

**ARCHAEOLOGICAL
OVERVIEW ASSESSMENT**

Lower Princeton Area Structure Plan
Peachland, B.C.

**Archaeological Overview Assessment
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Peachland, B.C.**

Prepared for
Hangingstone Properties Inc.
550C West Avenue
Kelowna, B.C.
V1Y 4Z4

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Table of Contents

CREDITS	i
TABLE OF CONTENTS	ii
1. INTRODUCTION.....	1
2. METHODOLOGY	4
3. PROJECT AREA.....	5
3.1 NATURAL HISTORY	5
3.2 ETHNOGRAPHY AND ETHNOHISTORY	6
3.3 EURO-CANADIAN HISTORY.....	7
3.4 ARCHAEOLOGY	8
4. RESULTS	10
4.1 PREVIOUS ARCHAEOLOGICAL ASSESSMENTS.....	10
4.2 PREVIOUSLY RECORDED SITES	10
4.3 FIELD INSPECTION.....	12
4.3 ARCHAEOLOGICAL POTENTIAL	13
5. RECOMMENDATIONS.....	15
REFERENCES CITED.....	16
LIST OF FIGURES	
Figure 1: Project Area.....	2
Figure 2: Archaeological Potential	14

1. INTRODUCTION

At the request of Hangingstone Properties Inc., I.R. Wilson Consultants Ltd. conducted an archaeological overview assessment of multiple privately owned parcels of land situated in the town of Peachland, B.C. The individual land parcels are not slated for immediate development; rather, it will be the individual landowners or a developer that may wish to redevelop the lots in future. The subject of the AOA is approximately 38 individual land parcels that are situated between Hwy 97 and Princeton Avenue near the shore of Okanagan Lake in Peachland, B.C. (Figure 1). The study area is within the asserted traditional territory of the Westbank First Nation.

Heritage sites and objects on private and Provincial Crown land in British Columbia are protected under the Heritage Conservation Act, which is administered by the Archaeology Branch of the Ministry of Tourism, Sport and the Arts. Heritage resources specifically protected by the Act include Provincial heritage sites, burial places with historical or archaeological value, aboriginal rock paintings or carvings, sites with evidence of human habitation or use before 1846 and heritage wrecks. The Lieutenant Governor in Council may also make regulations to define the extent of types of sites protected by the Act.

Heritage resources can be prehistoric in age (the time before written records) or they can be historic. They can be of North American Indian, European, Euro-Canadian or other ethnic affiliation. Ethnographic heritage sites are locations reported as having been used or occupied by Aboriginal people in the past which may or may not contain any physical evidence for such an occupation or use. A reported ethnographic site found to contain physical evidence changes the site to an archaeological site enhanced by ethnographic information. Ethnographic sites with no corroborative physical evidence are not treated as heritage sites according to present heritage legislation. However, ethnographic sites require proper management as a responsibility of developers.

There are usually three stages to the heritage resource impact assessment and review process; including an overview assessment, a detailed 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 detailed impact assessment are the identification and evaluation of heritage resources within a proposed development area, and also an 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, and normally involves archaeological excavation.

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

It should be noted that the results of this study do not address traditional use.

2. METHODOLOGY

A file search of previously recorded archaeological sites was conducted using the Archaeology Branch's Remote Access to Archaeological Data (RAAD) application to determine the nature, location and distribution of prehistoric and historical resources in the vicinity of the study area. Site records were obtained and used as an aid to identify relevant previous archaeological studies. A review of background literature dealing with the anthropology, history and archaeology of the region was conducted to place the study area in cultural context and to aid in determining archaeological potential. The literature review included a search for data on traditional sites and place names.

The study area was briefly inspected by Casey O'Neill of I.R. Wilson Consultants Ltd. to identify possible areas of archaeological potential in the field. Archaeological potential was assessed primarily on the presence of well-defined landforms and the proximity to water features.

3. PROJECT AREA

3.1 Natural History

The study area is within the Okanagan Valley and its surrounding plateaus, bordering on the Nicola Valley to the west. This area, which is part of the Interior Plateau of the Interior System of the Cordilleran Region (Holland 1976), is characterized by deeply cut valleys fringed by high mountains and rolling uplands.

