Attachment 5

MADRONE
environmental services ltd.

ARCHAEOLOGICAL OVERVIEW ASSESSMENT

Proposed Superior Road Development
Lantzville, BC

PREPARED FOR

Sincana Land Corp
c/o Darwin Mahlum
1 3179 Barons Road
Nanaimo BC V9T 5W

PREPARED BY:

Madrone Environmental Services Ltd.

March 20, 2019

MADRONE ENVIRONMENTAL SERVICES LTD.
1081 CANADA AVENUE • DUNCAN • BC • V9L 1V2
TEL 250.746.5545 • FAX 250.746.5850 • WWW.MADRONE.CA

DOSSIER: 19.0057

Credits

Project Manager and Field Director	Kira Kristensen, B.A., RPCA
Field Crew (Madrone)	Matt Bullock, M.A.
Snaw-Naw-As First Nation	Sarah Wyse Beatrice Bob
Report Authors	Kira Kristensen Matt Bullock
Report Drafting	Anna Jeffries, B.Sc., ADGIS Jessie Yelowees
Report Production	Lisa Hoodge

Management Summary

Madrone Environmental Services Ltd. conducted a desk-based Archaeological Overview Assessment and Preliminary Field Reconnaissance for a proposed housing development at a property consisting of three contiguous lots in Lantzville BC (LOT 1, DISTRICT LOT 53, NANOOSE DISTRICT, PLAN 2490, EXCEPT PARTS IN PLANS 23069 AND 40250; LOT 2, DISTRICT LOT 53, NANOOSE DISTRICT, PLAN 2490; LOT 3, DISTRICT LOT 53, NANOOSE DISTRICT, PLAN 2490). The proposed project consists of 120 residential lots located in LOT 1 and LOT 2, although this report assesses the entire parcel.

A review of recorded archaeological sites found no sites located within the project area. The nearest sites, DhSa-9 and DhSa-28 are located roughly 450m north of the project area near the mouth of Knarston Creek, which passes through LOT 3. These sites are highly disturbed, and include shell midden, lithic and bone artifacts, and faunal and ancestral remains.

Preliminary Field Reconnaissance took place on March 5, 2019, and consisted of a foot survey of the subject properties by two Madrone archaeologists and two representatives of Sna-Naw-As First Nation.

The project area was assessed as having low archaeological potential due to poor soil development, a lack of terrain features associated with archaeological sites, and no observable culturally modified trees or stumps. Two areas of low to moderate potential to produce lithic scatters were identified within the riparian zone on the west bank of Knarston Creek, however, there are no planned impacts to this area.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF PHOTOS

ARCHAEOLOGICAL OVERVIEW ASSESSMENT

Proposed Superior Road Development Lantzville, BC

1 Introduction

Madrone Environmental Services Ltd. (Madrone) was contacted by Sincana Land Corporation to conduct an Archaeological Overview Assessment (AOA) for a proposed housing development on Superior Road in Lantzville BC.

The purpose of this AOA is twofold: (1) to confirm or refute the presence of known archaeological sites, or areas of archaeological potential, within the project area through a review of existing archaeological, ethnographic, and historical reports, and (2) to determine the most appropriate survey methods or techniques to be used if additional archaeological work is deemed to be necessary.

This report describes the proposed project; details the ethnographic, historical and archaeological review relevant to the project area; assesses the archaeological potential; and provides recommendations. This assessment does not address potential impacts to traditional and contemporary use sites within or near the project area.

2 Proposed Project

The study area is located in the District of Lantzville and is bordered by the E&N Railway and the Island Highway to the north, Superior Road to the east and south, and by Nanoose Indian Reserve to the west (Figures 1 and 2). The study area is comprised of three properties totaling approximately 65 acres:

- Lot 1, District Lot 53, Nanoose District, Plan 2490, Except Parts in Plans 23069 and 40250 (PID 006-609-546
- Lot 2, District Lot 53, Nanoose District, Plan 2490 (PID 006-609-597)
- Lot 3, District Lot 53, Nanoose District, Plan 2490 (PID 006-609-643)

The proposed project is a housing subdivision to be located on Lots 2 and 3 with 120 lots proposed (Figure 3). No plans are currently proposed for Lot 1.

FIGURE 1: Study Area Overview Map

LOCATION:	NTS MAP:	CLIENT:	MAP DATE:	DRAWN BY:	DOSSIER:
Lantzville, BC	92F/08	Sincana Land Corp.	February 06, 2019	Jessi Yellowlees	19.0057

