



# Islands Trust

Shoreline Protection Model Bylaw Report  
March 2021

# ACKNOWLEDGEMENTS

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We would like to thank all those who participated in the Islands Trust Shoreline Review Model Bylaw Project.

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It is a privilege to write this guide and we acknowledge the lands described in this report are within the ancestral territory of the Coast Salish people and as a reminder we are all connected.

We are in a sacred relationship with all things in the natural world – the land, waters, and air, and all of the plants and animals we live with. Respect for the spirit and life in each of these, and the intricate relationships and interconnectedness we are all in together is a key value and principle of our culture.



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## OVERVIEW

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Located in the islands and waters of the Salish Sea, between the British Columbia mainland and southern Vancouver Island, the Islands Trust encompasses 13 major and more than 450 smaller islands, covering 5,200 square kilometers. The area is home to the highest density of species at risk in Canada and some of the most diverse and sensitive marine ecosystems in the world. The region's rich forests, soils, wetlands, and ocean vegetation act as important carbon sinks, mitigating greenhouse gas emissions and buffering communities against the impacts of climate change. The ecological significance and sensitivity of the region, and the need for protective measures, were internationally recognized in 1973.

The Islands Trust Area is located within the Coast Salish territory and is the homeland to over 28,000 Coast Salish Peoples who have called this place home since time immemorial. In 2019, Islands Trust Council passed a Reconciliation Declaration and committed to a Reconciliation Action Plan as per the Truth and Reconciliation Commission (TRC) Calls to Action. Islands Trust is committed to building meaningful relationships with First Nations in the Trust Area, protecting cultural heritage, and upholding the principles embodied within the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), the BC Declaration on the Rights of Indigenous Peoples Act (DRIPA); the Truth and Reconciliation Commission (TRC) Calls to Action; and the Missing and Murdered Indigenous Women and Girls (MMIWG) Calls for Justice. Islands Trust Council recognizes that the work of reconciliation is key to preserving and protecting this place for generations to come.

The Islands Trust Council adopted a Strategic Plan for the 2018-2022 term. Item six of the Strategic Plan is to: Undertake a review of Local Trust Committees and Bowen Islands Municipality foreshore policies and regulatory bylaws and develop model policy and regulatory bylaws for the protection of the foreshore and nearshore. This is a community planning project that is being advanced by Islands Trust Council Regional Planning Committee. The work will be consolidated into a template of standard bylaws that will be available for local trust committees and Bowen Island Municipality to use when developing policy and regulation along the shoreline.

### **Project Deliverables:**

- Review all 21 existing Official Community Plans and 21 Land Use Bylaws in the Islands Trust Area on foreshore and nearshore policies and regulations, and a selection of other BC coastal jurisdictions and San Juan County. Selection should have relevance to the Trust Area with similar shorelines and upland uses.
- Discussion with Islands Trust Senior Intergovernmental Policy Advisor on consideration of First Nations interests in the options and recommendations.
- Review Provincial guidelines on mitigation and adaptation to sea level rise.
- Review Islands Trust Policy Statement for compliance of any proposed policies and regulations.

- Develop options and make recommendations on model official community plan policy and land use bylaw regulations to protect foreshore and nearshore,

# HERITAGE AND CULTURAL CONSIDERATIONS

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## Islands Trust Initiatives:

The Islands Trust acknowledges the value of Indigenous traditional knowledge and perspectives as part of its decision-making processes.

Some of the recent Official Community Plans (OCP) reviews included references to Heritage and Archaeological Resources. To guide development the Saturna, South Pender and Thetis Island OCPs include the following objectives:

1. To encourage the identification, protection, and conservation of archaeological sites, buildings and sites associated with early settlement, and natural heritage features.
2. To protect archaeological sites from damage due to development, land alteration or human use.
3. To increase public awareness of the Island's heritage resources.
4. To recognize first nations past and current presence on Thetis Island, its foreshore, and surrounding waters, and to protect archaeological and other cultural heritage resources in cooperation with First Nations.

The Saturna Island OCP also includes a Heritage designation which identifies known heritage sites and areas of historical or cultural significance. The objective is to preserve places of historical or cultural significance from destruction. These places are to be identified and means for their preservation should be sought. Furthermore, the Saturna Island Local Trust Committee

may create a Heritage Commission to study and recommend sites, areas, landmarks, buildings, roads, trails, and other features of historical or cultural significance for inclusion together with sites that are on a registry in a Heritage designation under the Local Government Act and archeological sites protected under section 13 of the Heritage Conservation Act.