Glacial activity from the Pleistocene epoch formed the U-shaped valley bottom by a process known as abrasion, where rocks and sediment carried by the glacier erode away the surrounding bedrock. The Vashon Stade of the Cordilleran Ice Sheet covered the Okanagan Valley about 12,000 years ago. The Okanagan Lobe of the Fraser Glacier was the last advance of ice in the study area (Hebda 1982; Kershaw 1978; Roed 1995). Deglaciation began about 11,000 years ago and was largely completed by 9,000 years ago. Melting occurred more quickly in upland terrain above the valley bottom, leaving the Okanagan Valley itself choked by stagnant ice long after surrounding areas of higher elevation were ice-free.

Meltwater from the retreating glaciers was obstructed by the tongues of ice remaining in low lying areas, causing Glacial Lake Penticton to flood the valley to elevations 100 m above current lake levels (Roed 1995). Waters gradually receded to the current limits of Okanagan Lake by about 8,900 years ago (Kershaw 1978). Up to 150 m of fine grained, light coloured silts were deposited in the bottom of Glacial Lake Penticton, forming a sedimentary base. Remnant landforms are terraced from fluvial processes or filled due to colluvial deposits. Sediments associated with lacustrine or glaciolacustrine landforms are typified by fine-textured silts, silty clay or very fine sand. These sediments can be so compact that they impede drainage. When dry, they are extremely dusty. Ancient lake terraces currently resemble rolling, grass-covered dunes due to aeolian activity after Glacial Lake Penticton drained and prior to colonization by grasses and other flora. Terraces flatten to narrow sandy beaches along the present lake shoreline (Brolly *et al.* 1997; Nasmith 1962; Rousseau 1984b).

Mount Mazama, a volcano in southern Oregon, erupted $6,730 \pm 40$ years ago creating Crater Lake and depositing a layer of ash eastward and northward for hundreds of kilometers along the path of prevailing winds. In situ, the Mazama ash layer in the Okanagan Valley often appears 315 to 330 cm below surface as a white sedimentary lens about 0.5 cm thick. This

lens of ash provides a temporal base, as deposits below are older than ~7,000 years, while those above are more recent. Wind and water erosion have altered stratigraphic deposition situationally across the landscape (Heinrichs *et al.* 2001).

Plant and animal populations became established as deglaciation proceeded. The study area falls within the Ponderosa Pine biogeoclimatic zone (Krajina 1965). A wide variety of plants and wildlife of importance to past Native subsistence economies are present within the area. Mammals found within the area include elk, deer, moose and bear. Fish include trout, sucker and salmon. Plant species that were traditionally utilized present in portions of the study region include various mushrooms, sages, berry bushes and the bark of many coniferous trees.

3.2 Ethnography and Ethnohistory

The project area is within the traditional territory of the Westbank First Nation who are considered part of the Interior Salish language family. Traditionally the Okanagan people occupied a territory stretching from the south side of the Columbia River in the south to the head of the Okanagan Lake in the north, the Arrow Lakes in the east and Nicola Lake in the west (Wilson and Thompson 1985). This territory is further divided by ethnographers between northern and southern Okanagan people, with the study area falling within the traditional territory of the Northern Okanagan people (Grabert 1974).

The Okanagan people followed a pattern of seasonal transhumance with a subsistence economy based for the most part on hunting, fishing and gathering roots. They spent their winters residing in semi-permanent villages and the remainder of the year moving to well-known locations to gather seasonally available resources. They had a loose, flexible social organization stressing individual autonomy (Wyatt 1972). The basic social unit was the extended family who would produce, consume and utilize resources together (Hudson 1986). The warmer months were spent traveling in these small groups, whereas winters were spent residing in larger semi-permanent villages. Travel was achieved by canoes and on foot, with horses being introduced in the 1800s. Trade was usually limited to nearby groups, although it expanded occasionally to include other more distantly removed neighbours.

The Okanagan moved to their winter dwellings which consisted of semi-subterranean pithouses in November or December and spent the winter months largely reliant on

stored foods, supplemented by dried roots and berries and occasionally complemented by fresh game and fish (Teit 1930). These winter villages were usually located on valley floors near lakes, access to water, fuel, shelter and good hunting and fishing (Archer 1981). Winter was a time of tanning hides and probably of making clothes and weaving baskets (Teit 1909). In addition to pithouses, winter villages included a number of smaller structures such as cache pits, menstrual lodges and sweathouses.

People began to leave their winter dwellings in March and April to move to higher elevations in order to exploit different resources. Roots from various elevations were collected from April to September, while berries were picked from May to September (Wyatt 1972). Housing during the warmer months consisted of above ground temporary mat lodges. Cambium from a variety of trees was also collected at this time either to be eaten raw or dried for winter use (Ray 1932). In addition, migrating birds were taken by a variety of methods.

