Minette Bay West Concept Plan

30 August 2017







KITIMAT
A Marvel of Nature and Industry

HAISLA NATION

URBAN systems

SILVERWOOD
NATURAL RESOURCE CONSULTANTS

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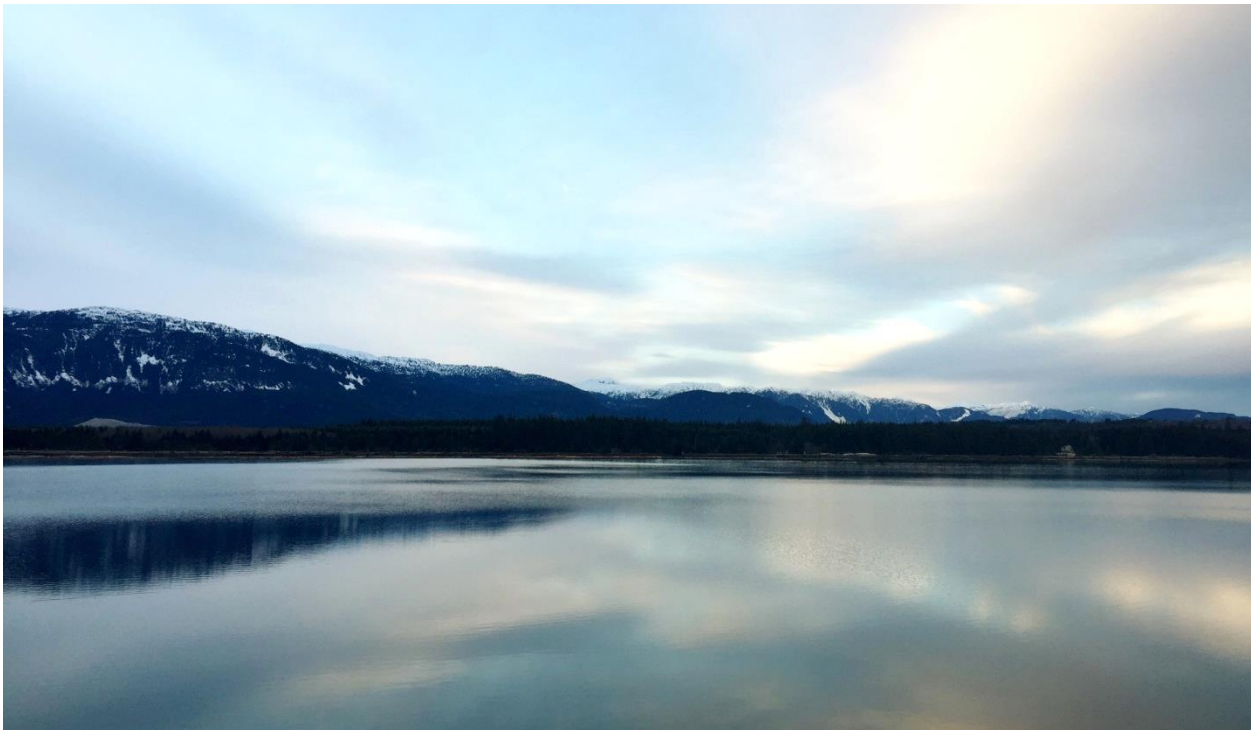
Acknowledgements

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Community Appreciation

The District of Kitimat would like to thank the many community members who provided input and shared valuable insights throughout the concept planning process. The Minette Bay West Concept Plan benefited from diverse comments received through open houses, workshops and booths; completed surveys; phone conversations; e-mail exchanges; in-person meetings; submission of letters and other forms of participation.



View of Minette Bay West from the east side of Minette Bay (DOK, 2017)

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1. Introduction

1.1 Kitimat Overview – Public Access to the Ocean

Kitimat is located on the North Coast of British Columbia at the end of Kitimat Arm, which is part of one of the largest fjords in the province, Douglas Channel. A flat valley at the head of Kitimat Arm is the setting for the developed and populated areas of the District of Kitimat. Port and industrial operations are located west of Kitimat River on the oceanfront, while residential, commercial and institutional lands are located east of the river, above the floodplain and set back a considerable distance from the ocean.

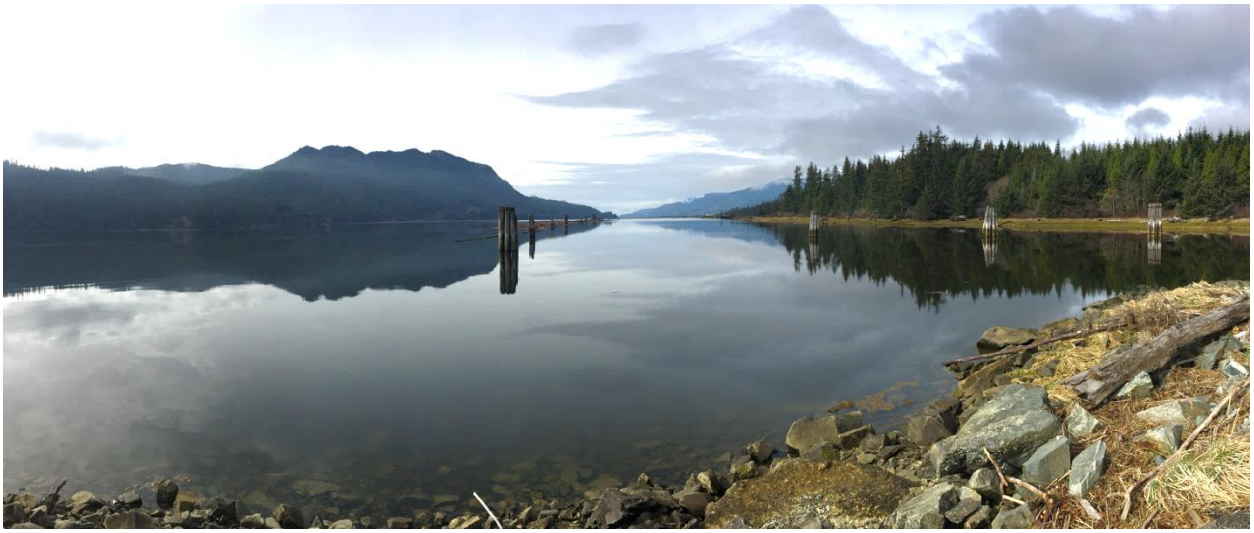
From a quality-of-life perspective, one disadvantage of Kitimat's layout is a lack of formal public space on the waterfront. Kitimat has been referred to as a coastal community without public access to the ocean. Much of the shoreline within the municipality is used or reserved for industrial purposes, is not accessible due to geographic or other constraints, or is privately-owned and not available for public use. There is one waterfront park within the municipality, Hospital Beach, which is owned by Rio Tinto and located adjacent to their BC Works aluminum smelter. For residents without a boat, there is limited opportunity to experience the beauty of Douglas Channel.

The District of Kitimat (DOK) has a standing vision and slogan: "A Marvel of Nature and Industry". The municipality strives to promote and diversify the economy while protecting the environment and providing public access to the outdoors, with a current emphasis on providing formal public access to the ocean. These objectives are established in and articulated throughout the community's guiding documents, including the 2008 Official Community Plan (OCP) and Council's 2015-2018 Strategic Plan. Similar objectives have appeared in previous versions of the OCP and other plans and studies dating back several decades.

During community engagement for the 2008 OCP, residents expressed that better physical connections to the ocean would strengthen Kitimat's livability and sense of place. One of the potential locations of the municipality discussed during this process was Minette Bay, the nearest sheltered tidewater bay to Kitimat's townsite. Community desire for oceanfront access in this area resulted in the designation of the west side of Minette Bay as "Park" and the adoption of the following OCP Policies:

- *Foster the eventual development of Minette Bay as an environmental and recreational area through permitted uses. (OCP Policy 4.1.9)*
- *Promote greenway expansion, park space, and provide public access to the ocean…at Minette Bay, where possible. (OCP Policy 4.2.4)*
- *Permit some public access and limited development (parks, open space and public / private passive recreation) in the Kitimat River Estuary and Minette Bay subject to access agreements, impact assessment report findings and design that retains natural attributes. (OCP Policy 4.4.10)*

In 2015, the District of Kitimat received a 60-hectare (ha) lot on the west side of Minette Bay from Rio Tinto to mark Kitimat's 60th anniversary of incorporation. This property, formally known as District Lot 471, is adjacent to 131 hectares of waterfront land (District Lot 95) purchased by the District in 1984 from Crown Forest Industries. Combined, these lots total 191 hectares of contiguous waterfront and upland along the west side of Minette Bay, within the "Park" designation in the OCP. This site, now referred to as "Minette Bay West", is Kitimat's first formal opportunity for a public recreational space on the ocean.



View of Minette Bay West shoreline, looking southwest from end of causeway (DOK, 2017)

1.2 Planning Process for Minette Bay West

In July 2016, the District of Kitimat launched a comprehensive concept planning process for Minette Bay West. The intent of the project was to work collaboratively with the community and stakeholders to prepare a concept plan—with a focus on public recreation and environmental preservation—that reflects and balances public input while respecting site limitations and sensitive areas.

The project team for this endeavour included the District of Kitimat, Haisla Nation's Lands and Resources Department, and experts in the areas of biology, archaeology, landscape architecture, planning, forestry, fisheries and other disciplines. Consultants on this project included: Urban Systems, Silverwood Consulting, Kleanza Consulting, McElhanney, Archipelago Marine Research, Murdoch de Greeff Landscape Architects and LM Forest Resource Solutions.

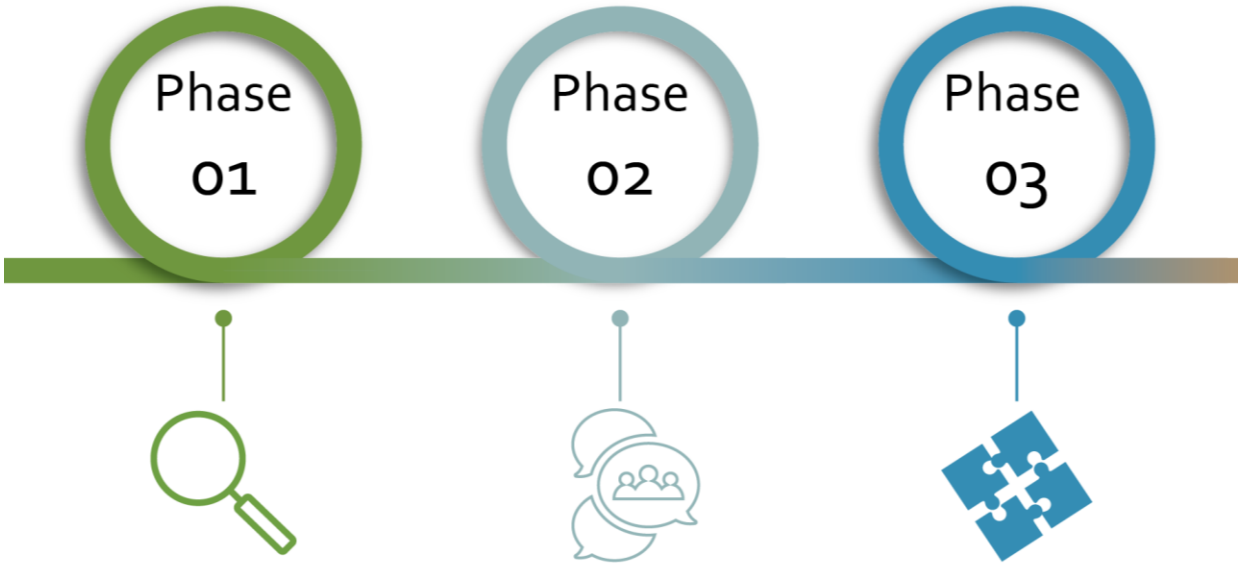
To ensure that the environmental integrity of the site is preserved, the planning process for Minette Bay West was premised on Green Shores™. The Stewardship Centre of BC established the Green Shores program to promote sustainable use of shoreline ecosystems. Four overarching principles apply:

- *Preserve or restore physical processes*
- *Maintain or enhance habitat function and diversity along the shoreline*
- *Prevent or reduce pollutants entering the aquatic environment*
- *Avoid or reduce cumulative impacts*

DOK enrolled in the Green Shores for Coastal Development program in March 2016, months in advance of commencing the concept planning process. This early commitment confirmed DOK's dedication to protect the environment at Minette Bay West, consistent with Kitimat's overarching vision and policy direction in the *Official Community Plan*. Kitimat has since been recognized as the first community in British Columbia to base a conceptual park planning exercise on Green Shores principles and guidelines from the outset. This distinction was announced online by the Stewardship Centre for BC in June 2017.

