Archaeological Overview Assessment

British Columbia Ferry Services Inc. Proposed Berth Rebuild –
Village Bay Ferry Terminal, Mayne Island, British Columbia

April 8, 2025

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Limitations and Sign-off

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Executive Summary

At the request of British Columbia Ferry Services Inc. (BC Ferries), Stantec Consulting Ltd. (Stantec) conducted an archaeological overview assessment (AOA) of the proposed Village Bay Terminal Berth 1 Rebuild, Village Bay Road, Mayne Island, British Columbia (the Project). As requested by BC Ferries, the AOA also included the assessment of the broader Village Bay Terminal property (Study Area) to inform future development planning. The Study Area is within the traditional territories of Semiahmoo First Nation, Lake Cowichan First Nation, Penelakut Tribe, Stz'uminus First Nation, Cowichan Tribes, Halalt First Nation, Lyackson First Nation, Tsawwassen First Nation, Tseycum First Nation, Pauquachin First Nation, Tsawout First Nation and Tsartlip First Nation (Consultative Area Database 2021).

The objectives of this AOA are to:

- Identify previously recorded archaeological sites, if present, within the Study Area.
- Identify First Nation traditional use sites and culturally sensitive areas, if present, within the Study Area.
- Identify and assess the potential for unrecorded archaeological sites within the Study Area.
- Assess potential impacts to archaeological sites that may result from the Project.
- Determine the appropriate methods and scope of work for subsequent archaeological studies, if needed.

There are no archaeological or historical sites recorded in the Study Area. However, there are four archaeological sites recorded within 1 km, the nearest of which, DfRt-8, is approximately 245 m to the south-southeast. Provincial records indicate that there have been few archaeological studies conducted in the Village Bay area and none involving subsurface testing in or adjacent to the Study Area. The 2005 Hul'qumi'num Treaty Group (HTG) archaeological potential model (APM) identified portions of the Project Area and Study Area as having high archaeological potential.

The Study Area has been extensively disturbed from past terminal development activities and lacks any well-defined natural landforms while moderately sloping down toward Village Bay. Comparative reviews of historical aerial photos and current Google Earth imagery reveal that the application of fill during previous terminal development activities has artificially extended the shoreline into the Bay.

Input received from Indigenous groups and considered in this assessment conveys the importance of the Active Pass area and sheltered island bays for year-round hunting, fishing and gathering activities, that there are ancestral remains throughout the Gulf Islands, and that it is preferred that artifacts and ancestral remains be left in situ.

The Project Area and broader Study Area are evaluated as having moderate archaeological potential (Figure 2). This evaluation is based on the environmental setting and terrain attributes, proximity to and contexts of previously recorded archaeological sites, and results of the 2005 HTG APM.

Archaeological monitoring of land-based ground disturbing activities associated with the Berth 1 Rebuild Project under a *Heritage Conservation Act* (HCA) section 12.2 heritage inspection permit is recommended.

A low tide intertidal survey of the proposed Berth 1 Rebuild piling installations is recommended.

It is recommended that a Project-specific Chance Find Procedure (CFP) is developed and followed during Project construction activities to provide direction on the process, roles, responsibilities, and actions required if suspected archaeological materials are encountered during this development activity.

It is also recommended that any future ground disturbing activities within the Study Area are monitored archaeologically under an HCA section 12.2 heritage inspection permit. It is anticipated that archaeological monitoring will only be required for select portions of the Study Area, dependent on and determined by the results of initial subsurface observations.

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List of Figures

Acronyms / Abbreviations

AOA	archaeological overview assessment
APM	archaeological potential model
BC	British Columbia
BC Ferries	British Columbia Ferry Services Inc.
BP	before Present
Cal	calibrated
CDF	Coastal Douglas-fir biogeoclimatic zone
CFP	Chance Find Procedure
ha	hectare
HCA	*Heritage Conservation Act*
HTG	Hul'qumi'num Treaty Group
m	metre
PARL	Provincial Archaeological Report Library
RAAD	Remote Access to Archaeological Data

1 Introduction

At the request of British Columbia Ferry Services Inc. (BC Ferries), Stantec Consulting Ltd. (Stantec) conducted an archaeological overview assessment (AOA) of the Village Bay Terminal property on Village Bay Road, Mayne Island, British Columbia (Study Area), including the footprint of proposed upgrades associated with the Berth 1 Rebuild Project (the Project).

Heritage sites and objects on private and Provincial Crown land in British Columbia are protected under the *Heritage Conservation Act* (HCA), which is administered by the Archaeology Branch of the Ministry of Forests, Lands, Natural Resource Operations and Rural Development. Heritage resources specifically protected by the HCA include Provincial heritage sites, burial places, aboriginal rock paintings or carvings, sites with evidence of human habitation or use before AD-1846 and heritage wrecks. The Lieutenant Governor in Council may also make regulations to define the extent of types of sites protected by the HCA.

Archaeological and historical sites are places which indicate past human occupation or use. Archaeological sites are those which can be investigated primarily by archaeological methods such as excavation whereas historical sites can be studied not only by archaeological methods but also through the analysis of written records.

There are usually three stages to the archaeological impact assessment and review process including overview assessment, impact assessment and impact mitigation. The overview assessment is intended to identify and assess heritage resource potential or the likelihood that sites are present. The objectives of the impact assessment are the identification and evaluation of heritage resources within a proposed development area and the assessment of possible impacts by the development on these sites. Impact mitigation is any course of action that results in the reduction or the elimination of the adverse impacts of a development. Mitigation usually involves site protection, project redesign or systematic data recovery, normally involving archaeological excavation.

The present study was designed to satisfy the objectives of an overview assessment.

