



Woodfibre LNG Project

Archaeological and Heritage Resources Management Plan

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A handwritten signature in black ink, appearing to read "Greg Morrissey". The signature is written in a cursive, stylized font. It is positioned above a horizontal line that spans the width of the page.

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IMPORTANT NOTICE

This is an outline for a management plan for archaeological sites and heritage associated with Woodfibre LNG Limited's proposed liquefied natural gas export facility located on the former Woodfibre Pulp and Paper Mill site in Nexwnnewu7ts atll'a7tsem (Howe Sound). It does not address potential impacts to traditional use activities and sites by this development. It is not the intent of this report to document First Nations' interests in the lands at this locality. The study was conducted without prejudice to First Nations' treaty negotiations, Aboriginal rights, or Aboriginal title.

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ACRONYMS AND ABBREVIATIONS

Term	Definition
AD	Anno Domini – The Gregorian calendar designation for years after the traditional date of the nativity. Also known as Common Era.
AD 1846	The date for “pre-contact” cultural material under the Heritage Conservation Act (HCA), used to delineate a protected archaeological site or an unprotected historical site.
AIA	Archaeological Impact Assessment — An archaeological survey including subsurface testing conducted under a Heritage Inspection Permit.
AOA	Archaeological Overview Assessment – A review of all available maps, topographic features, forest cover, waterway data, and previously conducted assessments.
AHMP	Archaeological and Heritage Resources Management Plan
BC	British Columbia
BP	Before Present — Refers to radiocarbon years before present (“present” is defined as AD 1950).
CE	Common Era - The Gregorian calendar designation for years after the traditional date of the nativity. Also known as Anno Domini.
CFMP	Chance Find Management Protocol
CMT	Culturally modified tree — A tree that has been altered by Aboriginal people as part of their traditional use of the forest
HCA	Heritage Conservation Act — Legislation outlining policies for the protection and conservation of heritage property on provincial land in British Columbia.
HIP	Heritage Inspection Permit – A permit issued under Section 12.2 of the Heritage Conservation Act that authorizes an Archaeological Impact Assessment.
MFLNRORD	Ministry of Forests, Lands, Natural Resource Operations, and Rural Development
PID	Parcel identifier
PIN	Parcel identification number
PFR	Preliminary Field Reconnaissance — A non-invasive archaeological survey completed without an HCA permit.

1. INTRODUCTION

The Woodfibre Liquefied Natural Gas Project (the Project) is a liquefied natural gas export facility being constructed on the former Woodfibre Pulp and Paper Mill site in Átl'ka7tsem (Howe Sound), approximately seven kilometres south of Skwxwú7mesh/ sq'w'x'aməx (Squamish). The Project is on the historical location of a Skwxwú7mesh Úxwumixw (Squamish Nation) village known as Swiyát. Swiyát and Átl'ka7tsem (Howe Sound) are tied to the cultural well-being of Skwxwú7mesh Úxwumixw (Squamish Nation) members, their ancestors, and their descendants, and to other Indigenous groups as defined in the Project's Environmental Assessment Certificates. Woodfibre LNG General Partner Inc. recognizes the importance of these areas to the Skwxwú7mesh stélmexw (Squamish People), and other Indigenous groups. Woodfibre LNG General Partner Inc. seeks to construct and operate the Project in a manner that is respectful of Indigenous values. This Estéteýwilhs iy Ínexwantas ta Sekw'ekw'inexw (Wildlife Management and Monitoring Plan) is primarily written in English with important place names, species, phrases, and passages provided in Skwxwú7mesh sníchim (the Squamish language).

Temíxwiýikw chet wa naantem chet ti temíxw Swiyát
Chet wa sménhemswit kwis ns7éyxnitas chet ti temíxw
We7ú chet kwis t'íchimwit iy íwas chet ek' l tti.

Our ancient ancestors named this place Swiyát
We, as their descendants safeguard these lands
We will continue to swim and fish in these clear waters.

The land is a fee simple, industrially zoned, brownfield site with more than 100 years of industrial use and deep-water marine access. The Project was subject to environmental assessment processes administered by the Province of British Columbia, Skwxwú7mesh Úxwumixw, and the Government of Canada, and in 2015 and 2016 received environmental assessment approvals from these three levels of government. On March 17, 2016, the Canadian Environmental Assessment Agency (now the Impact Assessment Agency of Canada) issued the Project a Federal Decision Statement (FDS) as part of a substituted process under the Canadian Environmental Assessment Act, 2012 (SC 2012, c. 19, s. 52). The FDS was re-issued on March 18, 2017, to account for material changes to the Certified Project Description (CPD). Similarly, the provincial EA certificate (EAC No. E15-02) has been twice amended and extended in 2017, 2019, and 2020 respectively. In 2019 the BC Oil and Gas Commission (BC OGC) issued an LNG Facility Permit (Permit No. 100105360) for the Project. A Heritage Inspection permit application has been submitted to the Archaeology Branch for review.

According to the provincially administered Profiles of Indigenous Peoples Consultation Areas, the Project is located within the overlapping asserted traditional territories of Skwxwú7mesh Úxwumixw, x'wəməθk'wəyəm (Musqueam Indian Band), and Snuneymuxw First Nation. Woodfibre LNG has conducted independent negotiations with each of these Nations that includes a variety of commitments relating to cultural heritage and archaeological resource management. It should be noted that the Environmental Assessment Certificate issued for this Project lists Skwxwú7mesh Úxwumixw and Tsleil-Waututh Nation

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(səlilwətał) as the affected Aboriginal Groups and does not reflect the current Profiles of Indigenous Peoples Consultation Areas.

In acknowledgement of impacts beyond the project footprint and interests expressed by səlilwətał, Woodfibre LNG has also conducted independent negotiations and made commitments relating to cultural heritage and archaeological resource management with səlilwətał. According to the provincially administered Profiles of Indigenous Peoples Consultation Areas səlilwətał does not assert a territorial claim to the Project area. They do, however, claim the waterways surrounding the Project area and the lands to the east of Howe Sound to which they connect.

Supplementary documentation such as the FDS and EAC may refer to First Nations as Aboriginal Groups or Indigenous Groups. It should be noted that this document will refer to local Indigenous Peoples as First Nations but is not meant to be distinct or separate from the terms Aboriginal Groups or Indigenous Groups used in related documents. First Nation(s) is the commonly used and accepted term to refer to local Indigenous Peoples when conducting archaeological work in British Columbia. The term Aboriginal Group or Indigenous Group may still be used when referencing documentation that utilizes the term.

At the request of Woodfibre LNG, EcoLogic has included various references to səlilwətał in this document. This study was conducted without prejudice to First Nations' treaty negotiations, Aboriginal rights, or Aboriginal title, and these references should not be interpreted as a statement of claim to the project area by səlilwətał.