The Minette Bay West concept planning process consisted of three phases of work spanning over a year. During this time, the project team had over 1,100 unique interactions with community members at project events; through surveys; and by e-mail, phone, letter and other forms of communication. Details about each phase of the planning process are provided in **Figure 1** and on **pages 6 and 7**.

Figure 1 – Concept Planning Process



Phase 1 – Site Investigation (July – October 2016)

The first phase of concept planning commenced in July 2016 with a drone flight to capture high-resolution imagery of Minette Bay West and the surrounding area. The project team used this technology to also capture bird's eye video of the site, which was shared at public events later in the planning process and posted on YouTube.

Professionals including biologists, archaeologists, landscape architects, planners, foresters, fisheries experts and others visited Minette Bay West throughout late summer and early fall to assess and document the resources and recreation opportunities on-site. Staff from Haisla Nation's Lands and Resources Department participated in this work alongside DOK staff and consultants.

Throughout Phase 1, members of the project team had conversations and exchanged e-mails with neighbouring property owners and other stakeholders. Information about the planning process, including opportunities to get involved, was provided and valuable insights and experiences were shared. This early input was factored into various components of the Phase 1 work.

Detailed site investigations, desktop inventories, and site analysis were completed in September and October. An environmental (Bio-Inventory) study, Archaeological Overview Assessment (AOA), climate change assessment, and an analysis of strengths and challenges for recreation were all completed during this time. Key findings were presented at a Community Open House on October 26. This event included display panels, a comment board, a questionnaire, and opportunities for conversations with DOK staff and consultants.

Phase 2 – Concept Plan Options (October 2016 – February 2017)

Phase 2 commenced in late October with a community survey, followed by a number of opportunities for public input at community events throughout November. District staff set up and attended project booths at the Annual Kitimat Fall Craft & Gift Sale, Love Kitimat Trade Show and Light Up Kitimat outdoor festival.

A visioning workshop was held at Kitimat Public Library on November 30. Over 40 invited stakeholders attended this event. Neighbouring property owners and business operators, DOK Advisory Commission members, representatives from local environmental, heritage and outdoor recreation user groups, and others attended. A similar visioning workshop was held with Kitimat Council and the project team, including staff, consultants and representatives from Haisla Nation's Lands and Resources Department.



Nov. 30 Stakeholder Visioning Workshop at Kitimat Public Library (DOK, 2016)

All input received throughout Phase 2 was presented in a Summary of Community Engagement document. The project team used this summary and the Phase 1 site investigation findings to prepare Guiding Statements for Minette Bay West. The Guiding Statements include a vision and eight broad goals, as well as objectives or ways to achieve each goal. The engagement summary and Guiding Statements were presented to Council on February 6 and posted on DOK's project web page.

Three options were then prepared based on the Guiding Statements, Summary of Community Engagement and Phase 1 site investigation findings. The options represent different approaches to developing the site, ranging from maximizing environmental protection (Option 1) to maximizing recreation opportunities (Option 3); Option 2 represents a balance. The ranging intensity of recreational uses and environmental preservation proposed in the three options was reflective of the diverse input shared by community members earlier in the process. All options respect site integrity and minimize encroachments into sensitive habitat.

The three options were presented for public review and comment at a Community Open House on February 28, 2017. District staff and members of Council were available throughout the event to discuss the planning process, present and explain the three options, and answer questions. Attendees were encouraged to provide feedback through a questionnaire, comment board and one-on-one and group conversation.

Phase 3 – Prepare Plan (March – August 2017)

The final phase of concept planning began March 2 with the launch of a second community survey. Community members were invited to indicate whether they supported any of the three options, and if so, to indicate preferences with respect to specific amenities. On April 1, DOK staff set up and attended a project booth at the Spring Craft Fair to provide information about the survey and to encourage participation before the deadline.

In May, the project team released a second Summary of Community Engagement and presented the document to Council. This report provides details about the 1,100+ interactions with community members from the outset of the project up to that point. It also includes a summary of key messages and themes arising from informal engagement (e.g., e-mails, letters, phone calls). A separate Fact Sheet & FAQ publication was released to provide clarity regarding the ten most common questions and inquiries.

In late spring, project consultants McElhanney and Silverwood completed a study of bear habitat use and suitability in the Minette Bay West area. This study was recommended by Silverwood in the November 2016 Bio-Inventory, which advised DOK to undertake a bear study in spring 2017 prior to preparation of a final concept plan. The bear study was undertaken in two phases, consisting of desktop and field work respectively, and a final report was presented to Council on July 10.

From July to the end of August, the project team prepared a concept plan, cost estimates, phasing plan, and preliminary management strategies for Minette Bay West. This content is presented in **Sections 4 and 5** of this document.

2. Engagement and Communications

The Minette Bay West Concept Plan was inspired by over 1,100 contacts[1] with community members and stakeholders. A variety of communication tools was used and many engagement activities undertaken to provide information to the community and to collect public input. During the three phases of work, the project team:

- Facilitated two open houses, four booths at community events and a stakeholder visioning workshop
- Held two community-wide surveys
- Engaged in ongoing dialogue with community members and stakeholders through e-mail, phone, letters and in-person
- Shared information with the public through digital and print communications

Diverse comments and opinions about the recreation potential of Minette Bay West were heard throughout the process. Many participants expressed a desire for public waterfront access and/or a range of recreation amenities, while others indicated that they would prefer to see the site minimally developed or preserved in its current state. A complete summary and analysis of community and stakeholder input are available in a supporting document titled *Summary of Community Engagement – Version 3* (August 2017).

2.1 Engagement

The project team endeavoured to provide meaningful and diverse opportunities for participation at multiple points throughout the planning process. **Table 1** includes a summary of the nine formal (i.e., scheduled and organized) opportunities.

Table 1 – Summary of Formal Engagement Opportunities

Events and Surveys	Date(s)
Community Open House #1	October 26, 2016
Booth at Fall Craft Fair	November 4 and 5, 2016
Booth at Love Kitimat Trade Show	November 25, 2016
Booth at Light Up Kitimat	November 27, 2016
Community Survey #1	October 26 – November 28, 2016
Stakeholder Visioning Workshop	November 30, 2016
Community Open House #2	February 28, 2017, 2017
Booth at Spring Craft Fair	April 1, 2017
Community Survey #2	March 2 – April 3, 2017

[1] This number represents the number of interactions, or inputs into the process, including attendance and participation at open houses, workshops and booths; completed surveys; phone conversations; e-mail exchanges; in-person meetings; submission of letters and other forms of participation. Contacts are not a direct representation of the number of individuals who have participated in the planning process. One contact can represent the thoughts of multiple community members; for example, when one survey is completed on behalf of a household of two or more people. Conversely, multiple contacts can represent the thoughts of one person, if that one person has participated in the planning process in multiple ways.



Open House #1 at Riverlodge Recreation Centre (DOK, 2016)

Significant input was also received through informal engagement. DOK had an 'open door' throughout the project, meaning any community member who wished to provide input was encouraged to do so over the phone, by e-mail or letter, or in-person at the municipal office. Many engaged community members opted to provide input to staff and Council by e-mail. Some residents had in-person meetings with staff to discuss ideas and concerns, and a small number of letters were submitted to Council and staff. Some input was also provided over the phone.

2.2 Communications

Open, transparent and frequent communication with the community was a fundamental component of the planning process. The following and other methods were used to inform residents and stakeholders of events and surveys, project updates, release of project-related studies and reports, and other details.

- **Web page** – DOK launched a project web page on September 21, 2016. Regular updates (over 30 in total) were made throughout the planning process to ensure web page content was current and comprehensive.
- **E-mail list** – Staff sent over a dozen informative messages, timed in accordance with key project milestones, to e-mail list subscribers. By the end of the planning process, the list included over 80 individuals.
- **Social media** – Staff posted project-related information on DOK's Facebook page more than 20 times. Information was also shared on Twitter and LinkedIn.
- **Posters** – Posters were displayed throughout the community at different points in the planning process. Locations included DOK's notice boards in City Centre Mall, downtown businesses, and high-traffic areas of DOK's facilities. Posters were typically in place for approximately one month leading up to a key event, survey deadline or other milestone.
- **DOK external newsletters** – Articles about Minette Bay West were included in six editions of DOK's external newsletter, including three editions in 2016 and three in 2017.
- **Newspaper** – DOK sponsored project advertisements in the Kitimat Northern Sentinel and Kitimat Northern Light papers. Further, reporters from the Sentinel and other media outlets have been covering the Minette Bay West planning process from the outset.

3. Site Information

3.1 Study Area and Context

The study area consists of two legal parcels, District Lots 471 and 95, located on the west side of Minette Bay. These lots, together known as Minette Bay West, are owned by the District of Kitimat and total 191 hectares of undeveloped terrestrial (upland) and coastal zone ecosystems on relatively-flat terrain. The site was significantly logged in the 1950s to 1970s and is regenerating. Human interventions on the site are concentrated in the far northeast corner of District Lot (DL) 471 and include:

- causeway into Minette Bay, constructed in the 1960s for purpose of log dumping/booming
- access road and cleared area leading up to the causeway
- 400 linear metres of tree clearing providing access to a recent fisheries enhancement project (Daudet Creek realignment)

The location of the study area within the context of Kitimat's townsite is shown in **Figure 2**. The entrance to DL 471 is a driving distance of approximately seven kilometres (10 to 15-minute drive) from City Centre and less than five kilometres from the intersection of Haisla Boulevard, Kitamaat Village Road and Nalabila Boulevard. Land uses and features that border the study area are listed in **Table 2**.