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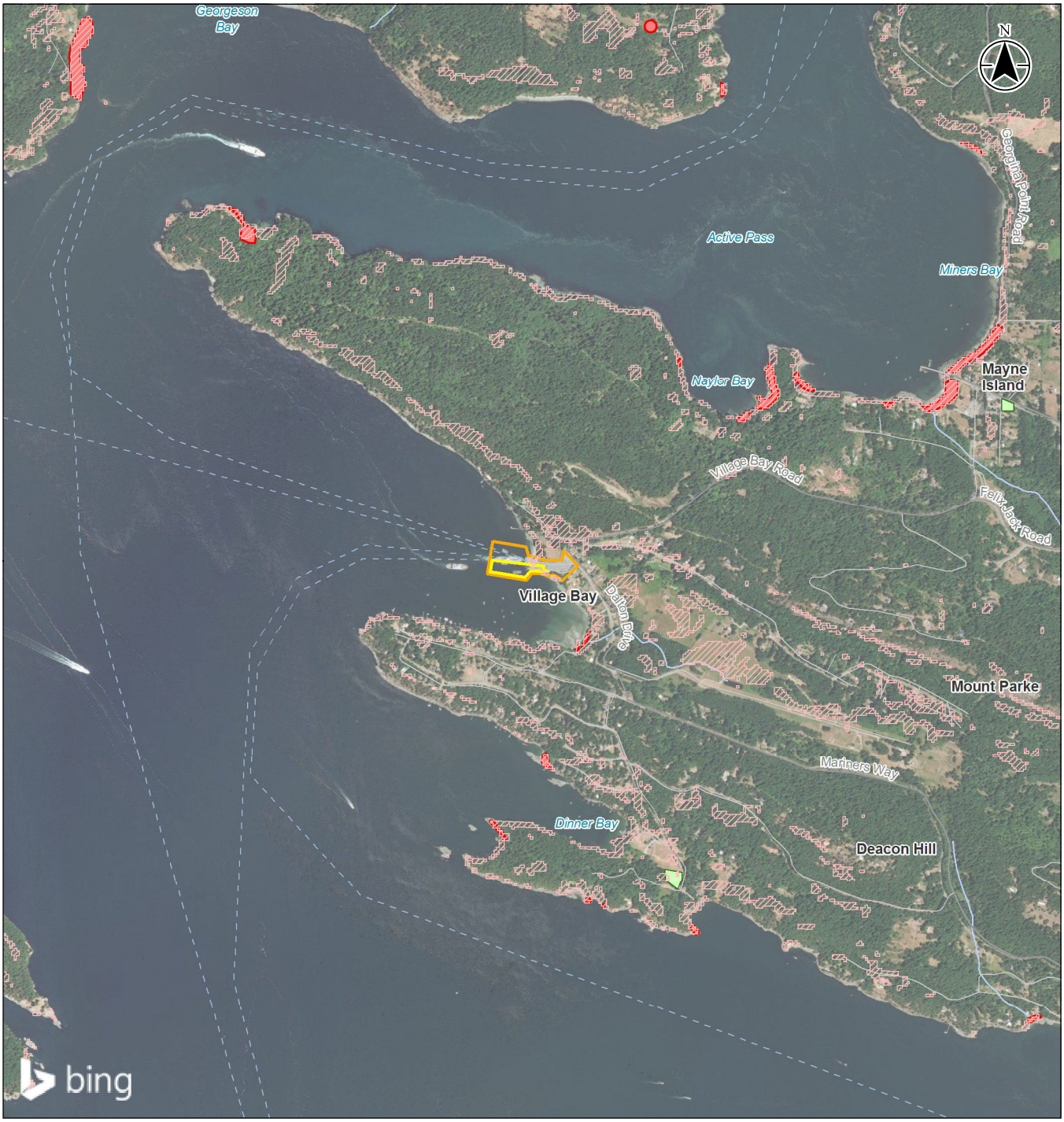
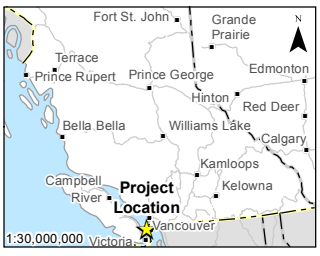
- Identify First Nation traditional use sites and culturally sensitive areas, if present, within the Study Area.
- Identify and assess the potential for unrecorded archaeological sites within the Study Area.
- Assess potential impacts to archaeological sites that may result from the Project.
- Determine the appropriate methods and scope of work for subsequent archaeological studies, if needed.





Road
Local Street
Ferry Route
Watercourse

AOA Study Area
Project Area
Previously Recorded Archaeological Site
Heritage Site

Archaeological Potential Model - HTG 2005

High Potential

0 200 400 600 800 1,000 m

1:25,000 (at original document size of 8.5x11)

Notes
1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data Sources: DataBC, Government of British Columbia; Natural Resources Canada

Stantec

Project Location:
Mayne Island,
British Columbia

Project Number: 123221874
Prepared by WWU on 20210730
Requested by RSPADY on 20210714
Checked by RSPADY on 20210730

Client/Project/Report
BC Ferries
Village Bay Ferry Terminal
Archaeological Overview Assessment