Multiple land parcels encompass the Project area. Parcel identifiers and their associated legal descriptions are listed in Table 1.

Table 1: Parcel Identifiers and Legal Description of the Project Area

Private Property		Provincial Crown Land	
PID	Legal Description	PID/PIN	Legal Description
015-822-052	Lot A, District Lot 5899, No Plan	PID 015-062-341 PIN 90031668	-
015-822-061	District Lot 5899 except part in reference Plan 5238, No Plan	PID 025-841-604 PIN 16739450	Plan LMP33348
015-791-611	District Lot 6237, No Plan	PIN 7228450	District Lot 1337, Group 1, New Westminster District, Plan 29TR6_New_Westminster
031-016-171	Lot 1, Plan EPP84409	PIN 90160046	Plan EPC1844
031-012-965	Lot A, Plan EPP84408	PIN 90160047	District Lot 8295, Group 1, Plan EPC1844
-	-	PIN 90160048	District Lot 8296, Group 1, Plan EPC1844

WLNG is proposing to develop a natural gas liquefaction facility and an LNG transfer facility to enable the export of LNG to global markets via marine vessels. The Project is expected to operate for at least 25 years and to produce between 1.5 and 2.1 million tonnes of LNG per year.

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This Archaeological and Heritage Resources Management Plan (AHMP) outlines the approach that WLNG will take to identify unrecorded archaeological sites within the Project area; investigate the age, use and extent of potential archaeological sites; and protect and avoid these sites wherever possible. If avoidance of a recorded archaeological site is not feasible, this document provides the steps for the archaeological process and permits that will be needed to impact an archaeological site (Section 6). It should be noted that at this time, no archaeological sites have been recorded within the Project area and as such, no site-specific impact management recommendations are provided. The impact management options provided include a range of typical mitigation measures that may be applied to any archaeological site of the types likely to occur in the Project area. Each archaeological site is unique and may require any combination of these impact mitigation measures. In the event of a chance find, specific impact management recommendations will be provided by a qualified archaeologist in direct communication with the Archaeology Branch and the appropriate First Nations.

Additionally, this AHMP includes ongoing archaeological awareness training and a chance find management protocol (CFMP; Appendix A). These two components provide what to do if evidence, or suspected evidence, of previously unrecorded archaeological materials are discovered throughout the construction and operation of the proposed project. The CFMP provides employees and contractors with specific measures to identify, protect, and report any suspected evidence of archaeological sites and is designed to be read and understood by all personnel conducting ground disturbance activities for the Project.

1.1 SCOPE AND OBJECTIVES

This AHMP outlines the approach that WLNG will take to minimize the potential effects of development activities on any archaeological sites or materials as a result of the Project. The AHMP will be reviewed by all involved First Nations and their feedback incorporated prior to finalization. The objectives of the AHMP are to:

- ♦ fulfill the archaeological and heritage conditions associated with the FDS for the Woodfibre LNG Project, Environmental Assessment Certificate (EAC) No. E15-02, and BC OGC Permit No. 100105360;
- ♦ conduct archaeological, historical, and ethnographic background research of the Project area involving the review of readily available articles, reports, records, and maps;
- ♦ conduct an archaeological impact assessment (AIA) of the Project area to identify and evaluate any protected archaeological sites prior to construction;
- ♦ outline the measures to be taken to protect any archaeological sites or suspected archaeological sites that are identified and recorded as a result of the AIA;
- ♦ outline the measures to be taken to protect any archaeological materials discovered during activities associated with the Project (chance finds); and
- ♦ identify the parties that will be informed of the chance finds, and identify who will investigate, record, and protect these archaeological sites or materials.

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These tasks can be catalogued into two broad areas of work: pre-construction tasks and ongoing archaeological awareness. Pre-construction tasks include all work done in advance of the developments proposed for the Project area and include the individual archaeological programs listed below. As each of these investigations is more invasive than the previous one, each step will be conducted as needed, based on the results of the previous one:

- ♦ background research,
- ♦ archaeological impact assessment,
- ♦ heritage investigation (mitigation), and
- ♦ site alteration.

Although AIAs are very effective at locating and delineating archaeological sites and materials, the nature of archaeological deposits is such that no field-testing program, regardless of intensity or thoroughness, can provide a guarantee that no further archaeological materials exist within a given area. As such, this AHMP will also incorporate ongoing archaeological awareness training and a detailed CFMP.

Archaeological awareness training and the detailed CFMP (Appendix A) will ensure that all contractors and employees working on the Project are aware of the potential for archaeological materials to be present within the Project area, the legally protected nature of these materials, and the importance of these materials to First Nations. This training will ensure that all personnel are equipped with the awareness they need to help WLNG prevent unnecessary damage to unidentified archaeological resources that may be identified during the Project development.

2. BACKGROUND

This AHMP will provide a framework for the archaeological assessment process that WLNG will undertake to meet the conditions of the FDS for the Woodfibre LNG Project, EAC No. E15-02, and BC OGC Permit No. 100105360. These commitments and conditions are outlined in Table 2. The details provided in this plan are derived from the data and recommendations made during the previous archaeological works conducted for the project. A primary AIA has been completed and is detailed in a report submitted to the BC Archaeology Branch (Finkelstein and Huard 2016). Additional archaeological work is ongoing, with heritage management recommendations outlined in an interim report (Morrissey and Pelletier 2023). Updates to this AHMP may be necessary to reflect additional data gained through future archaeological work.

Table 2: Permit Conditions Regarding Heritage Concerns

Compliance Document	Condition	Description	Consideration
Federal Decision Statement - Reissued	3.12.6	For any fish habitat offset areas proposed in any offsetting plan(s) under condition 3.11, and prior to submitting the offsetting plan to Fisheries and Oceans Canada, <i>the Proponent shall determine whether there are adverse effects on physical and cultural heritage and structure, site or thing that is of historical, archaeological, paleontological or architectural significance to Aboriginal peoples.</i>	<p>Section 2.1: Results and recommendations of Heritage Resources Overview Assessment</p> <p>Section 2.3: Archaeological site presence and limits to be determined by Archaeological Impact Assessment (An Initial AIA has been completed and the Interim Report reviewed and approved).</p>
	7.2	The Proponent shall, in consultation with Aboriginal groups, develop, prior to construction, and implement, during the construction and operation phases of the Designated Project, a follow-up program to verify the accuracy of the predictions made during the environmental assessment in relation to <i>the effects of the wake generated by Designated Project-related vessels on the current use of lands and resources for traditional purposes and on physical and cultural heritage and structures, sites or things of</i>	<p>Wake study of Project area completed (Moffatt & Nichol 2014).</p> <p>Section 2.3: Archaeological site presence and limits to be determined by Archaeological Impact Assessment (An Initial AIA has been completed and the Interim Report reviewed and approved). Follow-up wake impact study dependent upon archaeological site identification.</p> <p>Appendix A: Chance Find Management Protocol is provided to aid in archaeological site recognition and identification.</p>