Previously Recorded Archaeological Site

Drainage

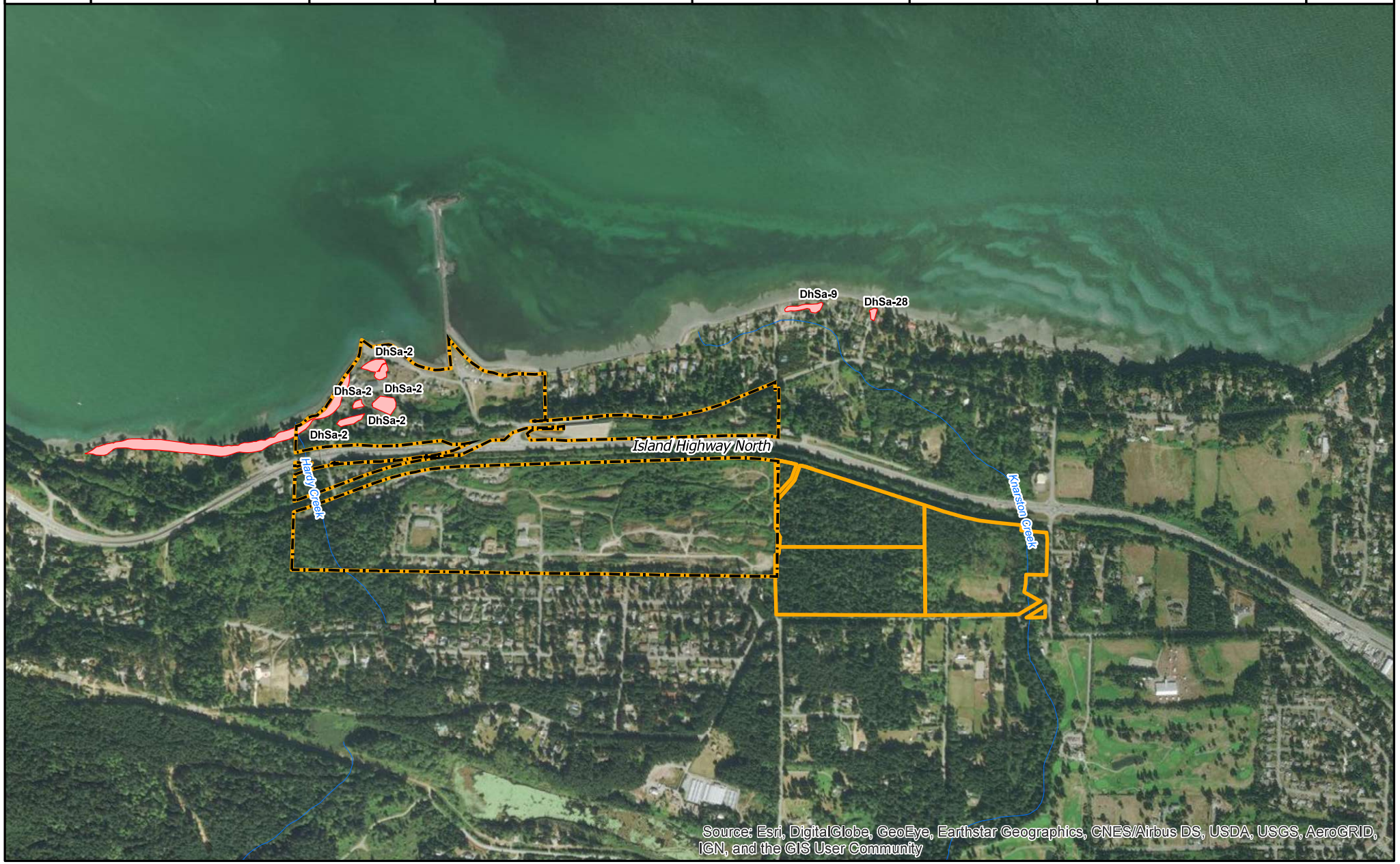
Study Area

0 250 500 1,000 m

1:30,000

FIGURE 2: Midrange Location Map

LOCATION:	NTS MAP:	CLIENT:	MAP DATE:	DRAWN BY:	DOSSIER:
Lantzville, BC	92F/08	Sincana Land Corp.	February 06, 2019	Jessi Yellowlees	19.0057



