JACQUES WHITFORD PROJECT NO. NFS09699

DRAFT REPORT

STAGE 1 HISTORIC RESOURCES OVERVIEW ASSESSMENT WASTE MANAGEMENT FACILITY NORRIS ARM, NL

(PERMIT 03.41)

APRIL 2004

04/07/11

JACQUES WHITFORD PROJECT NO. NFS09698

DRAFT REPORT

STAGE 1 HISTORIC RESOURCES OVERVIEW ASSESSMENT WASTE MANAGEMENT FACILITY NORRIS ARM, NL

(PERMIT 03.41)

SUBMITTED TO

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EXECUTIVE SUMMARY

Jacques Whitford Environment Limited (JW) completed a Stage 1 Historic Resources Overview Assessment (HROA) of a proposed waste management facility located east of the town of Norris Arm, Newfoundland.

The main purpose of the assessment was to help prevent any negative effects of the proposed development on historic resources. This HROA involved desktop research and a field assessment. Background research included a review of archaeological reports and abstracting data from the Newfoundland and Labrador Site Record Inventory. In addition, individuals were contacted for information on past and present land and resource use in the project area. Maps and aerial photographs were examined to identify additional land use indicators, define areas of historic resources potential, and develop a strategy for field investigations. Background research depicts pre-contact (before the arrival of Europeans), historic (from the early settlement period by Europeans to 1960) and contemporary (1960 to present) land and resource use in the study region. This research provides contextual information for the interpretation of archaeological potential and results of the field assessment.

As requested by the proponent, BAE/Newplan Group Limited, the project area for field investigations was limited to the western part of the proposed waste management facility, or approximately 100 hectares of land. The area is located east of the community of Norris Arm, between the Trans Canada Highway (south) and an abandoned railway track now converted into a trail (north). The western boundary of the study area includes an existing borrow pit. Archaeological fieldwork was conducted over a two-day period during the first week of September 2003. The study team for the field program was composed of Yves Labrèche, archaeologist and permit holder; and archaeologist Roy Skanes, field co-researcher. Fieldwork involved two principal methods: ground survey and surface inspection of the project area; and close surface inspection and subsurface testing, where appropriate.

Physical attributes of the project area such as vegetation cover, wildlife, soil, stream and evidence of land use (e.g., trails and cutting areas) were noted and several photographs were taken. UTM coordinates were recorded with a GPS (Geographic Positioning System) hand-held unit at 21 survey and subsurface testing locations. A total of six test pits were excavated and the level of effort for this field program is considered to be adequate.

No historic resources were discovered during this assessment and it is concluded that the historic resources potential of the study area is low. It is recommended that the proponent be allowed to proceed with the development of the waste management facility.

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1.0 INTRODUCTION

BAE/Newplan Group Limited (BAE/Newplan) requested that Jacques Whitford Environment Limited (JW) conduct a Stage 1 Historic Resources Overview Assessment (HROA) of a proposed waste management facility located east of Norris Arm, Newfoundland.

This HROA included background research, a field survey and preparation of this report. The report was prepared in accordance with the *Historic Resources Assessment and Impact Management Summary* (Government of Newfoundland and Labrador 1992). The report is submitted to BAE/Newplan and to the Provincial Archaeology Office (PAO). It includes a description of methods and techniques used (Section 2) and a summary of the results (Section 3). A discussion of survey coverage and archaeological potential of the project area is provided in Section 4 of this report, and Section 5 includes recommendations. Detailed bibliographic references for all materials and individuals consulted are also included (Section 6). Other deliverables including selected photographs from the field assessment, field notes, and a photo catalogue are presented in Appendices A to C, respectively.

1.1 Rationale and Objectives

The proponent was planning to develop a waste management facility with a program involving cutting, landscaping and associated activities. It was anticipated that this program would result in ground disturbance which has the potential to adversely affect historic resources. Indeed, specific activities related to the development (e.g., vehicle circulation) may alter or destroy historic resources. Historic resources are non-renewable resources and are of great value to society. For the pre-contact period, archaeological sites are the only sources of information on ancient life-ways. Disturbance or loss of such sites eliminates the possibility of understanding the past. Therefore, the proponent committed to hire a certified archaeologist to conduct a Stage 1 HROA. The main purpose of the assessment was to identify historic resources prior to the development, help minimize any negative effects of the proposed activities on historic resources and prevent their destruction. The primary objectives of the Stage 1 HROA, as outlined in *the Historic Resources Assessment and Impact Management Summary* (Government of Newfoundland and Labrador 1992), are to:

- identify and assess historic resources potential or sensitivity within the specified development area(s); and
- recommend the appropriate mitigation measures and methodology and scope for further assessment, if required.

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1.2 Project Area

The project area is located near the town of Norris Arm, Central Newfoundland (Figure 1.1 and 1:12,500-scale aerial photo No. 99-09-01). As requested by the proponent, the project area for field investigations targeted the western part of the proposed waste management facility, or approximately 100 hectares of land (W. Manuel, pers. comm. 2003). The area is located east of the community of Norris Arm, between the Trans Canada Highway (south) and an abandoned railway track now converted into a trail (north). The western boundary of the study area includes an existing borrow pit. The project area lies at elevations that vary from approximately 45 to 105 m above sea level (asl).

Background research considered a larger study region (NTS 1:50,000-scale topographic map-sheet 2 E/3) that was further expanded, where appropriate, to obtain the necessary contextual information for the interpretation of the archaeological potential within the project area.

1.3 Study Team

The assessment was conducted by Mr. Yves Labrèche under the PAO Archaeological Investigation Permit No. 03.41. Mr. Labrèche, M. Sc., has been involved in archaeological research and assessment since 1973. He has provided archaeological services for JW in Newfoundland and Labrador since 1996. He was the lead archaeologist, responsible for background research, field activities, quality assurance and report preparation. Archaeologist Roy Skanes, M. Phil., participated in the field program. Mr. Skanes has been involved in archaeological research and has directed and supervised projects throughout Newfoundland and Labrador since 1978. Both archaeologists have directed a number of assessments of similar scope and subject matter for a variety of industrial developments and construction activities in the province. For the preparation of the report, Mr. Labrèche was assisted by a GIS/mapping specialist, and a secretary.