Figure No.
1

Title
Midrange Map

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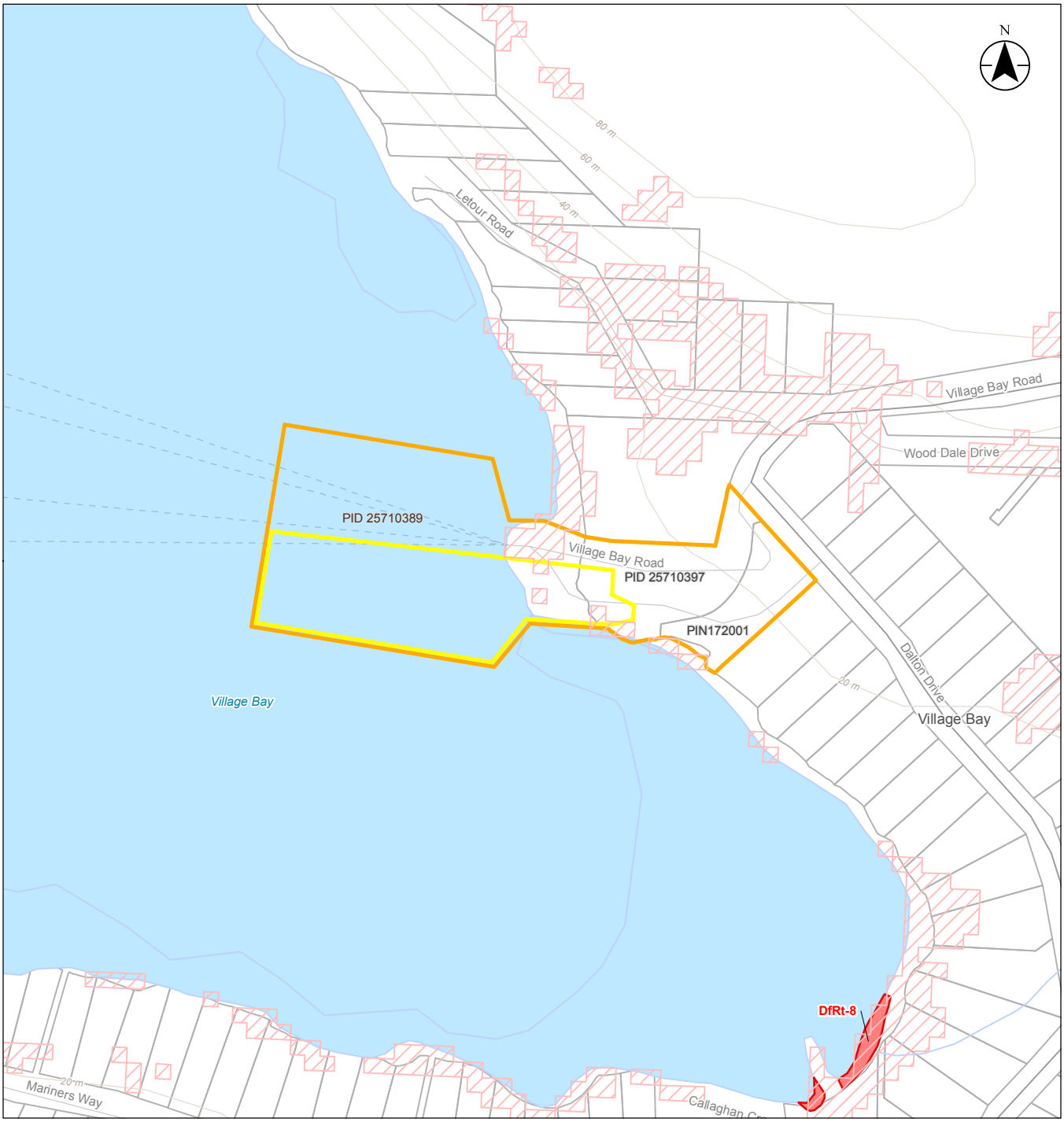
2 The Study Area

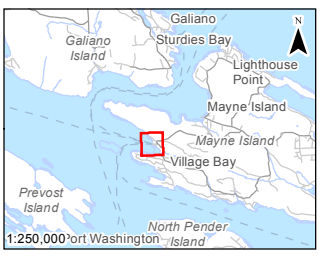
The Study Area of approximately 3.6 ha is comprised of three contiguous lots on the shoreline of Village Bay on Mayne Island, British Columbia (BC) which compose the Village Bay ferry terminal property (Figure 1 and Figure 2):

- PID 25710389 (full legal description unavailable)
- PID 25710397 (full legal description unavailable)
- PIN 172001, legally described as Lot 37, Section 6, Mayne Island, Cowichan District, Plan 22057

The Study Area is bounded by Dalton Road to the east, private properties and the intertidal waters of Village Bay to the north and south, and Village Bay to the west.

The proposed Project area of approximately 1.5 hectare (ha) overlaps portions of the two westernmost lots comprising the Study Area and includes foreshore and intertidal areas (Figure 1 and Figure 2). Upgrade development plans for Berth 1 will involve the demolition of the existing berth structure and placement of the new berth at the same location through the installation of steel piles in the intertidal area and some associated excavation and grading on the foreshore.





Road
Local Street
Ferry Route
Topographic Contour
Watercourse
Waterbody

AOA Study
Project
Previously Recorded Archaeological Site

Archaeological Potential Model - HTG 2005

High Potential

0 20 40 60 80 100 m
1:4,000 (at original document size of 8.5x11)

Notes
1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data Sources: DataBC, Government of British Columbia; Natural Resources Canada

Stantec

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BC Ferries
Village Bay Ferry Terminal
Archaeological Overview Assessment

Figure No.
2

Title
Detail Map

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3 Methods

3.1 Background Information Review

Stantec undertook a desktop study of relevant archaeological, ethnographic, historical, and environmental data to identify any recorded archaeological sites and evaluate potential for the presence of unrecorded archaeological sites within the Study Area, and to determine if the Project is in potential conflict with these archaeological constraints. The following information sources were reviewed:

- Provincial Heritage Register through the Remote Access to Archaeological Data (RAAD) application maintained by the Archaeology Branch, last accessed July 15, 2021.
- Previous archaeological studies within and near the Study Area accessed through the Provincial Archaeological Report Library (PARL), maintained by the Archaeology Branch, last accessed July 20, 2021.
- Relevant biophysical and ethnographical data.
- Hul'qumi'num Treaty Group (HTG) archaeological potential model (APM) through the RAAD application, last accessed July 15, 2021.
- An historical aerial photograph from ca. 1932 from the National Earth Observation Data Framework Catalogue.

