map 7**). Projects to enhance SWH, such as improving corridor function, are identified in this Plan. Recreation activities, resource management and infrastructure development will avoid the most ecologically sensitive areas.





6.4.4 SPECIES AT RISK

Eleven (11) Species at Risk have been identified within Belfountain Conservation Area, including Jefferson Salamander, Snapping Turtle and Chimney Swift. Appendix A contains a list of all Species at Risk observed within the property.

Provincial Species at Risk recovery plans will be followed and implemented. Development in or near Species at Risk habitat will include sympathetic design, such as minimal curbing in the parking lot to facilitate salamander movement. Integrated habitat into built features, such as a false chimney that can be used by Chimney Swift, will also be incorporated.

6.4.5 INVASIVE SPECIES

Over one-hundred species of non-native plants have been identified at Belfountain Conservation Area, several of which are considered to be invasive. **Key actions identified to manage invasive species include:**

-  Develop a site specific Invasive Species Strategy
-  Implement invasive species management practices based on CVC best practices and the Conservation Lands Management Manual (CVC 2012)
-  Continue to monitor and manage Japanese Knotweed, an aggressive species that has been observed in Belfountain Conservation Area proper
-  Continue to manage or remove Ash trees affected by Emerald Ash Borer to ensure public safety

6.4.6 FISHERIES MANAGEMENT

The management of fisheries resources will focus on habitat protection and rehabilitation with an emphasis on improving the coldwater fishery. Management activities are based on the principle that a healthy fishery is the result of a healthy ecosystem. Fisheries management in the West Credit River is guided by the Credit River Fisheries Management Plan (MNR, CVC 2002), the goal of which is: “Healthy aquatic ecosystems that provide sustainable benefits, contributing to society’s present and future requirements for a high quality environment, wholesome food, employment and income, recreational activity and cultural heritage.”

Management of the Belfountain Dam, the Stone Cutter’s Dam, and the concrete weir are important considerations in fisheries management. The Belfountain Dam will continue to function as a species partition; separating sensitive upstream Brook Trout, a native species, from non-native species that live downstream of the dam. While the Stone Cutter’s Dam was assumed to be impassable, adult Atlantic Salmon have been observed upstream of the dam, indicating potential passages within the structure.

The implementation of the Class EA features the development of a natural channel through the existing headpond. The removal of the headpond will create a narrower, faster moving channel that won’t permit water to stand and warm, impacting the coldwater system. The new channel will also facilitate the movement of fine sediment downstream (it currently collects in the headpond), which is beneficial for fish habitat. Additional design details will be defined and described through the detailed design process.

Belfountain Conservation Area has been a site for Atlantic Salmon stocking as part of the Ministry of Natural Resources and Forestry’s Lake Ontario Atlantic Salmon Restoration Program since 1996, and will continue to be a stocking location.

Monitoring of biomass, spawning areas, and other aquatic features will continue as part of

CVC’s Integrated Watershed Monitoring Program or as directed by the Credit River Fisheries Management Plan (MNR, CVC 2002).

6.4.7 SCENIC RESOURCES AND VISTAS

Belfountain Conservation Area contains a diversity of viewsapes that are important to the visitor experience and intrinsic value of the area. The integration of Belfountain Conservation Area’s built heritage, such as the Belfountain Dam, into the escarpment environs contributes to what makes it a special place and CVC’s most photographed conservation area.

Belfountain Conservation Area and its surroundings, including the Forks of the Credit and nearby Devil’s Pulpit, are located in a landscape unit classified as having outstanding scenic resources by the NEC (NEC 1976). As the only area south of Hwy 89 with this ranking, it conveys the importance of providing access to, and carefully managing the vistas and viewsapes of the conservation area.

Belfountain Conservation Area’s scenic resources are an essential element of the visitor experience and they will be maintained. Public access to viewsapes will be enhanced through infrastructure improvements, such as the cantilevered addition on the terrace and the platforms located on the new boardwalk along the Pond Loop Trail. Care will be taken to ensure that structures, such as signs or buildings, do not limit or impede views.

6.4.8 GARDENS

Gardens and landscaping are planned for the actively used portion of Belfountain Conservation Area. While not considered a natural resource, they are a component of the natural system that can provide habitat and stormwater management functions. They are also accessible to visitors, making them an attractive demonstration tool to communicate benefits and best practices and a potential opportunity for community partnerships.



Species selection will favour native species, though non-native, non-invasive species that provide other benefits, such as being pollinator friendly, drought resistant, or have heritage value, may also be used.

6.4.9 LAND SECUREMENT AND DISPOSITION

Priority properties for securement are identified through CVC’s land acquisition strategies and will

be secured on a willing seller-willing buyer basis. Land disposition will only occur where there is a net environmental gain that helps achieve the goals and objectives of the Plan or CVC’s broader vision.

The acquisition of lands in close proximity to Belfountain Conservation Area may be amalgamated into the conservation area, with the general directions of this Plan applied and will not require an amendment to this Plan.

6.5 Recreation, Programming & Events

A diverse recreation programme will be offered in Belfountain Conservation Area proper; the Willoughby Property will be limited to appropriate, trail-based activities on the existing trail system; and the Cox Property will not be accessible to visitors.



Recreational offerings, whether pre-existing or proposed, have been evaluated based upon:

- Environmental Impacts
- Market Demand
- Social Impacts
- Cost-Benefit Analysis
- Appropriateness
- Liability
- Ability for Staff to Manage

Activities that require specific directives are identified in the following section. Appendix D contains a more detailed list of recreational activities and identifies those that are permitted within the conservation area.

6.5.1 PROGRAMMING AND EVENTS

The development proposed for Belfountain Conservation Area provides ample opportunity for hosting a variety of programs and events in the various spaces on the property, including the day use area, visitor centre and terrace.

The development of a unique and captivating visitor experience is a vital component of the Plan. **Programming at Belfountain Conservation Area will be designed to:**

- Appeal to people of all ages and abilities across a wide market segment
- Attract people during off-peak times, including weekdays and during the shoulder season
- Engage members of the local community
- Educate and celebrate the unique and significant natural, cultural, and social attributes of Belfountain Conservation Area
- Connect with other area attractions, tourism partners, and local businesses

Events and programs will encourage people to connect with Belfountain Conservation Area in unique ways, and may include traditionally unconventional activities for CVC, such as art

exhibits, live music and theatre. A detailed Programming Framework that provides examples of the types of events and activities that are appropriate for Belfountain Conservation Area will be developed closer to implementation. This framework will function as an amendment to this Plan.

6.5.1.1 SIGNATURE EVENT

The Salamander Festival is an annual one-day event, and it is considered to be the signature event for the property. The festival is jointly hosted by the Belfountain Community Organization, CVC, and other local partners, like the Belfountain Public School, Belfountain Village Church, and the Town of Caledon. The festival typically occurs in September with exhibits, vendors and activities located throughout the conservation area as well as the Hamlet. The Salamander Festival will continue to be Belfountain Conservation Area’s signature event.

6.5.2 DAY CAMPING

Day-camping is characterized as a day-long event where visitors set-up BBQs, lawn games and tents or other shelters. Given the demand for space at Belfountain Conservation Area, day-camping is not a permitted activity.

Visitors wishing to day-camp are redirected by customer service staff to an alternate conservation area; those observed conducting the activity may be asked by staff to remove equipment and gear.

6.5.3 PICNICKING

Anchored tables, seating areas and other site furnishings will be provided throughout Belfountain Conservation Area so that visitors may continue to bring outside food, or purchase items from the visitor centre to enjoy. Large group picnics, however, are no longer supported on the site. Visitors wishing to have a large group picnic will be redirected to an alternate conservation area.

6.5.4 FISHING





Opportunities for recreational trout fishing will continue to exist and angler access is permitted throughout the site with the exception, for safety reasons, of immediately upstream and downstream of the dams. Formal river access will be offered in two locations within the day use area (Section 6.2.13). Ontario fishing regulations apply to this reach of the West Credit River.



6.5.5 PRIVATE EVENTS AND SITE RENTALS

The visitor centre, terrace and day use space may be rented for private events.

Private events will be evaluated on a case-by-case basis to determine if they are suitable for the site. **All private events and site rentals will be assessed by CVC prior to approval to ensure that they will not:**

-  Increase traffic congestion during peak times
-  Exacerbate parking issues
-  Negatively impact the experience of other visitors
-  Negatively impact the local community (e.g. noise)

The rental rates will be subject to a fee schedule as approved by the CVC’s Board of Directors.

6.5.6 INTERPRETATION AND EDUCATION

Educational and interpretive programming at Belfountain Conservation Area will focus on the exciting elements of the areas nature, history and cultural attributes.

Self-guided opportunities will be developed with interpretive displays and materials focused in the visitor centre. Formal programs, such as lectures, tours and events will also be developed as part of site programming.

With the new visitor centre providing indoor facilities, there will be opportunity for CVC to develop and host a variety of educational and interpretive programming. The Belfountain Public School will continue to be invited to use the site.

6.5.7 TRAIL SYSTEM

The steep, uneven terrain of the Niagara Escarpment has resulted in a trail system that is rugged and can be difficult to navigate.

Nevertheless, the hiking experience is an integral component of most visits. The range of ages and abilities visiting Belfountain Conservation Area makes the importance of offering a suitable range of hiking opportunities paramount.

In order to accommodate a variety of user needs, trails will be designed and enhanced based on the visitor experience to be provided, such as family friendly, moderate, or challenging. Enhancements, like trail re-routes and surface material improvements, will provide a safer, more accessible trail system.

Through the planning process, a few new trails, and trails with significant upgrades were proposed. Significant development is required for upgrades to the Pond Loop Trail and the new Hillside Pathway; these infrastructure projects are discussed in Sections 6.2.1.4 and 6.2.5 respectively. Additional trails are detailed below and are represented in **Map 11**.

6.5.7.1 RIVERWALK TRAIL

The Riverwalk Trail will be developed along the edge of the lower day use area, creating an accessible loop, to encourage visitor movement and flow. The 170 m trail will be made of limestone screenings, or a similar material that can withstand periodic flooding.

6.5.7.2 MACK’S COTTAGE TRAILS









Mack’s Cottage Trails are an existing series of short paths that lead to the foundations of historic cottages. These duff trails will be improved to reduce the development of unsanctioned trails and off-trail activities. Formalizing a trail route in this area will also enhance sight lines and allow for the interpretation of cultural features. During events on the terrace, these trails will serve as a bypass route to maintain access to the Trimble Side Trail and Gorge Loop Trail.

6.5.7.3 WILLOUGHBY BYPASS TRAIL

The Willoughby Bypass Trail is a roughly 250 m duff trail that will be developed to connect the terminus of Scott Street to the Crowsnest Side Trail. The route was carefully selected to avoid sensitive environmental features. Identified previous to the development of this Plan, the trail is being built in partnership with the OHT to provide a safe alternative to the existing driveway for visitors wishing to access the Bruce Trail side trails on the Willoughby Property.

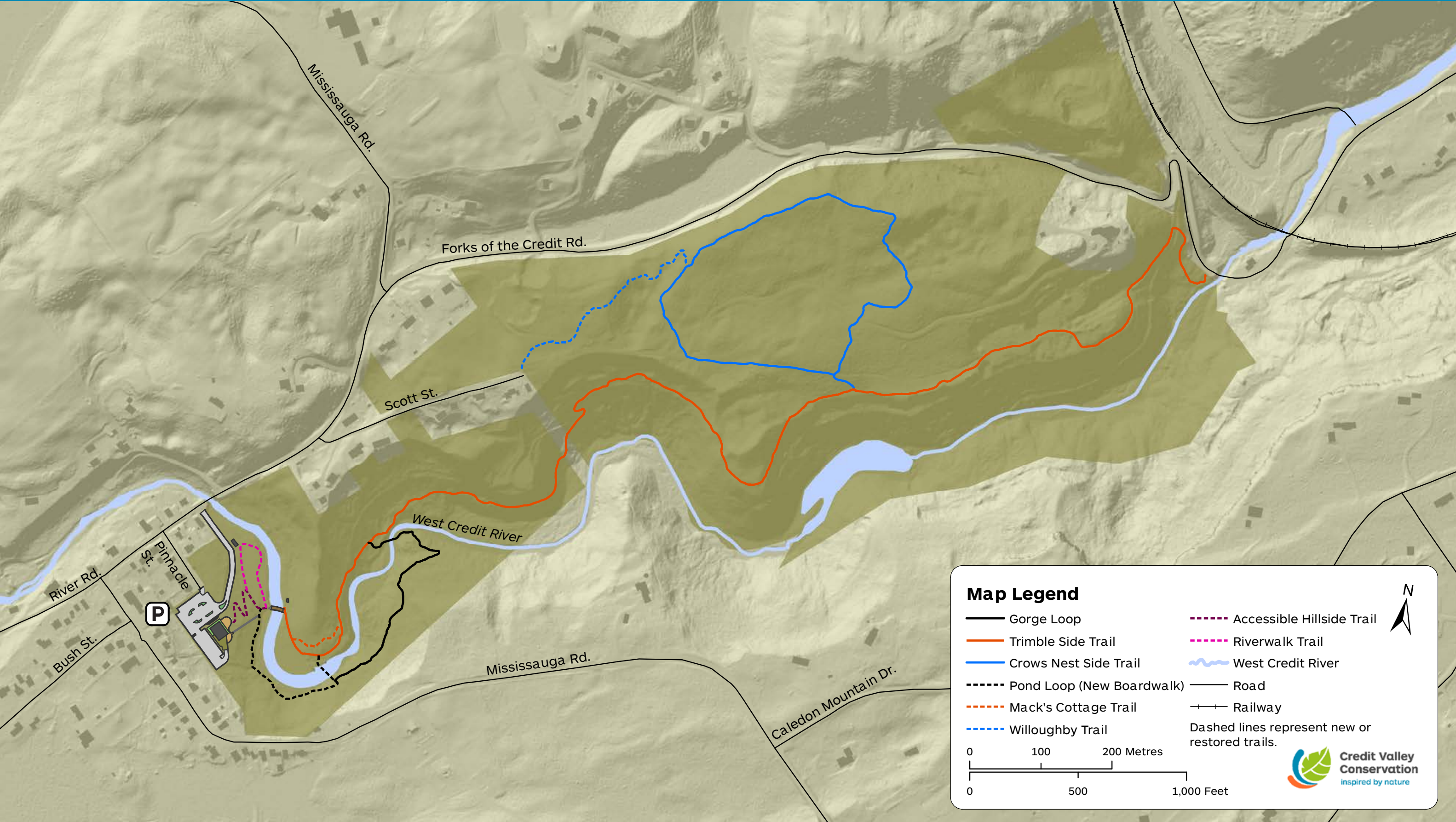
6.5.7.4 TRAIL PLAN

A detailed Trail Plan will be developed specifically for Belfountain Conservation Area. **The Trail Plan will:**

-  Classify trails based on the experience that can be expected
-  Describes trails in the context of accessibility standards
-  Identify where re-routes and upgrades to trails are required
-  Provide recommendations for implementation
-  Illustrate the location and design details of new trails
-  Identify where the closure of unsanctioned trails is necessary
-  Recommend locations for wayfinding signage
-  Identify priorities and estimate implementation costs

The Trail Plan will be developed in conjunction with the development of detailed design for the conservation area. Once complete, the Trail Plan will serve as an amendment to this Plan.

