

**C7 Stage I and 2
Archaeological Assessments**

Stage 1 Archaeological Assessment
North Bala Hydroelectric Development,
Town of Bala, Ontario

Submitted to:

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ENVIRONMENTAL ASSESSMENT DIVISION**

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Stage 1 Archaeological Assessment

North Bala Hydroelectric Development, Town of Bala, Ontario

1.0 INTRODUCTION

Archaeological Services Inc. (ASI) was contracted by Hatch Energy, Mississauga, on behalf of Swift River Energy Limited, to conduct a Stage 1 Archaeological Assessment for the Redevelopment of the North Bala Falls Hydroelectric site in Bala, Ontario (Figure 1). Swift River Energy is pursuing the development of a run-of-the-river hydroelectric generating station on approximately 0.07 ha of Crown lands adjacent to Bala's North Dam. These lands were the site of a power generating station built by the Bala Light and Power Company in 1924 (later acquired by Ontario Hydro), until it was demolished in 1972.

Permission to access the study area and to carry out the activities necessary for the completion of the Stage 1 archaeological assessment was granted to ASI by Hatch Energy on April 15, 2008.

This report presents the results of the Stage 1 background research and field review and makes several recommendations.

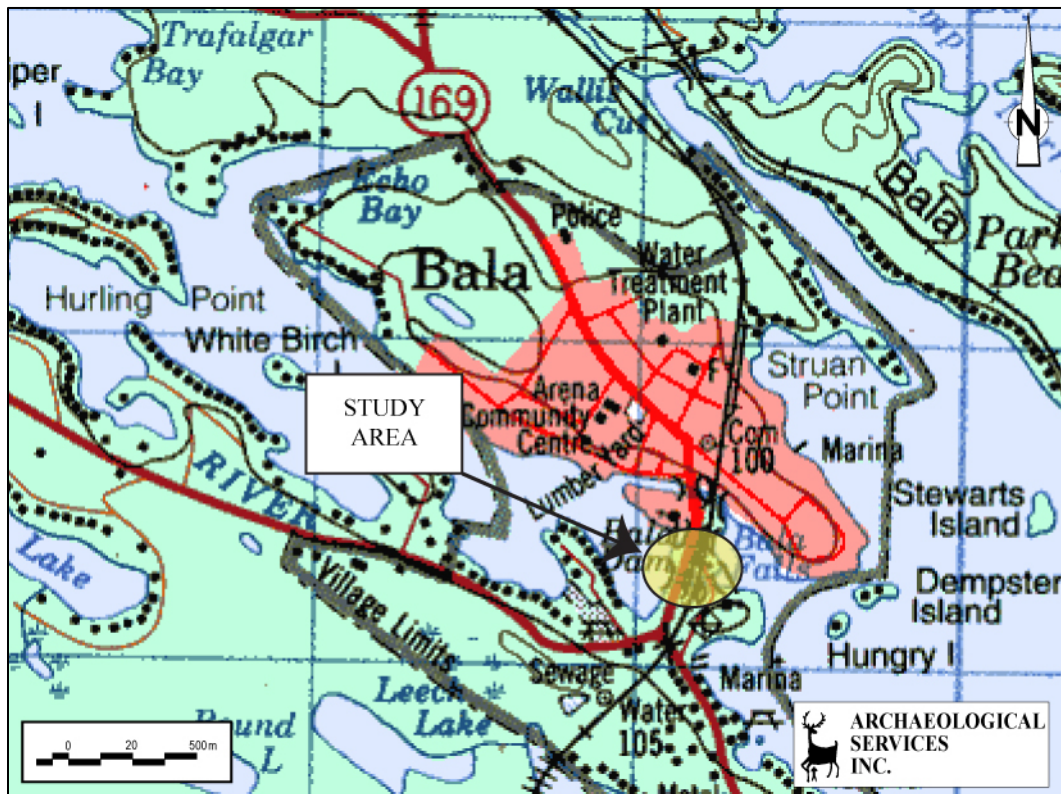


Figure 1: Location of the study area [NTS Sheet 31 E/04, Lake Joseph]

2.0 STAGE 1 BACKGROUND RESEARCH

The Stage 1 archaeological assessment of the study area was conducted in accordance with the Ontario Heritage Act (2005) and the Ontario Ministry of Culture's (MCL) draft *Standards and Guidelines for Consultant Archaeologists* (MCL 2006). A Stage 1 archaeological assessment involves research to describe the known and potential archaeological resources within the vicinity of a study area. Such an assessment incorporates a review of previous archaeological research, physiography, and land use history. Background research was completed to identify any archaeological sites in the study area and to assess their archaeological potential.

2.1 Previous Archaeological Research

In order that an inventory of archaeological resources could be compiled for the study area, three sources of information were consulted: registered archaeological site records kept by the Ontario Ministry of Culture; published and unpublished documentary sources; and the files of ASI.

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the Ontario Ministry of Culture. This database contains archaeological sites registered according to the Borden system. Under the Borden system, Canada has been divided into grid blocks based on latitude and longitude. A Borden block is approximately 13 km east to west, and approximately 18.5 km north to south. Each Borden block is referenced by a four-letter designator, and sites within a block are numbered sequentially as they are found. The study area under review is located in Borden block *BgGv*.

According to the OASD (email communication, Robert von Bitter, MCL Data Coordinator, May 2, 2008), there are two previously registered archaeological sites within 2 km of the study area (Table 1). Neither of these sites are registered within 100 m of the study area.

Table 1: Registered Archaeological Sites within 2 km of the study area

Borden #	Name	Cultural Affiliation	Site Type	Researcher
BgGv-1	Whitehead	Aboriginal - Undetermined	Lithic Scatter	L. Jackson, 1975
BgGv-5	Jewitt	Aboriginal - Middle Archaic	Isolated Find	ASI, 1993

2.2 Physiography and Assessment of Aboriginal Archaeological Potential

The study area is located within the Georgian Bay Fringe physiographic region (Putnam and Chapman, 1984: 214). The region extends along the east shore of Georgian Bay and is characterized by shallow soil with outcropping rock knobs and ridges. The thin till cover was removed from the rock outcrops by the wave action within glacial Lake Algonquin. Local vegetation is a mix of red oak, maple, birch, and ash white pine, red pine, hemlock and other conifers. Soils are Monteagle sandy loam (Hoffman *et al.* 1964).

Potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in southwestern Ontario after the Pleistocene era, proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most commonly used variables for predictive modeling of site location. The many lakes of the Muskoka region would have been important

foci, and Aboriginal peoples would have been attracted to this area, especially during the spring and fall, by the abundance of fish, as well as by other important aquatic resources such as migratory species.

The Ministry of Culture's draft *Standards and Guidelines for Consultant Archaeologists* (MCL 2006: Unit 1c 5-7, 10) stipulates that undisturbed land within 300 m of a primary water source (lakeshore, river, large creek, etc.), undisturbed land within 200 m of a secondary water source (stream, spring, marsh, swamp, etc.), as well as undisturbed land within 300 m of an ancient water source (as indicated by remnant beaches, shorecliffs, terraces, abandoned river channel features, etc.), are considered to have archaeological potential. 'Disturbance' is a relative term depending on the history of the landscape as activities like agriculture and logging do not necessarily destroy archaeological remains and certain industrial uses have heritage significance in their own right.

In the Canadian Shield in general, there is an abundance of water as attested to by the extensive wetlands, rivers, smaller streams and lakes. Therefore, distance from water alone is not a useful predictive index. One must take into account other environmental and cultural factors in addition to potable water to predict the location of sites.

In order to develop a model that is relevant to the sub-boreal nature of the Canadian Shield in the study area, it is necessary to examine the existing Aboriginal site database as well as ethnographic or historic descriptions of native land use.

The wealth of recent historical information available from such regions as the Temagami District and archaeological site potential models such as one developed for the District Municipality of Muskoka (ASI 1994) can be used to augment the Aboriginal model. By testing these models in different areas of the Canadian Shield, their utility and versatility can be assessed. The basic pattern of settlement, which has been identified historically, ethnographically and archaeologically in the nearby Temagami (ASI, *et al.* 1991) and Muskoka (ASI 1994) districts, involves the later spring/early summer occupation of a main settlement by the band or several bands to exploit the rich fishery of the larger lakes and to engage in economic and social interaction. These settlements may have been located at or near the mouths of the major rivers draining into large lakes. During the fall, the larger band would separate into smaller family or extended family groups for the purposes of hunting, fishing, gathering and trapping. At this time, smaller camps would be established along trap lines, in good hunting locations and at locations where fall spawning whitefish and lake trout could be procured. In early spring, family groups moved to the maple bush for sap collection. In addition to the primary camps and settlements, small special-purpose sites were occupied including camps associated with portages and overland travel, quarry sites, kill sites, plant collecting camps, fishing camps. Another important site type relates to spiritual activities. Sites of this type include pictographs, vision quest locations and spiritual landscape features.

Lakes and large rivers are probably the most important foci of settlement. Generally, lakes over 25 hectares, such as Muskoka Lake, are likely to be suitable for extended occupation as the presence of a reliable fishery is a necessary prerequisite to settlement, and Lake Muskoka is assumed to be a natural feature (i.e. not solely the product of artificial water levels created by damming). While the general shoreline of a lake has moderate to high potential, certain shoreline features enhance the potential for archaeological sites. These include points of land, islands, river mouths and narrows. A higher potential rating can also be given to secondary features such as rapids, falls, portages, and river mouths or confluences along rivers that drain to, or from, lakes greater than 25 ha.