	<p><i>historical, archaeological, paleontological or architectural significance.</i> The follow-up program shall include:</p> <ul style="list-style-type: none"> - monitoring during the construction period and the first two years of operation of the degree of wake generated by Designated Project-related vessels and of adverse environmental effects on harvesters caused by vessel wake attributable to Designated Project-related vessels at key harvest sites and during key harvest periods for Aboriginal groups and on physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance located on or near the shoreline and identified in consultation with Aboriginal groups. - providing the results of the follow-up program and details of any additional mitigation measures implemented as a result of the follow-up program to Aboriginal groups. 	
8.1	<p>The Proponent shall, in consultation with Aboriginal groups, develop, prior to construction, and implement, during all phase of the Designated Project, an archaeological and heritage resources management plan for the Designated Project. The archaeological and heritage resources management plan shall take into account the British Columbia's Handbook for the Identification and Recording of Culturally Modified Trees. The archaeological and heritage resources management plan shall include:</p>	<p>Section 2.1: Results and recommendations of Heritage Resources Overview Assessment</p> <p>Section 2.3: Archaeological site presence and limits to be determined by Archaeological Impact Assessment. Areas which could not be assessed due to obstructions (e.g., concrete cover) may be monitored during obstruction removal.</p> <p>Section 5.4: Describes the archaeological site alteration process.</p> <p>Appendix A: Chance Find Management Protocol is provided to aid in archaeological site recognition and identification.</p>

	<ul style="list-style-type: none"> - a description of structures, sites or things of historical, archaeological, paleontological or architectural significance (including culturally modified trees) that may be encountered by the Proponent during construction. - procedures and practices for on-site monitoring of construction activities that may affect a structure, site or thing of historical, archaeological, paleontological or architectural significance (including culturally modified trees) and for the identification and removal of that structure, site or thing. - a chance find protocol, should a previously unidentified structure, site or thing of historical, archaeological, paleontological or architectural significance (including culturally modified trees) be discovered by the Proponent or brought to the attention of the Proponent, during construction, by an Aboriginal group or another party. 	
EA Commitments Register	<p>Woodfibre LNG Limited will work with impacted Aboriginal groups to address issues identified with regard to Heritage Resources</p>	<p>The EAC application includes an assessment of heritage resources that may be potentially impacted by the Project. The Heritage Resources section as proposed generally accepted mitigation measures pursuant to permitting for the Heritage Resources Act. Woodfibre LNG Limited will continue to work with Aboriginal groups to clarify where potentially adverse Project-related effects may exist and also work together to develop mitigation measures to address potential future adverse effects.</p> <p>WLNG will provide an opportunity to review and comment on draft Heritage Resources reports, including Heritage Management Plans, Heritage Resources Preliminary Field Reconnaissance Report, Heritage Resources Impact Assessment Report and Chance Find Procedures for the Project.</p>

BC OGC Environmental Protection and Management Regulation	7_b	<p>Old-growth management areas, resource features, cultural heritage resources</p> <p>For the purposes of the definition of "government's environmental objectives" in section 1 (2) of the Act, the following objectives are prescribed:</p> <ul style="list-style-type: none"> - that oil and gas activities not damage or render ineffective a resource feature; 	<p>Section 2.3: Archaeological site presence and limits to be determined by Archaeological Impact Assessment (An Initial AIA has been completed and the Interim Report reviewed and approved).</p>
	7_c	<p>Old-growth management areas, resource features, cultural heritage resources</p> <p>For the purposes of the definition of "government's environmental objectives" in section 1 (2) of the Act, the following objectives are prescribed:</p> <ul style="list-style-type: none"> - that oil and gas activities conserve or, if necessary, protect cultural heritage resources. 	<p>Section 2.3: Archaeological site presence and limits to be determined by Archaeological Impact Assessment (An Initial AIA has been completed and the Interim Report reviewed and approved).</p>
BC OGC Facility Permit	11;12	<p>If an artifact, feature, material or thing protected under the Heritage Conservation Act is identified within the activity area, the permit holder must, unless the permit holder holds a permit under section 12.4 of the Heritage Conservation Act issued by the Commission in respect of that artifact, feature, material or thing:</p> <ul style="list-style-type: none"> - immediately cease all work in the vicinity of the artifacts, features, materials or things; - immediately notify the Commission; and - resume work in the vicinity of the artifacts, features, materials or things in accordance with an appropriate mitigation plan, if required, that has been accepted by the Commission. 	<p>Section 2.3: Archaeological site presence and limits to be determined by Archaeological Impact Assessment (An Initial AIA has been completed and the Interim Report reviewed and approved). Site Alteration permit to be obtained as and when needed.</p> <p>Appendix A: Chance Find Management Protocol is provided to aid in archaeological site recognition and identification as well as step to follow if an unanticipated site is encountered.</p>

	13	<p>Prior to the commencement of construction activities the permit holder must:</p> <ul style="list-style-type: none"> - complete an archaeological assessment for the portion of the activity area located northwest of UTM 481409E 5502112N as shown on document 180836OV2_Figure1_20k.pdf, dated September 12, 2018, in accordance with applicable requirements of the Heritage Conservation Act; and - complete and submit to the Commission an acceptable report on the results of the assessment. <p>If the report required under the condition above recommends any further assessment work on an area, the permit holder must not begin construction activities on that area until further assessment is completed.</p>	<p>Section 2.3: Archaeological Impact Assessment (An Initial AIA has been completed and the Interim Report reviewed and approved).</p>
EA Table 22-1 Proposed Mitigation Measures	M7.6-1	<p>Consult with Tsleil-Waututh Nation on additional mitigation for Aboriginal Interests.*</p>	<p>Upon receipt of the completed Tsleil-Waututh Nation Knowledge Study, WLNG will work in consultation with the Tsleil-Waututh Nation to identify technically and economically feasible mitigation measures needed to address potential Aboriginal Rights issues identified in the Tsleil-Waututh Nation Knowledge Study, such as access to traditional marine mammals, vegetation, wildlife, and fishing areas, and additions to various Plans, including marine related plans, to accommodate Tsleil-Waututh Nation interests as well as heritage and culturally significant site issues. Examples of additional mitigation measures to discuss with the Tsleil-Waututh Nation are:</p> <ul style="list-style-type: none"> • Woodfibre LNG Limited will provide the Tsleil-Waututh Nation with an opportunity to review and comment on the draft Construction Environmental Management Plan, and other management plans that have a potential bearing on identified Tsleil-Waututh Nation Aboriginal Rights, such as the Squamish Harbour Vessel Traffic Plan, and Marine Transport Management Plan.