Map 11: Belfountain Conservation Area Trails



6.6 Community Connections

The importance of our existing relationships and our responsibility to develop and foster meaningful, mutually beneficial connections with the community is a key objective and outcome of the Plan. A variety of partnerships or potential partnerships exist and connections with new or unconventional partners will be encouraged and explored through Plan implementation.

6.6.1 MANAGEMENT AGREEMENTS

CVC and the OHT entered into a Custodianship Agreement for the Willoughby Property in 1986. While the OHT retains ownership of the property, CVC manages it as part of Belfountain Conservation Area. The agreement states that CVC will maintain the property and develop a plan that outlines recommendations for its ongoing management.

A 0.44 ha (1 acre) parcel of land was acquired by CVC in 2007 and amalgamated into Belfountain Conservation Area proper. Known as the McCurdy parcel, it was purchased with assistance from the OHT's Natural Spaces Land Acquisition and Stewardship Program (NSLASP). All lands acquired through NSLASP are subject to Heritage Conservation Easement Agreements (HCEA) that place restrictions on the property to ensure its wise stewardship. Directions provided in this Plan adhere to the existing HCEA for the McCurdy parcel.

CVC also has a long standing relationship with the BTC and its local clubs (Caledon Hills) to perform management activities on the Bruce Trail side trails in Belfountain Conservation Area. It is expected that this longstanding, beneficial, partnership will continue.

The objectives and priorities of the management agreements have been considered through the development of the Plan.

6.6.2 LOCAL COMMUNITY

CVC is supportive of the local community and welcomes opportunities to cultivate and nurture this relationship. Partnerships with community groups such as the Belfountain Community Organization and Belfountain Heritage Society have already been reinitiated, but additional opportunities with local businesses, clubs, service groups and others will also be explored.

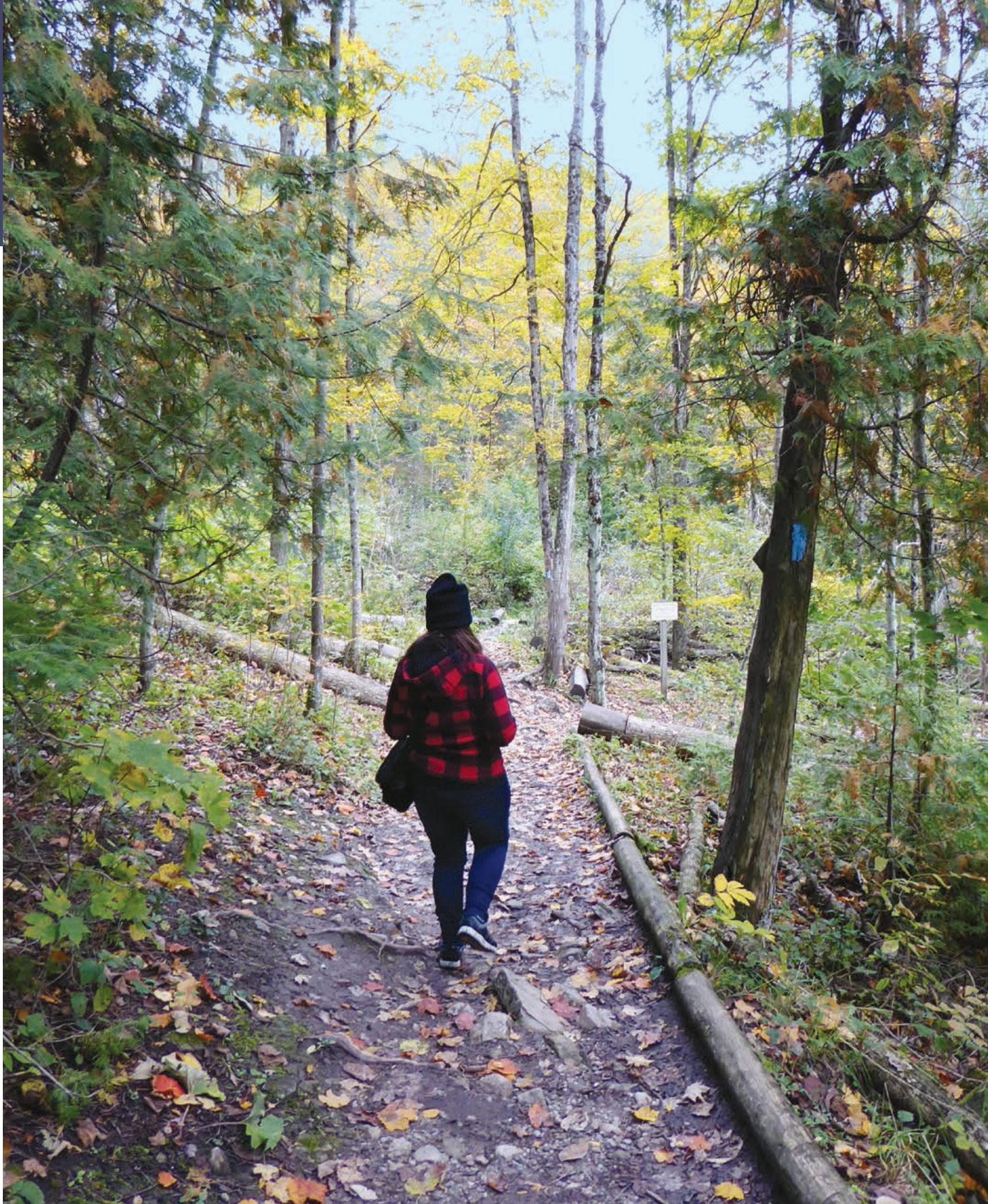
Opportunities to establish (or re-establish) community programs and partnerships, such as a gardening program, will be pursued based on community interest.

6.6.3 FRIENDS OF BELFOUNTAIN CONSERVATION AREA

A 'Friends of' group does not currently exist for Belfountain Conservation Area. The development of such a group, however, could assist with fundraising goals and establish awareness and support for Belfountain Conservation Area. The Credit Valley Conservation Foundation (CVCF) may establish a 'Friends of' group if there is sufficient interest from local community members and stakeholders.

6.6.4 PARTNER INITIATIVES

CVC is supportive of several local initiatives and committees led by our partners. These include the Fall Colours Management Initiative led by the Town of Caledon, along with other programs developed to address local issues, such as parking and traffic management.



6.7 Cultural Heritage Restoration & Management

Conserving and celebrating the cultural heritage of Belfountain Conservation Area is an important and distinct objective of the Plan. The majority of resources located on the Willoughby and Cox properties are not accessible by trail and the unique and fascinating histories of these properties will be interpreted in the visitor centre, through signage in Belfountain Conservation Area proper and historical programming.



6.7.1 BELFOUNTAIN CONSERVATION AREA HERITAGE DESIGNATION

In 2017, the Town of Caledon undertook a process to determine if the portion of Belfountain Conservation Area proper, known historically as Mack’s Park, had merit for designation under Part IV of the Ontario Heritage Act. Of the nine evaluative criteria outlined in Ontario Regulation 9/06 for determining cultural heritage value, Belfountain Conservation Area proper satisfied eight of those criteria. Only one criterion needs to be met in order to merit heritage designation (George Robb Architect 2017).

The heritage designation applies to all of the cultural heritage resources which remain or are known to have once been present in Belfountain Conservation Area proper. This includes the Mack’s Park surviving features, the three (3) nineteenth century mill sites and the former quarry.

The following heritage attributes were identified as the resources that infuse Belfountain Conservation Area proper with historic interest and character:

- Three (3) former sawmills and the abandoned quarry
- Early twentieth century stone and concrete works including the dam, cave (grotto), tiered fountain and its circular pool, retaining walls, steps, walks, circular oven and remnant walls and posts
- The trail beside the pond
- The headpond, its walls and former swimming pool
- The concrete bridge
- The suspension bridge, which is a replacement of the original suspension bridge
- The concrete staircase, which is a replacement of the original staircase
- The terrace, as the site of Mack’s bungalow

While CVC may make structural alterations or other changes to the designated features, mitigation efforts will be carefully considered to ensure minimal impacts to the site’s cultural heritage. Complete replacement of some of these features is proposed, including the concrete staircase and bridge. In some

instances, the designated feature may have to be removed altogether, as is the case with the headpond. In this case, the feature will be honoured through interpretive information and signage.

A heritage permit from the Town of Caledon is required for major alterations to any of the designated features.

6.7.2 CULTURAL HERITAGE CONSERVATION PLAN

A Cultural Heritage Conservation Plan (CHCP) will be developed to ensure that the site’s heritage attributes and the integrity of its cultural resources are managed appropriately. The CHCP will focus on Mack’s Park extant features that have been designated by the Town of Caledon under the Ontario Heritage Act (Section 6.7.1).

The CHCP will:

- Develop management objectives for each feature
- Outline a schedule to systematically inspect features and record change over time
- Identify and prioritize recommendations for appropriate restoration or rehabilitation activities
- Provide recommendations for mitigation measures where alterations to the feature may be required
- Identify supplementary investigations that may be required to assess specific aspects of certain features (e.g. the structural stability of the cave)
- The CHCP will serve as an amendment to this Plan. The Belfountain Dam will be excluded from the Cultural Heritage Conservation Plan. An Operations, Maintenance and Surveillance Manual will be specifically developed for the Belfountain Dam structure.



6.7.3 APPROACH TO CULTURAL HERITAGE MANAGEMENT AND RESTORATION

The Parks Canada ‘Standards and Guidelines for the Conservation of Historic Places in Canada, Second Edition’ (Park’s Canada 2010) is widely recognized as the authoritative Canadian guide to the preservation, rehabilitation and restoration of built form cultural heritage features. The document establishes assessment, decision making and intervention guidelines as well as general non-hierarchical principles to be considered and applied, where appropriate, to a heritage conservation project. CVC will consider and use these Standards for conservation of the Mack’s Park features and to the related built form of the conservation area. Appendix E contains the General Standards for Preservation, Rehabilitation and Restoration for historic places in Canada.



7.0 IMPLEMENTATION

The Belfountain Conservation Area Management Plan is an integrated plan – meaning its directives, policies and development proposals are mutually supportive and highly interrelated, and the success of the Plan depends on implementation of the full suite of recommendations to meet the intended outcomes. Partial implementation or half measures will greatly affect Plan success, as will picking or choosing certain actions or developments; therefore Plan implementation must likewise be integrated, concise and fulsome to meet our challenges head-on and in a responsive way.

7.1 Timing

Proposed conservation area development must begin within five years of MNRF plan approval in order to be exempt from a NEP Development Permit (NEPDA Regulation 828/90 s. 41(iii)). Similarly, the Conservation Ontario Class EA guidelines state that a project must start construction within five years of Ministerial approval; otherwise the Class EA must be updated. **For Belfountain Conservation Area implementation, the approval windows are:**

Table 5: Belfountain Conservation Area Approval Windows

Plan	Approval Date	Works to Commence By
C.O. Class EA	October, 2017	October, 2022
NEPOSS Management Plan	October, 2020	October, 2025

7.2 Development Phasing

The development of the conservation area is proposed to occur in two major phases over a period of approximately five years (Figure 19). As construction of the proposed facilities and amenities is a major and complex undertaking with implications for park and community disruptions, environmental health and safety, and construction management, the development should be focused into the shortest possible timeframes, respecting environmental timing windows and site limitations.

The locations of each phase represent a natural separation point between work sites with distinct types of construction and different planning and permit requirements. They are therefore more easily managed and allow for separation of significant capital investment in focused areas. Advancing the work is subject to CVC being able to secure the necessary funds and the provincial agency and regulator approval processes.

The first phase (Phase I) of development is the Class EA project area, which includes:

- Naturalized channel for West Credit River, modifications and 1-1.5 m lowering of the Belfountain Dam, new landform fill and construction, riparian stabilization and restoration
- Construction of Heritage Gardens, including a new pedestrian bridge, new and replaced elevated boardwalks along the south slope of the Pond Loop Trail, trail construction, landscaping, and new features installation, such as the curved wall, planted berms, and site furnishings
- Restoration of cultural heritage elements, including the fountain, stone steps, head wall caps, former swimming pool (lily pond conversion), and stone walls
- Site servicing related to spring water access and potable water delivery

The second phase (Phase II) of development is the main conservation area and visitor amenities, which includes:

- New visitors centre and related terrace and forecourt public realm
- Hillside garden accessible trail and plantings
- Parking lot reconfiguration and expansion, including bioswales and landscaping
- Road modifications, pedestrian entrance, park gate and related landscaping
- New gatehouse and washroom facility and related staging amenities
- Day use area upgrades, trails and staging, river access points, and riparian restoration
- Site servicing including potable water distribution, water conservation features, grey and black water management systems including septic tanks, balancing tanks and leaching bed
- Site furnishings, caliper tree plantings, and all other outfitting
- Interpretative, wayfinding, and enforcement signage
- Electrical servicing and lighting

The implementation of both Phases I & II requires the full closure of the park for the duration of construction. Additionally, closure of the Trimble Side Trail access point, and/or temporary re-route will be necessary.

Appendix F provides an overview of all of the directions identified in the Plan and estimated implementation timelines.