The months of June and July were spent gathering a variety of plant resources used not only for food, but also for ceremonial and medicinal purposes. Hunting and fishing likely supplemented this diet of roots and ripening berries. The most important time for hunting was usually between October and November. Fishing, primarily for salmon, was most significant during July and August (Wilson and Thompson 1985).

3.3 Euro-Canadian History

Trails are important indicators of both historic and pre-1846 activities. Locating and describing aboriginal trails can be difficult and complicated. The lack of maps and records is compounded by modern events. Many trails have been destroyed or transformed by highways, housing subdivisions and other development. Current roadways frequently follow ancient trail routes. Aboriginal trails tended to parallel lakeshores and rivers, indicating the shortest and most easily traversable routes between settlements. This positioning also enabled travelers to take advantage of water transport when possible. Less significant trails also connected settlements with surrounding resource use locations (Brolly *et al.* 1997).

Like modern roads, historic trails also tended to follow the routes of aboriginal trails when convenient, especially on main routes. One example of this is the major route that crossed the interior plateau from Ft. Astoria in Washington, or Fort Vancouver on the

Fraser River, along the west side of Okanagan Lake, to Fort St. James and Jasper House in the north. Once an aboriginal trail, the early Northwest Company fur traders used it from 1811 to 1821, with the Hudson's Bay Company and subsequent fur traders continuing use from 1821, widening it to allow traverse by pack trains of horses by 1826 (Brolly *et al.* 1997; Buckland 1935, 1948). After it was widened to accommodate pack trains, it became widely known as the Hudson's Bay Company Brigade Trail.

3.4 Archaeology

Many researchers have applied models developed largely from the Fraser River and Thompson River areas north and west of the study area (Richards and Rousseau 1987), although culture historical sequences linking the Canadian and American Okanagan valleys have also been proposed. David Sanger (1963, 1966, 1969, 1971) established a five part prehistoric sequence based on his early work in the mid Fraser region, a sequence that was virtually unchallenged for more than two decades. Today, a tripartite scheme is most often used, though different divisions have been proposed (Fladmark 1982; Stryd and Rousseau 1996). Wilson *et al.* (1992, 1995) have summarized this sequence and offered some new interpretations based on research near Kamloops. The culture history in the region is known to extend 7,000 – 10,000 years though no sites from this time period are known in the Okanagan Valley.

An alternative culture historical sequence for the Okanagan Valley was initially proposed by Grabert (1968, 1974) and later expanded upon by Copp (1974). This sequence was established for the north-central region of Washington, but has been applied by some researchers to the Canadian Okanagan Valley. The earliest phase is defined as the Okanagan phase (10,000 to 6,000 years B.P.). However, due to the lack of known sites, little is known about this phase except for the presence of large flake tools and stemmed points. The Indian Dan phase (6,000 to 3,000 B.P.) is defined primarily on the presence of pit ovens, exploitation of fish and a greater variety of stemmed points. This is followed by the Chiliwist phase (3,000 to 900 B.P.) whose characteristics are relatively similar to the Shuswap and Plateau horizons in the Plateau Pithouse tradition. Copp (1974) further divides the Chiliwist phase into three periods, largely on the basis of stylistic changes of leaf shaped and stemmed points. Finally the Cassimer Bar phase (900 to 150 B.P.) is characterized by increasingly larger settlements and an abundance of fish and shellfish remains.

A number of site inventory studies of varying intensity have been completed within the Okanagan Valley (Baker 1975; Bond 2006a; Cadwell 1954; Grabert 1968; Lawhead and McAleese 1976; Rousseau and Wales 1977). Rousseau (1984a; 1984b) conducted a site inventory heritage project for the Westbank Indian Council in which he traced local prehistory back 4,000 years. Similarly, James and Oliver (1991) conducted an intensive site survey and ethnographic study on behalf of the Upper Nicola Band. Over 100 archaeological sites and a compilation of oral history within the band's traditional territory were recorded during the two phase project (Bailey 1996). However, this study focused on valley bottoms, particularly around Nicola and Pennask lakes. Copp (1974) conducted one of the few studies which included a partial focus on surveying and locating sites in the highland areas of the Okanagan and nearby Similkameen region. Bond (2006a) recently identified two high elevation sites along Smith Creek in Kelowna and conducted studies of a nearby area of Tsinstipkeptum I.R. 10 (Bond 2006b).