		<p>Woodfibre LNG Limited will provide the Tsleil-Waututh Nation with an opportunity to review and comment on draft Heritage Resources reports, including the Heritage Resources Preliminary Field Reconnaissance Report, the Heritage Resources Impact Assessment Report, and the Chance Find Management Procedures for the Project.</p> <p>*It should be noted that WLNG is committed to consulting in good faith with all affected First Nations and that Commitment M7.6-1 is specified due to conversations with Tsleil-Waututh Nation.</p>
M8.2-1	Avoid disturbance of heritage sites	<p>Woodfibre LNG Limited will avoid effects to heritage resources, if present, through partial Project redesign or relocation. This will result in minimal effect to the heritage site and is the preferred option from a cultural resource management perspective. It can also be the least expensive option from a construction or operation perspective. A site investigation may be required to define the heritage site limits.</p> <p>Section 2.3: Archaeological site presence and limits to be determined by Archaeological Impact Assessment (An Initial AIA has been completed and the Interim Report reviewed and approved).</p>
M8.2-2	Employ non-intrusive systematic data techniques	<p>Woodfibre LNG Limited will employ non-intrusive systematic data recovery techniques. This may include the documentation of heritage resources, if present, such as a canoe run or fish trap, historic structure or a heritage wreck; detailed recording of culturally modified trees, or surface collection of palaeontological material; activities which may or may not require a Heritage Inspection permit, in addition to a Site Alteration permit prior to site alteration.</p> <p>Section 2.3: A non-intrusive surface survey will be employed as part of the Archaeological Impact Assessment (An Initial AIA has been completed and the Interim Report reviewed and approved).</p>
M8.2-3	Employ systematic data recovery (archaeological	<p>Woodfibre LNG Limited will employ systematic data recovery (archaeological salvage or emergency excavation), if necessary. In</p>

	salvage or emergency excavation)	<p>addition to a Site Alteration permit prior to site alteration, this option will likely require a Heritage Inspection permit, and can delay construction or operation by up to several weeks and additionally involve extensive artifact analysis. Consequently, salvage or emergency excavation is not a preferred option.</p> <p>Section 2.3: Archaeological site presence and limits to be determined by Archaeological Impact Assessment (An Initial AIA has been completed and the Interim Report reviewed and approved). Salvage or emergency excavation will only be utilized when all other options are exhausted.</p>
M8.2-4	Monitor for undetected heritage resources	<p>In the event that no newly identified heritage resources are identified within the LAA, it remains possible that yet undetected heritage resources could still be encountered once ground-disturbing activities begin. Archaeological monitoring will require an HCA permit issued by the Archaeology Branch. Woodfibre LNG Limited will continue monitoring where site-specific Project effects cannot be predicted or evaluated before construction or operation, especially near the margins of a heritage site, or in cases where deeply buried deposits are expected that cannot be accessed without the assistance of heavy machinery. Monitoring may also be appropriate where systematic data recovery has been undertaken, but where significant heritage deposits (potentially archaeological or palaeontological) remain.</p> <p>Appendix A: Chance Find Management Protocol is provided to aid in archaeological site recognition and identification.</p>
M8.2-5	Develop Heritage Resource Chance Find Management Procedures	<p>To provide a cost-effective method of managing heritage resources throughout the life of the Project, WLNG will develop Heritage Resource Chance Find Management Procedures that would provide direction to the Proponent and its contractors if unforeseen heritage resources are encountered.</p> <p>Appendix A: Chance Find Management Protocol is provided to aid in archaeological site recognition and identification.</p>

M11-3	Develop Heritage Site-specific Clean-up Plan	<p>If the spill occurs over or into ground where a palaeontological, archeological, or historical site exists or where potential for a paleontological site has been identified but not assessed, a professional palaeontologist, archaeologist, historic archaeologist or built-heritage specialist respectively will be engaged to participate in the non-emergency development of the EMP specific to the spill event.</p> <p>Any clean-up plan or spill management that includes ground disturbance requires immediate consultation with an archaeologist to determine if archaeological monitoring will be required.</p> <p>Section 2.3: Archaeological site presence and limits to be determined by Archaeological Impact Assessment (An Initial AIA has been completed and the Interim Report reviewed and approved). The appropriate clean-up plan is dependent upon site type impacted. Site type is determined through Archaeological Impact Assessment.</p> <p>Appendix A: Chance Find Management Protocol outlines steps to follow if a spill might impact an archaeological site.</p>
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Previous archaeological studies have been conducted to satisfy these permit conditions: an Archaeological Overview Assessment (AOA) by Golder Associates in 2014 (Moore and Mattson 2014) and an Archaeological Impact Assessment (AIA) by Kleanza Consulting Ltd. in 2016 (Finkelstein and Huard 2016). Each study will be mentioned in the appropriate subsection below with a summary of their recommendations. Additionally, a BC OGC Archaeology Information Form was completed by Roy Northern Environmental Ltd. for the Project area including the most recent additions to the Project area (Girard 2019).

2.1 RESULTS OF WOODFIBRE LNG HERITAGE RESOURCES OVERVIEW ASSESSMENT: GOLDER ASSOCIATES 2014

A Heritage Resources Overview Assessment (HROA) study, including an AOA component, was conducted for the Project by Golder Associates Ltd. in 2014. The recommendations of the AOA are as follows (Moore and Mattson 2014:44):

- ♦ “Engage Squamish Nation to determine whether they have traditional use information for the LAA that would refine the archaeological potential assessment.

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- ◆ Conduct a preliminary field reconnaissance to refine heritage potential determinations, including archaeological potential, as identified in this Heritage Resources Overview Assessment.
- ◆ Undertake archaeological impact assessment in locations identified in the Heritage Resources Overview Assessment and recommended PFR as having archaeological potential within the LAA to meet the following objectives: (1) identify, record, and assess archaeological sites located within the LAA; (2) identify and evaluate possible effects by the proposed development to these archaeological sites; and (3) recommend appropriate effects management actions.”

Golder Associates' 2014 HROA recommended a PFR of the Project area to refine suggested areas of archaeological potential (Moore and Mattson 2014). Though a standalone PFR of the Project area was not conducted, Kleanza Consulting incorporated a PFR into their AIA of the Project area (Finkelstein and Huard 2016).

To conform with the *Fossil Management Framework*, a Palaeontological Overview Assessment (POA) of the Project area was conducted by Branta Biostratigraphy Ltd as part of the HROA. The POA recommended that a Palaeontological Impact Assessment (PIA) be conducted prior to proposed construction (Davies 2014). The POA also recommended that additional background research be conducted to close knowledge gaps identified during the POA as well as developing a chance find management protocol for unexpected fossil discoveries (Davies 2014).