The Heritage Commission may:

- a) develop a Community Heritage Registry to identify island heritage buildings or other heritage and archaeological sites and features;
- b) develop heritage conservation areas for inclusion in the plan;
- c) require heritage alteration permits for heritage features identified in the Community Heritage Registry and heritage conservation areas;
- d) require heritage impact assessments for designated heritage features and archaeological sites protected under section 13 of the Heritage Conservation Act.;
- e) encourage heritage conservation covenants to protect heritage features; and
- f) encourage dedication or donation of heritage features for long-term protection.

Furthermore, the Saturna Island Local Trust Committee shall encourage and support creation of a community heritage museum on Saturna Island to maintain and display heritage artifacts originally located within the Area.

South Pender Island heritage cultural resources include the archaeological evidence of First Nations use and buildings

associated with the island's more recent settlement. There are registered archaeological sites on South Pender Island, mostly midden deposits, and these are afforded protection from disturbance under the provisions of the Heritage Conservation Act.

South Pender Island OCP Heritage Cultural Resources Objectives include: a) To increase awareness and appreciation of the island's ancient and recent cultural heritage.

b) To encourage and support measures that identify, inventory, and protect heritage cultural resources.

c) To recognize First Nations presence on South Pender Island and to protect archaeological and other cultural heritage resources in cooperation with First Nations.

Heritage Cultural Resources Policies:

a) The Local Trust Committee is to encourage the formation of a Community Heritage Commission to provide it and the community with advice and assistance regarding:

i) criteria for determining community heritage values, e.g., archeological evidence, historical significance, socio-cultural context, and architectural relevance;

ii) identification, inventory, and information compilation regarding sites, artifacts, structures, buildings, and persons of interest;

iii) measures to increase general awareness and appreciation of the island's cultural heritage; and

iv) methods of securing protection for the island's cultural heritage resources.

b) Roads or portions thereof identified as Scenic/Heritage Road are not to be altered without consultation,

c) All development applications shall be reviewed for the presence of known and recorded archaeological sites. Applicants should modify or revise proposed development plans to avoid archaeological site impacts as the best means of preserving archaeological resources. Alteration of a protected archaeological site requires a Provincial Heritage Alteration Permit prior to land altering activities.

d) The Local Trust Committee should not approve applications that would result in disturbance to an archaeological site unless there are unavoidable conflicts with significant archaeological sites or other known First Nations cultural sites. If this is the case, the LTC should require measures to manage the impacts.

e) Recognizing the inter-relationship of community interests and services between North and South Pender Islands, the Local Trust Committee is to encourage opportunities for mutually beneficial co-operative efforts relating to heritage cultural resources.

f) The Local Trust Committee may consider designation of a Heritage Conservation Area or adoption of Heritage Bylaws to protect heritage cultural resources.

The Salt Spring Island Official Community Plan includes a General Community Objective designed to "identify and protect important components of our island's heritage, including archaeological and First Nations cultural sites, whether they are reminders of past or present lifestyles." (*Source: SSI OCP Volume 1 Section A4 Objective 15*)

### **Provincial Archaeological Requirements:**

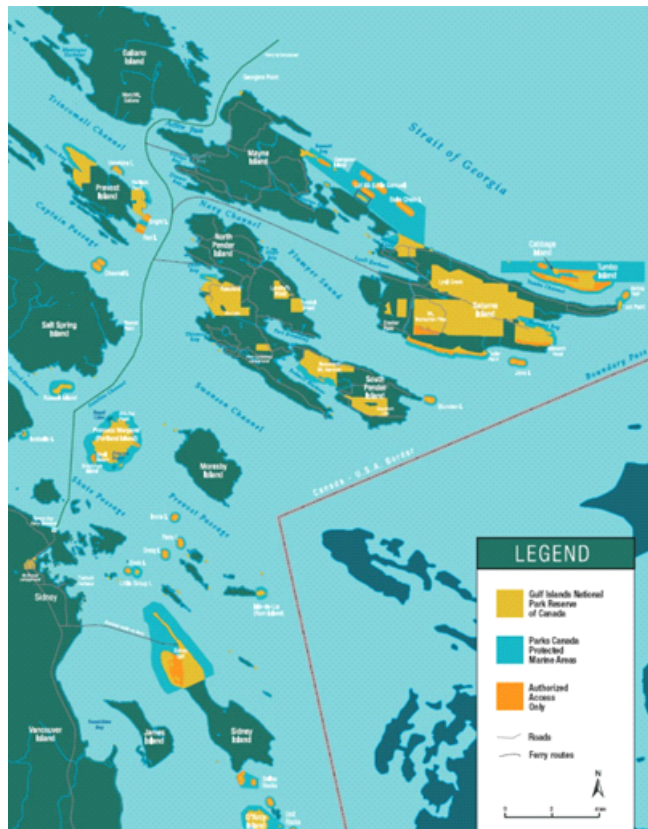
The protection of archaeological and heritage sites afforded under the Heritage Conservation Act is acknowledged by all the Local Trust Committees. The LTC recognizes that there are other buildings and landscapes of heritage value to Island residents and to the First Nations with a long and continuing history of life on the island. <http://www.islandstrust.bc.ca/trust-council/first-nations-reconciliation/>