3.2 Indigenous Group Correspondence

The Study Area is within the traditional territories of Cowichan Tribes, Halalt First Nation, Lake Cowichan First Nation, Lyackson First Nation, Pauquachin First Nation, Penelakut Tribe, Semiahmoo first Nation, Stz'uminus First Nation, Tsartlip First Nation, Tsawout First Nation, Tseycum First Nation and Tsawwassen First Nation were contacted to request information that would assist with the assessment of archaeological potential. The Malahat First Nation and Ts'uubaa-asatx First Nation were also contacted for their input in alignment with BC Hydro's engagement on the Project.

3.3 Archaeological Potential Assessment

Key factors considered in the assessment of archaeological potential in terrestrial and intertidal portions of the Study Area include archaeological potential ratings as indicated in the existing HTG 2005 model, proximity to known archaeological sites, proximity to terrain and hydrological features frequently associated with archaeological sites in the region (e.g., marine shorelines, freshwater bodies, fish-bearing streams, terraces, knolls, ridgelines), regional sea-level history, and the nature and extent of past development (e.g., construction, dredging, and fill).

4 Results

4.1 Background Information Review

The Study Area is on the west side of Mayne Island along the east shoreline of Village Bay at the west terminus of Village Bay Road (Figure 1 and Figure 2).

4.1.1 Biophysical Setting

Mayne Island is one of the outer sub-group of the southern Gulf Islands. These islands are part of a single geological formation now forming a broken island chain. Mayne is located between Galiano to the north, Saturna to the south and Pender to the west. The island is typical of the southern Gulf Islands with its rugged, rocky sandstone shores broken by pebble beaches and protected bays.

The Study Area falls within the Coastal Douglas-fir biogeoclimatic zone (CDF). The CDF zone is limited to only a small portion of southeastern Vancouver Island, several Gulf Islands, and a segment of the adjacent BC mainland (Nuszdorfer et al. 1991:82). The climate is mild and relatively dry. Most forests in the CDF have regenerated after turn of the century logging. Old growth forests are rate and tend to be found only in parks. Douglas-fir (*Pseudotsuga menziesii*) is the most common tree species found in the upland forests with a typical understory of salal *(Gaultheria shallon*) and/or Oregon grape (*Mahonia aquafolium*). Western redcedar (*Thuja plicata*), grand fir (*Abies grandis*), arbutus (*Arbutus menziesii*), Garry oak (*Quercus garryana*) and red alder (*Alnus rubra*) are most frequently found with Douglas-fir and cedar in the wetter areas, arbutus and Garry oak in drier locales. Other tree species which occur less commonly in the CDF zone include shore pine (*Pinus contorta*), Sitka spruce (*Picea sitchensis*), western hemlock (*Tsuga heterophylla*), bitter cherry (*Prunus emarginata*), western flowering dogwood (*Cornus nuttallii*), bigleaf maple (*Acer macrophyllum),* black cottonwood (*Populus trichocarpa*) and trembling aspen (*Populus tremuloides*) (Nuszdorfer et al. 1991:82). Vegetation in the region is diverse and includes seaside, aquatic, rock outcrop and forest habitat species. Species of native wildlife common in the CDF zone include blacktailed deer *(Odocoileus hemionus*), black bear (*Ursus americanus*), cougar (*Felis concolor*) and elk (*Cervus elaphus*) as well as a variety of smaller land mammals. Common birds and waterfowl include blue grouse (*Dendragapus obscurus*), pileated woodpecker (*Dryocopus pileatus*), Steller's jay (*Cyanocitta stelleri*), raven (*Corvus corax*), great blue heron (*Ardea herodias*), mallard (*Anas platyrhynchos*), hooded merganser (*Lophodytes cucullatus*), glacous gull (*Larus hyperboreus*) and Canada goose (*Branta canadensis*). Fish species found in the waters around the island include salmon (*Oncorhynchus sp.*), Pacific herring (*Clupea pallasii*), numerous species of rockfish (*Sebastes sp.*), lingcod (*Ophiodon elongatus),* halibut (*Hippoglossus sp.*), spiny dogfish (*Squalus sp.),* and greenling (*Hexagrammos sp.*). Native invertebrates include butter clam (*Saxidomus gigantea)*, horse-clam (*Tresus sp.*), littleneck clam (*Leukoma staminea)*, mussel (*Mytilus sp.*), Nuttall cockle (*Clinocardium nuttallii*), and native oyster (*Ostrea lurida, formerly O. conchaphila*).

The Gulf Islands were glaciated several times during the Pleistocene; the weight of ice depressed the islands relative to the sea. Following the final deglaciation approximately 13,600 calibrated years before present (CalBP) (Dallimore et al. 2008), the islands rebounded isostatically relative to the sea, resulting in marine deposits at 30–50 m above current sea-level (Kenney et al. 1988). Sea-level modelling conducted by Wyatt (2015) suggests that the sea-level was approximately 30 m higher than present 11,570 CalBP. By approximately 9,850 CalBP, sea-level dropped approximately 55 m below current levels. By 3,500 CalBP, sea-level stabilized at approximately 1.25 m below current levels (Wyatt 2015). This aligns with former sea-level research conducted for the Gulf Islands National Park reserve which suggested that sea-level has been relatively stable in the Strait of Juan de Fuca for the last 6,000 years (Fedje et al. 2009; Clague et al. 1982). These models suggest that archaeological sites dating to the late Holocene would be either submerged underwater or situated near present shorelines, whereas Terminal Pleistocene/Early Holocene sites may be stranded farther inland at higher elevations associated with relict paleo-shorelines.

4.1.2 Ethnographic Setting

The Study Area is within the traditional territories of Cowichan Tribes, Halalt First Nation, Lake Cowichan First Nation, Lyackson First Nation, Pauquachin First Nation, Penelakut Tribe, Semiahmoo first Nation, Stz'uminus First Nation, Tsartlip First Nation, Tsawout First Nation, Tseycum First Nation and Tsawwassen First Nation.