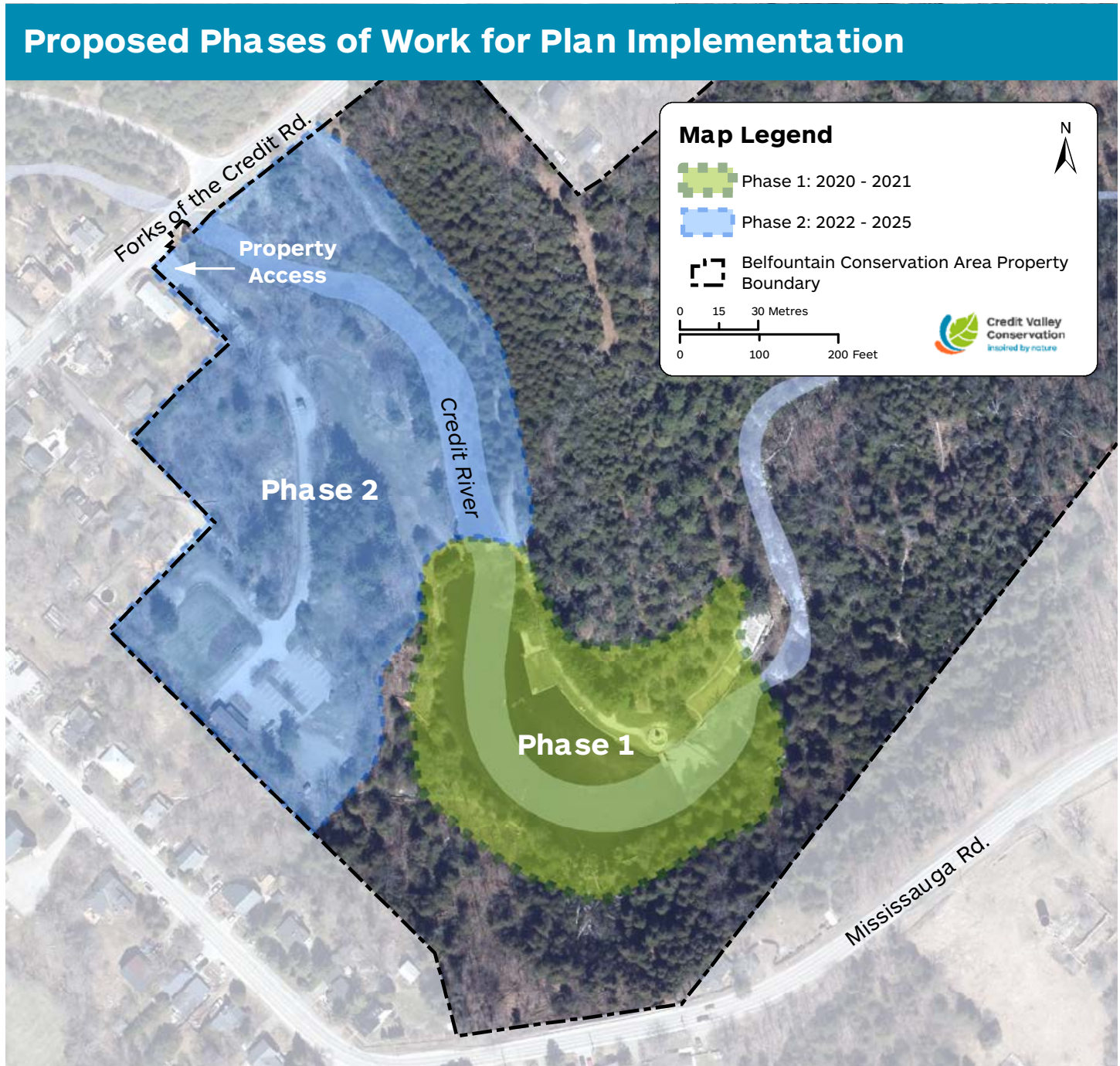


Figure 19: Proposed Phases of Work for Plan Implementation

7.3 Communicating Closures and Disruptions

CVC will develop and implement a Construction Communication Plan to signal disruptions in advance of any planned work, closures or access changes. Frequent and ongoing communication of park status, progress and completion timelines will be a key feature of this plan. Site information

and safety signage will direct and inform visitors during the construction phases and communication with the local residents and businesses, as well as municipal and agency partners, will be ongoing throughout the planning and implementation of each phase.

7.4 Estimated Construction Timelines and Details

The duration of either phase of construction is dependent on permit acquisition and conditions, timing windows, tendering and contract approvals, and site limitations, including weather. However, the goal of construction timeline management is to reduce, to the greatest possible extent, the duration of construction of either phase to limit park closure disruptions and to protect natural and cultural features.

The estimated timelines for construction, including time allocated for detailed design and permit acquisition or authorizations, are as follows:

PHASE I:	
Detailed Design	Summer 2019 - Fall 2020
Construction	Spring 2021 - Spring 2022 [13 months] *Park Closure for the 2021 operating season
PHASE II:	
Detailed Design	Winter 2023 - Fall 2023
Construction	Winter 2024 - Spring 2025 [18 months] *Park Closure for the 2024 operating season

Phase I is proposed to be staged to respect all timing windows for in-water works and related species habitat protections. As per the Environmental Study Report for the Class EA (AFW 2017), implementation is proposed to be conducted in five stages of construction, which are outlined in Appendix G.

Staging for construction of Phase II is not fully developed and is highly dependent upon permit approvals, funding and site limitations. Phase II involves the closure of the conservation area for one full operating season, and has an estimated 18 month construction period.



7.5 Permitting and Authorizations

Multiple permits and authorizations are required to implement the development proposed in this Plan. Permitting agencies have been consulted throughout the management planning process to ensure that conceptual designs meet with the broad aspects of regulation and policy. Multiple technical studies have been completed in support of the feasibility of the conceptual design and will be used at the detailed design stage. As per Regulation 828 (s. 41) projects identified within an approved Park and Open Space Plan are exempt from requiring a development permit if construction occurs within 5 years of approval. The infrastructure projects exempted under this Plan are identified in Appendix H. The detailed design and permitting process will include focused consultation with agencies prior to permit application submissions to ensure that all technical requirements, additional studies, or details are provided to satisfactorily review and provide approval for the implementation of the Plan.

Table 6 outlines the permit and authorization requirements for each phase of implementation.

Table 6: Required Approvals for Plan Implementation

Permit or Authorization	Phase I	Phase II	Notes
Niagara Escarpment Commission			
Exemption under Ontario Regulation 828/90 or Development Permit	X	X	This Plan will be approved by the NEC and MNRF as per Part 3 of the NEP. Regulation 828, s. 41 outlines exemptions from Development Permit control for activities under an approved Plan. Appendix H outlines the infrastructure projects exempted under this regulation.
Credit Valley Conservation			
Development, Interference with Wetlands and Alterations to Shorelines and Watercourses (Ontario Regulation 160/06)	X	X	CVC implements a self-permitting process to ensure that all activities conform to policy and permits under regulation 160/06 are issued for development in a regulated area.
Ministry of Natural Resources and Forestry			
Lakes and Rivers Improvement Act - Application for Approval	X		LRIA permit required for dam modifications; Class EA complete.
Public Lands Act - Application for Works Permit	X		PLA permit required for work on bed of river (Crown Land) where design is supported by MNRF.
Department of Fisheries and Oceans			
Fisheries Act - Request for Review/Letter of Authorization	X		Self-assessment protocol for projects affecting recreational fishery.
Town of Caledon			
Building Permit		X	Building Permit required for visitor centre and washroom structures.
Demolition Permit		X	Demolition permit required for removal of existing work shop structure.
Heritage Permit	X	X	Heritage Permit(s) is required for significant alteration of the designated area.
Ministry of the Environment, Conservation and Parks			
Permit to Take Water (PTTW) or Environmental Activity and Sector Registry (EASR)		X	A PTTW may be required for the well or expanded water taking associated with the on-site water and waste water servicing.
Environmental Compliance Approval (ECA)		X	ECA required for water and wastewater systems over 10,000 L/Day (under 10,000 is local municipal permits).
Species at Risk Act - Letter of Advice	X	X	Letter of Advice required for compatible development within the habitat of a Species at Risk (e.g. Jefferson Salamander, Butternut). Permanent destruction of endangered species habitat will be avoided.

7.6 Costing

The proposal for Belfountain Conservation Area is a generational investment and will require significant funding and support to implement. **Table 7** contains the estimated costing for both Phase I & II.

Table 7: Phase I and Phase II Cost Estimates²

Phase I		Phase II	
Item	Est. Cost	Features	Est. Cost
Dam and Structural	\$1,190,000	Visitor Centre	\$3,245,000
River Channel	\$588,000	Interior Outfitting & Furnishing	\$275,000
Landscape, Cultural & Public Realm	\$1,278,000	Entrance & Gatehouse	\$450,000
Site Servicing	\$247,000	Parking and Forecourt	\$520,000
Design & Engineering	\$444,000	IT & Access Control Systems	\$215,000
		Hillside Garden & Day Use Area	\$950,000
		Wayfinding & Signage	\$75,000
		Design, Engineering & Construction Mgmt.	\$834,000
TOTAL	\$3,747,000	TOTAL	\$6,564,000

The estimated costs have been formulated at a general ‘Class C’ level of costing which is prepared at the end of the design concept stage and based on updated user requirements, general description of the end built works, preliminary site information and existing conditions. The expected degree of accuracy is +/- 15 percent. It should be noted that best practice suggests including a 20 percent contingency on detailed design and construction planning to offset unknown conditions.

The estimated core cost for the entire conservation area development is **\$10,311,000**. This figure is based on 2020 dollars, and does not include HST or other taxes, contingency allotments, development and application charges, CVC staff time, projects associated with CVC’s core functions (such as the development of the Invasive Species Strategy and Programming Framework), and the additional hiring of staff that may be required to implement the Plan and manage the new Belfountain Conservation Area.

² All figures are exclusive of HST, a large portion of which is recoverable by CVC through HST rebate.



7.7 Funding

The implementation of the Plan is funding-dependent. Timelines for constructions outlined in Section 7.4 may be adjusted based on obtaining the full capital cost of each phase prior to its commencement. Coordinating the timing of construction with the acquisition of funding from multiple sources at each phase of development is anticipated to be a significant challenge. Currently, only partial CVC funding is set aside for construction of the proposed facilities in this Plan, however, substantial consolidated funding must be in place prior to the start of each phase of development.

To maximize the likelihood of obtaining outside funding, CVC will work to align the implementation of this Plan with the goals and priorities of municipal, provincial and federal government partners, as well as with other funding sources whose outcomes are similarly aligned to aspects of the Plan (e.g. tourism, education, water conservation technology, climate change mitigation, cultural heritage preservation, riverine and stream restoration, water and erosion control infrastructure maintenance, etc.). While the estimated costs are significant, the Plan represents a once in a generation investment in Belfountain Conservation Area and the capital outlay is to be amortized over a significant horizon, particularly if asset management and lifecycle replacement investments are maintained.

7.7.1 FUNDRAISING STRATEGY

CVC and CVCF worked together to develop an initial fundraising study for the activities proposed in this Plan. The study determined that the projects outlined in the Plan are best suited for government infrastructure funding and grant programs. Municipal support connected to complimentary objectives such as environmental restoration, regional growth, visitor pressures and climate change and water conservation, was also identified. Opportunities to align the implementation of the Plan with multiple fields and industries, as well as the goals of other levels of government will be explored.

7.8 Detailed Design Process

Detailed design of Phase I is already underway, with expected completion in late 2020.

Following approval of the Plan by the CVC Board, the NEC and the MNRF, CVC staff will undertake a detailed design process for the elements associated with Phase II, based on funding availability.

The detailed design process will involve scoped consultation with agency partners, particularly with those that will be issuing permits or exemptions for any element of the conservation area construction. Broad conformity to the conceptual designs will be a key aspect for review by the NEC and agency partners, especially as the proposed development has been the result of numerous technical studies and consultation informing feasibility and the preferred option for public realm elements.

CVC will undertake scoped consultation with stakeholders throughout the detailed design process and will include substantive consultation with NEC, MNRF and CVC staff to ensure that the final design is in keeping with the concept presented in this Plan as well as all applicable policy.

7.8.1 VISITOR CENTRE DETAILED DESIGN

The detailed design of the Visitor Centre is of particular interest to CVC staff, local stakeholders and residents, and agency partners. As the largest and most important piece of new infrastructure for the conservation area, the Visitor Centre must function well, be sustainably built and designed, and must work aesthetically with the landscape and heritage characteristics of the surrounding area. The conceptual design for the Visitor Centre underwent multiple and careful revisions and is an accurate reflection of the most important design parameters and functionality as determined by the management planning process. Detailed design will include refining this vision with appropriate materiality, building system design (including the ‘One Water’ innovative servicing solutions), architectural/ structural engineering, and furnishings and outfitting.



8.0 CONCLUSION

The information captured in this Plan represents the outcome of a process that achieves balance amongst a set of dynamic objectives. The thoughtful, respectful and interesting design of Belfountain Conservation Area, as presented in this Plan, has been the result of careful study of its history, inventory of natural and cultural features, observations of the way visitors interact with its uniqueness,

and consideration of the opportunities that exist to capitalize on its sense of place to create a meaningful and exciting park experience, while also protecting what is important about it. The implementation of this Plan represents a generational investment that ensures Belfountain Conservation Area remains an iconic destination, cherished in the hearts of Ontarians, for the next century.

8.1. Management Plan Review and Evaluation

The Belfountain Conservation Area Management Plan is a 25 year plan. Consistent with the timing requirements laid out for implementation (Section 7.1), the majority of the works identified will occur within the first five years after Plan approval. The Plan will undergo a formal review at the 10 year mark to evaluate its progress and determine whether the Plan has achieved the desired outcomes.