In general, larger sites such as house pit sites, cache pit sites, combinations of house pits and cache pits and lithic scatters tend to be associated with valley bottoms near lakes, marshes or major rivers. Six traditional villages have been recorded on Okanagan Lake (Teit 1930). A smaller number of sites have been recorded in the higher elevation plateau areas. These sites tend to be smaller, reflecting a highly mobile population of a small group size and include culturally modified trees, talus slope burials, petroforms, rock art, trails and historic sites. Many of these site types are easily recognizable with the exception of wholly and partially buried lithic scatters of stone tools. Sites may be made up of one or several of these components.

4. RESULTS

4.1 Previous Archaeological Assessments

Background research was conducted at the Archaeology Branch of the Ministry of Tourism, Sport and the Arts to determine if previous archaeological studies had been undertaken within or adjacent to the study area. The first major archaeological surveys of the area were conducted in 1976 and 1977 (Lawhead and McAleese 1976; Rousseau and Wales 1977). These surveys focused on identifying sites near the shoreline of Okanagan Lake. These assessments resulted in the identification of many archaeological sites scattered around Okanagan Lake.

Three additional archaeological studies focused on highways projects in the region. Two of these focused on areas north and south of the study area (Lawhead 1986; Wilson and Thompson 1985). The third assessment was conducted along Highway 97, which forms the east boundary of the study area. No archaeological resources were identified within the portion of Highway 97 situated adjacent to the study area (Zacharias 1990). However, no subsurface testing was conducted, despite the obviously high archaeological potential. The lower trail of the Hudson's Bay Brigade Trail follows Highway 97 and was destroyed by the construction of the highway near the study area.

4.2 Previously Recorded Sites

There are no previously recorded archaeological sites within the study area. However, three sites are within 3 km of the study area; one within 750 m and the remaining two within 2.5 km. These sites are briefly summarized to provide background regarding potential archaeological resource types in the study area. Site types that could be present within the study area include small lithic scatters to large village sites, cultural depressions – including cache pits and/or pit houses, petroforms such as burial cairns, historic trails and culturally modified trees.

Recorded archaeological sites within 750 m:

- **DkQw 20** is located 738 m north of the study area. The site was first recorded in 1977. In 1990, the site was reported as 95% destroyed (Zacharias 1990). The site consists of a 300 m x 50 m lithic scatter situated along a public beach located near the government wharf north of the study area. Several basalt flakes and a fragment of a projectile point have been recovered from the site.

Recorded archaeological sites within 2500 m:

- **DkQw 21** is located approximately 2085 m south of the study area at Antlers Beach Park where Peachland (Deep) Creek empties into Okanagan Lake. The site was first recorded in 1977 and it represents a major intersection of the upper and lower Hudson's Bay Brigade Trail. No artifacts were identified at this location and no physical evidence of the Brigade Trail is present. The location was recorded as a site based on historical records and also because of the presence of Kokanee salmon in the creek during the fall and the presumption that people must have utilized the resource. The site was revisited in 1985 and no evidence of the trail was identified. However, the use of the Kokanee salmon in the area was supported by ethnographic information acquired from the First Nations participant involved in the AIA (Wilson and Thompson 1985).
- **DkQw 19** is located approximately 2,490 m northeast of the study area and consists of a surface lithic scatter situated on a beach on the west shore of Okanagan Lake. The site was originally recorded in 1971 and was subsequently revisited in 1990. The site was then reported to be 95% disturbed (Zacharias 1990). The site measures 300 m x 50 m in size.

Recorded archaeological sites within 5000 m:

The remaining ten archaeological sites located in relatively close proximity to the study area are situated directly across the lake from Pincushion Bay and the study area.

- **DkQw 1** is a cache pit site located near a small beach on Rattlesnake Point. The site was originally recorded by the Provincial Museum in 1971.
- **DkQw 4** is a multi-component site consisting of a lithic scatter, cache pit and two historic log cabins. The site is approximately 75 m x 50 m and is situated on a small point flanked by beaches on the east side of Okanagan Lake.
- **DkQw 6** is a subsurface lithic deposit located on a high bank above a beach. The site was originally recorded by the Provincial Museum in 1977.