Previously Recorded Archaeological Site

Study Area

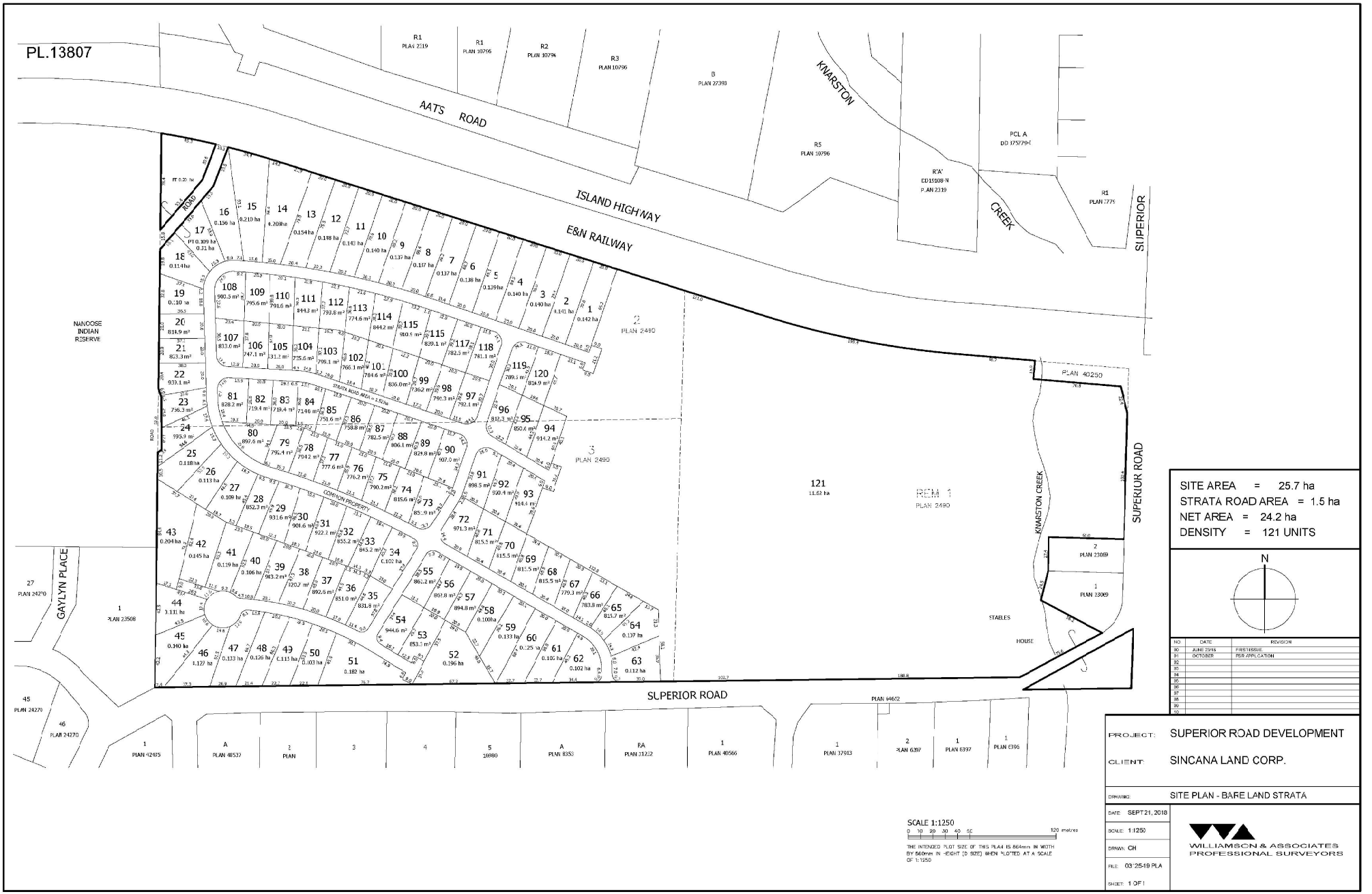
Drainage

Nanoose Indian Reserve Boundary

0 250 500 1,000 m

1:15,000

MADRONE environmental services ltd.	**FIGURE 3:** Proposed Superior Road Development				
	LOCATION: Lantzville, BC	**NTS MAP:** 92F/08	**CLIENT:** Sincana Land Corp.	**MAP DATE:** February 06, 2019	**DOSSIER:** 19.0057



Not To Scale

3 Project Area Environment

The current project is located on the inland side of the south shore opening to Nanoose Bay, which is situated within the broader geological region termed the Nanaimo Lowlands, which extends from Campbell River to Victoria on the east side of Vancouver Island and includes most of the Gulf Islands. The physiographic setting of this region is identified by the presence of gently rolling hills that reach elevations of 200 m with flatter plains that border most of the Gulf of Georgia (Yorath and Nasmith 1995).

The project area is situated within the Coastal Douglas Fir (CDF) biogeoclimatic zone. This zone is limited to only a small area of south eastern Vancouver Island, several Gulf Islands and a portion of the adjacent BC mainland (Nuszdorfer et al. 1991: 82). The climate within the CDF zone is relatively dry, with mild annual temperatures and the vegetation is diverse with species that occupy rock outcrops, seaside, aquatic and forest habitats.

4 Ethnographic Review

The current study area falls into the Gulf of Georgia region (now known as part of the Salish Sea), an area that has been traditionally occupied by several local groups often generally described as the Central Coast Salish (Suttles 1990). The Central Coast Salish encompasses five distinct language groups: Halkomelem, Squamish, Nooksack, Northern Straits, and Clallam (Suttles 1990). Halkomelem speakers are found from Harrison Lake and the Fraser Canyon to the mouth of the Fraser River, across the Gulf Islands and along eastern Vancouver Island (Suttles 1990: 453). Three different dialects of the Halkomelem language have been distinguished, separating the group further into the Island Halkomelem, the Upriver Halkomelem and the Downriver Halkomelem with the Island Halkomelem known to have traditionally occupied winter villages on eastern Vancouver Island (Suttles 1990).