This recognizes that marine shorelines were well used by First Nations people and as a result it is not uncommon for these areas to contain significant cultural sites and remnants. Any development activity along the marine shoreline must understand that there is a strong potential that these cultural remnants could exist on or below the surface. The BC Heritage Conservation Act governs the processes by which any development activity can occur in and around archeological sites and any indication of archeological artifacts requires adherence to this legislation.

It should be noted that information pertaining to archaeological sites is not available publicly, and Islands Trust planning staff are not authorized to share this information. Individual property owners can petition the BC Archaeology Branch for information regarding archaeological sites on their property, as the Archaeology Branch is responsible for maintaining and distributing archaeological information; however, the Archaeology Branch may not release data that could potentially damage archaeological sites. Property owners are encouraged to contact the Archaeology Branch for more information.

### **Federal Government Initiatives:**

The Federal Government's Gulf Islands National Park Reserve (GINPR) comprises approximately 31 square kilometers of land and intertidal areas scattered over 15 of the southernmost Islands. The following map provides an overview of the national parks in the Gulf Islands.



(Source: [Camping - Gulf Islands National Park Reserve \(pc.gc.ca\)](http://Camping - Gulf Islands National Park Reserve (pc.gc.ca)))

Parks Canada is responsible for the management of about six square kilometers of marine area located offshore of waterfront portions and around islets of the national park reserve.

The southern Gulf Islands embody a rich human history stretching from thousands of years ago to the present. Coast Salish people have occupied the region since time immemorial and continue to live and use these islands.

These parklands help maintain a deep spiritual connection to the area and traditional use continues today. First Nations

archaeological sites as well as historical features from other groups provide tangible evidence of the history of the region’s inhabitants who lived out their lives in this ecologically diverse landscape.

GINPR lies within the Dry Coastal Douglas-fir ecosystem—one of Canada’s most at risk ecosystems. Although the national park reserve contains examples of many of the various components found within the Coastal Douglas-fir ecosystem, younger forest ecosystems make up the majority of the reserve, with significantly smaller amounts of mature forest and Garry Oak and associated ecosystems. To protect these ecosystems the Federal Government implemented the legislation to protect Species at Risk.

The Species at Risk Act (SARA) prohibits individuals and applies to species listed. All critical habitat in national parks and national historic sites must be legally protected within 180 days of being identified.

Recovery measures for species at risk will be integrated within the framework of Parks Canada’s ongoing ecological integrity and management programs. The species-directed measures outlined in this plan will contribute to maintaining and improving ecological integrity of GINPR by improving the conservation status of native species and their habitat and maintaining biodiversity.

### Provincial Initiatives

There are a number of Provincial recovery strategies and plans that complement the GINPR and provide guidance for the recovery of individual species, including strategic directions, recovery objectives, critical habitat, and threats. Multi agency cooperation links strategies and plans for more successful outcomes.

The measures presented in the action plan for GINPR could result in positive impacts on biodiversity and the value individuals place on preserving biodiversity (Federal, Provincial, Territorial Governments of Canada, 2014).

Intergovernmental collaboration and support will benefit park reserve visitors, local residents and Coast Salish groups. Voluntary stewardship opportunities will help build community knowledge which is an important consideration for species at risk management in GINPR. Some activities may create opportunities for local residents to become involved in the recovery of species at risk and for community partnerships to enhance recovery for Species at Risk. Benefits should be relatively evenly distributed across individuals in local communities. These include opportunities to learn about and take part in the recovery of culturally important species at risk, opportunities for integration of Coast Salish traditional knowledge into conservation issues in GINPR, and greater awareness of Coast Salish values and culture among local residents and visitors to the park reserve. Clam food harvesting brings communities together. This activity crosses cultural boundaries and is vital to BC coastal communities to have access to healthy Shell-Fish harvests.