Wetland areas have the potential for sites related to hunting and plant collecting. Camps associated with wetlands would be located on well-drained locations adjacent to the wetland. These may be situated on ridges that extend into wetland areas.

For the purposes of this assessment, any areas within 200 m of the secondary watercourse or 300 m of the lakeshore, and which are further characterized by an elevated setting with improved drainage and some level terrain were deemed to constitute areas of archaeological site potential for the presence of pre-contact or contact period Aboriginal activity, provided that they have not been completely altered by the modern use of the property.

The study area includes a number of attributes that are associated with the presence of archaeological potential: lake front, creek and creek mouth, elevated vantage points, well drained locale adjacent to land suitable for a portage route between lakes. Therefore, depending on the degree of previous land disturbance, it may be concluded that there is potential for the recovery of pre-contact archaeological remains within the study area.

2.4 Assessment of Historic Archaeological Potential

The 1879 *Guide Book & Atlas of Muskoka and Parry Sound Districts* was reviewed to determine the potential for the presence of nineteenth century archaeological remains within the study area (Figure 2a and 2b).

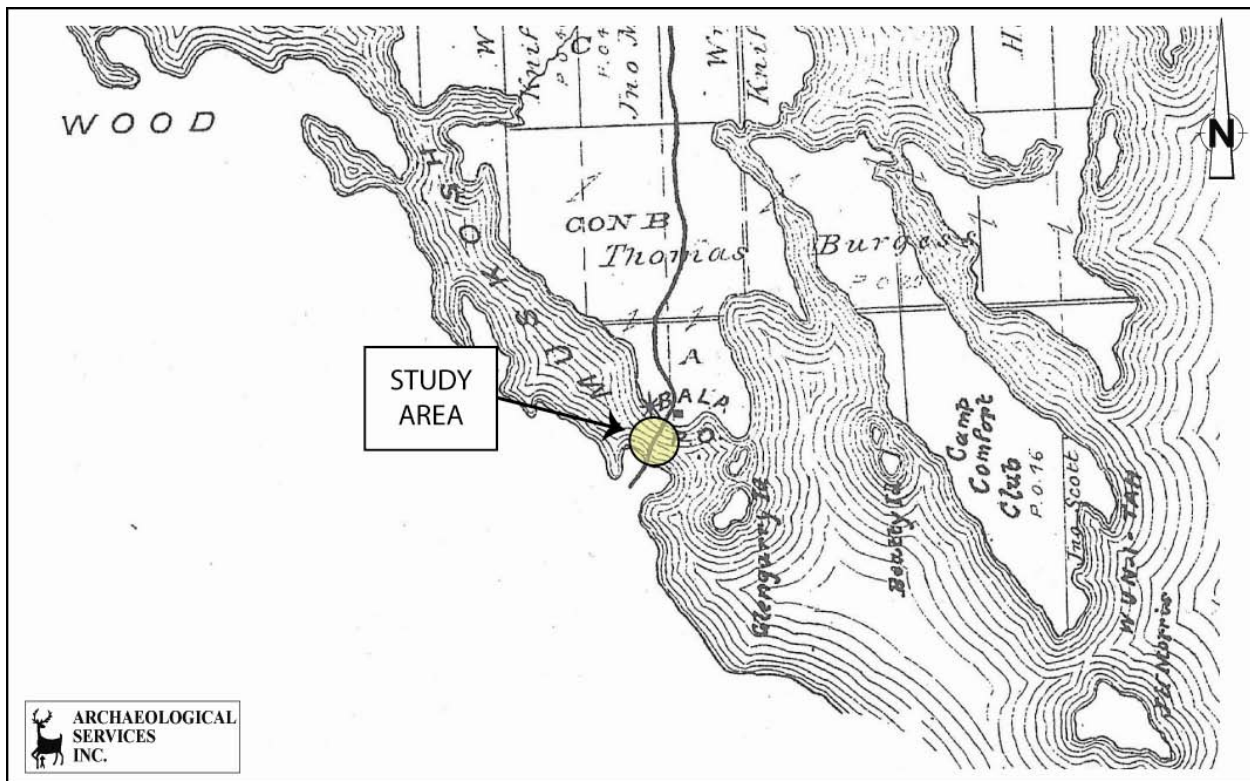


Figure 2a: The study area overlaid on the historic map of the Township of Medora, as found in the 1879 *Guide Book & Atlas of Muskoka and Parry Sound Districts*.

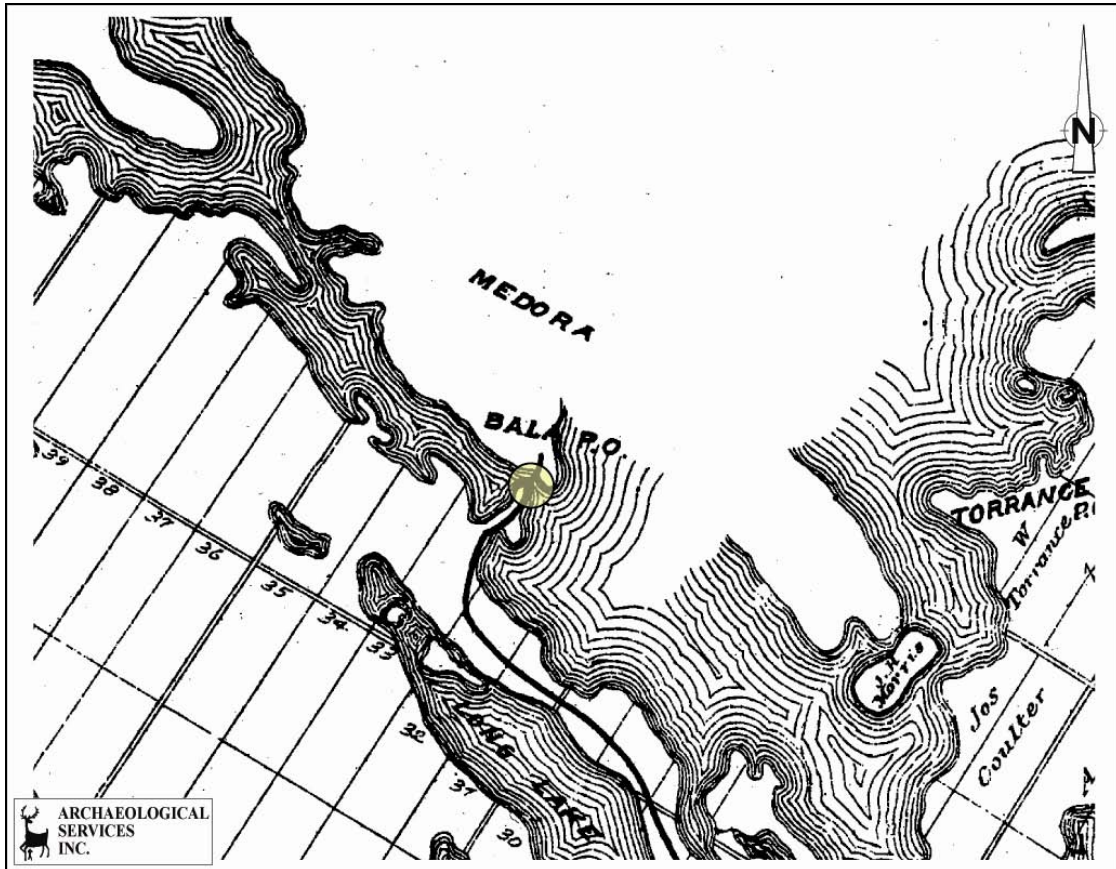


Figure 2b: The study area overlaid on the historic map of the Township of Wood as found in the 1879 Guide Book & Atlas of Muskoka and Parry Sound Districts.

The study area is located on the border of the former Townships of Medora and Wood, along the Muskoka River. The lands adjacent to the proposed North Bala Hydroelectric Development are on part of Lots 14 and 15, Concession “A” in Medora Township, and part of Lot 33, Concessions 6 and 7 in Wood Township. The Bala Post Office is the only feature illustrated, and it falls just north of the study area. It should be noted, however, that not all features of interest were mapped systematically in the Ontario series of historical atlases, given that they were financed by subscription, and subscribers were given preference with regard to the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the 1879 *Atlas*.

For a detailed historical overview of the study area, see Appendix A.

For the Euro-Canadian period, the majority of such early nineteenth century land uses such as posts, depots or farmsteads (*i.e.*, those which are arguably the most potentially significant resources and whose locations are sometimes recorded on nineteenth century maps) are likely to be captured by the basic proximity to the water model outlined in Section 2.2, since these occupations were subject to similar environmental constraints. An added factor, however, is the development of the network of colonization, resource extraction and concession roads, and railways through the course of the nineteenth and early 20th centuries. These transportation routes frequently influenced the siting of farmsteads, industries and

businesses. Accordingly, lands within 100 metres of an early settlement route or water power site are also considered to have potential for the presence of Euro-Canadian archaeological remains.