Local groups residing in the Gulf of Georgia region, and more specifically along eastern Vancouver Island, have been subject to extensive ethnographic study by researchers such as Barnett (1939, 1955), Duff (1952), Kroeber (1963), and Suttles (1951, 1960). Ethnographic information gathered by these individuals among others has led to the establishment of a defined cultural area known as the Gulf of Georgia. The Gulf of Georgia region is characterized by several locally distinct characteristics that tend to separate the groups in the area from neighbouring groups. Based on ethnographic accounts for Gulf of Georgia groups (Barnett 1939, 1955; Duff 1952; Suttles 1951, 1960), three regional features of the culture type are listed by Mitchell (1971: 26-27). These features are: (1) an

extensive range of food procuring technologies for a variety of conditions (i.e., specialized types of nets, many forms of harpoons, hooks and lures), (2) a set annual round of movements from one resource location to another depending on the specific season, and (3) an effective means of food preservation and storage. Additional features restricted or closely identified with groups in the Gulf of Georgia region include: (1) some form of a class structured society that distinguishes between high, low and a slave class, (2) a winter dancing complex, (3) the raising of a specific breed of white dog for its wool, (4) reef-net technology and associated social and ritual aspects of its use, (5) swaixwe dance and costume, and (6) myth of origin (Suttles 1960; Mitchell 1971: 26). The presence of these features with any one group in the Gulf of Georgia region does, of course, vary and this list of specific features exists to set the Gulf of Georgia cultures apart from the Northwest Coast culture type (Mitchell 1971: 26).

4.1 Enthographic History of Snaw-Naw-As First Nation

The Snaw-Naw-As, or Nanoose, First Nation are a Coast Salish group that, along with other Salish groups, speak the Halkomelem language. The territory of the Snaw-Naw-as is centred on Nanoose Bay just north of the city of Nanaimo, BC. The name "Nanoose" is an Anglicization of the name "Noonooa" (Walbran 1971: 350). In 1859, Captain Richards of the H.M.S. Plumper named the body of water Nanoose Bay (Assaf and Assaf 1990: 2). The ethnographic literature specific to the Nanoose First Nation, or Snaw-Naw-As as they now refer to themselves, is quite scarce, with most information regarding the history of the Snaw-Naw-As coming from a small number of historical documents and interviews with elders, most specifically with Sam Bob, grandson of former Chief Nanoose Bob.

Historically, the Snaw-Naw-As was comprised of a small number of individuals who made use of the lands surrounding the Bay. These lands were used for purposes such as hunting, fishing, gathering food and raw material, lookout posts, and digging among many other activities. The southeast base of Nanoose Hill (now called Notch Hill), situated up a draw above a cove (now referred to as Melstrom Cove) on the north side of Nanoose Bay, was once the location of the main village site of the Nanoose. The location of the village was hidden and therefore less susceptible to possible attacks from other groups (http://www.nanoose.org). Nanoose Hill was a known lookout site for warning Snaw-Naw-As people of the presence of invading groups (Assaf and Assaf 1990: 7).

In the early to mid-19th century, the Snaw-Naw-As suffered many attacks from other groups. As a direct result of these attacks, combined with the presence of foreign diseases that were brought to the area, the Snaw-Naw-As experienced a significant drop in

population. Nanoose Bob, one of the few remaining group members, was an important and revered ancestor of the present-day Snaw-Naw-As peoples, specifically well-known for his abilities as a hunter (http://www.nanoose.org). Sam Bob, the grandson of Nanoose Bob, recounts how his grandfather was the sole survivor of an attack by group of Haida. Following this attack the village site was moved to the south side of the two creeks feeding into Nanoose Harbour (Keddie 1987).

5 Historical Review

The historical period at Nanoose Bay is similar to that of other areas along the east coast of Vancouver Island. In the mid to late 1800's, Euro-Canadian settlers began pre-empting land in the area around the Bay with many of the first settlers clearing and farming the land they had bought. Over the years, lands around the bay were re-sold and subdivided and in 1876, the federal and provincial government established a Reserve on the south side of the Nanoose Bay. The lands that the Snaw-Naw-As had traditionally hunted, fished, gathered, camped and settled became increasingly restricted and the original reserve lands given to the Snaw-Naw-As also decreased over time with some acres privately bought by settlers, land allotted to the railroad right-of-way and land used for the original Island Highway right-of-way (Assaf and Assaf 1990: 8).

In 1911, a large acreage along the northern side of Nanoose Bay was sold to the Giant Powder Company, who manufactured cordite and various kinds of dynamite used for land clearing, mining and in armaments for World War I. The company lands included 17 houses as well as accommodation for Chinese workers. A railway was also built between the plant's wharf and a set of storage buildings. Eventually, the company amalgamated with other larger companies and, in 1925, was re-located to James Island (Assaf and Assaf 1990: 24-25).

In 1912 a mill was established on the southern shore of Nanoose Bay, operated by the Straits Logging Company. The community of Red Gap grew up behind the mill site straddling the mouth of the creek where the Nanoose Bay Rest Area is located today. The community included a company store, post office, school and boarding houses and private homes. Conclaves of Chinese, Japanese and East Indian employees of the mill were built along the railway tracks at Red Gap as well. The Strait Lumber Company went out of business in 1942, though the mill site was still used until the early 1950's (Paterson and Basque 1989).