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Appendix A: Species at Risk in Belfountain Conservation Area

Taxon	Common Name	Latin Name	Species at Risk Act (SARA – Federal status)	Endangered Species Act (ESA – Provincial status)
Amphibian	Jefferson Salamander	Ambystoma jeffersonianum	Endangered	Endangered
Bird	Canada Warbler	Cardellina canadensis	Threatened	Special Concern
Bird	Chimney Swift	Chaetura pelagica	Threatened	Threatened
Bird	Eastern Wood-pewee	Contopus virens	Special Concern	Special Concern
Bird	Wood Thrush	Hylocichla mustelina	Threatened	Special Concern
Bird	Louisiana Waterthrush*	Parkesia motacilla	Special Concern	Threatened
Insect	Monarch*	Danaus plexippus	Special Concern	Special Concern
Mammal	Little Brown Myotis	Myotis lucifugus	Endangered	Endangered
Mammal	Northern Myotis	Myotis septentrionalis	Endangered	Endangered
Plant	Butternut	Juglands cinerea	Endangered	Endangered
Reptile	Snapping Turtle	Chelydra serpentina	Special Concern	Special Concern

*Monarch: COSEWIC status assessment; proposed change from Special Concern to Endangered
*Louisiana Waterthrush: COSEWIC status assessment; proposed change from Special Concern to Threatened

Appendix B: Summary of Public Consultation Meetings (2014 – 2018)

Public Meeting	Format	Meeting Purpose	Attendees	Feedback Format	Additional Information
Public Meeting #1 December 3, 2014 Cheltenham Community Centre	Daytime drop-in and poster review Evening presentation by CVC, poster review and question and answer period	Introduction of Management Plan Review of situational analysis Discussion of early directions, goals and objectives	24 participants during the afternoon (13 registered) 25 participants during the evening (15 registered)	Dotmocracy was used on the poster boards to gage public opinion Questionnaire was provided (4 submitted)	Additional information including the meeting summary, posters and presentations are located on CVC's website: https://cvc.ca/enjoy-the-outdoors/conservation-areas/belfountain-conservation-area/belfountain-conservation-area-management-plan/consultation/
Public Meeting #2 September 22, 2015 Caledon Ski Club	Evening presentations, poster review and question and answer period Presentations by CVC on Management Plan, Amec Foster Wheeler on Class EA and by Brook McIlroy Inc. on Concept Designs	Introduction of Management Plan and Class EA planning processes Review of Class EA objectives and alternatives Presentation on initial concept drawings and ideas for BCA	46 participants	Questionnaires (2) for Class EA objectives and Management Plan concepts was provided (15 submitted)	Additional information including the meeting summary, posters and presentations are located on CVC's website: https://cvc.ca/enjoy-the-outdoors/conservation-areas/belfountain-conservation-area/belfountain-conservation-area-management-plan/consultation/
Public Meeting #3 December 1, 2015 Caledon Ski Club	Evening presentation, poster review and question and answer period Presentation by Amec Foster Wheeler on Class EA alternatives Presentation by CVC on Management Plan	Present Class EA alternatives and evaluation process Review updates to the management plan (use and integration of public comments)	25 participants	Questionnaire on the Class EA alternatives was distributed (12 submitted)	Additional information including the meeting summary, posters and presentations are located on CVC's website: https://cvc.ca/enjoy-the-outdoors/conservation-areas/belfountain-conservation-area/belfountain-conservation-area-management-plan/consultation/

Public Meeting	Format	Meeting Purpose	Attendees	Feedback Format	Additional Information
Public Meeting #4 May 12, 2016 Belfountain Public School	Evening presentation and poster review Facilitated small group discussion and question and answer period	Present Class EA preferred alternative	28 participants	Facilitated small group discussions and question and answer period were recorded in the summary notes Comment Cards were available (0 submitted)	Additional information including the meeting summary, posters and presentations are located on CVC's website: https://cvc.ca/enjoy-the-outdoors/conservation-areas/belfountain-conservation-area/belfountain-conservation-area-management-plan/consultation/
Public Meeting #5 June 23, 2016 Caledon Ski Club	Daytime drop-in and poster review Evening poster review and facilitated small-group discussions	Receive input and ideas regarding design and activities for BCA	4 day-time participants 13 participants in the evening session	Facilitated small group discussions were recorded in the summary notes Survey posted online (2 submitted)	Additional information including the meeting summary, posters and presentations are located on CVC's website: https://cvc.ca/enjoy-the-outdoors/conservation-areas/belfountain-conservation-area/belfountain-conservation-area-management-plan/consultation/
Public Meeting #6 June 19, 2018 Caledon Ski Club	Daytime drop-in and poster review Evening poster review, presentation by CVC, and question and answer period	Share the final vision for Belfountain Conservation Area; communicate how concerns and issues will be addressed	12 day-time participants (8 registered) 19 participants in the evening session	Comment cards were available (6 submitted)	Additional information including the meeting summary, posters and presentations are located on CVC's website: https://cvc.ca/enjoy-the-outdoors/conservation-areas/belfountain-conservation-area/belfountain-conservation-area-management-plan/consultation/

*6 days were spent in Belfountain Conservation Area reaching out to visitors and answering questions about the Plan. Approximately 70 conversations with visitors were held over four days in 2015. Approximately 50 conversations were held over 2 days in 2018.

Credit Valley Conservation (CVC) owns sixty-one (61) properties within the Credit River Watershed. These natural spaces support a variety of benefits to local communities, the public and visitors. CVC’s conservation areas contribute to the natural environment on a number of scales, from providing habitat for native species to contributing to the healthy functioning of the region through the provision of ecological goods and services such as climate regulation and sustaining clean water. CVC’s conservation areas also provide opportunities for outdoor appreciation and recreation which are widely acknowledged to contribute to personal well-being and an improved quality of life. From an economic perspective, natural areas also contribute to increased property values and local tourism, as well as non-market benefits such as societal satisfaction in knowing that natural areas will exist for future generations. A comprehensive management approach to CVC’s conservation areas system is essential for ensuring that these special areas continue to protect natural features and functions and provide opportunities for interpretation, appreciation and sustainable outdoor recreation.

The development and management of CVC’s conservation areas are guided by individual management plans for each property. As a holistic decision making process, management planning balances a science-based approach with a community-driven approach. It is designed to engage municipal and provincial agencies, partner groups and the public in determining the priorities and future management of a conservation area. This transparent process ensures that recommendations are founded on the best science available and that those individuals and groups that have a vested interest in the property can contribute their thoughts and values to the development of management goals.

A key component of the management planning process is determining the classification and

“Within the context of a park’s classification, zoning is essential to its orderly and effective management. A park’s land and water resources are allocated on the basis of their significance for protection and potential for recreation.”

- Ontario Provincial Parks – Planning and Management Policies (1992, updated 2009)

zoning for each property. Conservation area classification sets the general direction for property management. Zoning organizes the conservation area into geographic units that have similar management philosophies. Zoning ensures that management policies are customized to reflect the significant natural, cultural and recreational resources within an individual property while also providing a consistent approach for management across the conservation area system.

Decisions regarding the zoning of conservation areas, and thus their future management, require detailed inventories focused on the natural, cultural and social environment of each individual property. Zoning decisions are developed based on several factors (**Figure 1**):






-  Conservation area classification, vision, goals and objectives
-  Significant natural and cultural features
-  Existing and future visitor needs
-  Restoration and resource management opportunities
-  Existing management agreements



Figure 1: Factors and Contexts that Inform Zoning Decisions

Input and feedback from CVC’s partner agencies, stakeholders and the public are considered throughout the management planning process. This information contributes to the identification of site specific challenges, opportunities and strengths, and provides context on how to manage a combination of values and objectives for a property.

Conservation area zoning supports the implementation of an approved management plan by providing a framework which organizes site specific objectives and focuses the application of policies, programs and activities. Conservation area zoning supports the development of a transparent management plan that provides the public, stakeholders, agency partners, and CVC with confidence that conservation areas balance appropriate objectives and are managed in an appropriate and responsible manner.

NATURE RESERVE ZONE:

Zones designated to contain relatively undisturbed natural features which are considered to be locally or regionally significant or are sites containing sensitive natural features that contribute to maintaining a healthy ecosystem. These zones only permit use that is non-intensive and compatible with the natural values and functions of the feature or resource. Management activities are limited to those that ensure the long range protection of natural values.

Development Regulations: Development and repair or replacement of essential services will be permitted. New infrastructure development not related to essential services is not permitted; however, repair or removal of existing infrastructure will be permitted. Recreation infrastructure is limited to environmentally appropriate trails and facilities necessary for passive recreation. Temporary facilities for research may be permitted.

Restoration and Resource Management: Environmental restoration and enhancement activities are permitted provided they are consistent with the goal and objectives of the conservation area and other applicable land management policies.

Visitor Experience: Visitor activities are limited to passive recreation opportunities. The visitor experience will be directed toward the perception of solitude and immersion within a natural landscape.

Zoning Definitions, Attributes and Regulations For Belfountain Conservation Area

NATURAL HERITAGE APPRECIATION ZONE:

Zones designated to include aesthetic landscapes and accessible natural features. A minimum of development is permitted to support outdoor recreation activities that are keeping with the natural character of the site. Resource Management is permitted to the extent that it rehabilitates sites impacted by human activity, enhances the natural character of the landscape and does not interfere with other permitted uses.

Development: Development and repair or replacement of essential services will be permitted. New infrastructure development will be permitted. Repair or removal of existing infrastructure not related to essential services will be permitted. Recreation infrastructure and amenities to support outdoor recreation opportunities may be permitted. Temporary facilities for research may be permitted.

Restoration and Resource Management: Environmental restoration and enhancement activities are permitted provided they are consistent with the goal and objectives of the

conservation area and other applicable land management policies.

Visitor Experience: The visitor experience will vary depending on the characteristics and theme of the conservation area, but Natural Heritage Appreciation Zones provide opportunities for appreciation and interactive interpretation and may accommodate active recreational activities. Activities appropriate for Belfountain Conservation Area may include educational programming, large events, such as the Salamander Festival, and ice-skating on the turf-ed-area.

CULTURAL HERITAGE ZONE:

Zones designated to include significant archaeological or historical features which require management to ensure the long-term protection of significant values.

Development Regulations: Development and repair or replacement of essential services will be permitted. New infrastructure development not related to essential services may be permitted. Repair or removal of existing infrastructure will be permitted. Stabilization, restoration, or dismantling of historical features is also permitted.

Recreation infrastructure development may include trails with associated signage, interpretive and educational facilities including signage and displays, and additional facilities or ancillary structures such as staging areas that are necessary to support passive and appropriate active recreation opportunities. Temporary facilities for research may be permitted.

Restoration and Resource Management: Environmental restoration and enhancement activities are permitted provided they are consistent with the goal and objectives of the conservation area and other applicable land management policies.

Visitor Experience: Visitor experience will focus on opportunities to appreciate and interpret cultural heritage features and historic viewsapes within the zone as well as the surrounding landscape. Activities appropriate for Belfountain Conservation Area may include educational programming, theatre re-enactments and other events.

DEVELOPMENT ZONE:

Zones designated to provide access, orientation and operational facilities that support appreciation, recreation and resource management activities of the conservation area. Development zones are separated into three (3) broad categories:

Access:
Areas that serve as public staging areas and provide facilities such as roads and parking lots, and gatehouses.

Operational:
Areas and features that serve conservation area operations. This may include workshops, out buildings and parking lots that are not open to the public. (This zone does not exist at Belfountain Conservation Area).

Recreation:
Areas designated to provide facilities for recreation purposes. This may include publicly accessible buildings and other infrastructure that support or are necessary for active recreation opportunities.

Development Regulations: Both essential and non-essential infrastructure development is permitted, including, but not limited to: roads; parking lots; service facilities including outfitting areas for recreation activities and interpretive/ educational facilities; visitor amenities; conservation area management facilities; storage facilities; washrooms; and, essential services.

Restoration and Resource Management: Environmental restoration and enhancement activities are permitted provided they are consistent with the goal and objectives of the conservation area and appropriate for the zone.

Visitor Experience:
Access: Access Development Zones may provide orientation, education and general maintenance facilities (e.g. garbage removal). Visitor flow will be directed to specific staging areas.

Operational: Operational Development Zones serve CVC staff and operations; visitors are not generally permitted to these areas.

Recreation: Recreation Development Zones facilitate active recreation opportunities and are areas where visitors tend to congregate to learn about a conservation area, participate in or observe an activity. Activities appropriate for Belfountain Conservation Area include educational programming, interactive workshops, indoor events and displays.

SPECIAL MANAGEMENT ZONE:

Special Management Zones are applied to a specific large scale project or area that falls outside of the scope of the other zones. These projects are most likely resource management or restoration projects, or areas that denote special management agreements. They may include any area that requires its own specific stipulations and regulations.

The Special Management Zone at Belfountain Conservation Area represents Scott Street, as it traverses the Willoughby Property. Scott Street provides an important ingress/egress function to the residence at 100 Scott Street. Scott Street also provides access to the Willoughby trail system; pedestrian access will be redirected from Scott Street on to the Willoughby Bypass Trail, once this trail is constructed. The two Scott Street crossings related to the Crowsnest Trail will continue to be managed.

Development Regulations: Development requirements and permitted activities will be described for each individual Special Management Zone

Restoration and Resource Management: Specific activities are not identified for this zone.

Visitor Experience: This zone does not provide a visitor experience.

Appendix D: Recreation Activities Permitted within Belfountain Conservation Area

Activities Considered for Belfountain Conservation Area	Belfountain Conservation Area Zones						
	Nature Reserve	Natural Heritage Appreciation	Special Management ¹	Cultural Heritage	Development (D)		
					D - Access	D - Recreation	D - Operations
Adventure Races	N	N	N	N	N	N	N
Astronomy	N	M	N	M	Y	Y	N
ATV's*	N	N	N	N	N	N	N
Birding	Y	Y	N	Y	Y	Y	N
Boating - Motorized	N	N	N	N	N	N	N
Camping – primitive sites	N	N	N	N	N	N	N
Camping – group sites	N	N	N	N	N	N	N
Camping – yurts	N	N	N	N	N	N	N
Canoeing / Kayaking	N	N	N	N	N	N	N
Cross Country Skiing	N	N	N	N	N	N	N
Cycling	N	N	N	N	N	N	N
Day Camping**	N	N	N	N	N	N	N
Dog walking – on leash	Y	Y	N	Y	Y	Y	N
Dirt Bikes*	N	N	N	N	N	N	N
Educational / Interpretative Programming	Y	Y	N	Y	Y	Y	N
Environmental Appreciation – self guided	Y	Y	N	Y	Y	Y	N
Research	M	M	N	M	M	M	N
Fishing	Y	Y	N	Y	N	N	N
Geocaching*	N	N	N	N	N	N	N

Activities Considered for Belfountain Conservation Area	Belfountain Conservation Area Zones						
	Nature Reserve	Natural Heritage Appreciation	Special Management ¹	Cultural Heritage	Development (D)		
					D - Access	D - Recreation	D - Operations
Hiking/Walking	Y	Y	N	Y	Y	Y	N
Historical Appreciation – self guided	Y	Y	N	Y	Y	Y	N
Horseback Riding	N	N	N	N	N	N	N
Hunting*	N	N	N	N	N	N	N
Ice Skating	N	M	N	N	N	N	N
Ice Fishing	N	N	N	N	N	N	N
Mountain Biking*	N	N	N	N	N	N	N
Orienteering	N	M	N	M	M	M	N
Painting / Photography	Y	Y	N	Y	Y	Y	N
(non-commercial)	Y	Y	N	Y	Y	Y	N
Picnicking**	N	M	N	M	N	M	N
Snowmobiling	N	N	N	N	N	N	N
Snowshoeing	Y	Y	N	M	Y	Y	N
Special Events	N	M	N	M	M	Y	M
Swimming	N	N	N	N	N	N	N
Wading/River Access	N	Y	N	Y	N	N	N
Wildlife Viewing	Y	Y	N	Y	Y	Y	N

¹ Once the Willoughby Bypass Trail is constructed, pedestrians will be directed away from Scott Street. The two Crowsnest Trail crossings on Scott Street will continue to be managed and maintained.

