



# MEMORANDUM

File No.: 6500-20 (Keats Island  
Shoreline Protection Project)

DATE OF MEETING: June 20, 2023  
TO: Gambier Island Local Trust Committee  
FROM: Marlis McCargar, Island Planner  
Northern Team  
COPY: Renée Jamurat, Regional Planning Manager  
SUBJECT: Keats Island Proposed Bylaw Nos. 153 (OCP) and 154 (LUB)

## PURPOSE

To update the Gambier Island Local Trust Committee (LTC) on the status and next steps of the Keats Shoreline Protection Project. In particular, to provide more context and rationale behind the changes proposed in Bylaw Nos. 153 and 154.

## BACKGROUND

The purpose of the Keats Island Shoreline Protection Project is to establish a Shoreline Development Permit Area (DPA) for the purposes of protecting the natural environment, its ecosystems and biological diversity, and protecting development from hazardous conditions. Work was initiated with Phase 1 of the Keats Shoreline Protection Project in 2018. The project is currently in Phase 3.

Proposed Bylaw No. 153, that would amend the Keats Island Official Community Plan Bylaw No. 77 (OCP), and Proposed Bylaw No. 154, that would amend the Keats Island Land Use Bylaw No. 78 (LUB), were given first reading at the July 22, 2021 LTC meeting. First reading of Proposed Bylaw No. 154 was rescinded at the October 14, 2021 LTC meeting, amended by the LTC, and then given first reading at that same meeting.

Three Community Information Meetings (CIMs) were held September 29, 2021 (online), following the LTC meeting October 14, 2021 (in person) and on September 15, 2022 (online).

At their regular business meeting held September 1, 2022, the LTC recommended amendments to Proposed Bylaw Nos. 153 and 154 and gave second reading. At that meeting, the LTC passed the following resolutions:

### GM-2022-042

#### It was **MOVED** and **SECONDED**

that the Gambier Island Local Trust Committee Bylaw No. 154 cited as “Keats Island Land Use Bylaw, 2002, Amendment No. 1, 2021” be amended as follows:

- a. Appendix 1, 9.3 DP-3 SHORELINE, .3 Guidelines, item “k”, replace “This may require an environmental assessment” with “This will require an environmental assessment”.

**CARRIED**

**GM-2022-043**

**It was MOVED and SECONDED**

that Bylaw No. 154 Schedule 1 be amended so that wherever there is reference to 36 square metres it will read 47 square metres; and that wherever it refers to 25 square metres it will read 30 square metres; and that wherever it refers to 85 square metres it will read 105 square metres; and that where it reads 1000 square metres, it will read 1500 square metres, with appropriate square footage noted as well.

**CARRIED**

**GM-2022-044**

**It was MOVED and SECONDED**

that the Gambier Island Local Trust Committee Bylaw No. 153, cited as 'Keats Island Official Community Plan, 2002, Amendment No. 1, 2021', as shown in Attachment 1 of the staff report dated September 1, 2022, be read a second time as amended.

**CARRIED**

**GM-2022-045**

**It was MOVED and SECONDED**

that the Gambier Island Local Trust Committee Bylaw No. 154, cited as 'Keats Island Land Use Bylaw, 2002, Amendment No. 1, 2021', be read a second time as amended.

**CARRIED**

**GM-2022-046**

**It was MOVED and SECONDED**

that the Gambier Island Local Trust Committee request staff to refer Proposed Bylaw No. 154 as amended to Skwxwú7mesh (Squamish) Nation.

**CARRIED**

**GM-2022-047**

**It was MOVED and SECONDED**

that the Gambier Island Local Trust Committee request staff to schedule a Public Hearing for Proposed Bylaw Nos. 153 (Official Community Plan) and 154 (Land Use Bylaw).

**CARRIED**

At their regular business meeting held January 31, 2023, the LTC passed the following resolutions:

**GM-LTC-2023-005**

**It was MOVED and SECONDED,**

that the Gambier Island Local Trust Committee rescinds the scheduling of a Public Hearing on Bylaw Nos 153 and 154 and requests staff to schedule a Community Information Meeting to take place after the Local Trust Committee meeting scheduled to take place on Keats Island on June 20, 2023 in person.

**CARRIED**

**GM-LTC-2023-011**

**It was MOVED and SECONDED**

that the Gambier Island Local Trust Committee requests that staff prepare an annotation of the proposed amendments to Bylaws 153 and 154 that discloses the scientific findings of projected climate change effect that each of the proposed amendments is intended to mitigate, and other rationale for the amendment.

A [public mail-out](#) titled “Frequently Asked Questions about the Keats Island Shoreline Protection Project” was sent to property owners on Keats Island on March 10, 2022. It was also sent out to all those who have signed up to receive Gambier Island Local Trust Committee email updates on March 11, 2022.

Reports and associated information for the Keats Island Shoreline Protection project are available on the Islands Trust website, under [Gambier Projects](#).

### **Changes to Proposed Bylaw No. 153**

In response to the LTCs request, staff have reviewed Proposed Bylaw No. 153 and highlighted major changes that have been proposed. Proposed Bylaw No. 153 will amend the Keats Island Official Community Plan Bylaw No. 77 (OCP). An OCP provides a vision, goals, objectives, and policies for how the community will manage change. The OCP guides the planning and decision making about land use and related community priorities. As a result, the proposed changes are largely high level and include justification and objectives.

The primary proposed change to the OCP is the creation of a Shoreline Development Permit Area (DPA) measured 15 metres upland from the foreshore and 100 metres seaward from the foreshore. This will require that a Development Permit (DP) be obtained for certain types of new development in the DPA.

A [paper](#) from the Department of Fisheries and Oceans (DFO) suggests that British Columbia develops setback values based on a study produced by [Chilbeck et al. 1993](#), which in turn interprets options laid out in the report by the [American Forest Ecosystem Management Assessment Team](#).

The following table (DFO) lays out setbacks and their basis in literature:

**Table 1. Land use classification scheme and associated setback distances currently used by Fisheries and Oceans Canada. Source acronyms are the same as those in the text. HHW=High high water line, and refers to the maximum annual tidal height.**

<b>Adjacent land use</b>	<b>Current setback Standard</b>	<b>Source</b>
Urban commercial /industrial/high density residential	30m from HHW	Chilbeck et al. (1993)
Urban low density residential	15m from HHW	Chilbeck et al. (1993)
Undisturbed crown foreshore adjacent to “sensitive habitats”*	100m +windfirm buffer	CSSP (1995)
Other undisturbed crown foreshore	50m +windfirm buffer	CSSP (1995)

\* Sensitive marine fish habitats used for the purpose of applying a 100 m marine riparian setback standard on crown forest foreshores include the following: estuaries, eelgrass meadows, kelp beds, herring and forage fish spawn areas, salt marshes, mudflats, rocky reefs providing rockfish spawning or rearing habitat, salmon spawning areas, and nursery/rearing and adult holding areas

Many Local Trust Areas and surrounding municipalities have established Shoreline DPAs. Attachment 3 provides a comparison table that looks at regulations in other Local Trust Areas and nearby municipalities and districts.

## **Changes to Proposed Bylaw No. 154**

Land use bylaws facilitate implementation of OCP policies and establish what is allowed on specific lots.

The amendments to the Land Use Bylaw No. 78 (LUB) leave the setback for a development at 7.5 metres, except on two large undeveloped lots in the centre of the island, where it is proposed that the setback be 15 metres.

Highlights of the Land Use Bylaw changes are:

- a) Reduction in the size of “platforms” in the setback from the natural boundary of the sea from 10 square metres to 5 square metres;
- b) Reconsideration of suitable “permitted” structures in the setback from the natural boundary of the sea including boat houses;
- c) Increase in the setback from the natural boundary of the sea to 15 metres in the Rural Comprehensive Zone (Lots 876 and 1829);
- d) Introduction of a minimum distance between docks of 10 metres;
- e) Reductions in the maximum size of docks and ramps to docks;
- f) Introduction of guidelines for the Development Permit Area.

Attachment 2 highlights some of the proposed changes and provides links to relevant Federal and Provincial legislation to justify the proposed change. It also includes links to relevant scholarly articles and studies that illustrate the importance of marine foreshore protection.

An Aquatic/Terrestrial Biologist from Madrone Environmental Services was retained to review Proposed Bylaw No. 154 and provided high level analysis of the proposed changes as well as outlined relevant provincial and federal legislation congruent with changes (see Attachment 4).

### **Legal Non-Conforming**

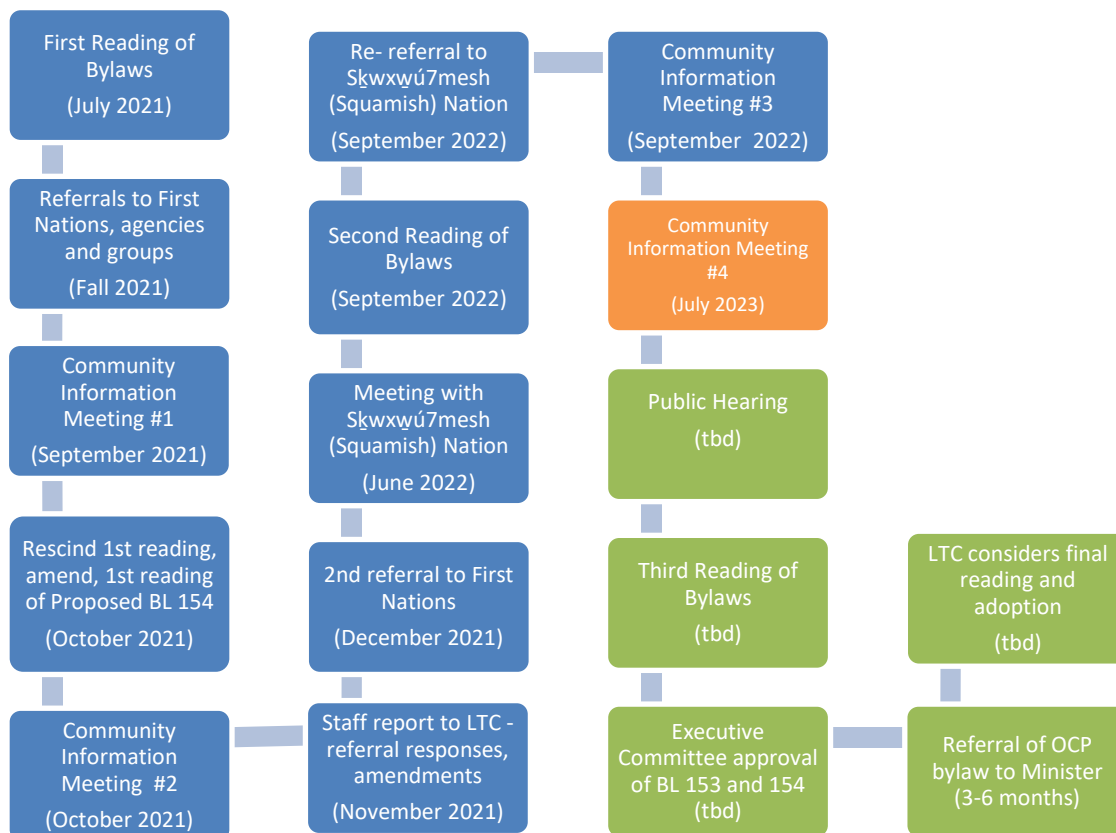
At the time a new land use bylaw is adopted, if an existing use of land or a building is lawfully used and it does not conform to the bylaw, then it may be continued as a legal non-conforming use unless:

- The use is discontinued for a period of six months
- More than 75% of the value of the building or structure above its foundation is damaged or destroyed.