Other business ventures within Nanoose Bay included logging activities around Powder Point Ranch from 1944 to 1955, the establishment of the Nanoose Bay Oyster Company in Melstrom Cove in 1909 (Assaf and Assaf 1990: 28-30), and the Nanoose Bay Gold Mine (circa early to mid-1930's) with the discovery of small quantities of gold at Nanoose Bay although the venture only lasted a few years (Assaf and Assaf 1990: 42).

6 Archaeological Review

6.1 Expected Archaeological Site Types

The archaeological site types anticipated in this region include midden deposits, human burials, lithic scatters, culturally modified trees (CMTs) and wet sites.

6.1.1 Midden Deposits

Midden sites can be indicative of large-scale village sites or short-term resource procurement camps, and therefore could also be classified as habitation sites. Prehistoric midden sites are most commonly located along shorelines, but have also been located inland, particularly along major rivers such as the Cowichan, Sooke, and Nanaimo Rivers. Midden sites are most commonly identified by the presence of crushed shell in a dark brown to black soil matrix, often with a "greasy" texture associated with large quantities of fire cracked rock, faunal remains, and artifacts such as tools made from stone, bone, antler and shell. Shell-less deposits are also quite commonly identified in similar soil matrix with associated cultural material. Midden may be observed in natural exposures, although subsurface testing is often required to determine the presence of buried deposits. Midden sites are important for the study of past life-ways and usually have high heritage significance. Because midden deposits are associated with habitation sites, they are frequently identified with other site types such as house platforms, CMTs, human burials, lithic scatters and rock art.

6.1.2 Human Burials

Burials are defined as the material remains of humans or features associated with mortuary practices. Often unmarked, burials in the project area can include below ground interment, mound/cairn burials, burial in caves, and above-ground tree burials.

6.1.3 Lithic Scatters

Lithic scatters are classified as "resource procurement/extraction sites", where specialized activity occurs, such as the procurement of raw material for making stone tools. Lithic scatters consist of stone tools and/or flakes which are the result of lithic raw materials

processing, tool production, and/or tool maintenance. Isolated lithic finds are also included in this category. The latter often mark hunting or similar nomadic events. Lithic scatter sites have been reported in many locations in the general project area.

6.1.4 Culturally Modified Trees (CMTS)

In the most basic sense, a CMT is any tree that shows evidence of human modification. CMT sites are widely present throughout much of the Pacific Northwest and are considered highly valuable by many native peoples, and are commonly undervalued as an archaeological resource.

As an archaeological resource, CMTs are trees that have been modified by aboriginal people for traditional purposes. Tree species commonly used by First Nations in the study area include both yellow cedar and, most commonly, western red cedar. Along the northwest coast traditional practices for utilizing cedars may include: stripping the tree of bark for basket making, weaving or matting; removing planks from a tree for building materials; and falling a tree for making objects such as buildings, canoes, and tools.

Recently, a debate has begun regarding Douglas fir trees as a possible type of CMT. At this time they are not recognized by the province and are therefore not currently protected by the *Heritage Conservation Act*. More recently, there has been expanded recognition of the potential for studying human impact to the environment through the use CMTs as criteria for understanding forest utilization practices (Anderson 2005).

The current study area has recently been cleared of most of the standing timber, though stumps are currently present. While the previous tree stand age and composition is unknown, CMTs are a likely site type in this area.

6.1.5 Wet Sites

Wet sites are those areas which are seasonally or continually covered by water such that oxygen is excluded and the decomposition of organic material is slowed or stopped. In such sites, organic material culture, such as baskets and wooden artifacts, are preserved. Wet sites are often associated with wetland features, but may also exist in areas of particularly high ground water table or where springs exist. The presence of Knarston Creek and other drainages on the property raises the possibility that this site type could be present.

6.2 Previously Recorded Archaeological Sites

There are two previously recorded archaeological sites within 500 m of the study area, DhSa-28 and DhSa-9 (Figure 2).

DhSa-9

DhSa-9 is a shell midden site located approximately 2.4 km west of Lantzville. The site was first recorded by the 1975 East Coast Vancouver Island Survey (Murton and Foster 1975-006), which measured its dimensions as 50 m x 175 m and assessed its condition as "poor," with 0-25% of intact deposits remaining. Disturbance was noted from house construction. No excavations have been recorded at this site.

DhSa-28

DhSa-28 was recorded by SFU archaeologists in 1987 (Skinner 1987-002C) based on ancestral remains recovered immediately below the sod line by the property owner. These remains were initially recorded as a component of DhSa-9, but a new site was created after a review of site forms for DhSa-9 found that the site has been incorrectly mapped. The ancestral remains at DhSa-28 represent one young child and one adult woman. Due to their shallow depth and lack of associated shell midden, the remains were interpreted as having fallen from a tree burial box before the land was cleared. A bone pin was also recovered during the 1987 investigation, likely associated with the adult individual.