Tsartlip First Nation's Mayne Island Reserve No. 6 is approximately 300 m north of the Study area. The Tsartlip First Nation is one of the four present day groups, along with the Pauquachin First Nation, Tsawout First Nation, Tseycum First Nation, that together comprise the Saanich peoples. Saanich is an anglicization of the Native term *shsánets*, which refers to those Indigenous people who speak the Saanich dialect of the Northern Straits Coast Salish language. The Saanich people themselves are known as *xwsánets* (WSÁNEĆ) (Suttles 1990) and have occupied and frequented the North Saanich peninsula and neighboring Gulf Islands for millennia (Horne 2012). On Vancouver Island, the WSÁNEĆ, along with the Sooke and the Lukungun (Songhees and Esquimalt), represent the "Northern Straits" or "Straits Salish", a linguistic grouping that, together with the Squamish, Halkomelem, Nooksak and Clallam, comprise the Central Coast Salish division of the Northwest Coast culture area. In SENĆOŦEN, the language of the WSÁNEĆ nations, Mayne Island is named SKŦOKEL (Montler 2018).

Considerable ethnographic information on the Northern Straights Coast Salish and WSÁNEĆ peoples is available in the works of Bamett (1935–1936, 1938, 1955), Hudson (1971), Jenness (1938), Kennedy and Bouchard (1990) and Suttles (1990). For purposes of this study, the overview of traditional culture provided by Suttles (1990) is briefly summarized below.

Traditionally, Northern Straits Coast Salish peoples followed a well-defined seasonal pattern of movement and resource exploitation. Seasonal movements during spring, summer and fall included travel through the Gulf Islands and to the lower Mainland to fish salmon in the Fraser River. Subsistence focused mainly on marine resources, primarily fish and intertidal shellfish, but also included the capture of marine mammals. Hunting of birds and land mammals including deer and black bear and gathering a wide variety of plants such as camas, salal and blackberry supplemented the marine diet. Winter villages comprised of

shed roofed houses were typically located on the coast and may have also served as secondary bases at other times of year. It was during the winter that most ceremonial activity took place. At other times of year, less permanent structures were constructed in other areas for seasonal use.

4.1.2.1 Ethnographic Activities Reflected in the Archaeological Record

Ethnographic activities such as resource procurement (fishing, shellfish harvesting, hunting, plant/root gathering), food storage or preparation (use of drying racks, hearths, roasting pits), habitation, transportation and trade (use of trails), human burial and associated cairn erection, and other spiritual practices associated with Coast Salish peoples prehistoric use of the region are reflected in the archaeological record.

4.1.3 History

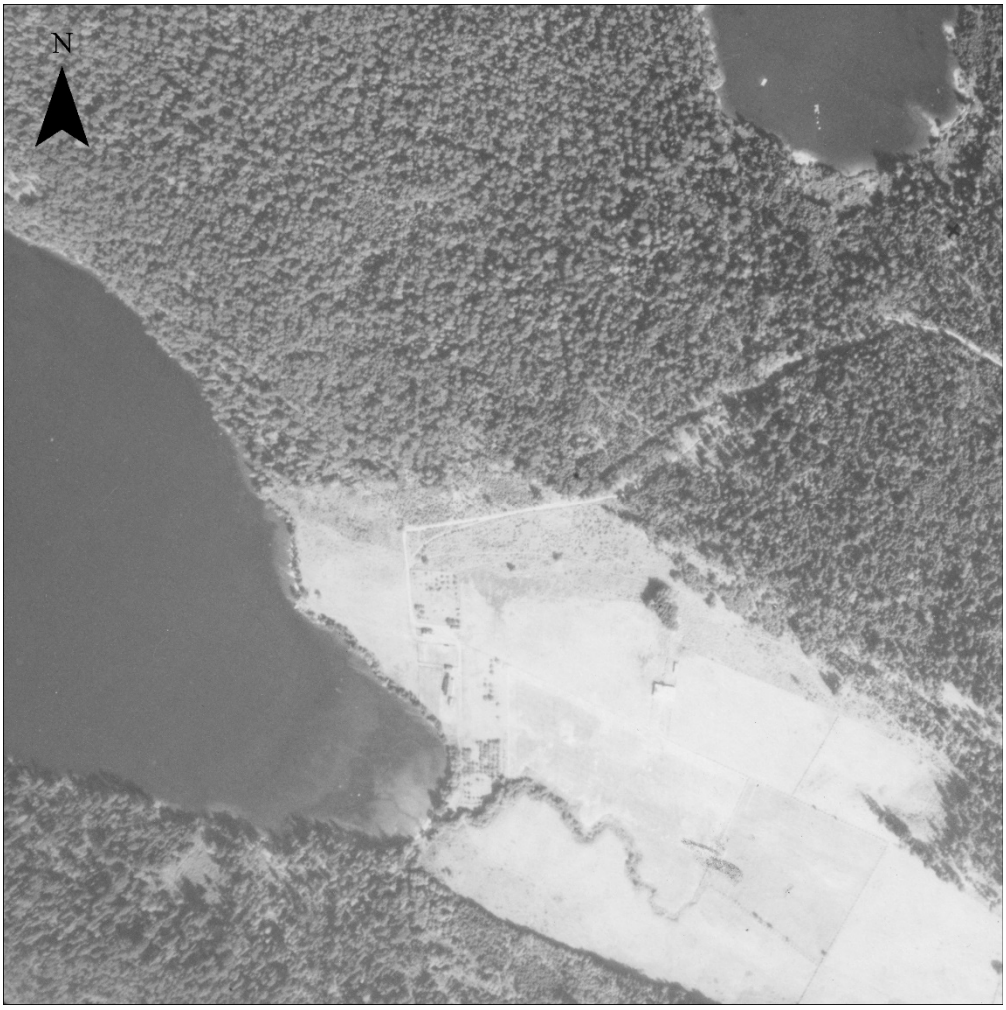
Historical records indicate that Captain George Vancouver camped at Georgina Point on Mayne Island in 1794, but Royal Navy exploration of the region was not carried out in earnest until the 1850s when Captain George Richards surveyed the area aboard the *H.M.S. Plumper* (Elliott 1984). It was during this expedition that Richards named Mayne Island after his lieutenant, Richard Charles Mayne, and Village Bay as such after observing an Indigenous village on the Bay's shoreline (Elliott 1984). The first steam vessel to navigate the pass between Mayne and Galiano Islands was the *U.S.S. Active*, the anglicized namesake for the pass (Mayne Island, BC - Our Island Community 2009).