In most cases, a legal non-conforming use cannot be expanded however it can be maintained under certain circumstances.

### **Timeline**

The following timeline outlines the bylaw amendment process milestones to date along with next steps and approximate timing which may assist in managing community expectations in how an OCP and LUB amendment such as this is processed. The blue steps identify completed milestones, the orange identifies the current stage, and the green identifies potential next steps or milestones in the process.



The public hearing must be held after first reading of the bylaw and before third reading. Public hearings may be conducted by means of electronic or in-person. At the public hearing, all persons who believe that their interest in property is affected by the proposed bylaw are afforded a reasonable opportunity to be heard. This involves an opportunity to make a speech or presentation to the elected officials or to present a written submission. Public input may be received by the LTC at any point during the OCP and LUB amendment process up until the end of the public hearing.

After the close of the public hearing (either the same day or at a later meeting), the LTC may do one of the following:

- Adopt or defeat the bylaw
- Alter and then adopt the bylaw (as long as the changes are not substantive).

After the close of the public hearing, each of the individual LTC members decide how they wish to vote on the bylaw. The LTC may consider a broad range of input including information and views from the public, staff reports, agency feedback, First Nations comments and other information.

### NEXT STEPS

The next steps will be to hold a Community Information Meeting in July after which, the LTC can decide if they would like to request staff to proceed with scheduling a Public Hearing.

Submitted By:	Marlis McCargar. Island Planner	May 29, 2023
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Concurrence:	Renée Jamurat, RPP MCIP, Regional Planning Manager	June 5, 2023
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**ATTACHMENTS**

1. Annotated Proposed Bylaw No. 153
2. Annotated Proposed Bylaw No. 154
3. Comparison Table
4. Letter from Madrone Environmental Services – Biological Benefits of Marine Foreshore Areas

# PROPOSED

## GAMBIER ISLAND LOCAL TRUST COMMITTEE BYLAW NO. 153

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### A BYLAW TO AMEND KEATS ISLAND OFFICIAL COMMUNITY PLAN, 2002

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The Gambier Island Local Trust Committee, being the Local Trust Committee having jurisdiction in respect of the Gambier Island Local Trust Area under the *Islands Trust Act*, enacts as follows:

1. Bylaw No. 77, cited as “Keats Island Official Community Plan, 2002” is amended as per Schedules “1” and “2” attached to and forming part of this bylaw.
2. This bylaw may be cited for all purposes as “Keats Island Official Community Plan, 2002, Amendment No. 1, 2021”.

READ A FIRST TIME THIS                    22<sup>ND</sup>                    DAY OF                    JULY                    , 2021

READ A SECOND TIME THIS                    1<sup>ST</sup>                    DAY OF                    SEPTEMBER                    , 2022

PUBLIC HEARING HELD THIS                    \_\_\_\_\_                    DAY OF                    \_\_\_\_\_                    , 20XX

READ A THIRD TIME THIS                    \_\_\_\_\_                    DAY OF                    \_\_\_\_\_                    , 20XX

APPROVED BY THE EXECUTIVE COMMITTEE OF THE ISLANDS TRUST THIS

\_\_\_\_\_                    DAY OF                    \_\_\_\_\_                    , 20XX

APPROVED BY THE MINISTER OF MUNICIPAL AFFAIRS AND HOUSING THIS

\_\_\_\_\_                    DAY OF                    \_\_\_\_\_                    , 20XX

ADOPTED THIS                    \_\_\_\_\_                    DAY OF                    \_\_\_\_\_                    , 20XX

\_\_\_\_\_  
Chair

\_\_\_\_\_  
Secretary

**GAMBIER ISLAND LOCAL TRUST COMMITTEE  
BYLAW NO. 153**

**Schedule "1"**

1. Schedule "A" of "Keats Island Official Community Plan, 2002" is amended as follows:
  - 1.1 **PART A – ADMINISTRATION AND INTERPRETATION**, is amended by replacing *Local Government Act* references to "Section 911" with "Section 528".
  - 1.2 **PART B – GOALS, OBJECTIVES AND POLICIES**, is amended by replacing *Local Government Act* references to "Section 946" with "Section 514".
  - 1.3 **PART C – DEVELOPMENT PERMIT AREAS**, is amended by replacing *Local Government Act* references to "Section 919.1(1)" with "Section 488(1)" and "Section 920.01" with "Section 485".
  - 1.4 **PART C – DEVELOPMENT PERMIT AREAS**, is amended by adding a new subsection 3:

**"3. DEVELOPMENT PERMIT AREA 3: SHORELINE**

The development permit area (DPA) is established, pursuant to Section 488(1)(a) of the *Local Government Act* for the protection of the natural environment, its ecosystems and biological diversity; and Section 488(1)(b) of the *Local Government Act* for the protection of development from hazardous conditions.

The Shoreline DPA (DP-3) is designated as an area for which development approval information may be required as authorized by Section 484 of the *Local Government Act*.

**Location**

The Shoreline Development Permit Area (DP-3) includes all land designated on **Schedule E – Development Permit Areas** of this plan.

The Shoreline Development Permit Area applies to all land measured **15 metres** upland of the present natural boundary of the sea, the foreshore area and all that area of land covered by water between the natural boundary of the sea and a line drawn parallel to and 100 metres seaward of the natural boundary of the sea.

**Justification**

It is the Object of the Islands Trust to "preserve and protect the Trust Area and its unique amenities and environment for the benefit of the residents of the Trust Area and of British Columbia generally, in cooperation with municipalities, regional districts, improvement districts, other persons and organizations and the government of British Columbia."

It is the policy of the Islands Trust Council that protection must be given to the natural processes, habitats and species of the Trust Area, and that development activity, buildings or structures should not result in a loss of significant marine or coastal habitat, or interfere with natural coastal processes.

It is also policy of the Islands Trust Council that local trust committees shall in their Official Community Plans and regulatory bylaws, address:

**Commented [MM1]:** Many Local Trust Areas and surrounding municipalities have established Shoreline DPAs (see Attachment 3 of Staff Report).

[https://salmonwatersheds.ca/libraryfiles/lib\\_252.pdf#page=68](https://salmonwatersheds.ca/libraryfiles/lib_252.pdf#page=68)

<https://naturefoundationsxm.org/wp-content/uploads/2022/04/Indigo-Hotel-Terrestrial-Assessment-report.pdf>

See BC Ministry of Environment Guidelines for Management of Coastal Flood Hazard Land Use:

[https://www.env.gov.bc.ca/wsd/public\\_safety/flood/pdfs\\_word/guidelines\\_for\\_mgr\\_coastal\\_flood\\_land\\_use-2012.pdf](https://www.env.gov.bc.ca/wsd/public_safety/flood/pdfs_word/guidelines_for_mgr_coastal_flood_land_use-2012.pdf)



- the protection of sensitive coastal areas;
- the planning for and regulation of development in coastal regions to protect natural coastal processes;
- the protection of public access to, from and along the marine shoreline and minimize impacts on sensitive coastal environments; and
- the identification of areas hazardous to development, including areas subject to flooding, erosion or slope instability, and to direct development away from such hazards.

Keats Island includes a mix of rock (hard) and sediment (soft) shorelines that offer a range of natural habitats, ecological functions, cultural heritage and aesthetic values. The shoreline has environmental and cultural significance for forage fish, eelgrass, shorebirds and shellfish, marine mammals such as seals and many other marine organisms, as well as values that define the character of the Keats Island community. The Keats shoreline has been the location of cultural sites, canoe landings and gathering places for First Nations since time immemorial. The shoreline also includes area that are transition zones of uplands and wetlands that may be susceptible to erosion or flooding.

Development activities on the upland such as land clearing and increasing impermeable surfaces can have harmful impacts on site drainage, bank stability, nesting habitat, sensitive natural areas, shading of intertidal areas critical for fish habitat and cultural and heritage sites.

Since the adoption of the OCP, there has been an increase in residential development on Keats Island along the shoreline. As of 2020, there were over 120 individual parcels fronting the natural boundary of the sea on Keats Island. The subdivision and development of these parcels in combination with the development that has already occurred, may, cumulatively, have a detrimental impact on the 13.72 km of shoreline habitat and function.

In 2013, approx. 9% of the Keats shoreline was identified to have been modified by 30% or more by development, principally by boat ramps, seawalls, rip rap and revetments. Applications for private docks and shoreline protection structures have increased since that time. Shoreline armouring, such as retaining walls, alter the shoreline and can result in loss of habitat and upland connectivity and may increase wave action and erosion on adjacent properties. Marine structures, such as ramps or docks, and their supporting pilings can have significant impact on fish movement and their habitat, and damage important marine vegetation.

Anticipated sea level rise and more frequent severe storm events as a result of climate change, may increase coastal flooding and erosion. It is recognized that there is a need for balance between ecological protection or other environmental values and the use of privately owned land.

