Identifying and Promoting Cultural Heritage Landscapes Along the Beaver Valley Section of the Bruce Trail

by

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ABSTRACT

IDENTIFYING AND PROMOTING CULTURAL HERITAGE LANDSCAPES ALONG THE BEAVER VALLEY SECTION OF THE BRUCE TRAIL

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The Bruce Trail (BT) meanders through the 725 km long Niagara Escarpment corridor that has a long history of human settlement. The Beaver Valley section of the BT is a mosaic of cultural heritage landscapes (CHL) from early settlement farmsteads to iconic apple orchards. At present the BT does not incorporate CHL through trail design although it is important that these landscapes are identified as they provide a deeper connection with the people who shaped this landscape. The goal of this research is to create guidelines that will inform trail designers on how to establish a CHL experience along the Beaver Valley section of the BT. Research methods were informed by the Ontario Heritage Tool Kit which included field observation, key informant interviews, document and online archival review. The results were used to develop CHL guidelines specific to the BV and inform future trail design.
DEDICATION

For my Grandpa Beech.
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I would like to acknowledge that The University of Guelph resides on the treaty lands and territory of the Mississaugas of the Credit. As well, I would like to acknowledge the land where my research took place is on the lands and territory of the Chippewas of Nawash Unceded First Nation (Cape Croker) and Chippewas of Saugeen Unceded First Nation (Chippewa Hill). Today this land is the gathering place and home to many Indigenous peoples. It is important for us to understand the history of Turtle Island, not just in the past, but also acknowledge the enduring presence of Indigenous peoples on this land today.

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List of Abbreviations

CHL – Cultural Heritage Landscapes

BT – Bruce Trail

NEP - Niagara Escarpment Plan

NEPA – Niagara Escarpment Plan Area

NEPOSS - Niagara Escarpment Parks and Open Space System
Chapter One

Introduction

Overview

The section of the Niagara Escarpment located in Southern Ontario, Canada, is an ecologically rich and mostly forested 725 km corridor. It was designated as a UNESCO World Biosphere Reserve in 1990 for the diversity of habitats along its length, including Great Lakes coastlines, cliff edges, talus slopes, wetlands, woodlands, limestone alvar pavements, oak savannas, conifer swamps and many others (Niagara Escarpment Plan [NEP], 2017). The combined population of all the upper-tier and single-tier municipalities that span the Niagara Escarpment Biosphere Reserve was 1.3 million people at the time of the 2011 Canadian census (Statistics Canada, 2011). The Escarpment runs through the westerly end of the Greater Toronto and Hamilton Area, which has a population of close to seven million people and is the most populous area of Canada. Human use of the Escarpment landscape, particularly after European settlement, includes mineral resource extraction; production of local food including vineyards and cideries; agri-tourism; recreation; and eco-tourism.

For millennia people have shaped the landscape they live in and through reading these ‘cultural heritage landscapes’ (CHL) we can learn and grasp a deeper understanding of the history of a particular place. Identifying and understanding CHL is important for gaining a greater understanding of the people who shaped the landscape in which we presently live.
Following the full length of the Niagara Escarpment in Ontario is the Bruce Trail (BT) that was established in 1960. The initial goal of this trail was to develop and maintain a trail to “the Bruce”, referring to the Bruce Peninsula, through which the northern-most terrestrial section of the Escarpment ends. The BT is named after James Bruce, 8th Earl of Elgin, who was Governor General of the Province of Canada from 1847 to 1854 (Bruce Trail Conservancy [BTC], 2020). The trail is managed by the Bruce Trail Conservancy, whose mission is to “preserve this ribbon of wilderness, for everyone, forever” (BTC, 2020). The trail crosses public and privately-owned land; the Bruce Trail Conservancy owns 67 percent of the land along the trail, while 33 percent of the trail is under private ownership (BTC, 2020). Trail re-routings may sometimes be required in areas of private ownership if current or new owners do not agree to allow the BT to cross their property. These reroutes provide the opportunity for CHL to be introduced and recognized along the trail.

The BT provides an opportunity for people to learn about the cultural history of this part of Southern Ontario as they hike along the Niagara Escarpment. The trail is divided into eight sections. For the purpose of this research, the area of study is the Beaver Valley Section, located in Grey County, which is experiencing a shift in population and new landownership along the trail. This shift, in turn, can lead to trail re-routing as the preferences of landowners change. Trail reroutes provide the opportunity for the Bruce Trail Conservancy to examine not only the geologic and ecologic features of this corridor, but also to begin to identify and highlight the CHL found along this section of the trail.
Using methods inspired by the 2006 Ontario Heritage Tool Kit, site observations, online archival research, document review, and key informant interviews, CHL along the Beaver Valley section of the BT were interpreted and assessed. The identified CHL were used to help formulate trail design guidelines that can be used during trail rerouting. This research informs future trail design that will in turn assist in interpreting cultural history and conserving natural heritage within Southern Ontario.

**Problem Statement**

Cultural heritage landscapes (CHL) are not presently considered or implemented in the BT design process. The study area has many features and elements that tell the history of the people who evolved with and influenced the landscape. These areas are defined as CHL, and they can help us to connect with our landscape’s heritage. The BT meanders through this landscape and provides the unique opportunity to act as an education corridor by allowing hikers to connect with and learn about the landscape’s past if CHL identification is implemented based on practical guidelines.

**Research Goal and Objectives**

The goal of this research is to create guidelines that will inform trail designers on how to establish a CHL experience along the BT using the Beaver Valley section as an example.
To meet this goal, the following objectives were established:

1. Identify an appropriate classification strategy for CHL along the Beaver Valley section of the BT by conducting a literature review, document analysis, and key informant interviews.

2. Identify examples of CHL along the Beaver Valley section of the BT by compiling previous CHL assessments done in the Beaver Valley by a literature review, site observations, and key informant interviews.

3. Apply the classification strategy (objective 1) to the examples of CHL found along the Beaver Valley section of the BT (objective 2) by categorizing the previous CHL using the Ontario Heritage Tool Kit classifications.

4. Suggest guidelines for trail designers to help incorporate CHL along the BT.

**Thesis Organization**

This thesis is structured into five chapters. Following Chapter One, Chapter Two reviews the literature important to the research topic by first examining the evolution of the term CHL prior to being adopted by governing bodies, understanding the term ‘CHL’, and explaining how CHL are defined in literature and by governing organizations. Chapter Two also introduces the Niagara Escarpment, BT, Beaver Valley, and summarizes the work that has already been conducted in the Beaver Valley regarding landscape assessments prior to the Ontario Heritage Tool Kit. Chapter Three explains the methodology used for this research. Chapter Four describes the results of the research. Chapter Five discusses the findings from Chapter Four and presents guidelines for how to include CHL in the design process during BT reroutes or along the
current main trail. Chapter Five also explains limitations to this research, and future work that can be conducted.

Summary

The introduction above highlighted the need to better understand what CHL are and how they are, or can be, incorporated into trail design, specifically, the BT in Ontario. The rationale was presented that CHL identification and categorization is an essential first step if user-experiences are to be enhanced. The following chapter examines some of the literature that has been published with respect to CHL identification, planning and design.
Chapter Two

Literature Review

Overview

Before creating guidelines that will inform trail designers on how to establish a CHL experience along the Beaver Valley section of the Bruce Trail, it is important to understand the need for this research. The purpose of this literature review is to understand the term and importance of CHL and comprehend how CHL are defined by governing organizations to gain an understanding of the study area. Lastly, this literature review will present the work that has already been conducted in the Beaver Valley regarding CHL.

Understanding ‘CHL’

CHL have the ability to narrate the stories of an area’s history. Cultural landscapes are formed from humans’ influence on the landscape. Sauer (1925) first wrote that cultural landscapes are the result of ‘culture’ acting as the agent, and the ‘natural landscape’ as the medium. The natural landscape is the surrounding environment of our daily lives.

The natural landscape existed before humans had a chance to alter it. Natural 'landscapes' is a broad term that can be identified in many ways. Sauer (1925) elaborates that 'landscapes' are a unit of geography, similar to an ‘area’ or ‘region’. Sauer (1925) explains that the English term 'landscape' is equivalent to the German
word ‘land shape’ which describes that the shaping of land is more than just physical, it is an area of both physical and cultural forms.

Our feelings towards a landscape can influence our daily interactions with it. Melnick and Alanen (2000) explain that our perceptions and experiences play a role in how we interpret landscapes. Understanding our perceptions with a particular landscape can be indicative of why we interact with a landscape in a certain way. The term landscape indicates humans' relationship with their surrounding environment. Humans can be drawn to a particular landscape for a particular reason. Humans can use the natural landscape to benefit their daily lives. Modification of a natural landscape is a cultural landscape. Mitchell, Rossler and Tricaud (2009) explain that is it important to understand the term ‘landscape’ to fully understand the origins of ‘cultural heritage landscapes’.

Prior to the understanding of cultural landscapes, there was a misconception of the relationship between ‘landscape’ and ‘cultural’. Anderson (2010) explains that initially the interconnection between ‘landscape’ and ‘culture’ was viewed as “man was the product of the earth” (Anderson, 2010, p. 20). However, it is now viewed that human modification of natural landscapes produce cultural landscapes. Sauer (1925) elaborates that while human beings have in fact shaped the earth, cultural landscapes are created from a natural landscape imprinted by a cultural group. Cultural landscapes have the potential to evolve. If people leave an area, and new people later inhabit that land, the landscape has the potential to evolve as a product of new settlement actions.
Or if the same group changes their purpose of land use, the landscape will also have the potential to evolve to that new purpose. Sauer (1925) stated that it is important to understand that culture changes over time, therefore a landscape under the influence of a culture will undergo changes. Sauer (1925) also explains, with an introduction of a new alien culture, the cultural landscape will go through a rejuvenation as this new culture superimposes change on the existing landscape.

The word heritage in the term ‘CHL’ indicates that the landscape may have heritage value to the community. Identifying and understanding CHL helps one to read into the history of an area. These landscapes share the stories of how generations evolved the natural landscape into what we can see today. Often, the term cultural landscape is used interchangeably with CHL.

**Evolution of the Term ‘CHL’**

Identifying CHL allows a deeper understanding of the history of a landscape (Nelson and Preston, 2005; Paine and Taylor, 1995). However, the importance of identifying and preserving CHL has only recently been coined by governing organizations, including the Province of Ontario (Mitchell et al., 2009; Town of Blue Mountains, 2009, Nelson and Preston 2005). Figure 1 below is a simplified graphic of a timeline of the evolution of the term CHL.
Figure 1. Timeline of the Evolution of the Term 'CHL'. Source: Author
1900s

In the early 1900s the nature of landscape was theorized in various ways by different disciplines. At this time, geographers described the physical landscape as the setting of human activities (Stephenson, 2008). In 1926, American geographer Carl Sauer attempted to understand the role of humans in the evolution of landscapes (Stephenson, 2008; Sauer, 1925; Jackson, 2012). Sauer expressed that cultural groups created cultural landscapes from a natural landscape, ‘cultural was the agent, the natural area the medium and the result was a cultural landscape’ (Sauer, 1925, p. 343).

1960s

In the 1960s the concept of heritage became an interest in public history and the term cultural landscapes began to arise (Taylor and Lennon, 2012). In 1962, UNESCO released: Recommendation Concerning the Safeguarding of the Beauty and Character of Landscapes and Sites, which introduced the emerging issue of protecting ‘man-made’ landscapes on a global level (UNESCO, 1962). During this time there was a desire to have a more meaningful understanding of landscapes as people began to discover that landscapes hold an unsurpassed record of social history (Taylor and Lennon, 2012). However, it was still the norm to protect natural heritage and cultural heritage focusing on monuments and architecture rather than looking at the value a surrounding landscape may hold (Agnoletti, 2006).
1970s

In 1972 the UNESCO World Heritage structure adopted the *Convention Concerning the Protection of World Cultural and Natural Heritage* which signified the conjoining of nature conservation and preserving cultural properties (Town of Blue Mountains, 2009). In 1976 the American Society of Landscape Architects (ASLA) held a leadership conference for cultural landscape preservationists, as they began to address issues associated with preserving the broader landscape (Alanen and Melnink, 2000). Their work focused on landscape preservation and restoration in the United States.

1980s

In 1982, the U.S. National Park Service released the first resource for identifying and defining cultural landscapes. This resource provided significant direction to the cultural landscape preservation movement (Alanen and Melnink, 2000; Melnick et al., 1984). During this time the National Park Service established four general categories of cultural landscapes:

- **Historic Site**: a landscape significant for its association with a historic event, activity or person.
- **Historic Designed Landscapes**: a landscape that was consciously designed or laid out by a landscape architect, master gardener, architect or horticulturalist according to design principles, or an amateur gardener working in a recognized design style or tradition.
- **Historic Vernacular Landscape**: a landscape that evolved through use by the people whose activities or occupancy shaped the landscape.
- **Ethnographic Landscape**: a landscape containing a variety of natural and cultural resources that associated people define as heritage resources (Alanen and Melnink, 2000, p. 8)

This is significant because this is the first time the National Park System released categories for cultural landscapes.
1990s

In 1992, the term cultural landscapes was officially adopted globally by the World Heritage Convention of UNESCO (Mitchell et al., 2009). During this year UNESCO developed three classifications of cultural landscapes: designed landscapes, evolved landscapes, and associative landscapes (Mitchell et al., 2009). These classifications are still used today.