The site dimensions of DhSa-28 were expanded during monitoring of storm drain installation along the adjacent street in August 2010 (Kristensen *et al.* 2011). Excavations uncovered disturbed shell midden deposits ranging from 5 cm to 105 cm thick, beginning at a depth of 20 cm to 80 cm. Ancestral remains of single adult male and Sixty-six artifacts were recovered. The ancestral remains were reburied onsite. Artifact typology suggests Marpole and Developed Coast Salish components at the site.

7 PFR results

On March 5th, 2019, two Madrone archaeologists and two members of Nanoose First Nation conducted Preliminary Field Reconnaissance (PFR) to assess the potential for the subject properties to contain archaeological resources. As there was no HCA permit in

place, field methods were limited to foot surveying. Observed soil exposures were recorded and photographed. The subsections below present field observations and their impact on archaeological potential.

7.1 Terrain description

The property has an overall northward slope with gently undulating terrain and low areas of pooling water. Glacial erratics measuring roughly 2-3 m in diameter are present, scattered throughout the landscape (Photo 1). A level paddock and grassy field are located in the southeastern corner of the property (Photo 2). Two gravel logging access roads run north-south from the south property line (Photos 3 and 4). An unnamed drainage feature is present in the eastern third of the study area (Photo 5). This feature begins in a poorly drained portion of the southeast grassy field and runs roughly north, with poorly defined banks no more than 2 m high. Knarston Creek runs south-north near the eastern property line. The creek is located in a deep ravine with steep, rocky banks ranging from approximately 3-4 m in the south and 10 m in the north.

PHOTO 1: VIEW OF CLEARED PORTION OF THE PROJECT AREA

Looking east from the west access road. Note glacial erratic near the large stump in the foreground, standing water visible near the right side of the photo, and the generally softly undulating terrain.

PHOTO 2: GRASSY PADDOCK AND FIELD (LEFT)

Looking west. Standing timber on right side of image is located on the banks of the unnamed drainage feature.

PHOTO 3: WEST ACCESS ROAD, LOOKING NORTH FROM SOUTH PROPERTY LINE.

PHOTO 4: EAST ACCESS ROAD, LOOKING NORTH FROM SOUTH PROPERTY LINE.

PHOTO 5: DRAINAGE FEATURE, LOOKING EAST FROM WEST BANK, SHOWING STANDING TIMBER AND GENTLY SLOPED BANKS.

PHOTO 6: LOOKING EAST OVER KNARSTON CREEK FROM WEST BANK NEAR NORTH PROPERTY LINE.
Drop-off is roughly 10 m in this area.

The property is generally devoid of terrain features associated with archaeological potential, with the exception of two areas of low to moderate archaeological potential on the west bank of Knarston creek (Figure 4). Both are level areas overlooking the creek with potential for lithic scatters representing temporary campsites. Area of Potential 1 measures roughly 10 m east-west by 5 m north-south (Photo 7), while Area of Potential 2 measures roughly 6 m east-west by 5 m north-south (Photo 8).

PHOTO 7: AREA OF POTENTIAL 1, LOOKING NORTH. THIS AREA IS FLAT, LEVEL, AND OVERLOOKS KNARSTON CREEK.

PHOTO 8: AREA OF POTENTIAL 2, LOOKING NORTH. THIS AREA IS SMALLER THAN AREA OF POTENTIAL 1, BUT THE ELEVATION OF THE BANK IS LOWER.

7.2 Vegetation

The majority of the property appeared to have been recently harvested for timber and cleared, and a crew was on-site clearing stumps with an excavator and stump grinder. Standing timber remained only in a narrow band along the unnamed drainage, in a narrow buffer along the west side of Knarston Creek, and between the east side of Knarston Creek and the east property boundary.

Observations of the remaining stumps in the cleared portions of the property indicate a mixed second growth forest of Maple, Douglas Fir, Western Red Cedar, and Arbutus. Stump diameter measurements ranged from 30-80 cm (Photo 9). No signs of cultural modification were observed on any tree stumps. The remaining standing timber surrounding Knarston Creek and the smaller drainage feature are consistent in size and species composition with the cleared areas. The understory east of Knarston creek is fairly open, consisting largely of mahonia and sword fern (Photo 10).

PHOTO 9: TYPICAL CEDAR STUMP IN RECENTLY CLEARED AREA.

PHOTO 10: STANDING SECOND GROWTH FOREST EAST OF KNARSTON CREEK, SHOWING OPEN UNDERSTORY.

Small grassy patches are present throughout the cleared areas, likely representing former clearings. These areas are associated with poor drainage and small pools of standing water.

The grassy paddock and field in the southeast corner of the property are bordered to the north by a band of blackberry roughly 10m wide.

7.3 Previous disturbances

As noted above, the majority of the property has been disturbed by recent and ongoing logging activity in preparation for development. Impacts include access road construction, stump removal, and heavy machinery tracks. Ground visibility was variable, with many areas areas covered with slash and wood chips.