* Denotes activities that are considered unsanctioned at all CVC conservation areas

** Site specific policies apply

GENERAL STANDARDS FOR PRESERVATION, REHABILITATION AND RESTORATION

- 1

Conserve the heritage value of an historic place. Do not remove, replace or substantially alter its intact or repairable character-defining elements. Do not move a part of an historic place if its current location is a character-defining element.
- 2

Conserve changes to an historic place that, over time, have become character-defining elements in their own right.
- 3

Conserve heritage value by adopting an approach calling for minimal intervention.
- 4

Recognize each historic place as a physical record of its time, place and use. Do not create a false sense of historical development by adding elements from other historic places or other properties, or by combining features of the same property that never coexisted.
- 5

Find a use for an historic place that requires minimal or no change to its character-defining elements.
- 6

Protect and, if necessary, stabilize an historic place until any subsequent intervention is undertaken. Protect and preserve archaeological resources in place. Where there is potential for disturbing archaeological resources, take mitigation measures to limit damage and loss of information.
- 7

Evaluate the existing condition of character-defining elements to determine the appropriate intervention needed. Use the gentlest means possible for any intervention. Respect heritage value when undertaking an intervention.
- 8

Maintain character-defining elements on an ongoing basis. Repair character-defining elements by reinforcing their materials using recognized conservation methods. Replace in kind any extensively deteriorated or missing parts of character-defining elements, where there are surviving prototypes.
- 9

Make any intervention needed to preserve character-defining elements physically and visually compatible with the historic place and identifiable on close inspection. Document any intervention for future reference.

ADDITIONAL STANDARDS RELATING TO REHABILITATION

- 10

Repair rather than replace character-defining elements. Where character-defining elements are too severely deteriorated to repair, and where sufficient physical evidence exists, replace them with new elements that match the forms, materials and detailing of sound versions of the same elements. Where there is insufficient physical evidence, make the form, material and detailing of the new elements compatible with the character of the historic place.
- 11

Conserve the heritage value and character-defining elements when creating any new additions to an historic place or any related new construction. Make the new work physically and visually compatible with, subordinate to and distinguishable from the historic place.
- 12

Create any new additions or related new construction so that the essential form and integrity of an historic place will not be impaired if the new work is removed in the future.

ADDITIONAL STANDARDS RELATING TO RESTORATION

- 13

Repair rather than replace character-defining elements from the restoration period. Where character-defining elements are too severely deteriorated to repair and where sufficient physical evidence exists, replace them with new elements that match the forms, materials and detailing of sound versions of the same elements.
- 14

Replace missing features from the restoration period with new features whose forms, materials and detailing are based on sufficient physical, documentary and/or oral evidence.

Appendix F: List of Directions and Implementation Timelines

Appendix F: List of Directions and Implementation Timelines										Detailed Design				Construction				Plan Development				Implementation							
Direction	2019				2020				2021				2022				2023				2024				2025				Five Year Implementation Requirement
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
PRE-IMPLEMENTATION PERIOD																													
Construction Communications Plan																													
Belfountain Fundraising Strategy																													
PHASE I																													
Belfountain Dam Remediation																													✓
Channel Naturalization																													✓
Pond Loop Trail Boardwalk and Look-outs																													✓
Landscaping																													
New Arched Bridge																													✓
Stone Seating Wall																													✓
Lily Pond																													✓
Cultural Heritage Conservation Plan																													
PHASE II																													
Detailed Design – Scoped Consultation																													
Visitor Centre																													✓
Concession Procurement Plan																													
Parking Lot																													✓
Construction Communications Plan																													
Snow and Salt Management Plan																													
Network Connectivity																													
Gatehouse																													✓
Stone Staircase and Hillside Path																													✓
Pumphouse Washroom Conversion																													✓
Terrace Upgrade																													✓
River Access Areas																													
Riverwalk Trail																													
Willoughby Bypass Trail																													
Automated Payment System																													
Fee Schedule Structure																													
Asset Naming																													
Signage Plan																													
Interpretation Materials																													
Trail Plan																													
Programming Framework																													
Landscaping																													
Invasive Species – Site Specific Strategy																													
ONGOING																													
“Friends of” Initiative					Dependent on Community Interest																								
Create Endowment Fund (Land Care)																													
Land Care Needs Assessment/Monitoring	Ongoing																												
Resolve Encroachments																													
Trail Monitoring and Management	Ongoing																												
Management Plan Review and Evaluation																													

Appendix G: Stages of Construction Proposed for Belfountain Dam Project Implementation

Preliminary construction sequencing is a refinement of the EA plan and is based on logical staging that condenses the schedule as much as possible, while respecting permit and timing windows. Some key constraints and opportunities which inform sequencing include:

Constraints and timing windows:

- Tree clearing must take place prior to Bat (ESA) and Migratory Bird windows (April 1st – September 30th)
- Draw down of headpond prior to fisheries window and in high flows to dilute release of sediment (June 15th – September 15th)
- In-water works during fisheries window (June 15th to September 15th – extension optional under MNRF permission)

- Mobilization and staging should occur when the ground is dry to prevent damage

- No concrete work in cold weather

Opportunities:

- Construction vehicular flow maximized by use of main entrance, secondary entrance and temporary bailey bridge
- Confinement berm placement to match reach of excavator arm to increase construction efficiencies
- Completion of North channel works first allows for earliest date possible to begin work on heritage garden public realm and landscaping

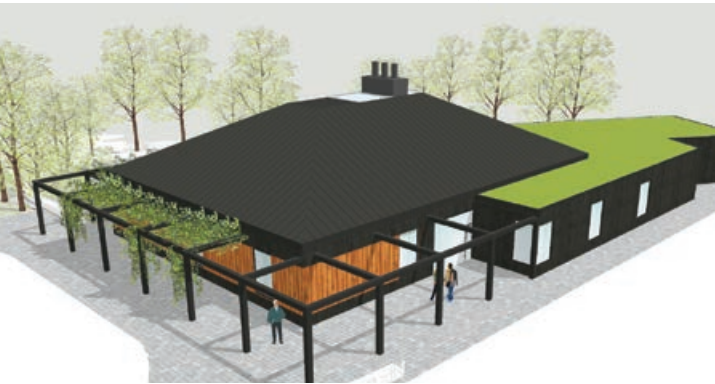
Stage	Timing	Constraints	Description
Stage 1 Clearing	Winter 2021	Prior to March 15 th	Complete all tree clearing as required along the south and north channel shore, and in vicinity of new bridge abutments. Installation of species exclusion fencing.
Stage 2 Mobilization	Spring 2021	Weather dependent to avoid mud and road damage	Installation of erosion and sediment control measures (i.e. sediment control fence, vehicle mud mats) to be installed in preparation for the in-water work period.
Stage 3 Partial Headpond Drawdown	Spring 2021	Prior to June 15 th fisheries window	Draw down the headpond, completed incrementally to minimize the rate and quantity of sediment release over the drawdown period. Turbidity monitoring during draw down to ensure discharge from the headpond will not have negative effects on downstream habitat.
Stage 4 North Works	June 15 th – August 15 th		Placement of cofferdam. Excavation of channel. Construction of north floodplain area, north bridge abutment, north dam cap, spillway, gate, and waterfall works. Construction of far section of boardwalk and water supply.
Stage 5 Heritage Garden Landscaping	August 15 th – December		Construction of public realm features and landscaping for heritage gardens. Construction may be restricted by truck traffic onsite, to occur concurrent with south channel works.
Stage 6 South Works	August 15 th – September 15 th	August 15 th fish window close – extension possible under MNRF permission	Flow to be flipped to newly construction channel and spillway to allow south channel works. Excavation of south channel. Construction of south floodplain, dam cap and wingwall restoration. Construction of south abutment and installation of new bridge. Completion of remaining boardwalk and trail sections. Barrier separating north and south channel to be removed after completion of this phase.
Stage 7 South Restoration and Boardwalk	September 30 th – December		Restoration planting on south shore and construction of public realm elements (outlook node and fox folly feature).
Stage 8 Planting and Deficiencies	Spring 2021	Prior to April 30 th	Final planting and remaining works. Removal of species exclusion and sediment control fencing.

Table 1: Visitor Centre

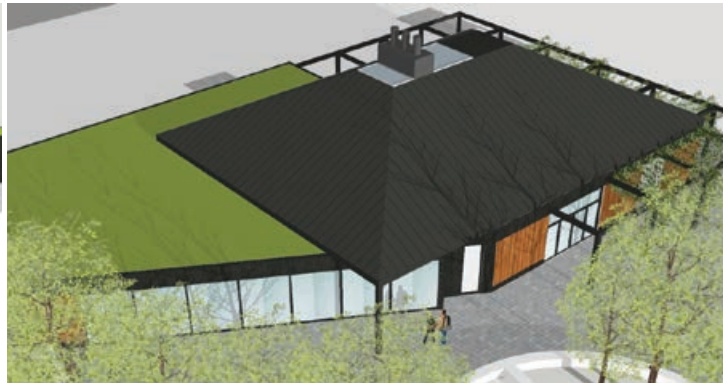
Visitor Centre		
Purpose	Design Details	Key Items to be Determined at Detailed Design
<p>Provide for staff operations and office space, accessible visitor amenities (washrooms) and flexible indoor space for interpretive displays, programming and events</p> <p>Replace the existing workshop and washroom facilities</p> <p>Provide additional educational benefit by showcasing green technologies and sustainable design</p>	<p>Approx. 550 m2 (5,900 ft2), one-storey (approx. 7.5 m in height)</p> <p>Natural materials will be used (wood and stone), with extensive windows</p> <p>Trellising and landscaping will encourage the building to blend into the surrounding landscape</p> <p>Design highlights character of Mack's Park's original buildings, including low roofline and a clay chimney</p> <p>A large outdoor terrace will function as an extension of the event space and provide additional seating and rest areas for visitors</p>	<p>Sustainable and innovative water and wastewater servicing options for the site are being explored, and final design will be determined through detailed design</p> <p>The current water source is pumped from a spring on the south slope of the site, across the dam, to the pumphouse and up to the existing workshop; a new delivery system will be identified as part of detailed design</p>

Conceptual Images

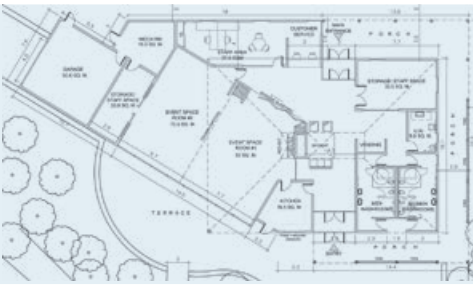
View from Front Entrance



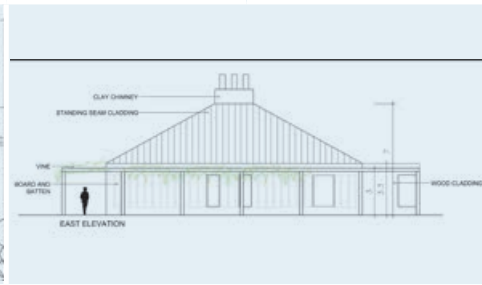
View from Back of Building



Proposed Floor Plan



East Elevation View



View from Top of Building

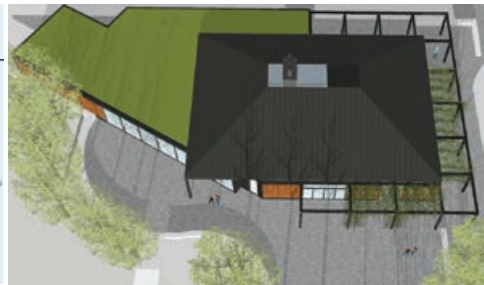


Table 1: Visitor Centre

Visitor Centre

Artistic Rendering of Visitor Centre from the Back of the Building



Proposed Site Servicing Plan



Table 2: Gatehouse



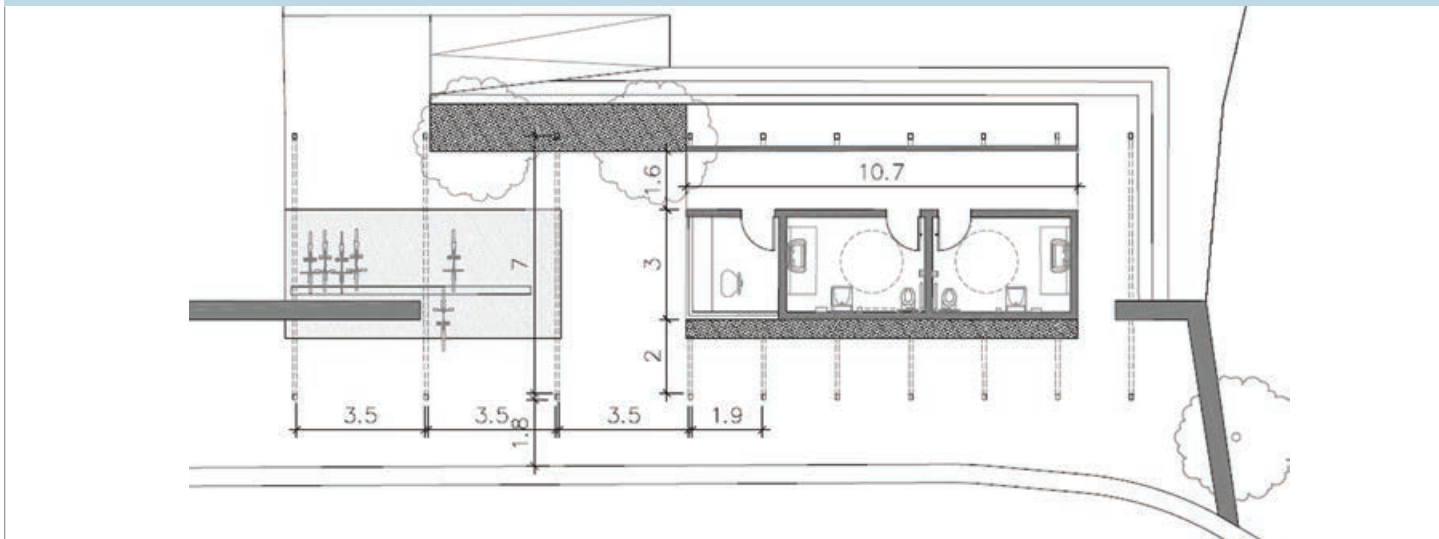
Gatehouse		
Purpose	Design Details	Key Items to be Determined at Detailed Design
<p>Provide a location for customer service representatives to interact with visitors</p> <p>Provide two accessible washroom facilities that can be used by both visitors and local tourists (who are not paying to enter the conservation area)</p> <p>Reduce queuing on to Forks of the Credit Rd and improve visitor and traffic flow</p> <p>Replace the existing gatehouse</p>	<p>Approx. 75 m2 (800 ft2), one-storey (approx. 3 m in height)</p> <p>Trellising and landscaping will encourage the building to blend into the surrounding landscape</p> <p>Additional furnishings include a seating area and bicycle rack</p>	<p>Sustainable and innovative water and wastewater servicing options for the site are being explored in conjunction with the visitor centre; final design will be determined through detailed design</p> <p>Location and style of the automated payment system</p>
Conceptual Images		
View from Front Entrance	View from Driveway	
		