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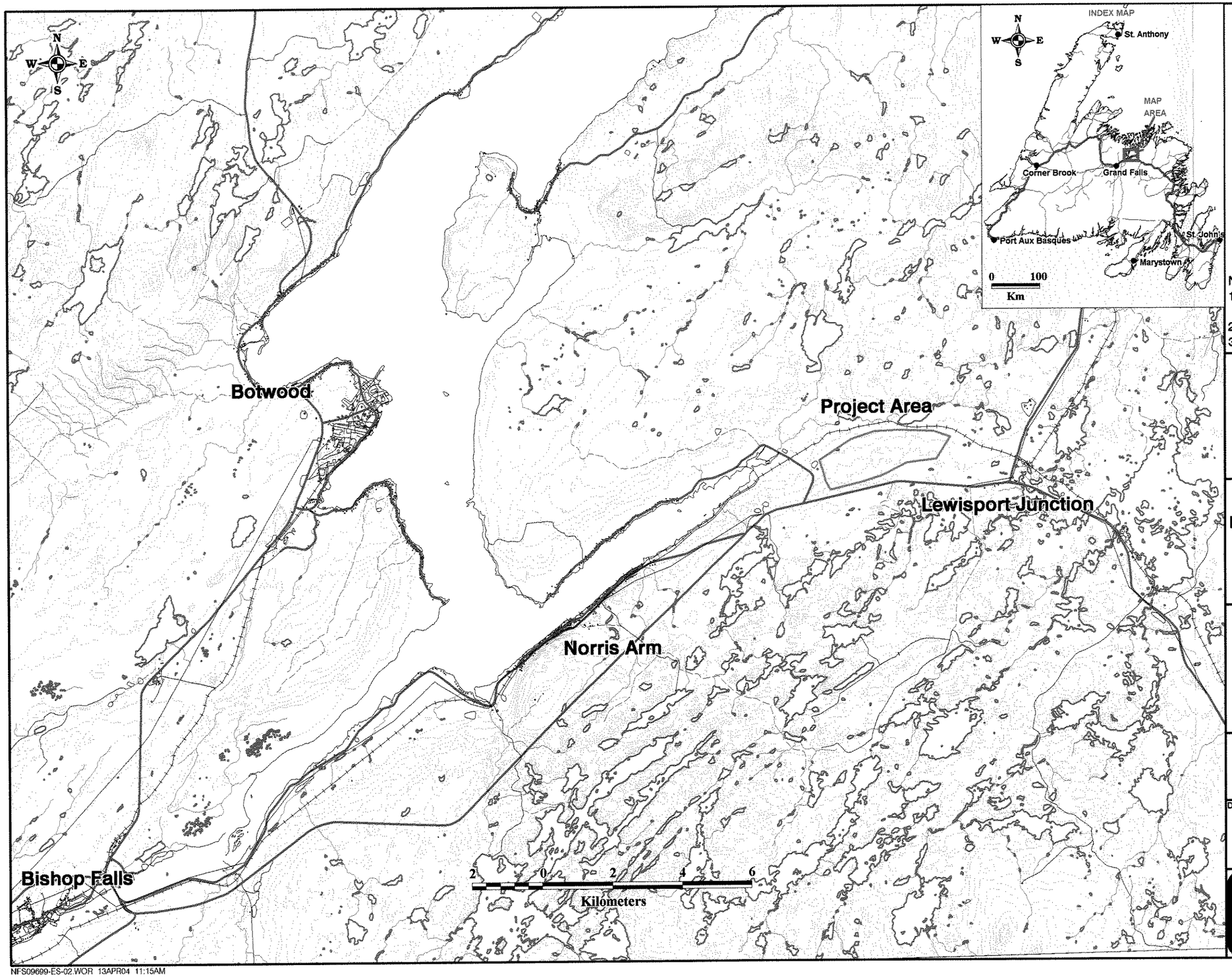

LEGEND

NOTE:
1. BASED ON NTS TOPOGRAPHIC MAP 2E/03 AND INFORMATION PROVIDED BY BAE NEWPLAN GROUP LTD.
2. DO NOT SCALE FROM DRAWING
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PROPOSED WASTE MANAGEMENT FACILITY
CENTRAL NEWFOUNDLAND

FIGURE 1.1
NORRIS ARM
WASTE MANAGEMENT FACILITY
PROJECT AREA

Newfoundland Geosciences Limited
CONSULTING ENGINEERS

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2.0 PROJECT NARRATIVE AND METHODS

The assessment involved background research, a field study, analysis and preparation of reports. Fieldwork was conducted over a two-day period, during the first week of September 2003. A status report (JW 2003) containing a summary of field activities and recommendations was provided to BAE/Newplan and the PAO after the completion of the field program (September 9, 2003) to minimize any unnecessary delay in the commencement of activities related to the development of the waste management facility. Data gathered were studied using standard methods and techniques. Results of the field assessment were interpreted in the context of previous knowledge of archaeological potential and pre-contact and historic settlement patterns in the general region.

1.1 Background Research

Maps and drawings and 1:12,500 aerial photography showing the proposed waste management facility were provided to the study team by BAE/Newplan. These documents were examined to help target areas of historic resources potential and to develop a strategy for field investigations. Background research also involved a review of relevant articles, reports, electronic documents (Section 6.2) and the Newfoundland and Labrador Archaeological Site Record Inventory (PAO 2004). No systematic interviews were conducted as part of the assessment. However, knowledgeable individuals were contacted for information related to ancient and recent land and resource use in the project area (Section 6.1).

2.1 Field Survey and Subsurface Testing

Fieldwork was conducted over a two-day period during the first week of September 2003. Fieldwork involved two principal methods:

- a ground survey and surface inspection of the project area; and
- close surface inspection and subsurface testing, where appropriate.

Physical attributes of the project area such as vegetation cover, soil, and evidence of contemporary land and resource use (e.g., trails, cutting areas) were noted and several photographs were taken. UTM coordinates were recorded with a GPS (Geographic Positioning System) hand-held unit at 21 survey and subsurface testing locations (Figure 2.1). A total of six test pits consisting of 20 cm square units were excavated with shovel and trowel.

