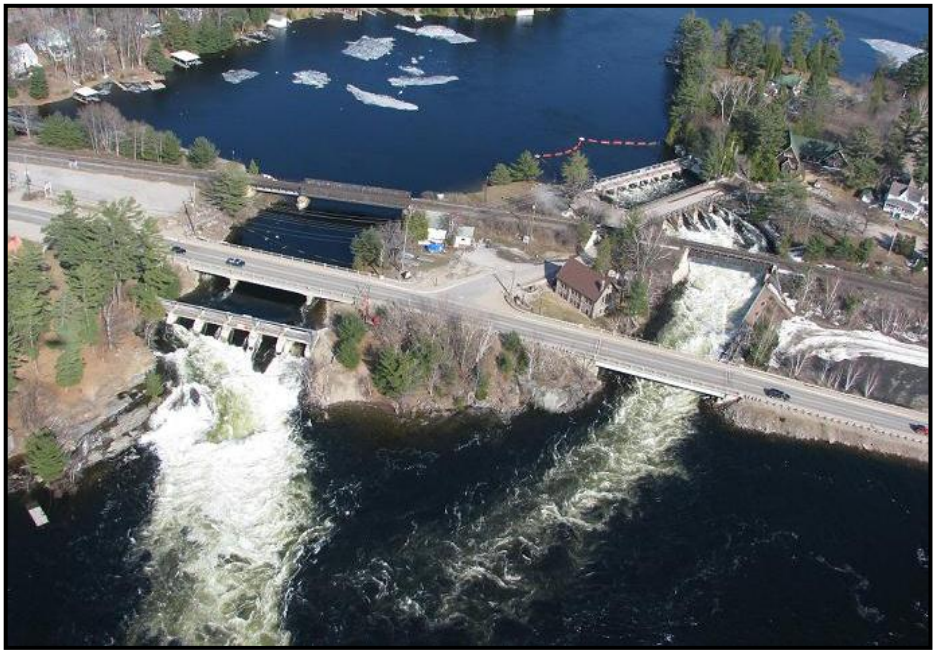
21 May 2013

LAND USE HISTORY

Burgess Island Historic Portage Routes
Community of Bala, Muskoka Lakes Township
District Municipality of Muskoka, Ontario

Submitted to:
Mr. Eric S. Block, Partner
McCarthy Tétrault LLP
Box 48, Suite 5300
Toronto Dominion Bank Tower
Toronto, Ontario M5K 1E6
Tel: (416) 601-7792 Fax: (416) 868-0673



Report Number: 11-1136-0068-2500-R01

Distribution:

1 Copy - McCarthy Tétrault LLP
2 Copies - Golder Associates Ltd.

Golder Associates

Table of Contents

1.0 STUDY PURPOSE 1

2.0 STUDY METHOD 2

2.1 General 2

2.2 Research Maps 2

3.0 PHYSICAL SETTING 6

3.1 Description of Channels 6

3.1.1 North Channel 6

3.1.2 Mill Stream 6

3.1.3 South Channel 7

3.2 Natural Topography of Burgess Island 8

4.0 LAND USE HISTORY 10

4.1 To 1840 10

4.1.1 Overview 10

4.1.2 Evidence of Portage Route 11

4.2 1840s-1873 12

4.2.1 Overview 12

4.2.2 Evidence of Portage Routes 12

4.3 1874 – 1906 12

4.3.1 Overview 12

4.3.2 North Channel Dam 13

4.3.3 South Channel Dam 13

4.3.4 Roads and Bridges 13

4.3.5 Buildings 14

4.3.6 Evidence of Portage Routes 14

4.4 1907-1964 15

4.4.1 Overview 15

4.4.2 Rebuilding of the North and South Channel Dams 15

4.4.3 Canadian Pacific Railway 15

4.4.4 Bala Road 16
4.4.5 Bala #2 Generating Station 18
4.4.6 Evidence of Portage Routes 20
4.5 1965 – 1972 20
4.5.1 Overview 20
4.5.2 Highway 169 21
4.5.3 Bala #2 Generating Station 21
4.5.4 Evidence of Portage Routes 21
5.0 SOURCES 22
5.1 Books and Reports 22
5.2 Files and Reports 22
5.3 Photographs 23
5.4 Maps and Plans 23
6.0 CLOSURE 24

APPENDICES

APPENDIX A
Resumes: Christopher Andreae & Marcus Létourneau

APPENDIX B
Photographs Used in Text

APPENDIX C
Report Maps

APPENDIX D
Enlargements of Thumbnail Images 1 – 18 in Maps B – E

1.0 STUDY PURPOSE

Golder Associates Limited was retained by McCarthy Tétrault LLP to research whether a “historic” or “traditional” portage route existed on the Crown Land south of the North Bala Dam abutment on Burgess Island.

Christopher Andreae, Senior Built Heritage Specialist at Golder, and Marcus Létourneau Senior Cultural Heritage Specialist at Golder, authored this report. Their resumes are provided in Appendix A of this report.

2.0 STUDY METHOD

2.1 General

The preparation of this land use history involved three different research components.

First, research was undertaken of historic documentation to evaluate and analyze written, graphic and photographic records of Burgess Island in general and the Crown Land in particular. Much of the historical information came from the Historica Research Limited report, *Cultural Heritage Landscape Assessment of the Bala Falls* (2009).[1] Information on aboriginal use of the Moon River came from the *Report of the Master Plan of Archaeological Resources of the District Municipality of Muskoka and the Wahta Mohawks* (1994) and *Stage One Archaeological Assessment: North Bala Hydroelectric Development, Town of Bala, Ontario* (2008), both prepared by Archaeological Services Inc. All sources are listed in Section 5 of this report.

Second, research was undertaken to determine the natural topography of Burgess Island prior to human intervention and how these landforms have been modified over the last 150 years. The primary research sources were the 1933 Ontario Hydro contour map of Burgess Island (Maps B, C and E) and the circa 1901 photograph of the island (Photograph 3). The contour map was the earliest large scale map identified during the research phase. These sources were augmented with historic photos of specific areas of the island that are included as thumbnails on the maps and as enlargements in Appendix C of this report. Based on this research it was possible to characterize the slopes of Burgess Island to develop constraint areas where portaging would have been more physically demanding than in other locations on the island.

Based on the physical evidence of changes to Burgess Island and the documentary record, maps were prepared for the location of portage routes across the island. Five maps were prepared for this report. The possible portage routes are plotted on Maps B and D.

All photographs referred to in this report are also included in Appendix B as Tabs. All maps referred to in this report are contained in Appendix C.

2.2 Research Maps

1) The base mapping for Maps A and D is geo-referenced 2008 air photography purchased from First Base Solutions. First Base Solutions is one of the largest commercial suppliers of air photography in Ontario (www.firstbasesolutions.com).

2) The modern contour information of Burgess Island and the boundary survey of the Crown Land that is the subject of this litigation were prepared by Hatch Ltd. The Crown land boundaries are plotted on all five maps and hydrographic information is plotted on Map A.

[1] The Historica report was written by Christopher Andreae before he joined Golder Associates.

3) 1962 vertical air photograph was used in conjunction with 1950s oblique air photography to determine the location of portages at the North Bala Falls area. This information is plotted on Map D. Although earlier vertical air photography exists, only the 1962 imagery could be enlarged to 1:750 before the film grain became too coarse to convey any information. This scale of 1:750 became standard for all the maps used in this report.

4) The certified plan prepared by John Hiley – taken from Township of Muskoka Lakes *Application Record of the Applicant* page 186 – was scaled to 1:750 and overlain on Map D. The plan did have an exact fit with the 2008 air photography and therefore the Hiley portage route has been adjusted to obtain a "best-fit" on Map D.

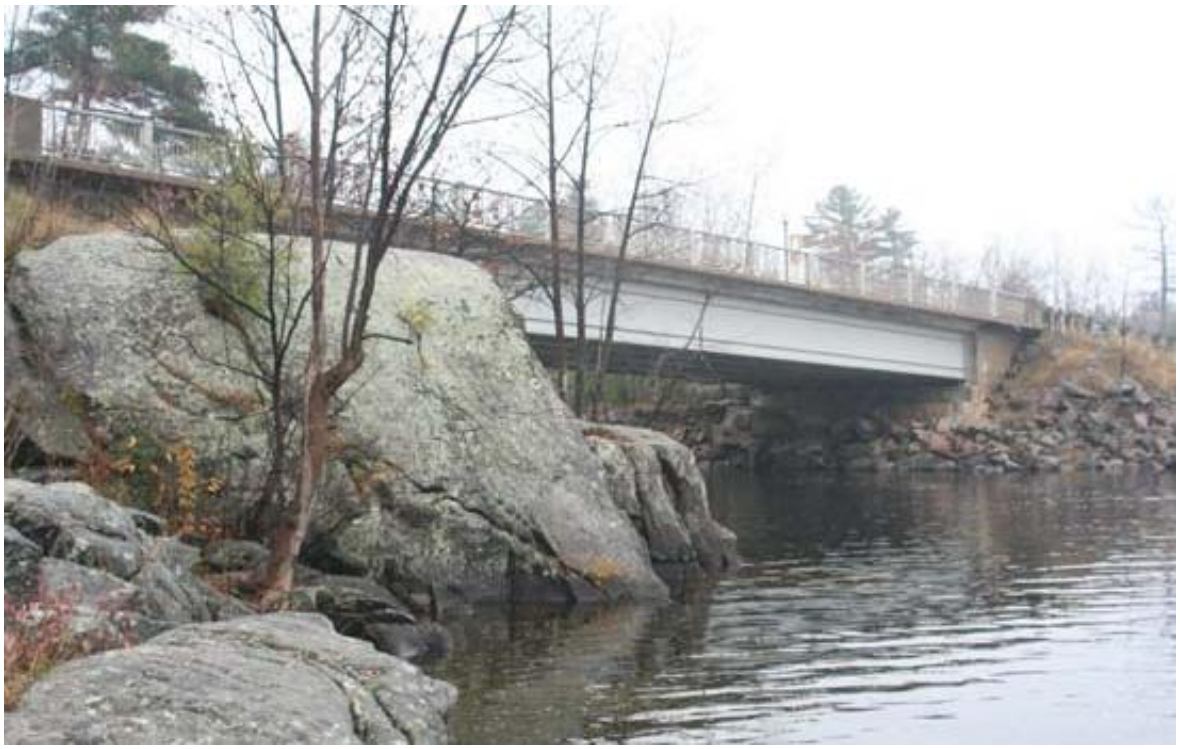
5) A photocopy of a 1933 Ontario Hydroelectric Power Commission map supplied by Swift River was enlarged to 1:750 and its accuracy was checked by overlaying on the 2008 air photography. This map was used as the base for Maps B, C and E because of the contour line information.

6) Thumbnail images of significant historic landscape elements are included with Maps B – E. Enlargements of these images are included in Appendix D.

Photograph 1: Bala #2 Generating Station at the North Bala Falls, pre 1956.

Photograph 2: Bala #2 Generating Station at the North Bala Falls, pre 1956.

Photograph 3: View of Burgess Island circa 1910.



Photograph 4: Highway 169 bridge over the South Channel. The rock outcropping on Burgess Island on the left of this photo is assumed to be the same rock outcrop as indicated in Photograph 3, 1999.

3.0 PHYSICAL SETTING

3.1 Description of Channels

3.1.1 North Channel

Bala Falls is located where Lake Muskoka falls over a ridge of Precambrian rock – known as the Bala Syncline – and enters the Moon River. This bedrock ridge formed a natural dam that held back the water of Lake Muskoka. Bala Falls is located in a channel that is today known as the North Channel. The falls are located at the Moon River end of the channel (Map A).

Since the mid-1870s the crests of the North and South Channel falls have been dammed to regulate lake levels in Lake Muskoka. Man-made changes to the Bala Falls were undertaken to control large seasonal variation in flows from Lake Muskoka. By the 1870s it was well known that the surface level of Lake Muskoka could vary by as much as nine-feet throughout the year. In 1872, the Ontario Minister of Public Works recommended that construction should be carried out at Bala Falls to deal with the dual problem of flood and shallow water.[2] In spring, high water caused extensive flooding along the shoreline and in the summer and fall, low water interfered with the safety of commercial steam navigation.

3.1.2 Mill Stream

In the river's natural condition, a second channel, located north of the North Channel, is known as the Mill Stream (Map A). Mill Stream never became the focus of community attention like Bala Falls and no description of its natural conditions is known. Although well north of the two modern Bala Falls, this channel is functionally connected to the falls because of its historic use of waterpower for a sawmill. Until about 1870 when Thomas Burgess constructed a sawmill, this channel was part of the natural flow of the Moon River. The mill closed in 1910 but the raceway was reused in 1917 when a hydroelectric power plant was constructed.[3] Mill Stream was used for portaging in the early 20th century.[4]

[2] Ontario Department of Public Works (DPW) *Annual Report* 1872.

[3] Lorne and Bunty Jewitt, *Bala – The way it was* (*2005).*

[4] Township of Muskoka Lakes, *Application Record of the Applicant* Volume 1 Tab G p.200.

3.1.3 South Channel

A third channel, known today as the South Channel, is located south of the North Channel (Map A). Until the 1870s this was a natural rock cut that only carried water during periods of high lake levels. In 1875 a channel was blasted in the crest of the falls in order to create a year-around flow. This created a man-made island known as Burgess Island. A regulating dam was constructed to work in conjunction with the North Channel Dam to regulate level of Lake Muskoka. The South Channel was created to provide increased flood-water discharge capacity. Unlike the North Channel, the South Channel falls were located at the Lake Muskoka end of the channel. Historically the base of the falls consisted of bedrock outcrops and a rock strewn debris field that extended down the channel until the vicinity of the Burgess Church that exists today.

Currently the dams at Bala maintain the surface of Lake Muskoka at 224.6-225.7 m. The Moon River is at 219.0-219.5 m. This creates a gross head (height of dam plus height of falls) of 6.2 m (18.9-feet) which had been established at least by the beginning of the 20th century.

Before construction of the dams, the North Bala Falls had a "natural height of roughly three metres (ten-feet).[5] Prior to dam construction the natural shoreline of Burgess Island above the dams would have been further out into the water. Map A illustrates the approximate pre-1870 shoreline.

The channel at the crest of both the North and South falls have been significantly widened. Portions of drill holes in the rock below the North falls are indicative of blasting activity that has changed the visual character of the falls over time (Photograph 5).

[5] DPW *Annual Report* 1913; Canada, Commission of Conservation, *Water Powers of Canada*, 1911.

Photograph 5: Drill holes (indicated by red circles) for blasting charges in rock at the base of North Falls, 2012.

3.2 Natural Topography of Burgess Island

Photograph 3 provides a circa 1901 view of Burgess Island's landform. Burgess Island has a rock spine running diagonally across the island with the summit starting in the vicinity of the North Channel Dam and running south westerly in front of the church (built 1926). The contour lines on Maps B, C and E also illustrate this ridge. Relatively steep slopes occur in the section between the dam and the bend in the Bala Road north of the church. Conversely, there is a relatively gentle slope rising diagonally from the area of the tailrace in an easterly direction towards the front of the church (Photograph 6).

Photograph 6: South Channel and Burgess Church showing approximate area of the Thompson portage landing, circa 1950

4.0 LAND USE HISTORY

4.1 To 1840

4.1.1 Overview

According to the *Master Plan of Archaeological Resources of the District Municipality of Muskoka and the Wahta Mohawks,* the canoe route from Georgian Bay to Huntsville and the Lake-of-Bays area was an important Aboriginal route.[6] Thus prior to European settlement of Muskoka, one or more portage routes would have existed around the Bala Falls between Lake Muskoka and Moon River.

The first detailed European description of a portage was given by David Thompson during an exploration of the Musquash/Moon River in 1837. Local Bala resident, Mitchell Shnier, and an affiant in this case, states that:[7]

> *21. Thompson's journal includes details such as the height of the waterfalls, and the locations and slopes of portages found. Page 13 of Thompson's journal number 66 shows that he reached Bala on August 13, 1837*
>
> *22. Thompson numbered each waterfalls up the Musquash River (which he called the Muskako River) beginning at Lake Huron (this area was not called Georgian Bay at the time)*
>
> *23. What we now call Ragged Rapids Thompson calls the "11th Falls". Upstream of that, is Bala Falls, previously known as the Musquash Fallam and referred to by Thompson as the "12th Falls".*
>
> *24. The book,* Muskoka and Haliburton, 1615-1875*, by Murray, notes that Thompson uses the abbreviation "CP" (carrying place) for portage, and the symbol "ɔ" for right. Thompson uses other abbreviations, such as "ab" for about, "yd" for yard, "&c" for etcetera, and "Exd" for examined. Attached as Exhibit "I" to this my affidavit, are excerpts from Murray's book which provides some of this information.*
>
> *25. From the journal and his assignment, it is clear that Thompson is travelling upstream, from Georgian Bay to Lake Muskoka. Therefore the south side of the north falls would be to his right, which he indicates with a "ɔ".*

[6] Archaeological Services Inc. Report of the Master Plan of Archaeological Resources of the District Municipality of Muskoka and the Wahta Mohawks. 1994. Vol 2 p.15.

[7] Affidavit of Michael Shnier, paragraphs 21-27.

26. The second page of Exhibit "G" provides and expanded view of the lines of interest, Thompson's journal reads:

> "at 11am came to the 12th Falls which comes boldly down about 12 ft & upper slope about 3 ft, in all 15 ft. The CP is in a Bay…100 yd to the ↄ of the Falls. …. We camped for the night."

27. From that, I believe that on Thompson's first arrival, he is reporting that he portaged up what is now called the south channel, which indeed is approximately 100 yards south of the north falls.

A schematic of the Thompson portage routes has been depicted on Map B as Route #1. The location is based on his description of being approximately 100 yards south from the base of the North Falls. This places the portage landing near the rear of the Burgess Church. Photograph 6 illustrates that this landing would have been very close to the termination of the bedrock outcrops in the South Channel. This photograph and the contour lines on Map B illustrate that this portion of Burgess Island was a flat, low ling area suitable for a portage landing.

Thompson identified his landing point on Moon River but did not describe his put-in point on Lake Muskoka. The schematic of his route on Map B follows the shortest distance across the island and is about 80 metres long. This estimated location of the Thompson landing on the North Channel is consistent with the landing area of possible 20th century portage routes.

4.1.2 Evidence of Portage Route

The Thompson portage route would have been the shortest route with the easiest gradients between Lake Muskoka and the Moon River. The low summit and shallow gradients suggests that Thompson's portage route would have been quite practical.

The Hiley portage, Route #3 on Map B, at issue in this case, would have a similar length as the Thompson route but contained steep slopes to rise and fall over the rock ridge in the middle of Burgess Island. Most importantly, the Hiley portage is located in too close proximity to the North Falls to be even remotely close to where Thompson landed to portage.

4.2 1840s-1873

4.2.1 Overview

Thomas Burgess arrived in the Bala area in 1868 and acquired land that included all of what is now Burgess Island and most of the future townsite of Bala. In around 1870 Burgess constructed a sawmill on the Mill Steam channel. The mill closed in 1910 but the raceway was reused in 1917 for a hydroelectric power plant that became known as Bala #1 station. Although now closed, the generating station still exists in 2013 (Map A).[8]

The Musquosh Colonization Road (later Bala Road, today Highway 169) was completed from Gravenhurst to Bala in 1872. In 1873, the Department of Crown Lands constructed a bridge across North Channel above the lip of the falls.[9]

4.2.2 Evidence of Portage Routes

No historic information is available for the location of a portage route during this time. Given that there was virtually no settlement on Burgess Island during this time period, in all likelihood the Thompson portage continued in use.