A pile of bricks was observed partially buried in the recently cleared northern third of Lot 3 (Photo 11). These may represent historic construction, as they appear to pre-date the associated stump.

PHOTO 11: PARTIALLY BURIED PILE OF BRICKS IN LOT 3.

7.4 Soil description

Observed exposures included road cuts, excavator tracks and shallow trenches, and tree throws. Soil development is poor, with a 2 cm layer of duff overlying light brown sands with 10% subrounded pebbles to a depth of 50 cm, which in turn overlies fine grey sand with slight clay content. Soil exposures in the west cut of the west logging access road (Photos 12 and 13) demonstrate this stratigraphic profile. Tree throws at the southwest corner of the paddock (Photo 14) and in the forested area east of Knarston Creek (Photo 15) show the same till deposits immediately underlying the thin duff layer. No shell midden or other cultural deposits were observed in any areas of the site.

PHOTO 12: WEST ROAD CUT OF WEST ACCESS ROAD, SHOWING THIN LAYER OF DUFF OVERLYING GLACIAL TILL.

PHOTO 13: SECOND AREA OF ROAD CUT SHOWN IN PHOTO 12, SHOWING REDDER SAND WITH FEWER INCLUSIONS.

PHOTO 14: TREE THROW IN THE SOUTHWEST CORNER OF THE PADDOCK
Showing light brown/yellow glacial till immediately below the surface.

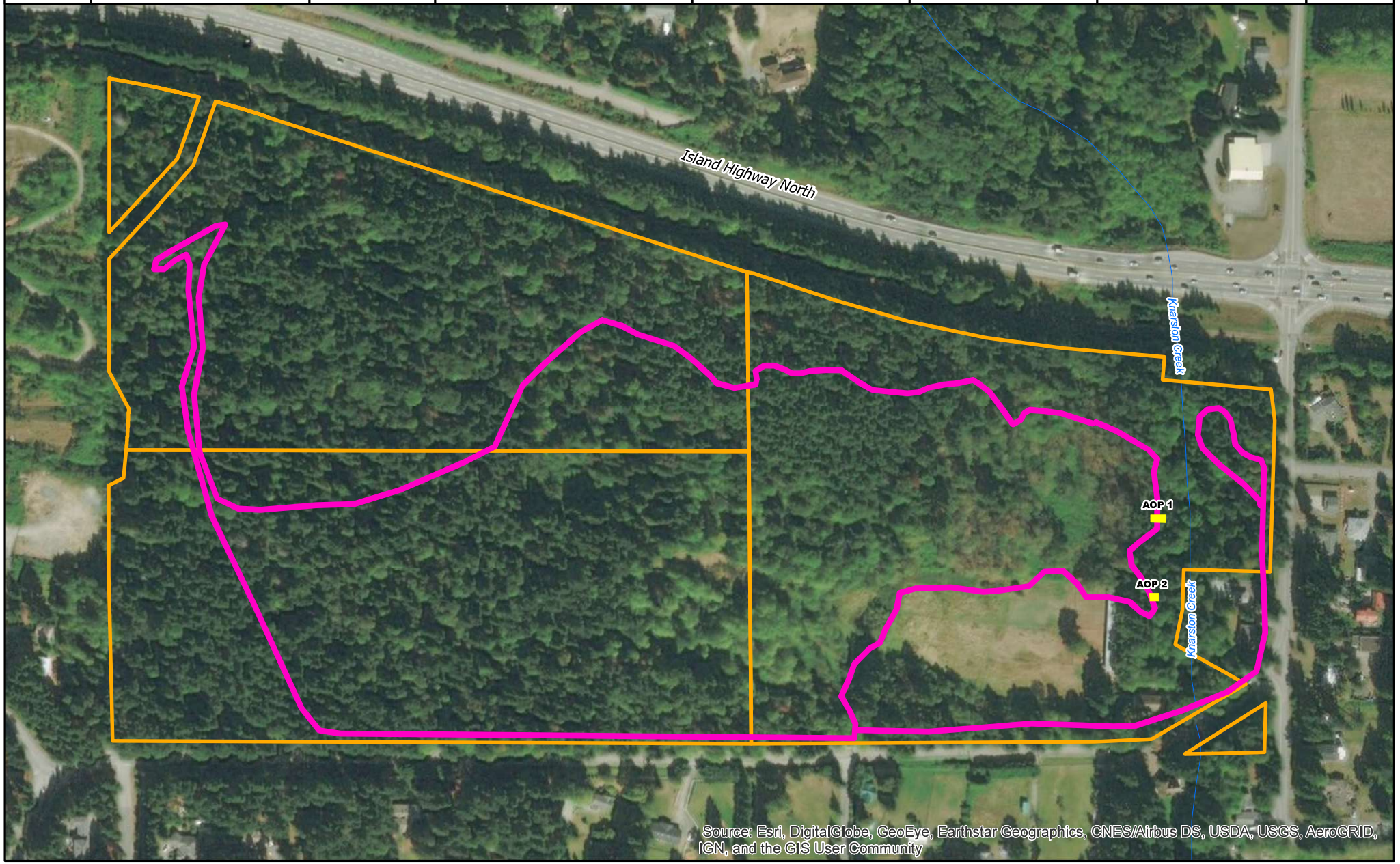
PHOTO 15: TREE THROW IN THE FORESTED AREA EAST OF KNARSTON CREEK
Demonstrating the continuity of till deposits on both sides of the creek.