### Objectives

The objectives of this development permit area are as follows:

**OBJ 3.1** TO PLAN AND REGULATE NEW DEVELOPMENT IN A MANNER THAT PRESERVES, PROTECTS AND RESTORES THE LONG-TERM PHYSICAL INTEGRITY, CONNECTIVITY, AND ECOLOGICAL AND MARINE RESOURCE VALUES OF SHORELINES AND ASSOCIATED FORESHORE AND UPLAND AREAS;

**Commented [MM2]:** <https://webfiles.islandstrust.bc.ca/islands/local-trust-areas/gambier/current-projects/Keats%20Island%20Shoreline%20Protection/6.%20Other%20Information/Shoreline%20Maps%20for%20Keats%20Island.pdf>

**Commented [MM3]:** <https://www.ipcc.ch/site/assets/uploads/2019/09/srocc-P51-press-release.pdf>

**OBJ 3.2** TO BALANCE DEVELOPMENT OPPORTUNITIES WITH THE ECOLOGICAL CONSERVATION AND RESTORATION OF THE SHORELINE AND MARINE ENVIRONMENT;

**OBJ 3.3** TO MINIMIZE THE DISRUPTION OF NATURAL FEATURES AND PROCESSES AND TO RETAIN, WHEREVER POSSIBLE, NATURAL VEGETATION AND NATURAL FEATURES;

**OBJ 3.4** TO MAINTAIN THE PUBLIC'S SAFE USE AND ACCESS TO IMPORTANT RECREATION AREAS IN A WAY THAT DOES NOT COMPROMISE THE ECOLOGICAL INTEGRITY OF THE SHORELINE;

**OBJ 3.5** TO ADAPT TO THE ANTICIPATED EFFECTS OF CLIMATE CHANGE;

**OBJ 3.6** TO PROTECT COASTAL PROPERTIES AND DEVELOPMENT FROM DAMAGE AND HAZARDOUS CONDITIONS THAT CAN ARISE FROM EROSION AND FLOODING.

**Development Approval Information**

Development Permit Area 3 is designated as an area for which development approval information may be required as authorized by Section 485 of the *Local Government Act*. Development approval information in the form of a report from a Qualified Professional may be required due to the special conditions and objectives described above.

**INFORMATION NOTE:** Development Permit Area guidelines for DP-3 Shoreline are in the Keats Island Land Use Bylaw.”

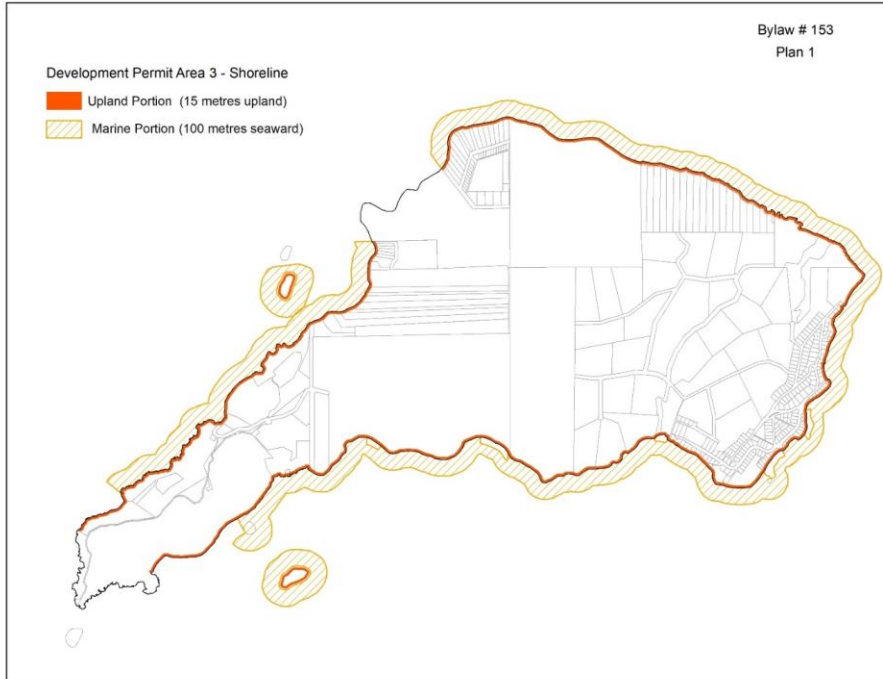
**GAMBIER ISLAND LOCAL TRUST COMMITTEE  
BYLAW NO. 153**

**Schedule "2"**

1. **Schedule "E" – DEVELOPMENT PERMIT AREAS**, is amended by designating a new Development Permit Area 3: Shoreline as shown on Plan No. 1 attached to and forming part of this bylaw and by making such alterations to Schedule "E" of Bylaw No. 77 as are required to effect this change.

**GAMBIER ISLAND LOCAL TRUST COMMITTEE  
BYLAW NO. 153**

**Plan No. 1**



# PROPOSED

## GAMBIER ISLAND LOCAL TRUST COMMITTEE BYLAW NO. 154

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### A BYLAW TO AMEND KEATS ISLAND LAND USE BYLAW, 2002

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The Gambier Island Local Trust Committee, being the Local Trust Committee having jurisdiction in respect of the Gambier Island Local Trust Area under the *Islands Trust Act*, enacts as follows:

1. Bylaw No. 78, cited as “Keats Island Land Use Bylaw, 2002” is amended as per Schedule “1” attached to and forming part of this bylaw.
2. This bylaw may be cited for all purposes as “Keats Island Land Use Bylaw, 2002, Amendment No. 1, 2021”.

READ A FIRST TIME THIS                    14<sup>TH</sup>                    DAY OF                    OCTOBER                    , 2021

READ A SECOND TIME THIS                    1<sup>ST</sup>                    DAY OF                    SEPTEMBER                    , 2022

PUBLIC HEARING HELD THIS                    \_\_\_\_\_                    DAY OF                    \_\_\_\_\_                    , 20XX

READ A THIRD TIME THIS                    \_\_\_\_\_                    DAY OF                    \_\_\_\_\_                    , 20XX

APPROVED BY THE EXECUTIVE COMMITTEE OF THE ISLANDS TRUST THIS

\_\_\_\_\_                    DAY OF                    \_\_\_\_\_                    , 20XX

ADOPTED THIS                    \_\_\_\_\_                    DAY OF                    \_\_\_\_\_                    , 20XX

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Chair

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Secretary

**GAMBIER ISLAND LOCAL TRUST COMMITTEE  
BYLAW NO. 154**

**Schedule "1"**

1. Schedule "A" of Keats Island Land Use Bylaw, 2002 is amended as follows:
  - 1.1 **PART 1 – ADMINISTRATION AND INTERPRETATION**, Section 1.5 **DEFINITIONS**, Subsection 1.5.1 is amended by adding the following definition in alphabetical order:

"platform means an unenclosed flat surface raised from the ground to serve for the loading and offloading of materials and supplies."
  - 1.2 **PART 2 – GENERAL LAND USE REGULATIONS**, Section 2.7 **MEASUREMENT OF SETBACKS Buildings and Structures**, Subsection 2.7.3 is amended by removing it in its entirety and replacing it with the following:
    - a) No building or structure except a platform with a maximum area of 5 square metres, or a set of stairs or a walkway for the purposes of accessing the foreshore or a permitted float, dock, wharf or other permitted marine related structure, may be constructed, reconstructed, moved, extended or located within 7.5 metres (24.6 feet) of the natural boundary of the sea.
    - b) Notwithstanding subparagraph a), for properties zoned Rural Comprehensive (Lot 876 and Lot 1829) the setback set out above shall be 15 metres (49.2 feet)."
  - 1.3 **PART 2 – GENERAL LAND USE REGULATIONS**, Section 2.7 **MEASUREMENT OF SETBACKS Buildings and Structures**, Subsection 2.7.5 is amended by replacing "3.0 metres" with "5.0 metres".
  - 1.4 **PART 2 – GENERAL LAND USE REGULATIONS**, Section 2.7 **MEASUREMENT OF SETBACKS Buildings and Structures**, is amended by inserting the following new subsection as follows:

"2.7.6 Private floats and docks shall be sited at least 10 metres from any existing dock or structure."
  - 1.5 **PART 2 – GENERAL LAND USE REGULATIONS**, Section 2.7 **MEASUREMENT OF SETBACKS Buildings and Structures**, is amended by renumbering Subsection 2.7.6 – Sewage Disposal Fields to Subsection 2.7.7.
  - 1.6 **PART 4 – ZONE REGULATIONS**, Section 4.1 **COMMUNITY RESIDENTIAL 1 (CR1) ZONE**, Subsection 4.1.4 is amended by inserting the words ", dock ramps" after "docks" and before "and stairs".
  - 1.7 **PART 4 – ZONE REGULATIONS**, Section 4.1 **COMMUNITY RESIDENTIAL 1 (CR1) ZONE**, Subsection 4.1.6 is amended by replacing "65 square metres (700 square feet)" with "47 square metres (505.9 square feet)".
  - 1.8 **PART 4 – ZONE REGULATIONS**, Section 4.1 **COMMUNITY RESIDENTIAL 1 (CR1) ZONE**, Subsection 4.1.7 is amended by replacing "47 square metres (500 square feet)" with "30

**Commented [MM1]:** Decrease in size from 10m

**Commented [MM2]:** Building setback is staying the same as current bylaw.

**Commented [MM3]:** Added specifically as it is the remaining undeveloped land on Keats Island.

**Commented [MM4]:** For navigational purposes (see Navigable Waters Protection Act)

**Commented [MM5]:** For navigational purposes (see Navigable Waters Protection Act)

square metres (322.9 square feet)” and by replacing “158 square metres (1,700 square feet)” with “105 square metres (1130.2 square feet)”.

- 1.9 **PART 4 – ZONE REGULATIONS**, Section 4.1 **COMMUNITY RESIDENTIAL 1 (CR1) ZONE**, Subsection 4.1.8 is amended by replacing “2.4 metres (8 feet)” with “1.5 metres (4.9 feet)”.
- 1.10 **PART 4 – ZONE REGULATIONS**, Section 4.4 **RURAL RESIDENTIAL (RR) ZONE**, Subsection 4.4.6 is amended by replacing “65 square metres (700 square feet)” with “47 square metres (505.9 square feet)”.
- 1.11 **PART 4 – ZONE REGULATIONS**, Section 4.4 **RURAL RESIDENTIAL (RR) ZONE**, Subsection 4.4.7 is amended by replacing “47 square metres (500 square feet)” with “30 square metres (322.9 square feet)” and by replacing “158 square metres (1,700 square feet)” with “105 square metres (1130.2 square feet)”.
- 1.12 **PART 4 – ZONE REGULATIONS**, Section 4.4 **RURAL RESIDENTIAL (RR) ZONE**, Subsection 4.4.8 is amended by replacing “2.4 metres (8 feet)” with “1.5 metres (4.9 feet)”.
- 1.13 **PART 4 – ZONE REGULATIONS**, Section 4.5 **RURAL COMPREHENSIVE (RC) ZONE**, Subsection 4.5.7 is amended by replacing “Article 6 of this subsection” with “Subsection 4.5.6”.
- 1.14 **PART 4 – ZONE REGULATIONS**, Section 4.5 **RURAL COMPREHENSIVE (RC) ZONE**, Subsection 4.5.6 is amended by replacing “65 square metres (700 square feet)” with “47 square metres (505.9 square feet)”.
- 1.15 **PART 4 – ZONE REGULATIONS**, Section 4.5 **RURAL COMPREHENSIVE (RC) ZONE**, Subsection 4.5.7 is amended by replacing “47 square metres (500 square feet)” with “30 square metres (322.9 square feet)” and by replacing “158 square metres (1,700 square feet)” with “105 square metres (1130.2 square feet)”.
- 1.16 **PART 4 – ZONE REGULATIONS**, Section 4.5 **RURAL COMPREHENSIVE (RC) ZONE**, Subsection 4.5.8 is amended by replacing “2.4 metres (8 feet)” with “1.5 metres (4.9 feet)”.
- 1.17 **PART 4 – ZONE REGULATIONS**, Section 4.6 **PRIVATE INSTITUTIONAL 2 (PI2) ZONE**, Subsection 4.6.5 is amended by replacing “3,000 square metres (32,970 square feet)” with “1500 metres (16,145 square feet)”.
- 1.18 **PART 4 – ZONE REGULATIONS**, Section 4.10 **PROVINCIAL MARINE PARK (P2) ZONE**, Subsection 4.10.6 is a8
- 1.19 ended by replacing “dock floats” with “a wharf float”.
- 1.20 **PART 4 – ZONE REGULATIONS**, Section 4.10 **PROVINCIAL MARINE PARK (P2) ZONE**, Subsection 4.10.7 is amended by replacing “dock” with “wharf”.
- 1.21 **PART 4 – ZONE REGULATIONS**, Section 4.12 **MARINE 2 – COMMUNAL MOORAGE (M2) ZONE**, Subsection 4.12.5 is amended by replacing “2.4 metres (8 feet)” with “1.5 metres (4.9 feet)”.