In 1994, the National Historic Sites System published by Parks Canada included cultural landscapes for the first time. Two years later, in 1996, *Guidelines for the Treatment of Cultural Heritage Landscapes* was released by the US National Register of Historic Places providing an identification and evaluation approach for cultural heritage landscapes (Town of Blue Mountains, 2009). Also in 1996, the Ontario Provincial Policy Statement officially recognized CHL.

2000s

Lastly, in 2006 Ontario Regulation 9/06 founded *Criteria for Determining Cultural Heritage Value or Interest*. As a result, the Ministry of Culture created the Ontario Heritage Tool Kit which provides explanation to the policies regarding CHL within the Provincial Policy Statement (Ontario Heritage Tool Kit, 2006). The Ontario Heritage Tool Kit (2006) recommends categories of CHL similar to UNESCO: designed landscapes, evolved landscapes, and associative landscapes.
Definitions of CHL

Since the term CHL has been adopted by experts, the view of the environment has become more holistic (Paine and Taylor, 1995). It is important to have a good understanding of the definition of CHL, as governing organizations all have their own variation. For the purpose of this review the different definitions of cultural heritage landscape will be presented from a global level to municipal level.

The World Heritage Convention is an international treaty including the members of the United Nations Educational, Scientific and Cultural Organization (UNESCO) founded in 1972. Canada joined the World Heritage Convention in 1976. The World Heritage Convention defines cultural landscapes as:

The combined work of nature and of man. They are illustrative of the evolution of human society and settlements over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal (WHC, 2005, p. 47).

The National Capital Commission and Parks Canada created the Canada’s Historic Places: Standards and Guidelines (Parks Canada, 2003). This document is a federal, provincial and territorial collaboration. These Standards and Guidelines define cultural landscapes as:

…any geographical area that has been modified, influenced or given special cultural meaning by people, and that has been formally recognized for its heritage value (Parks Canada, 2003, p. 49).
In 2006, the Ministry of Culture published the *Ontario Heritage Tool Kit* in an effort to inform the heritage conservation process in Ontario. The Tool Kit gives guidance to municipal councils, municipal Heritage Committees, municipal staff, heritage professionals and organizations, land use planners, and property owners (Ontario Tool Kit, 2006). The Tool Kit also provides municipalities the responsibility to create their own heritage register for identifying CHL. The Ontario Tool Kit defines CHL as:

> These are geographical areas that involve a grouping of features such as buildings, spaces, archaeological sites and natural elements, which collectively form a significant type of cultural heritage resource. Examples might include villages, parks, gardens, battlefields, main streets and other streets of special interest, golf courses, farmscapes, neighborhoods, cemeteries, historic roads and trail ways and industrial complexes (Ontario Heritage Tool Kit, 2006, p. 7).

The *Niagara Escarpment Plan* arose after the Niagara Escarpment Planning and Development Act was established. The purpose of the plan is to create a planning process that protects the Niagara Escarpment Protection Area. Because the BT runs through the Niagara Escarpment corridor, it is important to understand how the Niagara Escarpment Plan defines CHL:

> A defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Aboriginal community. The area may involve features such as structures, spaces, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association (NEP, 2017. p.183).

The Beaver Valley section of Bruce Trail runs through the Municipality of Grey Highlands and Town of Blue Mountains. The Official Plans for these municipalities act as a tool for growth management and guide environmental protection and economic development. The Municipality of Grey Highlands defines CHL as:
A defined geographical area of heritage significance which has been modified by human activities and is valued by a community. It may involve a grouping(s) of individual heritage features such as structures, spaces, archaeological sites and natural elements, which together form a significant type of heritage form, distinctive from that of its constituent elements or parts (Grey Highlands Official Plan, 2017, p.85).

Town of Blue Mountains defines CHL as:

A defined geographical area of heritage significance that has been modified by human activities. Such an area is valued by a community and is of significance to the understanding of the history of a people or place. Landscapes such as existing rural and agricultural areas, historic hamlets, and heritage roads will be identified in the inventory (Township of Blue Mountains Official Plan, 2016, p. 188).

**Common Elements within the Definitions**

Although CHL can be interpreted in various ways, they all share common themes that are essential for understanding the term as illustrated through the above definitions. The beginning of the definition commonly begins with the identification of a specific geographical area. The next key element explains the relationship of human’s modification or influence on the landscape that delineates the meaning of ‘cultural’. The interrelationship of humans and the landscape is essential to comprehending the term CHL. Another common thread in the definition is that the area should be of heritage value or significance. The measure of value and significance can be understood from interpreting its value for the community, which is explained in the definitions from the Niagara Escarpment, Municipality of Grey Highlands, and Town of Blue Mountains.
Importance of CHL

CHL embody the history and meaning of an area (Paine and Taylor, 1997). Together, a CHL is a work of art that holds a culture’s narrative and expresses the identity of a region (The Cultural Landscape Foundation [TCLF], 2020). These landscapes embody the legacy of an area’s origin and can act as a guide to our evolving relationships with the natural world (TCLF, 2020).

The Ontario Tool Kit (2006) explains that protection of CHL is important for a community’s overall economic and cultural development plan. Grey County’s Official Plan (2019) acknowledges the necessity of maintaining cultural heritage landscapes in order to encourage cultural heritage tourism that will help to promote activity development and support the tourist industry in the area. The BT provides the unique opportunity to act as an educational corridor through the Niagara Escarpment. Paine and Taylor (1995) elaborate, “CHL form an integral part of the Niagara Escarpment, reflecting the identity and achievements of those who live and work within it, and providing inspiration and a source of knowledge for future endeavors” (Paine and Taylor, 1995, p. 1). Through preservation of CHL, care, and interpretation along the BT, it is possible to create a, “deeper sense of place and identity for future generations” (TCLF, 2020).

The Niagara Escarpment

The Niagara Escarpment is, more accurately, a cuesta, that runs generally in an east/west direction from New York, through Ontario, Michigan, Wisconsin, and Illinois. It
is a unique geologic and ecological feature, with cliffs reaching 500m in height in some areas. The formation of the Niagara Escarpment began hundreds of millions of years ago. The area was once immersed under deep water, the characteristic limestone formations where created by the movement of ice during the Glacial Ages (Town of Blue Mountains, 2009). The Escarpment is most well known as the cliff over which the Niagara River drops at Niagara Falls.

The section of the Escarpment located in Southern Ontario, Canada, is an ecologically rich and mostly forested 725 km corridor and is a designated UNESCO World Biosphere Reserve due to the diversity of habitats (See Figure 2 below). The Niagara Escarpment is protected by the Niagara Escarpment Plan (2017) which gives guidance to development and land uses within the Niagara Escarpment Area. The Niagara Escarpment can be hiked via the BT from Queenston to Tobermory.
Figure 2. Niagara Escarpment within Ontario. Map: Author
The Bruce Trail

The BT is a footpath meandering 900km through the Niagara Escarpment from Queenston to Tobermory, see Figure 3 (Tyson, 2017). In 1960, Raymond Lowes had a vision of a footpath that would span the entire Niagara Escarpment in southern Ontario (BTC, 2020). Philip Gosling was appointed Trail Captain at the time, and he knew that the only way to have access to the Niagara Escarpment was to build relationships with the private landowners along the proposed corridor (BTC, 2020). Mr. Gosling and some volunteers went door to door, sharing their idea with landowners along their proposed corridor (Tyson, 2017). To this day, the relationship with private landowners is critical to the success of the trail, as only 67 percent of the trail is on public land (BTC, 2020).

In 1963 regional trail clubs were established, growing in number to the nine at present. These are: Niagara, Iroquoia, Toronto, Caledon Hills, Dufferin Hi-Land, Blue Mountains, Beaver Valley, Sydenham, and Peninsula (BTC, 2020).

The BTs mission is to, “Preserve a ribbon of wilderness, for everyone, forever” (BTC, 2020, p.1). To this day the BT is a highly successful Conservancy with over, 1400 volunteers (BTC, 2020). The Conservancy has maintained the Trails private land ownership relationship, currently passing through more than 700 private properties (BTC, 2020).
Figure 3. The Bruce Trail. Map: Author
The Beaver Valley Section of the BT

The Beaver Valley section of the BT meanders through Grey County within the municipalities of the Town of Blue Mountains and Grey Highlands. The trail spans from Craigleith to Blanytre with 117km of main trail, see Figure 4 (BTC, 2020). The trail traverses diverse landscapes consisting of a rural lot mosaic, grand views of Nottawasaga Bay and Beaver Valley, farm fields and forests, through creeks and over waterfalls, all with the prominent backdrop of the Niagara Escarpment (BTC, 2020). The rural areas of the Beaver Valley have an open landscape pattern characterized by valley and stream courses, farmland with orchards, hedgerows, rolling topography, agricultural fields and pastures, and views and vistas (Town of Blue Mountains, 2009).
Figure 4. Beaver Valley Section of the Bruce Trail. Map: Author
Landscape Characteristics

The Niagara Escarpment is a dominant feature in the Beaver Valley landscape (Wells, 2003). The Escarpment has created a unique physiography and microclimate which has shaped the agricultural practices of the area; the landforms drove early settlement patterns (Town of Blue Mountains, 2009).

The main river in this section is the Beaver River; this river system has many associated creeks and tributaries which have shaped their way through the limestone escarpment, forming well-defined valleys, waterfalls, rolling terrain, and numerous views and vistas (Town of Blue Mountains, 2009; Wells, 2003). The waterfalls in this area were an early energy source, as settlers built mills in these areas (Town of Blue Mountains, 2009). Beaver Valley’s agricultural practices have been heavily influenced by the physiography and microclimate created by the Niagara Escarpment and the Georgian Bay (Town of Blue Mountains, 2009; Wells, 2003). The microclimate is created from the influence of Georgian Bay and the elevation of the Niagara Escarpment (Town of Blue Mountains, 2009). This valley has cooler summers, warmer mid-winter temperatures and longer frost-free periods, having a mild climate and good soils (Town of Blue Mountains, 2009). This unique climate is perfect for growing apples. Over a quarter of all Ontario apples are produced within the Beaver Valley. This area is also home to many local wineries and cideries (Town of Blue Mountains, 2009). On the other side of the Escarpment ridge, the lake effect yields higher than average snowfall. The copious amount of snowfall along with the elevation of the Escarpment has created a world class downhill ski industry (Town of Blue Mountains, 2009).
Landscape Assessments in the Beaver Valley

The Beaver Valley area has been studied for years prior to the establishment of the Niagara Escarpment Plan. In 1968 the Ontario Government commissioned a report, titled *The Niagara Escarpment Study Conservation and Recreation Report* to recognize the unique features of the Niagara Escarpment, which included the Beaver Valley. Since this report numerous studies have been conducted by the Niagara Escarpment Commission involving the Beaver Valley area.

In 1975, a Features and Conditions Survey was conducted that included mapping of waterfalls, geological features, viewpoints and sites of historic interest (see Figure 5 and Figure 6) (Niagara Escarpment Commission [NEC], 1975). In 1976, *A Landscape Evaluation Study* evaluated landform, vegetative cover, land use, special features, and views, providing insight on areas based on an attractiveness ranking (NEC, 1976). In 2003, *A Landscape Assessment of the Central Beaver Valley* was conducted with the purpose of creating a landscape analysis and classifications of landscape character, (see Figure 7). Together these maps provide a good representation of the landscape character of the Beaver Valley.
Figure 5. Waterfall, Geological Features, Viewpoints Identified by Niagara Escarpment Commission. Source: (NEC, 1975)
Figure 6. Sites of Historic Interest Identified by Niagara Escarpment Commission. Source: (NEC, 1975)
Figure 7. Landscape Character Units in Central Beaver Valley. Source: (Wells, 2003)
CHL Assessments Prior to the 2006 Ontario Heritage Tool Kit

Aside from studies conducted by the Niagara Escarpment Commission, Paine and Taylor (1995, 1997) conducted two studies on CHL found within the Beaver Valley. These studies were conducted prior to the establishment of the Ontario Heritage Tool Kit (2006). Their purpose was to create a CHL assessment method appropriate for the Niagara Escarpment. At the time of this study only natural resources and features were being inventoried and there was no emphasis on the cultural heritage aspect of the Niagara Escarpment. To complete Paine and Taylor’s (1997) report, a Master’s thesis by Collin (1996) was conducted to test their recommended method: A Community-Based Method For Assessing Cultural Landscapes in the Country Side. Collin (1996) identifies a working list of CHL valued by the Beaver Valley community.

Collin (1996) focused on the Beaver Valley area and used community-based techniques to create an inventory of CHL of value to the community. An advisory committee and three local community groups participated in the three techniques: cognitive mapping, history matrix, and surrogate photography to create an inventory list of cultural landscapes. The inventory list was then categorized by scale from small (specific sites), large (geographic patterns), largest (scenic views). Through Collin’s study, it was found that the small-scale resources corresponded to the criteria of a vernacular landscape, one of the three typologies for CHL proposed by Paine and Taylor (1995), which are vernacular, designed, and associative landscapes. A vernacular landscape is now termed as an “evolved landscape” by the Ontario Heritage Tool Kit (2006).
The second categorization - large scale landscapes - were classified as designed landscapes because they are protected by the Niagara Escarpment Commission and Conservation Authorities. The third categorization, the largest landscapes, is a list of valued scenic views, which Collin classified as designed landscapes as they are protected by the Niagara Escarpment Plan’s open viewshed policy. At the end of Collin's study, the Advisory Committee was asked to prioritize the inventory of 295 features to their top 20 (Table 1). This list of CHL will be used as a resource for the purpose of this research (see Figure 8).