Proposed Layout		
		

Table 2: Gatehouse

Gatehouse
Artistic Rendering of Gatehouse


Table 3: Parking Lot

Parking Lot		
Purpose	Design Details	Key Items to be Determined at Detailed Design
<p>Increase number of designated spaces onsite (from ~45 to 78), which will reduce on-street parking</p> <p>Provide adequate turning radius for emergency access vehicles and school buses</p> <p>Provide designated accessible parking spots and designated Green Vehicle parking spots and charging stations</p>	<p>Asphalt pavement</p> <p>Bioswales integrated into design to capture and infiltrate stormwater. Dry cells, bioretention cells, and filter strips will be used in the parking lot area.</p> <p>Low curbs will facilitate amphibian movement</p>	<p>Low Impact Development Practices will be used in the parking lot. Detailed design will conform to CVC Guidelines, as per “Low Impact Development Stormwater Management Planning and Design Guide”, CVC, 2011, Version 1.0.</p>

Conceptual Images

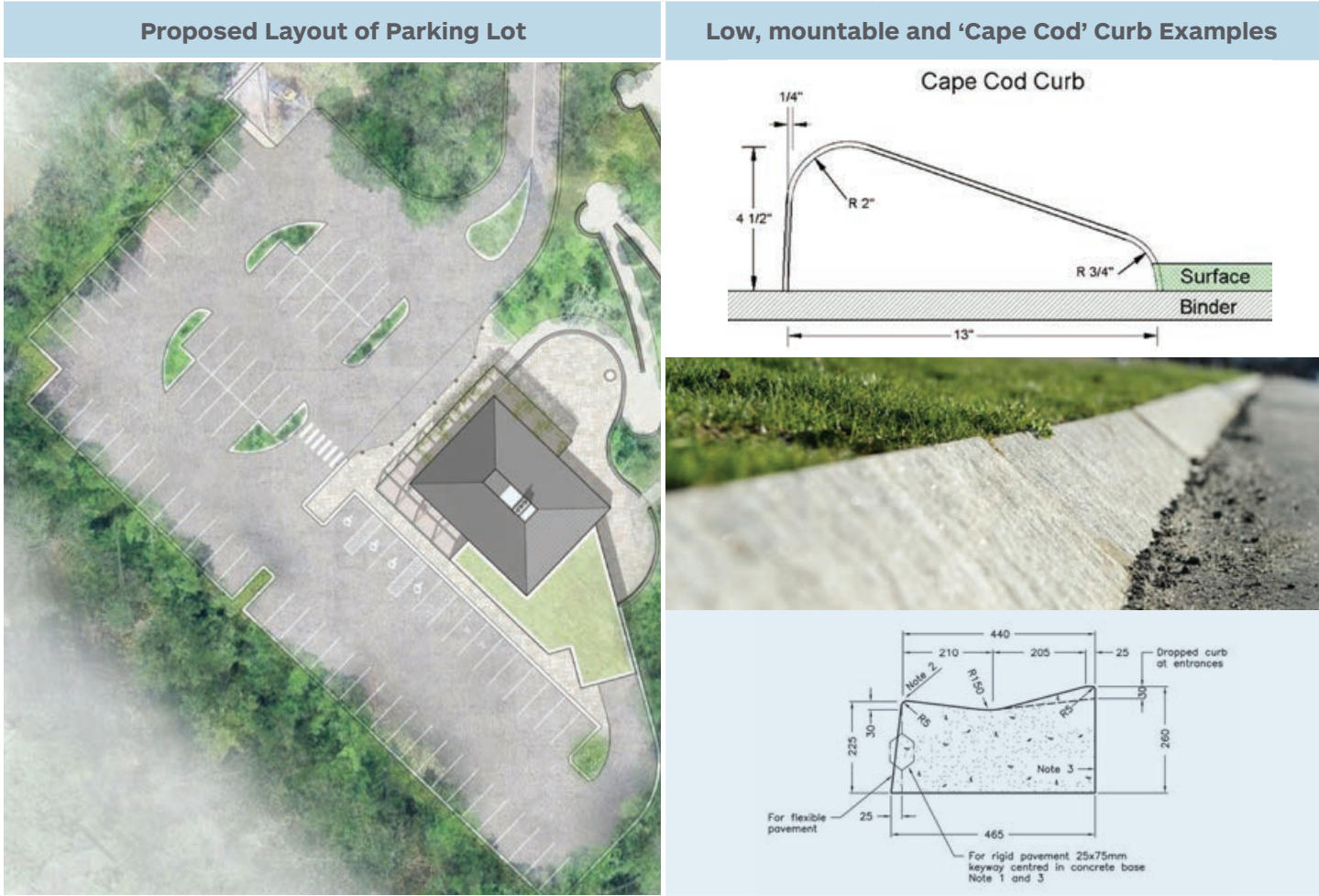


Table 3: Parking Lot

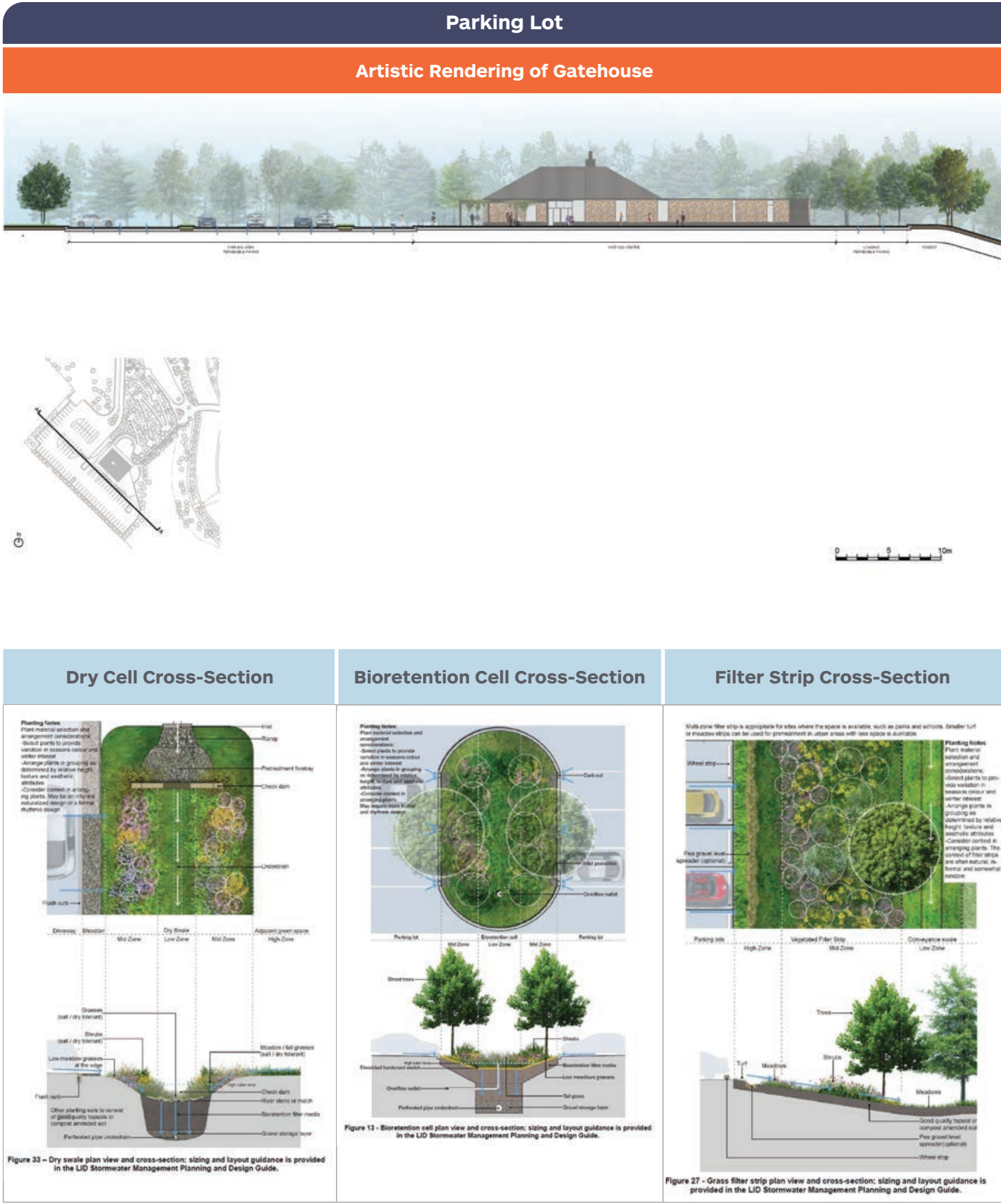


Table 4: Class EA Area: Heritage Gardens



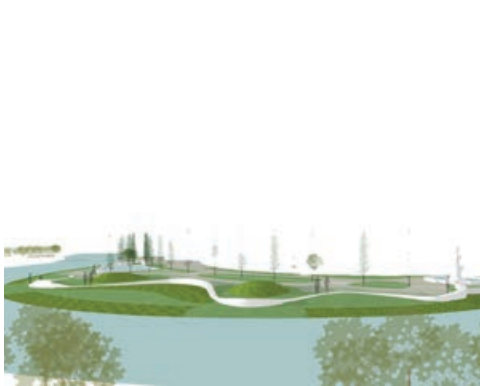
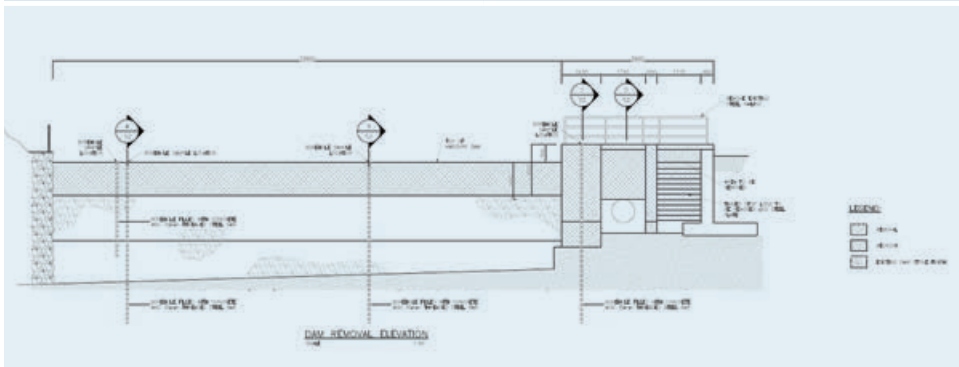
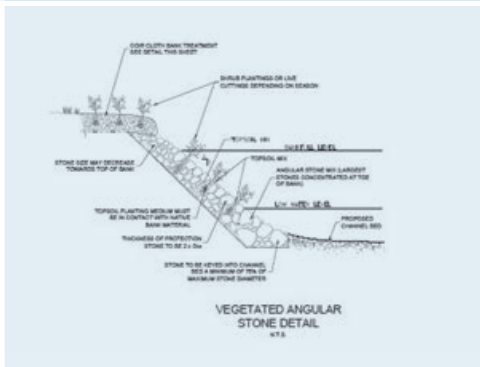
Class EA Area: Heritage Gardens		
Purpose	Design Details	Key Items to be Determined at Detailed Design
<p>Class EA for the Belfountain Dam and Headpond was approved by the MOECC in 2017. This project identifies a solution for the dam, a heritage feature with structural deficiencies, and its headpond, which negatively impacts the coldwater system.</p> <p>Additional features related to park use and design have also been identified, particularly as they relate to the new 17,000ft² landform that will be created.</p>	<p>Naturalization of the river channel will result in the removal of sediment and creation of a new landform</p> <p>The Belfountain dam will be lowered 1 – 1.5 m and anchored into bedrock to improve stability</p> <p>Removal of the sluiceway (control structure) and reconstruction of the spillway's historic width</p> <p>Stabilization of the wing-wall</p> <p>Renovations and improvements will reflect accurate historic reference and incorporate heritage design</p>	<p>Detailed design for this project is currently underway and includes channel design features and public realm design features.</p> <p>The numerous design details associated with this project are detailed in the Environmental Study Report for the Class EA (Amec Foster Wheeler, 2017).</p>
Conceptual Images		
Overlay of Proposed Works	Rendering of Heritage Gardens	Rendering of Heritage Gardens
		