**Commented [MM6]:** Provincial “General Permission” Requirements: [https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/private\\_moorage\\_general\\_permission.pdf](https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/private_moorage_general_permission.pdf)

**Commented [MM7]:** The following references are related to the reduction in dock sizes Section 1.7-Section 1.17.

M.C. Wright and Associates. (2018). “Impacts of docks in Pender Harbour: Phase 2 assessment.” Prepared for BC Ministry of Forests, Lands, and Natural Resource Operations and Rural Development

<https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/crown-land-uses/regional-initiatives/envirostudy.pdf>

To the extent that this can reduce total dock sizes, it is in line with strategies to increase marine species abundance. In a study of Pender Harbour “an approximately 50% increase in the number of docks resulted in a 21% decrease in the number of fish” (M.C. Wright and Associates, 2018).

The fragmentation of eel grass beds can lead to “large scale declines” (Burdick & Short, 1999).

Effects of Docks on Eelgrass Beds  
<https://pubmed.ncbi.nlm.nih.gov/9852189/>

Parks Canada gives the following size limits:

Combined maximum surface area of dock and fingers is 45m<sup>2</sup>. Must fit within 8m x 10m area adjacent to the shore.  
[parks.canada.ca/docs/r/polip/page01](https://parks.canada.ca/docs/r/polip/page01)

Kelty & Blliven. (2003). “Environmental and aesthetic impacts of small docks and piers.” NOAA Coastal Ocean Program. [www.researchgate.net/publication/237539922\\_Environmental\\_and\\_aesthetic\\_impacts\\_of\\_small\\_docks\\_and\\_piers\\_workshop\\_report\\_Developing\\_a\\_science-based\\_decision\\_support\\_tool\\_for\\_small\\_dock\\_management\\_phase\\_1\\_Status\\_of\\_the\\_science](https://www.researchgate.net/publication/237539922_Environmental_and_aesthetic_impacts_of_small_docks_and_piers_workshop_report_Developing_a_science-based_decision_support_tool_for_small_dock_management_phase_1_Status_of_the_science)

Logan et al. (2021). “A Review of Habitat Impacts from Residential Docks and Recommended Best Management Practices with an Emphasis on the Northeastern United States.” Estuaries and Coasts. [www.mass.gov/doc/a-review-of-habitat-impacts-from-residential-docks-and-recommended-best-management-practices-with-an-emphasis-on-the-northeastern-united-states/download](https://www.mass.gov/doc/a-review-of-habitat-impacts-from-residential-docks-and-recommended-best-management-practices-with-an-emphasis-on-the-northeastern-united-states/download)

Sanger, D.M. & Holland, A.F. (2002). “Evaluation of the impacts of dock structures on South Carolina estuarine environments.” Marine Resources Research Institute. South Carolina Department of Natural Resources. [mri.coifc.edu/pdf/tr90s/Techreport99.pdf](https://mri.coifc.edu/pdf/tr90s/Techreport99.pdf)

Scyphers, S.B. et al. (2015). “Natural shorelines promote the stability of fish communities in an urbanized coastal system.” PLoS ONE 10(6). [journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0118580&type=printable](https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0118580&type=printable)

- 1.22 **PART 4 – ZONE REGULATIONS**, Section 4.12 **MARINE 2 – COMMUNAL MOORAGE (M2) ZONE**, Subsection 4.12.6, **Table 4.1**, Site Specific Regulation (a) is amended by replacing “65 square metres (700 square feet)” with “47 square metres (505.9 square feet)” and by replacing “47 square metres (500 square feet)” with “30 square metres (322.9 square feet)” and by replacing “158 square metres (1,700 square feet)” with “105 square metres (1130.2 square feet)”.
- 1.23 **PART 9 – DEVELOPMENT PERMIT AREA GUIDELINES**, is amended by adding a new Section **9.3 DP-3 SHORELINE** as shown on Appendix 1 attached to and forming part of this bylaw.



**GAMBIER ISLAND LOCAL TRUST COMMITTEE  
BYLAW NO. 154**

**Appendix 1**

**9.3 DP-3 SHORELINE**

**Applicability**

- .1** The following activities shall require a development permit whenever they occur within the Development Permit Area 3: Shoreline (DP-3), unless specifically exempted under Subsection 9.3.2:
- construction of, addition to or alteration of a building or structure;
  - land alteration, including vegetation removal and disturbance of soils; and
  - subdivision of land.

**Exemptions**

- .2** The following activities are exempt from the requirement to obtain a development permit for DP-3:
- a) Development or alteration of land to occur outside the designated Development Permit Area, as determined by a BC Land Surveyor;
  - b) Repair and maintenance of pre-existing lawful buildings, structures or utilities, except for shoreline protection structures, provided there is no alteration of undisturbed land or vegetation and that they are entirely within the existing building or structure footprint. For clarity, repair, maintenance, alteration or reconstruction of shoreline protection works such as retaining walls, requires a development permit whether or not they meet the definition of 'structure' in the Keats Island Land Use Bylaw;
  - c) The installation of a mooring buoy;
  - d) Construction, reconstruction or repair of the following structures sited within the setback from the natural boundary of the sea:
    - i. A platform not exceeding 5 square metres in area;
    - ii. A set of stairs or a walkway for the purpose of accessing the foreshore or a permitted marine related structure;
  - e) Small-scale manual removal of non-native, invasive plants or noxious weeds, conducted in accordance with best management practices;
  - f) Construction of a fence so long as no trees of native species are removed and the disturbance of native vegetation is restricted to 0.5 metres on either side of the fence;
  - g) The construction of a trail if all of the following apply:
    - i. Trail design and location must minimize vegetation disturbance;
    - ii. No native trees are removed;
    - iii. The trail is 1 metre wide or less;
    - iv. The trail is for personal, non-vehicular use only;
    - v. The trail is constructed of soil, gravel, mulch or other pervious surface;
    - vi. The trail is designed to prevent soil erosion where slopes occur;
  - h) Repair and maintenance of existing roads, driveways, paths and trails, provided there is no expansion of the width or length of the road, driveway, path or trail, and no creation of additional impervious surfacing, including paving, asphaltting or similar surfacing;

- i) Gardening and property maintenance activities, not involving artificial fertilizer, pesticides or herbicides, within a pre-existing landscaped area, including lawn mowing, weeding, shrub pruning, vegetation planting and minor soil disturbances that do not alter the general contours of the land;
- j) The pruning, trimming or limbing of trees provided it cannot reasonably be expected to result in the death or removal of the tree;
- k) The removal of trees that have been examined by an International Society of Arboriculture (ISA) certified arborist or registered professional forester and certified in writing to pose an immediate threat to life or property;
- l) Vegetation removal to prevent wildfire or other potential emergencies;
- m) Emergency works required to prevent, control or reduce an immediate threat to human life, the natural environment or public or private property, including:
  - i. Forest fire, flood and erosion protection works;
  - ii. Protection, repair or replacement of public facilities;
  - iii. Clearing of an obstruction from a bridge, culvert, dock wharf or stream;
  - iv. Bridge repairs.
- n) A farm operation as defined in the *Farm Practices Protection (Right to Farm) Act*;
- o) Forest management activities, as defined in the *Private Management Forest Land Regulation*, on land classified as managed forest land under the *Private Managed Forest Land Act*;
- p) The subdivision of land parcels where a conservation covenant satisfactory to and in favour of the Gambier Island Local Trust Committee or the Islands Trust Conservancy Board has already been registered for the maintenance of natural drainage and protection of environmentally sensitive areas;
- q) Subdivision involving lot consolidation;
- r) Works conducted and/or authorized by the Province and its Ministries or Agencies, and by Fisheries and Oceans Canada (or subsequent federal department), with respect to trail construction, stream enhancement and fish and wildlife habitat restoration. For clarity, private moorage, shoreline protection measures or placement of fill below the natural boundary of the sea authorized by the Province and its Ministries or Agencies, requires a development permit.

**Guidelines**

- .3 Prior to undertaking any applicable development activities within DP-3, an owner of property shall apply to the Local Trust Committee for a development, and the following guidelines apply:

**General Guidelines:**

- a) In general, development of the shoreline area should be limited, should minimize negative impacts on the ecological health of the immediate area, should not disrupt coastal sediment transport processes, and should not impede public access.
- b) It should be demonstrated that locating development entirely outside of the Development Permit Area has been considered, and a description of why that is not being proposed should be provided.
- c) New, or additions to, upland buildings or structures should be located and designed to avoid the need for shoreline protection works throughout the life of the structure.
- d) New development on steep slopes or bluffs should be set back sufficiently from the top of the slope or bluff to ensure that shoreline protection measures will not become necessary during the life of the structure, as demonstrated by a geotechnical analysis and recommendations for the site by a Geotechnical Engineer or Professional Geoscientist.

**Commented [MM8]:** Shoreline stabilization, particularly "harder" protection measures, can be harmful as it can: transform the shore, encroach onto the sea bed, disrupt fish habitat and life cycles, alter current patterns, disturb sediment, and remove native vegetation (Parks Canada, 2022).

"Along coastlines, natural habitats support high biodiversity and valuable ecosystem services", with natural shorelines supporting the most "stable" marine ecosystems when compared with engineered shorelines (Scyphers et al., 2015).