Table 2 – Adjacent Land Uses and Features

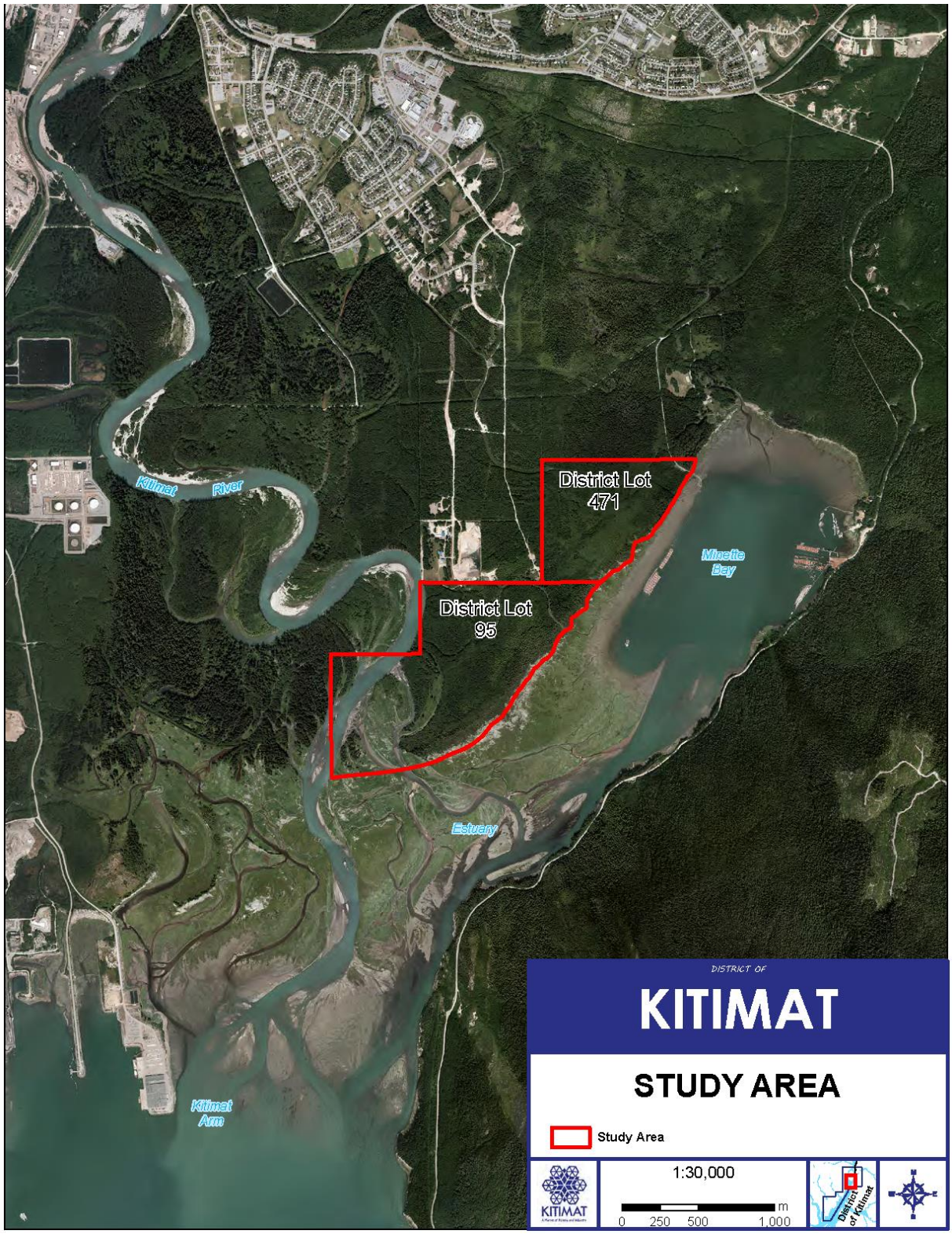
Direction	Land Use(s) or Feature(s)
North / Northwest	Large-lot residential properties, future phases of Strawberry Meadows residential subdivision and vacant land
Northeast	Rural resort uses, including Minette Bay Lodge and proposed Pyne Hamlet development
East	Minette Bay
South	Kitimat Estuary and Minette Bay
West	Kitimat River

Across the bay from the study area (to the east) are a log-handling facility, marina, detached residence and Kitamaat Village Road. The remainder of the Minette Bay waterfront, at the head of the bay, is Haisla Nation's Jugwees Reserve.

The entire study area is designated as a future "Park" within Kitimat's 2008 *Official Community Plan.* DL 471 is zoned G5-A Forestry Transition, which allows for agriculture and silviculture uses, a detached residence with up to two dwelling units, and a range of accessory uses. DL 95 is zoned G6-A Environmentally Sensitive, which allows for outdoor recreation, natural open space, and preservation or improvement of sensitive habitats.

There is a Right of Entry registered on title of DL 471. As part of this agreement, the land must be used by DOK for municipal or public purposes, such as road, park, boat launch, marina or other municipal facilities. There is also a requirement that DL 471 not be used for third party commercial, industrial or revenue purposes, other than recreational uses or municipal revenue generation in the form of municipal user fees and other service charges.

Figure 2 – Study Area Context



3.2 History

a. Archaeology

Archaeology is the study of people and the past through the identification, analysis, and interpretation of the physical remains of human activity. Archaeological sites are locations where physical remains have been preserved. In British Columbia, all archaeological sites that pre-date 1846 are protected by the Heritage Conservation Act, whether on federal, provincial, municipal, or private land. Some post-1846 sites, such as burials, shipwrecks, plane wrecks, First Nation rock art sites, and sites which have been designated by the provincial government are also protected, regardless of age (Kleanza, 2016, pg.1).

An Archaeological Overview Assessment (AOA) was completed for Minette Bay West in October 2016 by Kleanza Consulting. The likelihood of archaeological sites on DL 471 and 95 was assessed with input from Haisla Nation Lands and Resources Department, DOK staff and local residents with knowledge of the site's history. Methods included: review of provincial archaeological site registry, archival information and ethnographic documents; inspection of available satellite and drone imagery and air photos; and visits to the study area.

The AOA determined that Minette Bay West has the potential to contain pre- and post-1846 archaeological sites, including culturally modified trees (CMTs) and areas of habitation potential. The AOA also confirmed that the following are located within the study area:

- a protected historical site
- plants known to be managed by First Nations communities
- a trapline owned by a local Haisla Nation member

Recommendations were provided by Kleanza to guide concept planning and implementation. These recommendations and other information are included in a document titled *Summary of Archaeological Overview Assessment of District Lots 95 and 471 (Minette Bay West)*.



Kleanza conducting site investigation at Minette Bay West (DOK, 2016)

b. Planning History

There are several historic plans and documents, dating back to the 1950s, that identify Minette Bay as a desirable public recreation area. The documents vary in terms of outlook and proposed amenities for Minette Bay, but they consistently suggest that the area has recreation potential. Below is a summary, starting with Clarence Stein's original 1952 *Townsite Report* (i.e., Master Plan) for Kitimat.

i. Kitimat Townsite Report (1951-1952)

The 1952 *Kitimat Townsite Report* is the earliest planning document in DOK's archives that promotes Minette Bay as a potential area for public recreation. In the Recreation section of the *Townsite Report*, author George D. Butler states that Minette Bay is a "natural site for developing facilities for boating, swimming, fishing, picnicking and related activities" and that it "can be reached easily by car from all parts of the town" (1952, pgs. 95 & 92). In the early 1950s, it was believed that a public beach should be developed on the bay:

> *The town authorities should develop such facilities as a golf course and a beach on Minette Bay so that they can be expanded as the population and resulting demand grow. Ownership should be retained by the town even though provision of specific services such as a boat livery might be leased to private operators. (Butler, 1952, pg. 95)*

> *"Recreation is a function of growing importance in every community… Unless adequate areas, structures and leadership are provided to assure residents recreation opportunities that will afford attractive and satisfying leisure-time living, people will be unwilling to reside in Kitimat." (89)*
>
> *George D. Butler, 1952*

This beach was proposed to be a component of a large, phased waterfront park at the head of Minette Bay. Butler envisioned the park being developed in four stages, triggered by population growth. Stage 1 included a 10-hectare park to serve an initial population of 6,000 people. Stage 2 proposed an expansion to 16 hectares for a population of 12,000, and Stages 3 and 4 proposed expansions to 20 and 40 hectares, when population reached 18,000 and 35,000 respectively. The proposed Minette Bay Waterfront Park was envisioned to include, subject to site conditions, areas for boating, picnicking and swimming. Butler proposed that the picnic area include:

> *One or more barbeque pits; several small fireplaces with tables and benches, for large group and family picnics, respectively located either along the waterfront in an area not required for bathing or boating or in an area removed from the shore. A softball diamond, horseshoe courts, and a few pieces of playground apparatus." (1952, pgs. 105-106).*

ii. Minette Bay Park Development for Kitimat, a Thesis submitted for the Degree of Master of Architecture at Massachusetts Institute of Technology (1957)

In 1957, with support and direction from the Aluminum Company of Canada, a Masters of Architecture student at the Massachusetts Institute of Technology (MIT) named Hajime Kinoshita completed a thesis advancing the 1952 vision for a waterfront park at Minette Bay. The purpose of Kinoshita's thesis, titled *Minette Bay Park Development for Kitimat*, was "to present to the citizens of Kitimat a visual idea of the possibility of development the recreational potentialities of Minette Bay" (1957, pg.4).

The final document, available online through the MIT library, contains historic site information about Kitimat and Minette Bay, proposed programming for a future waterfront park at the head of the bay, and design details including conceptual drawings and models. Although never implemented, Kinoshita's vision is a good example of the optimism that was prevalent in the 1950s amongst Kitimat's early planners and designers regarding the recreation potential of Minette Bay.

> *"Minette Bay Park development is to be a summer recreation centre on a waterfront for the people of Kitimat. It shall create a setting of nature for the movements of people; to swim, to dance, to play, to rest or to love. Within this magnificent setting of nature shall float the architectural elements of man to arouse delight, gaity, colour and joy; to entice people to be gay, to be happy." (pg. ii)*
>
> *Hajime Kinoshita, 1957*

iii. Kitimat Parks and Recreation, Community Plan Report (1961)

In 1961, the District of Kitimat released a *Parks and Recreation Report* under Planning Director Edmund T. Ames. In this report, Ames notes that George Butler's 1952 assessment of the recreation potential of Minette Bay was "highly optimistic" and "should be modified" (1961, pg. 100). Ames identifies challenges for boating, swimming and fishing at Minette Bay due to tidal action, strong winds, shallow areas and other issues, but acknowledges that Minette Bay has potential for picnicking, nature study and photography. In his words, Minette Bay is a "Place to Go":

> *While the surrounding countryside offers unlimited opportunities for wilderness recreation, there are few places of interest within Kitimat which are directly approachable by car. Minette Bay, as a place where one can drive and look at the open view, is such a place of interest. The view of the open Bay offers a refreshing contrast to the mountains, which give many people a sensation of being enclosed. The recreational potential of Minette Bay is a good deal more limited than that envisaged in the Butler report. Nevertheless it does have recreation potential and should not be ignored. (1961, pg. 101)*

iv. Kitimat Official Community Plan, 1980

The 1980 *OCP* for the District of Kitimat describes Minette Bay as having "considerable recreation potential", but suggests that this potential was limited at that time by two log-booming and dumping operations (1980, pg. 25). The *OCP* presents a single objective for Minette Bay: "In the long term, Minette Bay should be maintained as a recreational area for the citizens of Kitimat" (1980, pg. 26). Two supporting policies are also included:

- *To accommodate the existing logging uses but to encourage the concentration of these activities into one facility located on the east side of Minette Bay. As the area is developed for other uses, logging operations may be gradually phased out. (OCP Policy 4.7.1.1)*
- *On the basis of recent information received regarding the quality of the marine environment in the Minette Bay area, and review of industrial requirements related to water access, further effort is to be undertaken to reassess the best long-term use for the Minette Bay Area. (OCP Policy 4.7.1.2)*

v. Kitimat Official Community Plan, 1987

The 1987 OCP contains similar direction to the 1980 community plan with respect to Minette Bay, indicating that the "intention is to establish Minette Bay as a recreation area in the long term". In section 2.3.7, the bay is identified as having "some recreation potential", limited by the two booming grounds and log dumps at that time (1987, pg. 42). The following strategic directions are also provided:

- *Minette Bay will be developed in accordance with the Minette Bay Concept Plan. (Objective 2.3.7)*
- *Present log handling activities in Minette Bay will be accommodated and concentrating this work in one facility on the east side of the bay will be encouraged. (Policy 2.3.7)*

The 1987 *OCP* included a high-level concept plan for Minette Bay, titled *A Proposal for the Development of Minette Bay.* The plan was authored by the District of Kitimat Planning Department and was based on three objectives: (1) determine site capabilities; (2) propose land uses that would best utilize specific areas; and (3) present a conceptual land use plan that could refine and clarify policies of the OCP as related to Minette Bay (1987, pg. A-1).