Dam Removal Elevation	Proposed Bank Treatment	
		

Table 4: Class EA Area: Heritage Gardens

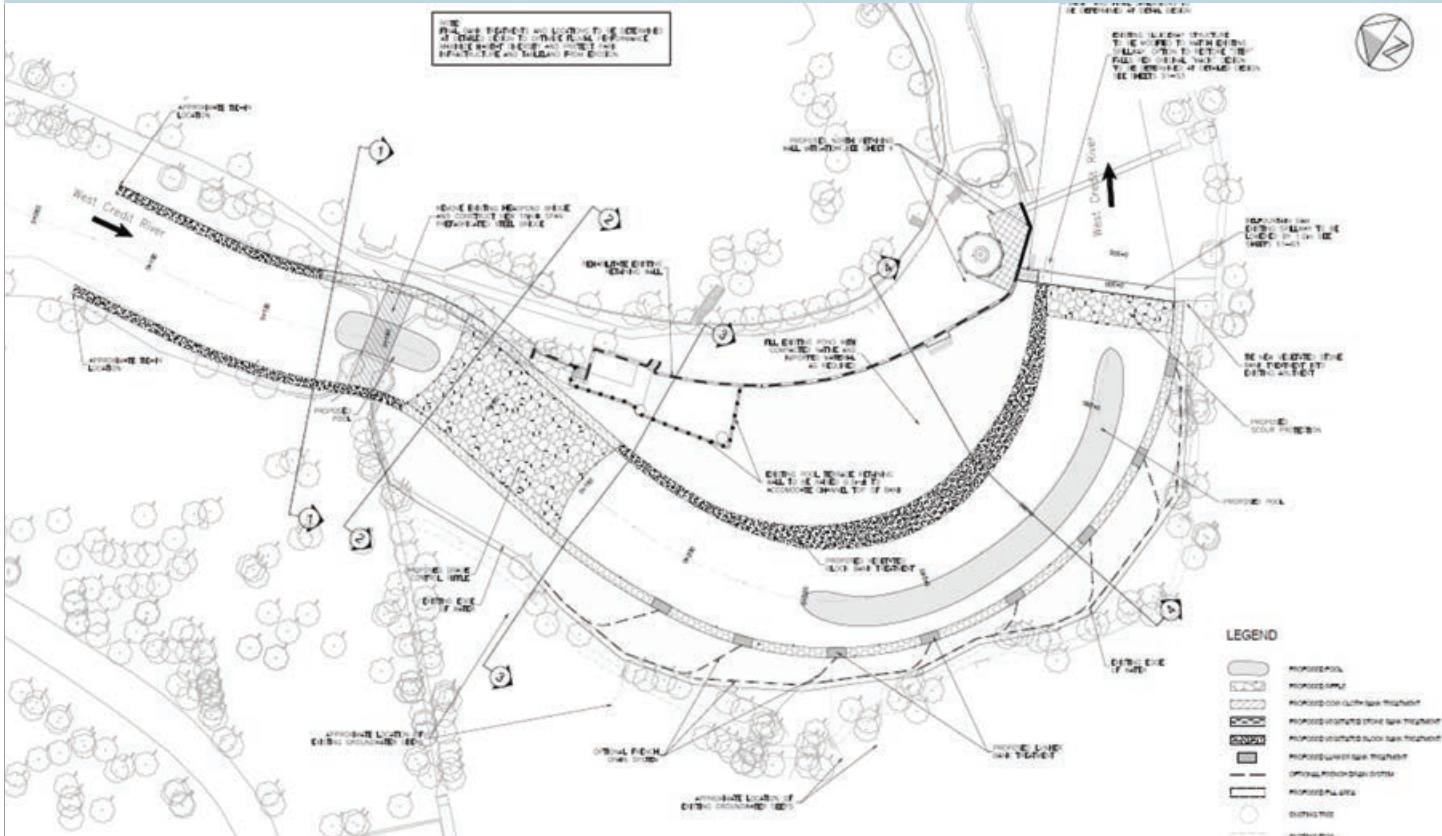
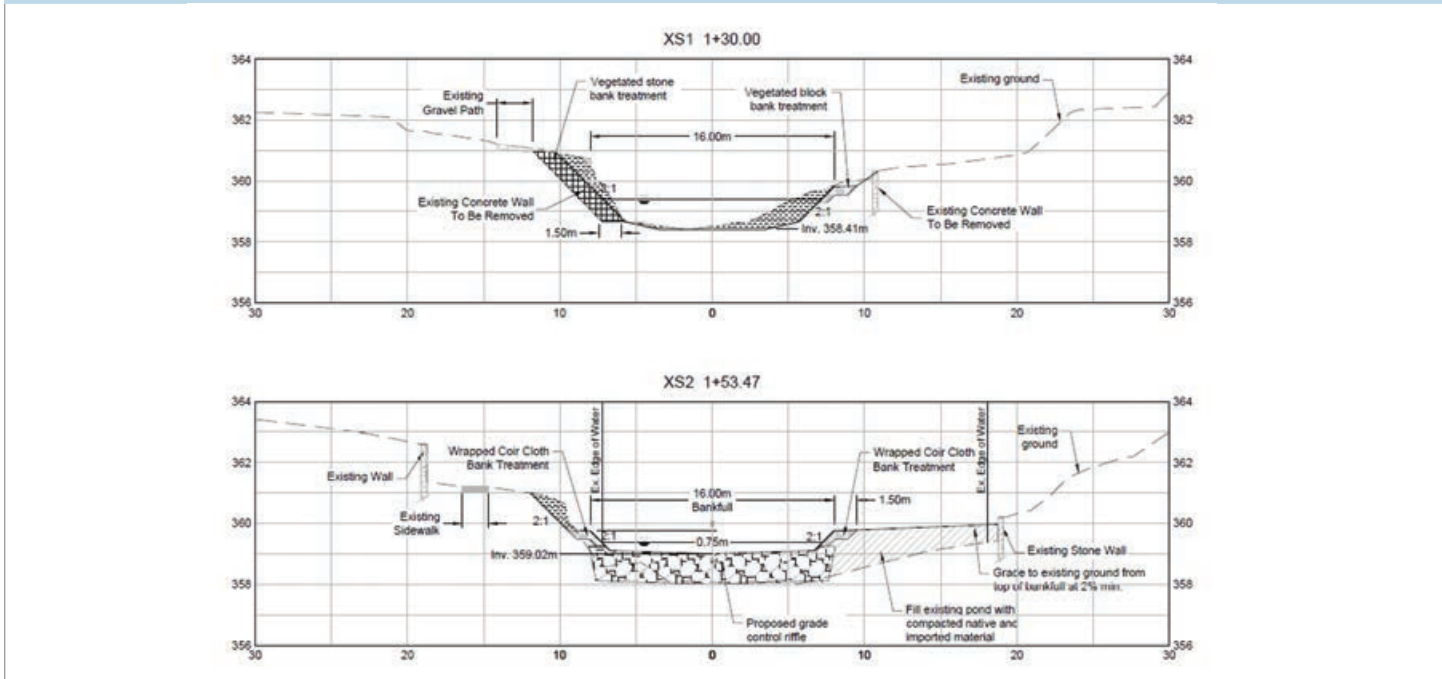
Class EA Area: Heritage Gardens
Preliminary Design Plan Drawing

Channel Cross-Section Examples


Table 5: Boardwalk



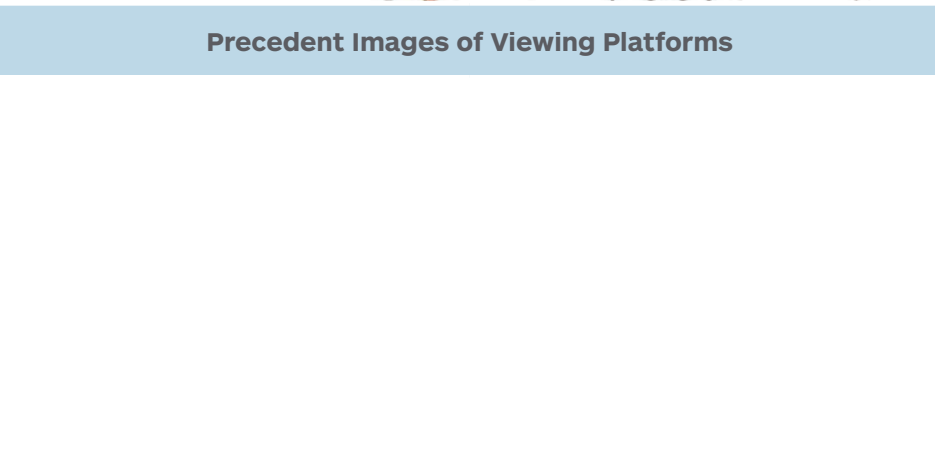
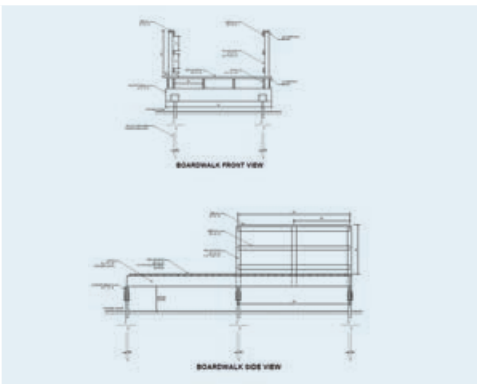
Boardwalk		
Purpose	Design Details	Key Items to be Determined at Detailed Design
<p>Provide an accessible trail option for visitors</p> <p>Protect sensitive environment; seeps and springs run over the existing path</p> <p>Two platforms overlooking the river will provide unique scenic views of the heritage gardens and turn-around points for visitors</p>	<p>130m boardwalk will replace the existing duff trail; 100m adjoining boardwalk will be replaced</p> <p>The boardwalk will be 2-3m in width</p> <p>Two (2) adjacent viewing platforms (45-65m²) will be built</p> <p>Natural wood, engineered plastic, fabricated wood, weathered steel and/or glass may be used for the construction</p> <p>Will adhere to AODA standards and guidelines (as feasible)</p>	<p>Exact location of trail and platforms based on final channel design</p> <p>Height and design of boardwalk and railings</p> <p>Materials used</p>
Conceptual Images		
Proposed Location of Boardwalk and Viewing Platforms		Artistic Rendering of Heritage
		
Precedent Images of Viewing Platforms		Boardwalk Cross-Sections with Helical Piles
		

Table 6: Terrace Cantilever

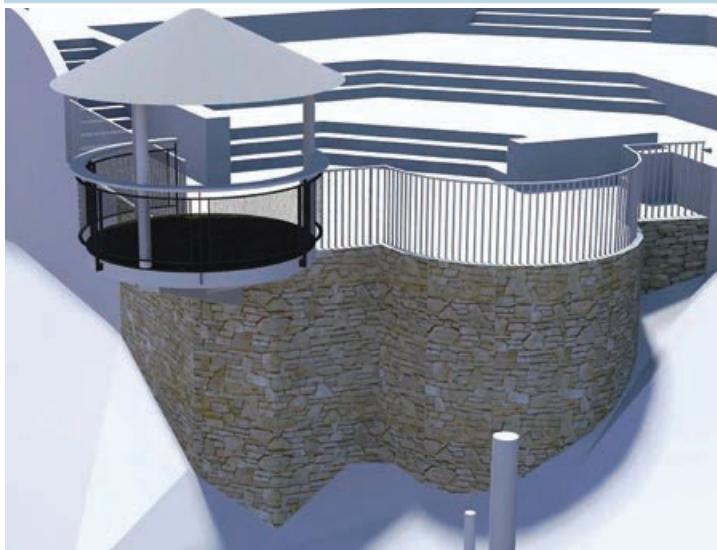

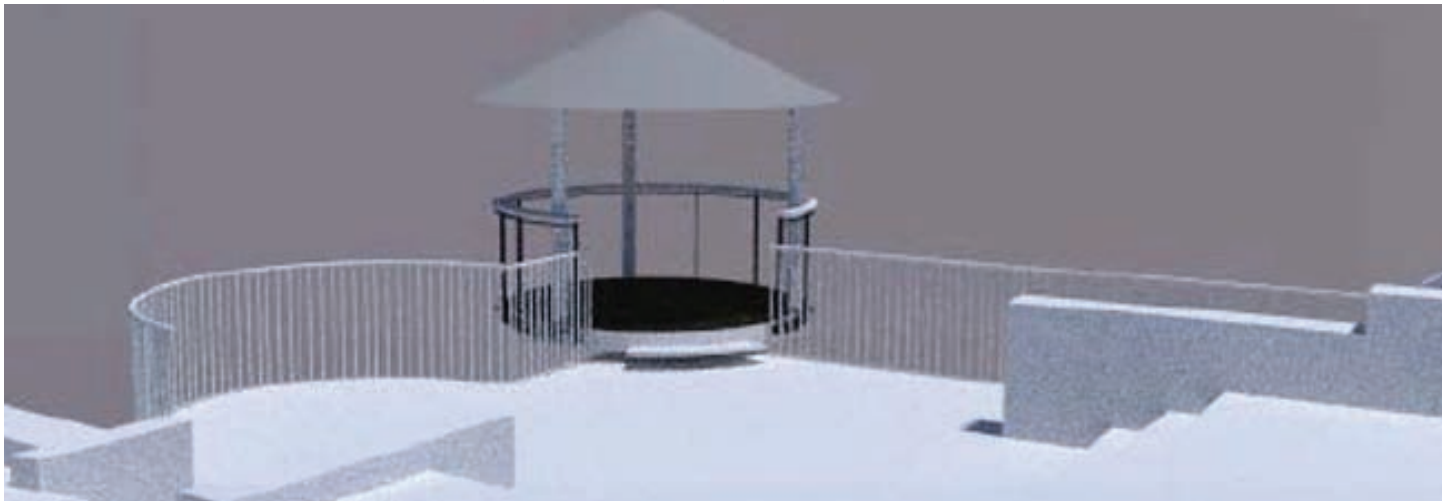
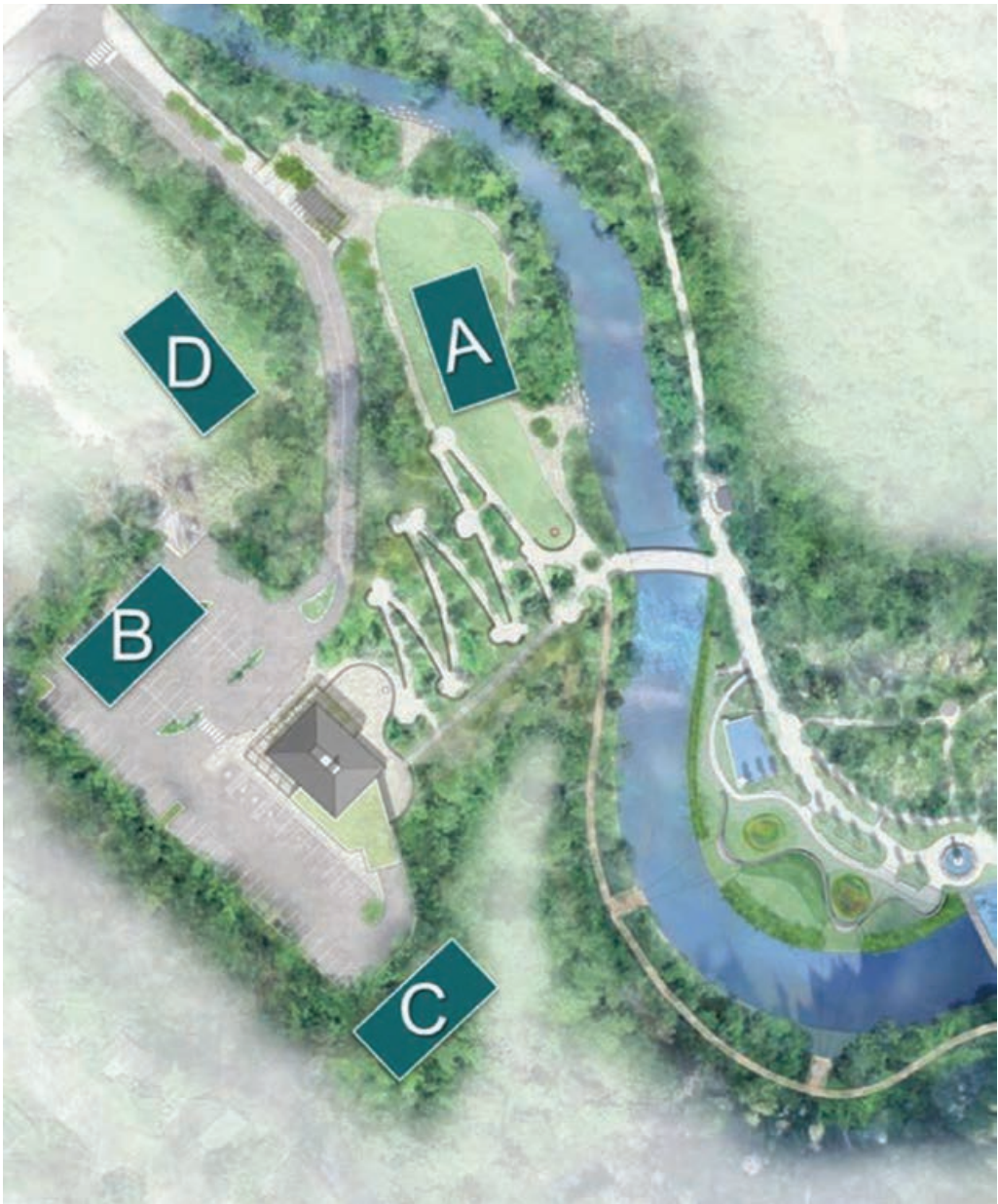
Terrace Cantilevered Platform		
Purpose	Design Details	Key Items to be Determined at Detailed Design
<p>Provide unique views of the West Credit River and Valley</p> <p>Reflect and pay homage to the unique look-out platforms that were once part of Mack's Park</p>	<p>Covered structure, approx. 10m²</p> <p>Constructed of similar stone design as the terrace</p> <p>The terrace, reconstructed in 2015, was structurally designed to support a cantilevered platform</p>	<p>Design and material of railings and roof</p>
Conceptual Images		
Proposed Situation of the Cantilevered Platform		Plan View of Cantilevered Platform
		