### Clam Garden Restoration

First Nations governance and inter-generational knowledge sharing helps to deepen knowledge. The Clam Garden Network is a group of First Nations, academics, researchers, and resource managers from coastal British Columbia, Washington State, and Alaska. Through collaborations across communities and disciplines participants explore the cultural and ecological

importance of traditional clam management practices and features to enhance regeneration of clam gardens.

### Eelgrass Restoration

The Sea Change Society based in Brentwood Bay, Victoria, BC initiated coast-wide eelgrass mapping, restoration, and monitoring. Sea Change Society works with First Nations communities on Southern Vancouver Island including the Gulf Islands. Their strategy is to locate and restore sites that historically supported eelgrass. Sea Change transplants between 500 and 1000 eelgrass shoots into a test plot. If restoration is successful, the transplant areas are expanded with additional eelgrass shoots.

Source: [Home - SeaChange Marine Conservation Society \(seachangesociety.com\)](http://seachangesociety.com)



Source: Mapping in the Salish Sea (islandstrustconservancy.ca)

Local organizations such as Green Shores use ecological methods to protect shorelines from erosion and to address the impacts of climate change. The use of Eelgrass mapping as a planning tool is proving to be an effective method to consider erosion control.

## GREEN SHORES

Green Shores is a program of the Stewardship Centre for British Columbia that promotes sustainable shoreline ecosystems for commercial, residential, institutional and park properties. It supports a broader vision for Canada's waterfront communities to increase capacity to minimize impacts of shoreline development and climate change while preserving or enhancing shoreline ecology and ecosystem services. Climate change is expected to impact the rate and nature of change across Canada's shorelines and affect its ecosystems. Green Shores incentivizes and provides a guideline for climate change adaptation and incorporates the most recent estimates of sea level rise to increase shoreline resilience for both ecosystems and property developments. The Green Shores guiding principles are to:

1. Preserve the integrity and connectivity of shoreline processes;
2. Maintain and enhance shoreline habitat diversity and function;
3. Minimize and reduce pollutants to the shoreline environment;
4. Reduce and reverse cumulative impacts to shoreline systems.

The Islands Trust promotes the Green Shores programs to the development community.