4.3 1874 – 1906

4.3.1 Overview

During the 1870s, dams were built at the North and South Channels to regulate the water level of Lake Muskoka (Map C). When the general store and Burgess sawmill on Mills Stream opened in circa 1870, as well as the post office in 1872, these services would have generated more river traffic.

[8] Lorne and Bunty Jewitt, *Bala – The way it was* (*2005).*

[9] DPW *Annual Report* , 1875; Archaeological Services Inc. *Stage One Archaeological Assessment: North Bala Hydroelectric Development, Town of Bala, Ontario*. September, 2008.

4.3.2 North Channel Dam

The natural course of the North Channel was widened and the construction of a dam commenced in 1873 and was completed in 1874. The total cost of the work was $9,000 and more than half of this ($4,800) was used for blasting channels in the rock. The dam was located about 10 m (30 feet) downstream of the highway bridge (Map C).

The dam had had two nine-metre (27-foot) openings. Rock was blasted and removed from the channel above and below the dam to the level of the stop log sills. The structure is assumed to have been of timber crib piers with wooden stop-logs between them. The capacity of the original dam was found to be inadequate and 13 years later in 1886 the channel at the dam was widened at each end and two additional stop-log openings were constructed. The new openings were 8.2 m and 4.6 m (27-feet and 15-feet) in width.[10]

4.3.3 South Channel Dam

The 1874 improvements of the North Channel did not provide adequate discharge capacity during floods. Historically, the South Channel flowed only during flood conditions but this was apparently no longer adequate. Possibly the damming of Mill Stream in c 1870 for the Burgess Mill eliminated the ability to this stream to act as a flood channel. The excess water was then diverted to the North and South Channels.

Rather than further enlarge the North Channel, the Department of Public Works decided to widen the South Channel to 48 m (160-feet). The bottom of this new cut was 0.6 m (two feet) higher than the North Channel dam in order to function as a regulating weir. A bridge was constructed over the channel at the same time (Map C).[11]

The widened channel increased the capacity to handle flood waters. However, the other challenge at Bala Falls was to maintain a steady level of Lake Muskoka. In around 1876 a timber-crib dam was built across the channel to work with the North Channel dam in regulating the level of Lake Muskoka. The dam had five openings of 8.5 m (28-feet) each. Within 20 years, the original timber dam had become unsafe and was replaced with a new structure.[12]

4.3.4 Roads and Bridges

As noted earlier, the Musquosh Road (today Bala Road/Highway 169) crossed Burgess Island in 1872. The Old Bala Road today follows the same alignment of the original road on top of the rock spine across Burgess Island. As the road approached the South Channel, the land and the road dipped downward in the vicinity of the later Burgess Church. Thus the road had to be elevated as it approached the South Channel bridge.

[10] DPW *Annual Report,* 1874,1875,1886, 1909.

[11] DPW *Annual Report,* 1875, 1879.

[12] DPW *Annual Report,* 1879, 1899.

The main span of the bridge was rebuilt in 1901. The roadway was 12 feet wide and the bridge truss rested on new masonry piers.[13]

The 1873 timber bridge across the North Channel was rebuilt as a steel structure in 1906.[14]

4.3.5 Buildings

Despite its proximity to the railway station, steamer dock and commercial centre of Bala, Burgess Island never contained many buildings. Photograph 3 depicts a house, barn, and warehouse on the island. Two buildings in the rear centre of the photo appear to be on the mainland.

The warehouse is identified by the fact that the structure is built on timber piles at the shoreline. Two doors face onto the crib structure in front on the water's edge that may be a landing stage. Only two windows are visible and they are positioned in a diamond-shape. Two canoes and what appears to be a rowboat are beached to the left of this building. The building and the beached water craft suggest that this area was being used as a landing for a portage route across Burgess Island. For convenience this route has been called the "Warehouse Portage" in this report and is plotted on Maps B and D.

The other key building built during this era was Hurling's Boat Livery. Sometime around 1900-1906 M.S. "Sam" Hurling constructed a boat livery (boat rental) on Burgess Island at the point where the future Canadian Pacific Railway bridge crossed the North Channel.[15] This operation later became known as Purk's Place.

4.3.6 Evidence of Portage Routes

The status of the "Thompson Portage" by 1906 is unknown. Since the 1870s water had begun to flow continuously in the South Channel. Possibly this current forced the portage landing to be pushed further downstream and closer to the North Channel. This may be a reason why a new portage landing had appeared by 1900 in the vicinity of the warehouse. There does not appear to have been any other changes in land use that would have impacted possible portage routes on Burgess Island.

The large rock outcrop between the second and third evergreen tree to the right of the "warehouse" appears to be the location of the 1965 Highway 169 bridge abutment for the bridge crossing of the South Channel (Photographs 3 and 4). This would suggest that the "Warehouse Portage" started on Moon River where the canoes are located, to the left of the "warehouse." The canoes and warehouse are almost certainly on what is today municipally owned land (Photographs 1 and 3).

[13] DPW *Annual Report*,1899, 1901.

[14] DPW *Annual Report*, 1906.

[15] Bob Petry, *Bala, an Early Settlement in Muskoka, (998);* Frederick Sutton, *Early History of Bala. (circa1967).*

By 1900 both the Thompson and Warehouse portage routes may have been used, However, depending on the condition of the South Channel after the dams had been built, the Thompson portage route might have been abandoned by this date.

4.4 1907-1964

4.4.1 Overview

Between 1907 and 1964 major changes in land use occurred on Burgess Island that affected the location of possible portage routes. In 1924 Bala #2 hydroelectric generating station was completed on the shore of the Moon River adjacent to the North Bala Falls. Two additional major changes occurred that could have affected the routes of portages across Burgess Island. The Canadian Pacific Railway was built across the island in 1907 and Bala Road was raised above the existing topography in the 1920s (Map E).

4.4.2 Rebuilding of the North and South Channel Dams

In 1909 a concrete dam was constructed on the North Channel, roughly in the location of the present dam, to replace the earlier 1874/1886 timber structure (Map C). The discharge capacity was increased to five openings of six metres (20-feet) each in width and one opening of 4.9 m (16-feet). Rock was blasted and removed from the channel above and below the dam to the level of the stop-log sills. In 1958 the present dam was completed about 15 m (50-feet) upstream of the earlier dam. It was 73 m (240-feet) long and had eight 4.3 m (14-foot) spillways. The dam held back a head of 7.6 feet.[16]

In 1913, the 13 year-old South Channel timber dam was rebuilt and redesigned so that it became a combined dam and highway bridge.[17]

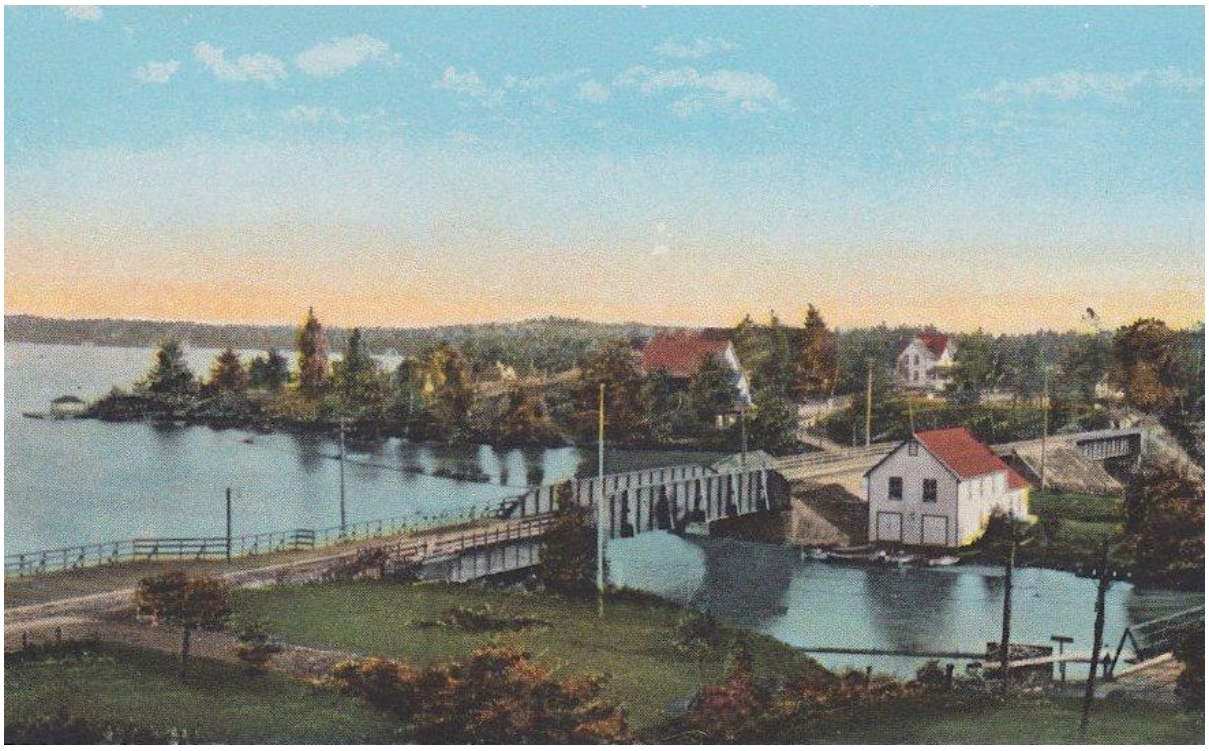
4.4.3 Canadian Pacific Railway

In 1904, construction began on the new Canadian Pacific mainline from Toronto through Bala to Sudbury. Track through Bala was completed in 1907 but the line was not open throughout until the following year.

The track was raised on an embankment about 3.5 m (11 feet) across Burgess Island, effectively cutting off the east tip of the island from the rest of the island. Hurling's boat livery (today Purk's Place) had to be relocated to its current location due to construction of the railway bridge (Photograph 7).[18]

[16] DPW *Annual Report* 1909, 1958, 1959.

[17] DPW *Annual Report* 1913.



Photograph 7: Canadian Pacific Railway and Hurlings Boat Livery (Purk's Place) on the North Channel. The earthwork of the raised railway embankment on Burgess Island is visible behind Hurlings Boat Livery, circa 1920s. (See Also Photograph 10)

4.4.4 Bala Road

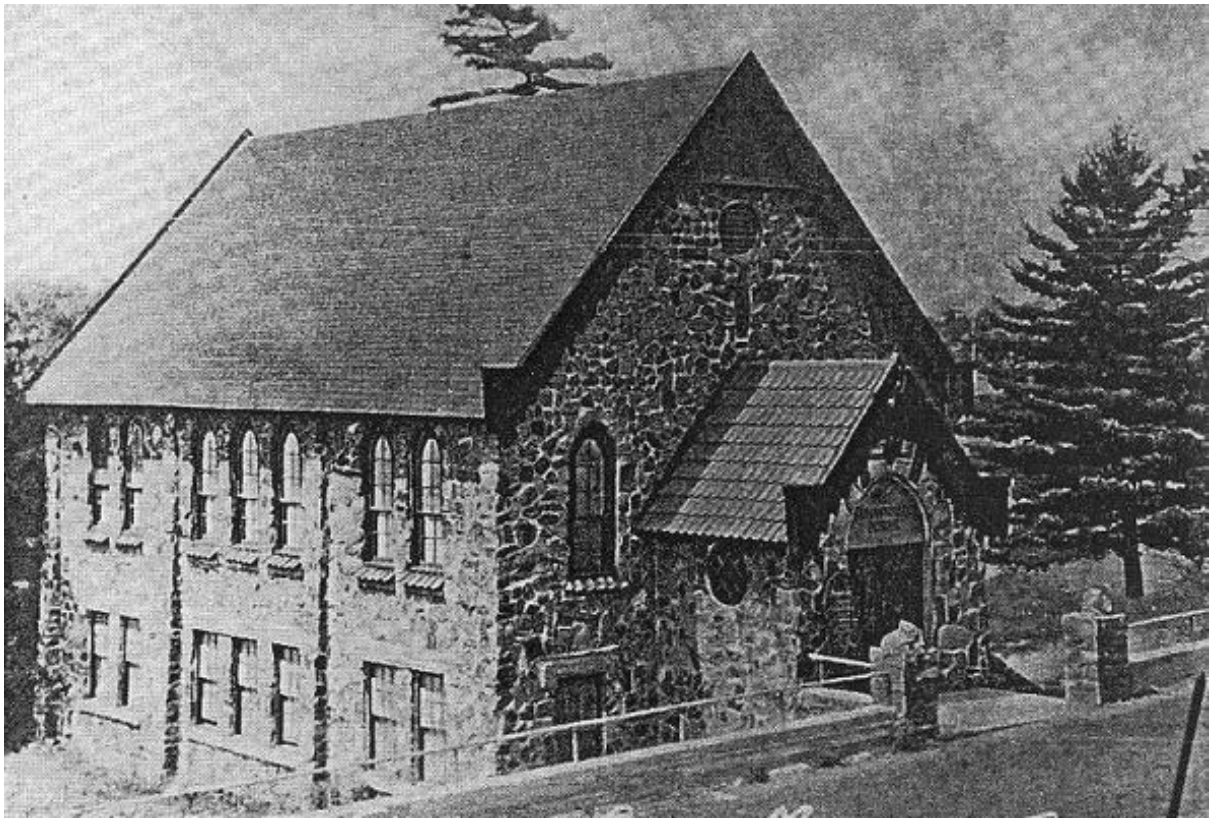
Until the 20th century Bala Road crossed Burgess Island by following the natural contours of the land (Photograph 8). Short portions were raised on timber-crib structures but overall the road was much lower than it is today. Construction of the railway seems to have changed the elevation of the road (Photograph 9). By the time the Burgess (Presbyterian) Church was completed in 1926, the road in front of the church had been raised more than a metre and large stone blocks were used to create a retaining wall in front of the church.

The Bala Road underpass was the most obvious impact of railway construction (Photograph 10). When the railway embankment was initially constructed ramps were built to carry the road up to a level crossing over the tracks. These ramps were so steep that the Township took the Canadian Pacific to court. In 1909, the township was successful and the existing underpass was constructed.[19]

[18] Lorne and Bunty Jewitt, *Bala – The way it was* (*2005);* Bob Petry, *Bala, an Early Settlement in Muskoka, (998);* Frederick Sutton*, Early History of Bala. (circa1967).*

[19] Lorne and Bunty Jewitt, *Bala – The way it was* (*2005).*

Photograph 8: Bala Road crossing the south Channel with Moon River in Background. The road on Burgess Island is much lower than it is today, circa 1910.



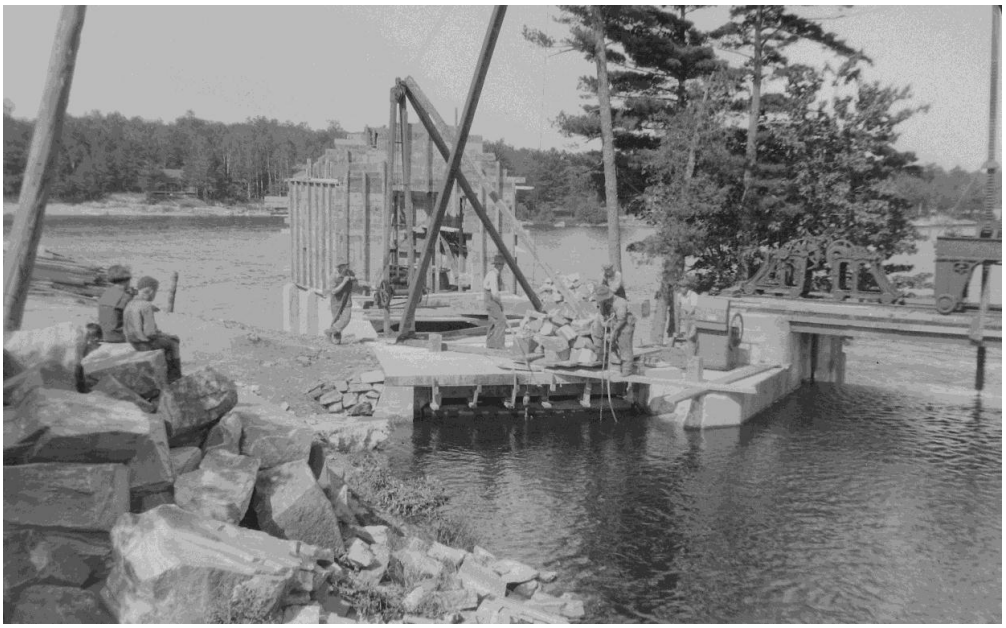
Photograph 9: Burgess Church with the raised surface of the Bala Road in foreground, circa 1920s.

Photograph 10: South Channel Dam, Bala Road bridge, and railway underpass. A park is located at the east end of Burgess Island, circa 1910. (See Also Photograph 7)

4.4.5 Bala #2 Generating Station

The Bala Light and Power Company built The Bala # 2 generating station adjacent to the North Bala Falls in 1924 (Map E).[20] The structure was located on the Crown Land that is the subject of this case. A headrace was cut into the bank above the North Channel dam to draw water into the power plant (Photograph 11). A tailrace was cut through the rock at the base of the powerhouse to carry the water back into the Moon River (Photograph 12). The combination of the headrace, powerhouse and tailrace occupied much of the Crown Land and created a barrier for public access to the base of the falls. The generating station was very tall in relationship to its building footprint.

[20] Biggar, *Ontario Hydro's History and Description of Hydro Electric Generating Stations.*



Photograph 11: Bala #2 Generating under construction showing head race and North Channel Dam on right, 1924.

Photograph 12: Bala #2 Generating Station under construction showing tail race and rip-rap rock placed on both sites of the building, 1924.

4.4.6 Evidence of Portage Routes

Those with cottages, a willingness to camp, or attending summer camp would be primary portage users. Mitchell Shnier in his Affidavit Paragraph 43 states that

> "*Camp Pine Crest is a YMCA children's summer camp, located in Torance .... For over 100 years they have regularly portaged at Bala to reach or return from Honey Harbour on Georgian Bay*."

The physiographic and photographic evidence seems to suggest that the "Warehouse Portage" would have been the preferred portage route during this era. For a group of YMCA canoes, this portage route would have been easier and safer than the Hiley portage route that is the issue in this case (Map B).

At least one other portage route, on the Mill Creek, was used in the 1920s.[21] This indicates that multiple portage routes were in existence.

Photographs 1 and 2 indicate a trail that existed before 1956 and ran up the steep slope along the south side of the powerhouse. The trail was almost certainly a maintenance path for inspecting the tailrace of the power plant. It is also probable that the trail was a walking path used by residents and tourists to come down to the water's edge to view the falls and river. Photograph 12 illustrates the steepness of the slope adjacent to the generating station. The photograph also shows the rip-rap covering of the slopes that would have made the area difficult for climbing.

The trail indicated in Photographs 1 and 2 is to the south of the Hiley portage route. As depicted on Map D, this route would have been located on top of the building footprint of the Bala #2 generating station. The Hiley portage route could not have existed at this time.

4.5 1965 – 1972

4.5.1 Overview

During the past half century, substantial land use changes occurred that affected the viability of portage routes on Burgess Island. A new alignment of Highway 169 was constructed and arguable interfered with portage routes on Burgess Island. In addition, the hydroelectric generating station was demolished in 1972.

[21] "Over Seventy Years of Summering in Muskoka," by Bob Strachan," *The Muskoka Sun* July 24, 1991, p.11.