2.2 RESULTS OF WOODFIBRE LNG FACILITY ARCHAEOLOGICAL IMPACT ASSESSMENT: KLEANZA CONSULTING 2016

An AIA of a portion of the Project area was completed by Kleanza Consulting in 2016 (Finkelstein and Huard 2016). A pedestrian survey of most of the Project area was completed and no areas suitable for shovel-testing were identified (Finkelstein and Huard 2016:18). No archaeological resources were identified during this AIA (Finkelstein and Huard 2016:24). The recommendations of the AIA are as follows (Finkelstein and Huard 2016:25):

- ◆ “... [N]o additional archaeological investigations are required within the Project footprint, given that said footprint does not change.

Kleanza recommends ongoing communication with Squamish Nation (Skwxwú7mesh) to address cultural concerns within this area.”

2.3 WOODFIBRE LNG FACILITY ARCHAEOLOGICAL IMPACT ASSESSMENT: ECOLOGIC CONSULTANTS LTD. 2022

Based on the recommendations of the 2014 AOA and 2016 AIA, an additional AIA was conducted for an extension to the Project area along Mill Creek. This extension encompasses Mill Creek and runs approximately 1.3 km to the northwest of the previous Project area extent. The Mill Creek addition has not been previously assessed and was not included in project plans at the time of the 2016 AIA.

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Recommendations were also made by Roy Northern Environmental Ltd. that “An AIA is recommended prior to any felling or ground disturbance occurring within the ‘arm’ portion of the proposed development” (Girard 2019:1), where the ‘arm’ refers to the Mill Creek extension.

A pedestrian survey was conducted by EcoLogic for the Mill Creek extension on July 14-15, 2022. No previously unrecorded archaeological sites were identified. However, one area of archaeological potential (AOP 1), a possible rock shelter, was identified in the northwestern portion of the study area (Morrissey and Pelletier 2023:9). The recommendations of the AIA are as follows (Morrissey and Pelletier 2023:3-4):

- “It is recommended that additional testing take place at AOP 1 if proposed developments are expected to impact the area. If proposed development avoids impacting AOP 1, then no further archaeological work is recommended for the Mill Creek expansion of the Woodfibre LNG facility.”

It should be noted that this AIA did not reassess areas subject to the 2016 impact assessment. However, it is recommended that an archaeological monitor and First Nations representatives be present if obstructions that prevented subsurface testing during the 2016 AIA are removed. In particular, monitoring is recommended if concrete/asphalt obstructions at the Woodfibre mill site are removed and expose the underlying sediment. Archaeological monitoring would be conducted under the currently held Heritage Inspection Permit (2022-0226) and First Nation permits.

Although the proposed developments for the Project are not in conflict with any previously recorded archaeological sites, the AIA may result in the identification of additional archaeological sites. As a result, the site alteration process has been included in the AHMP (Section 5.4) to be used as a guide should a site alteration be required in the future.

3. APPLICABLE LEGISLATION AND GUIDELINES

The management of recorded archaeological sites within the Project area and management of the discovery of any potentially unrecorded archaeological sites identified during development activities for the Project will be done according to applicable federal and provincial legislation and regulations (Table 2), in conjunction with regional management plans and strategies (where they exist) and, where applicable, following the heritage management plans of the involved First Nations (Squamish Nation 2020; Squamish Nation 2021). These regulations include federal and provincial conditions associated with the *Canadian Environmental Assessment Act* (CEAA) 2012 (now the *Impact Assessment Act*) and the *British Columbia Environmental Assessment Act*. This also includes adherence to the *Heritage Conservation Act*, *Fossil Management Framework*, *Local Government Act*, *Cremation, Interment and Funeral Services Act*, and *Coroners Act* as an extension of the permit conditions.

Table 3: Applicable Federal and Provincial Legislation Relevant to Archaeological Sites

Regulatory Component	Jurisdiction	Year	Description
<i>Canadian Environmental Assessment Act (CEAA) 2012</i>	Federal	2012	An Act respecting the environmental assessment of certain activities and the prevention of significant adverse environmental effect. This Act has since been superseded by the <i>Impact Assessment Act 2019</i> . The Project is considered a 'transitional project' and will remain under the authority of the CEAA.
<i>Environmental Assessment Act (BC)</i>	Provincial	2018	An Act that provides a review process for major projects to assess their potential environmental impacts. Additionally, it ensures these projects meet environmental, economic, and social sustainability goals as well as consideration of First Nation, public, community, and government concerns.
<i>Coroners Act</i>	Provincial	2007	An Act outlining the procedures for reporting a death to the BC Coroners Service as well as requirements for coroner investigations and inquests.
<i>Cremation, Interment and Funeral Services Act</i>	Provincial	2004	An Act detailing the processes surrounding the disposition of human remains.
<i>Fossil Management Framework</i>	Provincial	2010	A comprehensive document outlining the different legislative tools that protect fossil sites: <i>Land Act</i> , <i>Heritage Conservation Act</i> , <i>Park Act</i> , <i>Mineral Tenure Act</i> , <i>Mines Act</i> .
<i>Heritage Conservation Act</i>	Provincial	1996	The <i>Heritage Conservation Act</i> provides for the legal protection and conservation of heritage property in BC.
<i>Local Government Act</i>	Municipal	2015	Provides municipalities with a framework to record significant historical places and protect them through by-laws.

Archaeological sites are composed of the materials and imprints left on the landscape by past human occupants. These sites vary in both age and typology. In British Columbia, the HCA protects all

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archaeological sites on provincially legislated land (both Crown and private). The HCA automatically protects all archaeological sites that pre-date 1846 whether they are known, unknown, intact, or disturbed. Sites with existing archaeological status, issued by the Archaeology Branch, Ministry of Forests, Lands, Natural Resource Operations, and Rural Development (MFLNRORD), are protected regardless of age. All burials, First Nations' rock art, and ship and plane-wreck sites over two years old also fall under the protection of the HCA. Additionally, sites identified in a schedule under Section 4 of the HCA (i.e., agreements with First Nations) and sites on property subject to a Ministerial Order are protected by the HCA. No impacts may be made to an archaeological site on provincially legislated land in British Columbia without a Heritage Inspection Permit, Heritage Investigation Permit, or a Site Alteration Permit. These permits are issued by the Archaeology Branch under Sections 12.2 (Inspection, Investigation) and 12.4 (Alteration) of the HCA, respectively. The HCA provides substantial penalties for the destruction or unauthorized alteration of archaeological sites including imprisonment for up to two years and fines of up to \$1,000,000. Additionally, many First Nations in British Columbia have permitting systems in place that must be obtained prior to conducting archaeological assessments within their traditional territories.

It should be noted that the *Cremation, Interment and Funeral Services Act* and *Coroners Act* do not apply to archaeological burials. Should suspected modern human remains be encountered, the Squamish RCMP will be notified, and the remains become the responsibility of the RCMP.

3.1 FIRST NATIONS HERITAGE MANAGEMENT PLANS

First Nations in BC have a long, complex history dating back at least 14,000 years. Unlike in other parts of the world, much of this history was not documented using written records. Instead, rich oral traditions and archaeological remains document the history of the people who have populated what is now BC. Combined, these sources illustrate the elaborate social structures, cultural practices, economies, laws, and material cultures of the First Nations.