**Commented [MM9]:** <https://islandstrust.bc.ca/document/you-r-marine-waterfront-guide/>

- e) Sea level rise, storm surges and other anticipated effects of climate change should be addressed in all development permit applications.
- f) All development within this Development Permit Area is to be undertaken and completed in such a manner as to prevent the release of sediment to the shore or to any watercourse or storm sewer that flows to the marine shore. An erosion and sediment control plan, including actions to be taken prior to land clearing and site preparation and the proposed timing of development activities to reduce the risk of erosion, may be required as part of the development permit application.
- g) Where this Development Permit Area includes critical habitat of any Species at Risk, including terrestrial or aquatic provincial red- and blue-listed species or SARA-listed species; or where a unique, sensitive or rare species has been identified by Islands Trust mapping, these areas should be left undisturbed. If disturbance cannot be entirely avoided, development and mitigation and/or compensation measures shall be undertaken only under the supervision of a Registered Professional Biologist with advice from applicable senior environmental agencies.
- h) Development activities along the foreshore or in marine areas should be conducted during the low risk timing window for spawning and nursery periods.
- i) All development that takes place below the natural boundary of the sea should be done in a way that minimizes degradation of water quality and disturbance of the substrate.

**Commented [MM10]:** <https://www.canada.ca/en/environment-climate-change/services/water-overview/pollution-causes-effects/erosion-sedimentation.html>

#### **Guidelines for the Construction and Replacement of Docks and Ramps**

- j) Construction details such as design, materials, methods, timing of construction and access shall be provided at the time of permit application.
- k) Docks, floats and ramps should be sited to avoid sensitive ecosystems such as eelgrass beds, forage fish habitat and to avoid interference with natural processes such as currents and littoral drift. This will require an environmental assessment by a Qualified Professional Biologist to identify such features and processes on the site in question.
- l) Docks must be designed to ensure that public access along the shore is maintained.
- m) Decking materials must allow for a minimum of 43% open space to allow for light penetration to the water surface. Light transmitting materials may be made of various materials shaped in the form of grids, grates, and lattices to allow for light passage to the water surface.
- n) To allow for the maximum amount of light penetration to the water surface.
- o) Piers on pilings and floating docks are preferred over solid-core piers or ramps. Piers should use the minimum number of pilings necessary, with preference to large spans over more pilings.
- p) All docks shall be constructed so that they do not rest on the bottom of the seabed at low water/low tide levels. Dock and float design shall allow the free flow of water beneath it.
- q) Docks should not use unenclosed plastic foam or other non-biodegradable materials that have the potential to degrade over time. Docks should be constructed of stable materials that will not degrade water quality. The use of creosote-treated pilings is not permitted.
- r) The access ramps, piers, walkways and stairs for docks should not exceed a maximum width of 1.5 metres.
- s) Preference is given to mooring buoys that are considered "seagrass-friendly" and are designed to reduce scouring of the sea floor. These include buoys with a mid-line float so as to prevent unnecessary damage to eelgrass habitat.

**Commented [MM11]:** Importance of eelgrass <https://gibsons.ca/wp-content/uploads/2017/12/eelgrassfacts.pdf>

"The presence of small docks leads to fragmentation of eelgrass beds—primarily through shading of the grasses" as well as to increased erosion (Kelty & Bliven, 2003).

In Pender Harbour, eel grass is almost never observed growing under docks, and "often not" observed where boats moore. When it is observed in these contexts, the grass has fewer and smaller shoots (M.C. Wright, 2018).

"Narrow docks with a north-south orientation can best ensure the long-term survival of eelgrass under and near the dock" (Burdick & Short, 1999).

**Commented [MM12]:** Recommendation from a report for BC Ministry of Land and ... "Docks should be constructed with light-transmitting materials that have a minimum of 43% open space" (M.C. Wright, 2018)

Grated decking significantly reduces the impact of deck shading on light saturation. However, spacing between planks does not appear to alter impact (Kelty & Bliven, 2003).

**Commented [MM13]:** Light levels of 50-60% are necessary for healthy grass beds (Kelty & Bliven, 2003).

Areas not oriented North-South are particularly sensitive to shading as, even without any docks, light saturation is not optimal for eel grass growth in these locations (M.C. Wright, 2018).

**Commented [MM14]:** Solid-core piers: "Habitat impacts are higher for a solid-fill structure, which displaces considerably more area than a pile-supported structure" (Logan, et al, 2021)

**Commented [MM15]:** "The most common contaminant-related concern related to docks is leaching from preservatives applied to pilings or floats in locations that come into regular contact with water". "Wood pressure-treated with a chromated copper arsenate (CCA) is the most commonly used material for pilings and decking for small docks" but studies have shown that leachate from this wood "can be toxic to estuarine species" (Kelty & Bliven, 2003)

#### **Guidelines for Shoreline Modifications**

- t) Shoreline protection or stabilization measures shall not be permitted for the sole purpose of reducing the setback regulations in the Land Use Bylaw or for reclaiming land lost due to erosion.
- u) Shoreline protection measures should not be allowed for the purpose of extending lawns or gardens, or to provide space for additions to existing or new structures.
- v) Applications for shoreline protection or stabilization works may be considered to protect existing structures and shall include a report, prepared by a Professional Engineer with experience in coastal and/or geotechnical engineering, which describes the proposed modification and shows:
- i. The need for the proposed modification to protect existing structures;
  - ii. If any natural hazards, erosion, or interruption of geohydraulic processes may arise from the proposed modification, including at sites on other properties or foreshore locations;
  - iii. The cumulative effect of shoreline protection or stabilization along the drift sector where the works are proposed;
  - iv. Whether there will be any degradation of water quality or loss of fish or wildlife habitat because of the modification;
  - v. Whether conditions should be incorporated into the development permit to achieve the objectives of this Development Permit Area.
- w) Where shoreline protection or stabilization measures are proposed, they shall be designed by a Professional Engineer with experience in coastal and/or geotechnical engineering, and:
- i. Limit the size to the minimum necessary to prevent damage to existing structures or established uses on the adjacent upland;
  - ii. Apply the 'softest' possible shoreline protection measure that will still provide satisfactory protection;
  - iii. Not be expected to cause erosion or other physical damage to adjacent or down-current properties, or public land;
  - iv. Address compatibility with adjacent shoreline protection works.

**Commented [MM16]:** Shoreline stabilization, particularly 'harder' protection measures, can be harmful as it can: transform the shore, encroach onto the sea bed, disrupt fish habitat and life cycles, alter current patterns, disturb sediment, and remove native vegetation (Parks Canada, 2022).

"Along coastlines, natural habitats support high biodiversity and valuable ecosystem services", with natural shorelines supporting the most "stable" marine ecosystems when compared with engineered shorelines (Scyphers et al., 2015).

**Commented [MM17]:** The most common contaminant-related concern related to docks is leaching from preservatives applied to pilings or floats in locations that come into regular contact with water". "Wood pressure-treated with a chromated copper arsenate (CCA) is the most commonly used material for pilings and decking for small docks" but studies have shown that leachate from this wood "can be toxic to estuarine species" (Kelly & Bliven, 2003)

Shoreline protection or stabilization measures are modifications to the shoreline, or adjacent seaward or landward areas, for the purpose of protection against erosion. Structural protection measures are often referred to as 'hard' or 'soft'. 'Hard' measures refer to those with solid, hard surfaces, such as concrete bulkheads, while 'soft' measures rely on less rigid materials such as biotechnical vegetation measures (i.e. the specialized use of woody plant materials to stabilize soil) or beach enhancement. There is a range of measures varying from soft to hard that include:

<ul style="list-style-type: none"> <li>• <b>Vegetation enhancement</b></li> <li>• <b>Upland drainage control</b></li> <li>• <b>Biotechnical measures</b></li> <li>• <b>Beach enhancement</b></li> <li>• <b>Anchor trees</b></li> <li>• <b>Gravel placement</b></li> <li>• <b>Rock (rip rap) revetments</b></li> <li>• <b>Gabions</b></li> <li>• <b>Concrete groins</b></li> <li>• <b>Retaining walls or bulkheads</b></li> <li>• <b>Seawalls</b></li> </ul>	<p><b>SOFT</b></p> <p><b>HARD</b></p>
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In general, the harder the construction measure, the greater the impact on shoreline processes, including sediment transport, geomorphology and biological functions.

- x) Entirely 'hard' structural shoreline protection measures such as concrete walls, lock block or stacked rock (rip rap), may be considered as a last resort only when a geotechnical and biophysical analysis demonstrates that:
- i. An existing structure is at immediate risk from shoreline erosion caused by tidal action, currents or waves. Evidence of normal sloughing, erosion or steep bluffs, or shoreline erosion itself, without a scientific or geotechnical analysis, is not sufficient demonstration of need;
  - ii. It is not feasible to instead construct a retaining wall that meets the land use bylaw setback;
  - iii. The erosion is not being caused by upland conditions, such as the loss of vegetation and uncontrolled drainage associated with upland development;
  - iv. All possible on site drainage solutions by directing drainage away from the shoreline have been exhausted;
  - v. Non-structural or 'soft' shoreline protection measures are not feasible or not sufficient to address the stabilization issues;
  - vi. The shoreline protection measure is designed so that neighbouring properties are not expected to experience additional erosion; and
  - vii. All shoreline protection structures are installed upland of the present natural boundary of the sea.
- y) An existing shoreline protection structure may be replaced if the existing structure can no longer adequately serve its purpose, provided that:
- i. The replacement structure is of the same size and footprint as the existing structure;
  - ii. The replacement structure is designed, located, sized and constructed to mitigate the loss of ecological functions, and include habitat restoration measures when feasible;
  - iii. Replacement walls or bulkheads do not encroach seaward of the natural boundary or seaward of the existing structure unless there are significant safety or environmental concerns. In such cases, the replacement structure should utilize the 'softest' approach possible and should abut the existing shoreline protection structure;
  - iv. Where impacts to critical marine habitats would occur by leaving the existing works in place, they can be removed as part of the replacement measure.
- z) Materials used for shoreline protection or stabilization should consist of inert materials. Materials should not consist of debris or contaminated material that could result in pollution of tidal waters.
- aa) Placement of fill upland of the natural boundary of the sea greater than (10) cubic metres in volume shall only be considered when necessary to assist in the enhancement of the natural shoreline's stability and ecological function. Such fills shall be located, designed and constructed to protect shoreline ecological functions and ecosystem-wide processes, including channel migration. This may require a sediment and erosion plan prepared by a Professional Engineer or Geoscientist with experience in coastal and/or geotechnical engineering.
- bb) Placement of fill below (seaward of) the natural boundary shall be considered only when necessary to assist in the enhancement of the natural shoreline's stability and ecological function, typically as part of a beach nourishment design. All fill proposals

Commented [MM18]: <https://islandstrust.bc.ca/document/our-marine-waterfront-guide/>

Commented [MM19]: See reference above (.3q)

below the natural boundary are subject to approval by the appropriate provincial and/or federal authorities.