4.5.2 Highway 169

Until 1965 all highway traffic had to pass through the narrow, low Canadian Pacific Railway underpass and then follow the old Bala Road over the 1913 bridge on the South Channel and then curved up a steep hill. In order to correct these deficiencies, the Department of Highways chose an entirely new alignment (Map E). This required that a small bay into which the South Channel discharges was completely filled except for a section bridged to provide an outflow for the channel (Photograph 4).[22]

The highway embankment on Burgess Island facing onto the Moon River is both high and steep. For all practical purposes, no section of the embankment provides an effective portage route.

Construction of the new highway crossing also pushed the South Channel further into the Moon River (Maps A and E). Thus the high flows and turbulent current that were originally dissipated in the former bay below the railway bridge now extended to the west end of the island. None of the former bank of the South Channel could be safely used as a portage put-in point after 1965.

4.5.3 Bala #2 Generating Station

Ontario Hydro removed the Bala #2 generating station from service in 1957 because of high production costs. In 1972, the structure was demolished and ownership of the property reverted to the Crown.[23]

4.5.4 Evidence of Portage Routes

Maps B and D show the location of the Hiley survey portage route. The data from the Hiley certified plan does not align exactly with the airphoto base mapping. Depending on how the map is adjusted, the survey lies on top of the demolition debris of the old powerhouse. This trail cannot have been in use prior to 1972 (Photographs 1, 2, 11, 12).

[22] Lorne and Bunty Jewitt, *Bala – The way it was* (*2005*).

[23] Biggar, *Ontario Hydro's History and Description of Hydro Electric Generating Stations.*

5.0 SOURCES

5.1 Books and Reports

Biggar, Glenys. *Ontario Hydro's History and Description of Hydro Electric Generating Stations*. Ontario Hydro, 1991.

Canada, Commission of Conservation, *Water Powers of Canada*, 1911.

Jewitt, Lorne & Bunty. *Bala – The way it was*. Bala, N.p.: private, 2005.

Ontario. Dept. of Public Works. *Annual Report*. Various years 1873-1958.

"Over Seventy Years of Summering in Muskoka, by Bob Strachan." *The Muskoka Sun* July 24, 1991, p.11.

Page, H.R. & Co. *Guide Book & Atlas of Muskoka and Parry Sound Districts*. Toronto: H.R. Page & Co, 1879 (reprint Stoddart, 2000).

Petry, Bob. *Bala, an Early Settlement in Muskoka*, n.p.: Lynx Images, 1998.

Sutton, Frederick William. *Early History of Bala*. Bracebridge, Ont: Herald-Gazette Press, circa1967?

5.2 Files and Reports

Advance Archaeology. Stage 2 Archaeological Assessment of North Bala Hydroelectric Development. Prepared for Swift River Energy Limited, December 2008

Archaeological Services Inc. *Report of the Master Plan of Archaeological Resources of the District Municipality of Muskoka and the Wahta Mohawks. Vol 2.* Prepared for the District Municipality of Muskoka, 1994.

-----. *Stage One Archaeological Assessment: North Bala Hydroelectric Development, Town of Bala, Ontario*. Prepared for Hatch Energy, September, 2008.

Historica Research Limited, *Cultural Heritage Landscape Assessment of the Bala Falls.* Prepared for Swift River Energy, 2009.

Township of Muskoka Lakes. *Factum of The Applicant*

-----. *Application Record of the Applicant*

5.3 Photographs

Swift River photographic collection

5.4 Maps and Plans

1962 vertical air photography

1933 Hydro Electric Power Commission – Copy supplied by Swift River Energy

6.0 CLOSURE

We trust that this report meets your current needs. If you have any questions, or if we may be of further assistance, please contact the undersigned.

GOLDER ASSOCIATES LTD.

Marcus Létourneau, Ph.D., MCIP, RPP, CAHP
Senior Cultural Heritage Specialist

Christopher Andreae, Ph.D., CAHP
Associate, Senior Built Heritage Specialist

CA/ML/slc

APPENDIX A

Resumes: Christopher Andreae & Marcus Létourneau

Education

PhD Geography , University of Western Ontario, London, Ontario, 2006

Masters of Social Sciences Industrial Archaeology, University of Birmingham, Birmingham, England, 1992

Masters of Museum Studies, University of Toronto, Toronto, Ontario, 1981

Arts & Science, Dalhousie University, Halifax, Nova Scotia, 1975-76

B.A. Social Science, University of Western Ontario, London, Ontario, 1971

Certifications

Consulting Archaeologist - Ontario Ministry of Culture

Languages

English – Fluent

Golder Associates Ltd. – London

Employment History

Golder Associates Ltd. – London, Ontario
Senior Built Heritage Specialist (2009 to Present)

Historica Research Limited – London, Ontario
President (1980 to 2009)

University of Waterloo – Waterloo, Ontario
Lecturer, Centre for Society Technology and Values, Systems Design Engineering Department (2005 to 2007)

University of Western Ontario – London, Ontario
Lecturer, Dept. of Geography (2002 to 2004)

Fanshawe College – London, Ontario
Instructor, Urban Design Division (1986-89, 1995)

University of Western Ontario – London, Ontario
Lecturer, Dept. of History of Science and Medicine (1988 to 1990)

Lambton Heritage Museum – Grand Bend, Ontario
Assistant Curator (1978 to 1979)

Canadian National Railways – Montreal, Quebec
Researcher (1973 to 1975)

PROJECT EXPERIENCE – HYDRO-ELECTRIC POWER

Rawsonville Power Plant Ypsilanti, Michigan, 2004	Preparation of Historic Properties Management Plan (HPMP) for the 1931 Rawsonville hydroelectric power plant on the Huron River, Michigan to meet the requirements of the Federal Energy Regulatory Commission (FERC).
Sturgis Power Plant Sturgis, Michigan, 1997 - 2003	Heritage assessment and preparation of Historic Properties Management Plan (HPMP) of the 1910 Sturgis hydroelectric power plant on the St. Joseph River, Michigan to meet the requirements of the Federal Energy Regulatory Commission (FERC).
Lansing Power Plant Lansing, Michigan, 2001	Heritage assessment of a 1908 hydroelectric power plant on the Grand River, Michigan to meet the requirements of the Federal Energy Regulatory Commission (FERC).
London Sub Station London, Ontario, 1999	Built heritage assessment of c.1920 hydro sub-station at London, Ontario.
Stave Falls Generating Station Vancouver, BC, 1994	Development of heritage plan for decommissioning the Stave Falls hydro-electric generating station.
Calabogie Generating Station Toronto, Ontario, 1990	Assessment of historic significance of mechanical and architectural features and landscapes of Calabogie Generating Station prior to facility modernization.

PROJECT EXPERIENCE – WATER POWER

Camco Powerhouse Hamilton, Ontario, 2006	Evaluate heritage significance of steam boilers (1940s) air compressors (1920s) and auxiliary services in former CAMCO powerhouse; make recommendations for retention of building and equipment within future McMaster University Innovation Park.
Dorchester Mill London, Ontario, 2004	Evaluation of historic significance of the former c, 1890 Dorchester Mill and dam prior to replacement of dam.
Cargill Mill Goderich, Ontario, 2003	Evaluation of historic significance of former Cargill Mill concrete dam and mill ruins prior to installation of micro hydroelectric power plant.
Whitevale Dam Pickering, Ontario, 2002	Evaluation of historic significance of concrete/earth dam prior to repairs.
Todmorden Mills East York, Ontario, 1997	Evaluation and interpretation of historic water power system for the museum property.
Totten Sims Hubicki Whitby, Ontario, 1993	Monitor demolition of mill ruin on Woodbine Avenue, Markham, Ontario.

PROJECT EXPERIENCE – BUILT HERITAGE

Canada Malting Plant
Toronto, Ontario, 2009

The 1928/1944 Canada Malting Co. property was acquired by the City of Toronto in 1988. In 2007 the City required a heritage impact assessment of the complex to assist in developing a future use for the property. Dr. Andreae undertook the study for the City of Toronto. Site research included locating and reviewing original construction plans, articles in technical journals, historic photographs, corporate documents, and contemporary engineering texts. Two days of field work were required to document the malt house and its associated elevator complex. The analysis of significance was based on criteria contained in Ontario Regulation 9/06 of the Ontario Heritage Act used by the Ontario Ministry of Culture and municipalities for evaluating the cultural value of structures and landscapes for the purposes of the Act. In the spring of 2009 Dr. Andreae was again retained to develop a conservation report on the selective demolition of the marine tower component of the complex. The tower had to be removed due to its deteriorated condition that prevented public access along the waterfront. The demolition work began in November, 2009.

Kitchener Heritage Homes
Kitchener, Ontario, 2006

Architectural assessment for redevelopment application of six houses on Scott, Pearl and Israel Streets in Kitchener.

Kaufman Home
Waterloo, Ontario, 2005

Prepare a cultural heritage landscape assessment of the former Kaufman Family summer home in Waterloo as part of a redevelopment proposal.

Robert van Pelt
Cambridge, Ontario, 2004

Heritage assessment of an c.1890 house in Cambridge as a component of a building permit application.

Highway 35/115 Widening
Kirby, Ontario, 2003 - 2004

Heritage assessment of a house in proposed road widening of Highway 35/115 in Kirby, Regional Municipality of Durham.

Highway 407 Right-of-Way
Pickering, Ontario, 2003 - 2004, 1997

Built heritage assessment of 15 kilometres of houses and farms on the Highway 407 right-of-way in Pickering and Scarborough. Heritage assessment of four houses in proposed right-of-way of Highway 407 extension in Whitby and Pickering.

Thames River Flood Plain
London, Ontario, 2003

Heritage assessment of a c.1850 house owned by the City on Thames River flood plain.

McKinnon & Associates
Cambridge, Ontario, 2003

Heritage assessment of an 1894 house in Cambridge as a component of a building permit application.

Emery Milton Subdivision
Milton, Ontario, 2001

Heritage assessment of a c.1870 house that will be impacted by construction of a new subdivision in the Town of Milton.

Jarvis and Wellesley Streets Toronto, Ontario, 1999	Assessment of historic utilities used in servicing four historic houses at the intersection of Jarvis and Wellesley Streets, Toronto, and owned by the province of Ontario.
Red Hill Creek Parkway Hamilton, Ontario, 1997, 1989	Assessment of built heritage of the proposed Red Hill Creek Parkway in Hamilton. Heritage review of historic archaeological resources in right-of-way for the Red Hill Creek Expressway.
Springbank Drive Widening London, Ontario, 1996	Built and archaeological assessment of right-of-way required for widening of Springbank Drive in London.
St. Lawrence Islands National Park Cornwall, Ontario, 1992	Federal Heritage Building Review Office (FHBRO) inventory of the St. Lawrence Islands National Historic Park.
Markham Road Widening Markham, Ontario, 1990	Heritage resource assessment for Steele's Avenue and Woodbine Avenue road widening, Markham, Ontario.
Ontario Hydro London, Ontario, 1988	Review of historic resources that may be impacted by the proposed "Bulk Transmission Line, West of London."

PROJECT EXPERIENCE – CULTURAL SCIENCES

Limehouse Kiln Society Limehouse, Ontario, 2007	Assessment of the structural character of an 1880s lime kiln at Limehouse as a component of a stabilization program for the ruin.
Dufferin Aggregates Acton Kiln Acton, Ontario, 2007	Historical assessment, inventory, and conservation recommendations for five 19th century lime kiln and a quarry at the company's Acton quarry.
Inglewood Quarry Caledon, Ontario, 2007	Cultural landscape assessment of former brick-shale quarry at Inglewood.
Hamilton Museum of Steam & Technology Hamilton, Ontario, 2004	Prepare a cultural landscape assessment of the impact on the museum landscape of a new controlled access highway interchange on the QEW.
Deloro Mine Deloro, Ontario, 2004	Review of heritage planning process for the decontamination of the former Deloro mining site.
Port Credit Waterfront Park Mississauga, Ontario, 2003 - 2004	Research historic land use for development of a waterfront park in Port Credit.

St. Thomas Psychiatric Hospital St. Thomas, Ontario, 2003	Cultural land use assessment of part of the St. Thomas Psychiatric Hospital.
Thames River Plaques London, Ontario, 2001	Research and prepare text for interpretive plaques of heritage structures in municipal park along Thames River.
London Military Hospitals London, Ontario, 2000	Architectural and landscape assessment of two former military hospitals in London, Ontario. The Western Counties Wing was a convalescent facility and the Veterans Psychiatric Institute was for psychiatric patients.
Canada Packers Plant Toronto, Ontario, 1998	Assess the historical significance of an industrial ammonia compressor in a former Canada Packers plant in Toronto.
Hamilton Pumphouse Museum Hamilton, Ontario, 1997 - 1998	Assessment of historic technology associated with the restoration of the Hamilton Pumphouse Museum.
Watertown Bakery Watertown, Ontario, 1997	Assess the historical significance of a 19th century industrial bakery in Watertown, Ontario.
Whitby Psychiatric Hospital Whitby, Ontario, 1996 - 1997	Assessment of historic utilities used in servicing the Whitby Psychiatric Hospital, Whitby, Ontario.
London Planning & Development London, Ontario, 1996 - 1997	Prepare a working definition of cultural heritage landscapes and prepare guidelines for use in the City.
Orange Crush Plant Toronto, Ontario, 1996	Assess the industrial resources within a former Orange Crush bottling plant in Toronto.
Beaverdell Mine Beaverdell, BC, 1993	Feasibility study to preserve silver-lead-zinc mine at Beaverdell, B.C.
National Museum of Science & Technology Ottawa, Ontario, 1992	Researched history of petroleum industry in Canada.
St. Lawrence Starch Company Port Credit, Ontario, 1992	Review of industrial heritage significance of the St. Lawrence Starch Company factory at Port Credit, Ontario, prior to its demolition.

Godderham & Worts Distillery Toronto, Ontario, 1990 - 1995	Preparation of site interpretation plan for the integration of heritage into redevelopment of Gooderham & Worts property. Oral history study of former employees of the Gooderham & Worts distillery, as background research for future site interpretation. Identification of industrially significant resources that could be incorporated into the proposed redevelopment of the Gooderham and Worts property, Toronto. Review of historic land uses of the Gooderham & Worts property that may have left contaminants on the property. Inventory of historic resources at Gooderham and Worts Distillery, with recommendations for site preservation and interpretation.
Terra Cotta Conservation Area Meadowvale, Ontario, 1989	Theme assessment of region surrounding Terra Cotta Conservation Area with recommendations for interpretive programs.
Don Valley Brick Yards Toronto, Ontario, 1988	Assessment of historic significance and recommendations for preservation of brick making equipment at the Don Valley Brick Yards.
Ontario Heritage Foundation Toronto, Ontario, 1988	Evaluate historic significance of artifacts and landscapes of former sandstone quarry in a provincial park at Forks of Credit; recommend preservation and interpretation strategies.
Dundas Limestone Crushing Plant Hamilton, Ontario, 1988	Evaluate historic significance of limestone crushing plant at Dundas as part of study to determine feasible reuse of structure.

PROJECT EXPERIENCE – RAILWAYS

Union Station - Toronto Toronto, Ontario, 2006, 2004	Trainshed Electrical (2006): Inventory and assessment of significance of signals, lighting communications and other associated electrical components in trainshed. Design of Bush Trainshed (2004). Architectural - engineering history of the evolution of Bush trainshed design and how applied to Union Station. Platform 5/6 Baggage Elevator (2004) Inventory of equipment and setting of 1930s freight elevator with recommendations for preservation.
Toronto Transit Commission Toronto, Ontario, 2001	Industrial assessment of street railway car barns in Toronto as part of adaptive reuse study for property.
Canada's Railway History Ottawa, Ontario, 1996 - 1998, 1994, 1987	Research reports on the history of railway industry in Canada to 1980 and analysis of innovation in Canadian railway industry.
Cabin D - Toronto Railway Lands Toronto, Ontario, 1997	Description of interlocking system used in the railway signal cabin, ''Cabin D'' in the Toronto Railway Lands.
Yukon Railway Pass Carcross, Yukon Territory, 1997	Assessment of historic processes used at the White Pass & Yukon Railway's tie treatment plant at Carcross, Yukon Territory.

John Street Roundhouse Toronto, Ontario, 1995	Review of heritage issues relating to the development of a park at the John Street Roundhouse.
Marathin Propoerty Toronto, Ontario, 1994, 1989	Evaluated heritage significance of built and archaeological resources in Marathon property in the "Railway Lands" Toronto.
CP Rail Line - Guelph to Goderich Bruce County, Ontario, 1992	Assessment of heritage resources associated with abandoned Canadian Pacific line, Guelph to Goderich.
CN Rail Danforth Yard Toronto, Ontario, 1989	Survey of Canadian National Railways Danforth yard, Toronto to determine the potential for historic hazardous waste sites.
Geographical Research Ontario Wide, 1989, 1981	Research and preparation of manuscript maps depicting the "History of Transportation in Canada;" for the data base of the National Atlas of Canada, 5th edition. Updated 1:2 million railway map series to 1980 for Energy Mines and Resources.
Sky Dome Stadium Toronto, Ontario, 1986	Evaluation of heritage significance of built and archaeological features of the Railway Lands, Toronto prior to construction of the Sky Dome.
1917 Ontario Railways Ontario Wide, 1984	Prepared a history of Ontario railways and a map of railways in 1917 to be used in a kit of the Ministry for the preservation of railway stations.
Ontario Concrete and Steel Pin Bridges Ontario Wide, 1984	Conducted research into the evolution of concrete bridges and of steel pin connected bridges in Ontario.
Railway Heritage Study Toronto, Ontario, 1984	Prepared Part Two, Railway Heritage Study undertaken by City; established planning guidelines for railway heritage resources in City.
Toronto Railway Lands Toronto, Ontario, 1983	Historical survey of railways in Toronto and structural inventory of resources the Railway Lands in Toronto.
CN Rail Ajax Ajax, Ontario, 1983	Heritage assessment of built features in a section of the Canadian National Railway near the Town of Ajax.

PROJECT EXPERIENCE – TRANSPORTATION

Welland Recreation Canal Welland, Ontario, 2006	Background research for master plan for the Welland Recreation Canal in Welland.

Port Burwell Lighthouse Port Burwell, Ontario, 2002	Prepare text for provincial plaque on the history of the 1840 Port Burwell lighthouse in Port Burwell.
Fathom Five National Park Tobermory, Ontario, 1993	History of aids to navigation at Fathom Five National Park, Tobermory, Ontario.
Third Welland Canal St. Catharines, Ontario, 1990, 1988	Assessment and recommendations for mitigation regarding heritage significance of remnants of Third Welland Canal in St. Catharines prior to proposed redevelopment of property. Record remains of Lock 1 retaining wall of the Third Welland Canal in Port Dalhousie prior to removal for stream improvements.
First Welland Canal St. Catharines, Ontario, 1987	Excavation and recording of timber lock on first Welland Canal (1829-c1843).