Archaeology is recognized by the Archaeology Branch as being “of great value to First Nations, local communities and the general public”, and it holds particular importance to BC’s First Nations because the existence of archaeological sites and archaeological evidence demonstrates a continual use of the land. Moreover, nearly all the recorded archaeological sites in BC are Indigenous in origin, and First Nations communities have special rights and responsibilities as caretakers of that inheritance. Some First Nations in BC have developed their own permitting processes and formal heritage management plans in response to observed shortfalls in the HCA concerning community heritage interests and values. As the HCA does not extend to federal lands (such as reserves), heritage management plans can provide direction for managing heritage resources in the absence of any federal heritage legislation. Heritage management plans can also emphasize the importance of archaeology to First Nations. For example, the Skwxwú7mesh Úxwumixw Heritage Policy (Squamish Nation 2021:13) specifies that “All Skwxwú7mesh Úxwumixw heritage has inherent cultural value” with the specific level of cultural significance being determined by Skwxwú7mesh Úxwumixw, and “... all Skwxwú7mesh heritage must be respected.”

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Each of the First Nations referred to in this report have a distinctive cultural history that may be reflected in archaeological sites. As such, each Nation will be contacted by the Archaeology Branch and provided the opportunity to review and comment on the proposed archaeological methodology as part of the HCA permitting process. Additionally, archaeological and/or heritage permits will be applied for from participating First Nations that have established permitting systems. To ensure the successful application of any required HCA and First Nation permits, all First Nations on whose asserted traditional territories a development will occur will be contacted prior to development and asked to provide guidance and direction for any specific heritage management policies or practices that they may have (Squamish Nation 2020; Squamish Nation 2021). In obtaining First Nations permits, WLNG commits to adhering to the heritage management policies of the affected First Nations.

Skwxwú7mesh Úxwumixw has two readily available policies: Skwxwú7mesh Úxwumixw Ancestral Remains Policy (Squamish Nation 2020) and Skwxwú7mesh Úxwumixw Heritage Policy (Squamish Nation 2021). The Ancestral Remains Policy describes the expectations, methods, and process that must be undertaken when suspected Ancestral Remains are encountered. This includes a stop work procedure, list of important contacts, limiting access to the remains, and developing a work plan. It is crucial that cultural time and space are made for any ceremonies that are required for disturbed Ancestral Remains. The Ancestral Remains Policy must be referred to if suspected Ancestral Remains are encountered.

The Skwxwú7mesh Úxwumixw Heritage Policy outlines procedures that are aligned with Skwxwú7mesh Úxwumixw values, beliefs, and traditions in an effort to protect their cultural heritage. It also describes Skwxwú7mesh Úxwumixw heritage management options, how to conduct oneself respectfully when working with Skwxwú7mesh Úxwumixw heritage, the heritage management process, types of heritage sites or objects, and information regarding archaeological investigation permits.

4. ROLES AND RESPONSIBILITIES

WLNG will be responsible for ensuring the protection of any archaeological sites or materials that may be present within the Project area. This responsibility includes any archaeological sites that are identified within the Project area as a result of the AIA conducted in advance of the development as well as any archaeological sites that may be identified as a result of the CFMP throughout the Project.

WLNG will direct all activities throughout the life of the Project to adhere to the AHMP and will ensure that all personnel conducting ground-disturbance activities have undergone archaeological awareness training and understood the content of the CFMP. Should potential archaeological sites be identified as a result of the CFMP these will be reported to WLNG management. It will be the responsibility of WLNG management to contact a professional archaeologist who can assess the nature of the find. If the find is archaeological, the archaeologist will determine the degree of the site impacts and will determine an appropriate mitigation plan in conjunction with WLNG, the Archaeology Branch, and the involved First Nations.

Table 4: Heritage Responsibilities by Role of the Woodfibre LNG Project

Role	Responsibility
Woodfibre LNG Environmental Representative	<ul style="list-style-type: none"> Responsible for overall compliance with regulatory permits and approvals. Review Contractor EPPs for compliance with EMP, permits, approvals, authorizations, notifications, letters of advice and applicable legislation and guidelines. Provide Contractors with environmental orientation, including archaeological and cultural awareness training. Review Contractor's permit applications. Review Contractor's environmental reports. Retain the Lead Environmental Monitor, Environmental Monitors and QEPs. Audit Contractor environmental and archaeological and heritage resources compliance. Communicate incidents, survey results and other information in accordance with the Archaeological and Heritage Resources Management Plan. Authority to stop work if activities are, or have the potential, to adversely effect environmental or archaeological resources. Responsible for reporting all reportable spills to the Provincial Emergency Program/Emergency Management British Columbia (EMBC) by calling 1-800-663-3456. Responsible for reporting marine spills to Canadian Coast Guard / DFO by calling 1-800-889-8852 and to Squamish Nation Environmental Manager.

	<ul style="list-style-type: none"> • Responsible for reporting all archaeological and heritage chance finds to a QEP and Indigenous Groups. • Submit environmental monitoring reports to external parties as required to satisfy permit conditions.
Contractor	<ul style="list-style-type: none"> • Supply all materials, plans, equipment, permits, licenses, tools, temporary facilities, sanitary facilities, labour, supervision, overhead, travel, accommodation, and everything required to complete the Work Activities as described on the specifications, drawings, or other information issued under the contract or called for in the contract documents. • Execute all works in compliance with all applicable environmental protection measures. Regardless of company affiliation or source, the term “Contractor” includes all subcontractors and subconsultants hired by the Contractor, who are subject to the same rules and regulations as the prime contractor and must abide by the conditions of all permits, authorizations, and regulations. <p>The Contractor is responsible for all their sub-contractors. As part of the Contractor’s responsibilities, the Contractor shall be responsible for:</p> <ul style="list-style-type: none"> • Implementing all applicable management plans. • Retaining a QEP to develop EPPs to address specific individual components activities identified in management plans. • Undertaking work in compliance with all contract documents (including management plans), EPPs, applicable legislation, permits, approvals, and notifications, letters of advice. • Implement work procedures, instructions, and mitigation measures to prevent and/or reduce adverse environmental and archaeological effects. • Correcting deficiencies and non-compliance items. • Conducting routine visual checks on vehicles, fuels storage areas, and equipment at the start of each day to identify potential equipment leaks. • Documenting and reporting environmental incidents, including archaeological. • Remaining on call to respond to environmental issues. • Providing individuals that are appropriately trained and equipped to respond to environmental incidents, such as spills. • Reporting all spills to the Woodfibre LNG Environmental Representative. • Reporting all chance finds to the Woodfibre LNG Environmental Representative and/or Lead Environmental Monitor.