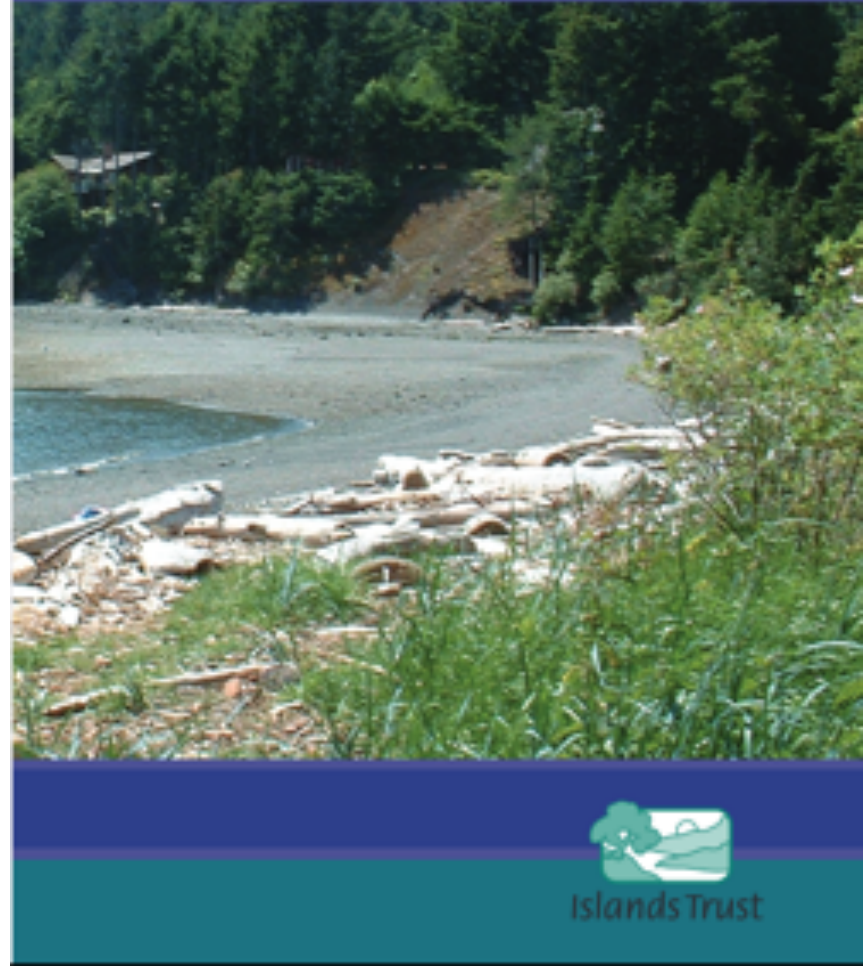
There are two programs –

Green Shores for Development provides a Credit and Ratings Guide for commercial, multi-family residential, subdivision, park, and institutional waterfront development.

Green Shores for Homes Program which is based on the four guiding principles:

1. Preserve or restore physical processes—the natural actions of water and sediment movement that maintain healthy shorelines.

## Sharing Our Shorelines



2. Maintain or enhance habitat function and diversity along the shoreline.
3. Prevent or reduce pollutants entering the aquatic environment.
4. Avoid or reduce cumulative impacts—small individual effects that add up to large impacts on shoreline environments. (Source:

Green Shores for Homes - Stewardship Centre for BC ([stewardshipcentrebc.ca](http://stewardshipcentrebc.ca)) and Care for my Shoreline ([islandstrust.bc.ca](http://islandstrust.bc.ca))

Examples of related policies include Salt Spring Island Official Community Plan B.9.2. shoreline conservation designation policy which states: shoreline conservation designation is encouraged to

help owners to implement best practices for shoreline development, such as green shores.

## GUIDELINES ON MITIGATION AND ADAPTATION TO SEA LEVEL RISE

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B.C.'s climate is changing, and climate scientists are projecting further changes over the next decades. Climate change mitigation and adaptation involves preparing for these changes and the impacts they will have on natural systems and communities. Communities are experiencing the impacts of climate change including more frequent and intense storms, increasing temperatures, drought, wildfire, sea level rise and flooding.

- Mitigations deal with how we can reduce the greenhouse gases that are the root cause of human caused climate changes.
- Adaptations are behavioral. Physical changes we make in our use of natural resources deal with the results of changing climate.

### Mitigations

Mitigations in climate change can be undertaken by the Islands Trust by either reducing carbon dioxide emissions or increasing carbon sequestration (the amount of atmospheric carbon fixed into plants or other solid materials). Energy use is a key issue around reducing emissions. Maintaining forest cover is important for carbon sequestration. Several resources are available to help us with mitigation efforts such as:

- Plug in BC - <https://pluginbc.ca/>
- Climate Action to Go Kits -

<https://www.crd.bc.ca/education/climate-action/at-home/climate-action-to-go-kits>

- Efficiency BC - <https://betterhomesbc.ca/> to carbon sequestration by island, Here's a link <http://www.islandstrust.bc.ca/media/346674/cdf-toolkit-final-web.pdf>

**The Islands Trust is committed to becoming a carbon neutral organization with no net increase in greenhouse gas emissions from its operations. Carbon neutrality has been achieved since 2012 through these steps:**

- Performing an emissions inventory of our operations.
- Implementing an action plan to reduce emissions;
- Purchasing carbon offsets to counteract emissions that cannot be readily reduced.
- Improving transportation networks that are low carbon such as bike paths or other trail networks or installing EV stations.
- All Local Trust Committee Official Community Plans contain targets and policies related to Green House Gas (GHG) emission reduction.

**Local Trust Committees have the following tools available for addressing climate change mitigation efforts:**

- GHG Reduction Targets- Section 473 of the Local Government Act – required content for official community plans, inclusion of targets and policies with respect to reducing greenhouse gas emissions.
- Zoning Authority – Section 479 of the Local Government Act could cluster development, protect areas for conservation, limit extent of development, establish building size limits, and prohibit uses that contribute the most to GHG production.
- Development Permit Area to Promote Energy Conservation– Section 488(1)(h) of the Local Government Act can be used to reduce heating and cooling requirements through building siting, systems, and landscaping.
- Development Permit Area to Promote the Reduction of Greenhouse Gas Emissions - Section 488(1)(j) of the Local Government Act.
- Off-street Parking and Loading Regulations - Section 525 of the Local Government Act – establish parking requirements, electric vehicle and active transportation parking, surfacing and landscaping of parking areas.
- Impacts of climate change include sea level rise, possible saltwater intrusion into groundwater aquifer, warmer winters and summers, dryer summers, more intense storm events, and wildfire potential. Adaptations to changes resulting from climate warming include a wide variety of options. Such adaptations could be behavioural (e.g., Educating people to reduce food waste and drive less) or structural measures (e.g., Requiring water storage for household and fire suppression use).