The concept plan proposed that a significant portion of the west shoreline of Minette Bay, including parts of DL 471 and 95, be designated for recreation use and that a mix of uses be permitted in the surrounding area. The conclusion section of the plan includes the following statement regarding future use(s) of Minette Bay:

> *Although recreation is still a consideration, the best use of the bay many not be for solely recreation purposes. Developing mixed use activities within Minette Bay should not negate the bay's potential for recreation development and may enhance options and opportunities for recreation. (1987, pg A-24)*

vi. Kitimat Recreation Master Plan, 2002

In 2002, consulting firm Randall Conrad & Associates completed a Recreation Master Plan for the District of Kitimat. The purpose of this plan is to guide the delivery and development of recreation services, parks, facilities and open space within the District to 2022. During the community engagement process, participants expressed a desire for improved waterfront/shoreline access in Kitimat. This input was included in the Plan in the form of strategic directions and general commentary. Below are some examples:

- *The affinity of humans to access the water edge for both enjoyment and recreational activity is as pronounced in Kitimat as it is elsewhere. (Section 10.10(c) – Waterfront Access, page 76)*
- *It is recommended that the District retain park zoning of [District] Lot 95 for the future development of a passive ocean front park and possible outdoor recreation / education resource (Recommendation #2, Section 10.7, page 73)*
- *A focus of parks & recreation planning for the future must be to optimize, improve and formalize access to shoreline recreation locations. Improved access from Riverlodge through Radley Park east and down to the water's edge is one example as is the protection of lands between the townsite and Lot 95 on Minette Bay (Section 10.10(c) – Waterfront Access, page 76)*

In Section 12 - Summary Statements, the Recreation Master Plan includes a series of action items that are organized into three categories: short, mid- and long-term. Three action items specifically related to oceanfront access are included:

- *Secure lands for future public access to [District] Lot 95. (Short term, 2002-2007)*
- *Plan and develop Lot 95 (Mid-term, 2008-2013)*
- *Expand water access (Mid-term, 2008-2013)*

vii. Kitimat Official Community Plan, 2008

The 1987 *OCP* was updated in 2007-2008 by DOK's Community Planning & Development Department and consulting firm Stantec. During the community engagement process for the OCP update, residents expressed that better physical connections to the ocean would improve quality of life and sense of place in Kitimat. The final version of the OCP, adopted by Kitimat Council in 2008, designates much of the west side of Minette Bay (including DL 471 and 95) as "Park" and includes the following supporting policies:

- *Foster the eventual development of Minette Bay as an environmental and recreational area through permitted uses. (OCP Policy 4.1.9)*
- *Promote greenway expansion, park space, and provide public access to the ocean…at Minette Bay, where possible. (OCP Policy 4.2.4)*
- *Permit some public access and limited development (parks, open space and public / private passive recreation) in the Kitimat River Estuary and Minette Bay subject to access agreements, impact assessment report findings and design that retains natural attributes. (OCP Policy 4.4.10)*

3.3 Environment and Wildlife

a. Bio-Inventory

An environmental (Bio-Inventory) study for Minette Bay West was completed in October 2016 by Silverwood Consulting. The intent of this exercise was to identify Environmentally Valuable Resources (EVRs) on DLs 471 and 95 through research and reconnaissance-level desktop and field investigations. The final report, titled *Bio-Inventory of District Lot 471 and District Lot 95,* includes research findings, observations, maps delineating ecosystem communities, and recommendations to guide concept planning and implementation. Below is a brief summary of findings.

The *Bio-inventory* confirmed that there are eleven different ecosystems (forest and coastal zone) at Minette Bay West, seven of which are blue- and/or red-listed communities.[2] Of the five forest ecosystems identified, three were confirmed to be blue- or red- listed:

- **Blue** - Young seral western hemlock low-lying forest
- **Blue** - Old climax western redcedar, sitka spruce and western hemlock low-lying forest
- **Red** - Young seral alder high fluvial bench floodplain

Six coastal zone ecosystems were identified within the study area, four of which were confirmed to be blue- and/or red- listed:

- **Blue** - Estuarine meadow tufted hairgrass-meadow barley / tufted hairgrass-douglas' aster
- **Blue** - Transitional shrub complex
- **Red** - Widgeon-grass
- **Red and blue** - Estuarine marsh-lyngbye's sedge-douglas' water hemlock

The *Bio-inventory* included a reconnaissance-level wildlife assessment, including species at risk and regionally significant species. It was confirmed that Minette Bay West is not within any approved Ungulate Winter Ranges, although signs of use by moose and deer were observed during field investigations. Wildlife trails, wildlife trees, signs of grizzly bear use and signs of beaver activity were all noted during field investigations, as was timber that is at the appropriate stage of maturity to support nesting habitat for marbled murrelet, bald eagle and osprey. No detailed bird surveys were conducted as part of the *Bio-Inventory,* but incidental species observations (visual or auditory) during an early-fall site visit included red-breasted sapsucker, gulls, sandpipers, pine siskin, and brown creeper.

[2] Each species and ecosystem is assigned by B.C's Conservation Data Centre (CDC)—based on their conservation status rank— to the red, blue or yellow list to help set conservation priorities and provide a simplified view of the status of B.C.'s species and ecosystems. Red-listed species include any species at risk of being lost (extirpated, endangered or threatened) and blue-listed species include any species or ecosystem that is of special concern. Species on the yellow list are those that are at the least risk of being lost.

b. Grizzly Bear Study

A study of grizzly bear seasonal habitat use and suitability at Minette Bay West was completed between March and June 2017 by McElhanney and Silverwood Consulting. This study was recommended by Silverwood in their *Bio-Inventory* (released November 2016), which advised DOK to undertake a bear study in spring 2017 prior to preparation of a final concept plan. The purpose of the study was to:

- Investigate and map seasonal bear habitat suitability (early and late spring, summer and fall)
- Assess risk of potential human/bear conflicts in the three concept plan options
- Provide recommendations for a final concept plan

The bear study was undertaken in two stages. Stage one included a desktop exercise to assess seasonal habitat suitability in Minette Bay West and the surrounding area, and a preliminary assessment of human/bear conflict risks. Stage two included a detailed site survey and field assessment, including field plots and the use of wildlife (trail) cameras. The final report was presented to Kitimat Council on July 10 in a public meeting, and was subsequently reviewed and endorsed by Len Vanderstar, Ecosystem Biologist in the Ecosystem Section, Resource Management Division of the Ministry of Forests, Lands & Natural Resource Operations on July 31.

The final report, titled *Assessment of Grizzly Bear Distribution, Habitat Use, and Human/Bear Conflict Management Recommendations*, includes methodology and results, seasonal forage (habitat) suitability maps, and recommendations for concept planning and implementation. The study confirmed that Minette Bay West has high and very high-value spring habitat. The highest-value habitat was identified in skunk cabbage forests 50 to 80 metres inland from the Minette Bay West shoreline, as well as in estuarine marshes and meadows on District Lot 95.

Grizzly bear use and movement were evident within skunk cabbage forests, and along existing ATV trails, footpaths and game trails. Evidence of grizzly bear use observed on site included scat, trails, tracks and vegetation excavations. Photographs of grizzly bears were collected by two of the seven trail cameras in May 2017. The trail cameras also captured photos of deer, fox, moose, wolves and humans.



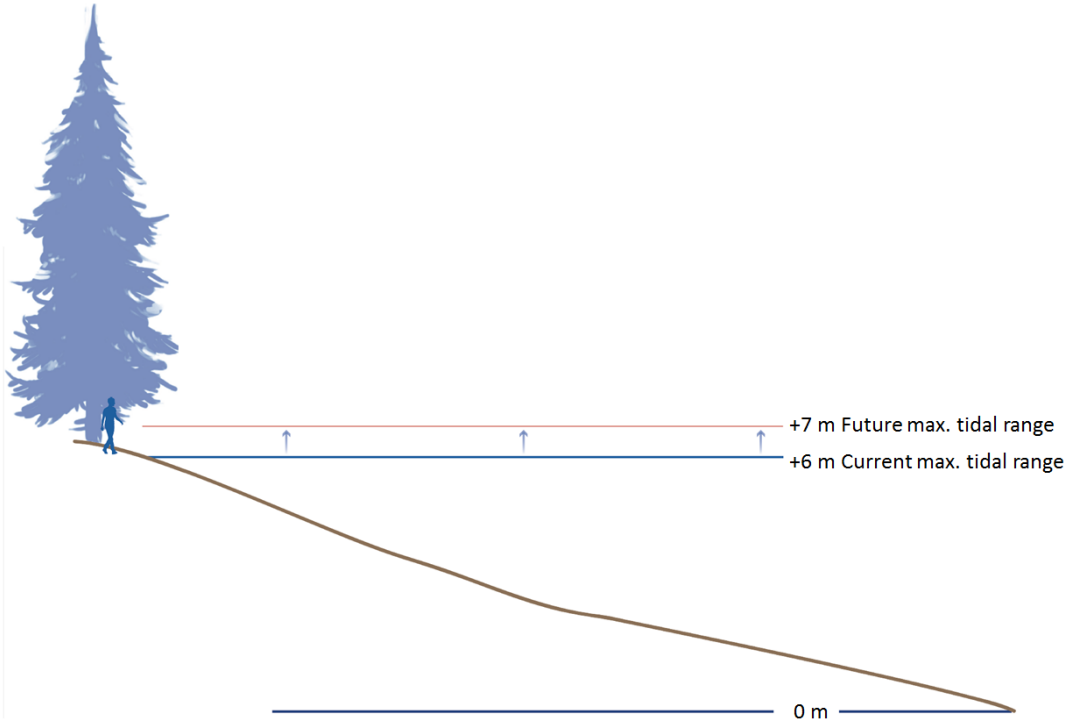
McElhanney and Silverwood conducting field assessment on DL 471 (Silverwood, 2017)

3.4 Climate Change

Forecasted climate change impacts for the Kitimat-Stikine region were reviewed during Phase 1 of concept planning, using literature from the Pacific Climate Impacts Consortium. By 2100, sea level rise is forecast to add about one metre to Kitimat's current tidal range and storm surges. Kitimat's coastline currently has a mean tidal range of about three metres and a maximum tidal range of about six metres; maximum tidal range is forecasted to increase to approximately seven metres with sea level rise (see **Figure 3**). Other forecasted climate impacts for the Kitimat-Stikine region by 2100 include:

- Increase in mean temperature: +2.6 degrees Celsius annually
- Increase in precipitation: +13%
- Increase in frost free days: +37 days annually
- Decrease in winter snowfall: -11%
- Decrease in spring snowfall: -72%