<table>
<thead>
<tr>
<th>Top 20 Cultural Heritage Landscapes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Old Mill at Kimberley</td>
</tr>
<tr>
<td>2. Kimberley Community Hall</td>
</tr>
<tr>
<td>3. Surge Towers at Eugenia</td>
</tr>
<tr>
<td>4. Water flumes at Eugenia</td>
</tr>
<tr>
<td>5. Ravenna Community Hall</td>
</tr>
<tr>
<td>6. Apple Orchards</td>
</tr>
<tr>
<td>7. Kolapore Forest</td>
</tr>
<tr>
<td>8. Escarpment Forests</td>
</tr>
<tr>
<td>9. Escarpment rock outcrops</td>
</tr>
<tr>
<td>10. Clarksburg Bridge</td>
</tr>
<tr>
<td>11. Old Mail Road</td>
</tr>
<tr>
<td>12. Lower Valley Road</td>
</tr>
<tr>
<td>13. Bruce Trail</td>
</tr>
<tr>
<td>14. Beaver Valley River</td>
</tr>
<tr>
<td>15. Eugenia Falls</td>
</tr>
<tr>
<td>16. Hogg's Falls</td>
</tr>
<tr>
<td>17. Beaver River</td>
</tr>
<tr>
<td>18. Thornbury Fish Ladders</td>
</tr>
<tr>
<td>19. Eugenia Dam</td>
</tr>
<tr>
<td>20. Archeological Sites</td>
</tr>
</tbody>
</table>

Table 1. Top 20 Cultural Heritage Landscapes. Source: (Collin, 1996)
Figure 8. Top 20 Identified CHL (Collin, 1996). Map: Author

Note: Figure 8 does not show Apple Orchards, Kolapore Forest, Escarpment Forests, Escarpment rock outcrops, Clarksburg Bridge, Archaeological Sites or Thornbury Fish ladders because exact coordinates were not found; however, they are still present within the landscape.
CHL Assessments After the 2006 Ontario Heritage Tool Kit

The Town of the Blue Mountains conducted a CHL assessment for the purpose of a Renewable Energy Approval proposal. This study is important to this research, as the Beaver Valley section of the Bruce Trail runs through the Town of the Blue Mountains. The Town of Blue Mountains (2006) report generated a map of CHL; these landscapes were evaluated using the Ontario Heritage Tool Kit (2006) categories. This report found that the majority of the landscapes within the study area are evolved or associative (see Figure 9).
Figure 9. CHL Identified (Town of Blue Mountains, 2008). Map: Author
Summary

Through this literature review, it is shown that the term CHL has evolved over time and has only recently been recognized in Ontario. Governing organizations all have their own variations of the term CHL; however, the key element in each definition is the interrelationship between a human and a landscape, whether associative or physical.

The Beaver Valley section of the Niagara Escarpment has been studied for many years prior to the establishment of the Ontario Heritage Tool Kit (2006). Collin (1996) used a community-based methodology prior to the establishment of the Ontario Heritage Tool Kit (2006) to gather an inventory of cultural heritage landscapes within the Beaver Valley Area. The Town of Blue Mountains’ Report has also generated an inventory of CHL; however, this study was conducted after the establishment of the Ontario Heritage Tool Kit (2006). Both of these inventories will be used as an initial list of CHL as the municipalities that the Beaver Valley section of the BT goes through do not have a register of CHL.
Chapter Three

Methods

Overview

The goal of this chapter is to outline the research methods used for identifying CHL along the Beaver Valley section of the BT and the creation of guidelines for trail designs in the identified CHL areas. To achieve the first objective of identifying a relevant classification strategy for CHL along the Beaver Valley section of the BT a literature review, document review, and key informant interviews were conducted. The second objective of identifying CHL found along the Beaver Valley section of the BT was accomplished by completing a literature review, site observations, and key informant interviews. The final objective of creating a guideline ‘tool’ for the identification of CHL along the Beaver Valley section of the BT for trail designers was met by completing key informant interviews, site observations, and online archival research. The relevance of each method - a literature review, field work, archival research, key informant interviews, and a document review - is explained within this chapter. See Figure 10 for a layout of the research design.
Figure 10. Research Design Flow Chart. Source: Author
**Literature Review**

A literature review was conducted to form a foundation of the available knowledge on the topic of CHL. A literature review is used to identify principle themes in the literature, past and present contributions to the topic, agreements and disagreements in the literature and, lastly, to distinguish gaps in the available knowledge (Deming and Swaffield, 2011). The literature review conducted was used to understand the evolution of the term CHL; understand the meaning of ‘landscape’, ‘cultural landscape’ and ‘heritage’; review how governing organizations define CHL and their categories; and understand cultural landscape assessment methods previously conducted in the study area. By obtaining and creating a synthesis of applicable and current knowledge found in literature about CHL gaps were discovered and a research direction was identified (Deming and Swaffield, 2011).

**Document Review**

A document review was conducted to gain knowledge about how levels of the Ontario government define CHL and the current policies put in place to identify these landscapes. The review was conducted by first reading fully through each document. Key words of CHL and Landscape Character were looked for with these documents. The goal of the document review was to understand which policies to follow for identifying CHL along the Beaver Valley section of the BT.
**Site Observation**

Site observation is a type of descriptive research that is used to provide new knowledge in areas that little is known (Deming and Swaffield, 2011). There is a lack of knowledge of the CHL found specifically along the Beaver Valley section of BT. Site observation is an effective way to gain an understanding of the character of a place (Deming and Swaffield, 2011). Site observation is also recommended by the Ontario Heritage Tool Kit (2006) when identifying CHL. Field work was conducted through the months of September, 2019, to January, 2020, through the process of hiking specific segments of the trail and documenting potential sites of CHL using photography.

**Transportation**

As with most hiking trails, access to the BT itself is varied and can greatly influence use and the hiking experience. Many users of the BT use cars to travel to locations where they can park and then hike. For this study, hiking segments were chosen based on access to designated parking areas for users of the BT that are located in the Manual (Bruce Trail Manual, 2017). Transportation to the hike was done in three different ways, with the goal of not having to hike back to the same starting point, this allowed for the ability to cover more ground through this process. The first method used during warmer months was to drive to a designated parking area and then ride a bicycle to the start of the hike, hide the bike behind a tree and then hike to the car. Once returned to the car, I would drive to pick up the bike. The second was the use of two cars if there was a hiking partner that day. One car was parked at the end of the hike then the second was used to drive to the start. The third was the use of the Beaver Valley BT ‘Trail Angels’,
which is a program run specifically in the Beaver Valley section of the BT. This program accepts donations to the club in return for a pick-up and drop off to any location in that section of the trail.

**Documentation**

Documentation for the hike was conducted using an Apple iPhone 7. The iPhone 7 had the ‘geotag option’ turned on, which allowed the coordinates of the location of the photograph to be documented. Photographs were taken of scenes, elements or larger landscapes that had an indication of human influence, such as a row of sugar maples or an old split rail fence. After concluding each hike, the photographs were uploaded on to a computer and labeled with the date in a folder. Once all the hikes were concluded the files were converted into a .csv file and placed onto ArcGIS online.

**Key Informant Interviews**

Key informant interviews were used as a research strategy as they can reveal unknown understandings of a topic or area (Deming and Swaffield, 2011). The objective of these interviews was to fill the gaps in the research identified from the literature review and document review and also provide relevance for the identified CHL adding community value and significance to the term ‘heritage’. The Ontario Heritage Tool Kit (2006) recommends a community component when identifying CHL.
The key informants were selected based on the following criteria:

- Had historical knowledge of Grey County, and were familiar with the CHL within the Beaver Valley
- Had knowledge of the BT’s current trail design framework and knowledge about what land is privately owned vs what land is owned by the Bruce Trail Conservancy
- Had trail design experience associated with CHL
- Had a first-hand hiking knowledge of the Beaver Valley section of the BT and had hiked most, if not all, of the entirety of the section.

It was important that the people chosen were well-versed on the topic of CHL and the Beaver Valley area, as this would increase the probability of gaining useful and relevant information (Deming and Swaffield, 2011). The interviews were conducted using pre-set questions along with the method of probing to help the interviewer share the information needed (Zeisel, 1981).
The following questions were asked of the Key Informants:

<table>
<thead>
<tr>
<th>#</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Can you share with me a little background about your education and career?</td>
</tr>
<tr>
<td>2</td>
<td>What is your experience with trail design?</td>
</tr>
<tr>
<td></td>
<td>a. <em>How did your career lead to the path of trail design?</em></td>
</tr>
<tr>
<td>3</td>
<td>During trail design what aspects of the landscape are considered, can you explain the design process?</td>
</tr>
<tr>
<td>4</td>
<td>What is your understanding of the term ‘cultural heritage landscapes’?</td>
</tr>
<tr>
<td></td>
<td>a. <em>How did you come to this understanding of cultural heritage landscapes? Education, Practice, etc.</em></td>
</tr>
<tr>
<td></td>
<td>b. <em>Has your understanding changed over time?</em></td>
</tr>
<tr>
<td></td>
<td>c. <em>Is this change due to any particular design project or experience?</em></td>
</tr>
<tr>
<td>5</td>
<td>Have you ever completed a design in which cultural heritage landscapes were assessed during the design process?</td>
</tr>
<tr>
<td></td>
<td>b. <em>If yes, was a cultural heritage landscape assessment conducted?</em></td>
</tr>
<tr>
<td></td>
<td>i. <em>If no, why not?</em></td>
</tr>
<tr>
<td></td>
<td>c. <em>If yes, were they identified in the implemented design for users to gain knowledge of the history of the landscape the design was in?</em></td>
</tr>
<tr>
<td>6</td>
<td>Given your experience, how would you incorporate identifying cultural heritage landscapes along a trail?</td>
</tr>
<tr>
<td></td>
<td>a. <em>Would there be challenges? What would they be?</em></td>
</tr>
<tr>
<td></td>
<td>b. <em>What do you think would be the benefits of adding this aspect to the</em></td>
</tr>
<tr>
<td></td>
<td>c. <em>Would your design include physical signs? Or would you prepare an online map for hikers to print off?</em></td>
</tr>
<tr>
<td>7</td>
<td>Do you know of any trails that have identified cultural heritage landscapes along the trail for hikers to access or view?</td>
</tr>
<tr>
<td>8</td>
<td>Based on your knowledge of what a cultural landscape assessment is, when do you think an assessment is needed?</td>
</tr>
<tr>
<td>9</td>
<td>Have you ever designed part of the Bruce Trail?</td>
</tr>
<tr>
<td></td>
<td>a. <em>What was the design process like with the Bruce Trail Conservancy?</em></td>
</tr>
<tr>
<td></td>
<td>b. <em>If yes, were cultural heritage landscapes considered during this design?</em></td>
</tr>
<tr>
<td></td>
<td>c. <em>If yes, what was the methodology used to determine these sites?</em></td>
</tr>
<tr>
<td></td>
<td>d. <em>If yes, were they identified for hikers’ knowledge?</em></td>
</tr>
<tr>
<td>10</td>
<td>What is the primary cause of trail reroutes?</td>
</tr>
<tr>
<td></td>
<td>a. <em>What is the method for selecting new land for the reroute?</em></td>
</tr>
<tr>
<td></td>
<td>b. <em>During the design of the trail reroute what elements of the landscape are considered?</em></td>
</tr>
<tr>
<td></td>
<td>c. <em>Are cultural landscapes considered?</em></td>
</tr>
<tr>
<td>11</td>
<td>Does the Bruce Trail Conservancy have a record of cultural heritage landscapes that may be of interest to highlight during trail design?</td>
</tr>
<tr>
<td>12</td>
<td>Is there currently a regulatory way of identifying cultural heritage landscapes along the Bruce Trail?</td>
</tr>
<tr>
<td>13</td>
<td>How much of the Beaver Valley section of the Bruce Trail is privately owned</td>
</tr>
<tr>
<td>14</td>
<td>How much of the Beaver Valley section of the Bruce Trail is publicly owned?</td>
</tr>
<tr>
<td>15</td>
<td>Through your knowledge of the Beaver Valley are there certain areas you would highlight as significant cultural heritage landscapes?</td>
</tr>
<tr>
<td>16</td>
<td>How would you describe the character of the Beaver Valley landscape?</td>
</tr>
</tbody>
</table>

Table 2: Key Informant Interview Questions. Source: Author
The following questions were asked of Key Informants who had experience working with the Niagara Escarpment Commission:

<table>
<thead>
<tr>
<th>#</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What is your role at the Niagara Escarpment Commission (NEC)?</td>
</tr>
<tr>
<td></td>
<td>a.  What design projects are you involved in?</td>
</tr>
<tr>
<td>2</td>
<td>Does the Niagara Escarpment have a cultural landscape assessment method?</td>
</tr>
<tr>
<td></td>
<td>a.  If Yes, what is the methodology?</td>
</tr>
<tr>
<td></td>
<td>i.  What are the categories used?</td>
</tr>
<tr>
<td></td>
<td>ii. Is there documentation of the assessments that have been conducted?</td>
</tr>
<tr>
<td></td>
<td>b.  If no assessment, what reference would you follow if an assessment was needed?</td>
</tr>
<tr>
<td>3</td>
<td>Do you think the Niagara Escarpment Commission should have their own cultural landscape assessment?</td>
</tr>
<tr>
<td>4</td>
<td>In your opinion, do you think a ‘cultural landscape assessment method’ is attainable to include in the next Niagara Escarpment Plan update?</td>
</tr>
<tr>
<td>5</td>
<td>In 3.1.4 Parks and open space classifications (zones) – is there any further classification for the cultural heritage areas?</td>
</tr>
<tr>
<td>6</td>
<td>How involved is the NEC in the Bruce Trail trail-design process?</td>
</tr>
<tr>
<td></td>
<td>a.  Are you included in the design process?</td>
</tr>
<tr>
<td></td>
<td>b.  Are you aware when trail reroutes occur?</td>
</tr>
<tr>
<td></td>
<td>i.  Are you aware of the design process used for trail reroutes?</td>
</tr>
<tr>
<td>7</td>
<td>Are you aware of these studies:</td>
</tr>
<tr>
<td></td>
<td>· Cultural Landscape Assessment in the Niagara Escarpment: Application of Expert and Informant Methods in the Beaver Valley.</td>
</tr>
<tr>
<td></td>
<td>· Cultural Landscape Assessment: A Comparison of Current Methods and Their Potential for Application within the Niagara Escarpment</td>
</tr>
</tbody>
</table>

Table 3. Key Informant Questions Regarding Niagara Escarpment Commission. Source: Author

The following questions were asked of the Key Informants with experience working along the Beaver Valley section of the BT:

<table>
<thead>
<tr>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  What are the Sentier National Trail Signs along the trail?</td>
</tr>
<tr>
<td>2  There is a large stone wall before entering the Metcalfe area on the trail. Do you know the history of this wall?</td>
</tr>
</tbody>
</table>

Table 4. Key Informant Questions Regarding the Beaver Valley Section of the BT. Source: Author
The interviews were conducted either in a public location or at a professional office. The interviews were recorded using an Apple iPhone 7. Once all interviews were completed each recording was listened to three times. Six common themes were found through these interviews: defining CHL, CHL within the Beaver Valley, landscape character, trail design, BT design, and incorporating CHL in trail design.

**Category Synthesis**

After completing the literature review, document review, site observation, and key informant interviews categories of CHL were developed through the selection process described below. An initial list of CHL along the Beaver Valley section of the BT was identified through the literature review from the two studies: Collin (1996) and Town of Blue Mountains (2008). The Key Informant Interviews also provided a list of CHL. Once these CHL were identified, they were added to the overall CHL list for identified CHL along the Beaver Valley section of the BT. It was very important that each of the CHL on this list was at least identified by the one of the studies (Collin (1996) and Town of Blue Mountains (2008) or by a Key Informant as this provides community value to the cultural landscape, which adds validation to listing the landscape as a CHL. Having community value is highlighted as a step in the CHL identification process by the Ontario Heritage Tool Kit (2006). The site observation was important as it provided information of which CHL from the formulated list intersected with the Beaver Valley section of the BT. If a CHL was identified at least twice - once by a study or Key Informant interviews and intersecting with the trail - it was used to formulate categories for organizing the CHL. Table 5 and 6 show this process.
<table>
<thead>
<tr>
<th>CHL Identified</th>
<th>Identifier</th>
<th>Bruce Trail Intersect</th>
<th># Identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Valley Road</td>
<td>C</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Old Mail Road</td>
<td>C B K</td>
<td>Yes</td>
<td>4</td>
</tr>
<tr>
<td>Fish Ladders</td>
<td>C</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Viewscapes (NEC designed)</td>
<td>C K</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Viewscapes from Farmers Field</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Escarpment Outcrops</td>
<td>C K</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Escarpment Forest</td>
<td>C K</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Row of Sugar Maples</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Barbed Wire Fence</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Cedar Plank Fence</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Stone Walls</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Barn Ruins</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Abandoned Apple Orchards</td>
<td>C K</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Eugenia Mill</td>
<td>C K</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Hogs Falls Mill</td>
<td>C K</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Unknown Mill wall</td>
<td>C K</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Hedge Rows</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Active Apple Orchards</td>
<td>C K</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Cultural Plantations</td>
<td>C K</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Viewscapes Farm Field</td>
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<td>1</td>
</tr>
<tr>
<td>Eugenia Water Flumes</td>
<td>C</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Eugenia Surge Towers</td>
<td>C</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Kimberley Community Hall</td>
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<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Ravenna Community Hall</td>
<td>C</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Eugenia Dam</td>
<td></td>
<td></td>
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<td>Kimberley General Store</td>
<td></td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>Beaver River</td>
<td>C K</td>
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<td>2</td>
</tr>
<tr>
<td>Blue Mountains - Euphrasia Townline &amp; The Beaver</td>
<td>B</td>
<td>1</td>
<td></td>
</tr>
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<td>Victoria Corners</td>
<td>B</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Lorree &amp; Eviroments</td>
<td>B</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Banks</td>
<td>B</td>
<td>Yes</td>
<td>2</td>
</tr>
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<td>Gibraltar</td>
<td>B</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>6th Line Community</td>
<td>B</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Ravenna</td>
<td>B</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Red Wing</td>
<td>B</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Mckean's Mills</td>
<td>B</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Beaver Valley Ski Club</td>
<td>K</td>
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<td>2</td>
</tr>
<tr>
<td>Old Talisman Ski Resort</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Georgian Peaks Ski Club</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
</tbody>
</table>

Identifier

C = Collins 1996 Study
B = Town of Blue Mountains Study
K = Key Informant Interview

Table 5. CHL Identification Process. Source: Author
Table 6. Final List of CHL Identified for the Beaver Valley Section of the BT. Source: Author

<table>
<thead>
<tr>
<th>CHL Identified</th>
<th>Identifier</th>
<th>Bruce Trail Intersect</th>
<th># Identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Valley Road</td>
<td>C</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Old Mail Road</td>
<td>C B K</td>
<td>Yes</td>
<td>4</td>
</tr>
<tr>
<td>Viewscapes (NEC designed)</td>
<td>C</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Viewscapes from Farmer Fields</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Escarpement Outcrops</td>
<td>C</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Escarpment Forest</td>
<td>C</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Row of Sugar Maples</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Barbed Wire Fence</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Cedar Plank Fence</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Stone Walls</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Barn Ruins</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Abandoned Apple Orchards</td>
<td>C K</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Eugenia Mill</td>
<td>C</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Hoggs Falls Mill</td>
<td>C K</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Unknown Mill wall</td>
<td>C K</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Hedge Rows</td>
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</tr>
<tr>
<td>Active Apple Orchards</td>
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<td>Cultural Plantations</td>
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<tr>
<td>Eugenia Surge Towers</td>
<td>C</td>
<td>Yes</td>
<td>2</td>
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<td>Kimberley Community Hall</td>
<td>C</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Beaver River</td>
<td>C K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Lorree &amp; Enviroments</td>
<td>B</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Banks</td>
<td>B</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>6th Line Community</td>
<td>B</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Ravenna</td>
<td>B</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Beaver Valley Ski Club</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Old Talisman Ski Resort</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Georgian Peaks Ski Club</td>
<td>K</td>
<td>Yes</td>
<td>2</td>
</tr>
</tbody>
</table>

Identifier

C = Collins 1996 Study
B = Town of Blue Mountains Study
K = Key Informant Interview

Once the final CHL list was identified for the Beaver Valley section of the BT, the Ontario Heritage Tool Kit Categories (2006) were applied to the list.
Table 7. Ontario Heritage Tool Kit Categories Applied to CHL Along the Beaver Valley Section of the BT. Source: Author

<table>
<thead>
<tr>
<th>CHL Identified</th>
<th>Ontario Heritage Tool Kit Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Valley Road</td>
<td>Designed or Evolved Continuing</td>
</tr>
<tr>
<td>Old Mail Road</td>
<td>Designed or Evolved Continuing</td>
</tr>
<tr>
<td>Viewscapes (NEC designed)</td>
<td>Designed or Evolved Continuing</td>
</tr>
<tr>
<td>Viewscapes from Farmer Fields</td>
<td>Evolved Continuing</td>
</tr>
<tr>
<td>Escarpment Outcrops</td>
<td>Designed or Evolved Continuing</td>
</tr>
<tr>
<td>Escarpment Forest</td>
<td>Designed or Evolved Continuing</td>
</tr>
<tr>
<td>Row of Sugar Maples</td>
<td>Evolved Relict</td>
</tr>
<tr>
<td>Barbed Wire Fence</td>
<td>Evolved Relict</td>
</tr>
<tr>
<td>Split Rail Fence</td>
<td>Evolved Relict</td>
</tr>
<tr>
<td>Stone Walls</td>
<td>Designed or Evolved Relict</td>
</tr>
<tr>
<td>Barn Ruins</td>
<td>Designed or Evolved Relict</td>
</tr>
<tr>
<td>Abandoned Apple Orchards</td>
<td>Designed or Evolved Relict</td>
</tr>
<tr>
<td>Eugenia Mill</td>
<td>Designed or Evolved Relict</td>
</tr>
<tr>
<td>Hoggs Falls Mill</td>
<td>Designed or Evolved Relict</td>
</tr>
<tr>
<td>Unknown Mill wall</td>
<td>Designed or Evolved Relict</td>
</tr>
<tr>
<td>Hedge Rows</td>
<td>Evolved Relict</td>
</tr>
<tr>
<td>Active Apple Orchards</td>
<td>Designed or Evolved Continuing</td>
</tr>
<tr>
<td>Tree Plantations</td>
<td>Designed or Evolved Continuing</td>
</tr>
<tr>
<td>Eugenia Surge Towers</td>
<td>Evolved Continuing</td>
</tr>
<tr>
<td>Kimberley Community Hall</td>
<td>Designed or Evolved Continuing</td>
</tr>
<tr>
<td>Beaver River</td>
<td>Associative</td>
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<tr>
<td>Lorree &amp; Environments</td>
<td>Evolved Continuing</td>
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<td>Banks</td>
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<tr>
<td>6th Line Community</td>
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<tr>
<td>Ravenna</td>
<td>Evolved Continuing</td>
</tr>
<tr>
<td>Beaver Valley Ski Club</td>
<td>Designed</td>
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<tr>
<td>Old Talisman Ski Resort</td>
<td>Designed</td>
</tr>
<tr>
<td>Georgian Peaks Ski Club</td>
<td>Designed</td>
</tr>
</tbody>
</table>

Online Archival Research

Online archival research was conducted to help narrate a story about a particular CHL. Deming & Swaffield (2011) explain that historiographical research is useful for creating narratives while inferring records of cultural events and acts. From the CHL identified along the trail, four of them were researched, based on which ones had sufficient available online information. For each example an archival study was conducted to help
narrate the story about each chosen CHL. These stories are examples of what can be shared with hikers as an education tool along the BT.

**Summary**

This chapter outlined the research methods used for identifying CHL along the Beaver Valley section of the Bruce Trail and the creation of guidelines for trail designs to incorporate a CHL experience for hikers. The relevance for selecting each method - a literature review, field work, archival research, key informant interviews, and a document review - was elaborated on, particularly focusing on how each method was used to achieve the objectives of this study. The following chapter explains the results found from these methods.
Chapter Four

Results

Overview

The purpose of this chapter is to communicate the results from the document review, site observation, key informant interviews, and online archival research. CHL categories appropriate for the BV section of the BT and guidelines were formed from the knowledge learned from each of the methods.

Document Review

The purpose of this section is to assist in accomplishing objective one of identifying the appropriate classifications for identifying CHL along the Beaver Valley section of the BT. Government documents were reviewed in the order of provincial to regional level. The importance of this review was to acknowledge how CHL are interpreted in all levels of the Ontario government and to understand, in a planning context, which documents can be applied to the Beaver Valley section of the BT. This section examined the following documents: *Provincial Policy Statement, Ontario Heritage Act, Niagara Escarpment Plan* and *Grey County Official Plan*.

Provincial Policy Statement

The most current *Provincial Policy Statement* (PPS) came into effect on April 30th, 2014. The PPS is an essential part of Ontario’s policy-led planning system providing the foundation for regulating development and land-use planning (PPS, 2014). The PPS
gives direction to the Planning Act and the Heritage Act and can be complemented by provincial and municipal official plans (PPS, 2014). It is important to note that land use planning decisions conducted by municipalities, the Province or commission of the government must coincide with the PPS (PPS, 2014). The PPS discusses policies in relation to cultural heritage resources in Part IV Vision and Part IV section 2.6 Cultural Heritage and Archeology.

In Part IV: Vision for Ontario’s Land Use Planning System, the PPS states:

The Province’s natural heritage resources, water resources, including the Great Lakes, agricultural resources, mineral resources, and cultural heritage and archaeological resources provide important environmental, economic and social benefits. The wise use and management of these resources over the long term is a key provincial interest (PPS, 2014, p. 4).

Section 2.6.1 of the PPS states that:

Significant built heritage resources and significant cultural heritage landscapes shall be conserved (PPS, 2014, p. 29).