	<ul style="list-style-type: none"> • Authority to stop work if activities are, or have the potential, to adversely effect environmental or archaeological resources. • Confirming that their employees and subcontractors are familiar with the contents of regulatory documentation (e.g. authorizations, management plans, etc.) specific to their scope of work.
Lead Environmental Monitor	<p>The Lead Environmental Monitor will report directly to the Woodfibre LNG Environmental Representative and will be responsible for providing overall environmental management and coordination, including but not limited to:</p> <ul style="list-style-type: none"> • Providing input into the preparation of environmental submittals (e.g., notifications or permits). • Attending planning and tailgate meetings to communicate potential environmental concerns and requirements. • Monitoring and reviewing compliance of activities with this EMP, Contractor EPP(s), permits, approvals and other environmental requirements. • Conduct audits, reviews as required by Woodfibre LNG • Maintain monitoring records including any measurements taken, sampling conducted, field notes, photographs, and environmental incident reports. • Liaising with regulatory agencies and other authorities as directed by the Woodfibre LNG Environmental Representative. • Reviewing the Contractor's EPP(s). • Managing the Environmental Monitor(s). • Reviewing environmental monitoring reports and submitting to the Woodfibre LNG Environmental Representative. • Identifying appropriate environmental performance indicators. • Authority to stop work if activities are, or have the potential, to adversely effect environmental or archaeological resources.
Environmental Monitor(s)	<p>The Environmental Monitor(s) will be onsite during relevant periods of increased potential environmental impacts as determined by the monitor/ QEP (e.g., works in proximity to watercourses/marine areas, sensitive habitats, severe rainfall events, etc.) to ensure appropriate mitigation efforts are in place and functioning effectively. The Environmental Monitor will have the following responsibilities:</p> <ul style="list-style-type: none"> • Communicating EMP and EPP requirements to the Contractor staff and field crews. • Liaising with the Contractor and the Woodfibre LNG Environmental Representative to assist in planning (i.e., identify

	<p>potential environmental issues and the options for mitigation measures).</p> <ul style="list-style-type: none"> • Conducting site visits for environmental monitoring during Work Activities as required by the Lead Environmental Monitor. The frequency of the monitoring activities will be influenced by the type of activities and weather conditions. • Measuring key environmental indicators (e.g., water quality) to determine if work being conducted is in accordance with the EMP, the Contractor's EPP and relevant permits, approvals, notifications, and guidelines. • Completing inspections of erosion and sediment control measures (including water quality tests) to determine that they are working properly and effectively. • Assisting the Contractor in identifying 'no-go zones/areas' in the field. • Informing the Contractor and the Lead Environmental Monitor immediately of activities that fail to meet the environmental requirements of applicable permits, approvals, guidelines, and regulations as described in the EMP or EPP, or that present an unacceptable risk to the local environment. • Providing recommendations to the Lead Environmental Monitor and Contractor if an activity is causing, or likely to cause, unacceptable environmental damage or risk, until an appropriate solution has been developed. • Documenting correction of environmental deficiencies by working directly with the Contractor. • Support reporting of spills if required under the Spill Reporting Regulation. Assist in verification of clean-up activities, confirmatory sampling if requested by the Woodfibre LNG Environmental Representative. • Attending meetings that the Lead Environmental Monitor considers relevant to their scope (e.g., kick-off meeting). • Preparing at a minimum weekly environmental monitoring reports to summarize activities and actions taken to minimize potential effects. • Authority to stop work if activities are, or have the potential, to adversely effect environmental or archaeological resources.
Qualified Professional(s)	<p>Woodfibre LNG, contractors, or other will retain QEPs to provide discipline-specific expertise (e.g., amphibians, birds, fish, archaeological and heritage resources). The QEPs will:</p> <ul style="list-style-type: none"> • Develop / review Contractor EPPs and work plans to confirm project commitments are satisfied. • Undertake surveys and monitoring requiring a QEP.

	<ul style="list-style-type: none">• Provide advice on discipline specific mitigation measures (e.g., determine size of buffers around active nests, “no go” zones around archaeological or heritage resources).
Archaeological/Heritage Professional	<p>In addition to the responsibilities listed above, Archaeological/Heritage Professionals may have additional responsibilities when engaged by Woodfibre LNG:</p> <ul style="list-style-type: none">• Ensure that the Archaeological and Heritage Resources Management Plan is being followed.• Ensure that the <i>Heritage Conservation Act</i> and heritage policies of affected First Nations are being followed.• Liaise with affected First Nations to ensure archaeological or heritage concerns are addressed.• Respond to calls and provide expert opinion regarding potential archaeological finds under CFMP.• Engage with affected First Nations during any potential CFMP finds and collaborate on appropriate management options.• Conduct any additional archaeological work that may arise throughout development and acquire the necessary permits (both First Nation heritage permits and HCA permits) to conduct that work.

5. ARCHAEOLOGICAL PROCESS IN BC

The Archaeology Branch has established an archaeological impact assessment process for industry, development, and research proponents to evaluate and mitigate the impacts to heritage resources (Archaeology Branch 1998). This process may include several distinct components: an AOA, a PFR, an AIA, and if needed, mitigation and/or site alteration. The pre-construction phase of this project may include most or all these components. As each of these investigations is more invasive than the previous one, each step will be conducted only as needed, based on the results of the previous one and the effects these results have on the proposed developments for the Project.

5.1 ARCHAEOLOGICAL OVERVIEW ASSESSMENT

The primary objective of an Archaeological Overview Assessment (AOA) is to describe the distribution of known and potential archaeological sites within a study area and to assess whether activities within the Project area pose a risk to known or potential archaeological sites. The characteristics of archaeological sites that may be identified within the local study area, based on relevant biophysical, ethnographic, and ethnohistoric data, are outlined to assess the potential risks to cultural resources. Based on this information, management recommendations are provided regarding the need for further archaeological investigations (e.g., an AIA or PFR) for potential and known archaeological resources within the Project area and to assess the risks associated with proposed developments. The format of an AOA should meet or exceed the Archaeological Impact Assessment Guidelines (Archaeology Branch 1998). This assessment addresses the potential for the existence of physical evidence of past human activity and does not encompass traditional use or other heritage concerns of the First Nation communities, which should be solicited directly from them.

5.2 PRELIMINARY FIELD RECONNAISSANCE

A PFR is a non-invasive field survey program. The primary objective of a PFR is to conduct a field survey to complement and further refine the findings of an AOA. During a PFR areas of high, moderate, and low potential as identified by the AOA should all be inspected to ascertain the effectiveness of the AOA model. Additionally, the data collected during a PFR can be used to refine the AOA model and provide increased accuracy of the modelled potential. As PFRs are non-invasive, no archaeological testing may occur. Although PFR programs can be done without HCA permits, the resulting reports should meet or exceed the Archaeological Impact Assessment Guidelines (Archaeology Branch 1998).