Figure 3 – Sea Level Rise Forecast

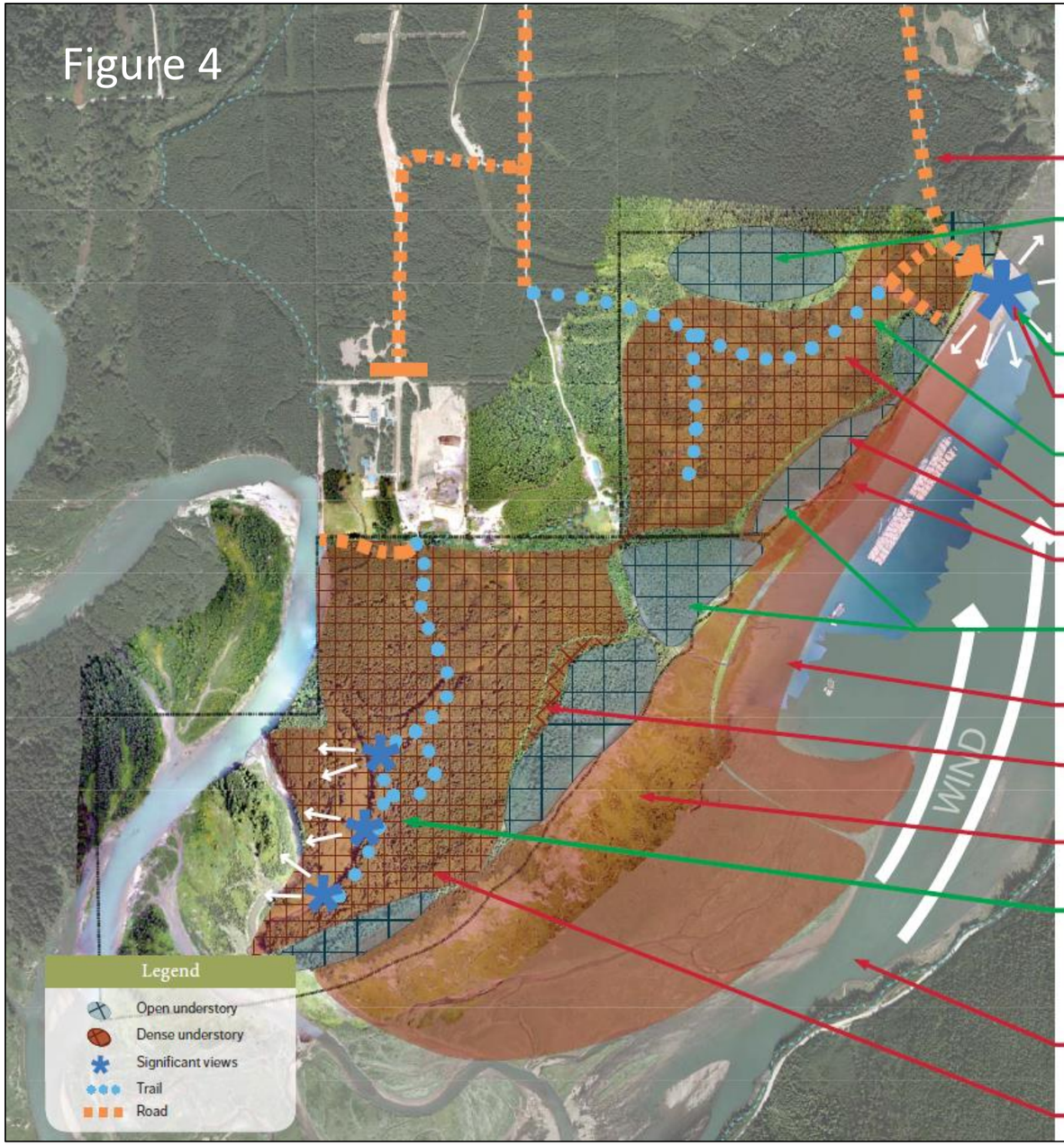


3.5 Recreation

An analysis of the recreation potential at Minette Bay West was completed during Phase 1. Information collected through the *Bio-Inventory* and *Archaeological Overview Assessment* was used in conjunction with field observations, high-resolution aerial photography, historic documents, expert knowledge and opinion, and other information to assess the site's strengths and challenges for recreation.

A summary of strengths and challenges from a recreation perspective is provided in **Figure 4**. Grizzly bear habitat is not included in **Figure 4** as habitat suitability and use (and associated risk of human/bear conflict) was assessed in detail through a separate exercise in Phase 3 in spring 2017 (see **Section 3.3b**).

Figure 4



RECREATION STRENGTHS & CHALLENGES

Open, walkable, park-like; Wildlife trees and good visibility

Causeway with views

Creek realignment

Old growth forest; trails would need to address wet conditions

Wet swamp forest; trails would need to address wet conditions

Existing informal trail with "peakaboo" views

Channel not accessible during low tide

Private road access

Causeway license of occupation required

Dense, young deciduous overstory and well-developed understory; poor visibility and access

Considerable sensitive riparian habitat

Wet, high water table; poor tree stability

Sensitive mud flat; no foot traffic

Estuarine meadow; trails would need to address wet conditions (or avoid area)

Dense, dark canopy; poor visibility and access; high chance of wildlife encounters and falling dead stems

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4. Concept Planning

4.1 Guiding Statements

This section describes the vision, goals and objectives for the concept planning process. These 'Guiding Statements' were prepared in Phase 2 based on Green Shores principles, site investigation findings, input from Haisla Nation's Lands and Resources Department, public input during the first round of community engagement in 2016 and other considerations. The Guiding Statements were then shared with Council and the public for feedback during the second round of engagement in 2017.

The vision, goals and objectives below establish a framework and provide guidance for the planning, design and management of Minette Bay West. The Guiding Statements are the foundation for the three options (**Section 4.2**), the concept plan (**Section 4.3**), and the preliminary park management strategies (**Section 5.1**).

Vision

Minette Bay West provides Kitimat residents access to the oceanfront and opportunities to experience and learn about the natural and cultural history of this special place

Goals and Objectives

1. Improve public access
    - Provide publicly accessible roads and trails to the park
    - Provide amenities at the shoreline that support public access to and from the water
2. Provide for outdoor recreation opportunities
    - Establish recreation amenities based on universally accessible design standards
    - Provide opportunities for land- and water-based recreation for all seasons of the year
    - Link the park to the District's trail network, including trails connecting to City Centre
    - Provide trails to points of interest to reduce impacts from off-trail use
3. Protect sensitive ecosystems, wildlife and cultural resources
    - Protect the most ecologically-sensitive areas by limiting human access
    - Locate improvements and amenities to protect sensitive ecosystems from disturbance
    - Design and build infrastructure to minimize negative impacts on ecosystems, water, wildlife and natural processes
    - Incorporate Greenshores principles that foster a resilient coastal zone
    - Restore and enhance habitats that have been disturbed or altered
    - Protect registered historical sites and areas deemed to have archaeological potential



4. Manage use to limit human impacts

    - Provide adequate amenities to manage waste
    - Encourage visitors to participate in monitoring and removing waste
    - Prohibit off-leash dogs in sensitive ecological areas
    - Limit motorized recreation uses

5. Maximize the safety of humans and wildlife

    - Locate and design infrastructure such as trails to minimize human-wildlife interactions
    - Provide signage on site risks and appropriate behaviours and responses, addressing grizzly bears, water tides and currents, duck hunters, and any other known or expected risks
    - Provide signage indicating the location, length and difficulty level of trails
    - Avoid locating trails in areas known to have poor tree stability
    - Manage and limit recreation uses that pose a risk of wildfire

6. Provide opportunities to learn about the environmental resources and build awareness of the cultural history of Haisla Nation and early settlers

    - Provide opportunities for self-guided interpretive programs that encourage the appreciation and protection of the coastal environment and cultural resources
    - Provide interpretative and outreach education programming to build awareness of Haisla and early settler values and activities
    - Work with Haisla Nation to provide environmental and cultural education programs and materials
    - Work with Coast Mountain School District 82, Northwest Community College, and other institutions to provide interpretive and environmental education programming on-site
    - Work with Haisla Nation to incorporate First Nations culture in the design of amenities
    - Work with Haisla Nation to raise awareness about trapline history and ownership

7. Make use of partnerships to enhance public opportunities of Minette Bay West

    - Continue to work with Haisla Nation on coordinating land use planning initiatives for Minette Bay
    - Work with local volunteer, non-profit and environmental organizations to help maintain the health of the park and Minette Bay, including stewardship initiatives such as an annual clean-up
    - Collaborate with local businesses that can offer services and amenities in alignment with the vision of Minette Bay West
    - Continue to work with landowners and leaseholders around Minette Bay on site access, management of park resources, and respect for rights of all stakeholders

8. Support ecotourism and economic development opportunities

    - Provide destinations and opportunities that will draw tourists to Kitimat
    - Provide for recreation opportunities that are complementary with ecotourism

4.2 Options

Three options were prepared in Phase 2 based on the Guiding Statements, Phase 1 site investigation findings and community input. The options were intended to represent different approaches to developing the site, ranging from maximizing environmental protection (Option 1) to maximizing recreation opportunities (Option 3); Option 2 was intended to represent a balance. All options respected the integrity of the site, minimized encroachments into sensitive habitats and incorporated Green Shores principles. See **Table 3** for a comparison of key features.

The ranging intensity of recreational uses and environmental preservation proposed in the three options was reflective of the diverse input shared by community members during the first round of engagement in 2016. Most participants in the first round of engagement indicated support for some level of development at Minette Bay West; opinions and desires ranged widely from minimal development (e.g., "keep it natural") to maximum amenities. Few participants at this stage expressed a desire for no development at all, which explains why a 'no development' option was not proposed. Further detail about community input that led to the creation of the three options is included in DOK's *Summary of Community Engagement – Version 3* (August 2017).

From February 28, 2017 to the end of August 2017, community members were able to provide comments on –and indicate their preferences for— different recreation amenities. Community feedback on the options was collected through an open house (Open House #2), community survey (Community Survey #2), project booth at the Spring Craft Fair, and informal engagement including phone calls, e-mails, letters and in-person meetings. Information about the options and opportunities to provide input was communicated using social media, project web page, e-mail list, newspaper advertisements, DOK external newsletters and project posters around the community.

In Community Survey #2 (March 2 – April 3, 2017), respondents were given an opportunity to choose their preferred option(s), and indicate which amenities they would like to see at Minette Bay West. An opportunity to indicate opposition to the three options was also provided for those who wished to see less or more development than proposed. In the first question of the survey (*"Q1: Which option do you generally prefer? Which is closest to your vision for the site*?"), participants could choose "none of the above" and give an open-ended explanation to state their rationale. 16 of 207 survey respondents (8%) were opposed to the three options, while the remaining 92% of respondents indicated support for development at Minette Bay West. More information about community feedback on the three options is available in *Summary of Community Engagement – Version 3* (August 2017).