- cc) All upland fill and beach nourishment materials should be clean and free of debris and contaminated material.

#### ***Guidelines for Vegetation Management, Restoration and Enhancement***

- dd) Existing native vegetation and trees should be retained or replaced wherever possible to protect against erosion and slope failure, and to minimize disruption to fish and wildlife habitat.
- ee) Existing vegetation and trees to be retained should be clearly marked prior to development, and temporary fencing installed at the drip line to protect them during clearing, grading and other development activities.
- ff) If the area has been previously cleared of native vegetation, or is cleared during the process of development, the development permit may specify replanting requirements to restore or enhance the natural environment or control erosion. Areas of undisturbed bedrock exposed to the surface or sparsely vegetated areas should not require planting. The Local Trust Committee may require provision of a security to be used to fulfill the replanting and vegetation maintenance conditions of the permit if the permit holder fails to do so.
- gg) Vegetation species used in replanting, restoration or enhancement should be selected to suit the soil, light and groundwater conditions of the site, should be native to the area, and be selected for erosion control and/or fish and wildlife habitat values as needed. While native species are preferred, suitably adapted, non-invasive, non-native vegetation may be acceptable.
- hh) All replanting shall be maintained by the property owner for a minimum of 2 years from the date of completion of the planting to ensure survival. This may require removal of invasive, non-native weeds and irrigation. Unhealthy, dying or dead stock will be replaced at the owner's expense within that time in the next regular planting season. The Local Trust Committee may require provision of a security to be used to fulfill the replanting and vegetation maintenance conditions of the permit if the permit holder fails to do so.

**Commented [MM20]:** Assessing the influence of root reinforcement on slope stability by finite elements  
<https://link.springer.com/article/10.1186/s40703-015-0012-5>

#### ***Guidelines for Subdivision***

- ii) All lots in a proposed subdivision must be configured to have sufficient area for permitted principal and accessory uses without encroaching into land use bylaw setbacks, the Development Permit Area, or creating a likelihood of shoreline protection measures for the permitted level of development.
- jj) New roads, driveways and wastewater disposal (septic) systems should not be located within the Development Permit Area.

## Keats Island Shoreline Protection - Comparison Table

\*THE FOLLOWING TABLE INCLUDES RESIDENTIAL ZONE CONSIDERATIONS ONLY

Number	Region	Setbacks to NBS	Maximum height of structures within NBS?	Exemptions for structures allowed within NBS?	Shoreline DPA?	DPA Application Area (Upland from NBS)	Maximum size of floats or docks?	Sea level rise or climate change considerations?	Resources
1	Keats Island	7.5 m	Yes: 4.6 m (boathouses)	Yes	No	n/a	Yes: 65 m <sup>2</sup>	Yes: OCP Policy	Keats Island Official Community Plan Bylaw No. 77,
2	Ballenas-Winchelsea Islands	15 m	Yes: 8.0 m within 30 m of NBS	Yes	Yes	30 m	Yes: 40 m <sup>2</sup>	Yes: OCP Policy	Policies for marine and shoreline uses (Section 3.8, Ballenas-Winchelsea Islands Official Community Plan Bylaw No. 27).
3	Bowen Island Municipality	30 m	None specified	Yes	No	30 m	Yes: 37 m <sup>2</sup>	Yes: OCP Policy	Bowen Island Municipality Official Community Plan Bylaw No. 282, 2010
4	Hornby Island	15 m	Yes: 7.0 m within 100 m of NBS	Yes	No	n/a	Not permitted	Yes: OCP Policy	Hornby Island Official Community Plan Bylaw No. 149, 2014
5	Salt Spring Island	15 m	Yes: 4.5-10 m (buildings)	Yes: Geoengineer's report required	Yes	10 m	Yes: 35 m <sup>2</sup>	Yes: OCP Policy	Salt Spring Island Official Community Plan Bylaw No. 434 - Volume 2
6	Campbell River	30 m	None specified	No: Apply for DVP	Yes	30 m	Not permitted	Yes: OCP Policy	Sea Level Rise Primers, Studies, and Anticipated Climate Change and Sea Level Rise Affecting Future City Projects.
7	Regional District of Nanaimo	8.0 m	None specified	No: Apply for DVP	Yes	15 m	Not permitted	Yes: OCP Policy	Floodplain Management Bylaw No. 1469
8	District of Sechelt	15 m	Yes: 4.5 m (buildings)	Yes	Yes	15 m	Yes: none specified	Yes: OCP Policy	District of Sechelt Official Community Plan Bylaw No. 492
9	Metro Vancouver Regional District	15 m	Yes: 1.2 m (for fences)	Yes	No	n/a	Not permitted	Yes: OCP Policy	Metro Vancouver Regional District Electoral Area A Official Community Plan Bylaw 1250, 2017
10	District of West Vancouver	15 m *	Yes: 1.2 m (fences)	Yes	Yes	15 m	Yes: Max width of 2.4 m.	Yes: OCP Policy	District of West Vancouver Official Community Plan Bylaw 4985, 2018
11	Sunshine Coast Regional District	15 m	None specified	moorage facilities	No	n/a	none specified		Zoning Bylaw No. 722: Electoral Areas B, D, E and F
		<p>* The greater of 15 metres from the future estimated natural boundary of the ocean at Year 2100, or landward of the location where the natural ground elevation contour is equivalent to the Year 2100 Flood Construction Level (FCL), calculated by a Professional Engineer, using the Provincial guidelines</p>							



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May 24<sup>th</sup>, 2023

Ms. Marlis McCargar, MEdes  
Island Planner  
Islands Trust  
700 North Road  
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By email to: [mmccargar@islandstrust.bc.ca](mailto:mmccargar@islandstrust.bc.ca)

Dear Ms. McCargar

## **Re: Biological Benefits of Marine Foreshore Areas – general context for proposed Keats Island Land Use Bylaw Amendments**

### **Introduction**

I understand that Islands Trust are proposing amendments to Bylaw No. 86 that has been implemented to oversee development activities in marine foreshore zones in recognition of the sensitive nature of habitat found in such areas. I hope to provide general information that will help articulate important functions that are provided by marine foreshore habitat, including ecosystem services that benefit both the natural environment and people. This information can be used to help provide reasoning as to why reduced footprints and sensitive approaches to development proposals are required in marine foreshore areas.

### **General Overview of relevant Federal and Provincial Legislation**

Prior to discussing biological values, it is worth outlining general provincial and federal regulatory requirements associated with developments in marine foreshore areas. In addition to local government mechanisms that help control development proposals (e.g., proposed Bylaw No. 154), both the provincial and federal governments implement legislation that helps protect sensitive marine foreshore habitat:



### Federal Legislation - Fisheries and Oceans Canada (DFO)

For projects in or near water, DFO is obligated to protect fish and fish habitat as part of the Fisheries Act. Under the Fisheries Act, it is unlawful to cause the death of fish, or cause a harmful alteration, disruption, or destruction (HADD) of fish habitat. Development activities in marine foreshore zones, such as vegetation removal, dock placement, or construction activities have potential to cause death of fish or a HADD of fish habitat. Information related to protection of fish and fish habitat is contained in DFO's "Projects Near Water" website.<sup>1</sup> Projects are subject to DFO review and subsequent approval unless the following measures can be implemented:

- Prevent the death of fish.
- Maintain riparian vegetation (including marine foreshore vegetation).
- Carry out works, undertakings, and activities on land.
- Maintain fish passage.
- Ensure proper sediment control.
- Prevent entry of deleterious substances in water.

Using dock construction as an example, most proposed docks would be subject to a DFO project review because there is an unavoidable requirement for working in water. For most small-scale projects, DFO provides a letter of approval with specific conditions that need to be met as part of the review process. In recognition that some larger scale projects cannot avoid death of fish or a HADD, authorizations can be provided by DFO for death of fish or a HADD. Most docks would likely not trigger the requirement for a death of fish/HADD authorization, but some larger scale projects such as foreshore armouring, retaining structures, and large-scale vegetation removal would likely require an authorization. Obtaining an authorization from DFO is a lengthy process that requires habitat offsetting to compensate for impacted habitat.

It is important to note that DFO does not provide established minimum setbacks in terms of marine foreshore vegetation buffers. DFO does, however, recognize the importance of marine foreshore riparian vegetation regarding benefits to fish: spawning habitat (related to forage fish – see below); rearing and migration habitat for juvenile salmonids; food production (nutrient input); temperature regulation; wave energy absorption, which maintains a natural beach slope; and structure (shelter for fish and invertebrates)<sup>2</sup>. While there may be no specific DFO buffers for protection of marine

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<sup>1</sup> <https://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>

<sup>2</sup> [https://publications.gc.ca/collections/collection\\_2015/mpo-dfo/Fs70-5-2001-109-eng.pdf](https://publications.gc.ca/collections/collection_2015/mpo-dfo/Fs70-5-2001-109-eng.pdf)

foreshore riparian vegetation, removal of marine foreshore riparian vegetation could constitute a HADD, in consideration of the benefits provided.

In the current Bylaw, there is a minimum building setback of 7.5 m from the natural boundary of the sea. Depending upon the development proposal, site conditions, and types of habitats present, this buffer may or may not be sufficient to prevent a HADD or protect biological functions associated with marine foreshore riparian zones. In the absence of a specific buffer, DFO has suggested a site-specific approach to ensure that buffers maintain values of marine foreshore zones<sup>3</sup>. In my opinion, a buffer of 7.5 m for buildings appears too narrow as a default value. Although intended for freshwater, the minimum freshwater setback for lentic systems (lakes and wetlands) is 15 m, as per the provincial Riparian Areas Protection Regulation. The minimum setback increases to 30 m adjacent to southern shorelines in recognition of the importance of shading (temperature regulation) over the adjacent waterbody. By implementing a precautionary principle and in lieu of marine guidance, it might be prudent to adopt a minimum buffer of 15 m for buildings, in keeping with freshwater requirements that are implemented to protect similar biological functions.