The PPS defines CHL as:

…a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Aboriginal community. The area may involve features such as structures, spaces, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association. Examples may include, but are not limited to, heritage conservation districts designated under the Ontario Heritage Act; villages, parks, gardens, battlefields, main streets and neighbourhoods, cemeteries, trail ways, viewsheds, natural areas and industrial complexes of heritage significance; and areas recognized by federal or international designation authorities (e.g. a National Historic Site or District designation, or a UNESCO World Heritage Site)(PPS, 2014, p. 40).

“Conserved” within the PPS is defined as:

…the identification, protection, management and use of built heritage resources, cultural heritage landscapes and archaeological resources in a manner that ensures their cultural heritage value or interest is retained under
the Ontario Heritage Act. This may be achieved by the implementation of recommendations set out in a conservation plan, archaeological assessment, and/or heritage impact assessment. Mitigative measures and/or alternative development approaches can be included in these plans and assessments (PPS, 2014, p. 40).

The PPS clearly outlines the importance of conserving CHL. All land use decisions made by municipalities and other approval authorities are to be consistent with the PPS.

**Ontario Heritage Act**

The *Ontario Heritage Act* was last amended in 2019. This is the primary piece of regulation governing the protection of cultural heritage resources in Ontario. This Act allows for municipalities to conduct identification, list, and protect cultural heritage properties of value or interest.

(3) The Minister may prepare heritage standards and guidelines which shall, (a) set out the criteria and the process for the identification of properties referred to in subsection (2) that have cultural heritage value or interest; and (b) set standards for the protection, maintenance, use and disposal of property referred to in clause (a). 2005, c. 6, s. 13.

Within the *Ontario Heritage Act*, Ontario Regulation 9/06 criteria are defined, which allows for identification of a cultural heritage property. Ontario regulation 9/06 states that a property can be designated under the section if one or more of the following criteria are met:

1. The property has design value or physical value because it, i. is a rare, unique, representative or early example of a style, type, expression, material or construction method, ii. displays a high degree of craftsmanship or artistic merit, or iii. demonstrates a high degree of technical or scientific achievement.
2. The property has historical value or associative value because it, i. has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community,
ii. yields, or has the potential to yield, information that contributes to an understanding of a community or culture, or
iii. demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.

3. The property has contextual value because it,
   i. is important in defining, maintaining or supporting the character of an area,
   ii. is physically, functionally, visually or historically linked to its surroundings, or
   iii. is a landmark. O. Reg. 9/06, s. 1 (2).

Criteria 3 highlights that if a property supports the character of an area it can be classified as having contextual value. The *Niagara Escarpment Plan* helps to define the landscape character within the Niagara Escarpment Area.

**The Ontario Heritage Tool Kit**

In 2006, the Ministry of Culture published the *Ontario Heritage Tool Kit*. The *Ontario Heritage Tool Kit* is a series of published guides designed for municipal councils, municipal staff, Municipal Heritage Committees, land use planners, heritage organizations, heritage professionals and property owners to educate them on the Ontario heritage conservation process (Ontario Heritage Tool Kit, 2006).

The *Ontario Heritage Tool Kit* outlines 3 categories that can be used when identifying cultural heritage ‘districts’ (landscapes). These categories are:

**Designed landscapes**: those which have been intentionally designed, e.g., a planned garden or, in a more urban setting, a downtown square. A natural feature with cultural association, such as specimen trees or plantings being part of a larger cultural heritage landscape.

**Evolved landscapes**: those which have evolved through the use by people and whose activities have directly shaped the landscape or area. This can include a ‘continuing’ landscape where human activities and uses are still ongoing or evolving e.g. residential neighbourhood or main street; or in a ‘relict’
landscape, where even though an evolutionary process may have come to an end, the landscape remains historically significant e.g. an abandoned mine site or settlement area.

**Associative landscapes**: those with powerful religious, artistic or cultural associations of the natural element, as well as with material cultural evidence, e.g., a sacred site within a natural environment or a historic battlefield.

(Ontario Heritage Tool Kit, p. 2, 2006)

These categories can be used as a starting point for organizing the CHL found along the Beaver Valley section of the BT.

**Niagara Escarpment Plan**

The *Niagara Escarpment Plan* (NEP) was last amended in 2017. The NEP was endorsed after the UNESCO designated the Niagara Escarpment as a World Biosphere Reserve in 1990. The NEP is the first large-scale environmental land use plan in Canada (NEP, 2017). The Plan builds on the foundation of the PPS by providing additional information regarding land use planning policies and development to ensure that changes that occur are compatible with the natural environment for the Niagara Escarpment Protection Area (NEPA). The NEP should be read in conjunction with the Provincial Policy Statement within the NEPA; however, NEP takes precedence if conflicting policies arise. The BT is a footpath corridor that connects the Niagara Escarpment Parks and Open Space System (NEPOSS); therefore, the NEP is an important document to consider while identifying CHL along the trail.

The purpose of the NEP is to:

...provide for the maintenance of the Niagara Escarpment and land in its vicinity substantially as a continuous natural environment, and to ensure only
such development occurs as is compatible with that natural environment. 
(NEP, 2017, p. 12)

The NEP specifies the importance of conservation of cultural heritage landscapes, 
features and scenic values. The first objective of the Plan is, “To protect unique ecologic 
and historic areas” (NEP, 2017, p. 12).

The NEP defines CHL as:

A defined geographical area that may have been modified by human activity 
and is identified as having cultural heritage value or interest by a community, 
including an Aboriginal community. The area may involve features such as 
structures, spaces, archaeological sites or natural elements that are valued 
together for their interrelationship, meaning or association.

Examples may include, but are not limited to, heritage conservation districts 
designated under the Ontario Heritage Act; villages, parks, gardens, 
battlefields, main streets and neighborhoods, cemeteries, trail ways, 
viewsheeds, natural areas and industrial complexes of heritage significance; 
and areas recognized by federal or international designation authorities (e.g., 
a National Historic Site or District designation, or a UNESCO World Heritage 
Site) (NEP, 2017, pp. 138-139).

The NEP addresses the BT in Section 2.14 and Section 3.1. In Section 2.14 the NEP 
States:

The Bruce Trail is a continuous footpath from Queenston to Tobermory, on 
which users can experience the scenic, natural, wooded, pastoral and 
culturally significant areas of the Niagara Escarpment. The objective is to 
design and locate uses within the Bruce Trail corridor in an environmentally 
sound manner (NEP, 2017, p.89).

The BT is a footpath corridor connecting the system of parks and open spaces 
identified as the Niagara Escarpment Parks and Open Space System (NEPOSS). The 
NEPOSS has the possibility of playing an essential role in CHL identification:
The NEPOSS provides opportunities for recreation, tourism, and plays a fundamental role in the protection of cultural heritage resources and the Escarpment’s natural heritage (NEP, 2017, p.92).

The objectives of the NEPOSS include conserving cultural heritage resources, securing a permanent route for the BT, and providing opportunity for public access and outdoor education. The NEP has a classification policy for parks and open spaces within the NEPOSS; these classifications include six types of zones: Nature Reserve, Natural Environment, Recreation, Cultural Heritage, Escarpment Access, and Resource Management Area. In particular, the Cultural Heritage zone is defined as:

These areas are intended to protect distinctive areas representative of the Escarpment’s cultural heritage resources. Development of facilities will be focused primarily on the conservation of cultural heritage resources (NEP, 2017, p.96).

The NEP defines cultural heritage resources as:

Property that includes built heritage resources, cultural heritage landscapes, archaeological resources and/or areas of archaeological potential (NEP, 2017, p.139).

The NEPOSS is an excellent opportunity to incorporate identifying CHL along the BT. However, the NEPOSS classification policy exempts the Bruce Trail Corridor:

Exceptions to the classification policy include: (i) lands owned by a federal agency; and (ii) lands acquired specifically for the Bruce Trail corridor not listed in Appendix 1 of this Plan (NEP, 2017, p.95).

As well, although one of the objectives of the NEPOSS is to conserve cultural heritage resources, the NEP defines:

“The Bruce Trail serves as a common public linkage tying the parks, open spaces, natural heritage features and landforms together in the NEPOSS” (NEP, 2017, p.93).
There is an opportunity here to include CHL; by doing so, the NEP would also add an aspect of outdoor education, which is one of their objectives.

The NEP includes the term 'open landscape character' which is important to understand when studying this unique landscape, as this is how the NEP views the NEPA. The NEP defines open character landscape as:

The system of rural features, both natural and human-made, that makes up the rural environment, including forests, slopes, streams, valley lands, hedgerows, agricultural fields, agricultural buildings and other features of similar character and scale (NEP, 2017, p.92).

For the purpose of this thesis, the Beaver Valley section of the BT runs through the NEPA. When working within the NEPA, the NEP trumps all other legislative policy unless the area is a designated national park. Therefore, for the purpose of this thesis, the definition of CHL and open landscape character will be adopted from the NEP.

**Grey County Official Plan**

The Grey County Official Plan encompasses both the Town of the Blue Mountains and Grey Highlands which the Beaver Valley section of the BT runs through. The Ontario Planning Act requires that all Counties have an Official Plan (OP) which is a legal document containing the goals, objectives, and policies for managing within the regional community.
In Section 1.4.1, the OP explains that the Grey County population is growing. This section also discusses that natural and cultural heritage environments are valued in Grey County and there is a need to protect these areas for future generations. The County believes these areas are important to maintaining Grey’s rich biodiversity and culture (Grey County Official Plan, 2019).

The plan then explains that:

…it is necessary to promote activity development that works with the landscape and supports the tourist industry…. The County, tourism/recreation groups and businesses and the local municipalities are encouraged to work to advance the eco-tourism, agri-tourism, and cultural heritage tourism opportunities available in the County and support linkages to surrounding regional cultural facilities… (Grey County Official Plan, 2019, p. 11).

The OP encourages local preservation, conservation and maintenance of natural, cultural or man-made historical or heritage features, while also promoting cultural heritage tourism opportunities.

Section 3.1, ‘Heritage Policies’, acknowledges the importance of cultural heritage resources and encourages municipalities to develop their own local policies for conservation and development of an inventory of heritage resources.

From a review of the governing documents it was found that while studying the BT the NEP should be turned to as the BT is geographically located within the NEPA. The NEP does not have their own criteria for categorizing CHL; however, the Ontario Heritage Tool Kit (2006) has three categories that can be used. The three categories found within the Ontario Heritage Tool Kit (2006) may not fully represent the character of the CHL
found along the Beaver Valley section of the BT. The Ontario Regulation 9/06 includes
criteria for identifying cultural heritage landscapes; criteria three states, “shows the
character of an area” O. Reg. 9/06, s. 1 (2). The NEP has a definition of ‘open
landscape character’ for the NEPA. Categories proposed for the CHL along the Beaver
Valley section of the BT will use this definition.

Key Informant Interviews

Key informant interviews were conducted to gain community-based knowledge about
trail design, the landscape character of Beaver Valley, CHL, and the importance of
identification of CHL along the BT. The following are the Key Informants selected based
on the criteria explained in Chapter 3 Methods.

1. Key Informant 1- Landscape Architect and professional trail designer with
   experience designing within Grey County
2. Key Informant 2- Retired Landscape Architect (retired OALA, CSLA) with 20+
   years work experience with the Niagara Escarpment Commission
3. Key Informant 3 - Current Landscape Architect with experience working with the
   Niagara Escarpment Commission
4. Key Informant 4 – Trail Director of the Bruce Trail 30+ Years
5. Key Informant 5 – Landowner in the Beaver Valley for 40+ years
6. Key Informant 6 – Retired Landscape Architect (retired OALA, CSLA) planning
   optimum route for the Bruce Trail in 1976
7. Key Informant 7 – Senior Planning Advisor with experience working with the
   Niagara Escarpment Commission
Questions that were asked during the interview were chosen based on the Key Informants’ knowledge about a particular subject area. From the seven interviews conducted, common themes were evident after listening to each interview three times. The themes are summarized below.

**Defining CHL**

CHL were commonly described as historic human interventions on the landscape that may have evolved over time. Key Informant 7 explained that these human interventions and natural features may have changed over time, but some can still be visible within the landscape. CHL were also commonly explained in a broader sense, rather than describing specific properties. However, it is important to note that individual features make up the broader landscape character. Key Informant 5 elaborated that he considers himself to be a part of the cultural landscape. Key Informant 5 also shared that he believes CHL are a reflection of what people do on their land. It is what is done on individual properties that make up the landscape character. Key Informant 2 voiced that the *Niagara Escarpment Plan*’s definition of CHL is similar to that of the definition of ‘open landscape character’ and explained that the definition of ‘open landscape character’ should also be used for the purpose of this study.

**CHL Within Beaver Valley**

The key informants shared their opinions on areas they would identify as CHL within the Beaver Valley. Commonly these features described remnants of agricultural practices. The commonalities were in line with comments from Key Informant 7 and their
description of the Beaver Valley’s changing landscape, from the heritage of agricultural practises to more natural wooded areas. Features that were identified by the key informants as CHL were described as cues and subtle things that indicate the many different layers of the Beaver Valley settlement history. These features included: quarries, early settlement, farming, hedgerows, fence lines, stone fence lines, cedar rail fences, old barn foundations, lilac dales, recreation practices, Talisman Resort, tree plantations, apple orchards. Features in the landscape help us to read the landscapes history. Viewscapes allow us to see the fabric of the land woven together. Key Informant 2 explained the importance of viewscapes for their ability to allow one to see the full fabric of the Beaver Valley landscape. Viewscapes are typically located within public parks and these particular places are maintained for the purpose of viewing the broader landscape.