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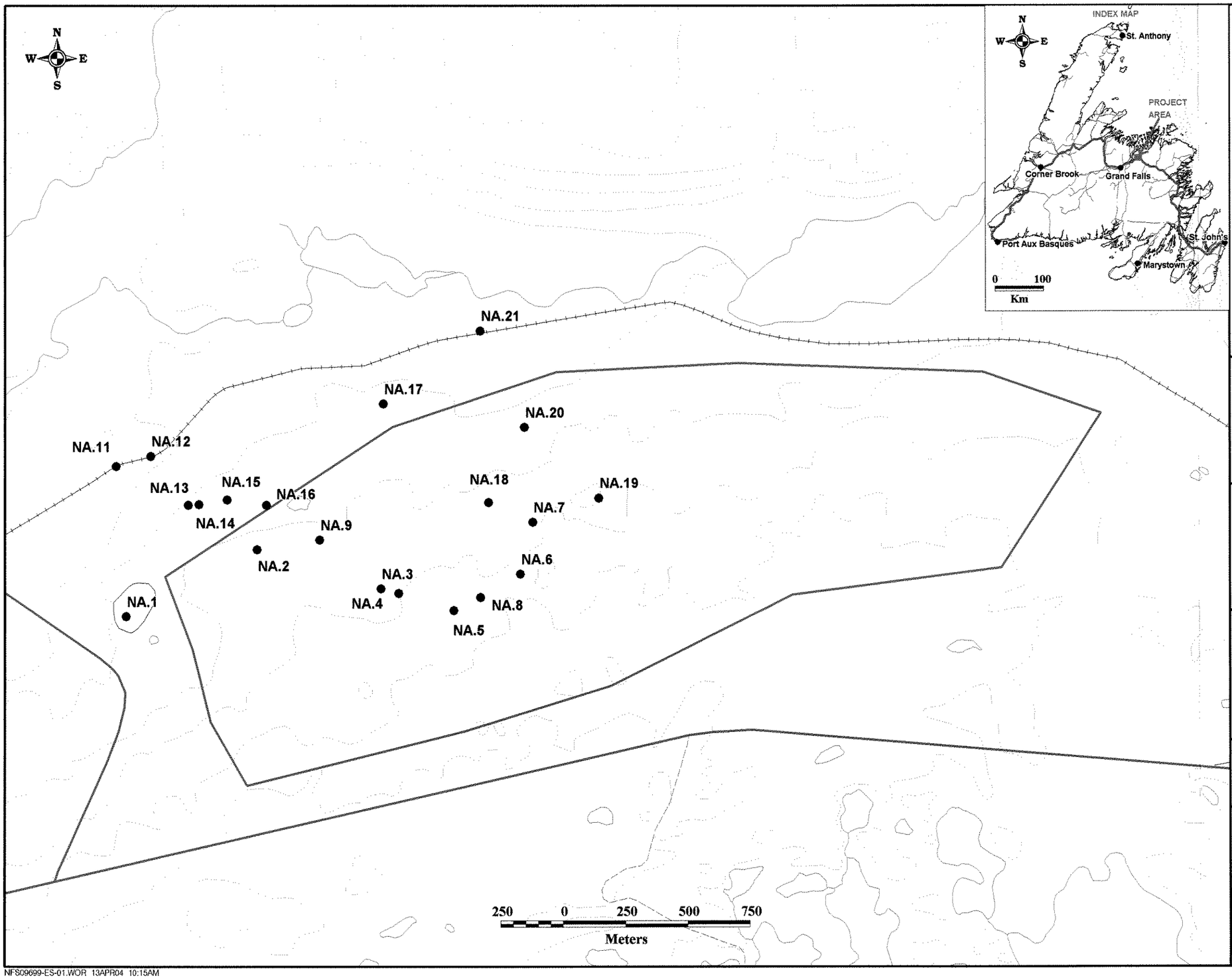

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NA.1 ● SURVEY/TESTING LOCATION

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PROPOSED WASTE MANAGEMENT FACILITY
CENTRAL NEWFOUNDLAND

FIGURE 2.1
SURVEY AND SUBSURFACE
TESTING LOCATIONS

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CONSULTING ENGINEERS

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3.0 RESULTS

3.1 Background Research

This research served to assess the overall archaeological potential of the project area and verify the presence or absence of previously recorded sites within the project area. It also provided regional and contextual information for the interpretation of the field assessment results.

3.1.1 Cultural History, Archaeological Potential and Site Distribution

The basic cultural sequence established for the region suggests that there is potential for a 5000-year sequence of human occupation (PAO 2004). Sites relating to the following cultures have been found: Maritime Archaic Indian, Palaeoeskimo (Dorset), Pre-contact (indeterminate), Beothuk, Mi'kmaq and European (18th and 19th century). Archaeological investigations in Newfoundland have established that historic resources are rich and abundant along the coastal strip, because the rich marine resources attracted a more permanent human occupation along the coast at all time periods (Pastore 1986; Robbins 1986; Thomson and Sproull Thomson 1989; Tuck 1976). Nevertheless, several cultural groups including the Palaeoeskimo, Recent pre-contact Indians, Beothuk, Mi'kmaq, and European settlers also used the hinterland to gain access to resources that are not available along the coast (Marshall 2001; Penney 1983; Schwarz 1994; Thomson 1983).

Palaeoeskimo groups occupying Central and Eastern Newfoundland were specialized in hunting marine and coastal resources. They established camps in the outer coastal zone where they remained during winter through spring to harvest harp seals, their main staple resource. In the summer, they would move to the inner coast where a variety of resources were available and travelled to the hinterland in autumn for caribou hunting. The settlement-subsistence pattern of the Recent Indian groups was rather designed to take advantage of both interior and coastal resources. They established camps in the near-coastal hinterland for the autumn caribou hunt and remained there through the winter months to harvest various resources. In the spring, they would move to the outer coast to hunt harp seals and during the summer, they moved back to the inner bays to harvest a variety of resources (Schwarz 1994: 64-67).

The Beothuk are the immediate descendants of Recent Pre-contact Indian people who are sometimes referred to as Little Passage Complex in Newfoundland. In Labrador, Recent Indian people (or Point Revenge groups) are thought to be ancestors of the present day Innu and among the closest relatives of the Beothuk. Both groups were Algonquian-speaking and largely mobile hunter-gatherers of the Subarctic Northeastern North America. When Europeans arrived in Newfoundland in the later part of the fifteenth century, the Beothuk probably numbered less than a thousand people. The first contacts in the sixteenth century were normally limited to casual trade and silent barter and involved very little contact with Europeans. A number of Beothuk sites dating to this period contain metal objects of European origin that were obtained through trade or otherwise and reworked into arrowheads, lance

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points, harpoon blades, awls and hide scrapers (Pastore 1997). Series of clashes and conflicts occurred in the eighteenth century and as a result, the Beothuk increasingly found it difficult to hunt and fish for coastal resources in the region. They were also facing an increasing presence of Micmac on the west and south coast of Newfoundland. By the mid-eighteenth century, the Beothuk were spending more time in the hinterland where they became more dependent on caribou, beaver and other resources. Nevertheless, the Beothuk continued to make short trips to the coast for the seals, fish and other resources that had sustained their people for generations.

Previous archaeological investigations in the general region include a pedestrian survey of the Exploits River and the upper reaches of the Bay of Exploits where 51 pre-contact and historic sites (60 components[1]) were assessed including 16 sites reported by previous investigators. In his report, Schwarz (1992) grouped these sites or components in the following manner: 1- Upper Bay of Exploits and Exploits estuary with evidence of occupation by the Maritime Archaic, Palaeoeskimo and other pre-contact groups of uncertain cultural affiliation and evidence of 18th and early 19th century European occupation at several locations; 2- scattered sites along the middle and upper reaches of the Lower Exploits River including one historic European stray find, one Recent Indian pre-contact site, one Beothuk site and several sites of indeterminate cultural affiliation; and 3- several Beothuk sites within five known Beothuk site clusters (North Angle, Badger, Red Indian Falls, Noel Paul's Brook and Indian Point) within the Exploits Valley. The region is known as the final refuge of the Beothuk prior to their extinction in the 19th century. The survey also revealed eight Palaeoeskimo sites nearly all located near prime salmon fishing locations (e.g, mouth of brooks flowing into the Bay of Exploits, or on the Exploits estuary, below Bishops Falls). Schwarz (1993) also conducted limited excavation and test pitting programs at two sites (Rattling Brook-1 and Lower Sandy Point-1) for the Exploits Valley Tourism Association.