For context, it is worth noting the following examples of recommended buffer zones for marine riparian areas in BC, Washington, coastal northeast USA, and Alaska:

- Clayoquot Sound, BC: riparian reserve on low shores adjacent to open waters extending 150 m from the seaward edge of forest vegetation, or to the inland limit of shore-associated features (e.g., overgrown sand dunes), whichever is greater (BC Ministry of Forests 1996).
- Clayoquot Sound, BC: riparian reserve of 100 m inland from the top of the coastal slope or bluff on cliffs for steep shores adjacent to open waters (BC Ministry of Forests 1996).
- Saanich Inlet, BC: “The sensitivity of nearshore habitats should be recognized by the establishment of a sensitive habitat buffer zone extending a minimum of 100 m (wider if necessary) from the high tide mark and covering areas of the inlet watershed with steep upland slopes (Saanich Inlet Study, 1996).
- Washington, USA: a buffer zone of “one-half-site-potential tree height, or 30.3 m (whichever is greater) along lakes and marine shorelines (Anon, 2001).
- Chesapeake Bay, USA: forest buffers of 35 to 125 feet are generally recommended to remove nutrients and other chemical contaminants, depending on pollutant loading and site conditions (Palone and Todd, 1997). Buffers 50 to 100 feet wide are usually recommended

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<sup>3</sup> [https://publications.gc.ca/collections/collection\\_2015/mpo-dfo/Fs70-5-2001-109-eng.pdf](https://publications.gc.ca/collections/collection_2015/mpo-dfo/Fs70-5-2001-109-eng.pdf)

to trap sediments, with buffers expanding where there are steep slopes or high sediment loads (Palone and Todd, 1997).

### Provincial Government Legislation

With regard to use of aquatic Crown Land for docks or other structures, the provincial government requires that several conditions are met to enable a dock to qualify under “General Permission.” Structures that do not meet General Permission requirements may be permitted under “Specific Permission”, which requires a lengthy application process involving leasing aquatic Crown land. General Permission requirements<sup>4</sup> are included as an attachment, but a summary of pertinent aspects that relate to marine foreshore habitat and spacing is provided here:

- The dock is not located over areas of eel grass, ecological reserves, parks, or protected areas.
- There is only one dock fronting the property and no boat ramps or stand-alone boat lifts.
- A marine habitat assessment report is required before construction of a new marine dock.
- A dock must be oriented at right angles to the general trend of the shoreline and must not interfere with the riparian rights of an adjacent property.
- The offshore end of the dock, including boat lifts and anchor lines, must be at least 30 metres from navigation channels.
- The dock (including boat lift) must be at least five metres from the side property lines (six metres from the side property line if adjacent to a dedicated public beach access or park), and at least ten metres from any existing dock or structure on the foreshore.
- A dock platform or float, and walkway, must be either floating or suspended above the water.
- A dock may not have crib foundations or solid core structures made of cement or steel sheeting.
- No new fill may be used in the construction or maintenance of a dock.
- The only improvements authorized to be part of a dock are those improvements necessary for mooring a boat (including non-overhead boat lifts, pilings, and anchor lines,) and a walkway. No beach houses, storage sheds, boathouses, roofs, sun decks, hot tubs or other similar improvements are permitted.

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<sup>4</sup> [https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/general\\_permission\\_checklist\\_and\\_interpretive\\_guide.pdf](https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/land-water-use/crown-land/general_permission_checklist_and_interpretive_guide.pdf)

- A dock in a marine environment must be no more than: a) 60m distance from the present natural boundary, measured perpendicular from the general trend of the shoreline b) 14m for the length of the float c) 3.7m for the width of the float d) 1.8m wide for the walkway connecting the float to the shore.
- Construction in or around water must only take place during the appropriate timing window specified by Fisheries and Oceans Canada.
- Do not use construction materials containing toxic substances.
- The dock must not unduly obstruct public access along the foreshore or beach.

## **Ecosystem Services**

Degraded foreshore areas are less effective at providing natural ecosystem services that prevent or decrease processes such as wave erosion or bank instability. By removing vegetation or disturbing foreshore areas, property owners inadvertently remove benefits provided by functioning marine foreshore areas that naturally protect against loss of land. To address such losses, landowners can be forced into expensive solutions, sometimes involving engineered erosion protection structures. By maintaining functioning ecosystem services, landowners can avoid financial repercussions involving loss of property and/or implementation of engineered solutions. Other services provided by foreshore areas that benefit people include flood control, maintenance of air and water quality, soil production, carbon sequestration, and noise buffering.

It is important to recognize the financial value of ecosystem services because failure to consider the value of these services has led to widespread disappearance of ecosystems (Barbier *et al* 2011). However, it is equally important to recognize that assigning a notional monetary value should not be taken to imply that these services are therefore tradeable or replaceable (Spash 2008). The global decline of coastal and estuarine ecosystems due to human activities is intense and increasing, affecting several services provided by these ecosystems. Some of the impacts to services provided include a reduction in the number of viable fisheries, a decrease in the provision of nursery habitats for juvenile fish, reduced coverage of seagrass beds and wetlands and a reduction in the filtering and detoxification services provided by submerged vegetation, suspension feeders, and wetlands. Considering the economic value provided by these ecosystem services, destruction of ecosystems for economic development can no longer be viewed as “costless” by those responsible for managing and approving such developments (Barbier *et al.* 2011).

Maintaining ecosystem services in marine foreshore areas will become extremely important in the near future, based on sea level rise induced by climate change. A recent special report produced by

the United Nation's Intergovernmental Panel on Climate Change (IPCC) in September 2019 established a sea level rate of rise trend of 2.1 mm per year between 1970 and 2015. Between 1993 and 2015, the rate of rise trend increased to 3.2 mm per year and between 2005 and 2015, the trend increased to 3.6 mm per year. These trends suggest that sea level rise will have significant impacts upon most coastal areas around the globe in the coming years.

### **Fish and Wildlife Habitat**

Interface habitat that exists between the marine ecosystem and upland areas provides important habitat for fish and wildlife. For example, such areas provide roosting, foraging, and nesting opportunities for raptors such as Bald Eagles and Ospreys and specific nesting requirements that are required by Great Blue Heron colonies. Such habitat can be negatively impacted by disturbance activities and development also has potential to disturb critical wildlife breeding behaviour. Vegetated marine foreshore interface habitat also provides important travel corridors for wildlife and can support unique vegetation assemblages.

Shallow intertidal areas that can be affected by development activities tend to support critical habitat such as eelgrass beds, while deeper foreshore zones provide habitat for kelp beds. Both eelgrass and kelp beds support a range of fish and wildlife. In terms of ecosystem services, eelgrass and kelp beds provide functions such as sediment stabilization, wave energy dissipation, carbon sequestration, and water filtration.

With regard to specific dependence upon marine foreshore areas, it is worth discussing habitat preferences of marine forage fish. Surf Smelt and Pacific Sand Lance are a component of the BC coast beach-spawning "forage fish" population, which also includes Pacific Herring. These fish form a critical part of the marine ecosystem, linking marine zooplankton to the production of predatory fish, birds, and mammals in the upper food web (de Graaf 2017). The ocean-phase life period of Pacific salmon (especially chinook salmon and coho salmon) depends upon forage fish (de Graaf 2017). Because Surf Smelt and Pacific Sand Lance spawning habitat is in the upper intertidal zone, both species depend upon functioning marine riparian vegetation to reduce erosion/transportation of sediment, reduce surface run-off of potential pollutants and provide shade to incubating eggs. Shade from marine riparian vegetation helps prevent desiccation of incubating eggs from sunlight and increased temperatures (Penttila 2007). Vegetation also reduces the drying effect of wind, and Surf Smelt and/or Pacific Sand Lance eggs that occur in beaches adjacent to exposed marine riparian areas generally have a higher potential for desiccation from wind (de Graaf 2017).

The natural supply/transportation of sediment along a beach and clean water are also extremely important to the integrity of forage fish spawning habitat (de Graaf 2017). Modifications such as

piping storm drainage can lead to erosion of suitably sized sediment (both on the beach and in the backshore zone), bank instability, and the concentration of pollutants. Larger shoreline modifications may interfere with along-shore transportation of sediments that create Surf Smelt and Pacific Sand Lance spawning habitat.

Because it is located in the upper intertidal zone, spawning habitat for forage fish is extremely susceptible to anthropogenic modifications to both the foreshore and vegetated marine riparian areas. Considering the current general decline of salmon stocks throughout the Pacific Northwest, the integrity of forage fish populations is extremely important. In addition, the apparent decline of species such as the Endangered Northeast Pacific southern resident killer whale that rely significantly upon chinook salmon is also a concern that has links to the general health of the forage fish population.

## **General Discussion**

Ecosystem services and habitat values associated with marine foreshore habitat have the potential to be eroded over time due to anthropogenic disturbance. Attitudes towards development that potentially exacerbate coastal erosion must become more sympathetic to protection of marine foreshore zones and associated ecosystem services. Using shoreline areas as an example and specifically the benefits of preserving marine riparian vegetation, public outreach would be beneficial in addressing impacts such as clearing of trees and plants to accommodate ocean views. The public should be aware of the critical importance of shoreline and backshore vegetation and hardened versus soft shorelines.

In terms of management of marine riparian areas, it is important to consider values of restoration to re-vegetate or complement existing vegetation by implementing restoration programs. In many cases, once established, vegetation will colonize new areas if space is available, and no disturbance occurs.

Incentives for restoration (*e.g.*, tax break incentives) would help to create positive reasons for converting poorly functioning or non-existent ecosystems into areas that provide biological function and ecosystem services. Such incentives would also help to curb encroachment into currently functioning ecosystems.

Through proposed Bylaw No. 154, Islands Trust are proactively implementing mechanisms to address development activities in sensitive areas, which are perhaps more important than other higher levels of provincial and federal legislation in controlling local issues. Forward-thinking initiatives that continue to restrict impacts on sensitive and vulnerable habitat types will help to ultimately provide education as to the importance of protecting marine foreshore areas and the ecosystem services

provided. However, a cultural shift is also required to change development attitudes and instill more of an understanding of ecosystem services and associated human benefits.

Sincerely,

*\*This is a digitally signed duplicate of the official manually signed and sealed document.*

*Trystan Willmott*



Trystan Willmott, B.Sc., A.Sc.T., R.B.Tech.

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**Attachment – Provincial General Permission Requirements Checklist  
and Interpretive Guide (docks)**

**GENERAL PERMISSION REQUIREMENTS CHECKLIST and INTERPRETIVE GUIDE**

The following checklist and guide, including web-links, is intended to aid proponents in determining whether their existing or proposed waterfront dock satisfies requirements of the General Permission (GP). It is important that the requirements are properly interpreted to ensure that your dock is in compliance.

Some of the required information listed below can be found by utilizing an online mapping program or combination of programs (see links below) to identify other authorizations or relevant designations on the land base. These tools, along with general instructions are available through the following links: [Resource Online Services Explore Tool](#); [Integrated Land & Resource Registry \(ILRR\)](#) and [iMapBC](#). In addition to these web-links, a set of instructions specific to private moorage general permissions has been prepared utilizing iMapBC (see the [Private Moorage iMapBC Online Mapping Instructions](#)). If you have any difficulty utilizing these tools or interpreting the information, contact [FrontCounter BC](#).