- **DkQw 7** is a surface lithic scatter of basalt and chalcedony flakes as well as fragmented projectile points. The site measures 100 m x 15 m in size and was originally recorded by the Provincial Museum in 1977.
- **DkQw 9** is a cache pit site with an associated lithic scatter. The site was originally recorded by the Kelowna Museum in 1969 and measures 30 m x 30 m.
- **DkQw 23** is a cultural depression with an unassigned function that also has an associated lithic component. It was presumed that the depression had a roof as it is situated at the base of a rock face with appropriate bracing areas to support a roof. The site was originally recorded in 1977 during an archaeological inventory of Okanagan Lake. The site measures 10 m x 5 m.
- **DkRw 26** is a surface scatter of lithics that measures 100 m x 10 m. The site was originally recorded in 1977 during an archaeological inventory of Okanagan Lake.
- **DkRw 27** is a petroform site consisting of seven circular rock cairns situated on a high terrace above Okanagan Lake. The function of the cairns is not known but could represent burial locations. The site was originally recorded in 1977 during an archaeological inventory of Okanagan Lake and measures 50 m x 10 m.
- **DkRw 28** is a surface lithic scatter located north of Rattlesnake Island on the east shore of Okanagan Lake. The site consists of several basalt flakes and a basalt drill, all of which were left *in situ*. The site was originally recorded in 1977 during an archaeological inventory of Okanagan Lake and measures 50 m x 10 m.
- **DkRw 29** is a surface lithic scatter located north of Rattlesnake Island on the east shore of Okanagan Lake at a beach flanked by two rock outcrops. The site consists of two basalt flakes which were left *in situ*. The site was originally recorded in 1977 during an archaeological inventory of Okanagan Lake and measures 50 m x 10 m.

4.3 Field Inspection

A very brief field inspection of the study area was conducted to better determine archaeological potential. The inspection consisted of a vehicle inspection around the

perimeter of the study area. A more detailed inspection was not practical given the large number of landowners who would have needed to be contacted regarding gaining permission for access.

The cursory examination showed much of the study area consists of moderate to steep slopes broken by several bench features. Other areas along the lake, especially at the north end of the study area are relatively level and well-drained. McCall Creek flows through the study area near its centre. The vegetation within the study area varied from natural ponderosa pine stands to typical backyard vegetation of fruit trees, vines, blackberry, grass and shrubs.

4.3 Archaeological Potential

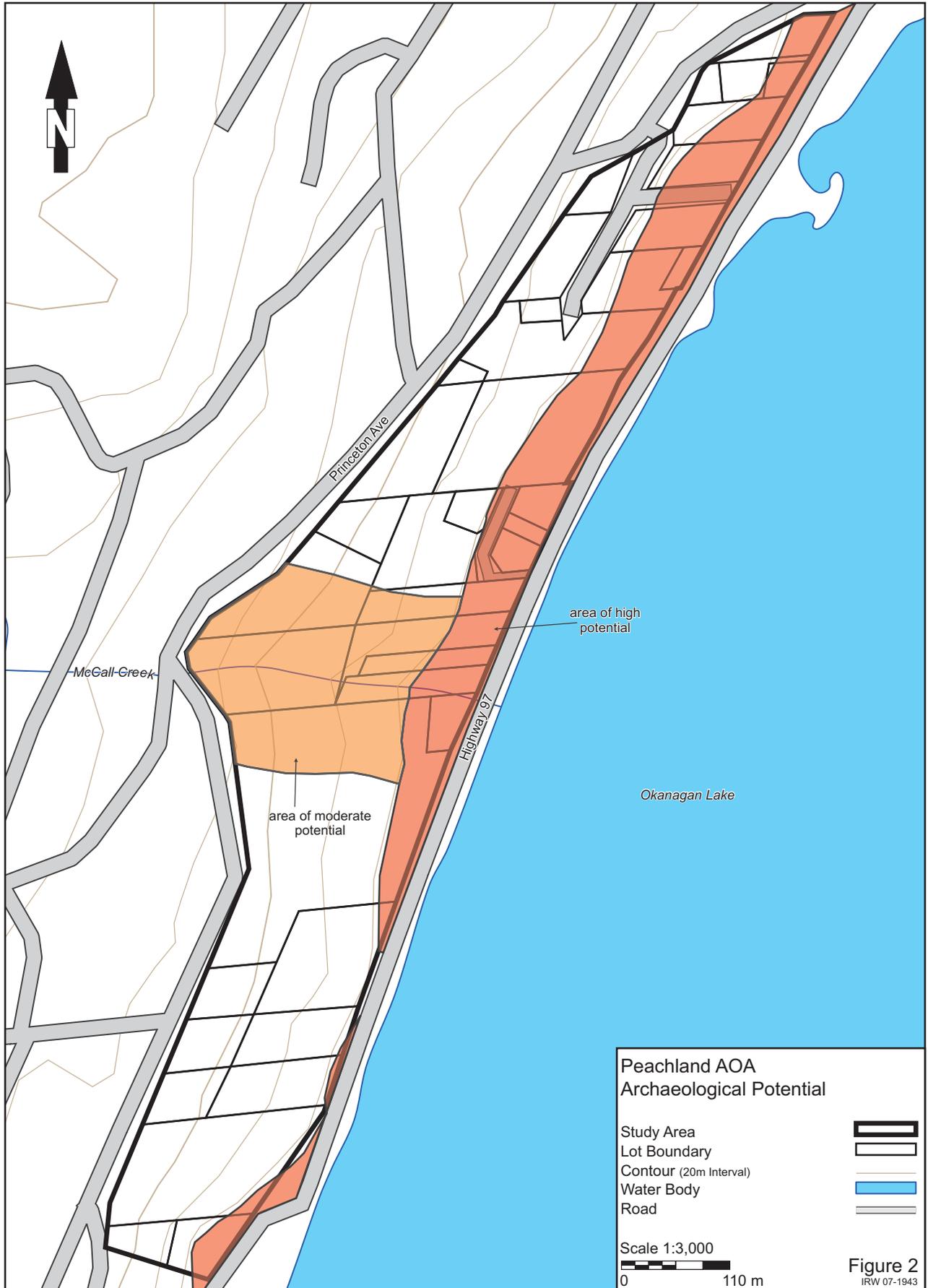
The area closest to the lake, especially the north end of the study area, is considered to have high archaeological potential. The lakeshore generally has high potential, with a site distribution marked by large numbers of sites along the lake and much lower frequencies in areas removed from the shore. Given the constraints of a desktop review, an area of high archaeological potential has been mapped below the first contour line above the present high water level of Okanagan Lake. This area is approximately 100 m wide but narrows to 20 m closer to the south end of the study area where a rock outcrop is located.