Previous investigations in the vicinity of the project area and within the study region (NTS topographic maps sheet 2 E/3) led to the discovery of 29 sites (Table 3.1). Of these, nine sites were comprised of more than one component for a total of 41 components. Eighteen sites were occupied during the pre-contact period (before the arrival of Europeans) and of these, nine were subsequently used by Europeans or Aboriginal groups during the historic period.

[1] Each site may have more than one component; e.g., a two-component site with evidence of a Dorset occupation followed by the Beothuk using the same location.

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Table 3.1 Previously Recorded Site Distribution in the Study Region (NTS Map 2 E/3)

Site Name Borden Number	Site Type (Features)	Artefacts and other samples	Cultural Affiliation Period
Rattling Brook DgAt-01	Habitation	Biface base and microblades	Maritime Archaic Palaeoeskimo (Dorset) Beothuk
Gill's Point 1 DgAt-02	Undetermined	Chert core, polished slate fragment, iron nail, bones	Pre-contact European
Gill's Point 2 DgAt-03	Undetermined	Ceramic, iron nails, glass	European
Gill's Point 3 DgAt-04	Undetermined	Flakes, ceramics, core, square iron nails	Pre-contact European
Gill's Point 4 DgAt-05	Undetermined	Clay pipe, glass, nails (cut nails)	European
Gill's Point 5 DgAt-06	Isolated find	One pipe stem	European
Peterview 1 DgAt-07	Undetermined	Flakes, chert nodules	Pre-contact
Peterview 2 DgAt-08	Find spot	Celt, flake	Maritime Archaic
Wigwam Point DgAt-09	Habitation	Flakes, bone, ceramic, glass, nails, burnt fat	Palaeoeskimo European
Upper Sandy Point 1 DgAt-10	Salmon fishing	2 flakes, early 19th century ceramic, clay pipe fragment, nails, bone	Pre-contact European (18th - early 19th C)
Wigwam Point Cemetery DgAt-11	Burial (Graves)		Mi'kmaq (19th C or earlier)
Upper Sandy Point 2 DgAt-12	Undetermined	3 iron nails	European (19th C)
Evans Point 1 DgAu-01	Undetermined Boat building, sawmill	3 microblades, 1 notched microblade, 1 bifacial knife, ceramic, lead, glass, iron nails, flakes, cores	Palaeoeskimo (Dorset) European
Muddy Hole Point 1 DgAu-02	Undetermined	Paginated microblade	Palaeoeskimo
King's Ridge 1 DgAu-03	Find spot	Two flakes	Pre-contact
Peterview 3 DgAu-04	Undetermined	Ceramic, nails, glass	European (19th C)
Silver Cove South 1 DgAu-05	Undetermined	Chert fragment 2 square nails, glass fragments	Pre-contact European
High Point DgAu-06	Salmon fishing	Flakes, microblade, harpoon endblade and	Palaeoeskimo (Dorset)

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Site Name Borden Number	Site Type (Features)	Artefacts and other samples	Cultural Affiliation Period
		preform, fragment of quartz crystal.	
Flat Rattle 1 DgAu-07	Salmon fishing	Worked chert, core stone, microblade, flake	Palaeoeskimo
King's Ridge 2 DgAu-08	Burial (Human remains)	None	European (19th C)
Lower Sandy Point DhAt-02	Undetermined (European-Salmon fishing station)	Flakes, microblades, pipestems, harpoon endblades, scraper, nails, ceramic, bone	Palaeoeskimo (Dorset) Pre-contact Beothuk European
Winter House Cove 1 DhAt-03	Burial (Burial cache)	8 ground slate tools	Maritime Archaic
Winter House Cove 3 DhAt-04	Undetermined	Flakes	Pre-contact
Apple Blossom DhAt-05	Undetermined (Burnt or buried sod)	Nails, ceramic	European
Ledrew's Garden DhAt-06	Undetermined	Pipe bowl fragment, ceramic, flake	Pre-contact European
Burnt Arm 1 DhAt-07	Undetermined	Ceramic, glass	European (19th C)
Burnt Arm 2 DhAt-08	Undetermined	Ceramic	European (19th C)
Porterville 1 DhAt-09	Find spot	2 bifaces	Maritime Archaic
Phillips Head 1 DhAt-10	Military gun battery	None	European (1940s)
Source: PAO 2004.			

Based on the elevation reported at 15 sites, it appears that more than 90% of the sites in the study region are likely to be located at an elevation that does not exceed 25 m asl, primarily within sections of the coastal strip of the Bay of Exploits where concentrations of marine resources were accessible to pre-industrial groups. Other high potential locations include the shoreline of major watercourses and ponds. It is suggested that such locations would have attracted human settlement at all time periods and have a positive potential for historic resources. Based on a review of the literature and archaeological site distribution in the study region, it is concluded that none of the sites recorded to date and listed above are located within the proposed waste management facility project area.

3.1.2 Historic and Recent Settlement and Economy

Early in the history of European settlement in Newfoundland, the population was concentrated in exposed outer coastal locations near prime fishing areas in summer and sealing areas during winter and spring. Settlement was also slow to spread to the sheltered bays such as Norris Arm and the hinterland and such areas remained sparsely occupied until the later part of the 19th century. During the earlier

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phase of European settlement, in the 18th and early 19th century, the interior was unoccupied by Europeans and the coast supported local salmon fishing and fur-trapping enterprises. The final Beothuk occupation of the interior is contemporary with this early phase of European settlement on the coast. (Schwarz 1992, 1993).

The increasing intensity of recent European settlement in the Bay of Exploits and Norris Arm was mostly marked by intensive logging activity. Several small mills were located along the banks of Norris Arm. This industry was the primary source of employment in the region, but it has declined in recent years. Norris Arm was first occupied in the 18th century and the town received its name from one of the first settlers, Mr. James Norris. A railway built across the Island of Newfoundland in the late 19th century. Construction started in St. John's and had reached Norris Arm by 1892 where a railway station was built in the mid-1890s (Anonymous 2004a). Improved means of transportation played a prominent role in the town's growth. The town consists of two linear settlements extending along both banks (north and south) of Norris Arm. While the most recent census indicates that the population of Norris Arm South is approximately 1100 people, the 1921 census suggests that 394 persons grouped in 74 households were living in the community during the first quarter of the 20th century (Anonymous 2004b).