Open House #2 at Riverlodge Recreation Centre (DOK, 2017)

Table 3 – Comparison of Amenities in Options 1, 2 and 3

Feature	Option 1 *Maximize Environmental Protection*	Option 2 *Balance Environmental Protection and Recreation*	Option 3 *Maximize Recreation Opportunities*
Trail system	3.7 km in north half of site only; two loops, including one accessible loop	6.7 km in north three-quarters of site; five loops, including two accessible loops	8.4 km across full site; six loops, including three accessible loops and an off-leash dog loop
Off-leash dogs	No provision for off-leash dogs; all dogs to be on-leash	Off-leash dog area in north-west corner	Off-leash dog area in north-west corner, with adjacent off-leash dog trail
Viewing decks and towers	Three, including one partially- accessible tower	Four, including one partially-accessible tower	Five, including one partially-accessible tower
Picnic / day use area	Small area north of access road to causeway	Narrow band close to shoreline	Wider band along shoreline
Barbeques and fire pits	No barbeques or fire pits allowed	Small barbeques allowed in designated areas such as picnic shelter	Small barbeques allowed in designated areas, and small fire pit(s) in picnic area
Buildings & structures in picnic area	Small washrooms (no plumbing) and platform for picnicking	Small washrooms (no plumbing) and small covered picnic shelter	Larger washrooms (no plumbing) and larger covered picnic shelter
Primary access and parking	Small double-loaded parking area along access road	Larger double-loaded parking lot at right angle to access road	Two connected double-loaded parking lots at right angle to access road
Future access and parking	Small double-loaded parking area	Larger double-loaded parking area	Largest double-loaded parking area
Access to water (non-motorized)	Small gravel launch off shoreline, north of causeway	Ramp off causeway	Ramp off causeway to floating dock
End of causeway	Seating area	Seating area and steps to water on south side	Shelter over seating area and steps to water on multiple sides
Vendor area	South of access road	South of access road	North of access road
Play area	None	Small natural play area	Large natural play area
Public art	None	None	Art installation in forest along accessible trail

4.3 Concept Plan

A concept plan for Minette Bay West was prepared from July to August 2017, following completion of a grizzly bear study (see **Section 3.3b**) in June and collection and evaluation of community input. The preparation of the plan was based on five key principles:

1. Integrate and balance community desires, site investigation findings and Green Shores principles and guidelines
2. Minimize risk of human/bear encounters
3. Preserve sensitive areas and bear habitat
4. Concentrate use in pre-disturbed areas
5. Recognize the causeway as a focal point and landmark feature

The concept plan is presented in **Figures 5 and 6** and summarized in **Table 4**; supporting visuals are included in **Figures 7 to 9.** This plan can be considered 'Phase 1', in that it is envisioned to be developed as one project to serve the community in the immediate future. The findings of the grizzly bear study are reflected in the concentration of amenities in the northeast corner of DL 471 and preservation of the majority of the remaining site. Park development has a small footprint and is intended to be low impact, in keeping with community desires heard through the planning process. Elements from the three options (**Section 4.2**)—including a floating dock, picnic area, covered seating and steps to water, and an 800m accessible trail loop in a pre-disturbed area near the existing access road—are recommended.

In keeping with public feedback, the site is proposed to have a natural aesthetic, be universally-accessible, and available for day-use only. Dogs are proposed to be on-leash at all times and motorized uses are proposed to be prohibited (and deterred through site design). Similar to other parks of this nature, Minette Bay West would be maintained and monitored by DOK from spring to late fall, and likely closed over the winter months. Details about other proposed park management strategies are included in **Section 5** and cost estimates and other implementation details are included in **Section 4.4.**

Table 4 – Summary of Concept Plan Phase 1 Amenities

Feature	Description
Access to water	Floating dock off causeway; steps to water at end of causeway (west, east and south)
Trails	800 m accessible trail loop located in pre-disturbed northeast corner of DL 471 (i.e., area cleared for Daudet Creek fisheries enhancement project)
Picnic area	Narrow band of waterfront picnic area with widened spots (includes six picnic tables)
Causeway	Shelter over seating area at end of causeway (includes three benches)
Signage	Wayfinding, interpretive/educational, bear awareness and other safety signs
Access and parking	Access via existing road in northeast corner of DL 471. Small gravel parking lot located in existing pre-disturbed area of DL 471 leading up to causeway
Washrooms	Universally-accessible, portable washrooms (two)
Restoration	Restoration of pre-disturbed areas (gravel, etc.) with native vegetation Potential causeway breach with bridge to enhance fish habitat (partnership)

The Phase 1 plan assumes that full public access will be available via the existing or an alternative access road. Conversations with land owners along the access road, and exploration of potential access options, are ongoing and are anticipated to be resolved prior to implementation of Phase 1. At the time of writing, DOK staff have the right to access DL 471 via the existing access road to monitor, conduct maintenance, and make improvements to the site, but full public access rights are not in place. Property owners who will be involved in access discussions include Rio Tinto, the Mills family, Haisla Trust Society and the District of Kitimat.

The existing access road is gravel and varies in condition with the time of year, frequency of use, amount of private maintenance, and other factors. If the Phase 1 concept plan is approved by Council, staff would undertake a review of potential road improvements and maintenance approaches to ensure an acceptable service level. This review would provide Council with a range of options for consideration, and would include an assessment of cost implications.

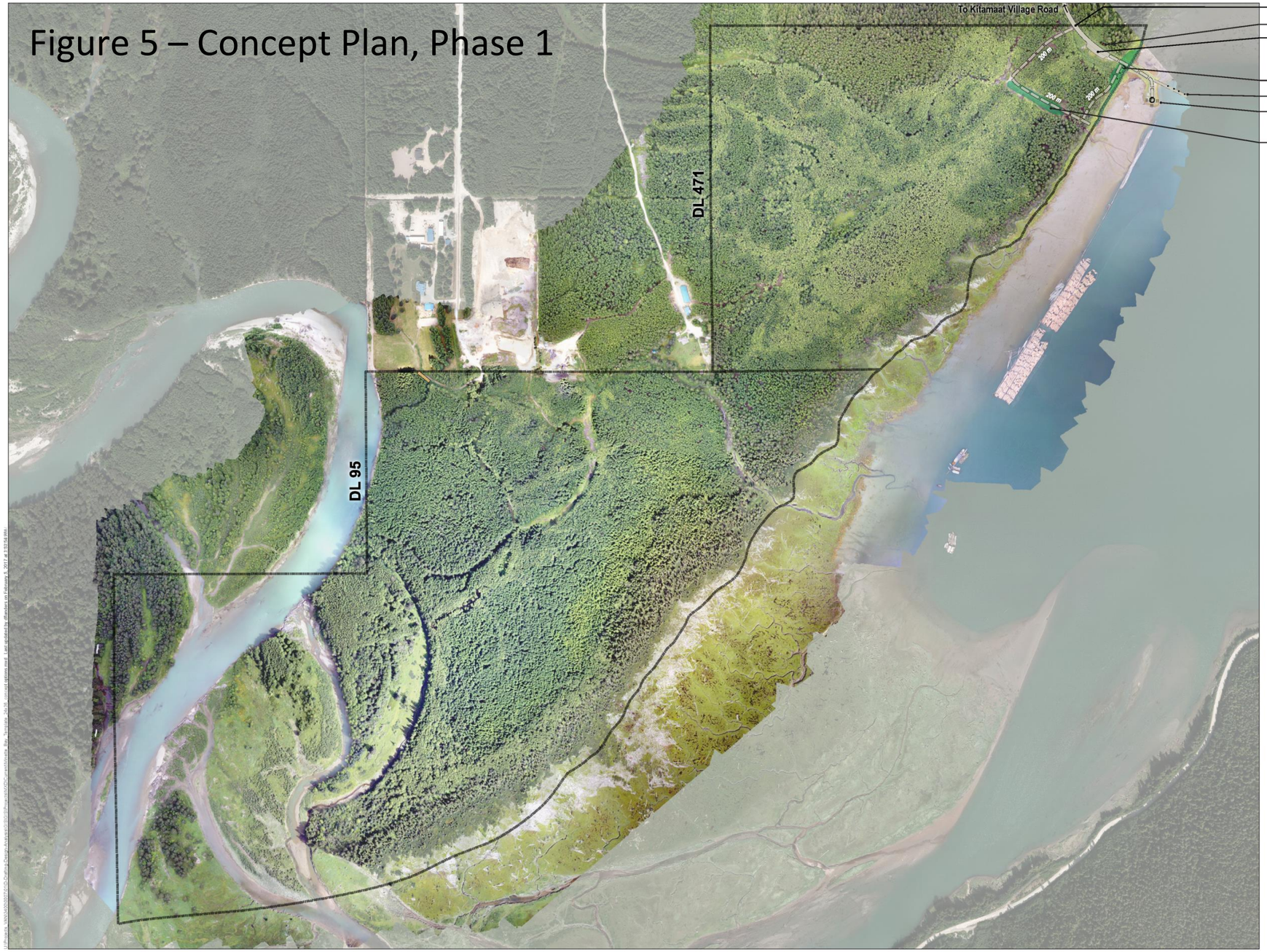
The Phase 1 concept plan is envisioned to serve the community over the short to medium-term. There are many potential amenities that could be added over time in the future to enhance the park in keeping with community desires identified through the planning process. A list of potential amenities and estimated costs are included in **Section 4.4.**

It is important to note that this is a concept plan and not a detailed design plan. A concept plan is a vision that identifies approximate locations and scale of use, amenities and improvements; it is not an exact representation of how a site would look when developed. Detailed design and site investigation work will be required in order to implement this concept plan.



View of Minette Bay at low tide, looking northeast along shoreline from DL 471 (DOK, 2017)

Figure 5 – Concept Plan, Phase 1



Gate with entry feature / sign
Portable washrooms (accessible)
Gravel parking area
Picnic area and tables
Floating dock off causeway
Shelter with steps to water
Accessible trail loop with vegetation restoration in gravel areas

Trail types

Accessible, compacted gravel

Amenities such as benches, waste and recycling bins, and signs (wayfinding, directional and interpretive) are assumed to be included, but are not shown at this scale

Concept Plan
PHASE 1

District of Kitimat
Minette Bay West Concept Plan



The accuracy & completeness of information shown on this drawing is not guaranteed. It will be the responsibility of the user of the information shown on this drawing to locate & establish the precise location of all existing information whether shown or not.