The areas within 110 m of either side of McCall Creek have at least moderate archaeological potential. The areas surrounding McCall Creek, especially at the estuary, are considered to have moderate potential because it is a source of fresh water and because it probably has fish resources.

Each relatively level bench on otherwise sloping terrain has at least moderate archaeological potential because of the vantage points that they provide. In addition, other documented sites in the region have been found on similar features. Because of the brief nature of the field assessment, the location of the benches was not mapped.

Several areas within the study area are assessed as having low archaeological potential. Areas with low archaeological potential are either steep, rocky, or have been severely disturbed by development.

Areas of differing archaeological potential are shown in Figure 2.



5. RECOMMENDATIONS

Potential varies considerably across the study area. An area of high potential was identified along the lakeshore. The area of high potential is approximately 100 m wide and is slightly elevated above the current lakeshore. The banks of McCall Creek are considered to have moderate potential and several level benches were also considered to have potential for archaeological site presence. These benches are scattered and were not all identified in the overview assessment. They are considered to have low to moderate potential. The majority of the study area is considered to have low archaeological potential.

Depending on how the area is developed, strategies regarding further archaeological research will vary. Archaeological impact studies are recommended in areas identified as being of moderate or high archaeological potential where development is proposed, specifically within about 110 m of the lakeshore in the northern part of the study area and within about 110 m of McCall Creek. Impact assessment studies must be undertaken under a Heritage Conservation Act site inspection permit.

A field reconnaissance is recommended in all other areas where development is proposed. Reconnaissance studies can be undertaken without a permit since no subsurface exploration is conducted. The purpose of a reconnaissance is to identify landforms with possible archaeological potential such as small level benches. It is possible that an impact assessment may be recommended if areas of potential were identified in the field.

Depending on long term development plans for the area, it may be of benefit to conduct a reconnaissance of the entire area in order to identify and map all areas of archaeological potential, particularly those which could not be identified in this desk top review. It is possible that identification of all areas of potential archaeological concern would serve to allow for better planning in terms of avoiding potential archaeological sites during initial design stages. The disadvantage of this approach is the difficulty of arranging landowner access throughout the study area.

These recommendations apply solely to physical archaeological evidence of past human activity and in no way attempts to encompass any traditional land use or heritage concerns of the various First Nations people with traditional territories in the study area.

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