3.1.3 Land and Resource Use Indicators

This section is based on a cursory review of aerial photos and maps and discussions with local resident Pierce Saunders (2003, pers. com.) and Kathy Knox (2004, pers. com.), a wildlife biologist who surveyed the project area in September of 2003. The project area has been traditionally used for forest harvesting and moose hunting. Forest harvesting in the original black spruce forest created a variety of vegetation types (e.g., hardwood stands, residual softwood, alder beds). The most recent cutovers are estimated to have occurred within the western sector of the project area where extensive alder beds developed in recent years. Areas of wetland (fen, supporting a high proportion of grasses and sedges) are interspersed between forested areas with small brooks flowing through areas of fen or alders. Thus, the project area provides a suitable habitat for moose and evidence of its presence (e.g., moose beds, droppings and trails) was found throughout the project area. The presence of fox, snowshoe hare, red squirrel and birds (e.g., Boreal chickadee, American crow and Common flicker) was also noted.

3.1.4 Summary and Archaeological Implications

Background research included reviews of available archaeological, historic, ethnographic data and literature. Aerial photo and map analysis and limited discussions with individuals also provided relevant clues for the interpretation of past and recent land use. Overall, results of this research suggest that:

- Habitable sections of shoreline in the study region appear to have some potential to yield sites, but no such shorelines are present in the project area;

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- Several pre-contact and historic sites previously discovered in the study region contain artefacts and features (e.g., burial caches or habitation) with some sites exhibiting a succession of occupations by different cultural groups including the Maritime Archaic and the Palaeoeskimos; but no sites were located within the project area;
- European settlers who first occupied the region in the late 18th century established their homes close to the marine shoreline; in the winter, they would go inland to access wood and timber for fuel and construction as well as other resources;
- Land use indicators (e.g., trails, cutting areas) appear to be evenly distributed in the project area; and
- During the 20th century, human activities including the use of granular materials and forest resources have created some ground disturbance and created new vegetation types and habitats.

In summary, based on the best information available at this time, it is anticipated that the overall archaeological potential for the project area is low.

3.2 Fieldwork Results

Most of the project area is forested with numerous cutting locations interspersed with a few small bogs. The mean elevation is 67 m above sea level (asl). The field assessment did not lead to the discovery of artifacts or features related to a prehistoric or historic occupation. However, abundant evidence of recent or contemporary land use (e.g., trails, cutting areas, borrow pit) was observed across the entire project area (Table 3.2).

Table 3.2 Methods and Results for Each Survey and Testing Location

Survey/Testing Location No.	Altitude (m asl)	Methods	Results
NA.1	39	Surface inspection	No historic resources. Borrow pit.
NA.2	60	Surface inspection	No historic resources. Trail.
NA.3	68	Surface inspection	No historic resources. Clearing.
NA.4	97	Surface inspection	No historic resources. Trail, bog/stream.
NA.5	99	Surface inspection	No historic resources. Cutover.
NA.6	94	Surface inspection	No historic resources. Cutover, bog.
NA.7	84	Surface inspection	No historic resources. No evidence of land use.
NA.8	96	Surface inspection	No historic resources. Bog.
NA.9	85	Surface inspection and subsurface testing (1 test pit)	No historic resources. Trail, till.

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Survey/Testing Location No.	Altitude (m asl)	Methods	Results
NA.10	25	Surface inspection	No historic resources. Moose tracks on train-track trail (not shown on Figure 2.1; west of survey point NA.11).
NA.11	29	Surface inspection	No historic resources. Train-track trail.
NA.12	33	Surface inspection	No historic resources. Train-track trail.
NA.13	42	Surface inspection	No historic resources. Cutover, stream.
NA.14	56	Surface inspection and subsurface testing (2 test pits)	No historic resources. No evidence of land use. Till.
NA.15	61	Surface Inspection and subsurface testing (1 test pit)	No historic resources. Clearing, large cutover. Humus overlying till.
NA.16	70	Surface Inspection	No historic resources. Cutover, west of a very small pond.
NA.17	76	Surface Inspection	No historic resources. Cut-over/clearing.
NA.18	76	Surface Inspection	No historic resources. Cutover.
NA.19	90	Surface inspection and subsurface testing (2 test pits)	No historic resources. No evidence of land use. Podzol-like soil.
NA.20	67	Surface inspection	No historic resources. No evidence of land use.
NA.21	65	Surface inspection	No historic resources. Train-track trail.

4.0 EVALUATION AND DISCUSSION

Background research conducted to date points to the rich archaeological potential of the Exploits Valley and Bay of Exploits region. Land and resource use indicators also suggest that the project area has been traditionally used by residents of Norris Arm for various purposes including forest harvesting, hunting and perhaps trapping.

The 2003 field investigations included a walkover and surface inspection of the project area and limited subsurface testing in selected locations. The intensity of the overview assessment conducted to date is thought to be adequate. Results of background research and fieldwork within the survey area did not reveal evidence of historic resources within the project area. However, evidence of contemporary land use (e.g., trails and numerous cutovers) was noted. Based on the best information available at this time, while the overall archaeological potential of the study region appears to be positive, the potential for historic resources to be located within the targeted project area for a waste management facility appears to be low. In addition, due to anthropogenic factors, it is anticipated that the probability of encountering artefacts or archaeological features in preserved context is also relatively low.

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5.0 RECOMMENDATIONS

Based on the assessment results, it is recommended that the proponent be allowed to proceed with the development of the waste management facility.

Nevertheless, as a safety procedure, a communication program could be implemented to ensure project personnel are aware of the possibility of inadvertent discovery of historic resources during activities related to the development. This would include reporting procedures between the proponent, subcontractors, field workers and site supervisors to prepare for such an occurrence.

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Tuck, J. 1976. *Newfoundland and Labrador Prehistory.* National Museum of Man, Ottawa, ON.