Proposed Situation of the Cantilevered Platform		
		

Table 7: Tile Field Location

Tile Field Location		
Purpose	Design Details	Key Items to be Determined at Detailed Design
<p>The existing septic area is past its design life expectancy; a new tile field is required for the new visitor centre</p> <p>Area D has been identified as the preferred location for the Tile Field</p>	<p>Target size of the tile field is 450m²</p> <p>Approximate size and potential locations for the tile field are identified in the map below and discussed in Table 8.</p>	<p>Size</p> <p>Configuration</p>



- Location criterion preferred, conforms to policy and is feasible with no, or acceptable, impacts
- Location criterion is less preferred, does not completely conform to policy, is questionably feasible, and/or represents impacts
- Location criterion is not preferred, does not conform to policy, is not feasible and represents unacceptable impacts

Table 8: Tile Field Location Evaluation

BELFOUNTAIN CONSERVATION AREA MANAGEMENT PLAN - TILE FIELD LOCATION EVALUATION MATRIX															
	Feasibility		Potential Impacts to Natural Features				Anthropogenic Considerations			CVC Policy Considerations					Summary
Tile Field Location	Geotechnical Feasibility	Treatment Considerations	SAR	Habitat Quality	Tree Removal	Proximity to Watercourse	Access to Staff	Impacts to CA operations/ visitors	Proximity to Neighbours	Outside of 25-year floodline	Above Top of Bank/ outside stable slope	Erosion hazard	Setback from watercourse (min. 15m)	Development in valleylands	
Habitat Unit #2 (D)	Soil and geotech studies support location Water table appropriate to support tile bed	Able to maintain setbacks to property line and crest of slop for tile bed	Within SAR habitat (JESA dispersal, foraging, hibernation)	Isolate lower quality forest	Minimal tree removal required (no mature or native trees)	85m separation	Access limited to staff only Good operational access for maintenance	No impacts to visitors or park operations	Outside 15m buffer from neighbouring lot lines/ wells, but in close proximity	Outside of 25 year and 100 year/ Regional floodlines	Above top of bank and outside the stable slope line	Setbacks to top of bank/ stable slope line will be achieved to the extent possible	Setback will be achieved	Development on table lands	Preferred location Studies have been conducted that support location Impacts to SAR habitat will be avoided and/or minimized to the extent possible
Day Use Area (A)	In-depth soil and geotech studies have not been undertaken Water table is higher than 90cm in some areas Stage II Archaeological shows in-situ Euro-Canadian resources (foundations)	Given proximity to river, additional tertiary treatment may be required to ensure nitrogen output (3g/L) targets	Within SAR habitat (JESA dispersal)	Manicured lawn area, not quality habitat	Minimal tree removal required	Within 20m - 30m of West Credit River	Staff access may impact visitor use	Impacts to day use area are expected (fill and raised tile bed required) - interferes with existing and planned park programming	Outside 15m buffer from neighbouring lot lines/wells	Outside of 25 year but within 100 year/ Regional floodlines	Below stable slope	Development within erosion hazard	Close to river but 15 m setback can be achieved	Development within valley land; fill being brought into valley lands	Not preferred Additional soil/ geotech study required to support location Location is within hazard lands and near river Location would impact park use and operations Filling in floodplain may increase flood depths and velocities
Parking Lot (B)	Building code does not allow parking on a tile field due to soil compaction and damage to distribution piping	Appropriate treatment not possible due to parking infrastructure	Within SAR habitat (JESA dispersal)	Development area, not quality habitat	No tree removal required	80m separation	CVC staff access difficult/ impossible	Removal of required parking for tile field would significantly impact park operations and traffic safety	Outside 15m buffer from neighbouring lot lines/ wells, but in close proximity	Outside of 25 year and 100-year floodlines	Above top of bank and outside the stable slope line	to top of bank/stable slope line will be achieved to the extent possible	Setback will be achieved	Development on table lands	Not feasible Logistics and requirements for placing a tile field under a parking lot are unknown, and further prohibited by Building Code

- Location criterion preferred, conforms to policy and is feasible with no, or acceptable, impacts
- Location criterion is less preferred, does not completely conform to policy, is questionably feasible, and/or represents impacts
- Location criterion is not preferred, does not conform to policy, is not feasible and represents unacceptable impacts

Table 8: Tile Field Location Evaluation

BELFOUNTAIN CONSERVATION AREA MANAGEMENT PLAN - TILE FIELD LOCATION EVALUATION MATRIX															
	Feasibility		Potential Impacts to Natural Features				Anthropogenic Considerations			CVC Policy Considerations					Summary
Tile Field Location	Geotechnical Feasibility	Treatment Considerations	SAR	Habitat Quality	Tree Removal	Proximity to Watercourse	Access to Staff	Impacts to CA operations/ visitors	Proximity to Neighbours	Outside of 25-year floodline	Above Top of Bank/ outside stable slope	Erosion hazard	Setback from watercourse (min. 15m)	Development in valleylands	
Natural Area (C)	In-depth soil and geotech studies have not been undertaken sloped; does not allow for tile fields on steep gradients	Given proximity to intermittent stream, additional tertiary treatment may be required to ensure nitrogen output (3g/L) targets	Within SAR habitat (JESA dispersal, foraging, hibernation)	High quality forest	Significant tree removal required	Within close proximity of tributary to West Credit (0-3m)	Access limited to staff only	No impacts to visitors or park operations	Outside 15m buffer from neighbouring lot lines/ wells, but in close proximity	Outside of year and likely 100-year floodlines	Stable slope has not been confirmed	Development within erosion hazard	Within close proximity to a tributary to West Credit (15 m setback from a watercourse cannot be met)	Development within valley land	Not feasible High quality forest habitat in sloped area placed on steep gradient
Current Location (approx. B)	Current septic is past design-life expectancy Recent studies on condition have not been conducted Soil remediation and amendments likely required	Remediation and/or removal of existing septic and soil required for area to be reused	Within SAR habitat (JESA dispersal)	Development area	No Tree removal required	75m separation	Staff access may impact visitor use	Reducing parking lot size or relocation of parking lot is not an option from a safety, visitor management, or tourism perspective	Outside 15m buffer from neighbouring lot lines/ wells, but in close proximity	Outside of 25 year and 100-year floodlines	Above top of bank and outside the stable slope line	Setbacks to top of bank/ stable slope line will be achieved to the extent possible	Wetback will be achieved	Development on table lands	Not feasible Not an option as more parking is required to safely and effectively manage visitation
No Tile Bed	Geotechnical issues to be addressed in building design and foundation engineering	Cost prohibitive/ not feasible onsite All treatment would be contained within building Direct disposal of treated wastewater still required on site	Development area	Development area	Minimal tree removal required coincident with Visitor Centre construction	40m separation of direct discharge to West Credit requirements under for Environmental Compliance Approval	Access limited to staff only	No impacts to visitors or park operations	Outside 15m buffer from neighbouring lot lines/wells	Outside of 25 year and 100-year floodlines	Above top of bank and outside the stable slope line	Setbacks to top of bank/ stable slope line will be achieved to the extent possible	Setback will be achieved	Development on table lands	Not feasible Based on current use of BCA, expected visitor uses and redundancy required for the system, a tile bed will most likely be required Direct surface discharge - unknown requirements under an ECA

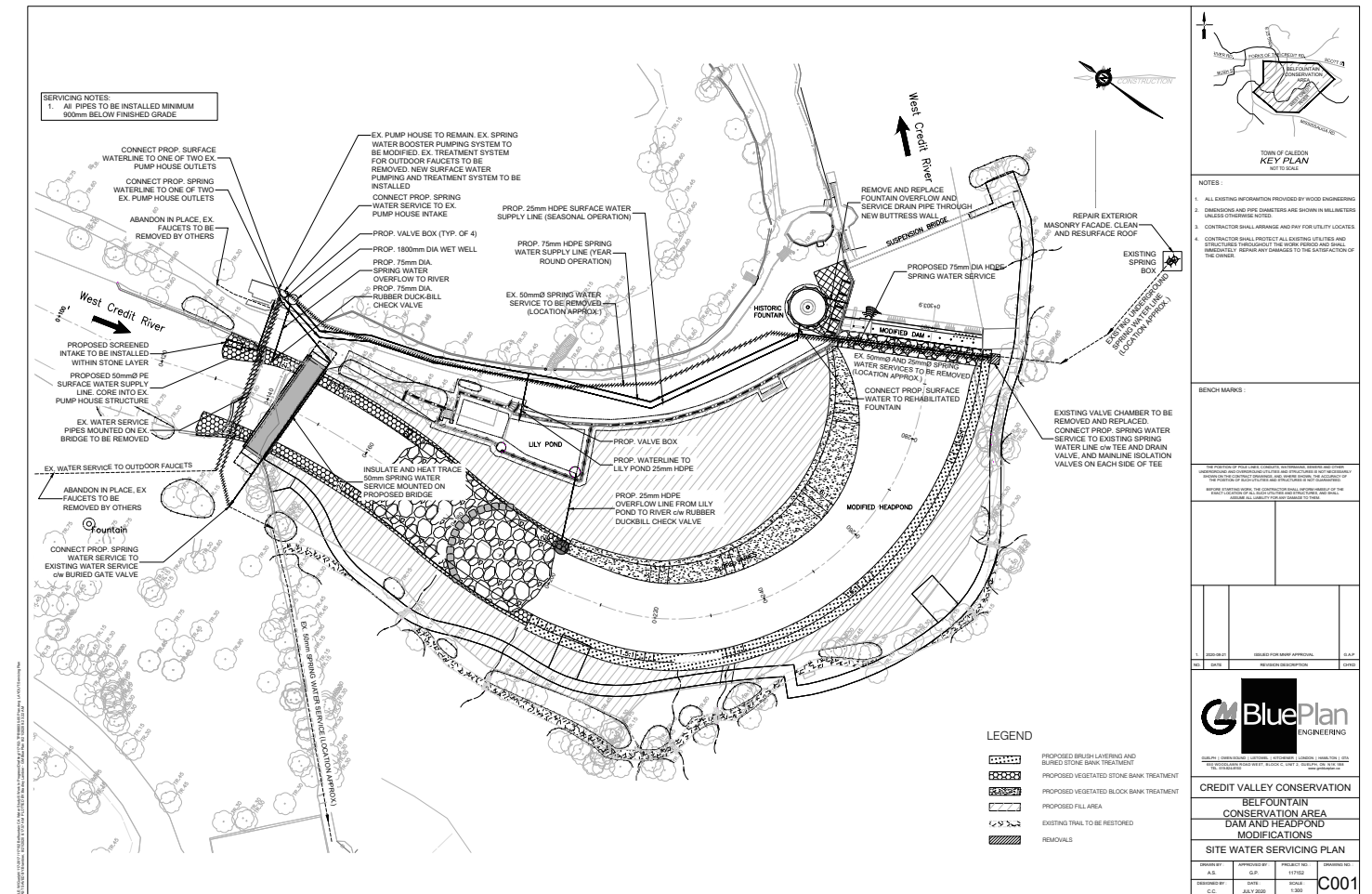
Based on the above feasibility analysis, we have developed three suggested alternative concepts to carry forward to preliminary design. We acknowledge that these concepts will be altered and refined during the preliminary design stage based on additional information from suppliers (Dragon's Den) and ongoing discussions with the CVC project team; elements of these concepts can also be combined in different ways. Water conservation (reduced design loading factors) and flow equalization are included in all three concepts; a seven day balancing window is proposed due to the dynamic weekday/weekend flow profile. We note that the minimum disposal bed capacities presented can be increased slightly within the available footprint to provide an additional safety factor.

5.1 Alternative Concept #1

- Well plus spring for potable water
- Unserved pumphouse washroom (i.e. vault toilet + hand sanitizer). No river crossing required.
- Gatehouse washroom with grinder pump and visitor centre wastewater to a centralized balancing and treatment system
- Wastewater effluent reclamation for non-potable water reuse (toilet flushing only) intended for of recycle 40% of water
- Filtered river water for fountain
- Irrigation, maintenance water, etc. supplied through rainwater/stormwater harvesting
- Level IV treatment with high-level nitrogen reduction prior to final disposal of excess wastewater
- Either Shallow Buried Trench or planted Type A bed, approximately 6,500L/d minimum capacity

- Well plus spring for potable water
- Pumphouse washroom has urine diverting dry toilet; greywater & urine pumped to centralized system. River crossing required.
- Gatehouse washroom with grinder pump and visitor centre wastewater to a centralized balancing and treatment system
- Wastewater effluent reclamation for non-potable water reuse intended to recycle up to 80% of water; includes toilet flushing, fountain use, irrigation, maintenance water, etc. Non-potable top-up from spring.
- Level IV treatment with high-level nitrogen reduction prior to final disposal of excess wastewater
- Either Shallow Buried Trench or planted Type A bed, approximately 6,500L/d minimum capacity (to account for months with low irrigation needs)

- Well plus spring for potable water
- Rain plus spring for non-potable water
- Pumphouse washroom fully serviced with grinder pump. River crossing required.
- Gatehouse washroom with grinder pump for blackwater; greywater diverted to mulch pits nearby
- Visitor centre greywater diverted to mulch pits nearby; blackwater sent to centralized balancing and treatment system
- No wastewater recycling; water conservation and flow balancing only
- Level IV treatment system with ultra-high-level nitrogen reduction prior to disposal
- Either Shallow Buried Trench or planted Type A bed, approximately 8,000 L/d minimum capacity



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**Credit Valley
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