Bala is a community built on three islands where Lake Muskoka flows over a break in slope into the Muskosh or Moon River. The most northerly of the channels, called Mill Creek, was the site of a timber dam and water power saw mill run by the Burgess family between 1878 and 1910. By 1892, the Shaws were generating hydro electric power in Bracebridge and in 1917, the Bala Electric Light and Power Company followed suit with a 245 kilowatt plant in Bala. After purchase by Ontario Hydro in 1929 it was called Bala Generating Station No. 1 (Plate No. 1). In 1924 second plant was built to the south of the village between the two main waterfalls. Purchased by Ontario Hydro from the Burgess family in 1929, the second plant was called Bala Generating Station No. 2 and was located in the study area (Figure 3).

Therefore, depending on the degree of evolving land disturbance, it may be concluded that there is potential for the recovery for historic cultural and industrial remains in the study area.

3.0 FIELD REVIEW

A field review of the study area was conducted by Mr. Peter Carruthers (P163), ASI, on May 7, 2008, in order to assess archaeological site potential and to determine the degree to which development and landscape alteration may have affected that potential. Weather conditions during the field assessment were cool, overcast and 10°C with light rain. Field observations have been generalized on a map of the study area (Figure 3). Associated photography can be found in Section 6.0.

Besides the mills and power facilities, various other alterations have occurred adjacent to the study area. These include the church, the marina/boathouse and store (Plates 5,7,8,9,10), possibly buildings no longer present, the dams and control structures (Plate 2), the CPR with associated bridges (Plate 3), Highway 169 and associated bridges (Plates 4 , 16), Bala Falls Road (Plates 2, 7), the decommissioning and demolition of the Bala No. 2 Power Station in 1924 with its upstream and downstream works (Plates 11, 12,13,) and the grading and filling of the gravel parking area adjacent to the boathouse/store (Plates 7 and 8). All of these contribute to the Bala story to some significant degree or another. Due to the extent of previous disturbances, portions of the study area no longer have archaeological potential and further archaeological assessment is not required (Figure 3: areas marked in yellow).

Where there is excessive natural or artificial slope, archaeological potential is reduced or non-existent. Where the slope is artificial it may or may not have cultural significance (Plates 3, 4, 5, 11, 12, 14, 15). No further assessment is required on slopes with no archaeological potential (Figure 3: areas marked in pink).

Archaeological potential is present in the parkette east of the Canadian Pacific Railway (Plate 3 and 6). This will not be impacted by the project and no further work is required (Figure 3: areas marked in hatched green).

Two historic structures are located adjacent to the proposed construction impact area (Figure 3: areas marked in purple). The Bala Presbyterian Church (Plates 10, 11) and Purk's Place Boat House and Marina (Plates 5, 8 and 9) are significant heritage resources and are worthy of preservation.

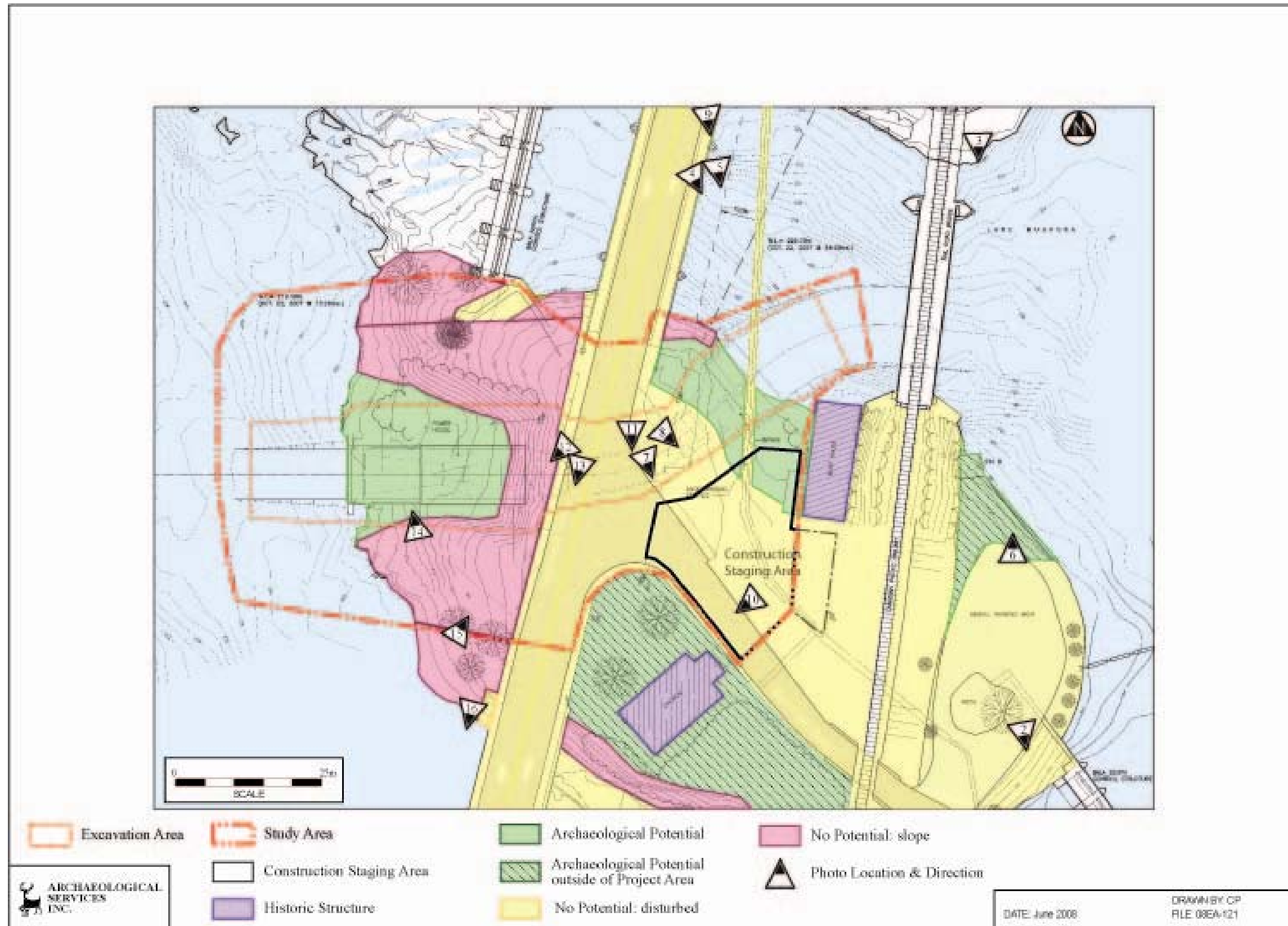


Figure 3: North Bala Hydroelectric Development—Results of Stage 1 Archaeological Assessment

Purk's Place Boat House has been listed by the Muskoka Heritage Committee as being significant. Formerly serving as Hurling, Hamill, Adams, Cunningham and Purkis' boat works and livery, the establishment has been purveying "boats and bait at least since 1908." It has long been a landmark near a favourite local swimming hole and on a portage in use for centuries. There is a photo in the Bala Museum showing a building on the site in 1897, prior to CPR construction. Because of the significance of this frame building and its proximity to the construction site and potential vulnerability due to damage, a mitigation plan for this site should be developed and approved prior to project commencement.

The land around Purk's Place Boat House and Marina, and between the building and Highway 169, has been variably impacted over time and exhibits varying degrees of potential (Plates 5, 8 and 9). The project proposes to blast an intake channel from the headpond near the railway bridge to the new power station site. Stage 2 testing should be carried out here where appropriate (Figure 3: areas marked in green).

The gravelled parking lot adjacent to Bala Falls Road has been filled on bedrock and levelled for ease of access to and from the road surface. This parking lot will be used for project staging. No further assessment is required in this area (Plate 7 and 8).

The Bala Presbyterian Church, also known as the Burgess Memorial Church, is designated under Part IV of the *Ontario Heritage Act*. The church grounds have archaeological potential but will not be impacted by the project (Figure 3: Area marked in hatched green). No additional assessment is required here but the comments about blast impact apply to the building.

Although the proposed project is not intended to directly impact these buildings, any blasting, vibration, water flow or encroachment could seriously damage these two historic structures. These and all other nearby structures should be effectively buffered and protected from the effects of blast, shock and vibration during construction. An effective protection strategy should be developed and implemented, and mitigation measures must be confirmed in advance.

Local plaques by Ontario Hydro and others suggest that hydro power generation in Bala was important. The property west of the intersection with Bala Falls Road and Highway 169 is characterized by a steep drop into a 25 x 25 m excavation into bedrock whose base lies approx 8 m below the level of the highway. It opens to the west just above the waterline (Plates 12, 13, 14). The excavation provided the foundation hole for the Bala generation Station No. 2. This building was demolished in the early 1970's. Water entered the station along a flume or penstock originating at the south end of the dam. The water exited the turbines to the west into a forebay which was also blasted into the bedrock. When the plant was decommissioned and demolished, the "various channels were filled and sealed"; the site experienced "levelling and dressing" (See Appendix A for historical overview). In cases like this, machinery and other remnants may have been buried in place or placed in deeper water. Indications of such a possibility may result from a Stage 2 examination of the former power station site.