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APPENDIX A

Selected Photographs from the Field Assessment

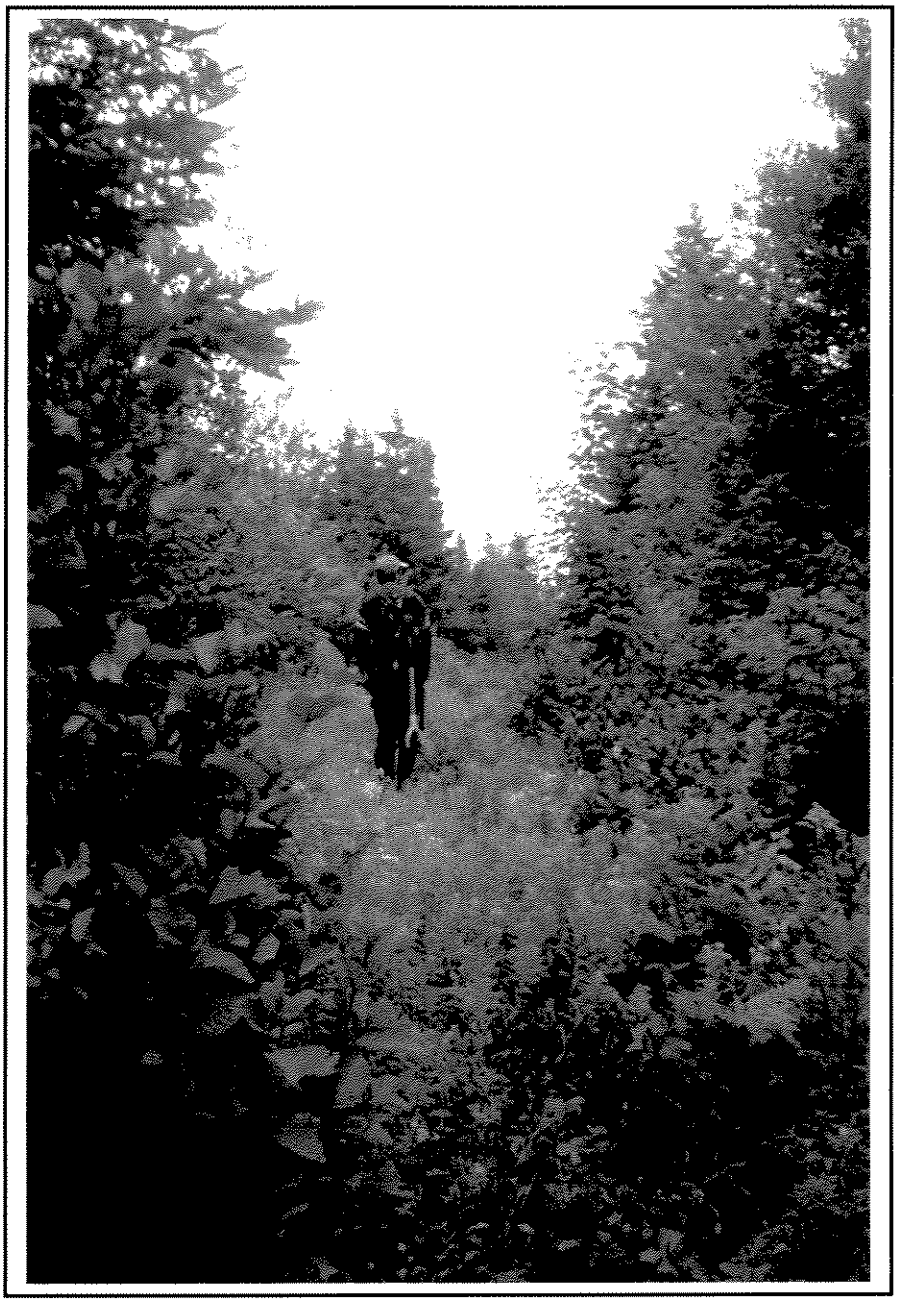

Photo 1: **R. Skanes on a trail during surface inspection, looking East, survey location NA.2, September 5, 2003.**

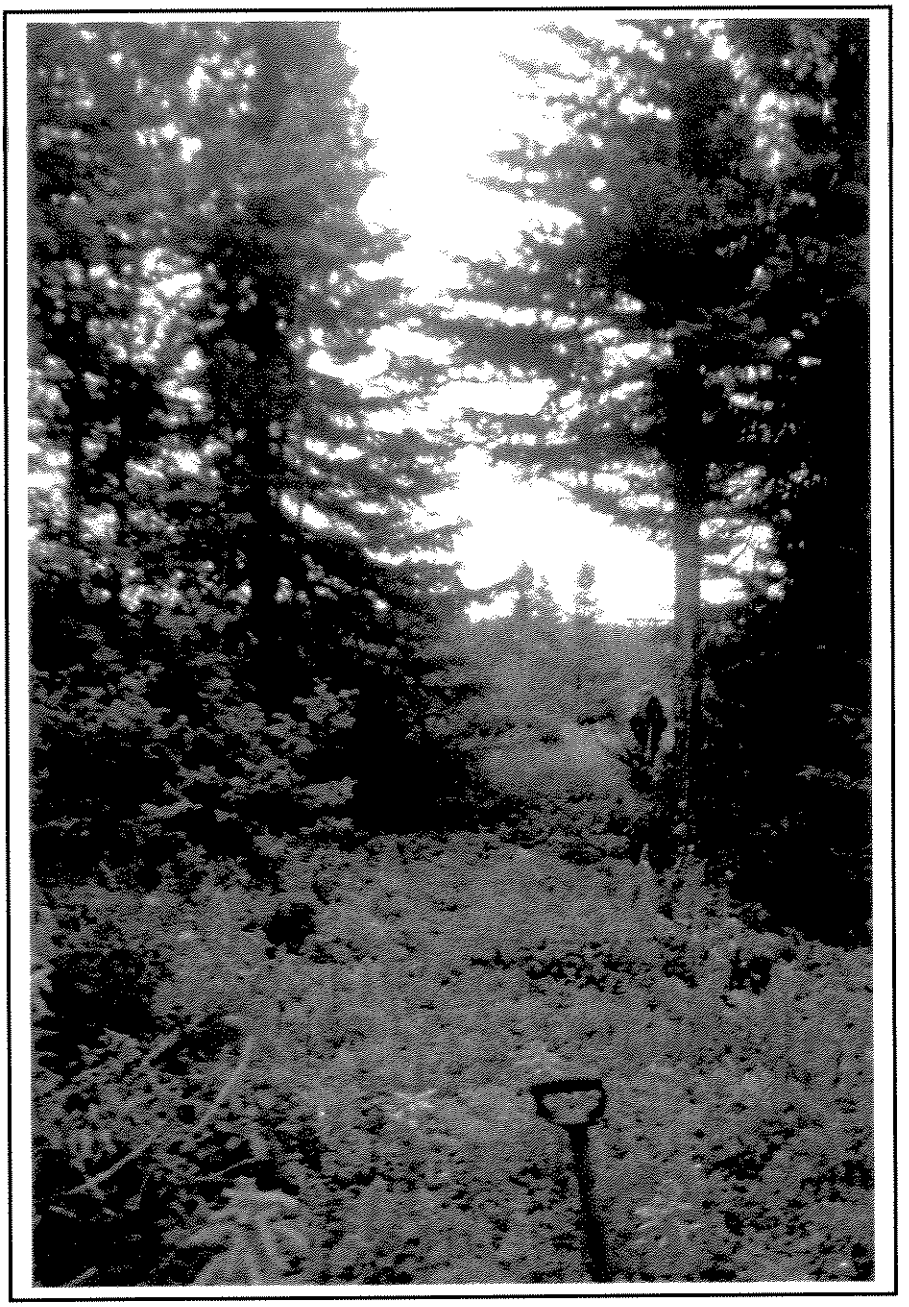

Photo 2: **Trail and clearing with R. Skanes in background, looking East, survey location NA.3, September 5, 2003.**