European settlers first registered land claims on Mayne Island in 1859 at Miner's Bay, named after those staying over from Vancouver Island on their way to the Cariboo Gold Rush of 1858 (Elliott 1984). The late 19th century saw continued homesteading and settlement on the Island with its first lighthouse, the Active Pass Lighthouse on Georgina Point, in operation by 1885, the first church on the Island, Church of St. Mary Magdalene, founded on the east shoreline of Miner's Bay in 1887, and working farms and apple orchards prospering by the 1890s (Mayne Island, BC - Our Island Community 2009). The Springwater Lodge, the oldest continuously operated hotel in BC, was established in 1892 at the head of Government Wharf in Miner's Bay. Originally a private home, then a boarding house, the residence was later turned into a hotel and renamed Grandview Lodge (Elliott 1984). The Plumper Pass Lockup, site of the present-day Mayne Island Museum, was built in 1896, and the first community hall of the outer Gulf Islands, the Mayne Island Agricultural Hall, was built in circa 1899, both in Miner's Bay (Mayne Island, BC - Our Island Community 2009). The Agricultural Hall is a provincially registered heritage site (DfRt-27) and The Active Pass Lighthouse is registered federally as an historic place.

With Canadian Pacific Railway Ferries first docking at Miner's Bay circa 1900, the early 20th century saw continued settlement of the Island, including the establishment of an active and successful Japanese community (Elliott 1984)The first Japanese settler to arrive on Mayne Island was Goan Kadonaga in 1903 and the Mayne Mast, presently operated as a restaurant on Village Bay Road near Mayne Street Mall, was once a Japanese farmhouse owned by Kumazo Nagata, who founded the "Active Pass Grower's Association" (Elliott 1984). Mayne Island's Japanese community flourished between WWI and WWII, until those of Japanese heritage were taken to war camps in the province's interior in 1942. In 1987 the Mayne Island Parks and Recreation Commission initiated the process of establishing a commemorative

Japanese garden in Dinner Bay Park to honour the Japanese who called the Island home prior to their forced departure (Mayne Island, BC - Our Island Community 2009). The Mayne Island Japanese Garden was officially opened and dedicated by BC Lieutenant Governor Iona Campagnolo in May of 2002 and is registered provincially as a heritage site (DeRt-125).

Figure 3 Aerial Photograph ca. 1932 Showing the Village Bay Area of Mayne Island



SOURCE: National Earth Observation Data Framework Catalogue

4.1.4 Regional Prehistory

Archaeological research in the Gulf of Georgia dates to the turn of the twentieth century. A generally agreed upon prehistoric sequence in all but terminology has been formulated over the years. The following generalized sequence is based primarily on the works of Borden (1970), Clark (2010), Ham (1982), Ham et al. (1984), Matson (1976), Matson et al. (1980) and Mitchell (1971). The latter part of the sequence has been summarized by Mitchell (1990). Carlson (1970) summarized the earlier part of the sequence. The sequence pertains to the areas identified as being occupied by the Northern Coast Salish (Kennedy and Bouchard 1990), Central Coast Salish (Suttles 1990), and Straits Salish (Carlson 1970).

From earliest to most recent, the sequence includes the Lithic, Charles, Locarno, Marpole and Developed Coast Salish culture types. The earliest of these on Vancouver Island begins about 9,000 years ago, with sites EeSu-8 in Bear Cove, Port Hardy (Carlson 1979) and DkSf-2A at Millard Creek in Courtney (Capes 1977). And more recently, two sites on Quadra Island, at the Yeatman Bay Ridge Site with median age of 9,609 Cal BP, and the Yeatman Bay Road Cut Site with median age 9,453 Cal BP identified during the Discovery Islands Archaeology Project (Vogelaar 2019). By about 5,000 years ago, the Charles culture type (5,500–3,300 years before present [BP]) sees the beginnings of the ethnographically documented patterned use of river and marine resources supplemented by diversified hunting and gathering (Mitchell 1990).

The Locarno culture type (ca. 3,500/3,300–1,500 years BP) is typified by a varied resource base showing and increased reliance on sea mammals, shellfish and birds. During this period, there appears to be a strong orientation to offshore rather than riverine resources. Locarno components are known for many sites on Vancouver Island and the Gulf Islands. The Marpole culture type spans the period between 2,000 and 1,500/1,100 years BP. Marpole artifact assemblages mark a shift away from chipped stone to ground and pecked stone. During Marpole, a rich artistic tradition develops which is expressed in stone and antler sculpture, slate and shell disc beads and decorated items of native copper. The final Developed Coast Salish culture type (2,000/1,400-200 years BP) is directly ancestral to ethnographically documented Coast Salish culture and continues the trend away from chipped lithic artifacts to an increase in composite tool technology. Intensive salmon processing and storage reaches its peak at this time. This period is well represented in the archaeological record of Vancouver Island and the southern Gulf Islands.