Landscape Character
Key informants were asked to provide their interpretation of the landscape character of the Beaver Valley. Understanding the different traits that make up the Beaver Valley area is important in creating the categories to be used for classifying CHL. Through the interviews it was clear that the overall landscape character is important to concentrate on, rather than just the individual parcels of land. Both Key Informants 2 and 7 explained that the eastern slopes of the Beaver Valley have changed from a fabric of small farm fields ringed by trees to now a more naturalized and wooded character. Key Informant 5 explained that through their years in the Valley he has witnessed a shift of private ownership to public, in particular, ownership by Conservation
Authorities. Key Informant 5 explained that these landscapes became tree plantations, first with Scotch Pine, but now more commonly White Pine.

Key Informant 4 describes the Beaver Valley as an evolving landscape. Key Informant 4 explained:

There is much forest now, you can see over time how many of the older fields are filling in, you are getting lots of natural regeneration, some plantations being established. Retreat from marginal farmlands, you now can walk through that pine plantation and there is a stone fence that says yes this was pastured here on both sides at some point or farmed here.

There are many different elements it is an interesting mosaic, with natural forest, plantation, orchards, wetlands, lowlands, natural streams, old ski hills. And because it's such a broken topography, you have more variety of different landscape types and people have used it in different ways as a result.

Through the interviews it was understood that the Beaver Valley landscape is a continuously evolving landscape made up of agricultural fields, apple orchards, water features, recreational landscapes, tree plantations, and, evidently, more naturalized areas.

**Trail Design**

The trail design process was generally explained as beginning at a high level with a master plan, and then working down to the details of the proposed trail. At a high level, existing trail networks are mapped out and the connections of a proposed trail are planned and assessed. The next step described was layering these networks with natural environment and cultural environment information. Public consultation was highlighted as very important during the design process by both Key Informants 1 and 3. After public consultation potential routes are designed with an evaluation method to help
‘score’ the various routes and choose a preferred route. Key Informant 1 explained
specific details are considered at this point, including: environmental features, species
at risk, topography and slope, species features. The next step is to select a preferred
route which is then vetted by another public consultation including stakeholders involved
in the project.

A common struggle discussed was trying to balance access while preserving and
conserving a feature. Key Informant 1 explains:

…there’s always the challenge of trying to find that balance between
providing access, preserving or conserving the feature or the environment
and providing a visitor experience, there’s kind of three pieces that are
involved in the balance.

Another struggle commonly discussed was the ability to provide appropriate
accessibility in areas of the trail in environments that may be challenging. Accessibility
here refers to providing opportunities for everyone to have access to the trail whereas
access is the opportunity for all people to get to the trail.

Key Informant 2 explained:

There’s always this balance between how we protect the environment and
how we provide accessibility.

Once the features and accessibility measures are decided on, specific design details
are considered, including design criteria needed for the trail such as slopes, surfaces,
wayfinding details and trail heads, etc.

Another important element of trail design discussed is having the ability to create a
diverse trail experience. Key Informant 6 described this process using a musical score
analogy. He referred to the book RSVP Cycles (Halprin, 1969). Key Informant 6 explains that by using the sequential notation system, like a musician creating a score of music, you have the ability to include a number of elements to create an experience:

I tried to use his sequential notation system, I created my own symbols and I went out and looked at existing trails and trying to map them. I was creating musical notes on the score, saying, ok, this symbol represents this, this symbol represents this, and this symbol represents this. And again, based on the premise that, you know, increasing variety is increasing excitement to a point, you know, what's the inventory for that piece of the trail and you just kind of look at the score and there's nothing on it as well. It's pretty flat. You know, this is not, there's not much happening here. Whereas the next section could be really exciting from a visual point of view, I really have to work to get up the side of this waterfall, oh the sound is amazing, like the water splashing on my hands, and that it is a hot day and all the trees are fantastic. So, all of this stuff, make that section of the trail really, really exciting. You could use this method as an inventory to see what you have to work with. When you are looking at a section of trail you can say, that's pretty much the same it's all forest and oh, yawn, and then I get to this one spot, and it's just so amazing. What can I do? Can I take any of those bits of amazing? And can I incorporate them into the earlier parts a little bit to make the whole thing a little bit more interesting. Take away from a couple of them at the end, but to make the rest of it interesting.

Key Informant 6’s method of trail design can be used as a tool when suggesting the guidelines for the addition of a CHL experience to the BT.

**Bruce Trail Design**

All key informants explained that the Bruce Trail Conservancy solely designs the BT while staying within the policies of the Niagara Escarpment Commission. Key Informants 3 and 7 explained that the Niagara Escarpment Commission were only involved in the trail design if built structures required permits to be built. Key Informant 7 explains:
NEC is involved when they are looking at doing something substantial like a parking area, or campground, or board walk, etc.

The Bruce Trail Conservancy has many local volunteer groups that help with trail design, and those features do not require consultation with the Niagara Escarpment Commission, for the most part. Key Informant 4 shared that the design process for the BT, to his knowledge, does not currently look at CHL. Key Informant 4 explains:

- It's interesting [that] the Bruce Trail doesn't give a lot of thought to cultural landscapes. To be honest, it's much more concerned about natural values. You know that the Conservancy has two staff ecologists who provide expertise around environmental impacts - what we should avoid when we're developing trails, sensitive features, and so on; how we should manage the landscape, how to deal with invasive species. So, there's a lot of expertise and interest in natural. There is some interest, but it doesn't come out strong on the cultural heritage side.

Key Informant 4 goes on to explain that one of the most important elements of the trail design is sustainability. When a reroute occurs, typically three potential routes are planned. The Bruce Trail Conservancy then evaluates the routes looking for species at risk and sensitive areas deciding on the route with the best potential for sustainability over time.

**Incorporating CHL in Trail Design**

Key informants commonly articulated that they thought there was an opportunity to include a CHL experience along the trail. They suggested that it was a really great prospect for the Bruce Trail. Key Informant 1 expressed that the addition of CHL identification would be invaluable to the trail. Key Informant 1 continued, “…there is a huge opportunity and something that would be invaluable to the process”. Key Informant
5 expressed, “It would be absolutely valuable to the trail”. Key informants shared that the introduction of an element of identification of CHL along the trail would be a valued asset to the BT.

Key informants were asked how they would incorporate identification of CHL along the BT. Key Informant 1 expressed an interesting thought, “You walk a fine line between interpretation and information overload”. How to share the information along the trail without taking away from a hiker’s experience is an important part of this work. Key Informant 1 suggested QR codes used to be commonly at trail heads for hikers to scan via their phone. Another common option discussed with Key Informants 1, 5 and 6 was the ability of using an app on a phone to indicate cultural heritage landscapes along the trail. The identification method chosen should not take away from a hiker’s experience which can be achieved by only labeling key CHL, and by allowing hikers the choice to choose to learn about these landscapes.

The key informant interviews shared valuable knowledge on their perceptions of the landscape character and what they consider CHL in the Beaver Valley Section. They also shared that identifying CHL would be a value added to the BT, and confirmed this work is not currently being done. The key informants also confirmed that the NEP would follow the Ontario Heritage Tool Kit (2006) if identifying CHL within the NEPA. Lastly, the key informants shared trail design advice that will be useful when synthesizing guidelines for trail designers to incorporate CHL along the BT.
Site Observation

Site observation was conducted by hiking the Beaver Valley section (117km) of the BT through the months of September 2019 to January 2020. Throughout this field work, photographs were taken using geo tags to help identify locations of potential CHL of interest. Areas that were selected to be photographed showed a sign of human intervention. These areas may not be CHL; however, they are cultural landscapes as they demonstrate human intervention. After reviewing and labelling the photos, common themes were identified. These themes are indicators that help us read the landscape character of the Beaver Valley Landscape. This section will explain the identified themes, with photographs used to show examples along the trail. Below is Figure 11, a map with all of the photograph locations organized by theme found along the Beaver Valley section of the BT.
Figure 11. Categorized Photograph Locations of CHL Along Beaver Valley Section of BT. Map: Author
Apple Orchards

The Beaver Valley area is nestled between Georgian Bay and the Niagara Escarpment and this creates a unique microclimate, ideal for orchard crops such as apples. Apple orchards are a very common element in the Beaver Valley landscape although many have been abandoned. Figure 12 is a photograph of an abandoned apple orchard along the Beaver Valley section of the BT. It is not known how long ago this orchard ceased to be managed, but apple trees have a general lifespan of 50-80 years and so some fallow orchards may be at least 50 years old.

Figure 12. Multiple Apple Trees in a Field Indicate an Abandoned Apple Orchard.
Source: Author
Farm Fields

The BT frequently runs along the edges of active farm fields. For the most part, the fields have crops such as wheat, hay, corn, and soybeans. Some fields are used as cattle pastures. Although farm fields are commonly turning into tree plantations on the west side of the Beaver Valley, farm fields still make up a large part of the landscape character. Grey County has over 3,000 farms and is the number one producer of hay, apples, sheep and lambs, and the second highest producer of cattle in Ontario (Scherzer, 2020).

Figure 13. Wheat Field. Source: Author

Figure 14. BT Meandering Along Cattle Field. Source: Author
**Tree Plantations**

Tree plantations are frequently seen along the Beaver Valley section of the BT. These areas are easily identified as plantations as the trees are generally of one species planted in distinct rows. The age of most plantations is generally 30-40 years in this area and are likely because of the Grey Sauble Conservation Authority (GSCA). In 1985, the GSCA began to increase forest management on their properties. When open land is purchased by GSCA it was planted right away with tree species: White or Red Pine, White or Norway Spruce, and European Larch (GSCA, 2016). When the GSCA begins forest management on Conservation Land, the land becomes a part of the Management Forest Tax Incentive Program.

Figure 15. Rows of Coniferous Trees Indicating Tree Plantation. Source: Author
**Sugar Maple Rows**

Rows of Sugar Maples are frequently seen along forest edges, and sometimes in the middle of forests along the Beaver Valley section of the BT. A row of Sugar Maples may be indicative of old property boundaries. In the late 1900s the government had an incentive for farmers to plant maples along roadsides and their laneways (MapleLeaves, 2020). Sugar Maples were popular for their production of maple syrup and useable hardwood (Government of Ontario, 1995). Today, rows of older Sugar Maples can indicate old roadsides and laneways within the current landscape.

![Sugar Maple Trees Planted in a Row](image)

**Figure 16. Sugar Maple Trees Planted in a Row. Source: Author**
Split Cedar Rails

Wooden fences are commonly seen bordering the edges of farm fields. Fences along property boundaries began to be built before the 1800s as the principle of private landownership became more prevalent (McIlwraith, 1997). These fences are suggestive of old property boundaries. Fence types are indicative of the availability of resources in Ontario for the past two centuries (McIlwraith, 1997). Split cedar rails marked the start of a new era in the landscape of Ontario (McIlwraith, 1997). At this time a good-sized tree trunk could be made into eighty 4m rails, creating a zig zag pattern that was longer than the tree it was made from (McIlwraith, 1997). Today split cedar rails are still evident of this time period and can be seen along farmers field while hiking along the Beaver Valley section of the BT, (see Figure 17).

Figure 17. Split Cedar Rail in Forest. Source: Author
**Barbed Wire Fences**

Barbed wire fences are frequently seen along the edges of farm fields. Generally barbed wire fences were used to contain or keep animals out of areas, as livestock could potentially make their way through cedar rail fences. As such, in the 1920s, rail fences were taken down and wire fences were put up (McIlwraith, 1997). In many places, trees have overgrown the barbed wire that would have been originally attached to the trees, as fence posts would have been expensive and labour intensive.

![Image: Tree Grown Over Barbed Wire](image1)

**Figure 18. Tree Grown Over Barbed Wire. Source: Author**

![Image: Barbed Wire Fence in the Middle of Forest](image2)

**Figure 19. Barbed Wire Fence in the Middle of Forest. Source: Author**
Stone Walls

Stone walls are generally seen in the middle of hedgerows, and sometimes on their own in the middle of two fields. Fences were often built with accessible resources found close to the farm field. After plowing a field, the rocks found were sometimes used to build stone fences. Drystone walls became increasingly popular in Ontario in the 1850s. Walls consisted of fieldstone, river stone, quarry stones or a mixture (McIlwraith, 1997). Along the Beaver Valley section of the BT you can see a variety of stone walls, from piles of stones from plowing fields to more thoughtful stone walls like Figure 20.

Figure 20. Stone Wall Found in Between a Tree Plantation and Mixed Deciduous Forest. Source: Author
Barn Ruins

Ruins of barn foundations were found in a few farm fields. These ruins are indicative of the Beaver Valley’s agricultural past.

Figure 21. Old Stone Barn Foundation. Source: Author
Mills

During the start of European settlement in Ontario, legislation encouraged entrepreneurs to occupy potential water-power mill sites to develop their own sawmill or grinding mill (McIlwraith, 1997). Three mill ruins were found along the Beaver Valley section of the BT. The mills documented were Hoggs Falls Mill (see Figure 23), Eugenia Mill, and an unnamed mill (see Figure 24). These sites were identified as they were at the top of a waterfall, used as the power source, and had a stone structure.