4.0 SUMMARY AND CONCLUSIONS

The Stage 1 Archaeological Assessment for the North Bala Hydroelectric Development, in the Town of Bala, revealed that no sites have been registered within 100 m of the study area, but two have been registered within a 1 km radius. Additionally, a review of the general physiography and local nineteenth century land use of the study area suggested that it has generalized potential for the identification of Aboriginal and Euro-Canadian archaeological sites. There are two buildings adjacent to the project area

that have local and/or provincial heritage significance: Purk's Place Boat House, and Bala Presbyterian Church.

The field review determined that, although portions of the study area have been extensively disturbed, there are several areas that have archaeological potential.

In light of these results, the following recommendations are made:

1. A Stage 2 archaeological assessment should be conducted on land determined to have archaeological potential (Figure 3: areas marked in green) and likely to experience impact. This work will be conducted in accordance with the Ministry of Culture's draft Standards and Guidelines for Consultant Archaeologists (MCL 2006), in order to identify any archaeological remains that may be present;
2. As Bala Presbyterian Church and Purk's Place Boat House and Marina may experience the effects of shock or vibration from blasting, a mitigation plan should be developed and approved showing how such impacts will be avoided;
3. Two other areas (Figure 3: marked hatched in green and yellow) have archaeological potential but will only require Stage 2 test pitting if project impacts are unavoidable; and
4. The balance of the study area (Figure 3: areas marked in yellow) does not require additional assessment, and it can be cleared of further archaeological concern.

The above recommendations are subject to Ministry of Culture approval, and it is an offence to alter any archaeological site without Ministry of Culture concurrence. No grading or other activities that may result in the destruction or disturbance of an archaeological site are permitted until notice of Ministry of Culture approval has been received.

The following Ministry of Culture conditions also apply:

- Should deeply buried archaeological remains be found during construction activities, the Heritage Operations Unit of the Ontario Ministry of Culture should be notified immediately; and
- In the event that human remains are encountered during construction, the proponent should immediately contact both the Ministry of Culture, and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Government Services, Consumer Protection Branch at (416) 326-8404 or toll-free at 1-800-889-9768.

The documentation and artifacts related to the archaeological assessment of this project will be curated by Archaeological Services Inc. until such a time that arrangements for their ultimate transfer to Her Majesty the Queen in right of Ontario, or other public institution, can be made to the satisfaction of the project owner, the Ontario Ministry of Culture, and any other legitimate interest groups.

5.0 REFERENCES CITED

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6.0 PHOTOGRAPHY



Plate 1: Bala Generating Station No.1 on Mill Creek. Built in 1917, it is still in service today.



Plate 2: Dam and Bala Falls Rd. bridge over South Bala Falls.



Plate 3: 1908 CPR bridge over North Bala Falls channel. Note small parkette just east of rail embankment.



Plate 4: Highway 169 bridge over North Bala Falls channel showing an area of potential near trees on left.



Plate 5: Archaeological potential occurs between the boathouse and the highway. The boat house may predate 1908.



Plate 6: View north across channel into Bala Bay from which flows Mill Creek.



Plate 9: Land between boathouse and 169 has potential. Excavation passes across between trees and under highway.



Plate 8: View to west toward boat house. Potential exists around structure.



Plate 7: Proposed construction staging area beside Bala Falls Road and across from Burgess Church. Note grade difference



Plate 10: Northeast elevation of designated site, Bala Presbyterian church.



Plate 11: View south on 169 and downslope into site of Bala No. 2 foundation . Level ground at bottom has potential for industrial remains.



Plate 12: View of proposed power station location. Water intake will pass under highway at this point.



Plate 13: View to northwest showing drilling rig on “dressed and levelled site” of 1924 Bala No. 2 power station.



Plate 14: View towards 169. Diminished archaeological potential exists on artificial or natural slopes.



Plate 15: View across channel of South Bala Falls with rock filled road bed covering a granite point extending out from the shore.

APPENDIX A

Historical Overview of the North Bala Hydroelectric Development, Part Lots 14 and 15 Concession “A,” Medora Township Part Lot 33 Concessions 6 and 7, Wood Township, Muskoka Lakes Township.

The study area is situated at the end of Bala Bay on Lake Muskoka. This is near the point where the intersection of Highway 169 and the Bala Falls Road crosses the Muskoka River. The study area is located in the present day Muskoka Lakes Township, but historically it would have been at the junction of two townships called Wood and Medora. The lands adjacent to the proposed North Bala Hydroelectric Development are part Lots 14 and 15, Concession “A”, in Medora Township, and part Lot 33, in Concessions 6 and 7, in Wood Township.

Administrative History

The land which contains the study area comprises part of a larger tract which was acquired from the Ojibway, as well as from those natives who inhabited the territory along the French River and Lake Nipissing, under the terms of the “Robinson Treaty.” This purchase was negotiated on behalf of the government by William Benjamin Robinson at Sault Ste. Marie in early September 1850. The consideration paid for this tract of land was a down payment of £2000, and a “further perpetual annuity” of £600 (Murray 1963:117-119).

During the earliest period, this area simply comprised part of an “unorganized territory,” parts of which would have fallen within the administrative jurisdictions of Simcoe and Victoria Counties. By 1868, Muskoka had been provisionally elevated to independent County or District status. Muskoka was finally separated from Simcoe County in 1879 (Crossby 1873:26; Sutton 1967:1; Armstrong 1985:140; Jonasson 2006).

The earliest land purchase in the district, which comprised Muskoka Township, was made by the British from the Chippawa Indians in early November 1818 (*Indian Treaties* 1891 vol. 1 p. 43).

Township Surveys

The lands within the study area were explored by Alexander Shirreff in 1829. He wrote a report of his expedition which was published in 1831. He referred to “a fine sixteen or twenty feet high, with a heavy body of water” at the outlet of “the large Muskoka lake” (Murray 1963:70-71).

This was followed by another survey in 1853, undertaken by J.W. Bridgland, who extended the “Bell line” from South Falls to Georgian Bay. His report was unfavourable, and he stated that in his opinion “the region [was] destitute of everything to make settlement desirable” (Sutton 1967:1).

In the summer of 1860, the Commissioner of Crown Lands issued instructions to J.S. Dennis to undertake an exploratory survey of parts of the Muskoka District. Part of the purpose of this survey was to determine the best possible route for the northerly extension of the Muskoka Road (Murray 1963:177).

The base-line survey of Medora Township was made by surveyor S. James in 1865 (MNR, *Field Notebook #2384*). The interior lots within Medora Township were actually surveyed by Thomas Byrne in 1869 (MNR, *Field Notes #1468*). The soil was found to be tolerably good, a mixture of sandy loam, vegetable soil and clay. Parts of the township were hilly. The timber consisted of a mixture of hardwood and pine, with good stands of hemlock, black ash, cedar, tamarack, black birch, maple, beech, ironwood and basswood (Kirkwood & Murphy 1878:98-99; Page 1879:31).

Part of Wood Township was first surveyed by A.B. Scott in 1870-71, and the remaining portions of the township were surveyed by James K. McLean in 1877 (MNR, *Field Notes #1519 and #1886*). Part of the township contained “excellent land” which was a sandy loam and nearly entirely taken up by squatters. The land was timbered with beech, maple, birch, basswood and some pine. The remainder of the township was “much broken and very rocky, and almost totally unfit for agricultural purposes.” It was noted that a recent fire had then destroyed much of the valuable timber between Hardy’s Lake and the Township of Muskoka. The most devastated part was located between the easterly limit of this township up to the vicinity of Lot 10 in the 9th and 10th Concessions: “what is left is of a stunted character” (Kirkwood & Murphy 1878:99-100; Page 1879:31).

Township History

Medora Township is said to have been named in 1869, after ***Calcina Medora Buell*** (d. 1875). She was the daughter of Norton Buell of Brockville, and the wife of a Toronto lawyer named Alexander Cameron. She was also the niece of Stephen Richards who was Commissioner of Crown Lands between 1867 and 1871. It was contained within the jurisdiction of the Muskoka Land Agency (Kirkwood & Murphy 1878:98-99; Gardiner 1899:430; Boyer 1970:85; Rayburn 1997:217).

Wood Township is said to have been named in 1870, after the ***Hon. Edmund Burke Wood*** (1817-1882). Wood was appointed the County Clerk and Clerk of the Crown for Brant Township in 1853. He represented South Brant in parliament both federally and provincially starting in 1863. He served as the treasurer of Ontario between 1867 and 1871, and chief justice of Manitoba from 1874 until his death. It is said that Wood had just one arm, and a loud voice that earned him the nickname “Big Thunder.” Wood Township was contained within the jurisdiction of the Muskoka Land Agency (Kirkwood & Murphy 1878:99-100; Gardiner 1899:425-426; Rayburn 1997:379).

The first available census return for Wood Township in 1871 recorded a total population of ninety inhabitants, with nineteen occupied dwellings. The ethnic mix of the township comprised settlers from Ireland (42%), Scotland (26%), England (25%), Wales (2%) and Scandinavia (1%). A small percentage of inhabitants (4%) did not disclose their ethnic origins. The religious affiliations for these settlers included the various branches of Methodism as well as that of the Presbyterian Church (Pope 1873:30-31, 144-145, 280-281).