PROJECT EXPERIENCE – PLANNING

Southwest London Area Plan London, Ontario, 2009	An archaeological and built heritage background assessment was conducted as part of the preparation of the Southwest London Area Plan. The objective of the built heritage assessment was to inventory and assess built heritage resources within the study area. In order to meet the objectives, the assessment included 1) a general history of settlement and development in the study area; 2) a history of architectural developments in the area; and 3) a photographic based inventory of potentially significant buildings. It was recommended that strong efforts should be made to effect the preservation of the buildings within the study area and serious consideration should be given to creating a Heritage Conservation District (H.C.D).
Oil Springs - Cultural Resources Inventory Lambton County, Ontario, 2008 - 2009	A detailed inventory of the features and landscapes of the Fairbank Oil Property to gather information about the number, age and significance of artifacts on the site. This cultural resources inventory will to be taken into consideration in line with the Municipal officials', landowners', and local historians' plan to establish certain areas in central Lambton as a Heritage Conservation District according to the rules set out by Part V of the Ontario Heritage Act.
Toronto Waterfront Revitalization Toronto, Ontario, 2004	Preparation of an archaeological master plan for the redevelopment of the Portlands area of Toronto.
1812 Battlefield London, 2000	Document potential for a War of 1812 battlefield in London, Ontario and present evidence at Ontario Municipal Board hearing as expert witness.
CP Rail John Street Roundhouse Toronto, Ontario, 1999	Artifact inventory of the railway collection at the former Canadian Pacific Railway John Street Roundhouse in Toronto.

Lundy's Lane Battlefield Niagara Falls, Ontario, 1998	Preparation of a master plan for the interpretation of the Lundy's Lane Battlefield site in the City.
Air Canada Centre Toronto, Ontario, 1997, 1995	Review archaeological strategy to be used during site construction.
Ruthven Park Cayuga, Ontario, 1996 - 1997	Preparation of a master plan for the interpretation of Ruthven Park, a 1,500 acre estate and mansion.
Smith Falls Museum Smith Falls, Ontario, 1995	Feasibility study for a railway museum in Smith Falls.
Fort York Toronto, Ontario, 1995	Review of cultural value of Fort York as part of review of redevelopment of area.
McLean Sawmill Port Alberni, BC, 1992	Feasibility study for the McLean Sawmill National Historic Site in Port Alberni.
Town of Caledon Caledon, Ontario, 1992	Review and recommendations for heritage policies in Town's Official Plan.
West Coast Railway Association Squamish, BC, 1992	Feasibility study for a railway museum in Squamish, B.C.
Cranbrook Railway Museum Cranbrook, BC, 1990	Assess museum collections and facilities and prepare recommendations for major capital expansion.
London Regional Art and Historical Museums London, Ontario, 1989	Review of collections storage facilities and recommendations for new facility.
Steel Museum Hamilton, Ontario, 1988	Collections assessment for proposed iron and steel museum.
Ontario Hysro Toronto, Ontario, 1988	Evaluation of existing heritage impact assessment methodologies suitable for Ontario Hydro environmental assessment requirements.
History Hall, Museum of Civilization Ottawa, Ontario, 1988	Exhibit research on structural history of grain elevators and railway stations as part of historic streetscape recreation.
Thunder Bay Historical Museum Thunder Bay, Ontario, 1987	Feasibility study to determine need for new museum building.

Welland Canals Corridor Niagara Region, Ontario, 1987	Preparation of development guide to incorporate historic elements of Welland Canals into a regional tourism strategy.
Wentworth Heritage Village Hamilton, Ontario, 1987	Assessment of collections and conservation requirements and preparation of recommendations to upgrade facility.
Uncle Tom's Cabin Historic Site Dresden, Ontario, 1987	Assessment of collections, programming, buildings and preparation of recommendations to upgrade facility.
Canadian Warplane Heritage Museum Hamilton, Ontario, 1986	Evaluation of programs, staffing, collections, building requirements, markets for a proposed move from Hamilton to Downsview.
Austin Sawmill Kinmount, Ontario, 1986	Feasibility study for the conversion of a sawmill into a tourist attraction.
Parks Canada Kitchener, Ontario, 1986	of space requirements, programming for proposed visitor's centre.

PROJECT EXPERIENCE – ARCHAEOLOGY

Menkes Development Toronto, Ontario, 2006	Stage One archaeological assessment of 25 York Street in Toronto.
Balls Falls Conservation Area Welland, Ontario, 2005, 2000	Record archaeological remains of c.1860s lime kiln in the Balls Falls Conservation Area and recommend preservation and interpretation strategies. Record archaeological remains of c.1827 woolen mill and c.1828 sawmill in the Balls Falls Conservation Area and recommend preservation and interpretation strategies.
Central Prison Toronto, Ontario, 2003, 2000	Archaeological assessment of potential cemetery site of the former Central Prison in Toronto.
Hamilton Museum of Steam Technology Hamilton, Ontario, 2000, 1997	Archaeological monitoring of rehabilitation of distribution mains on the museum property. Archaeological testing of the 1859 pumphouse and associated buildings.
Gooderham & Worts Distillery Toronto, Ontario, 1999	Archaeological assessment of a portion of the former dock at the Gooderham and Worts Distillery in Toronto.
Red Hill Creek Expressway Hamilton, Ontario, 1994, 1992, 1988	Archaeological excavation of two lime kilns, excavation and interpretation of circa 1880 lime kiln and site recording of 19th century explosives magazine.

Woodstock Museum Woodstock, Ontario, 1993	Excavation of foundations of 1877 weigh scale at former Town Hall.
Hilton Falls Conservation Area Burlington, Ontario, 1991	Record built/archaeological sawmill remains, Hilton Falls Conservation Area; recommend preservation//interpretation strategies.

PROJECT EXPERIENCE – WASTE

Region of Waterloo Waterloo, Ontario, 1993 - 1994	Contaminant sources inventory for the Regional Municipality of Waterloo.
York Region Landfill Toronto, Ontario, 1992 - 1993	Heritage resource assessment of landfill sites for Regional Municipality of York.
Essex County Landfill Essex County, Ontario, 1992 - 1993	Heritage resource assessment of two landfill sites in Essex County, Ontario.
Toronto Waste Treatment Plant Toronto, Ontario, 1985 - 1987	Heritage resource assessment of eight candidate sites for hazardous waste treatment plant; detailed study of preferred site for treatment plant.

PROJECT EXPERIENCE – OIL & GAS

ERA Architects Toronto, Ontario, 2000	Document significant features of a c.1912 water-gas purification building in Toronto prior to adaptive reuse as a police office headquarters.
Consumers Gas Toronto, Ontario, 2000	Describe land use of 19th century Consumers Gas coal gas works as these impacted on the site of the first parliament buildings in Ontario.

PROFESSIONAL AFFILIATIONS

Canadian Association of Professional Heritage Consultants, Toronto

Ontario Historical Society, Toronto

Society for Industrial Archeology, Houghton, Michigan

PUBLICATIONS

Other

"Hydrographic Survey Work of the Departments of Public Works, Railways & Canals, and the Interior," Charting Northern Waters: Essays for the Centenary of the Canadian Hydrographic Service, McGill/Queens, 2004.

A Guide to the Industrial Archaeology of Lambton County, Society for Industrial Archeology, 2000.

“Industrial Archaeology In Canada: A Binocular View,” with John Light. IA, The Journal of the Society for Industrial Archeology 25:2 (1999).

Contributor to Dictionary of Canadian Biography. Toronto: University of Toronto Press, 1998 (vol. 13), 1990 (vol 12), 1987 (vol 6), 1985 (vol 8) 1982 (vol 11)

Lines of Country; An Atlas of Railway and Waterway History in Canada. Toronto: Stoddart/Boston Mills, 1997.

"Industry, Dereliction, and Landscapes in Ontario," Ontario History 89:2 (June, 1997).

"Appreciating the Architecture of Industry," Vernacular Architecture in Ontario. Toronto: Architectural Conservancy of Ontario, 1993.

"The Expansion and Consolidation of Railways (Plate 6)," Historical Atlas of Canada. Vol 3. University of Toronto Press, 1990.

"Railways," Building Canada: A History of Public Works. University of Toronto Press, 1988.

Railways of Lambton County, Sarnia Public Library and Art Gallery, 1986

"Monument Erected from Soap Company Ruins", Bulletin, Ontario Historical Society, Autumn, 1986

"Salvaging the Past - London's Old Soap Factory", Canadian Heritage, Oct-Nov, 1985.

"Canadian Government Railways," The Canadian Encyclopedia. Edmonton: Hurtig, 1985.

"Heritage Planning Comes of Age in Ontario", Bulletin, Ontario Historical Society, Summer, 1986

Canada: Railway Transportation Network, 1980, (1:7,500,000 map in National Atlas of Canada). Canada. Energy Mines & Resources, Ottawa, 1984.

"Nineteenth-century Nova Scotia Iron Works," All that Glitters; Readings in Historical Metallurgy. Montreal: Canadian Institute of Mining and Metallurgy, 1983.

"The Influence of Engineering on the Design of Railway Structures", Selected Papers, vol. 2, Society for the Study of Architecture in Canada, 1982

"A History of Railways in Ontario", Working Papers, Ontario Task Force on Provincial Rail Policy, Sept, 1980.

"The Canal at Sainte Marie Among the Hurons", American Canals, May, 1980 (reprinted, 1984 in The Best of American Canals, 2.

Education

PhD Historical/Cultural Geography, Queen's University at Kingston, Kingston, Ontario, 2009

Master of Arts Geography, University of Western Ontario, London, Ontario, 2001

Bachelor of Arts (Honours) Geography (History Minor), Queen's University at Kingston, Kingston, Ontario, 1998 (awarded 1999)

Diploma Peace and Conflict Studies, University of Waterloo, Waterloo Ontario, 1999

Ontario Management Development Program (OMDP) Certificate (with Distinction) - Leadership Skills, St Lawrence College, Kingston, Ontario, 2010

Professional Specialization Certificate Heritage Conservation Planning, University of Victoria, Victoria, British Columbia, Expected 2013

Certificate Museum Studies, Ontario Museum Association, Ontario, Completed 2012 (To be awarded 2013)

Golder Associates Ltd. – Ottawa

Career Summary

Dr. Marcus Létourneau (MCIP, RPP, CAHP) started working in the heritage field over 20 years ago as a volunteer at a local museum in his home town of Haliburton, Ontario. He is the Manager for the Sustainability and Heritage Management Discipline Team (Ottawa) and a Senior Cultural Heritage Specialist for Golder Associates Ltd. He is also an Adjunct Assistant Professor in the Department of Geography at Queen's University. His previous positions included: serving as a contract professor at Carleton University in the School of Canadian Studies (Heritage Conservation); as the senior heritage planner for the City of Kingston (2004-2011); and, in various capacities at Queen's University at Kingston (2001-2007). At the Corporation of the City of Kingston, Dr. Létourneau served as an advisor to the City's Heritage Committee; developed numerous City heritage policies; served as a speaker/trainer on heritage matters; and was project manager for a number of heritage projects such as the Old Sydenham HCD Study, the Frontenac County Court House NHSC CIS, and Kingston City Hall NHSC Conservation Plan. At Golder, he has been involved in a variety of projects both as a project manager and as the senior cultural heritage specialist. Marcus currently serves as Vice-President of the Ontario Association of Heritage Professionals, and has served on the Board of Directors for Community Heritage Ontario and the Kingston Historical Society. He is also a Contributing Associate for the Heritage Resources Centre at the University of Waterloo.

Employment History

Golder Associates Ltd. – Ottawa/Kingston, Ontario

Senior Cultural Heritage Specialist (2011 to Present)

Marcus is currently the Discipline Manager for the Sustainability and Heritage Management Discipline team in the Ottawa Office and is a Senior Cultural Heritage Specialist. His responsibilities include marketing Heritage Management Services, both internally and to public/private sector clients; developing public sector projects and facilitating the integration of heritage concepts into Golder's Sustainable Cities Initiative; proposal development; co-chairing Golder's Municipal Marketing Strategy Group; conducting cultural heritage assessments; undertaking heritage management and strategic planning projects; staff supervision, and, project management.

Department of Geography, Queen's University – Kingston, Ontario

Adjunct Assistant Professor (2013-present)

Marcus was appointed as an Adjunct Assistant Professor in the Department of Geography in January 2013.

School of Canadian Studies, Carleton University – Ottawa, Ontario

Contract Professor – Heritage Conservation Program (2012-2013)

For the 2012-2013 school year, Marcus was hired to teach the two core courses in the Heritage Conservation Program - CDNS 5401 (Heritage Conservation I: History, Principles, and Concepts) and CDNS 5402 (Heritage Conservation II: Theory in Practice).

Certifications

MCIP - Canadian Institute of Planners, 2009

RPP - Ontario Professional Planning Institute, 2009

Full Membership - Canadian Association of Heritage Professionals

Government of Canada Reliability Status, 2011

Provincial Security Clearance (Ontario), 2012

Standard First Aid + Level C CPR/AED, 2011

Open Water Scuba Diver (ACUC International), 1994

NAS Level 1 Certificate in Foreshore and Underwater Archaeology

Pleasure Craft Operator Card

Basic Certification under the Occupational Health and Safety Act, 2006

Fall Arrest Training, 2011

WHMIS, 2011

Confined Space Pre-Entry Training, 2013

Qualified as an Expert Witness at the CRB, 2013

Languages

English – Fluent

Corporation of the City of Kingston – Kingston, Ontario
Heritage Planner (Planning and Development Department) (2004 to 2011)

While at the City of Kingston, Marcus was responsible for a variety of tasks. This included serving as a project manager (Old Sydenham Ward HCD Study, City of Kingston Archaeology Master Plan, Kingston City Hall NHSC Management Plan, Section 27 OHA Properties Review, and the Frontenac County Court House CIS); developing a number of heritage policies for the City (primary author of Section 7 (Cultural Heritage Resources) of the City of Kingston Official Plan, heritage by-law development, developing the City's adjacent properties policy, the City's evaluation policy for heritage properties, the City's policy for archaeological matters, and the City's heritage property standards); serving as a commenting agent for development review applications from a cultural heritage perspective; serving as the primary resource staff for the Kingston Municipal Heritage Committee (2004-2008); being responsible for specific OHA approvals under the City of Kingston Delegated Authority By-law (2005-2011) as well as reviewing archaeological assessments (2007-2011); serving as the Administrator for Kingston's Heritage Incentives Program (2005-2008); serving as a public speaker/educator for the City of Kingston on heritage issues; serving as the City of Kingston representative to Parks Canada and the National Historic Sites Alliance of Ontario; serving on the Steering Committee for the Rideau Heritage Network (2005-2010); directing and overseeing the work of junior heritage staff, interns, volunteers, and co-op students (2005-2011); and assisting with the development of the 2007-2011 Capital and Operating Budgets.

Dark Arts Studio – Kingston, Ontario
Owner/Operator (2002 to 2007)

-Graphics Design/ Photography for Academic and Government Materials
-Services and Database Development
-PowerPoint and Corel Presentations document development
-Digital and 35mm photography

Queen's University - Department of Geography – Kingston, Ontario
(2001 to 2007)

-Teaching Fellow
-Course Coordinator
-Research Assistant
-Teaching Assistant

University of Western Ontario - Department of Geography – London, Ontario
Teaching Assistant (1999 to 2001)

University of Waterloo - Institute of Peace and Conflict Studies – Waterloo, Ontario
Project Associate (1999)
Assisted with the development and implementation of a new certificate program

Haliburton Highlands Chamber of Commerce – Minden, Ontario
Executive Assistant to the General Manager (1998)

PROJECT EXPERIENCE – PROJECT MANAGEMENT

Heritage Impact Statement– Cana Waste Water Treatment Plant
Kingston, Ontario

Marcus is currently overseeing a team that is developing a Heritage Impact Statement for the Cana Waste Water Treatment Plan located near Kingston Mills in Kingston Ontario. Marcus was one of the authors of the report. This information will be used in support of an Environmental Assessment. ($7,000 project)

Heritage Impact Statement and Conservation Plan – 24 Mercer Street
Toronto, Ontario

Marcus is currently overseeing a team (including a sub-consultant) that is developing a Heritage Impact Statement and Conservation Plan for 24 Mercer Street in Toronto, Ontario. Marcus also contributing to the writing of the report. This information was used in support of a *Planning Act* application. ($18,000 project)

Heritage Conservation Plan – Lundy House
Brampton, Ontario

Marcus oversaw a team that developed a Heritage Conservation Plan for Lundy House in Brampton, Ontario. Marcus was also the primary author of the document. This information was used to guide the development process for the property and was used in support of a *Planning Act* application. ($15,000 project)

Visioning and Opportunities Assessment Project, 15 King Street,
Bracebridge Ontario

As project manager for Golder Associates and supervising two sub-consultant teams, Marcus oversaw the development of a Vision and Opportunities Project for 15 King Street (Woodchester Villa) in Bracebridge Ontario. The project consists of a review of all aspects of the site (including heritage management, built heritage, governance, open space and business planning) and the provisions for recommendations for future actions. Marcus also provided the assessment of the heritage management operations, built heritage, and history of the site. ($25,000 project)

Saskatchewan Military Heritage Project
Regina, Saskatchewan

As project manager for Golder Associates, and supervising staff from 4 offices and 1 sub-consultant, Marcus is overseeing the development of a strategic plan for celebrating Saskatchewan's military history and heritage. ($60,000 project)

City of Kingston Archaeological Master Plan
Kingston, Ontario

As project manager for the City of Kingston, Marcus oversaw the development and implementation of the first comprehensive Archaeological Master Plan for the amalgamated City. This multi-year project involved working with City departments, various Provincial Ministries, local archaeological firms, and community stakeholders. He was also responsible for coordinating and providing in-house training on the Plan. This plan was adopted by Kingston City Council in 2010 with no objections. ($100,000 project)

Kingston City Hall NHSC Cultural Heritage Management Plan
Kingston, Ontario

As project manager for the Kingston City Hall NHSC Cultural Heritage Management Plan, Marcus oversaw four consultants from a variety of heritage fields, worked with a number of City departments, and community stakeholders to develop a draft Management Plan for all of the cultural heritage resources at Kingston City Hall NHSC. ($30,000 project)

Old Sydenham HCD Study
Kingston, Ontario

As project manager for the City of Kingston, Marcus oversaw the development of a Heritage Conservation District Study for the Old Sydenham Area within the City of Kingston. He also prepared a staff report recommending the immediate listing of over 350 properties as having "cultural heritage value and interest." This Study was adopted by Kingston City Council with no objections. ($80,000 project)

Frontenac County Court House CIS
Kingston, Ontario

As project manager for the City of Kingston, Marcus oversaw the development of a Commemorative Integrity Statement for the Frontenac County Court House and prepared the draft staff report that recommended its approval. He also served as the liaison between the consultant, the City, and Parks Canada. This project was approved by Kingston City Council. ($20,000 project).

Section 27 Ontario Heritage Act Properties (Listed Properties) Review
Kingston, Ontario

Marcus served as project manager for this initiative that involved the reassessment of 159 heritage properties. These properties had been previously identified by pre-amalgamation municipalities as "listed" on earlier heritage inventories. In order to ensure these properties were compliant with the requirements of Section 27 of the Ontario Heritage Act, new descriptions of these properties were developed and a comprehensive report was brought to Council recommending formal endorsement. This project was approved by Council with no objections. ($~25,000)

Development of Designation Templates and the City of Kingston Heritage Properties Register
Kingston, Ontario

As project manager, Marcus oversaw the development of a new evaluative template for the City of Kingston to ensure compliance with Regulation 9/06 of the Ontario Heritage Act. He also oversaw the consolidation of records and materials to develop an updated and comprehensive Register of all heritage properties within the City of Kingston. This Register was also designed to be integrated into the City's GIS System. Both the Evaluative Template and the Register were adopted by Kingston City Council. (~$25,000 project)

PROJECT EXPERIENCE – POLICY DEVELOPMENT

Heritage Conservation Plan – Wiser Hall
Prescott, Ontario

At the request of the property owners, Marcus prepared a Heritage Conservation Plan for Wiser Hall in Prescott, Ontario. This information was used to guide the development process for the property and was used in support of a *Planning Act* and *Ontario Heritage Act* application.