Figure 22. Old Stone Wall at the Top of a Waterfall. Source: Author

Figure 23. Concrete Wall Remnants of Hogg’s Sawmill. Source: Author
Views

There are many locations along the Beaver Valley section of the BT where views can be seen of the Beaver Valley. Viewpoints can be at high vantage points along the top of the Escarpment, Figure 24, or in farm fields along the trail, Figure 25. Over time it is possible to see changes in the landscape character by comparing the same views years apart. The landscape area seen by an observer’s viewpoint is called a viewshed (Wells, 2003).

Figure 24. View from Old Baldy Looking Southwest into Beaver Valley. Farm Fields, Tree Plantations, and Ski Recreation Can Be Seen. Source: Author

Figure 25. View into Beaver Valley from Farm Fields. Source: Author
Maple Syrup Lines

Maple syrup lines were found along the Beaver Valley section of the BT in one area. This is a newer cultural landscape being established by Beaver Valley Maple in 2017. Beaver Valley Maple’s goal is to, “craft the finest quality organic 100% pure maple syrup from the beautiful Beaver Valley” (Beaver Valley Maple, 2020). This sugar bush is revealed by the sap lines connecting the Sugar Maples, see Figure 26.

Figure 26. Sap Lines Connecting Sugar Maples in a Forest Along the Beaver Valley Section of the Bruce Trail. Source: Author
Trees in a Row

Frequently trees can be seen planted in a distinct row, evenly spaced along parts of the Beaver Valley section of the Bruce Trail. These rows are often seen dividing two different landscapes; Figure 27 shows a mixed deciduous forest behind the row of trees, and an open field on the right. Trees planted in an organized row may be indicative of a property boundary or edge of a farm field.

Figure 27. Coniferous Trees Planted in a Row. Source: Author
Old Buildings

Old buildings are rarely seen along the Beaver Valley section of the BT, unless passing by an old hamlet or into Kimberley. The architecture and materials used of a building can tell the stories of the people who shaped the landscape of a particular area and at a particular time. Often times there are clues that indicate their origin, and their past purpose. Figure 29 shows the Community Memorial Hall in Kimberley. As is typical for a building of some significance, the name of the building has been carved into limestone above the formal front entrance.

Figure 29. Community Memorial Hall located in Kimberley, Ontario. Source: Author

Figure 28. Old House Located at the Top of Georgian Peaks Ski Club. Source: Author
Hydro Plant

The Beaver Valley section of the BT makes a steep climb up the right side of the Eugenia Surge Tanks. These two penstocks tower over the east side of the Beaver Valley; distinct in the landscape, they cannot be missed along this part of the trail. The two Surge Tanks are a part of the Eugenia Power Station which holds a unique part in the history of Ontario Power.

Figure 30. Eugenia Surge Tanks at the Top of East Side of Beaver Valley. Source: Author
Old Mail Road

Prior to the establishment of the current road grid system, other corridors were used for travel. The Beaver Valley section of the BT follows along a short section of one of these original corridors. The Old Mail Road linked post offices located in the hamlets of Duntroon, Rob Roy, Ravenna, Heathcote, and Griersville in the 1830s to 1850s (Town of Blue Mountains, 2009). This road guided pioneer settlers to the Towns of Osprey, Collingwood and St. Vincent. This section of the corridor is still maintained; it is just wide enough to fit a horse and carriage, (see Figure 31).

Figure 31. BT Following Along Small Portion of Old Mail Road. Source: Author
Abandoned Farming Equipment

The Beaver Valley section of the BT passes alongside numerous farm fields. While hiking beside the hedgerows that frame the farm fields, if you look close enough sometimes you can spot rusted abandoned farming equipment, (see Figure 32). This abandoned equipment is a cue that suggests past and present agricultural activity within the Beaver Valley.

Figure 32. Old Farming Equipment Found Along Bruce Trail. Source: Author
Notices of Conservation Projects

There are a few conservation signs that are seen along the Beaver Valley section of the BT. These conservation signs, in some instances, are indicators of tree plantations, (see Figure 33), or rehabilitation efforts, (see Figure 34), in areas that may have once been agricultural landscapes. These signs are cues of the changing landscape character of the Beaver Valley, from a predominantly agricultural landscape to one of conservation.

Figure 33. Sign Explains Bruce Trail Association Reforestation Project. Source: Author

Figure 34. Canada 150 Sign Indicating a Habitat Conservation Project. Source: Author
Ski Hill Recreation

The Beaver Valley section of the BT crosses over two active ski hills, Georgian Peaks Ski Club Figure 35 and Figure 36, and the Beaver Valley Ski Club. The trail also passes over the old Talisman Resort which also used to be run as a recreation ski area. The Niagara Escarpment’s unique topography has created a rich history of recreational skiing in Grey County.

Figure 35. Chair Lift at Top of Georgian Peaks Ski Club. Source: Author

Figure 36. Top of Georgian Peaks Ski Club. Source: Author
The site observation results showed that the Beaver Valley section of the BT has a mosaic of different landscapes. These landscapes showed a diverse age, from early settlement tree rows, to new maple syrup collection lines. The themes highlighted along the trail helped to form the categories that can be used to identify CHL along the trail.

**Online Archival Research**

After completing the literature review, document review, site observation, and key informant interviews, categories of CHL were developed. First, the final list of identified CHL was selected by having been recognized by either Collin (1996), Town of Blue Mountain’s (2008) or a key informant interview and intersected by the BT during site observation (see Table 6). The final list of CHL were then categorized in a way that best describes the Beaver Valley landscape character capturing the unique mosaic of the area. The emergent categories narrate the landscape character of the Beaver Valley section of the Bruce Trail:

> One of the fundamental considerations in identifying a potential cultural heritage landscape is its connection to the major historical themes, trends or patterns associated with the area’s development (Town of Blue Mountains, 2009, p.12).

The categories that emerged are: Agricultural Landscapes, Historic Settlements, Recreation Landscapes, Industrial Landscapes, Conservation Landscapes, Viewscapes and Connecting Corridors (see Figure 37). The purpose of this section is to narrate four stories using online archival research. These stories are examples of what can be made available to hikers to learn about the CHL along the Beaver Valley section of the Bruce Trail.
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<td>• Old Talisman Ski Resort</td>
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<td>• Georgian Peaks Ski Club</td>
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Figure 37. CHL Categories Synthesized from Themes Found in Results. Source: Author
Recreation Landscapes Example: Georgian Peaks Ski Club

The Beaver Valley section of the BT meanders to the top ridges of Georgian Peaks Ski Club, Beaver Valley Ski Club, and Blue Mountains Ski Resort. A Czech ski enthusiast, Jozo Wieder saw the potential of the Niagara Escarpment landscape, and in 1941 Blue Mountains Ski Resort was opened to the public (Brooks, 2020) (Town of Blue Mountains, 2009). Twenty years later, after searching for the highest, and steepest part of the Niagara Escarpment, Ian ‘Buck’ Rogers founded Georgian Peaks Ski Club with Ross Wilson and Bill Whalen (see Figure 38) (Brooks, 2020).

Figure 38. Georgian Peaks Ski Club, 1960s. Source: (Brooks, 2020)
Rogers, Wilson, and Whalen were innovators and their determination led to a successful installation of a 3000 ft chairlift engineered in England and installed onto Rogers Run (see Figure 39) (Brooks, 2020).

Figure 39. Installation of First Rogers’ Run Chair Lift. Source: (Brooks, 2020)

The Georgian Peaks Ski Club was also the first ski club along the Niagara Escarpment to create a snow-making system. These innovators and their innovations shaped the landscape and created the recreation industry of the Niagara Escarpment.
Conservation Landscapes Example: John Muir Tree Plantation

Trees planted in consecutive rows are an indication of a tree plantation. The Beaver Valley landscape character is evolving from one of an agricultural landscape to one focusing on conservation. This tree plantation in the image (see Figure 15) is known as the John Muir Plantation, and is maintained by the Grey Sauble Conservation Area. This property has 11.19 acres of White Pine and is part of the Managed Forest Tax Incentive Program (MFTIP). The MFTIP is a voluntary program that provides a reduction in property tax. The eligible piece of land is taxed at 25 percent of the municipal tax rate for residential properties.

This property is an example of how the landscape character of the Beaver Valley is shifting from an agricultural past (see Figure 40 for an aerial view from 1954 prior to the tree plantation), to one of conservation (see Figure 41 of the current aerial photo of the tree plantation). There are many tree plantations located along the Beaver Valley section of the BT; they can be identified simply by the lines of same-species trees planted in consecutive rows.
Figure 40. Aerial Photograph of John Muir Lookout 1954. Source: (University of Toronto, 2020)
Figure 41. Aerial Photograph of John Muir Lookout 2020. Source: (Google Earth, 2020)
Connecting Corridors Example: Old Mail Road

This corridor along the BT was historically a connecting road creating access to the early hamlets of Grey County (Ontario Heritage Trust [OHT], 2020). This corridor is called the Old Mail Road; it was established as early as 1835 and became a public highway in 1846 (OHT, 2020). The corridor, in full, ran northwest from Duntroon to Griersville (see Figure 42) (OHT, 2020) (Town of Blue Mountains, 2009). This corridor linked post offices located in the hamlets of Duntroon, Rob Roy, Ravenna, Heathcote, and Griersville. The Old Mail Road was also used by settlers travelling to the newly-opened townships of Collingwood, St.Vincent, Euphrasia and Osprey (Town of Blue Mountains, 2009). The Old Mail Road was constantly in poor repair, although was supposed to be maintained by statute labour (Town of Blue Mountains, 2009). Today there is little evidence of the pioneer road, other than a five-mile stretch still used connecting Griersville and Heathcote (Town of Blue Mountains, 2009). The Old Mail Road was wide enough for a horse and buggy; this width can still be seen along this section of the corridor.
Figure 42. Collingwood Township Census of 1851, Showing Old Mail Road. Source: (Town of Blue Mountains, 2009)
Industrial Landscape Example: Eugenia Power Station

The BT leads sleepily up the left-hand side of the Eugenia Surge Tanks. It is this steep landscape that helped to generate the power that gave light to Eugenia and Flesherton over a century ago. This feat came with many successes and failures over the years.

The story of the Eugenia Power Station began in the 1870s when William Hogg moved to Eugenia and bought land along the Beaver River (Hubbert, 1986) (Ontario Waterpower Association, 2017). Hogg created his own sawmill in the late 1870s, and throughout 1870-1890 became well educated in the new invention of gaining electrical power from water (Hubbert, 1986). In 1895, Hogg bought a turbine and built an electric plant at Eugenia Falls. Hogg ended up having power to spare, so he went to the City of Toronto to try and persuade them to use his power to help run their streetcar system (Hubbert, 1986). Unfortunately, the City of Toronto made a deal with the Niagara Electric Plant, and William Hogg passed away soon after (Hubbert, 1986).

In 1905, the idea of electric power at Eugenia Falls came to light again by two Toronto men who formed the Georgian Bay Power Company (Hubbert, 1986). Once the land was surveyed, the engineers working on this project suggested creating a tunnel through the Niagara Escarpment beside Eugenia Falls (Hubbert, 1986). This tunnel was supposed to divert the river creating a large enough fall to turn the turbine. The project was completed in 1907 at a cost of one million dollars (Hubbert,
1986). Sadly, by 1912 the company went bankrupt, and the tunnel was abandoned. To this day, you can still see the limestone entrances to the tunnels created by this project in 1907 along the Beaver Valley section of the Bruce Trail, (see Figure 44) (Hubbert, 1986).

Figure 43. Eugenia Tunnel Circa 1907. Source: (Hubbert, 1986)

Figure 44. Eugenia Tunnel, Winter 2019. Source: Author
In 1913, the Hydro Power Commission of Ontario began a project that would soon bring plentiful power to Eugenia for decades to come (Hubbert, 1986). After purchasing 10,125 hectares of surrounding land, a water reservoir, a dam and a power plant were constructed (see Figure 45) (Pearn, 2016).

Figure 45. Construction of Eugenia Dam, December 11, 1914. Source: (Hubbert, 1986)

The Eugenia Power Station holds the highest head of water compared to any other hydroelectric generator in Ontario and has successfully contributed ample amount of electricity to the provincial grid for longer than a century. The Eugenia Surge Towers (see Figure 47) helped the Eugenia Power Station put Eugenia on the Map.
Figure 46. Eugenia Surge Tanks, 1920. Source: (Hubbert, 1986)

Figure 47. Eugenia Surge Tanks, Winter 2019. Source: Author
The Beaver Valley section of the BT is a mosaic of different CHL. Hidden within this unique landscape are cues that tell the narratives of the area’s history. The four stories above are examples of what can be provided to hikers to educate them about the history along the BT.