Medora was joined for administrative purposes with Humphrey during the early 1870s. In 1871, for example, both townships were enumerated in one schedule for the census. At that time these two townships contained a united population of 582, with 120 inhabited dwelling houses and another two under construction. The total population of Wood Township was just 90 inhabitants. Wood contained a mere nineteen inhabited dwelling houses (1871:30-31).

These two townships were once joined for administrative purposes as the United Townships of Wood and Medora. This union was dissolved on January 1, 1971, and was succeeded by the Township of Muskoka Lakes (Mika 1977:121).

The first available census return for the United Townships of Humphrey and Medora in 1871 recorded a total population of 582 inhabitants, with 120 occupied dwellings. The ethnic mix of the township comprised settlers from England (40%), Ireland (31%), Scotland (20%), as well as those of French (4%), German (2%), "African" (2%) and Dutch (1%) descent. The religious affiliations for these settlers included the various branches of Methodism as well as that of the Presbyterian Church (Pope 1873:30-31, 144-145, 280-281).

The railway was extended across Medora Township in 1907, when the Canadian Pacific Railway constructed the Sudbury to Kleinburg branch line (Plan O18-22). The right-of-way for this branch through Wood Township was surveyed by A.L. McNaughton (Plan N15-4).

Land Use History.¹

In 1868, the government of the Province of Ontario passed legislation known as the "Free Grants Act" in an effort to assist in the settlement of the undeveloped portions of Ontario. This act provided for the free grant of 100 acres of land to each prospective settler, who was aged at least 18 years or more. The head of a household with minor children was entitled to a free grant of 200 acres, with the option to purchase additional lands at the rate of fifty cents per acre. It was required that the 200 acre lots be adjoining, or sufficiently close that they could be managed as one farm. Before the grantee could obtain the Crown Patent for his land, settlement duties had to be fulfilled. This included the clearance and planting of at least fifteen acres of land, of which two acres had to be cultivated annually for the first five years. The construction of a dwelling house measuring at least 16x20 feet was required, which had to be occupied for the first five years after location. The settlement duties were not as stringent on a purchased lot, which simply required cultivation if it was held in conjunction with a Free Grant lot. Any pine trees found growing on the land, or mineral deposits remained the property of the Crown (Kirkwood & Murphy 1878: 53-54, 268-272; Page 1879:41-42).

The Free Grant lands within the Townships of Wood and Medora fell within the jurisdiction of the Muskoka Crown Lands Agency, which was managed by Mr. C.W. Lount of Bracebridge (Kirkwood & Murphy 1878:55).

It was noted that cereal grains were especially productive in Muskoka, particularly wheat, oats, barley, rye, corn and buckwheat. Other abundant crops included peas, beans, corn, turnips, cabbages, hay and potatoes (Kirkwood & Murphy 1878:64, 66).

Lot 14 Concession "A," Medora Township

¹ It has not been possible to produce a detailed land use history for the township lots adjacent to the study area, since the Archives of Ontario does not possess any *Abstract Index Books* for Medora or Wood Townships. A partial set of Copy Books for deeds is available at the Archives on microfilm, but these would be cumbersome and time-consuming to work with and would only produce a limited amount of land titles history.

A map of Medora Township produced in 1879 showed that this lot was owned by **Thomas Burgess**. The lot was traversed by what was then called the “Musquosh Road,” and it contained a mill structure (Page 1879:55).

Lot 15 Concession “A,” Medora Township

This land appears to have been occupied by **Thomas Burgess, Sr.** as early as 1868.

Burgess (ca. 1824-1902) was a native of Scotland who had initially settled in King Township (York County). During the 1860s, he relocated to Bentinck in Gray County, and then to Saugeen in Bruce County where he farmed and engaged in the lumber business. He was married to Margaret McTaggart (b. ca. 1831). They had a family of six children, four sons and two daughters, who were born between 1862 and 1870. Burgess settled in Medora Township, where he became a successful merchant and saw-miller. He served as the first postmaster for Bala, and was a long-standing Reeve for the United Townships of Medora and Wood. Burgess acted as an agent on behalf of the Watha Indian band for a number of years. He was a philanthropic minded individual, who donated land for the use of the Presbyterian Church in 1892 (Sutton 1967:3).

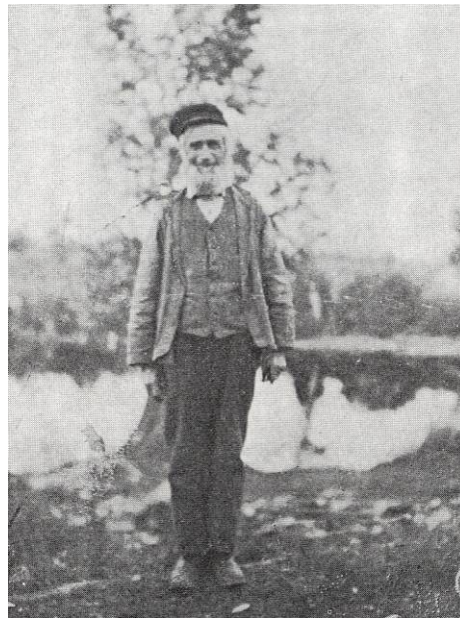


Figure 1: Thomas Burgess, Sr. (1824-1902), photographed in October 1898.

In 1871, Burgess appears to have been engaged in some farming activities. The census for that year indicated that he had cleared at least twenty-five acres of land, upon which he grew hay and potatoes. His farm contained a team of working oxen, milch cows, “horned cattle” and pigs. Additional farm products included butter and cured pork (*1871 Medora census*, division e p. 28).

A map of Medora Township produced in 1879 showed that this lot was owned by **Thomas Burgess**. A small part of the lot was traversed by what was then called the “Musquosh Road,” and it contained another structure which appears to have been a private residence (Page 1879:55).

Lot 33 Concession 6, Wood Township

This land appears to have been vacant in 1871, since the decennial census for that year did not record any owners or tenants for this particular lot. A map of Wood Township produced in 1879 did not show the name of any land owner for this lot, nor did it indicate the existence of any structures (Page 1879:51).

Lot 33 Concession 7, Wood Township

This land appears to have been vacant in 1871, since the decennial census for that year did not record any owners or tenants for this particular lot. A map of Wood Township produced in 1879 did not show the name of any land owner for this lot, nor did it indicate the existence of any structures (Page 1879:51).

Muskoka Road

The Muskoka Road had been located and constructed to a point near Gravenhurst by the late 1850s. The Muskoka Road formed one of several “settlement” or “colonization roads,” which were intended to facilitate the development of what was then considered to be the “northern” parts of Canada West (or Ontario), including settlement and lumbering.

To develop this large forested country the Commissioner of Crown Lands of that time, instructed J.S. Dennis to make exploration surveys throughout the districts, and if the exploration surveys reached a country suitable for farming settlement, then roads were to be opened to be based on those survey lines with outlets on suitable Georgian Bay harbors (Murray 1963:172).

In May 1860, the government issued instructions to Mr. Dennis for “the location and extension of the Muskoka Road north-eastward to the north branch of the Muskoka River with a suitable bridge crossing over the Muskoka River, starting from the end of the located road at the Falls on the south branch...thence easterly and northerly north of the Muskoka River to the surveyed line of the Bobcaygeon Road.” This exploration survey commenced in July 1860. One of the members of this crew was Vernon B. Wadsworth, a student under Mr. Dennis, who later penned his reminiscences of the surveys which he took part in between 1860 and 1864 (Murray 1963:173).

Due to the conditions of the country, which was “very rocky and swampy and totally unfit for settlement,” it was determined that the mouth of the Musquosh River “be abandoned as a shipping port for the Muskoka District.” Improvements to these roads, such as planking, were not completed until the early 1870s (Murray 1963:lxviii-lxxi, 177; Mason 1974:3-4).

This road was eventually constructed north through the townships of Wood and Medora, and linked to the Lake Joseph Road at Butterfly Lake near the village of Glen Orchard.

Town of Bala

The first settler within the Town of Bala was Thomas Burgess, who arrived here in 1868. He constructed a sawmill at the rapids on the Musquosh River.² The settlement was first known as Musquosh Falls (Figure 2), and then Muskoka. In 1871, it was re-named “Bala” after Bala Lake in Wales where Burgess had temporarily resided. Some of the early families who located here included: Board, Carr, Clements, Currie, Guy, Hamill, Hurling, Jackson, May, Moore, Spencer and Sutton. Several of the early families around Bala engaged in farming and lumbering in order to sustain themselves. Another seasonal occupation was tourism, and some of the early settlers acted as guides. Boat liveries, hotels and summer



Figure 2: Early lithographed view of the Musquosh River Falls at Bala (1879).

cottages began to appear on the landscape during the early twentieth century (Sutton 1967; Boyer 1970:84).

The first plan of subdivision for the town of Bala was surveyed for Thomas Burgess sometime prior to 1890. The community developed and was mainly centred around Lot 15 Concession “A” in Medora. Burgess sold the first town lots to Alexander Burns in November 1890. This was followed by the sale of other lots to Mrs. Euphemia Jackson in February 1893, and to Mrs. Mary Margaret May in October 1895. These early land sales within the town ranged in price between \$30 and \$75 (*Medora Deeds Copy Book*, instrument numbers 617, 651 and 856).