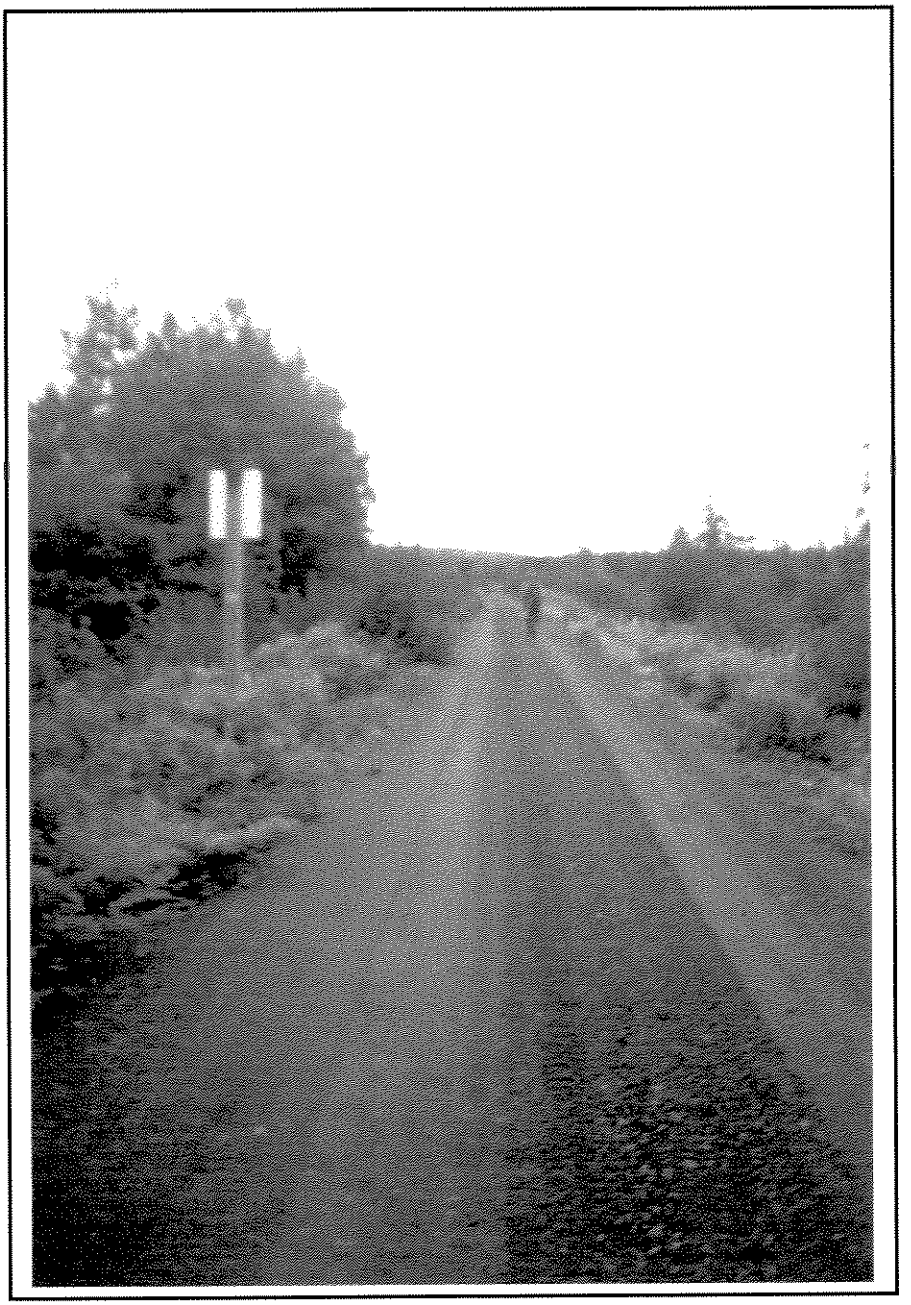

Photo 3: **Train-track trail, north of the project area, with R. Skanes in background , looking East, between GPS checkpoints NA.10 and NA.11, September 6, 2003.**

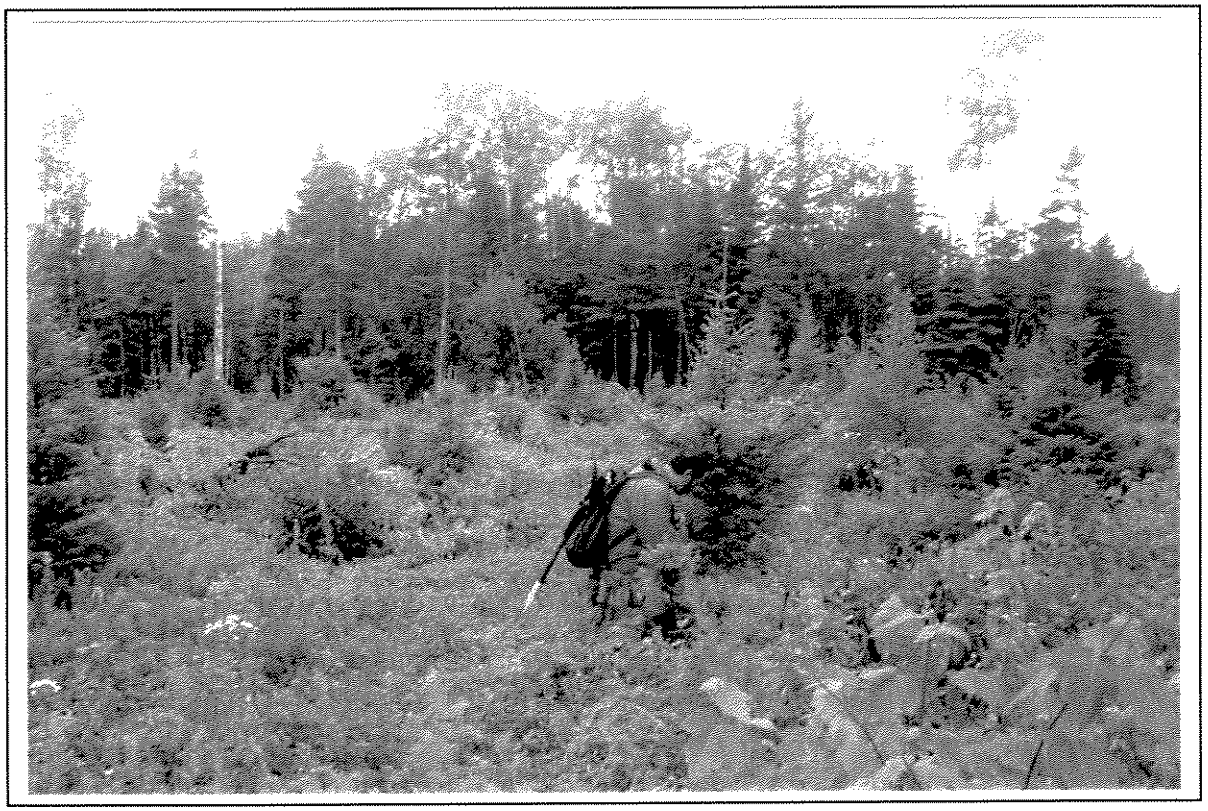

Photo 4: **Large clearing with R. Skanes, subsurface testing location NA.15, September 6, 2003.**

APPENDIX B

Field Notes

Project No. NFS09699
Stage 1 Historic Resources Overview Assessment
Waste Management Facility, Norris Arm, NL

Field Notes
Permit No. 03.41
September 5 and 6, 2003

Yves Labrèche
Jacques Whitford Environment Limited
St. John's, NL.