Summary

The results revealed that, when working within the NEPA, the NEP should be followed. The NEP turns to the Ontario Heritage Tool Kit (2006) when identifying CHL. The key informant interviews revealed insight on CHL along the Beaver Valley of the BT, detailed aspects of the landscape character that are important, and insight for trail design. The results from the site observations revealed that there are many cues along the Beaver Valley section of the BT that indicate CHL. Through synthesizing these results, seven categories were identified that help to organize the CHL found along the Beaver Valley section of the BT. Online archival research was then used to provide four examples of stories that can be shared with hikers along the trail to learn more about the landscape’s history.
Chapter 5  
Discussion & Conclusion

Overview

The purpose of this chapter is to discuss the results and analysis, and to reach some conclusions regarding the findings of this study. The information will provide insight for landscape architects and trail designers to consider during trail design with respect to the inclusion of a CHL experience for hikers.

Application of the Ontario Heritage Tool Kit Categories

The Ontario Heritage Tool Kit (2006) suggests using three categories when identifying CHL:

1. Designed Landscapes
2. Evolved Landscapes (Relict or Continuing)
3. Associative Landscapes

After identifying relevant CHL for the study area, it was found the application of the suggested categories was unclear (see Table 6). Many CHL fall into several of the suggested categories. With the association of multiple categories, it is unclear which category should take precedent over another. With multiple categories being selected for a single landscape, the organizing method became redundant. These categories also did not represent the themes of the unique CHL found within the study area. If the categories do not represent the study area sufficiently it would be hard to use them during trail design. Moreover, a hiker will not gain a well-rounded CHL experience. After
conducting a thorough document review, site observation, and key informant interviews, it became evident that the landscape character of the study area should be represented by the categories given to the CHL identified.

**CHL Themes for Beaver Valley Section of BT**

Through document review, site observation, and key informant interviews, appropriate categories became evident for the CHL within the study area. The document review and key informant interviews revealed an important definition from The Niagara Escarpment Plan of ‘Open Landscape Character’:

> The system of rural features, both natural and human-made, that makes up the rural environment, including forests, slopes, streams, valley lands, hedgerows, agricultural fields, agricultural buildings and other features of similar character and scale (NEP, 2017, p.92).

This definition speaks to the agricultural past that still makes up a large part of the study area’s mosaic. The results from the key informant interviews also revealed themes found in the landscape character: recreation, industrial, views, conservation, and agriculture. These themes were described by the key informants as individual pieces that, when woven together, make up the mosaic of the landscape character of the study area. Subsequently, site observation shared the same results. Once compiling the preliminary list of CHL (see Table 5), the landscape character themes helped to inform the categories synthesized for the study area.
The unique landscape of the study area has created a rich mosaic of CHL that helped to form the history of the study area. The categories synthesized, for best describing the landscape character of the study area, are:

1. Agricultural Landscapes
2. Conservation Landscapes
3. Industrial Landscapes
4. Connecting Corridors
5. Recreational Landscapes
6. Historic Settlements
7. Viewscapes

Together, these categories make up part of the unique mosaic of the Beaver Valley section of the BT. By categorizing CHL using this organization method, we can learn from many aspects of the landscape. Figure 48 shows the different CHL identified along the Beaver Valley section of the BT using the new categories.
Figure 48. New Categories for CHL Along the Beaver Valley Section of BT. Map: Author
Including CHL in Trail Design

The most important outcome of this research is to create a strategy for landscape architects and the trail designers of the Bruce Trail Conservancy to use and implement when identifying CHL along the BT, specifically focusing on the Beaver Valley section of the BT. Trail reroutes provide the optimal opportunity to begin to include CHL into trail design. The trail is changing constantly due to the publicly- and privately-owned land composition of the BT. To show this change (see Figure 49) displaying my Grandpa’s BT Maps of what the Beaver Valley section looked like in 1981, compared to what it currently looks like in my BT maps.

Figure 49. Beaver Valley Section 1981. Source: (Bruce Trail Conservancy, 1981)
While discussing trail design during the key informant interviews, certain aspects of trail design were highlighted. These included: the ability to access certain landscapes, ensuring a diverse experience of the landscape, and how to share knowledge of the cultural heritage landscapes with the hiker. From these discussions, and knowledge
synthesized through the site observations, the following guidelines are recommended for incorporating CHL into trail design.

1. **Identification of CHL**

The first step in including CHL identification in trail design is gathering a list of CHL for the section of the BT being designed. The Ontario Heritage Tool Kit (2006) recommends that each municipality has their own heritage register:

> Together, the Ontario Heritage Act and the Provincial Policy Statement of the Planning Act offer methods for conserving cultural heritage properties. This makes listing cultural heritage properties on the municipal register an important tool in managing their conservation (Ontario Heritage Tool Kit, 2006, p. 10)

First, research to see if the municipality that the section of the BT runs through has their own CHL register. It is important to note that having a heritage register for CHL is fairly new to Ontario. If the municipality does not have a CHL register, research relevant studies that may have identified CHL within that area.

**For example:**

The Beaver Valley section of the BT goes through the Town of the Blue Mountains and the Municipality of Grey Highlands. The Town of the Blue Mountains does not have a heritage register, and the Municipality of Grey Highlands only has a register of heritage buildings. Two relevant studies were identified that provided lists of CHL for the Beaver Valley Section: Paine and Taylor (1995) and the Town of Blue Mountains (2009). The Ontario Heritage Tool Kit (2006) recommends that the CHL have community relevance. The cultural landscape should have value or be valued by the community in some way.
Both studies conducted by Collin (1996) and The Town of the Blue Mountains (2009) had a community element that gave validation to their identified CHL. These two studies covered the study area, therefore the list of CHL pulled from these two studies already had community value. The key informant interviews served as an additional community accreditation for this particular study. Although the key informants were not asked directly about a particular landscape, themes of landscape characteristics which they value were included. Therefore, when determining a list of CHL, it is important to gain community input to validate decisions. If a previous study does not have a community engagement element, community input can still be conducted through community workshops or key informant interviews.

Whether the CHL list is gathered from a municipality or relevant study, this list of CHL can be used to see whether the BT intersects or leads close by these landscapes to access, if their identification is possible along the trail.

2. Providing access to CHL

Due to the composition of the BT on both publicly- and privately-owned land, it is important to maintain relationships with private landowners. Identification of CHL should not compromise this essential relationship. If landscapes identified are on private land, they should not lead the hiker off the trail. By adding this layer of understanding for hikers, a protocol by the Bruce Trail Conservancy should be established for when identification of CHL are located on private land.
3. Creating a diverse experience along the trail

During trail design a key element is to provide the hiker with a diverse well-rounded experience. The purpose of creating categories that describe the landscape character of the study area is to allow trail designers the ability to create a diverse experience. During trail design these themes are recommended over the Ontario Heritage Tool Kit (2006) categories for the purpose of creating a diverse trail design. This is due to the fact that the categories recommended by the Ontario Heritage Tool Kit (2006) can be used multiple times on one landscape, therefore creating a diverse experience may become redundant or not possible.

Key Informant 6 discussed a technique they use in trail design. This technique came from the book RSVP Cycles written by Halprin (1969), with the idea originating from R. Burton Litton Jr.’s work conducted for the USDA. The technique was explained by Key Informant 6 as having a musical staff with different notes, when creating a composition, you want to provide the listener with a variety of notes to listen to. The same goes for trail design, the elements of the landscape are the notes on the musical score. Key Informant 6’s goal in their trail design work is to create a trail experience that keeps the hiker captivated and intrigued for the next parts of the trail. From this knowledge it is recommended that during trail design all the themes are represented if possible, evenly along the trail, this in turn will provide a diverse, and intriguing experience for the hiker.
4. Allowing the hiker to choose the experience they want along the trail

Application of this research is an important part of this work. Through conducting the document review, key informant interviews and site observation it became evident that it is important to allow the hiker to choose the experience they want along the trail. When asked about how to implement an education tool for hikers to learn about CHL key informants suggested signs with QR scan codes, however their main concern was overcrowding the trail with information. The application of a CHL education along the BT should not interfere with the current experience one might have on the trail, rather it should be provided as an additional option a hiker might choose.

Through the research two ideas for application that allowed hikers to choose this experience became clear. First, the Bruce Trail Conservancy has a well put together app with layers that can be turned on and off, for example to show where parking lots are. With this successful app, it is possible to add in a layer for CHL. This layer would include pins on the maps with the location and the stories of these landscapes. Second, The Bruce Trail Conservancy website is a great resource that can be used for sharing downloadable maps. Hikers prior to their walk can select the section they are hiking and print off the cultural heritage landscape map and story information. Examples of the stories that can be shared on the Bruce Trail app and website can be found in the online archival research section of the Results.
Limitations

Due to the nature of the time given to complete an MLA thesis, the site observation hikes were completed while the weather still allowed for the landscape to be visible. For this research hikes were completed prior to the completion of a literature review, document review, and key informant interviews during the fall and early winter months. It is recommended, if conducting this research again that the site observation hikes are completed after all other methods to provide the researcher with the knowledge of the CHL specific locations in the study area.

Key informants were selected by using specific criteria that would benefit the research. However, although the criteria were met, it is possible for key informants to have not been knowledgeable on certain areas of this research.

It is recognized that the CHL list included does not fully capture the Indigenous peoples history of the study area landscape. Additionally, it is acknowledged that the European settlers in this area were not the first people to shape this landscape. Furthermore, additional categories should be included to fully grasp the Indigenous peoples history within this landscape. Limitations to archeological research, and time to complete this research did not allow for this component of the research to be respectfully completed. Further research and additional categories are required to provide a complete history of this landscape.
Due to the circumstances of the Covid-19 pandemic archival data was not able to be physically accessed. Instead online archival research was used. Physical archival research would strongly add to this work by providing unique graphic content and help tell the stories of these CHL that are not found in other research sources.

Lastly, this is one study of this research area, completed by one MLA student, in a limited time frame. It is possible for someone to further this research or repeat this research and reach similar or different conclusions based on their own bias.

**Future Research**

This is just the beginning of a systematic approach to assessing CHL planning and design for the BT. As has been shown, CHL are important and worth preserving for the BT user experience, but they first must be identified and to do so in the context of a physical landscape that is diverse and complex. The goal of this research was to create guidelines that will inform trail designers on how to establish a CHL experience along the BT using the Beaver Valley section.

Future research is needed to assess if these guidelines, once enacted, would indeed lead to desired user experiences. Unless and until such research is conducted, the recommended guidelines in this study remain hypotheses. This is the nature of all planning and design activities.
As well, future research is needed to complete the categories synthesized to include the Indigenous peoples history of the study area. This will require local knowledge and access and expertise of archeological studies and knowledge.

**Conclusion**

CHL hold the narrative of a region’s history. They help us learn about the people who evolved with and influenced the landscape connecting us to an area’s heritage. CHL are a fundamental part of the Niagara Escarpment, they share the identity and achievements of the people who shaped the landscape (Paine and Taylor, 1995). The BT provides the unique opportunity to act as an educational corridor through the Niagara Escarpment by implementing identification of the CHL.

The Beaver Valley as a segment of the BT is undeniably rich in CHL features, yet, there needs to be a more systematic approach to identifying these and incorporating them in the visitor experience. The goal of this research was to create guidelines that will inform trail designers on how to establish a CHL experience along the BT using the Beaver Valley section as an example. To achieve this goal a literature review was conducted to gain insight of the research that has already been conducted in the study area and to gain a better understanding of CHL. A document review was completed to reveal the policies in place for the study area, and to understand how CHL are currently analyzed within the study area. Key informant interviews were completed to gain knowledge on trail design, CHL in the study area, and understand more about the landscape character of the study area. Site observation via a hike of the full section of the Beaver Valley
section of the BT was completed to identify CHL along the trail. Lastly, online archival research was conducted to reveal examples of stories that can be created about the identified CHL along the trail.

The analysis of the results revealed that the Ontario Heritage Tool Kit (2006) categories may not be best suited for categorizing the CHL identified along the Beaver Valley section of the Bruce Trail. Instead, new categories were formed from information gained from the document review, key informant interviews, and site observation. The new categories were inspired from the landscape character of the study area. Guidelines for landscape architects and trail designers were shared as the final part of this research.

Landscape architects and trail designers design for the experience of the user. It is the decisions that we make during the design process that impact the experience people have for years to come. The proposed guidelines allow for the Bruce Trail Conservancy trail designers to share the historic story of the BT landscape, in turn providing a new and important experience for hikers. The process of identifying CHL is fairly new in Ontario, however it is new design processes like this that continues to grow the industry of landscape architecture. It is our role as designers to provide a diverse well-rounded experience, and this research is the first step in that direction for the BT.
Epilogue

My Grandpa Beech was an End to Ender which is a title given to someone who has hiked the Bruce Trail in its entirety, 900km from Queenston to Tobermory. There is something about the Bruce Trail that evokes someone to become an end to ender, whether the natural systems or cultural systems, there becomes an emotional attachment to the design of the trail. I am not entirely sure what my Grandpa’s reasoning was. Since my Grandpa’s passing, I have been drawn to the Bruce Trail because it has inherently become a place I can quite literally walk in his footsteps and the connection with my Grandpa will always be there when I walk along the Bruce Trail. Through my recent education I began to pick up on cues along the trail created by humans that hold stories of the landscape’s history. These cues began evoking my curiosity along the trail as my imagination placed stories to the cues hidden in the trail’s landscapes. These cues can be defined as cultural heritage landscapes.

![Figure 51. My Grandpa Beech Along the Bruce Trail.](image-url)
References


Beaver Valley Bruce Trail Club. (2020, February 1). http://beavervalleybrucetrail.org/about.html