The Province of B.C. has developed a Climate Change Secretariat to address climate change adaptations and has begun to produce numerous resources for communities to deal with climate change adaptations. These include:

- The site of climate change resources - <https://www2.gov.bc.ca/gov/content/environment/climatechang>

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- The climate action toolkit - <https://www.toolkit.bc.ca/taking-action/community-wide> Local Trust Committees are being supported in understanding potential adaptations through staff reports.

A review of Islands Trust policies revealed a commitment to addressing climate change demonstrated by the islands of North Pender, South Pender, Galiano, Mayne and Saturna that are collaborating on a project to assess groundwater and establish water budgets.

Tools to support Local Trust Committees in understanding possible adaptations include:

- Zoning Authority - Section 479 of the Local Government Act require setback from the sea and water bodies, building location and size, appropriate uses, and density.
- Runoff Control Bylaw - Section 523 of the Local Government Act Regulations to address increased rain events.
- Development Permit Area to Protect Development from Hazardous Conditions – Section 488(1)(b) of the Local Government Act. Flood plain regulations along foreshore, rivers, and lakes. Tree and vegetation retention in areas prone to land slip.
- Development Permit Area to Promote Energy Conservation- Section 488(1)(h) of the Local Government Act. Siting, landscaping, and flooding.

### **Shoreline Management Plans: Oak Harbour. WA. U.S. Oak Harbour SMP**

#### Shoreline Environment Designations

The basic intent of a shoreline environment designation is to preserve and enhance shoreline ecological functions and to encourage development that will enhance the present or desired future character of the shoreline as described in the

Comprehensive Plan, other adopted plans and the Shoreline Management Plan. To accomplish this, shoreline segments are given an environmental designation based on existing development patterns, biological capabilities and limitations, and community objectives. This Master Program establishes seven shoreline environments for the City of Oak Harbor. These shoreline environments shall include the shorelines of the City of Oak Harbor, including shorelands, surface waters, and bed lands. These environments are derived from and based on policy direction contained in the Oak Harbor Shoreline Inventory and Characterization Report, the Oak Harbor Comprehensive Plan, the Shoreline Management Act, and the Shoreline Master Program Guidelines. The seven Oak Harbor shoreline environment designations are: Maritime, Urban Mixed Use, Residential, Residential - Bluff Conservancy, Urban Public Facility, Conservancy, and Aquatic.



*Storm surge flooding, Victoria. Photo: B.C. Ministry of Environment*

The Summary List of Recommended Actions [Appendix A: Summary List of Recommended Actions Page 1 \(washington-apa.org\)](#) includes a number of options that LTC could use to outline how protection of marine ecology will be managed.

## BC MARINE COASTAL SHORELINES JURISDICTION

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Jurisdiction over coastal areas in B.C. is split among federal, provincial, and local governments, depending on the location along the coast and the relationship to the shore.

Within the Islands Trust Communities there are six types of shorelines that are shaped by complex processes that connect the land to the sea.