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Scale: 1:3,750

Project #:	3400.0007.01
Author:	DF
Checked:	CB
Date:	2017 / 08 / 25

Data Sources:
Data provided by District of Kitimat 2016

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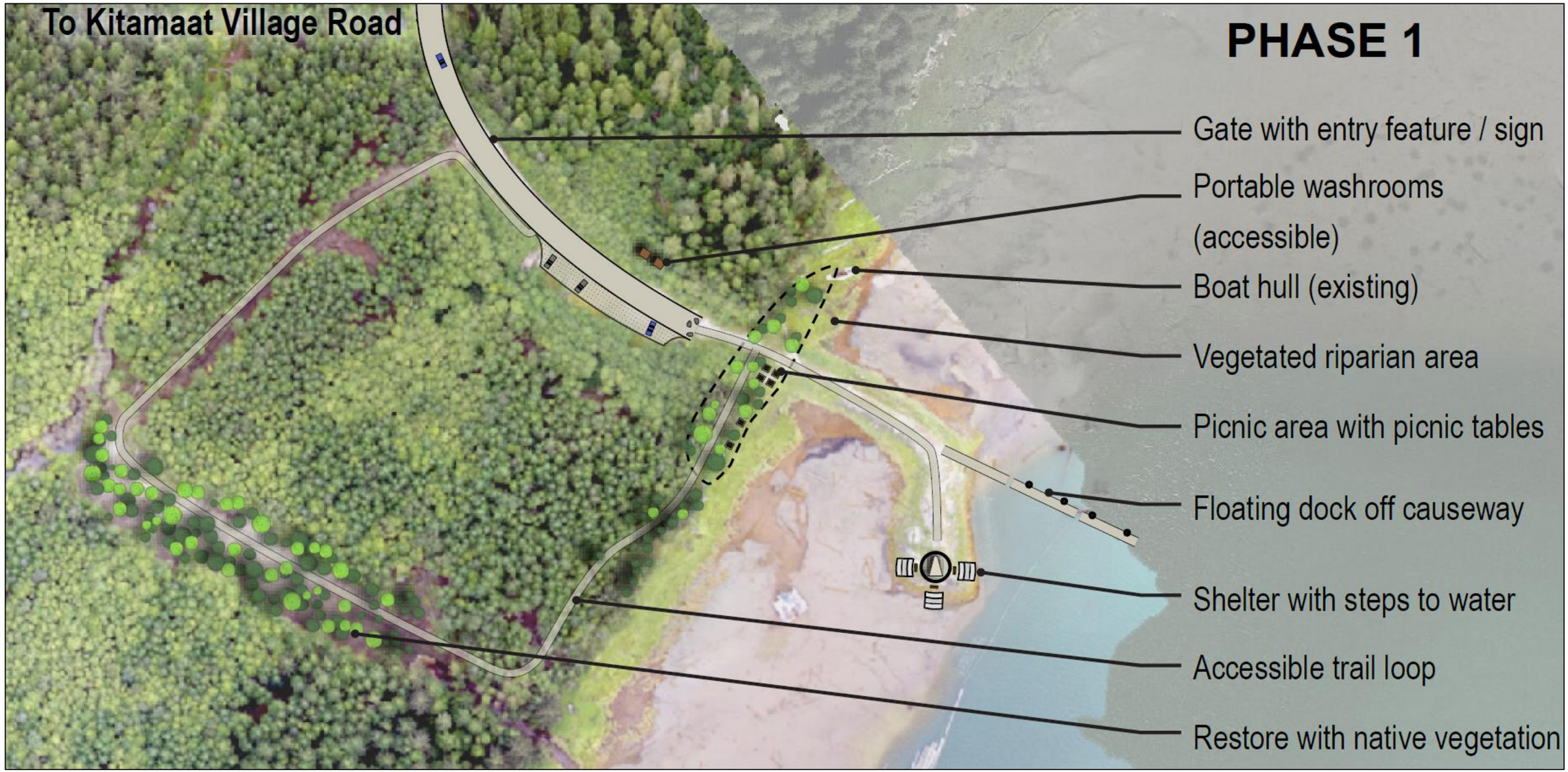


Figure 6 – Close-up of Phase 1 concept plan, focused on northeast corner of DL 471



Figure 7 - Visualization of Minette Bay West causeway and floating dock, looking northwest (note - amenities and improvements shown are conceptual and would require detailed design)



Figure 8 - Visualization of Minette Bay West causeway, covered seating area and steps to water, looking southeast (note - amenities and improvements shown are conceptual and would require detailed design)



Figure 9 – Sample waterfront picnic area (note – the picnic area at Minette Bay West could resemble this type of landscape design or have less tree cover to accommodate a small metal fire pit)

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4.4 Implementation

a. Phasing

Phase 1

The Phase 1 plan presented in the previous section is envisioned to serve the community for the immediate future. If Council wishes to proceed, Phase 1 could be undertaken as one project in 2017-2018. If Council decides to proceed with the Phase 1 plan, detailed design and site investigation could commence in late 2017 and site preparation and development could occur in 2018.

Potential Future Amenities

A variety of potential future amenities could be added over time to enhance the park (see **Table 5**), budget permitting and as scheduled by Council. Most of these projects are discrete and could be undertaken individually. The trail segments can be combined to form a larger loop.

The projects in the list below are shown conceptually on a map in **Appendix A**. Similar to Phase 1, this is a concept plan (i.e., vision) and these projects would require detailed design prior to implementation.

Table 5 – Summary of Potential Future Amenities

Feature	Description
Trails	Three segments providing 2.8 km of trails concentrated largely on DL 471. Includes a mix of accessible, natural and boardwalk trails. Portions of trail may be seasonal to reflect seasonal bear use
Bridges	Two creek crossings along future trails
Viewing Towers and Decks	One partially-accessible viewing tower south of the picnic area, one waterfront viewing deck along future trail, and one viewing deck along future trail adjacent the historic Corduroy Road
Natural Play Area	Natural play area adjacent to picnic area
Picnic Structure	Covered picnic structure within picnic area
Signage	Additional wayfinding, interpretive/educational, bear awareness and other safety signs, including a kiosk adjacent to the primary access and parking lot
Second Access and Parking Area	Small gravel parking lot and access to Strawberry Meadows and Kildala neighbourhood in northwest corner of DL 471 (note – future developer of adjacent DL 6006 would be required to establish access as part of the subdivision process)
Washroom	Wood outhouse (provincial standard) or small washroom building (universally-accessible)

b. Cost Estimates

The Phase 1 concept plan could be implemented for an estimated cost of $797,725 (2017 dollars) before tax. This is a 'Class D' estimate, meaning it is high-level/preliminary and subject to change after detailed design. In line with industry standards, a contingency allowance of 30% and design fees of 15% are included in this estimate. Cost of detailed environmental and archaeological site investigation work required to complete Phase 1 is also included.

A summary of Phase 1 costs is provided in **Table 6**. A detailed cost estimate is included in **Appendix B**. Cost estimates for potential future amenities are included in **Appendix C**.

Table 6 – Phase 1 Cost Estimate Summary

Phase 1 Features	Estimated Cost (2017 dollars)
Parking and road on DL 471	$55,000
Picnic area and causeway amenities	$267,000
Paths	$166,500
Landscaping	$20,000
Furnishings and installations	$27,000
Environmental and archaeological fees	$22,000
Design fees (15%)	$79,575
Contingency, Class D (30%)	$160,650
Phase 1 total (excluding tax)	$797,725

c. Potential Funding Sources

If a plan for Minette Bay West is approved by Council, funding will be pursued from a number of sources. DOK will pursue available grants and will seek partnerships and legacy projects from industry, all levels of government and other potential partners. Funding may also come from general municipal revenue; exact amount and impact on taxes, if any, may vary year-to-year and will be determined by Kitimat Council through the annual budget process. $1 million has been allocated in reserves but no expenditures have been formally approved.

d. Green Shores Certification

As indicated throughout this document, the Minette Bay West Concept Plan is based on the Stewardship Centre for British Columbia (SCBC) Green Shores program. DOK has been enrolled in Green Shores for Coastal Development (GSCD) since March 2016 and was recognized in June 2017 as the first community in BC to base a park planning exercise on Green Shores from the outset.

If a plan is approved by Kitimat Council—and if Council wishes to formally pursue Green Shores certification—DOK and consultants will be required to submit documents to SCBC using the GSCD template and guide. All GSCD prerequisites must be satisfied, plus additional optional credits, to receive certification. Five, ten and fifteen optional points are required respectively for bronze, silver or gold certification. It is anticipated that the Phase 1 plan for Minette Bay West could achieve silver or gold certification based on the amenities and conceptual design proposed.

5. Park Management

5.1 Preliminary Management Strategies

If a plan for Minette Bay West is approved by Council, there are a number of management strategies that must be developed in advance of, during and/or after construction. Some strategies can be sourced from existing procedures at other DOK parks, while others may be crafted in consultation with Council, stakeholders and the public. The following are some preliminary directions that will be further explored, developed and refined if a plan is approved.

a. Day Use

One of the key themes heard through the community engagement process was that a park at Minette Bay West should be day use only. The park would not include any lighting or other amenities that would promote use after dark or overnight, and would have a gate and signage indicating that the park is closed from sundown to sunrise. Signage would also clearly indicate that late night and overnight activities are prohibited and this limit on use is subject to enforcement.

b. Seasonal Closures

It is envisioned that a park at Minette Bay West would be open from spring to late fall (closed in winter). During winter, the entrance gate could be closed and signage would clearly indicate: (1) park is unmaintained and unpatrolled; and (2) visitors should avoid the park or use at their own risk. Measures would be undertaken in late fall to prepare the site for winter, including removing portable washrooms and floating dock, and locking litter and recycling bins.

If Council decides to implement any portion of trail labeled as “seasonal trail” on the map in **Appendix A** (Concept Plan Map for Potential Future Amenities), segments would be closed in early spring when potential bear use is most likely. Early spring—in the context of bear habitat suitability—is defined as the period between mid-April and mid-May (McElhanney and Silverwood, 2017). A gate and signage would be used to deter trail use and reinforce the reason for seasonal closure. Additional risk reduction and bear awareness strategies are included in **Section G.**

c. Routine Maintenance

From spring to late fall, a park at Minette Bay West would be maintained regularly by Leisure Services staff and/or contractors. Necessary routine maintenance would include collecting litter and recycling from bins, picking up litter (if any) from the property grounds, and cleaning and pumping portable washrooms. The number of hours and staff to be allocated to maintenance would be determined by the Director of Leisure Services (based on projected park use, remoteness and experience at other DOK parks) and would be budgeted accordingly. Pumping of portable washrooms would likely be contracted as at other DOK parks.

d. Vegetation Management

During detailed design, qualified professionals would conduct danger tree and invasive species assessments, as well as prepare a detailed planting plan for site landscaping that includes revegetation of disturbed areas and enhancements to riparian areas. Recommendations within these assessments and plans would be implemented by DOK as directed by qualified professionals.

After a park is developed and opened to the public, annual danger tree assessments would be conducted by DOK's contractor and measures undertaken, when needed, to ensure ongoing user safety. Routine maintenance to landscaping and other vegetation in the park would be conducted by staff and/or contractors to ensure the area is safe and visually attractive; this would include management of trees and shrubs along any trails to ensure lines of sight are maintained as recommended in the grizzly ear study (see **Section G**).

e. Motorized Use Prohibition

Many participants in the planning process expressed a desire to restrict motorized uses (e.g., ATVs, dirt bikes, snowmobiles) from the Minette Bay West site. Signage would be installed in prominent locations clearly stating that motorized uses are prohibited and that infractions are subject to enforcement. Design measures would be implemented to physically block access to motorized vehicles, such as strategically placed boulders, bollards or other barriers in key areas.

f. Small Fire Pits and Portable Barbeques

It is intended that one or more small metal fire pit(s) may be included in implementation of the Phase 1 concept plan. The exact location of the pit(s) would be determined by a qualified professional as part of the detailed design process, through careful consideration of forest fire risk and application of best practices and design standards. The final location(s) of any small fire pit(s) would be approved by Kitimat Fire Department.

It is also envisioned that small portable barbeques would be permitted in the designated picnic area, adjacent to the picnic tables. Signage would be installed to inform visitors of the boundary of the designated area and to note that littering is an offence and subject to enforcement.

The use of any small fire pit(s) and barbeques at Minette Bay West would be subject to municipal and provincial fire bans. Fire bans are strictly enforced by Kitimat Fire Department.

g. Bear Awareness and Risk Reduction

In addition to seasonal trail closures and maintaining line of sight along trails, as described in **Sections B and D**, the following management approaches would be implemented to promote bear awareness and reduce risk of human/bear conflict. These strategies were recommended by project consultants McElhanney and Silverwood in their 2017 study titled: *Assessment of Grizzly Bear Distribution, Habitat Use, and Human/Bear Conflict Management Recommendations* (see **Section 3.3b** for information about the study):

- Carefully manage refuse - A robust and well-managed waste removal program would be implemented, such that bears will not be attracted to trails and/or amenities at Minette Bay West.

- Multiple warning and other communication schemes - Educational signage/programs and warning signage would be implemented at multiple locations to help avoid bear encounters. For example, signage could include bear behaviour information and potentially a reporting and tracking system for bear sightings. Warning signs would remind visitors of "bears in the area" and that they should remain noisy to deter an encounter situation. In the case of the seasonal trail on the map in **Appendix A** (Concept Plan Map for Potential Future Amenities) and any other applicable areas, visitors would be reminded that they are encroaching on high-value and high-density grizzly bear habitat.