4.1.5 Previous Archaeological Studies

Few archaeological studies have been conducted within or near the Study Area. The Village Bay shoreline was subject to avocational survey of the Gulf Islands in 1974 for the Archaeological Sites Advisory Board of British Columbia (1974-0001) and was re-visited in 1975 for the SW Gulf of Georgia Archaeological Survey. Thirty years later, an archaeological predictive model was developed for the Hul’qumi’num Treaty Group AOA (2005) which identified areas of low and high potential in the Study Area (Figure 2). Based on provincial records, no other archaeological assessments have been conducted within or adjacent to the Study Area.

Considerable archaeological work including survey and excavation has been undertaken throughout the Gulf Islands. Closest to the Study Area, large scale archaeological excavations have been conducted at Helen Point (DfRu-8) on Mayne Island (Carlson 1970; McMurdo 1974, Mitchell 1967), Georgeson Bay (DfRu-24) on the south portion of Galiano Island (Haggarty and Sendey 1976) and Montague Harbour (DfRu-13) on the west side of Galiano (Mitchell 1971). Consistent Strait of Georgia culture "types" or phases were identified at all three sites. These widely accepted cultural sequences, based primarily on the works of Borden (1968a, b, 1975), Ham (1982), Ham et al. (1984), Matson (1976) and Mitchell (1971) have been documented at sites from the Fraser Valley to the Gulf Islands up to and including southern Vancouver Island. The sequences identified at the three Gulf Island sites listed above span over 3,000 years of prehistory: the Locarno culture type from approximately 3,200 to 2,400 years ago, Marpole from 2,400 to 1,600 years ago and Gulf of Georgia or Developed Coast Salish from 1,600 years ago to European contact (Mitchell 1990:340).

The Helen Point site (DdRu-8) has been subject to three large-scale programs of archaeological excavation, one in 1966 (Mitchell 1967, Hall 1968) and two in 1968 (Carslon 1970, McMurdo 1974). McMurdo (1974) is a master's thesis on the archaeology of Helen Point. The site is considered to represent the remains of a large prehistoric and historic village, occupied prehistorically from approximately 3,500 years ago BP (before present) to AD 1,400 (McMurdo 1974: iv). The site was historically occupied well into the twentieth century.

4.1.6 Previously Recorded Archaeological Sites

There are 26 archaeological sites, and three heritage sites recorded on Mayne Island, with three of the archaeological sites also including historical components (Figure 1). Most of the archaeological sites registered on the Island include shell midden deposits, some with associated lithic artifacts, petroforms and/or ancestral remains. The three heritage sites recorded on or in the intertidal waters of the Island include the Mayne Island Agricultural Hall, the Mayne Island Japanese Garden and the Zephyr Shipwreck.

There are no archaeological or heritage sites recorded within the Study Area. However, four archaeological sites (DfRt-5, DfRt-8, DfRt-9, DfRt-11 and DfRt-12) are recorded within 1 km (Figure 1 and Figure 2).

DfRt-5, also known as the "Reserve Point" site, is recorded along the east shoreline of Naylor Bay and west side of Reserve Point on Mayne Island Reserve No. 6, approximately 912 m northeast of the Study Area. The site is composed of precontact shell midden and lithic artifacts, as well as the remains of historical houses. DfRt-5 was first recorded in 1963 by the Provincial Museum and was revisited in 1974 during the Gulf Islands Archaeological Survey under HCA permit 1974-001, and again in 1975 during the Archaeological Survey of the Southwestern Gulf of Georgia under HCA permit 1975-0006. The site measures 150 m long by 30 m wide and was reported as being in good condition in 1975 despite having been partially disturbed by past clearing and road construction activities, as well as erosion from natural wave action (Acheson et al. 1975).

DfRt-8, also known as the “Village Bay” site, is the nearest registered archaeological site to the Study Area, recorded approximately 245 m to the south-southeast along the Village Bay shoreline at the mouth of Village Bay Creek. The site is composed of precontact shell midden and lithic artifacts. According to provincial records, all artifacts associated with the site were recovered from dredged material and not from the midden deposits. DfRt-8 was first recorded in 1968 by the Provincial Museum and was revisited in 1974 during the Gulf Islands Archaeological Survey under HCA permit 1974-0001, and again in 1975 during the Archaeological Survey of the Southwestern Gulf of Georgia under HCA permit 1975-0006. The site measures 20 m long by 10 m wide and was reported in 1975 as being in poor condition due to extensive disturbance from past clearing and road construction activities, as well as erosion from natural wave action (Acheson et al. 1975).

DfRt-11 is recorded along the north shoreline of Dinner Bay approximately 720 m south of the Study Area. The site is composed of precontact shell midden, lithic artifacts and bone artifacts. DfRt-11 was first recorded in 1974 during the Gulf Islands Archaeological Survey under HCA permit 1974-0001 and was revisited in 1975 during the Archaeological Survey of the Southwestern Gulf of Georgia under HCA permit 1975-0006. The site measures 80 m long by 20 m wide and was reported as being shallow and disturbed in 1974 (Cassidy et al. 1974). During the 1975 visit, DfRt-11 was reported as being in fair condition with some disturbance from past clearing and road construction activities, as well as erosion from natural wave action (Acheson et al. 1975).

DfRt-12 is recorded along the west shoreline of Naylor Bay on Mayne Island Reserve No. 6, approximately 920 m north-northeast of the Study Area. The site is composed of precontact shell midden and was originally recorded in 1974 during the Gulf Islands Archaeological Survey under HCA permit 1974-0001 and was revisited in 1975 during the Archaeological Survey of the Southwestern Gulf of Georgia under HCA permit 1975-0006. The site measures 30 m long by 10 m wide and was reported as being in good condition in 1975 with the only disturbance attributed to erosion from natural wave action (Acheson et al. 1975).

4.1.7 Archaeological Potential Model

The 2005 HTG APM overlaps with the Study Area and is approved as a planning tool by the Archaeology Branch. The HTG APM identified portions of the Study Area as having high archaeological potential.