5.3 ARCHAEOLOGICAL IMPACT ASSESSMENT

An AIA is a field survey and invasive testing program. The AIA focuses on inventory or identification and evaluation of archaeological resources within proposed development areas. An AIA must be conducted under the authority a Heritage Inspection Permit, issued under Section 12.2 of the HCA. The results of an AIA are documented in an AIA report that must meet the requirements and conditions laid out in the Heritage Inspection Permit application.

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AIA fieldwork can take many forms and must be defined and described in the Heritage Inspection Permit application in advance of conducting fieldwork. AIA fieldwork, survey, and testing methodology should be developed on a project-to-project basis and should include methods that are tailored to the cultural history of the Project area with a focus on the types of archeological sites that are likely to be present. The vegetation, topography, and climate of the Project area can also play a significant role in determining the best approach for AIA methodology.

5.4 SITE ALTERATION

A site alteration is an invasive and destructive investigation of a previously recorded archaeological site for which impacts, as a result of development, cannot be avoided or mitigated in any other way. Site alterations should only be done if all other opportunities to avoid impacting archaeological sites have been exhausted. Site alteration projects may involve a variety of archaeological methods ranging from the systematic sampling of portions of a site to excavation of an entire site and are conducted on a site-by-site basis under a Site Alteration Permit issued under Section 12.4 of the HCA. A Site Alteration Permit application is completed by a professional archaeologist and held by both the archaeologist and proponent.

6. IMPACT MANAGEMENT

No archaeological sites associated with the Project footprint have been identified to date. As such, specific impact management plans cannot be determined at this time. In the event of a chance find, the project archaeologist must be contacted so they can assess the find and determine if it is archaeological in nature (Appendix A). Each archaeological site has its own unique constraints and will need to be addressed individually. The possible management recommendations that may be offered by the archaeologist are listed below.

If an archaeological or cultural heritage site is confirmed to be present, the archaeologist will coordinate with the client, Archaeology Branch, and the involved First Nations to evaluate management options. Archaeology Branch and First Nations approval are required prior to the implementation of any management options that require archaeological investigations or alterations to an archaeological site. Management options that include additional archaeological research will require the appropriate HCA permits issued by the Archaeology Branch and archaeological/heritage permits issued by the affected First Nations. The potential management options are provided below. These options are not mutually exclusive, and one or more may apply.

- ◆ Option 1: Avoidance through project redesign or relocation. This is the preferred option as it minimizes impacts to sensitive archaeological sites. It can also minimize cost and schedule impacts to the Project.
- ◆ Option 2: Enforcement of site protection measures, both temporary and permanent. Temporary options could include fencing, flagging, or a barricade to protect the site. Permanent solutions could include capping the area with fill. Appropriate measures should be discussed with all involved First Nations.
- ◆ Option 3: Systematic data recovery in the form of controlled archaeological excavation (heritage investigation) or site alteration. This option is destructive to the archaeological site and can delay proposed Project activities and may involve the implementation of all options presented here. Systematic data recovery requires an HCA Heritage Investigation Permit and site alteration requires an HCA Site Alteration Permit; both studies require archaeological/heritage permits from the affected First Nations.
- ◆ Option 4: Monitoring of construction or operations maintenance activities by a professional archaeologist. Monitoring is appropriate where Project impacts cannot be predicted or evaluated before construction or operations maintenance activities, or in cases where deeply buried deposits are expected that cannot be accessed without the assistance of heavy machinery. Monitoring may also be appropriate where systematic data recovery has been undertaken but where significant archaeological deposits remain. This option will require an HCA Heritage Inspection Permit when an archaeological site has not yet been identified, an HCA Site Alteration Permit when an archaeological site is present, and archaeological/heritage permits from the affected First Nations.

7. ONGOING ARCHAEOLOGICAL AWARENESS TRAINING

The objective of the ongoing archaeological awareness training is to protect archaeological sites or cultural heritage resources that were not identified during the pre-construction investigations. This is accomplished by providing Project employees and contractors with education about local First Nations' long history and use of the landscape, and the types of archaeological materials likely to be present because of these activities. This knowledge is then supplemented by providing detailed training on how to identify, react to, and report any archaeological chance finds. A chance find is any suspected evidence of archaeological materials discovered during Project construction or operations in the absence of a professional archaeologist. The Chance Find Management Protocol (CFMP; Appendix A) is intended to be part of an employee's ongoing archaeological awareness training and must be kept with this document. All the data needed for this training are provided in the CFMP.

Archaeological awareness training will be provided to all employees and contractors working on site, except for visitors. This will ensure that personnel, even if not conducting ground disturbance, will be aware of their surroundings and the potential for archaeological and cultural materials on the landscape. Archaeological awareness training will be provided immediately upon arrival. Refreshers on awareness training will be provided in the form of toolbox talks, bulletins, environmental meetings and/or environmental standdowns.

WLNG has committed to delivering archaeological awareness training, as required, and ensuring the CFMP is provided to all project personnel. WLNG understands the importance of educating workers on the legal obligations related to archaeological and heritage resources and the significance of these resources to local First Nations.

8. REPORTING

The AHMP described here and the incorporated CFMP are tools to be used to limit unnecessary impacts to archaeological materials within the Project area. The CFMP should not be treated as an archaeological management tool on its own.

To ensure that the AHMP is being followed and that the results of the AOA, AIA, and any other fieldwork conducted for the Project have met the required standards, WLNG will record and document all reported chance finds. If a chance find is reported, the following data will be recorded:

- ♦ the name and contact information of the person who reported the find;
- ♦ the location and circumstances of the find;
- ♦ the name and contact information of the archaeologist who assessed the find;
- ♦ the results of the archaeologist's analysis and, if archaeological, the nature and extent of the archaeological materials;
- ♦ the management recommendations made by the archaeologist, the Archaeology Branch, and the involved First Nations; and
- ♦ the actions taken by WLNG to manage the archaeological materials.

All appropriate recording and reporting required by the HCA will be completed. Draft reports will be provided to the affected First Nations for comment prior to finalization. If a reported chance find is determined to be archaeological, WLNG will share all information regarding the archaeological chance find with the affected First Nations. WLNG will ensure adherence to any statutory reporting requirements and will maintain records of investigations carried out and evidence discovered.

9. PLAN PERFORMANCE AND EFFECTIVENESS REVIEW

At WLNG's discretion, the results from the archaeological survey programs and the reports from all chance finds reported under the CFMP program may be reviewed by the client (or designated qualified staff) and a professional archaeologist. The goal of this review will be to determine if any trends are evident and if target criteria are being met. The results of this review can be used to further focus the CFMP training, gather additional data on the quantities and types of materials being identified, and provide feedback to modify any management or workflow procedures, as required. Where applicable, any modifications made to the plan will be communicated to regulatory authorities.

10. REFERENCES

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APPENDIX A. CHANCE FIND MANAGEMENT PROTOCOL