City of Kingston Official Plan - Section 7 (Cultural Heritage Resources)
Kingston, Ontario

Marcus served as the primary author for Section 7 (Cultural Heritage Resources) of the City of Kingston Official Plan. The Official Plan was adopted and MMH approved in 2010. There were no objections to the heritage policies.

City of Kingston Adjacent Properties Policy
Kingston, Ontario

In response to the requirements of Section 2.6.3 of the Provincial Policy Statement (2005) and in conjunction with community stakeholders, Marcus developed new policies for works adjacent to protected heritage properties. The definition of these properties was also expanded to include National Historic Sites. These policies were adopted by Kingston City Council.

City of Kingston Heritage Incentives Program
Kingston, Ontario

Working with the City of Kingston's Finance Department, Marcus developed a new Heritage Incentives Program that included both a grants program and a tax incentive program. The adopting by-laws were approved by Kingston City Council.

City of Kingston Heritage Properties Standards
Kingston, Ontario

As project lead, and working in conjunction with City of Kingston Building Services and Legal Services, Marcus developed a by-law amendment for the City's Property Standards By-law to enhance protection for designated heritage properties. The by-law amendment was approved by Kingston City Council.

Heritage Impact Statement Requirements
Kingston, Ontario

Marcus developed specific requirements for the development of Heritage Impact Statements within the City of Kingston and developed the policy framework to support it. The requirements were adopted by Kingston City Council.

City of Kingston Heritage Scope of Work Form
Kingston, Ontario

In response to community concerns, Marcus developed a distinctive 'Scope of Work" form for properties that had received Council approval to make alterations. This form was developed to be highly visible and outline the specific approvals. The form was adopted by Kingston City Council.

Kingston Remembers Program
Kingston, Ontario

In response to a Council motion, Marcus developed the policy framework (including the adopting by-law) for a new interpretive plaquing program for the City of Kingston. The by-law was approved by Kingston City Council.

City of Kingston Delegated Authority By-law
Kingston, Ontario

In response to revisions to the Ontario Heritage Act in 2005, Marcus developed a by-law that that granted staff the ability to approve specific works under the Ontario Heritage Act. The by-law was adopted by Kingston City Council.

City of Kingston Site Visit Policy
Kingston, Ontario

In response to the requirements of the Ontario Heritage Act, Marcus developed the policy framework (including by-law amendments) for staff and volunteer site visits for applications under the Ontario Heritage Act. The by-law was approved by Kingston City Council.

Interim Protocol for Kingston City Hall NHSC
Kingston, Ontario

In response to Kingston Municipal Heritage Committee and Council motions concerning the impact of works on the interior of Kingston City Hall NHSC, Marcus developed an interim protocol to govern works within the building while an Ontario Heritage Act designation by-law and Management Plan were developed. The policy was adopted by Kingston City Council.

Interim Archaeological Policies for the City of Kingston
Kingston, Ontario

In response to Section 2.6.2 of the Provincial Policy Statement (2005) and while the City of Kingston Archaeological Master Plan was in development, Marcus developed specific policies to govern the review of development applications. It also included the development of a "Legal Deposit By-law for Archaeological Assessments undertaken within the City of Kingston." The policy and by-law were adopted by Kingston City Council.

PROJECT EXPERIENCE – HERITAGE ASSESSMENTS

22 Bridge Assessments
Eastern Ontario

Marcus provided technical and editorial guidance for the preparation of twenty-two Cultural Heritage Evaluation Reports (CHER) for East Region MTO. Marcus also undertook in the site visits.

CRRRC EA Cultural Heritage Overview Report
Ottawa, Ontario

Marcus was the co-author on a Heritage Overview Report for the Capital Region Resource Recovery Centre (CRRRC) EA project in Ottawa. As part of this project, he identified known and potential heritage properties, reviewed the heritage planning framework, and provided options for the design phase of the project for two potential sites for the CRRRC.

Bala Falls Ontario Heritage Act Objection
Bala, Ontario

Working on behalf of Swift River Energy, Marcus was the one of the lead authors to provide an assessment of four sites identified for designation under the *Ontario Heritage Act*. He also provided several technical memorandums on implications of the Ontario Heritage Act designations and the implications of the Notice of Intention to Designate. He served as an expert witness at the Conservation Review Board hearing on the matter.

Bird's Mill Pumping Station Cultural Heritage Assessment
Bracebridge, Ontario

Marcus was one of the primary authors of a cultural heritage assessment of Bird's Mill Pumping Station, an 1892 industrial site in Bracebridge Ontario. A designated property under the Ontario Heritage Act, the statement of significance for the property was ambiguous, and the assessment was written to clarify the heritage values and attributes of site.

Barrhaven LRT Environmental Assessment
Ottawa, Ontario

Marcus prepared a Heritage Overview Report for the Barrhaven LRT project, in which he identified known and potential heritage properties, reviewed the heritage planning framework, and provided options for the design phase of the project. This included recommendations for further heritage assessments.

Bank Street Expansion Environmental Assessment
Ottawa, Ontario

Marcus prepared a Heritage Overview Report for the Bank Street Expansion project, in which he identified known and potential heritage properties, reviewed the heritage planning framework, and provided options for the design phase of the project.

NRC Chilled Water Line Cultural Heritage Assessment

As part of this project, which involved FHRBO identified buildings and NCC identified heritage resources, Marcus laid out the recommended critical path for the heritage assessment.

Baseline Road Intensive Traffic Corridor Environmental Assessment
Ottawa, Ontario

Marcus prepared a Heritage Overview Report for the Baseline Road Intensive Traffic Corridor project, in which he identified known and potential heritage properties, reviewed the heritage planning framework, and provided options for the design phase of the project.

Brighton Landfill Environmental Assessment
Brighton, Ontario

Marcus prepared the Heritage Screening Report for the Brighton Landfill Environmental Assessment in which he identified known and potential heritage properties, and recommended appropriate actions for next phase of the project.

Bala Falls Small Hydro Project Sites - Heritage Designation Objection Study
Bala, Ontario

Marcus reviewed the Notice of Intention to Designate issued by the Township of Muskoka Falls, and provided heritage planning guidance concerning options and reasons for objecting to the Notice.

Ottawa Light Rail Transit Cultural Heritage Impact Statement
Ottawa, Ontario

As part of a team of built heritage specialists, Marcus assisted with the development and review of the cultural heritage impact statement for the OLRT project. Specifically Marcus provided a heritage planning assessment and commentary, reviewed the entire document, and helped prepare the report structure and purpose. Marcus also wrote the addendums for the Queen Street/Bronson Avenue Realignment, the Rideau Street/Waller Street Realignments, and the Commissioner/Cliff Street traffic options.

Forest House Demolition Monitoring
Belleville, Ontario

Prepared for a local demolition company and AECOM, Marcus monitored the demolition of an old house, and prepared a report outlining new information discovered as part of the demolition.

Deloro Mine Heritage Inventory
Deloro Ontario

As part of team of built heritage specialists, Marcus contributed to an ongoing documentation project of over 40 built heritage resources.

Hockey House (#2 Fourth Street) Heritage Assessment
Welland, Ontario

Prepared at the request of AECOM and the City of Welland, Marcus undertook a Cultural Heritage Value Assessment of a municipally owned property currently being used as a clubhouse by the local minor hockey association. The report recommended against designation or listing under the Ontario Heritage Act, but recommended specific steps to conserve the Historical/Associative values of the site.

Memorial Arena Cultural Heritage Property Assessment
Belleville, Ontario

Prepared at the request of the City of Belleville, Marcus undertook a Cultural Heritage Value Assessment of a downtown heritage property consisting of a 1929 Hockey Arena and a c1929 Weigh Scale Building. This property was evaluated against Regulation 9/06 of the Ontario Heritage Act, and the report recommended updating the Ontario Heritage Act Designation By-law.

Forest House CHER
Belleville, Ontario

Prepared at the request of the Ministry of Transportation (Ontario), Marcus revised a CHER for Forest House (located at 9 Farnham Road, Belleville). His revisions included: refining the applicable policy framework; reassessing the property and comparing it against Regulation 9/06; undertaking an expanded community consultation program; and undertaking an assessment of the site as a cultural heritage landscape.

Prince George Hotel CHPIF Review
Kingston, Ontario

At the request of Parks Canada, Marcus provided a review of the Prince George Hotel and its applicability under the guidelines of the Commercial Heritage Properties Incentive Fund (CHPIF) program.

PROJECT EXPERIENCE – RESEARCH

Heritage Impact Assessment Requirements
Kingston, Ontario

Marcus oversaw an academic-term internship to research Heritage Impact Statements and their municipal applications in Ontario. Publication of the research findings are forthcoming.

PROJECT EXPERIENCE – DEVELOPMENT REVIEW

Ontario Heritage Act Applications
Kingston, Ontario

At the City of Kingston from 2004 to 2008, Marcus was responsible for the receipt and processing of applications under the Ontario Heritage Act. During this time he processed over 300 applications and developed new application procedures and forms. He was also responsible for the receipt and processing of Heritage Grant and Heritage Tax applications received under the City's Heritage Incentives Program from 2006-2008.

Commenting Agent - Planning Act Applications
Kingston, Ontario

At the City of Kingston from 2004 to 2008, Marcus was responsible for reviewing applications under the Ontario Planning Act (OPAs, ZBAs, Site Plans, Committee of Adjustment applications) and commenting from a cultural heritage perspective. On average, he reviewed 20 applications per month.

Commenting Agent - Site Alteration By-law Applications
Kingston, Ontario

At the City of Kingston from 2008 to 2011, Marcus was responsible for reviewing applications under the City's Site Alteration By-law and commenting from a cultural heritage perspective.

Committee of Adjustment Application - D10-514 to 524-2009, United Church of Canada, 30-34 Colborne St., 151-153-157 Clergy St. and 221 Queen St.
Kingston, Ontario

Working with the planner assigned to the City of Kingston's Committee of Adjustment, Marcus co-wrote the staff report for Applications D10-514-2009 to D10-524-2009 for the properties located at 30-34 Colborne Street, 151-157 Clergy Street, and 221 Queen Street. Marcus provided a heritage planning review based upon the PPS, the Official Plan, the Ontario Heritage Act, and the Ontario Heritage Act Designation By-law for the property.

TRAINING

Confined Spaces Pre-Entry Training
Danatec, 2013

Strategic Planning
Ontario Museum Association, 2013

Mission and Vision Statements
Ontario Museum Association, 2013

Online Collections
Canada's History, 2013

Roles and Responsibilities of Boards
Ontario Museum Association, 2013

Pinterest
Ontario Museum Association, 2012

Heritage Bridge Assessment Workshop
Golder Associates Ltd., 2012

AODA Training
Golder Associates Ltd., 2012

Health and Safety Learnings Database Training
Golder Associates Ltd., 2012

Serve-Ability: Transforming Ontario's Customer Service (including Decision Makers Content)
Government of Ontario, 2011

Section 106 - Understanding 36 CFR 800.12: Disaster Response and Emergencies
The Advisory Council on Historic Preservation (ACHP), 2011

Senior Hires Course
Golder Associates Ltd., 2011

eHaSEP Training
Golder Associates Ltd., 2011

Section 106 Essentials Training Course
The Advisory Council on Historic Preservation (ACHP), 2011

First Nations Cultural Awareness/Sensitivity Training
Golder Associates Ltd., 2011

GAIMS Training
Golder Associates Ltd., 2011

Project Management (PM24)
Golder Associates Ltd., 2011

PLAN-180: Preservation and Sustainability
Planetizen, 2011

Workplace Violence Prevention Training (Bill 168)
Golder Associates Ltd, 2011

Opportunity, Proposal, and Project System (OPPS) Training
Golder Associates Ltd, 2011

Workplace Hazardous Materials Information System (WHMIS) Training
Golder Associates Ltd, 2011

Health and Safety Module 2: Hazard Assessment and Control
Golder Associates Ltd, 2011

Health and Safety Module 1: Safety Basics
Golder Associates Ltd, 2011

History of Ontario Architecture
Mohawk College, 2010

Workplace Violence and Harassment (Bill 168) Training
City of Kingston, 2010

Respect in the Work Place
City of Kingston, 2009

Managing Multiple Projects, Objectives, and Deadlines
Skillpath Seminars, 2009

The Changing Nature of Sacred Places
National Historic Sites Alliance for Ontario, 2009

Conserving the Modern
Parks Canada, 2009

Conserving and Preserving in the Lab
Ontario Museum Association, 2008

First Nations Peoples
St. Lawrence College, 2008

Windows Conservation for Historic Places
Parks Canada, 2008

Heritage Planning Workshop
University of Waterloo, 2008

Aboriginal Collections: Redefining the Meaning of Care
Ontario Museum Association, 2008

Aboriginal/First Nations Interests and the Duty of Consult
OEMC, 2007

CRM/GRC Forum Saskatoon 2007
Parks Canada, 2007

19th century ceramics
Parks Canada, 2007

Precontact lithics and ceramics
Parks Canada, 2007

Creative Placemaking
Artscape & City of Kingston, 2007

Introduction to Masonry Conservation for Historic Places
Parks Canada, 2007

Old House Seminar and Forum
Edifice Old Home Magazine, 2007

Nautical Archaeological Survey (NAS) Level 1 Course
Ministry of Culture - Ontario, 2007

Aboriginal Protocols
City of Kingston, 2007

Conservation, Designation, and Conflict
Community Heritage Ontario and Ministry of Culture [Conservation Review Board], 2007

"Strong Communities": OMB/Planning Reform
Ontario Ministry of Municipal Affairs and Housing, 2007

Cultural Resource Management Policy Orientation Course
Parks Canada, 2006

Preservation Housekeeping in Historic House Museums
Ontario Historical Society and the Ontario Museum Association with CCI, 2006

Planner at the OMB
Ontario Professional Planners Institute, 2006

Ontario Health and Safety Act Training
City of Kingston, 2006

Fire Risk Management for Historic Places
Parks Canada, 2006

Accessibility and Heritage
Ontario Historical Society, 2006

Archaeological Resources: Conservation and Planning
Ministry of Culture - Ontario, 2005

Creative Clusters Development Program - Workshop 4
Artscape Ltd, 2005

Dealing with Difficult Interactions
City of Kingston, 2005

Sacred Places of National Historical Significance
Sacred Places Network & Parks Canada, 2005

Ontario Heritage Act
Ministry of Culture - Ontario, 2005

Municipal Cultural Planning
Ministry of Culture - Ontario, 2005

2005 Planning Reform (Provincial Policy Statement, 2005): Municipal Session
Ontario Ministry of Municipal Affairs and Housing, 2005

Take it for Granted: How to Write Better Proposals
Kingston Funders Group, 2005

Plain Writing for Planners
Ontario Professional Planners Institute, 2004

Writing Designations for Historical Properties
Ministry of Culture - Ontario, 2004

Basic Photography
St. Lawrence College, 2002

Webpage development - Microsoft FrontPage and Adobe PhotoShop
University of Western Ontario, 2000

National Coaching Certification Program - Level 1 Theory
NCCP, 1996

Leadership Training
Bark Lake Leadership Camp, 1995

PROFESSIONAL AFFILIATIONS

International Network for Traditional Building, Architecture & Urbanism

Association for Preservation Technology

Communal Studies Association

ICOMOS Canada

Canadian Institute of Planners

Canadian Archaeological Association

Canadian Association of Heritage Professionals

Canadian Association for Conservation of Cultural Property

Heritage Canada Foundation

Ontario Professional Planning Institute

Community Heritage Ontario

Ontario Archaeological Society

Ontario Historical Society

Architectural Conservancy of Ontario

Ontario Museum Association

Frontenac Heritage Foundation

Kingston Historical Society

National Trust for Historic Preservation

PUBLICATIONS

Books

Letourneau, Marcus et al. 2011. *City of Kingston Properties of Cultural Heritage Value and Interest ("Listed Properties")*. Kingston, City of Kingston.

Journal Articles

Godlewska, Anne, Marcus Letourneau and Paul Schauerte. "Maps, Lies and Painting: Portraying Napoleon's Battlefields in North Italy". *Imago Mundi*, 57 No. 2 (2005), 149-163.

Letourneau, Marcus. Book Review: "Mark Fram and Albert Schrauwers's 4SQUARE". *Ontario History*, Vol. XCVIII No. 1. (2006), 122-124.

Letourneau, Marcus. Book Review: "Richard V. Francaviglia's Believing in Place: A Spiritual Geography of the Great Basin". *Journal of Historical Geography*, 30 (2004), 805-807.

Conference Proceedings

Letourneau, Marcus. 2013. *"Challenging the Labyrinth: Reflections on the legal intricacies of Heritage Conservation and Wind Energy projects in Ontario"*. Universite de Montreal Heritage Roundtable, March. Montreal, Canada *(forthcoming)*

Letourneau, Marcus. 2010. *"Planning for the Future of the Past: Experiences with Cultural Heritage Resource Management in a Municipal Context"*. Carleton School of Canadian Studies Heritage Conservation, March. Ottawa, Canada.

Other

Unpublished Thesis/Dissertation

Létourneau, M. "Holy Mount": Identity, Place, Religion, and Narrative at New Lebanon Shaker Village - 1759-1861. Unpublished Ph.D. Dissertation. Kingston: Queen's University at Kingston, 2009. Available at: http://hdl.handle.net/1974/1882

Létourneau, M. Sacred Text: National Identity, Place, and Language in the English Newspapers in Jerusalem. Unpublished M.A. Thesis. London: University of Western Ontario, 2001.

Journal - Series

Russell, J., Ginting, N., Hall, C., Hansen, C., Létourneau, M., Luk, E., Mandal, M. (eds.) *Queen's Arts and Science Undergraduate Review: Volume 10* [1998]. Kingston: Arts and Science Undergraduate Society, 1998.

Non-Academic

Létourneau, M. "A Cultural Heritage Management Plan for Kingston City Hall National Historic Site." *Site Lines*. No. 26. August 2010: p. 5.

Létourneau, M. "The John Marks House." *CHOnews*. October 2009: p.1-2.

Létourneau, M. "Sacred landscapes in Ontario's communities." *Heritage Matters*. Vol. 7. No. 3. 2009: p. 30.

Létourneau, M. "Kingston's Heritage: Time and Again." *Heritage Matters*. Vol. 6. No. 3. 2008: p. 5-6.

Létourneau, M. "New Heritage Legislation and Policies." *Foundations*. Vol. 33. No. 2. 2006: p. 3-6 & 12.

Létourneau, M. "Sub-versions of Peace."*Imprint*. Vol. 21. No. 29. March 5, 1999.

Létourneau, M. "Where Duty Leads." *Haliburton County Echo*. April 11, 1995.

APPENDIX B

Photographs Used in Text

TAB A

Photograph 1: Bala #2 Generating Station at the North Bala Falls, pre 1956.