4.1.8 First Nation Input

Cowichan Tribes, Halalt First Nation, Lake Cowichan First Nation, Lyackson First Nation, Malahat First Nation, Pauquachin First Nation, Penelakut Tribe, Semiahmoo First Nation, Stz’uminus First Nation, Tsartlip First Nation, Tsawout First Nation, Tseycum First Nation, Tsawwassen First Nation and Ts’uubaa-asatx First Nation were contacted on June 25, 2021, to invite their input for this study.

Stantec received a response from Candace Charlie of Cowichan Tribes on June 28, 2021, in which the traditional Hul’q’umi’num place name for Active Pass, *Sqthaqa’lh*, meaning ‘Little Narrows’ was provided, and the pass identified as a very important *’A’lu’xut* (resource harvesting) and a *Syuth* (oral tradition) area (pers. comm. Charlie, C. 2021). Ms. Charlie added that the pass was used year-round for gathering

resources such as “sea-urchin, sea cucumber, octopus, seals, sea lion, sockeye salmon, lingcod, and halibut”, that Cowichan Nation communities used the protected bays along the pass for fishing, hunting and gathering, and that Mayne Island was a key deer hunting area (pers. comm. Charlie, C. 2021). Ms. Charlie also provided the following oral tradition of Cowichan Tribes:

> In our oral tradition, it is recorded that when Xeel’s (the Transformer) stepped across to Vancouver Island from Washington State, he left his footprint marked on the southern shore of Galiano Island in the vicinity of Active Pass. Xeel’s footprint, or *Shxixnetun*, is commemorated by our people as a landmark of the Transformer’s mythic journey across the land (pers. Comm. Charlie, C. 2021).

On July 6, 2021, Dianne Hinkley of Cowichan Tribes responded to inform Stantec that a Cowichan family, the Jack family, had lived on Mayne Island “for eons” up to the 1970s or 1980s (pers. comm. Hinkley, D. 2021).

On August 12, 2021, Sandy Godwin and Carrie McIntosh of BC Ferries, Shane Bond and Ryan Spady of Stantec, and Karyn Scott of Lyackson First Nation met to discuss the Project and AOA study in detail. During the meeting Ms. Scott commented on Lyackson First Nation’s position on the Project, impacts from previous development and archaeological work at sites in the region, and that the Nation prefers to leave artifacts and ancestral remains in situ. Ms. Scott also added that there are ancestral remains throughout the Gulf Islands and all archaeological sites are culturally meaningful to Lyackson First Nation (pers. comm. Scott, K. 2021). On March 20, 2025, via email from BC Ferries, Stantec received a comment from Lyackson First Nation stemming from the Nation’s review of the original draft of this report asking for additional information and reference to data sources on sea level changes relevant to the Study Area. To address this comment, this final version of the AOA report has incorporated additional information from recent sea level studies in Section 4.1.1 above.

Amber Fox of Malahat First Nation responded on June 29, 2021, informing Stantec that the Nation does not have any additional information to provide for the AOA (pers. comm. Fox, A. 2021).

5 Archaeological Potential Evaluation

The Berth 1 Rebuild Project Area and the broader Study Area are evaluated as having moderate archaeological potential (Figure 2). This evaluation is based on the following criteria:

- Four previously recorded archaeological sites (DfRt-5, DfRt-8, DfRt-11, and DfRt-12) are within 1 km of the Study Area; one of which (DfRt-8) is within 250 m.
- The 2005 HTG APM developed for the region indicates small and disperse areas of high archaeological potential within the Project Area and Study Area; concentrated near the shoreline (Figure 2).
- The Study Area is on the shoreline and foreshore of a sheltered island bay, a setting frequently associated with archaeological sites in the Southern Gulf Islands.
- Information received from local Indigenous groups indicates that the sheltered island bays of the Active Pass area are traditionally important for year-round hunting, fishing, and gathering.
- The Study Area has a relatively uniform slope of approximately 32% down toward Village Bay and lacks any well-defined natural landforms. Only a small section of the paved loading area in the east portion of the Project Area is relatively level from past grading to facilitate ferry boarding.
- Comparative reviews of current Google Earth imagery and the historical aerial photograph from 1932 suggest both the Project Area and broader Study Area have been subject to extensive ground-disturbing activities associated with past development of the Village Bay Terminal. Variations between the current and historical aerial imagery reveal that most of the land-based portion of the Project Area has been extensively filled during past terminal development resulting in an artificial extension of the shoreline into Village Bay.
- As the Project Area and broader Study Area lack any observable natural landforms and have been extensively disturbed, the potential for intact archaeological deposits to be encountered during the Project or any further development activities in the Study Area is considered low. However, due to the Study Area's general setting on Village Bay's shoreline and lack of any prior archaeological subsurface assessment, there remains potential for displaced archaeological resources to be present under and adjacent to the paved holding and loading areas of the existing terminal, as well as within intertidal portions of the Study Area.

6 Recommendations and Closure

The Project Area and Study Area are evaluated as having moderate archaeological potential.

Archaeological monitoring of land-based ground disturbing activities associated with the Berth 1 Rebuild Project under an HCA section 12.2 heritage inspection permit is recommended. It is anticipated that archaeological monitoring will only be required for select portions of the Project Area, dependent on and determined by the results of initial subsurface observations and the confirmation of the extent and depth of fill.

A low tide intertidal survey of the proposed Berth 1 Rebuild piling installations is recommended.

It is recommended that a Project-specific Chance Find Procedure (CFP) is developed and followed during Project construction activities to provide direction on the process, roles, responsibilities, and actions required if suspected archaeological materials are encountered during this development activity.

It is also recommended that any future ground disturbing activities within the Study Area are monitored archaeologically under an HCA section 12.2 heritage inspection permit. It is anticipated that archaeological monitoring will only be required for select portions of the Study Area, dependent on and determined by the results of initial subsurface observations.

These recommendations apply solely to physical archaeological evidence of past human activity.

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