Bala was incorporated as a town in 1914, with Dr. A.M. Burgess elected as the first mayor. At that time it was believed to have been Canada’s smallest incorporated town (Sutton 1967:17; Mika 1977:121; Rayburn 1997:21; Scott 1997:18).

The post office was established here on June 1, 1870, with Thomas Burgess appointed as the first postmaster. He served as post-master until his resignation in May 1900. In 1873, Bala was noted as a post

² The river which flows out of Bala Bay, now known as the Muskoka River, was originally known as the Musquosh River. This river divides near Bala into two streams, the more northerly of which is known as the Moon River.

office village which contained a population of approximately thirty inhabitants (Crossby 1873:26; Rayburn 1997:21; www.archivia.ca).

The community once contained a school, hotel, post office, general store and blacksmith shop. Bala had three churches, the Presbyterian (1893), Anglican (1920) and Baptist.³

Bala was incorporated with other municipal bodies as part of the Township of Muskoka Lakes in 1971, at which time the population was estimated to number around 550 (Mika 1977:121; Scott 1997:18).

Railway extensions which were proposed during the late 1860s, initially by-passed Bala. The Northern Railway constructed its line of tracks to Gravenhurst, and then along the east side of Lake Muskoka. By 1879, the Whitby and Port Perry Railway proposed the construction of a line of track from Parry Harbour south to Lake Simcoe. This proposed right-of-way passed well to the west of Bala, through the southwest corner of Medora Township before cutting diagonally across Wood Township. The right-of-way for the CPR branch line, between Sudbury and Kleinburg, was surveyed and constructed between ca. 1905 and 1907 (Sutton 1967:24-25).

A number of steamboats operated in the vicinity of Bala during the late nineteenth and early twentieth centuries. One was called the “Lady-of-the-Lake,” operated by Arthur Lowe during the 1870s or 1880s. In the 1890s, a steamer was imported from Lake Simcoe by Mr. M.S. Hurling. This ship, known as the “Siesta,” was rechristened as the “Gypsy.” Other steamers that plied the lakes between Bala and Bracebridge were the “Wasp,” the “Florence Main” and, most renowned of all, the “City of Bala” which was constructed during the 1890s (Sutton 1967:22-23).

Bala Light and Power Company

At the death of Thomas Burgess in 1902, the old sawmill site was taken over by his son, Thomas Jr., who operated the business for several years. In 1916, another son, Dr. Alexander Burgess, formed the Bala Electric Light and Power Company. The principal shareholders were the heirs of the Burgess estate. The company purchased the mill stream and the old sawmill site, where a small power generating plant, known as Bala Generating Station No. 1, was built in 1917 (Tweedsmuir History of Bala; Biggar 1991).

This structure housed two 160 hp William Hamilton Francis type horizontal shaft turbines with a total capacity of 320 hp. There were also two generators, one - 125kVA, 140 rpm. and another 150 kVA, 500 rpm: Canadian General Electric. 8-phase, 60 Hz, 2800 V. They were directly connected to the turbine (Biggar 1991).

The Department of Public Works owned and operated the two dams in the town of Bala. These dams controlled the outflow from Lake Muskoka and established a head of 5.8 m (19 ft) between the water surface elevations of the lake and the Muskoka River downstream. The site included a small head pond canal which connected the plant to Lake Muskoka. There was also a small dam at the generating station (Biggar 1991).⁴

³ The Presbyterian (now United) Church at Bala was constructed in 1893, with the first minister being the Rev. Donald McKay. This church was destroyed by fire in March 1934. Reconstruction started immediately, with the new corner stone being laid in October of the same year. The new church was largely completed by December 1934, and fully furnished by May of 1935 (*Tweedsmuir History of Bala*).

⁴ Plans for one of the dams at Bala exists, undated, but attributed to the period ca. 1870-1890. Plans are also extant for a later dam, constructed in 1909 (Archives of Ontario, RG15-13-3-0-44 and RG15-55-1 box 7).

By July 1924, a second generating station (Bala No. 2) was under construction.

A photograph dated 1924, and found in the John Boyd collection, was inscribed “At Bala Falls, Muskoka, a new power plant is under construction. This diver has to work in the swirling waters—a very dangerous job. Great care is taken by the three men who get him into his suit to see that everything is safe” (*Boyd collection*, Archives of Ontario, C7-3 accession 19062, container b117491).

The station was supplied by an intake flume connected to the south pier of the dam which was owned by the Ontario Department of Public Works. The operating head was about 6 m (19 ft). There was one 400 hp, William Hamilton, propeller type vertical shaft, 277 rpm. Also, one 312.5 kVA Canadian General Electric, 3 phase, 60 Hz, 2800 V generator, directly connected to the turbine (Biggar 1991).

Another photograph in this same collection was inscribed “A modest power plant at Bala, Muskoka, which supplies light and power to Bala, Port Carling, and other adjacent places with a radial of 15 miles. It gets power from the waters of Lake Muskoka as they flow to the Georgian Bay” (*Boyd collection*, Archives of Ontario, C7-3 accession 17605, container b117485).

A photograph taken in the 1920s or 30s showed that Bala No. 1 was a simple, one story, flat roofed, rectangular shaped building of concrete construction. This station was capable of producing 245 kilowatts of hydro-electric power, which provided the community with its first electric lighting.

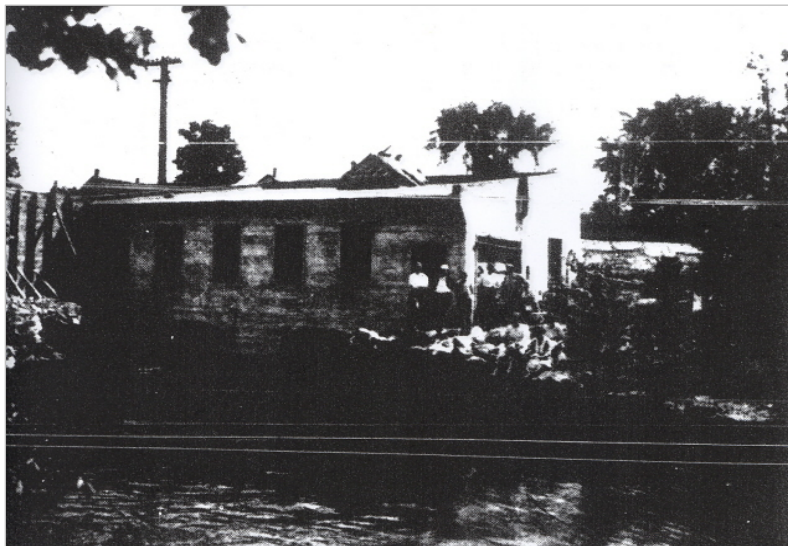


Figure 3: Hydro generating station No. 1 at Bala, ca. 1920s
(*Tweedsmuir History*).

Both generating stations were eventually acquired by Ontario Hydro in 1929. They served about 99 customers around the Bala area in 1930. The surrounding neighbourhood was known as “Bala Rural Power District” or the “Bala Rural Operating Area.”

This station was retired from use in April 1957, due to the high operating costs and repair needs. The buildings and dams were transferred to the town of Bala in 1962. The generation of hydro-electric power

here was later commemorated by a historical plaque which was unveiled by the Bala Chamber of Commerce and the Town of Bala on August 23, 1963.

Studies in 1960 showed that it was not economical to rehabilitate the plant or to redevelop the site. It was proposed in 1972 to carry out the work required to make the structure permanently safe for the public and to leave the site in a neat and tidy condition. The work involved the sealing and filling of the intake channel, demolition of the powerhouse superstructure and leveling and dressing the site. Ownership of the site was reverted to the Crown (*Tweedsmuir History of Bala*; Biggar 1991.)

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STAGE 2 ARCHAEOLOGICAL ASSESSMENT
OF NORTH BALA HYDROELECTRIC DEVELOPMENT,
PART OF LOTS 14 and 15, CONCESSION A of
GEOGRAPHIC MEDORA TOWNSHIP and
PART OF LOT 33, CONCESSIONS 6 and 7 of
GEOGRAPHIC WOOD TOWNSHIP,
NOW IN THE TOWNSHIP OF MUSKOKA LAKES,
MUSKOKA DISTRICT MUNICIPALITY

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December 10, 2008

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1.0 INTRODUCTION

A contract to carry out a Stage 2 archaeological heritage resource assessment of the North Bala Hydroelectric Development (Town of Bala, Ontario) was awarded to *Advance Archaeology* by *Swift River Energy Ltd.* on October 22, 2007 (PIF #: P121-065-2007). A Stage 1 archaeological assessment of the subject property, plus adjacent lands beyond the project's area of impact, has been carried out [ASI 2008; PIF#: P264-042-2008]; one of the recommendations made in that report (which is discussed further in Section 2.1) was for a Stage 2 archaeological assessment of the subject property. Figure 1 shows the location of the subject property in the Town of Bala, on part of Lots 14 and 15, Concession A of geographic Medora Township and part of Lot 33, Concessions 6 and 7 of geographic Wood Township, now in the Township of Muskoka Lakes, Muskoka District Municipality. It is at the intersection of Highway 169 and Bala Falls Road, and its boundaries are shown on Figure 2. The proposed project would involve the construction of a run-of-the-river hydroelectric generating station to the south of the existing Bala North Dam; a site plan for this proposed development is shown in Figure 2, below.