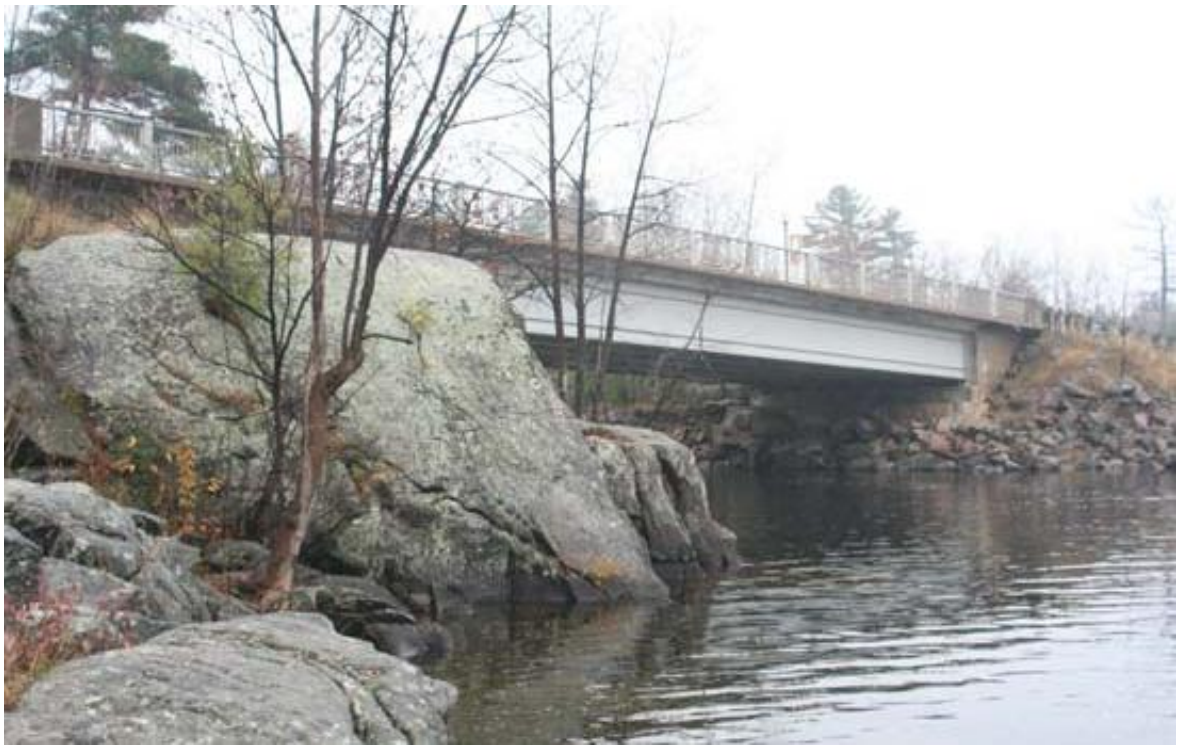
TAB B

Photograph 2: Bala #2 Generating Station at the North Bala Falls, pre 1956.

TAB C

Photograph 3: View of Burgess Island circa 1910.1 with North Channel and Bala Falls on the left and South Channel and debris field on the right.

TAB D



Photograph 4: Highway 169 bridge over the South Channel. The rock outcropping on Burgess Island on the left of this photo is assumed to be the same rock outcrop as indicated in Photograph 3, 1999.

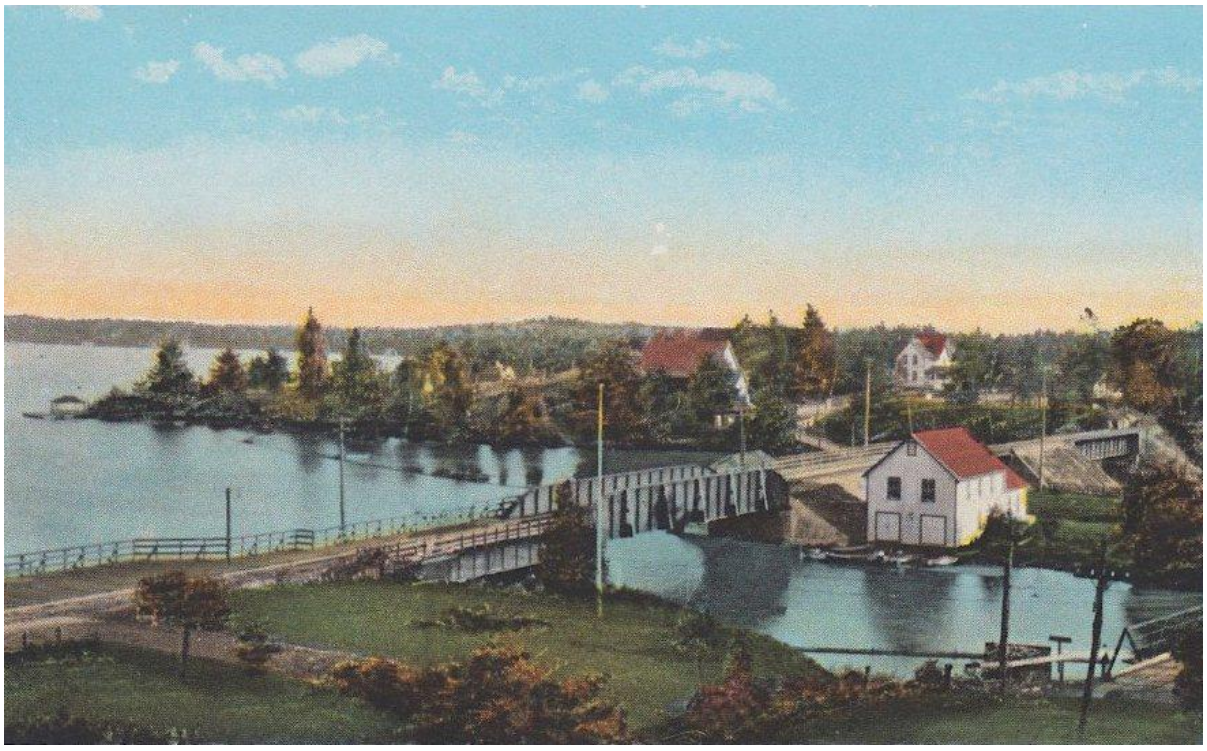
TAB E

Photograph 5: Drill holes (indicated by red circles) for blasting charges in rock at the base of North Falls, 2012.

TAB F

Photograph 6: South Channel and Burgess Church showing approximate area of the Thompson portage landing, circa 1950.

TAB G

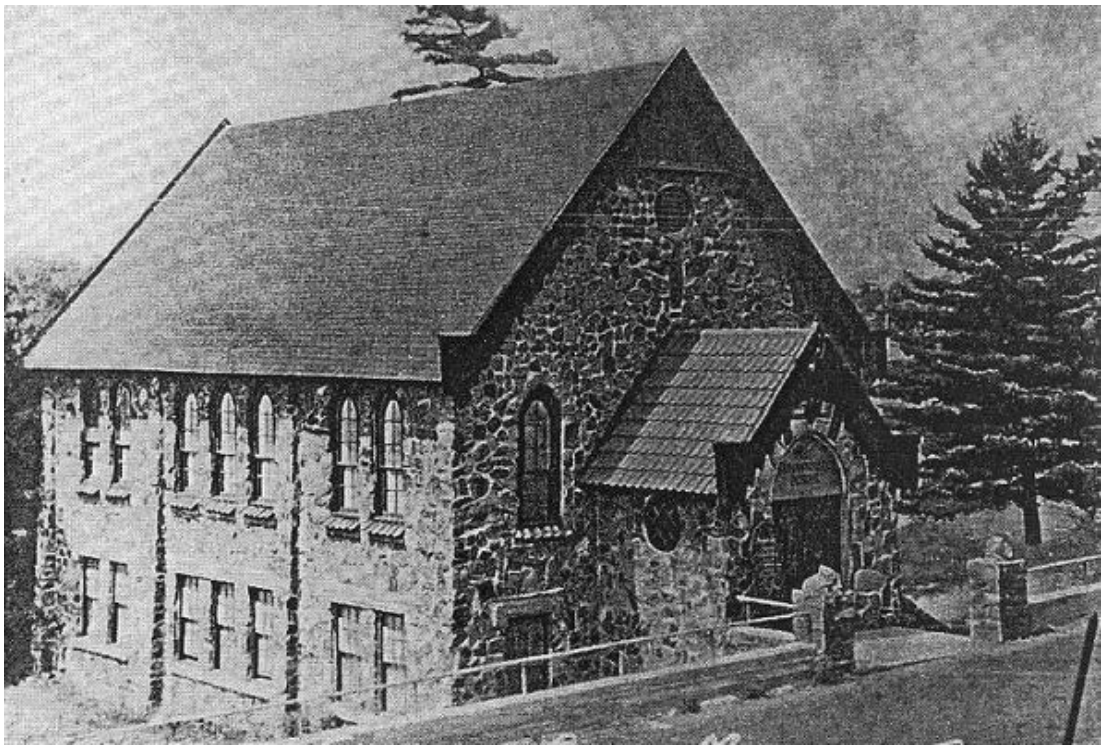


Photograph 8: Canadian Pacific Railway and Hurlings Boat Livery (Purk,s Place) on the North Channel. The earthwork of the raised railway embankment on Burgess Island is visible behind Hurlings Boat Livery, circa 1920s. (See Also Photograph 10)

TAB H

Photograph 8: Bala Road crossing the south Channel with Moon River in Background. The road on Burgess Island is much lower than it is today circa 1910

TAB I

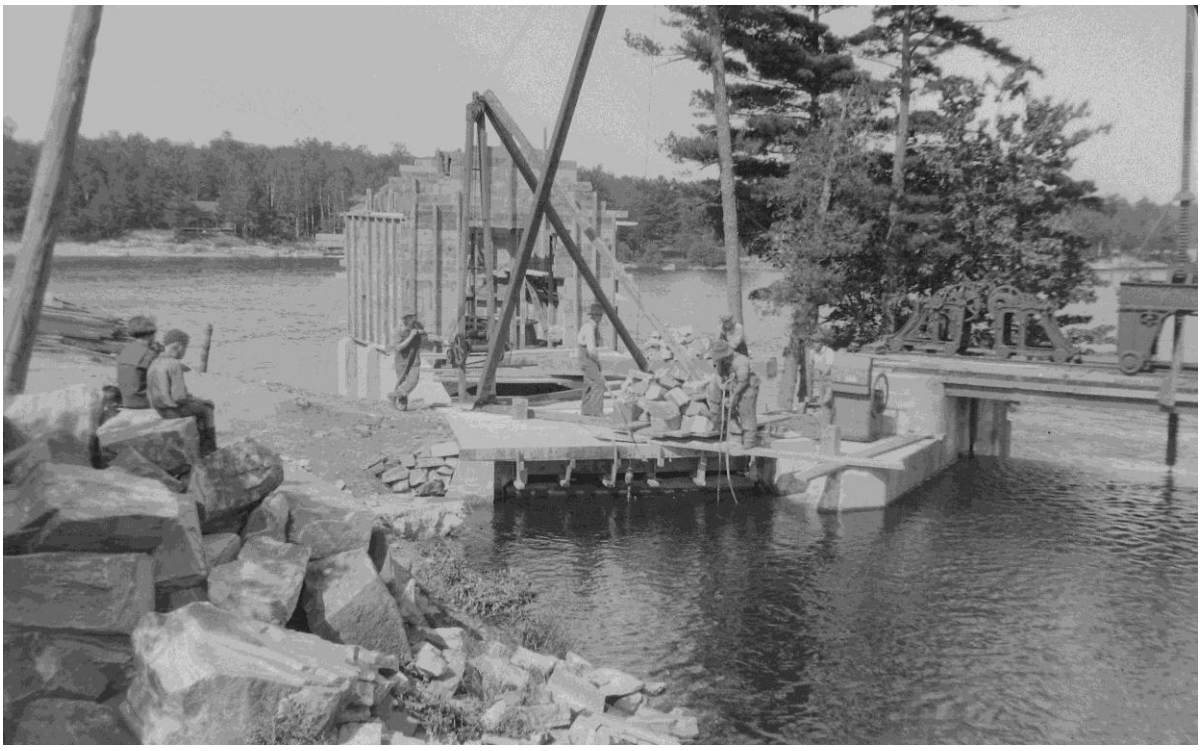


Photograph 9: Burgess Church with the raised surface of the Bala Road in foreground, circa 1920s.

TAB J

Photograph 10: South Channel Dam, Bala Road Bridge, and railway underpass. A park is located at the east end of Burgess Island, circa 1910. (See Also Photograph 7)

TAB K



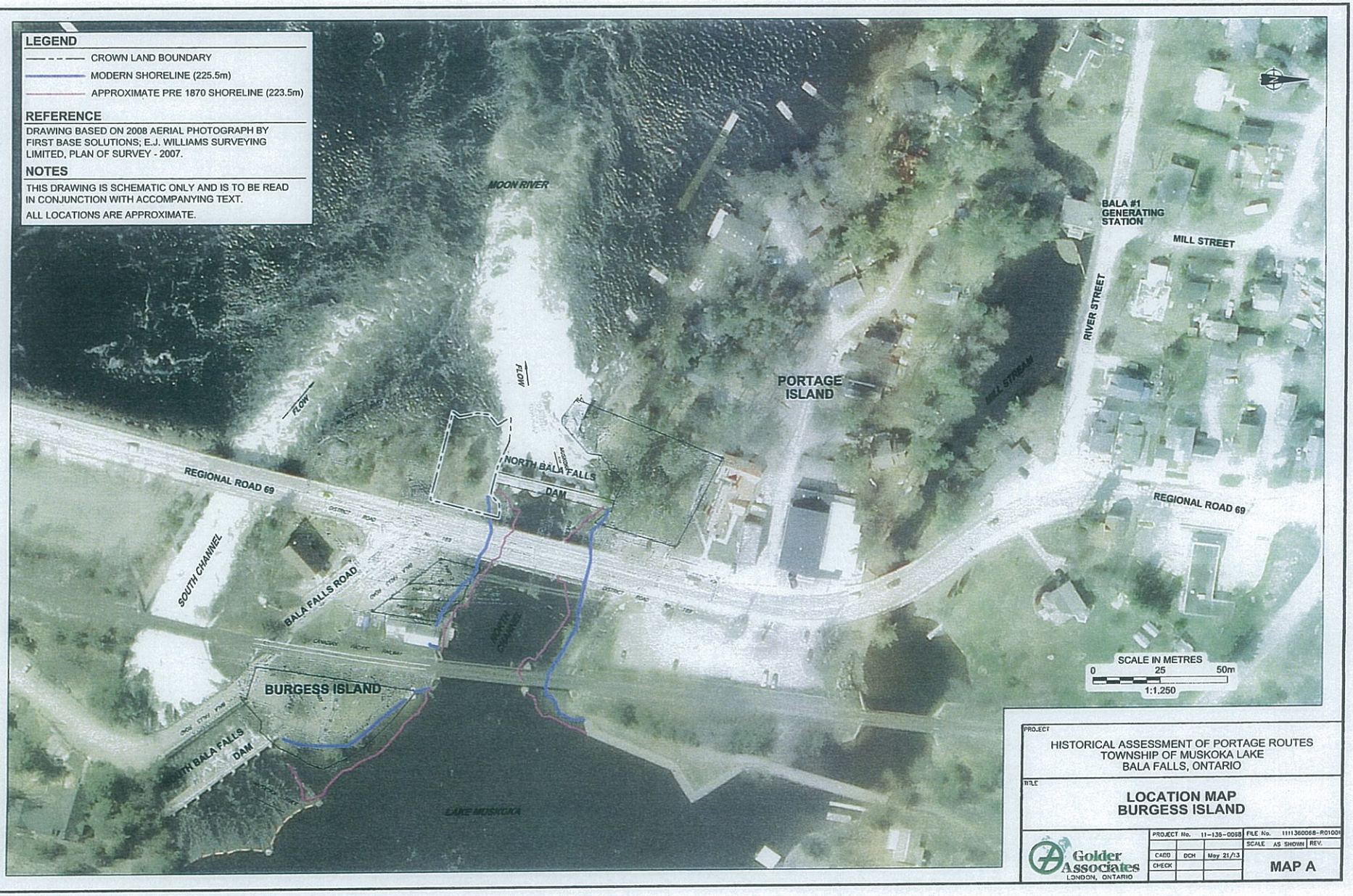
Photograph 11: Bala #2 Generating under construction showing head race and North Channel Dam on right, 1924.

TAB L

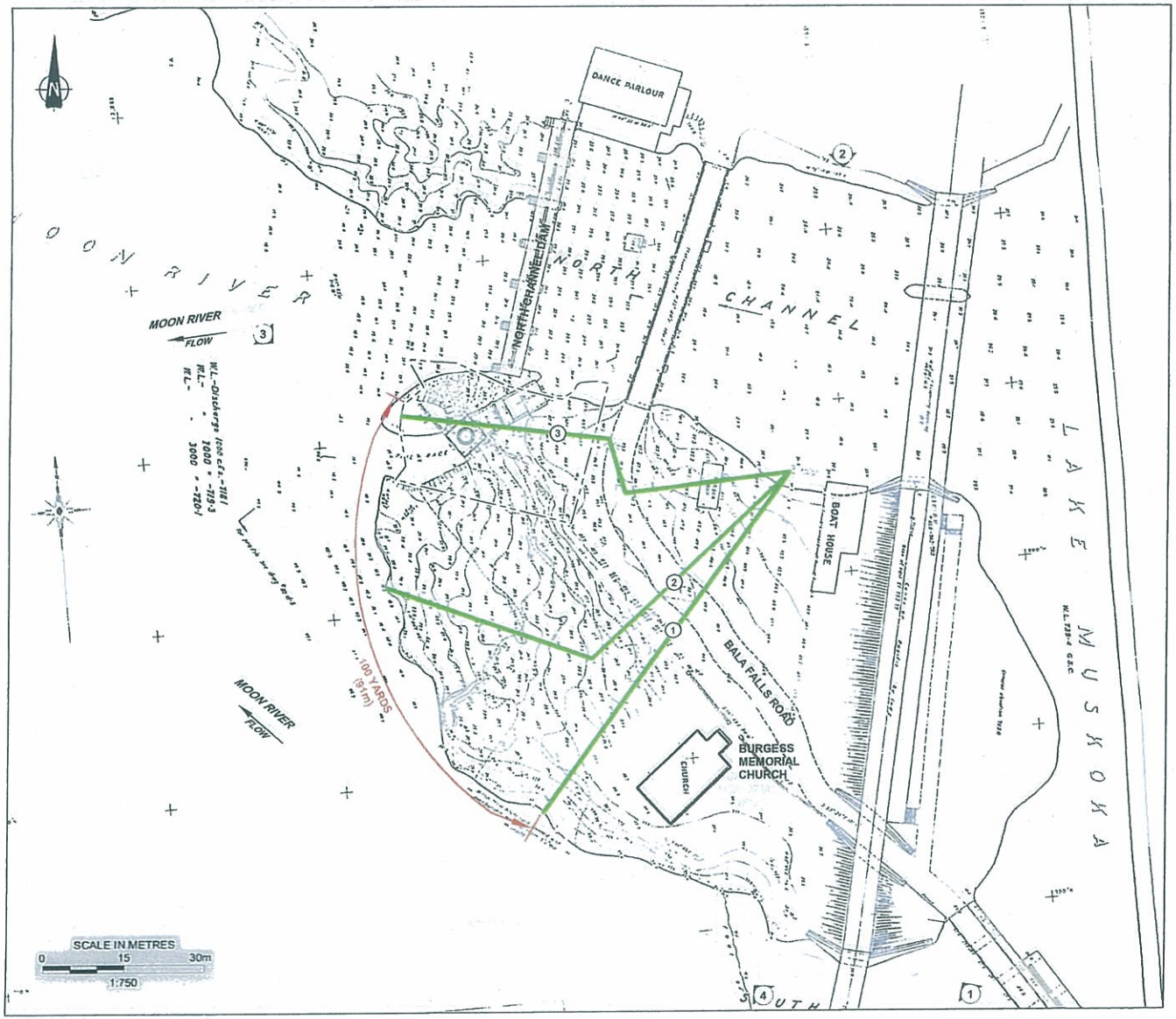
Photograph 12: Bala #2 Generating Station under construction showing tail race and rip-rap rock placed on both sites of the building, 1924.