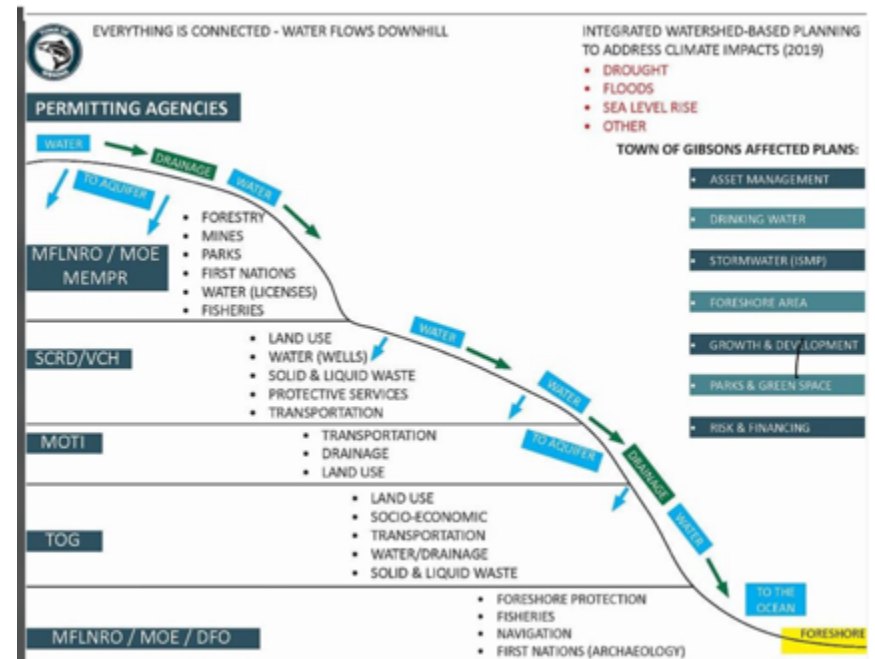
The land and surrounding environment protect the natural processes that form the shoreline. Marine and terrestrial habitat, as well as sensitive habitat and features exist, which are important to support a vibrant marine ecosystem.

The Islands Trust interactive mapping (MapIT) application is available online and provides more information about regulations. Although mapping is informative, it cannot replace observations made by walking the site and surrounding areas, particularly noticing seasonal and other changes over time.

It is important to note that while the following points refer to ownership and jurisdiction, all of B.C.'s coast is subject to aboriginal claims based on traditional use by First Nations and constitutional recognition of Aboriginal Title and Rights.

To highlight the multiple jurisdictions that regulate water the following water model in Figure 1 highlights how watershed planning can help to address climate impacts such as droughts, floods, and sea level rise.

Figure 1: Permitting Agencies | Integrated Watershed Model



Source: [2020-07-28 Gibson's Source to Sea Project.pdf \(civicweb.net\)](#)

The federal government has jurisdiction over offshore waters – from the low water mark out to 12 nautical miles along the outer coast. The Federal Department of Fisheries and Oceans (DFO) is responsible for fisheries protection provisions to prevent serious harm to commercial, recreational, and Aboriginal fisheries under the *Fisheries Act*, including shoreline “riparian” habitats, as well as for maintaining maritime safety through the Coast Guard. Transport Canada is responsible for preserving the public right of navigation under the *Navigation Protection Act* (2014) in waters listed in the schedule to that Act. The public right of navigation

will continue to be recognized in common law for navigable waters not listed in the Act. Port Authorities are also established under federal legislation to manage major harbours and facilities that are federal Crown lands, such as Victoria, Metro Vancouver, Port Alberni, Prince Rupert, and Nanaimo harbours.

On B.C.'s coast, the area between high tide and low tide (the foreshore area) is owned and controlled by the provincial government as well as the beds of inland seas such as the Strait of Georgia, Juan de Fuca Strait and Johnstone Strait. Foreshore area is never privately owned, though the Province may grant leases and licences for special uses of the foreshore – like gathering oysters or building docks and wharves. [Land Use - Private Moorage - Province of British Columbia \(gov.bc.ca\)](#)

The Land Tenure Branch (under the Ministry of Forests, Lands, Natural Resource Operations and Rural Development) administers lands in the foreshore area and issues permits, licences or leases for a wide range of uses – private and public moorage, wharves, marinas, aquaculture, and log storage to name a few. Consultation with First Nations is an important consideration with development around the coastal lands. It is part of land and resource decision-making. The following link outlines communications protocols with First Nations.

[Consulting with First Nations - Province of British Columbia \(gov.bc.ca\)](#)

The Province may also establish regional coastal zone or estuary management plans. Use of the foreshore is also subject to local

government land use regulations. *Source: Regulations Affecting BC Marine Coastal Shorelines Green Shores™ Background Report Shoreline Regulations and Permitting Processing BC 2014*

**Professional Organizations** Engineers have been involved in shoreline ecological restoration for some time. For example, in 2010 Jericho Beach enabled the opportunity to return the shoreline to its natural state and allowed for return of native plant habitat. Dangerous materials, such as creosote treated piles were removed.

The experience in undertaking flood plain restoration shows that a co-ordinated approach is essential and Community buy-in is required. An example of a multidisciplinary team has been the Shoreline Protection for the Town of Comox which commenced in 2011.