Permission to enter the property for the purpose of conducting a Stage 2 archaeological assessment was granted by the proponent and landowners. The Project Director was Donna Morrison, and the report was prepared by Donna Morrison with maps by *Hatch Energy* and Dale Bateman. The field director was Lawrence Jackson and field crew included Pierre Stewart, Marika Atfield, and Kris Martin. Fieldwork took place on November 6, 2008 under unseasonably warm weather and excellent visibility and soil conditions.

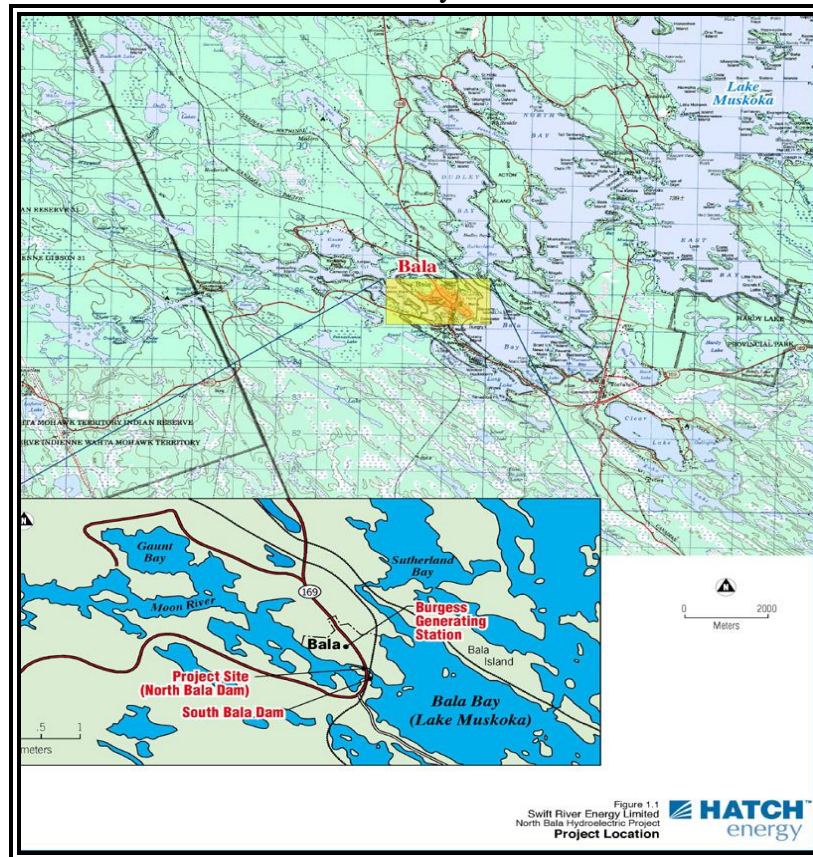


Figure 1: Location of Subject Property.

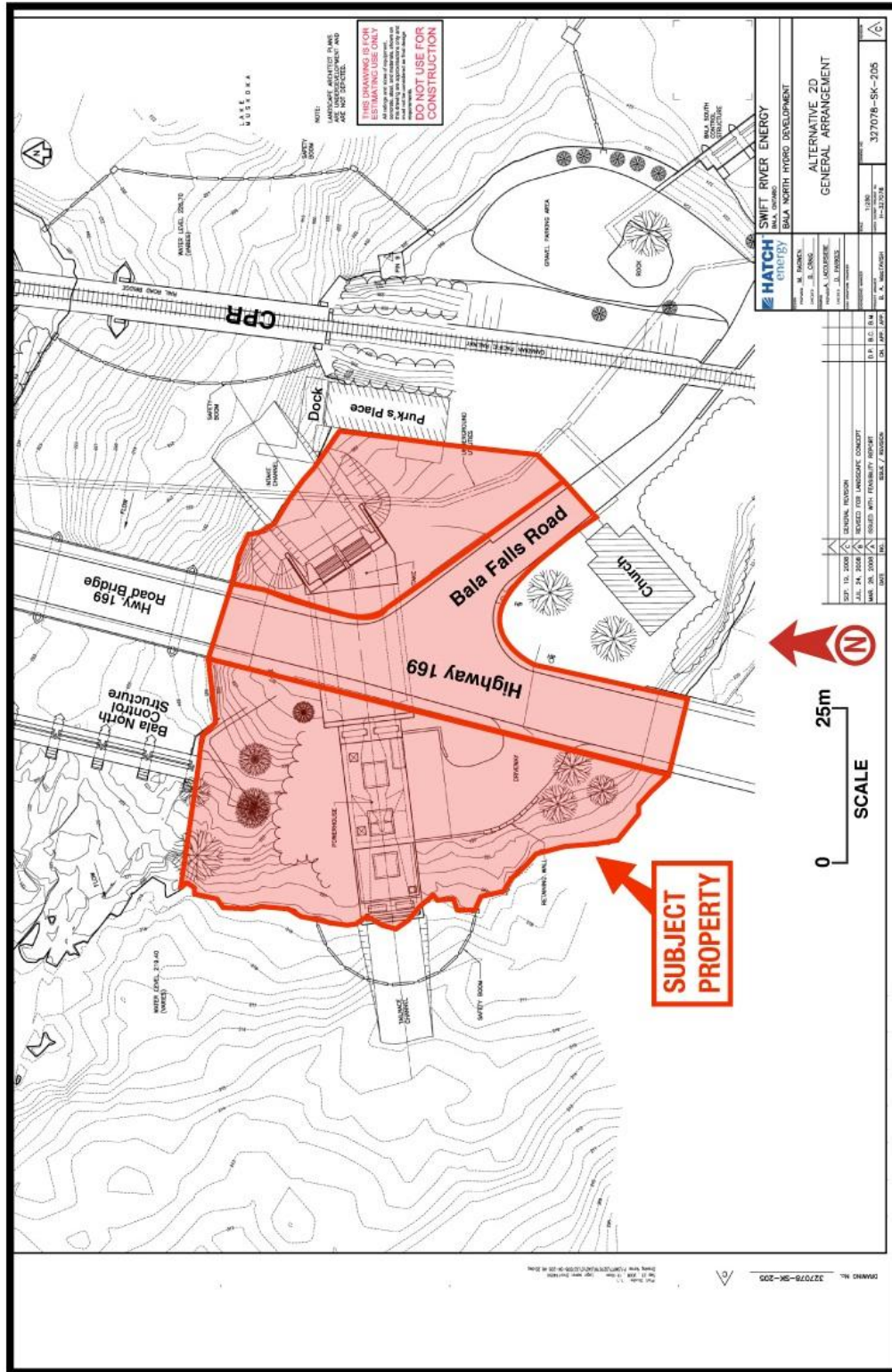


Figure 2: Plan of Subject Property.

2.0 STAGE 2 ASSESSMENT

2.1 Zones of Archaeological Potential and Stage 2 Fieldwork Methodology Used

Since the Stage 1 assessment [ASI 2008] had determined that there was generalized potential for the presence of archaeological sites or cultural heritage resources on parts of the subject property, a Stage 2 archaeological assessment was required. This Stage 2 assessment was carried out by *Advance Archaeology* in accordance with the Technical Guidelines used by the *Ontario Ministry of Culture* (OMCTR 1993; OMCzCR 1998; OMCL 2006) so that, if present, any archaeological resources on the subject property would be properly identified.

The first steps in a Stage 2 assessment are to confirm the various zones of archaeological potential that were identified during the Stage 1 assessment and to determine the fieldwork methodology that is appropriate to each of these zones. The Stage 1 assessment [ASI 2008] had determined that large sections of the subject property were either too steep or were extensively disturbed and therefore had low archaeological potential. The boundaries of these low-potential zones were confirmed during the Stage 2 assessment and they were exempt from fieldwork; they are discussed further in Section 2.2 (Special Conditions), below, and are shown in orange and purple on Figure 3, below. In addition to the low-potential zones, two zones with moderate-to-high archaeological potential were identified on the subject property (shown in green on Figure 3). Those zones included a small, relatively flat, grassy section adjacent to the river on the east side of Highway 169 (see Plates 1 and 2), and a rocky, wooded section on the west side of Highway 169 (see Plates 3, 4, and 5) that lies to the south of the North Bala Dam and the Bala falls on the site of the former Bala No. 2 power station that had been built in 1924 and demolished in 1972. The zone on the east side of Highway 169 was considered to have archaeological potential mainly due to its proximity to the river (especially as a portage route) and to an adjacent early-20th century frame building (*Purk's Place* – see Plate 1) that is listed as significant by the Muskoka Heritage Committee; the zone on the west side of the highway was thought to have the potential for the presence of buried industrial heritage resources relating to the former power station once located on that site [ASI 2008].