Example of warning signage (DOK, 2017)



Example of educational signage (DOK, 2017)

h. Duck Hunting

Open season for duck hunting in the Kitimat area is October 1 to January 13. This is a relatively short window at a time of year when public use of amenities at Minette Bay West may be low (late fall) or restricted (winter). During open season, duck hunting typically occurs in the southern portion of DL 95, Crown estuary, and west side of Kitimat River (DL 6001 and 94); these areas are secluded from the proposed Minette Bay West concept plan amenities. There is no known activity—except hunter access—on DL 471.

For the reasons above, it is recommended that duck hunting be permitted to continue in accordance with DOK *Municipal Code* regulation 5.3.2 until a park is developed at Minette Bay West. Regulation 5.3.2 is as follows (see **Figure 10**):

> *5.3.2 - During the open season for duck hunting under the provisions of provincial legislation, the firing of shotguns, with shot shells only, shall be permitted in the District in the following areas: District Lots 94, 95, 471, and 6001, provided that no person shall at any time fire a shotgun within 100m of any power or transmission line.*

Seasonal closure of trail segments or park amenities in the vicinity of prime duck-hunting areas, if any, may be necessary. Other potential mitigation measures—such as public education, signage, limitations or elimination of hunting on DL 471— would also be considered. Any measures would be developed with the duck-hunting community, local residents and relevant stakeholder groups as part of implementation of the concept plan.

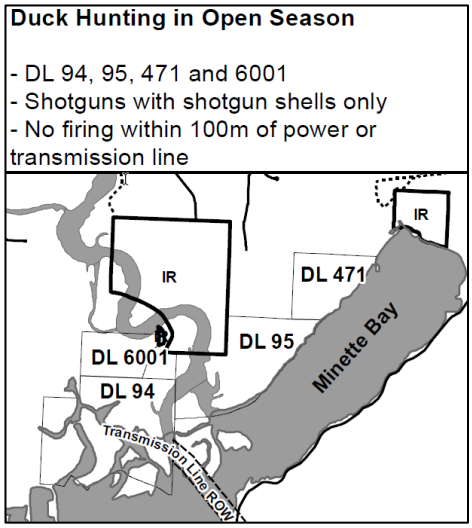


Figure 10 – Diagram from *Hunting Guide*



Drone image of Kitimat River, Kitimat Estuary and Kitimat Arm, looking south (DOK, 2016)

5.2 Review and Evaluation

If a concept plan is approved by Council and Phase 1 of the park is constructed, it is recommended that park management strategies be reviewed by DOK staff and Council within the first year of park opening. Successes and areas for improvement would be documented and management strategies adjusted if needed for the second year of park operation. Thereafter, it is recommended that management strategies be reviewed on a bi-annual or as-needed basis.



View of northwest Minette Bay, looking north from causeway (DOK, 2016)

APPENDIX A

Concept Plan Map for Potential Future Amenities



Accessible washrooms

Sign and kiosk

Natural play area

Picnic shelter

Viewing tower (partially accessible)

Waterfront trail

Viewing deck

Viewing deck (Corduroy Road)

Trail types

Accessible, compacted gravel

Seasonal trail, elevated / boardwalk as needed

Natural trail, elevated / boardwalk as needed

Amenities such as benches, waste and recycling bins, and signs (wayfinding, directional and interpretive) are assumed to be included, but are not shown at this scale. Amenities included in Phase 1 are in the Phase 1 Concept Plan and shown faded in this drawing.

Concept Plan

POTENTIAL FUTURE AMENITIES

District of Kitimat
Minette Bay West Concept Plan



The accuracy & completeness of information shown on this drawing is not guaranteed. It will be the responsibility of the user of the information shown on this drawing to locate & establish the precise location of all existing information whether shown or not.

0 20 40 80 120
Metres

Scale: 1:3,750

N

Project #:	3400.0007.01
Author:	DF
Checked:	CB
Date:	2017 / 08 / 25

Data Sources:
Data provided by District of Kitimat 2016

KITIMAT
URBAN systems

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APPENDIX B

Cost Estimate for Phase 1 Plan

District of Kitimat - Minette Bay West

URBAN systems

PRELIMINARY CLASS D COST ESTIMATE

USL FILE	**3400.0007.01**
DATE	**2017-08-25**
PREPARED BY	**DF, BM, CB**
ESTIMATE CLASS	**D**

	Item	Unit	Quantity	Unit Price	Total	Description
Phase 1						
Parking and roads						
1	Gate with entry feature / sign	L.S.	1	$ 10,000.00	$ 10,000.00	Including supply and installation
2	Gravel parking area	sq. m.	1000	$ 45.00	$ 45,000.00	Including site prep, 200mm granular subbase, 100mm granular base, gravel surface course. Contingent on testing existing condition.
Picnic area amenities						
3	Shelter with steps to water	L.S.	1	$ 70,000.00	$ 70,000.00	Including supply and installation
4	Boat launch / dock	sq.m.	200	$ 500.00	$ 100,000.00	Including supply and installation of 100m length of dock
5	Portable washroom (accessible)	ea.	2	$ 2,500.00	$ 5,000.00	Including supply and installation
6	Picnic area	sq.m.	8000	$ 10.00	$ 80,000.00	Including sypply and installation of hydroseed over 150mm of growing medium
7	Picnic tables	ea.	6	$ 2,000.00	$ 12,000.00	Including supply and installation with concrete pad
Paths						
8	Path and upgrades to causeway (rip-wrap and gravel)	L.S.	1	$ 99,000.00	$ 99,000.00	Including supply and installation
9	Accessible Trail Loop (2m width)	sq. m.	1500	$ 45.00	$ 67,500.00	Including site prep, 200mm granular subbase, and 100mm granular surface
Landscaping						
10	Trees	ea.	5	$ 500.00	$ 2,500.00	Including supply and planting
11	Revegetation of stream realignment scar	sq.m.	2500	$ 7.00	$ 17,500.00	Including supply and planting, excavating where necessary and replacing with 30 cm of growing medium
Furnishings and installations						
12	Benches	ea.	4	$ 1,500.00	$ 6,000.00	Including supply and installation with concrete pad
13	Waste and recycling bins	ea.	4	$ 2,500.00	$ 10,000.00	Including supply, installation and concrete pad for double units
14	Wayfinding signage	ea.	2	$ 1,000.00	$ 2,000.00	Including supply and installation
15	Interpretive signage	ea.	3	$ 3,000.00	$ 9,000.00	Including supply and installation
Environmental consultant						
16	EMP and Fisheries Act Authorization Application	ea.	1	$ 12,000.00	$ 12,000.00	Overview EMP (will cover general protection measures and validation for Green Shores for both Phase I and II); Site Specific EMP (in water works associated with dock); Fisheries Act Authorization Application (dock and breakwater works)
Archaeology consultant						
17	Pre-field preparation, field reconnaissance (PFR), Analysis and reporting	ea.	1	$ 10,000.00	$ 10,000.00	A review of archaeological reports, records, and maps will be conducted in order to assess the archaeological potential of the areas to be impacted by the proposed development; field investigations to assess the overall archaeological potential of the proposed development.

CONSTRUCTION SUBTOTAL	**$ 557,500.00**
Design Fees @ 15%	$ 79,575.00
Contingency Allowance @ 30%	$ 160,650.00
PHASE 1 TOTAL ESTIMATED COST BEFORE TAX	**$ 797,725.00**

Notes

- This estimate is preliminary and subject to detailed site inspection and design
- Market conditions will affect fees and construction costs
- Mobilization, demolition of existing features, and rough grading are not included.
- Maintenance of amenities is not included
- Movable furnishings and equipment are not included
- Hydro, tel and communications are not included
- Assumes civil servicing is available at property line of the site

APPENDIX C

Cost Estimate for Potential Future Amenities

District of Kitimat - Minette Bay West

URBAN systems

PRELIMINARY CLASS D COST ESTIMATE

USL FILE	**3400.0007.01**
DATE	**2017-08-25**
PREPARED BY	**DF, BM, CB**
ESTIMATE CLASS	**D**

	Item	Unit	Quantity	Unit Price	Total	Description
Potential future amenities						
Parking and roads						
1	Sign and kiosk	L.S.	1	$ 10,000.00	$ 10,000.00	Including supply and installation
Picnic area amenities						
2	Natural play area	L.S.	1	$ 100,000.00	$ 100,000.00	Including supply and installation
3	Picnic area shelter	L.S.	1	$ 25,000.00	$ 25,000.00	Including supply and installation
4	Permanent washroom (wooden outhouse / comfort station)	ea.	1	$ 20,000.00	$ 20,000.00	Including supply and installation (alternatively concrete pump-out washroom, $105,000)
5	Viewing tower	ea.	1	$ 100,000.00	$ 100,000.00	Including supply and installation
Paths						
6	Bridges along trails	ea.	2	$ 100,000.00	$ 200,000.00	Including supply and installation
7	Waterfront Trail (2m wide)	sq. m.	900	$ 45.00	$ 40,500.00	Including site prep, 200mm granular subbase, and 100mm granular surface
8	Corduroy Loop (2m width)	sq. m.	2900	$ 45.00	$ 130,500.00	Including site prep, 200mm granular subbase, and 100mm granular surface
9	Connector Trail (2m width)	sq. m.	1300	$ 45.00	$ 58,500.00	Including site prep, 200mm granular subbase, and 100mm granular surface
10	Boardwalks along trail (2m width)	sq. m.	500	$ 500.00	$ 250,000.00	Including construction of wood boardwalk
11	Viewing platforms	L.S.	2	$ 7,500.00	$ 15,000.00	Including construction of wood boardwalk. Assumes two 15 m2 wood deck platforms.
Landscaping						
12	Trees (picnic area)	ea.	5	$ 500.00	$ 2,500.00	Including supply and planting
Furnishings and installations						
13	Benches	ea.	4	$ 2,500.00	$ 10,000.00	Including supply and installation with concrete pad
14	Gates to close seasonal trails	ea.	2	$ 1,000.00	$ 2,000.00	Including supply and installation
15	Wayfinding signage	ea.	2	$ 1,000.00	$ 2,000.00	Including supply and installation
16	Interpretive signage	ea.	3	$ 3,000.00	$ 9,000.00	Including supply and installation
Environmental consultant						
17	EMP and Fisheries Act / Water Sustainability Act Authorization	ea.	1	$ 22,000.00	$ 22,000.00	Potential stream assessment and fish usage assessment for stream crossings associated with trail (7-8 water bodies to assess, cost will be signficantly lower should there be no requirement for the stream and fish assessments); Site Specific EMP for water crossing construction and trail construction; Fisheries Act and/or Water Sustainability Act Authorization/Notification

CONSTRUCTION SUBTOTAL	**$ 997,000.00**
Design Fees @ 15%	$ 146,250.00
Contingency Allowance @ 30%	$ 292,500.00
TOTAL ESTIMATED COST FOR POTENTIAL FUTURE AMENITIES BEFORE TAX	**$ 1,435,750.00**

Notes

- This estimate is preliminary and subject to detailed site inspection and design
- Market conditions will affect fees and construction costs
- Mobilization, demolition of existing features, and rough grading are not included.
- Maintenance of amenities is not included
- Movable furnishings and equipment are not included
- Hydro, tel and communications are not included
- Assumes civil servicing is available at property line of the site