APPENDIX C

Report Maps



Drawing file: 1111360068-R01001.dwg May 21, 2013 - 1:09pm



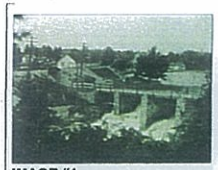


IMAGE #1


IMAGE #2


IMAGE #3


IMAGE #4

LEGEND

- (1) APPROXIMATE IMAGE LOCATION AND VIEWING DIRECTION
- CROWN LAND BOUNDARY
- SCHEMATIC PORTAGE ROUTE

SCHEMATIC PORTAGE ROUTES:

1. THOMPSON PORTAGE ROUTE (80m)
2. WAREHOUSE PORTAGE ROUTE (90m)
3. HILEY SURVEY PORTAGE ROUTE (80m)

REFERENCE

DRAWING BASED ON "BALA DEVELOPMENT - POWER SITE", HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO, CIRCA 1933; AND
IMAGES No. 1 - 4 PROVIDED BY SWIFT RIVER ENERGY CORP.

NOTES

THIS DRAWING IS SCHEMATIC ONLY AND IS TO BE READ IN CONJUNCTION WITH ACCOMPANYING TEXT.

THE 1933 HYDRO PLAN WAS ADJUSTED TO PROVIDE A BEST-FIT FOR THE 2008 AIR PHOTO OF BURGESS ISLAND. AS A RESULT OF THE QUALITY OF THE ORIGINAL PHOTOCOPY, THE NORTH/SOUTH DISTORTION OF FEATURES BECOMES PRONOUNCED WITHIN THE NORTH CHANNEL AND BECOMES UNRELIABLE BY THE NORTH BANK OF THE CHANNEL. THERE IS NEGLIGIBLE EAST-WEST DISTORTION.

ALL LOCATIONS ARE APPROXIMATE.

PROJECT

HISTORICAL ASSESSMENT OF PORTAGE ROUTES
TOWNSHIP OF MUSKOKA LAKE
BALA FALLS, ONTARIO

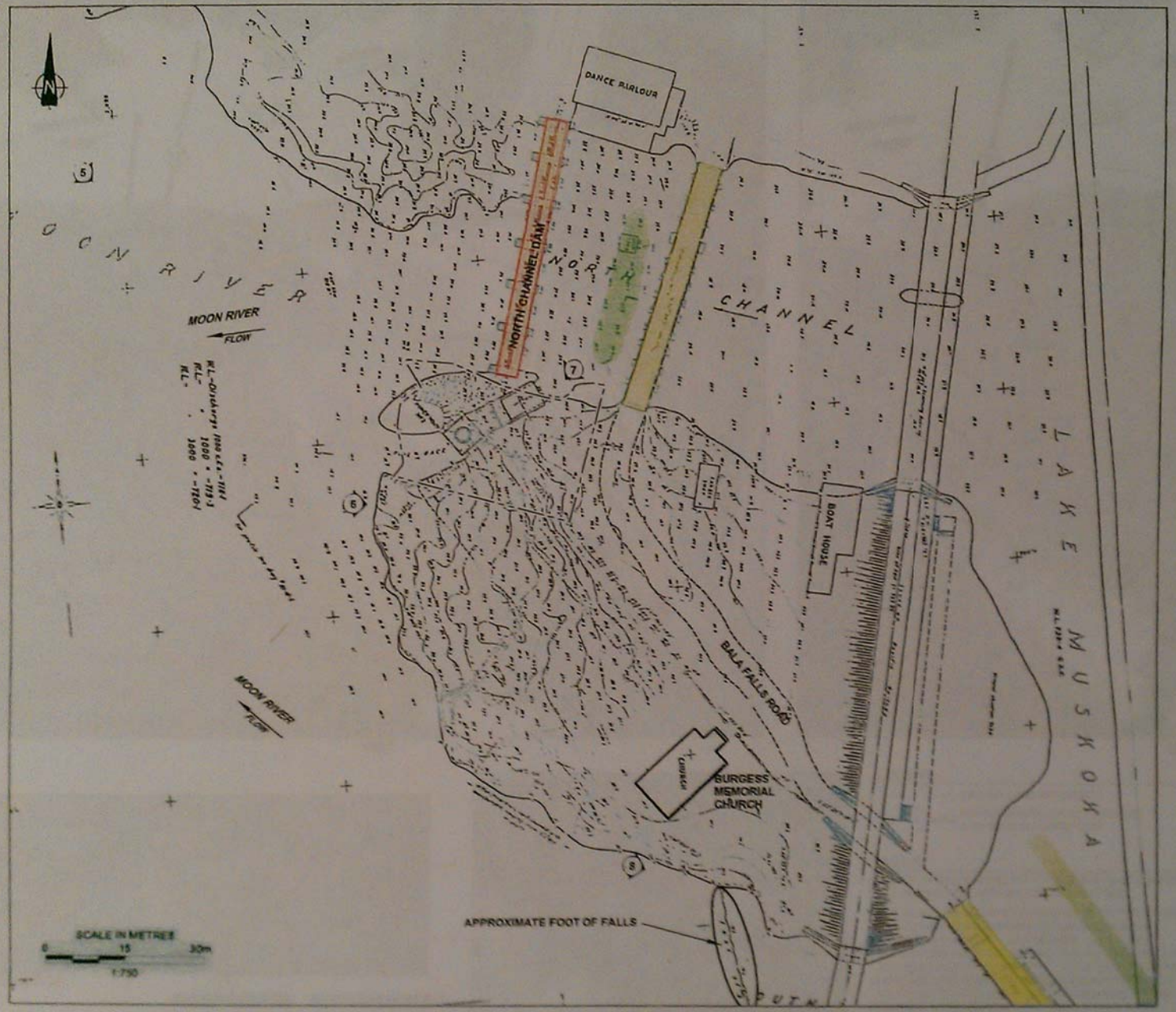
TITLE

POSSIBLE PORTAGE ROUTES ACROSS BURGESS ISLAND

Golder Associates
LONDON, ONTARIO

PROJECT No. 11-1136-0068	FILE No. 1111380068-R01002
	SCALE AS SHOWN REV.
CADD DCH May 21/13	MAP B
CHECK	

Drawing file: 1111380068-R01002.dwg May 21, 2013 - 11:24am



LEGEND

- APPROXIMATE IMAGE LOCATION AND VIEWING DIRECTION
- 1958 SOUTH CHANNEL DAM
- 1958/1909 NORTH CHANNEL DAM
- 1916 NORTH CHANNEL BRIDGE
- 1876/75 SOUTH CHANNEL DAM1, 1899 DAM2, 1913 DAM3
- 1874/1886 NORTH CHANNEL DAM

REFERENCE

DRAWING BASED ON "BALA DEVELOPMENT - POWER SITE", HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO, CIRCA 1933; AND
IMAGES No. 5 - 8 PROVIDED BY SWIFT RIVER ENERGY CORP.

NOTES

THIS DRAWING IS SCHEMATIC ONLY AND IS TO BE READ IN CONJUNCTION WITH ACCOMPANYING TEXT.

THE 1933 HYDRO PLAN WAS ADJUSTED TO PROVIDE A BEST-FIT FOR THE 2008 AIR PHOTO OF BURGESS ISLAND. AS A RESULT OF THE QUALITY OF THE ORIGINAL PHOTOCOPY, THE NORTH/SOUTH DISTORTION OF FEATURES BECOMES PRONOUNCED WITHIN THE NORTH CHANNEL AND BECOMES UNRELIABLE BY THE NORTH BANK OF THE CHANNEL. THERE IS NEGLIGIBLE EAST-WEST DISTORTION.

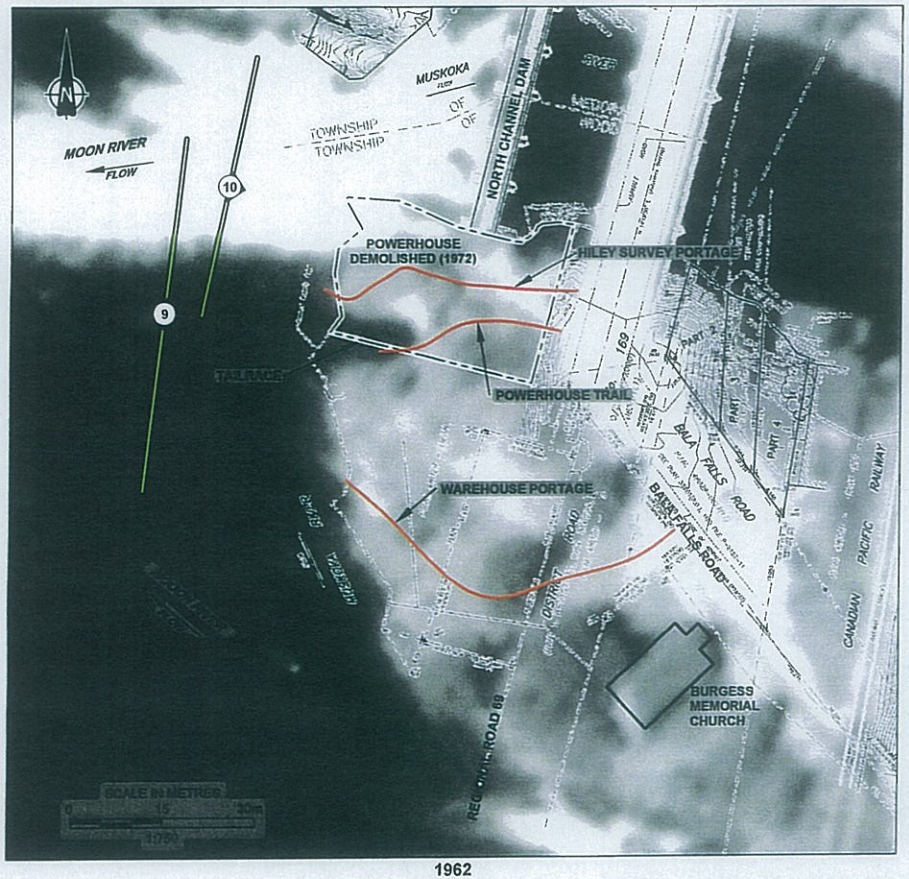
ALL LOCATIONS ARE APPROXIMATE.

HISTORICAL ASSESSMENT OF PORTAGE ROUTES
TOWNSHIP OF MUSKOKA LAKE
BALA FALLS, ONTARIO

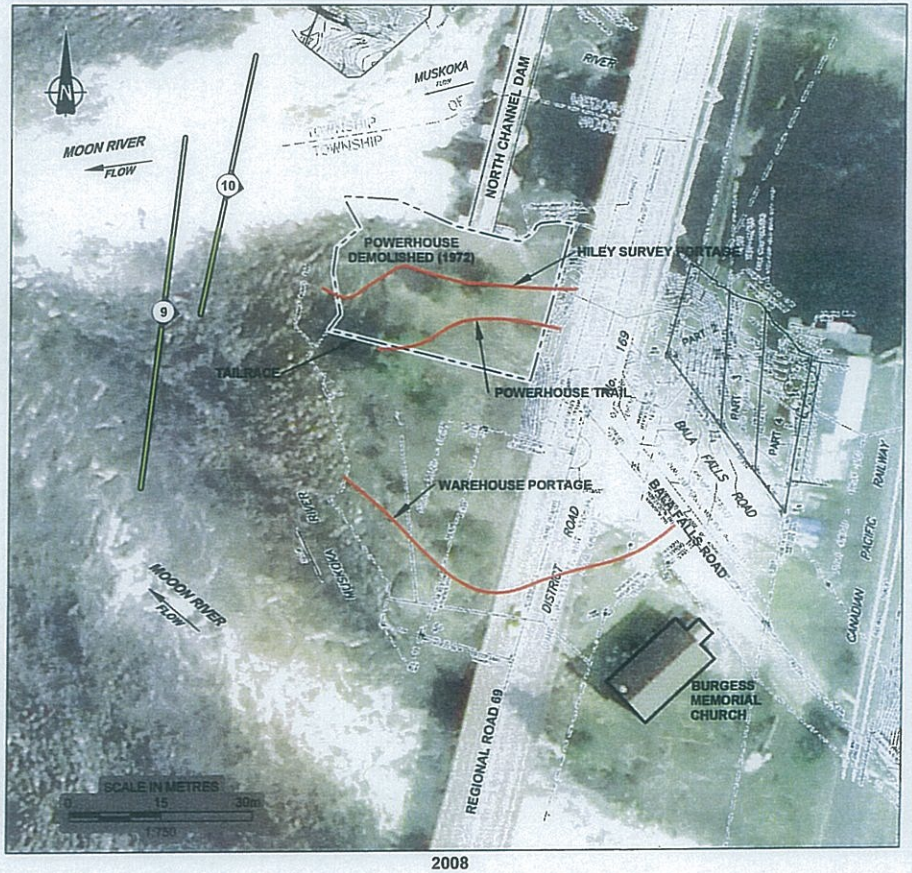
DAMS AND POWER HOUSE

Golder Associates

MAP C



1962



2008

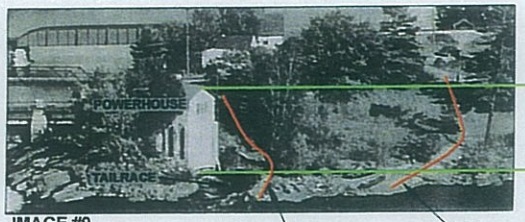


IMAGE #9

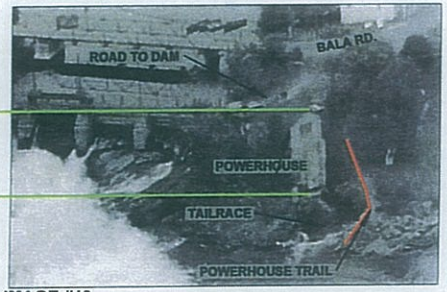


IMAGE #10

LEGEND

CROWN LAND BOUNDARY

1 APPROXIMATE IMAGE LOCATION AND VIEWING DIRECTION

NOTES

THIS DRAWING IS SCHEMATIC ONLY AND IS TO BE READ IN CONJUNCTION WITH ACCOMPANYING TEXT.

THE JOHN HILEY SURVEY BOUNDARIES OF THE CROWN LAND DO NO COINCIDE WITH THOSE PROVIDED BY SWIFT RIVER ENERGY. IN ADDITION, THE HILERY SURVEY DOES NOT MATCH THE SURVEY FEATURES ON THE 2008 BASE PHOTOGRAPHY. THE PORTION OF THE PORTAGE ROUTE ON THE HILERY SURVEY HAS BEEN ADJUSTED TO PROVIDE A BEST FIT WITH THE OTHER PLOTTED INFORMATION.

ALL LOCATIONS ARE APPROXIMATE.

REFERENCE

DRAWING BASED ON 1962 AERIAL PHOTOGRAPH No. A17577-041; 2008 AERIAL PHOTOGRAPH BY FIRST BASE SOLUTIONS; E.J. WILLIAMS SURVEYING LIMITED, PLAN OF SURVEY - 2007; AND IMAGES No. 9 AND 10 PROVIDED BY SWIFT RIVER ENERGY CORP.

PROJECT

PRELIMINARY ASSESSMENT OF PORTAGE ROUTES
TOWNSHIP OF MUSKOKA LAKE
BALA FALLS, ONTARIO

TITLE

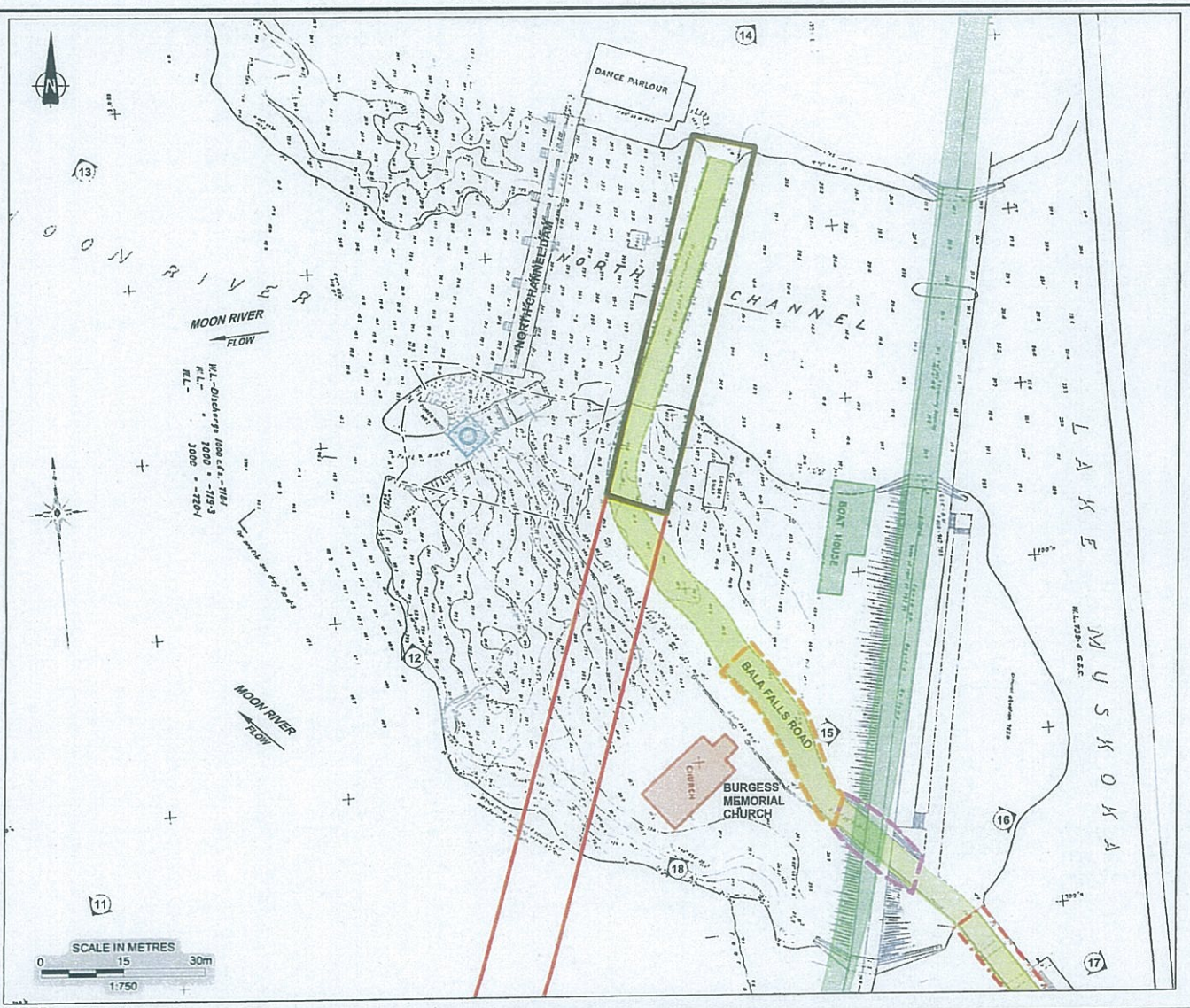
TRAILS AT NORTH FALLS

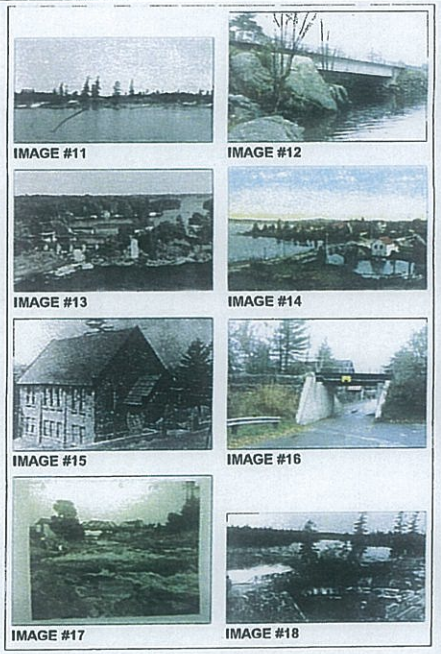
Golder Associates
LONDON, ONTARIO

PROJECT No.	11-1136-0068	FILE No.	1111360068-R01004
		SCALE	AS SHOWN
CADD	DCH	May 21/13	REV.
CHECK			

MAP D

Drawing file: 1111360068-R01004.dwg May 21, 2013 - 2:17pm





LEGEND

- APPROXIMATE IMAGE LOCATION AND VIEWING DIRECTION
- CROWN LAND BOUNDARY
- 1906 BRIDGE REPLACEMENT
- 1907 RAILWAY CONSTRUCTION
- 1909 ROAD UNDERPASS
- 1913 BRIDGE REPLACEMENT
- 1920 ROAD ELEVATED
- 1924 BALA POWER HOUSE
- 1926 CHURCH
- 1955 BRIDGE REPLACEMENT
- 1965 HIGHWAY BYPASS

REFERENCE

DRAWING BASED ON "BALA DEVELOPMENT - POWER SITE". HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO, CIRCA 1933; AND IMAGES No. 11 - 18 PROVIDED BY SWIFT RIVER ENERGY CORP.