All Stage 2 fieldwork consisted of hand-excavation of shovel tests, since the subject property was less than 1 hectare in size, had never been used agriculturally, and would have been impossible to assess by pedestrian survey. Normally, the testing interval used for high potential zones is 5m; however, due to the small size of the subject property and the possible risk of missing any buried cultural heritage resources by using a 5m interval, it was determined that 2.5-metre intervals should be employed in all zones determined to have archaeological potential. The high-potential zones consisted of two small areas on either side of Highway 169 (one on the east side and one on the west side) at its intersection with Bala Falls Road (see Figure 3). The first area, on the west side of the highway, was approximately 25m by 30m in size, while the second area, on the east side of the highway, was approximately 25m by 20m in size. All shovel tests were excavated to sterile subsoil (where present) or bedrock, and all soil was screened through 6mm (¼-inch) mesh rocker screens. All shovel tests were carefully backfilled.

Figure 3 shows the zones of archaeological potential and the Stage 2 fieldwork methodology used on the subject property. Plates 1 to 5 show the ground conditions and Stage 2 shovel testing in progress. The results of the Stage 2 assessment are discussed in Section 2.3.

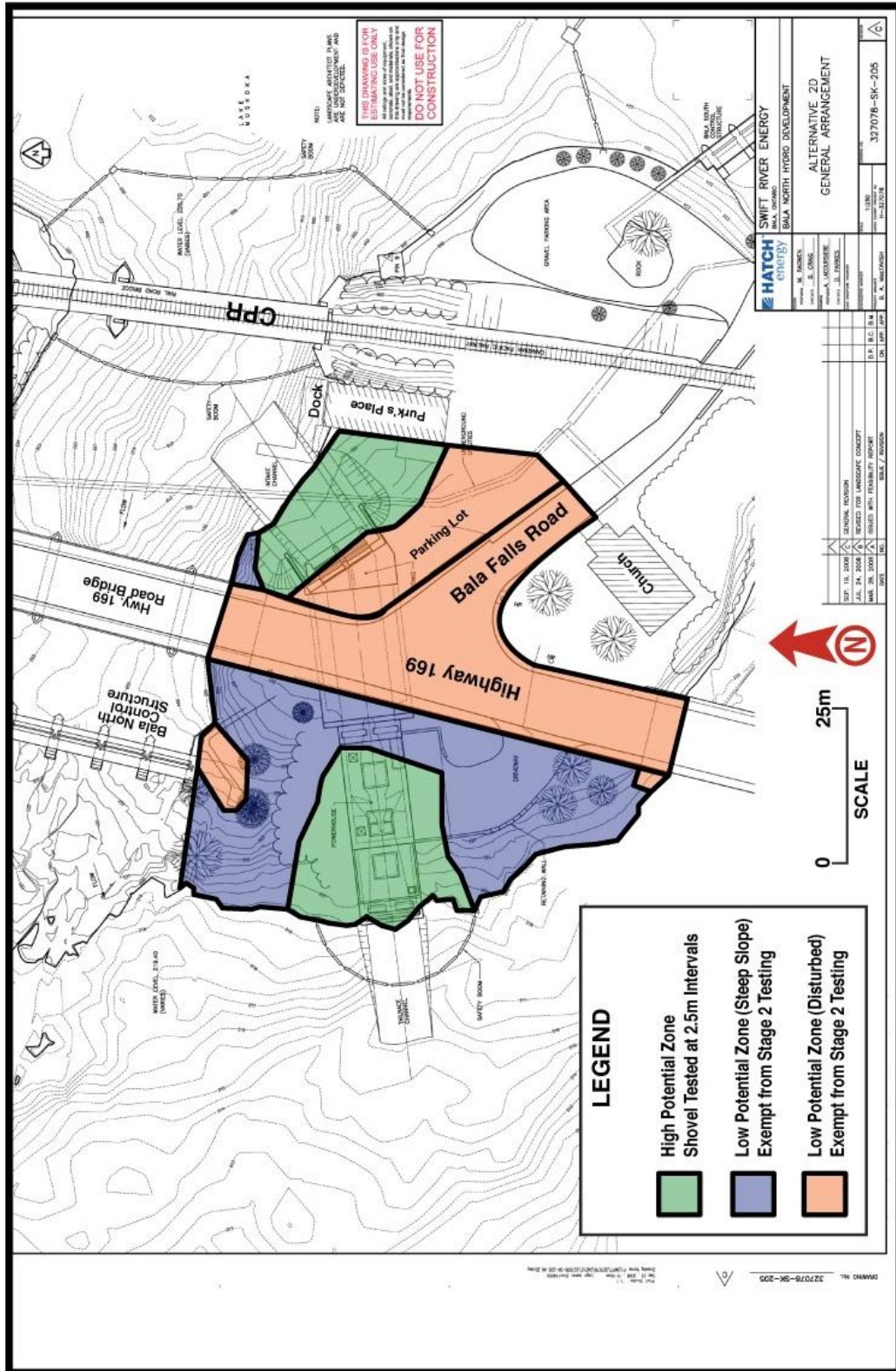


Figure 3: Zones of Potential and Stage 2 Fieldwork Methodology Used.



Plate 1: View to East of Shovel Testing on Eastern Edge of Subject Property.
Note *Purk's Place* (white frame building) in Background.



Plate 2: View to Northwest of Shovel Testing on East Side of Highway 169.



Plate 3: View to East of Shovel Testing on West Side of Highway 169 on Former Site of the Bala No. 2 Power Station.



Plate 4: View to South of Shovel Testing on West Side of Highway 169 on Former Site of the Bala No. 2 Power Station.

2.2 Special Conditions on the Subject Property

About 65% of the subject property was exempt from Stage 2 shovel testing due to low archaeological potential. Two areas on the west side of Highway 169 were exempt due to the steepness of the hill slopes (see purple zones on Figure 3, above, and Plates 4 and 5). The remainder of the exempted special condition zones consisted of areas that had experienced extensive disturbance of the original soil horizons, including the road beds for Highway 169 and Bala Falls Road; a disturbed area adjacent to the existing North Bala Dam; and a gravel parking lot beside *Purk's Place* that had been infilled and graded (see Plates 1 and 2, and orange zones on Figure 3). Although there had been similar or worse disturbances to the site of the former generating station (resulting from the construction, demolition and subsequent infilling and grading of the site), it was still considered to have the potential for the presence of significant buried industrial components and was not exempt from Stage 2 testing.



Plate 5: View to Southeast of Former Site of Bala No. 2 Power Station.

2.3 Results of the Stage 2 Assessment

Despite the use of intensive 2.5m shovel-testing intervals (which is a much closer interval than the normally-used 5m testing interval for high-potential zones) in both of the zones with archaeological potential, nothing of archaeological significance dating to either the historic or precontact time periods was encountered during the Stage 2 assessment. No artifacts were recovered, and no structural remains, industrial remains, or any other cultural heritage resources were discovered. No indications of the presence of deeply-buried industrial remnants were noted on the former site of the Bala No. 2 Power Station. Almost all of the Stage 2 shovel tests within the high potential zones showed signs of disturbed soil conditions, although there appeared to be somewhat less disturbance on the east side of Highway 169, in comparison with the extremely high degree of disturbance at the former site of the generating station on the west side of Highway 169.

3.0 CONCLUSIONS

3.1 Summary

Based on the recommendations of a Stage 1 archaeological assessment of the subject property [ASI 2008], which were confirmed during reconnaissance carried out by *Advance Archaeology*, Stage 2 fieldwork was carried out in all sections of the subject property that had archaeological potential. The majority of the subject property, however, was determined to be of low archaeological potential and was exempt from Stage 2 fieldwork due to either the presence of very steep hill slopes on the west side of Highway 169, or extensive prior soil disturbance and infilling in the roadbeds and a parking lot, for example (see Figure 3, above).

In the two zones with high archaeological potential, Stage 2 shovel testing was carried out at 2.5m intervals in order to identify any cultural heritage resources (such as Aboriginal and Euro-Canadian artifacts, or industrial components of the former Bala No. 2 Power Station), if present. Nevertheless, despite the use of intensive 2.5m shovel-testing intervals, nothing of archaeological significance dating to either the historic or precontact time periods was encountered during the Stage 2 assessment. No artifacts were recovered and no structural remains, industrial remains, or any other cultural heritage resources were discovered or indicated.

3.2 Recommendations

Based on the results of the Stage 2 assessment, we offer the following two recommendations. Please also read the Development Caution in Section 3.3, below.

1. Since nothing of archaeological or cultural heritage significance, dating to either the historic or precontact time periods, was discovered on the subject property during the Stage 2 assessment, our recommendation is for complete clearance of the archaeological condition on the subject property.
2. No construction operations, earth-moving activities, or blasting may take place until the Ministry of Culture has issued a signed letter of clearance of the archaeological condition for the subject property.

3.3 Development Caution

There is always the possibility that *deeply buried* heritage resources or human burials can exist on site and were not identified during a standard archaeological assessment. Therefore, if deeply buried archaeological resources, either historic or precontact, are encountered on the subject property during construction, the proponent must stop work immediately and contact Mr.

Andrew Hinshelwood of the Heritage Operations Unit of the *Ontario Ministry of Culture* at (807) 475-1632.

If human remains are encountered anywhere on the subject property during construction, the proponent must stop work immediately and contact the Registrar (Mr. Michael D’Mello) or Deputy Registrar of the Cemeteries Regulation Unit of the *Ontario Ministry of Government Services, Consumer Protections Branch* at (416) 326-8404, as well as the Heritage Operations Unit, as above. Please also contact the archaeological consultant at (905) 342-3250.

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