**Definitions for red highlighted terms are provided in the General Permission document.**

GP Sctn #	REQUIREMENTS	INFORMATION SOURCE	Requirement met? YES / NO
2.1a	<p><b>ELIGIBILITY - DOCKS</b> The owner of the dock is the owner or Crown lessee of the Upland Property.</p>		
2.1c	<p><b>GENERAL LOCATION</b> The dock is not located over an Area of Special Interest, including:</p> <ul style="list-style-type: none"> <li>• Known archaeology sites</li> <li>• Areas of eel grass</li> <li>• Ecological reserves, parks, or protected areas</li> </ul>	<p><b>Known archaeology sites:</b> Information is determined by using the <a href="#">Integrated Land &amp; Resource Registry (ILRR)</a> tool. You will need to acquire a <b>business</b> BCeID as described in the link to generate a “public report” for the proposed area of the dock. If the report indicates the presence of an archaeology site in the vicinity, the general permission will not be valid,</p>	

GP Sctn #	REQUIREMENTS	INFORMATION SOURCE	Requirement met? YES / NO
		<p>instead you will have to apply for a tenure through FCBC.</p> <p><b>Eel grass</b> mapping:  <a href="https://islandstrust.bc.ca/programs/ecosystem-inventories/#eelgrass-inventory-maps">https://islandstrust.bc.ca/programs/ecosystem-inventories/#eelgrass-inventory-maps</a></p> <p><b>Ecological reserves, park and protected area designations:</b>                      Link to <a href="#">General Permission iMap instructions</a></p>	
2.1d	<p>The Crown land over which the dock has been or will be installed is not a:</p> <ul style="list-style-type: none"> <li>• designated <b>application-only area</b>, or</li> <li>• an area that has been designated as a reserve or withdrawal under sections 15, 16 or 17 of the Land Act as prohibiting authorization of a dock</li> </ul>	<p><b>Application-only area</b> will be identified as Notations of Interest (NOI).                      Maps of these areas <u>may be</u> available on the <a href="#">Private Moorage website</a>.</p> <p>If maps are not available on the policy website for your area refer to one of the online mapping programs to identify if there is an NOI in place.</p> <p>If an NOI is present and it is unclear whether it is for private moorage application-only areas contact FCBC.</p> <p><b>Reserve or withdrawal</b> designations may restrict dock development. These areas will be identified as <b>Land Act sections 15, 16 or 17's</b> on digital maps.</p>	

GP Sctn #	REQUIREMENTS	INFORMATION SOURCE	Requirement met? YES / NO
2.1e	There are no other authorizations for use of the Crown land which would prevent an overlapping permission on that land	Link to <a href="#">General Permission iMap instructions</a> <b>Other authorizations:</b> Link to <a href="#">General Permission iMap instructions</a>	
2.1f	There is only one Dock fronting the Upland Property, and no boat ramps or stand-alone boat lifts.		
6.4	<b>MARINE HABITAT ASSESSMENT – Marine waters only</b> Before construction of a new marine dock the owner must obtain a Marine Habitat Assessment Report for the site, completed by a qualified registered professional biologist. This report must be provided to the Authorizing Agency upon request.	<b>Marine Habitat Assessment Report process:</b> talk to a qualified professional biologist for information; see members listing at: <a href="https://www.cab-bc.org/">https://www.cab-bc.org/</a> . Dock builders will often be familiar with these assessments.3	
4.1	<b>DOCK PLACEMENT and LOCATION</b> A dock must be oriented at right angles to the general trend of the shoreline and must not interfere with the riparian rights of an adjacent property.		
4.2	The offshore end of the dock, including boat lifts and anchor lines, must be at least 30 metres from navigation channels.	For more information on navigable waters refer to Transport Canada’s “ <a href="#">Navigation Protection Program – Overview</a> ”	
4.3	The dock (including boat lift) must be at least five meters from the side property lines (six meters from the side property line if adjacent to a dedicated public beach access or park), and at least ten meters from any existing dock or structure on the foreshore.	Refer to diagrams at bottom of this document	
3.1	<b>DOCK CONSTRUCTION</b> A dock platform or float, and walkway, must be either floating or suspended above the water.		
3.2	A dock may not have crib foundations or solid core structures made of cement or steel sheeting.		

## GENERAL PERMISSION REQUIREMENTS CHECKLIST

GP Sctn #	REQUIREMENTS	INFORMATION SOURCE	Requirement met? YES / NO
3.3	No new fill may be used in the construction or maintenance of a dock.		
3.4	No dredging may occur on Crown land.		
3.5	Riparian vegetation on Crown land shall not be unduly disturbed.		
3.6	A dock must be connected to the shore and the connection must provide pedestrian access to the dock.		
3.7	The only improvements authorized to be part of a Dock are those improvements necessary for mooring a boat (including non-overhead boat lifts, pilings and anchor lines,), and a <b>walkway</b> . <b>No</b> beach houses, storage sheds, boathouses, roofs, sun decks, hot tubs or other similar improvements are permitted.		
3.8	A dock in a <b>freshwater</b> environment must <u>not</u> : a. extend beyond a distance of 42m from the point where the walkway begins, measured perpendicular from the general trend of the shoreline; b. have more than a 3m wide <b>moorage platform or float</b> ; or c. have more than a 1.5m wide <b>walkway</b> connecting the platform or float to the shore; and d. for <b>mobile docks</b> located in waterbodies that have seasonally fluctuating water levels, the outermost extent of the dock must not be more than a distance of 60m from the present natural boundary.  <i>Exception: If this is for an existing freshwater dock which satisfies an historical standard as per section 6.5 of the General Permission</i>	Refer to diagrams at bottom of this document	
3.9	A dock in a marine environment must be no more than: a. 60m distance from the present <b>natural boundary</b> , measured perpendicular from the general trend of the shoreline b. 14m for the length of the <b>float</b> c. 3.7m for the width of the <b>float</b> d. 1.8m wide for the <b>walkway</b> connecting the float to the shore	Refer to diagrams at bottom of this document	

## GENERAL PERMISSION REQUIREMENTS CHECKLIST

GP Sctn #	REQUIREMENTS	INFORMATION SOURCE	Requirement met? YES / NO											
3.10	Construction in or around water must only take place during the appropriate timing window specified by Fisheries and Oceans Canada	Refer to Fisheries and Oceans website, which also includes links to regional freshwater timing windows: <a href="http://www.dfo-mpo.gc.ca/pnw-ppw/timing-periodes/index-eng.html">http://www.dfo-mpo.gc.ca/pnw-ppw/timing-periodes/index-eng.html</a>												
3.11	Construction “in and about a stream” (including a lake or river) must only take place in accordance with a <i>Water Sustainability Act</i> , section 11 Notification or Approval.	Refer to the website at: <a href="#">Activity Search - Natural Resource Online Services (gov.bc.ca)</a>												
3.12	Do not use construction materials containing toxic substances.													
6.3	The dock must not unduly obstruct public access along the foreshore or beach.	A member of the public must be able to readily cross over or go around any dock structures along the foreshore. Stairs may be necessary in some cases to accommodate crossing a walkway. Walkway railings should not be restricting to pedestrian access.												
6.5	<p>Subject to the following schedule, within the Thompson Okanagan and Kootenay Boundary regions only, a Dock that was built or altered during the periods indicated may have different standards apply, in place of the current setback, width and length provisions of this permission. If requested, the owner must provide proof of when the Dock was built and/or altered.</p> <p>SCHEDULE OF HISTORICAL STANDARDS</p> <table border="1" data-bbox="1166 1066 1388 1801"> <thead> <tr> <th data-bbox="1166 1528 1279 1801" rowspan="2">Structural Element</th> <th colspan="2" data-bbox="1166 1066 1279 1528">Construction Year</th> </tr> <tr> <th data-bbox="1166 1369 1279 1528">2007 - 2009</th> <th data-bbox="1166 1066 1279 1369">2010 Onwards</th> </tr> </thead> <tbody> <tr> <td data-bbox="1279 1528 1351 1801">Property Line Setback</td> <td data-bbox="1279 1369 1351 1528">≥3m/6m*</td> <td data-bbox="1279 1066 1351 1369">≥5m/6m*</td> </tr> <tr> <td data-bbox="1351 1528 1388 1801">Walkway Width</td> <td data-bbox="1351 1369 1388 1528">≤3.7m</td> <td data-bbox="1351 1066 1388 1369">≤1.5m</td> </tr> </tbody> </table>	Structural Element	Construction Year		2007 - 2009	2010 Onwards	Property Line Setback	≥3m/6m*	≥5m/6m*	Walkway Width	≤3.7m	≤1.5m		
Structural Element	Construction Year													
	2007 - 2009	2010 Onwards												
Property Line Setback	≥3m/6m*	≥5m/6m*												
Walkway Width	≤3.7m	≤1.5m												

GP Sctn #	REQUIREMENTS				INFORMATION SOURCE	Requirement met? YES / NO
	Moorage Platform / Float Width	≤3.7m	≤3.7m	≤3m		
	Maximum distance from shore	≤42m	≤42m	≤42m		
* 6m setback required if adjacent to a dedicated public beach access or park						
<b>SITE AND STRUCTURE MAINTENANCE</b>						
5.1	The owner of the Dock keeps the dock structures and the Crown land beneath the structures in a safe, clean and tidy condition.					
5.2	The owner of the Dock will not commit any wilful or voluntary waste, spoil or destruction of the Crown land beneath or in the vicinity of the Dock or do anything on that Crown land that may be or become a nuisance or annoyance to an owner or occupier of land in the vicinity of the Crown land.					
<b>USE RESTRICTION</b>						
2.1b	A Dock shall be used for private residential moorage purposes only and the owner of the dock must not use the dock for commercial purposes or make the dock available to others for a fee.					
<b>OTHER REQUIREMENTS</b>						
6.1	A Dock will be subject to any other restrictions, requirements or specifications which the Minister may impose from time to time.					
6.2	An owner of a Dock must comply with all laws that apply to the installation and use of a Dock as contemplated by this permission.					
9.3	Without limiting the Dock owner's obligations or liabilities the dock owner must, at their expense, effect and keep in force a Homeowner's Insurance Policy or other insurance policy which expressly covers the use of the dock, including Comprehensive Personal Liability in an amount of not less than \$2,000,000 per occurrence.					
<b>For DEFINITIONS and OTHER PROVISIONS refer to the General Permission document.</b>						

### GENERAL PERMISSION: DOCK DIMENSION AND DISTANCE DIAGRAMS



Lake docks – length, seasonal shorelines and distance from natural boundary