8 Assessed archaeological potential

Overall, the archaeological potential of the property is low. Several factors influence this, including poor soil development, lack of high potential terrain (e.g. large, flat terraces near water sources), and lack of old growth stumps, precluding CMTs. The two identified areas of low to moderate archaeological potential are located within the riparian zone of Knarston Creek, and are outside of the development area.

FIGURE 4: Results Map

LOCATION:	NTS MAP:	CLIENT:	MAP DATE:	DRAWN BY:	DOSSIER:
Lantzville, BC	92F/08	Sincana Land Corp.	March 12, 2019	Jessi Yellowlees	19.0057



Areas of Potential (AOP)

Study Area

Drainage

GPS Transect

0 50 100 200 m

1:3,500

9 Recommendations

Overall, the risk of the current project as proposed impacting archaeological sites is considered to be low. We do not recommend further archaeological study in advance of development of the property.

We do note, however, that unanticipated archaeological deposits may nonetheless be encountered during development. In this event, work must stop immediately, and the Archaeology Branch and Snaw-Naw-As First Nation be notified. We recommend that an archaeologist be engaged to assess the resource and that the resource be managed as per the direction of the Archaeology Branch and all the affected First Nations. Please note that all archaeological sites whether intact or disturbed, previously recorded or previously unknown, are protected by the Heritage Conservation Act and cannot be alerted without a permit.

Respectfully submitted,

Kira Kristensen, B.A.
Senior Archaeologist

10 References

Anderson, Rikard (2005). Historical Land-Use Information from Cultural Modified Trees. Doctoral thesis, Swedish University of Agricultural Sciences, Umea, Sweden.

Assaf, B. and M. Assaf (1990). *A History of Nanoose Bay*. R.R. Desktop Publishing & Graphics Ltd., Parksville, BC.

Barnett, Homer G. (1939). *Cultural Element Distributions: IX Gulf of Georgia Salish.* Anthropological Records Vol. 1 (5). University of California Press, Berkeley, CA.

1955 *The Coast Salish of British Columbia.* University of Oregon Press, OR.

Duff, Wilson (1952). The Upper Stalo Indians of the Fraser Valley, British Columbia. *Anthropology in British Columbia. Memoirs* 1. Victoria, BC.

Keddie, Grant (1987). Nanoose Bay Notes March 9, 1987. Personal Collection of Grant Keddie. Royal British Columbia Museum, Victoria, BC.

Kristensen, Kira, Rena Varsakis and Becky Wigen (2011). Archaeological Monitoring at DhSa-28, Knarston Creek Storm Drain, Lantzville, B.C. HCA Permit 2009-0149.

Kroeber, Alfred L. (1963). *Cultural and Natural Areas of Native North America.* University of California Press, Berkeley, CA.

Mitchell, Donald (1971). Archaeology of the Gulf of Georgia, A Natural Region and its Cultural Types. *Syesis* 4, Victoria, BC.

Murton, Phil, and Denis Foster (1975). Report of the East Coast Vancouver Island Survey (Nanaimo - Courtenay). HCA permit 1975-006.

Nuszdorfer, F.C., K. Klinka and D.A. Demarchi (1991). Chapter 5: Coastal Douglas Fir Zone. In *Ecosystems of British Columbia.* Edited by D. Meidinger and J. Pojar. Research Branch, Ministry of Forests, Victoria, BC.

Paterson, T.W. and Garnet Basque (1989). *Ghost Towns and Mining Camps of Vancouver Island*. Heritage Publishing Company. Surrey BC.

Skinner, Mark (1987). Analysis of Human Skeletal Remains (87-4) from the Plover Road Buri.1 Site (DhSa~). Lantzvme. B.C. HCA permit 1987-002C

Suttles, Wayne (1951). *Economic Life of the Coast Salish of Haro and Rosario Straits.* 3 vols. Volume 1, Garland Publishing Inc., NY.

1960 Affinal Ties, Subsistence, and Prestige among the Coast Salish. *American Anthropologist* 62(2): 296-305.

1990 Central Coast Salish. In *Handbook of North American Indians: Northwest Coast*. 7: 441-452.

Walbran, John Thomas (1971). *British Columbia Coast Names, 1592–1906*. Introduction by G.P.V. Akrigg. Vancouver, BC.

Yorath C.J. and H.W. Nasmith (1995). The Geology of Southern Vancouver Island: A Field Guide. Orca Book Publishers, Victoria, BC.

Websites:
http://www.nanoose.org (accessed 2010 – website changed and information removed as of 2012)