Note: After the completion of the field program, edits and additions were made while typing the field notes to address data gaps or provide background information to substantiate technical notes, where appropriate. Original manuscript field notes are also available for further consultation, if required.

All UTM coordinates were noted using the NAD 1927 reference grid. The following numbering system has been used to identify survey and subsurface testing locations, GPS checkpoints, or locations where evidence of land use was noted: NA-1 to NA-21. These identification codes/numbers also refer to Figure 2.1 and Table 3.2 of the report. The team was composed of two professional archaeologists: Yves Labrèche and Roy Skanes.

Friday, September 5, 2003

The team traveled from Lumsden to Norris Arm. The client was contacted to obtain further confirmation that the field program would be limited to the western portion (approximately 100 ha) of the Proposed Waste Management facility, Site No.1 shown on Figure 17-4 received from BAE/Newplan prior to the commencement of fieldwork. The team started field investigations at the west-end of the project area.

NA.1

Starting position, west of project area, in an existing borrow pit: GPS coordinates: 21 U 633409E, 5442987N, EPE 6 m, Alt. 39 m asl. Heading east, the team is planning to follow a trail seen on the aerial photograph.

NA.2

Checkpoint on the trail, GPS coordinates: 21 U 633938E, 5443256N, EPE 7 m, Alt. 60 m asl. One photo of R. Skanes on the trail, heading east (Roll No. 1, exp.3).

NA.3

Checkpoint GPS coordinates: 21 U 634435E, 5443099N, EPE 8 m, Alt. 68 m asl. From here, one photo showing clearing, looking east (Roll No. 1, exp.2).

NA.4

Bog/stream. GPS coordinates N-E of bog: 21 U 634507E, 5443080N, EPE 7 m, Alt. 97 m asl. The trail is at the north end of the bog.

NA.5

Next checkpoint at the S-E limit of an elongated cutover. GPS coordinates: 21 U634728 E, 5443012N, EPE 7 m, Alt. 99 m asl.

NA.6

The team followed an elongated bog towards the NE and then S-E to a small cutover area.. GPS coordinates: 21 U 634995E, 5443158N, EPE 7 m, Alt.94 m asl.

Then back to the elongated bog and further N-E, pursuing surface inspection.

NA.7

Next checkpoint at the easternmost point reached, GPS coordinates: 21 U 635045E, 5443366N, EPE 5 m, Alt. 84 m asl.

NA.8

Back to the western edge of bog marked with flagging tape at GPS coordinates: 21 U 634836E, 5443064N, EPE 7 m, Alt. 96 m asl.

NA.9

On the way back, one test pit was excavated on the trail at GPS coordinates: 21 U 634189 E, 5443295N, EPE 6 m, Alt. 85 m asl. The soil appears to be a brown till with the upper portion altered by several factors: vegetation, rain, frost, etc. Further down, the color is gray and more compact.

Saturday, September 6, 2003

NA.10

Starting position at the west end of the abandoned train track, at the intersection of Norris Arm North access road. GPS coordinates: 21 U 632751E, 5443226N, EPE 5 m, Alt. 25 m asl. The team is heading east. One photo of R. Skanes on the train track trail (Roll No. 1, exp.1). Moose tracks on the trail were noted.

NA.11

Next checkpoint after passing a bog, on the south side of the train track trail, just before a right turn in the trail route, and near the beginning of the targeted project area. GPS coordinates: 21 U 633369E, 5443590N, EPE 7 m, Alt. 29 m asl.

NA.12

Checkpoint on a trail, before heading south for surface inspection along a transect towards higher ground. GPS coordinates: 21 U 633510E, 5443631N, EPE 7 m, Alt. 33 m asl.

NA.13

The team more or less followed a stream bed uphill to a small cutover area. GPS coordinates: 21 U 633661E, 5443435N, EPE 10 m, Alt. 42 m asl.

NA.14

Further up, in a clearing, two test pits were excavated. Again, the soil appears to be a till containing abundant small split rocks. GPS coordinates: 21 U 633704E, 5443438N, EPE 7 m, Alt. 56 m asl.

NA.15

Large clearing/cutover area with blueberry patches. GPS coordinates: 21 U 633818E, 5443456N, EPE 4 m, Alt. 61 m asl. One test pit excavated at this location. Soil: humus more defined than in previous locations; underlying gray leached sand, and further down, reddish sand mixed with rocks. One photo of R. Skanes in this clearing (Roll No. 1, exp. 0).

NA.16

Checkpoint further east, in this cutting area, west of a very small pond. GPS coordinates: 21 U 633976E, 5443435N, EPE 5 m, Alt. 70 m asl.

NA.17

Next checkpoint, still in open cut area, GPS coordinates: 21 U 634445E, 5443841N, EPE 6 m, Alt. 76 m asl.

NA.18

The team continued surface inspection towards the south and then east. New checkpoint in cutover area. GPS coordinates: 21 U 634868E, 5443446N, EPE 4 m, Alt. 76 m asl.

NA.19

Easternmost point reached, GPS coordinates: 21 U 635309E, 5443463N, EPE 6 m, Alt. 90 m asl. Two test pits were excavated here. Soil: Podzol type. Then the team continued surface inspection, heading N-N-E, towards the train-track trail.

NA.20

Between the northernmost point reached and the train-track trail, while the team was heading back N-W, a new position was recorded. GPS coordinates: 21 U635012 E, 5443747N, EPE 6 m, Alt. 67 m asl.

NA.21

Final position on train-track trail, after speaking with local resident Pierce Saunders. GPS coordinates: 21 U 634834E, 5444135N, EPE 10 m, Alt. 65 m asl.

Then the team followed the train-track trail back west to the access road and a nearby cemetery.

End of field program.

***

APPENDIX C

Photograph Catalogue

Back to Report

Stage 1 Historic Resources Overview Assessment, Waste Management Facility, Norris Arm, NL (JW Project No. NFS09699)

Camera: Canon EF-M 30-80 mm **Film:** Color prints 200 ASA **Roll Number:** 9699-1 **Year:** 2003
Photographer: Yves Labrèche

Expos. #	Survey/Testing Location	Subject	Direction	Date	Catal. #
3	NA.2	R. Skanes on trail during surface inspection	East	5-Sep-03	9699.1
2	NA.3	Trail and clearing with R. Skanes in background	East	5-Sep-03	9699.2
1	NA.10/NA.11	Old train track trail with R. Skanes in background	East	6-Sep-03	9699.3
0	NA.15	Large clearing with R. Skanes	-	6-Sep-03	9699.4