NOTES

THIS DRAWING IS SCHEMATIC ONLY AND IS TO BE READ IN CONJUNCTION WITH ACCOMPANYING TEXT.

FOR LARGE IMAGE DETAILS, REFER TO ACCOMPANYING TEXT.

ALL LOCATIONS ARE APPROXIMATE.

THE 1933 HYDRO PLAN WAS ADJUSTED TO PROVIDE A BEST-FIT FOR THE 2008 AIR PHOTO OF BURGESS ISLAND. AS A RESULT OF THE QUALITY OF THE ORIGINAL PHOTOCOPY, THE NORTH/SOUTH DISTORTION OF FEATURES BECOMES PRONOUNCED WITHIN THE NORTH CHANNEL AND BECOMES UNRELIABLE BY THE NORTH BANK OF THE CHANNEL. THERE IS NEGLIGIBLE EAST-WEST DISTORTION.

PROJECT

HISTORICAL ASSESSMENT OF PORTAGE ROUTES
TOWNSHIP OF MUSKOKA LAKE
BALA FALLS, ONTARIO

TITLE

TRANSPORTATION AND BUILDINGS

Golder Associates
LONDON, ONTARIO

PROJECT No. 11-1136-0068			FILE No. 1111360068-R01005
			SCALE AS SHOWN REV
CADD DCH		May 21/13	MAP E
CHECK			

Drawing file: ...\1360868-R01005.dwg May 21, 2013 - 11:25am

APPENDIX D

Enlargements of Thumbnail Images 1 – 18 in Maps B – E

Image 1: South Channel Dam and road bridge and showing park at east end of island, circa 1910.

Image 2: Purk's Place with railway bridge on left. The orange floats mark the upstream approach to the dam on the North Channel, 2009.

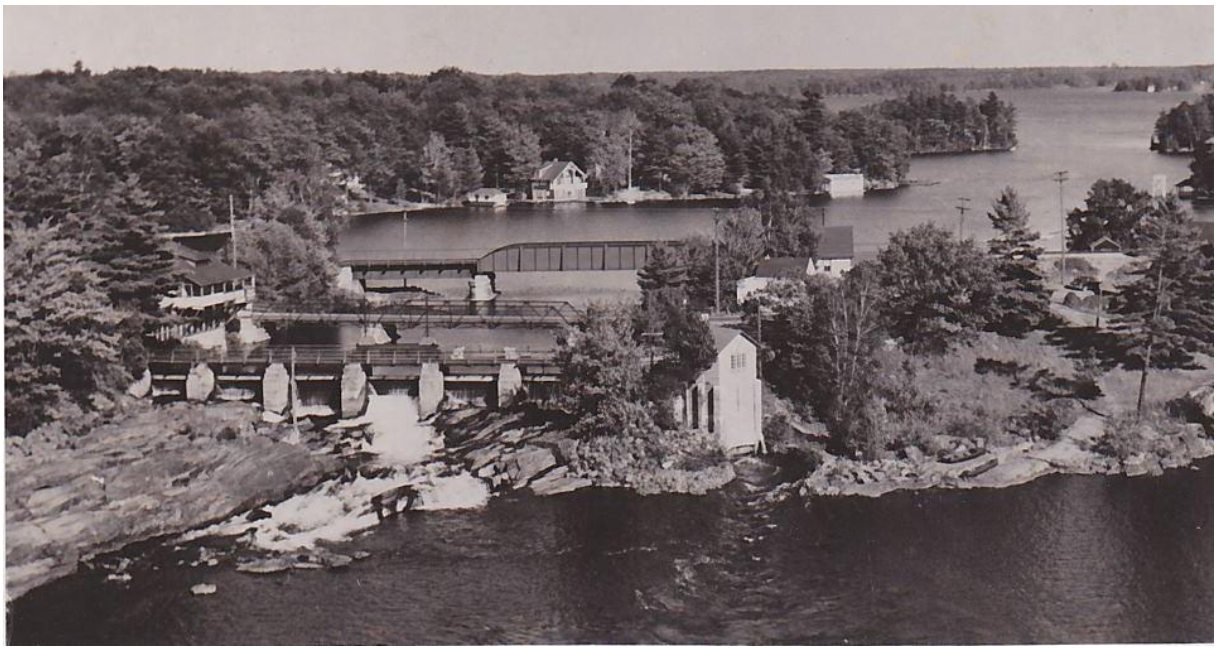


Image 3: Bala #2 Generating Station with tailrace channel in foreground, pre 1956.

Image 4: View of Possible 1837 portage landing in South Chanel near Burgess Church, circa 1950.

Image 5: Bala #2 Generating Station pre 1956

Image 6: Bala #2 Generating Station under construction showing tail race, 1924.

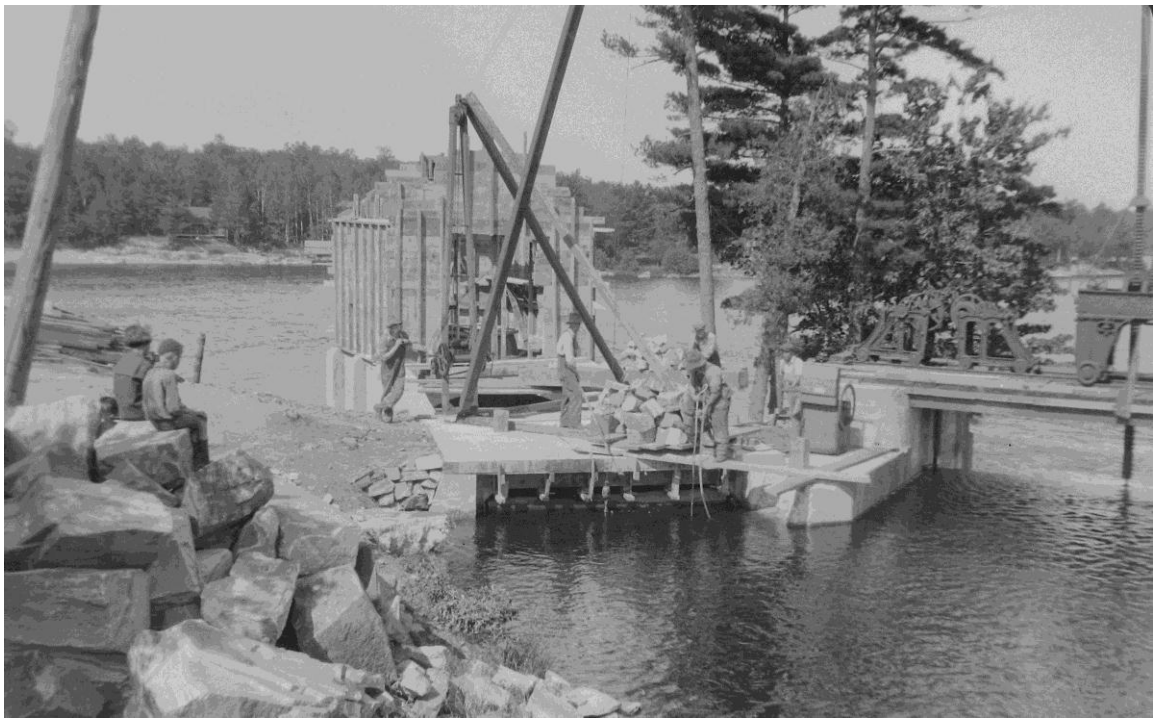


Image 7: Bala #2 Generating under construction showing head race and North Channel Dam on right, 1924

Image 8: Bridge and dam at South Channel, looking upstream , circa 1910.

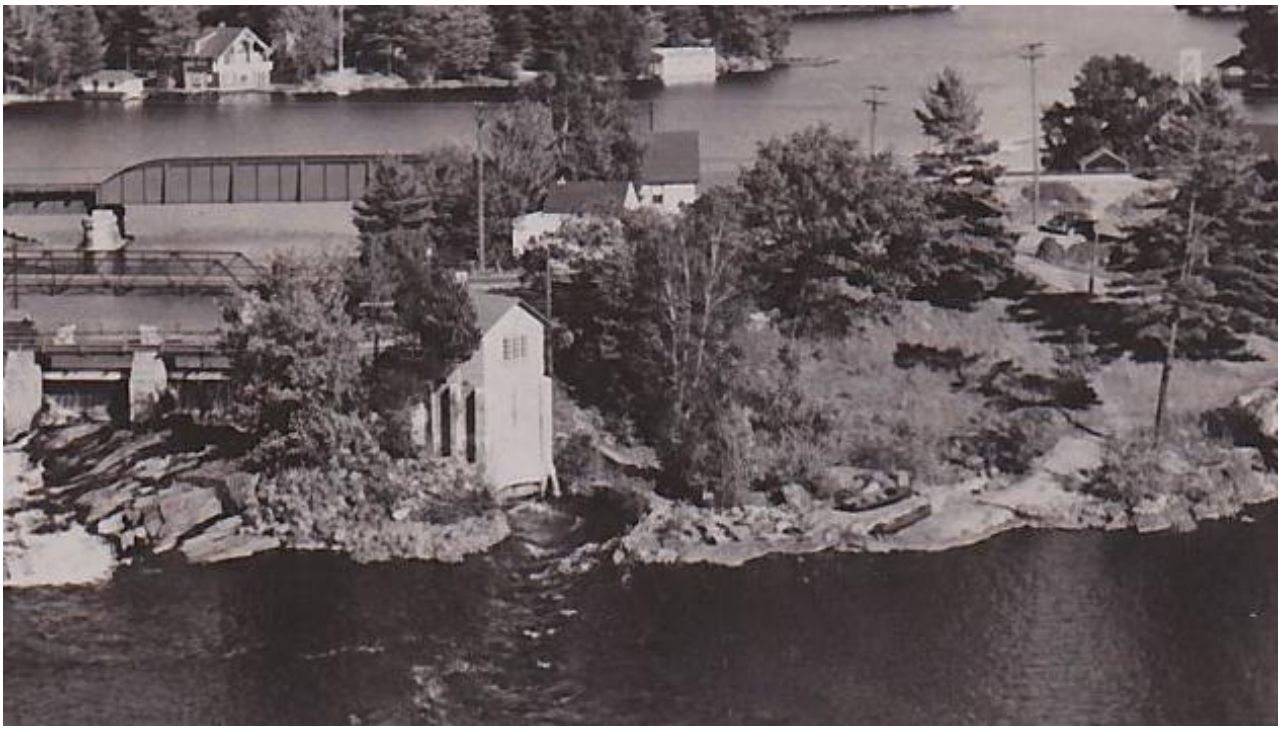


Image 9: Bala #2 Generating Station with tailrace channel in foreground, pre 1956.

Image 10: Bala #2 Generating Station pre 1956

Image 11: View of Burgess Island with North Channel and Bala Falls on the left and South Channel and debris field on the right, circa 1910.

Image 12: South Channel bridge showing bedrock of original shoreline on left and filled shore on right, 2009.

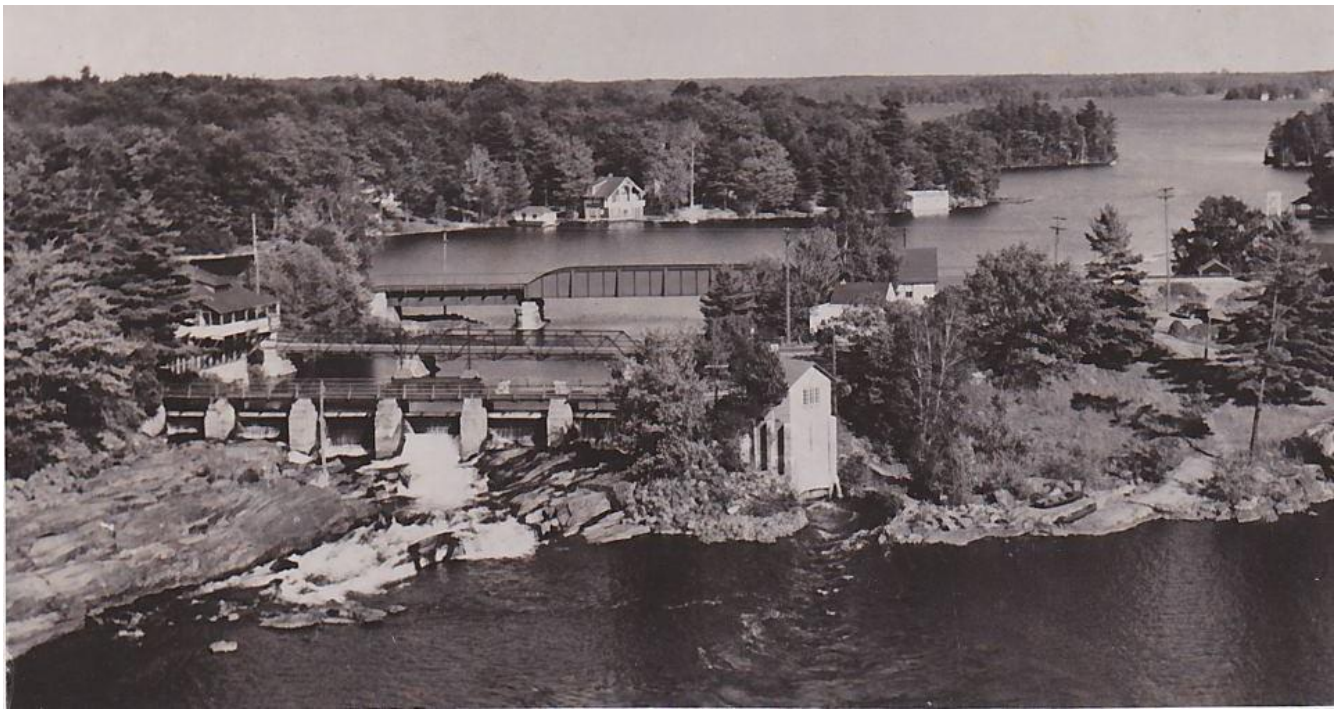


Image 13: Bala #2 Generating Station with tailrace channel in foreground, pre 1956.

Image 14: Canadian Pacific Railway and Hurlings Boat Livery with North Channel, circa 1920s.

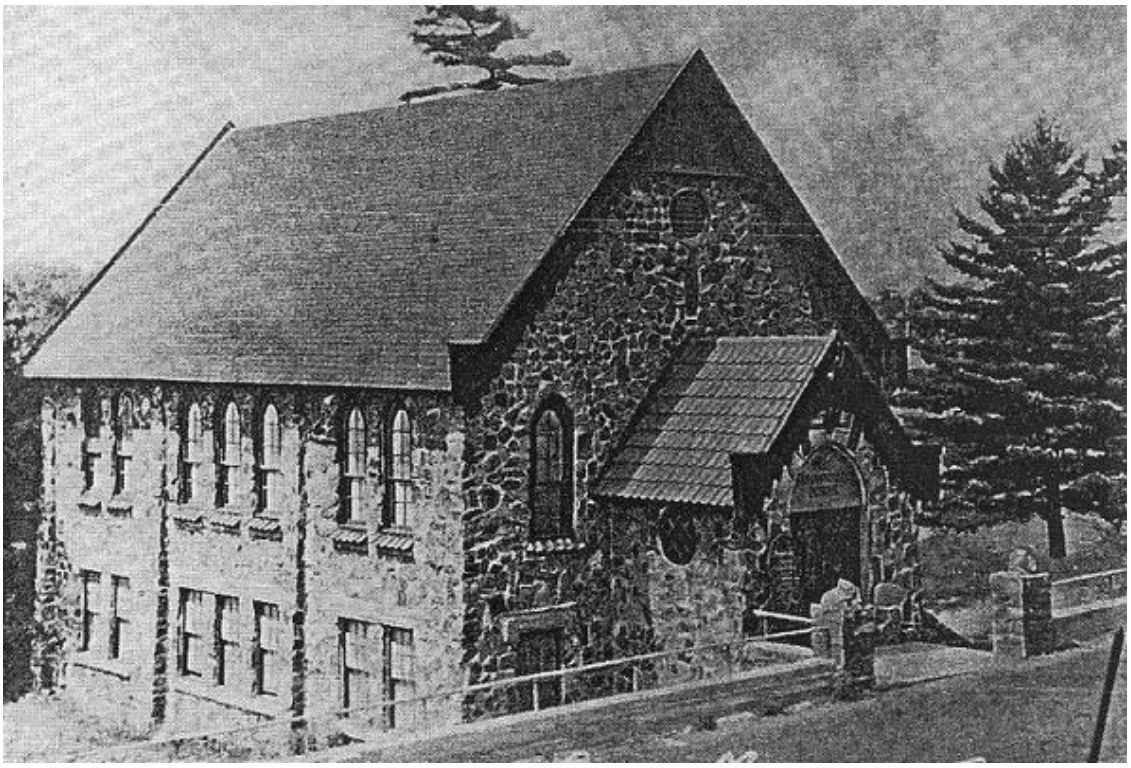


Image 15: Burgess Church with Bala Road in foreground, circaq 1920s.

Image 16: The single lane Ball Road underpass with low headroom under the Canadian Pacific with the Presbyterian church in rear, 2009.

Image 17: Bridge over South Channel with dam in background, circa 1910

Image 18: Looking downstream along the South Channel to the 1901 bridge. Stop logs are lying on top of dam at right, circa 1910.

As a global, employee-owned organisation with over 50 years of experience, Golder Associates is driven by our purpose to engineer earth's development while preserving earth's integrity. We deliver solutions that help our clients achieve their sustainable development goals by providing a wide range of independent consulting, design and construction services in our specialist areas of earth, environment and energy.

For more information, visit golder.com

Africa	+ 27 11 254 4800
Asia	+ 86 21 6258 5522
Australasia	+ 61 3 8862 3500
Europe	+ 356 21 42 30 20
North America	+ 1 800 275 3281
South America	+ 56 2 2616 2000

solutions@golder.com
www.golder.com

Golder Associates Ltd.
309 Exeter Road, Unit #1
London, Ontario, N6L 1C1
Canada
T: +1 (519) 652 0099

Golder Associates