*(Source: [Waters | Nanwakolas Council](#))*

The Team included the K'omox First Nation, an archaeologist, a biologist/fisheries expert, a wave modelling/coastal engineering specialist, and a geotechnical engineer. The Foreshores dynamic nature made the Project extraordinarily complex. In addition, an archaeological site was located. *(Source: Innovation 2018 Engineers and Geoscientists BC). In 2016, the Association of Professional Engineers of BC (APEGBC) released a position paper entitled Human-Induced Climate Change which was followed in 2017 by professional practice guidelines, Flood Mapping in BC.*



1. Low Bank Beach of Jericho Beach, Vancouver, BC



Pictures 3 and 4 depict Low Bank Beaches in Comox, B.C. Rocks and logs are used as a natural approach to slow tidal flows and to prevent erosion.



2. Beach Images: Stanley Park, Vancouver, BC  
Rocks placed to slow tidal action



## LEGISLATIVE FRAMEWORK FOR SHORELINE PROTECTION STRATEGIES

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An overarching goal of government regulation is to strengthen opportunities for protection of archaeological resources, sensitive ecosystems, shoreline integrity and function, and public access to marine ecosystems.

The Islands Trust has policies that give local island trust committees the ability to amend Official Community plans and Land Use bylaws. Policies to manage development on shorelines through its preserve and protect mandate, is expressed through

the Islands Trust Policy Statement that reflects the values expressed by Island Trust communities.

### **1. Islands Trust Policy Statement**

The Islands Trust policy statement guides land use planning and development through the preserve and protect mandate of the islands trust. It includes goals and policies that reflect the values and concerns for the future of the trust area. Local trust committee official community plans and land use bylaws must comply with the policy statement. There are several policies which speak broadly for shoreline protection, and more specifically for the implementation, regulation and use of foreshore development for policies in the Islands Trust. These are listed in Appendix 1: Policies in the Islands Trust. Note that the Islands Trust Mandate in Section 3.4.4 requires that Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of sensitive coastal areas protection of sensitive marine areas and in Section 3.4.5 requires that Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning for and regulation of development in coastal regions to protect natural coastal processes.

### **2. Official Community Plans**

Official Community Plans allow local governments to set objectives and policies to regulate future growth and development in communities. The OCP divides the communities into residential, commercial, agricultural, institutional, industrial, and other land uses. The OCP outlines when these uses are needed and provides policy direction on how, when and where each land use will be located. Designated uses can be outlined on OCP maps.

The Official Community Plans within the Islands Trust area have included the Objectives and Mandate in a variety of ways. The following communities demonstrate how they have amended their OCP's to address shoreline protection.

The Saturna Island Official Community Plan highlights the legality of the Islands Trust Object. Over the years the provincial legislature has reaffirmed the Islands Trust object.

“The object of the trust is 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.”  
(Sec.3 Islands Trust Act).

This legislated objective defines the purpose of providing authority to the Islands Trust for land use regulation. The challenge is how to employ the available planning powers of the Local Government Act to preserve, protect, and effectively maintain the rural nature, health, natural environment, and vitality of the Saturna Island community.

The strength and obligation of the Trust mandate has been more clearly defined by the Court in the Galiano Island vs. McMillan Bloedel case. The BC Court of Appeal found that when a Local Trust Committee exercises its powers "to preserve and protect" an amenity, it is not acting in bad faith, but rather carrying out its assigned duty under the Islands Trust Act. Official Community Plans and Land Use Bylaws can be explicit and either more restrictive or permissive when furthering the objectives than would be acceptable in other local governments in British Columbia. The

Court's decision affirmed the powers and obligation of each Local Trust Committee to further the object of the Islands Trust Act.

The Galiano Island Official Community Plan elaborates on Principles.

- a. This Plan advances the Object of the Islands Trust to "preserve and protect the Trust area and its unique amenities and environment" and supports the limitations the Object presents for the type and scale of development in the Galiano Island Local Trust Area.
- b. Several First Nations have traditional ties and territories on Galiano. The community supports continued and strengthened collaboration and cooperation with First Nations in planning land and resource management and protection of cultural heritage and sites.

One method of regulation is via Development Permits as established in Section 919.1(1)(a) of the Local Government Act for the protection of the natural environment, its ecosystems and biological diversity. An example is Ballenas Winchelsea Official Community Plan, which elaborates on the justification of a Shoreline Development Permit area. The Plan notes that the Object of the Islands Trust to "Preserve and protect the Trust Area and its unique amenities and environment of the Trust Area 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." Provincial legislation in Section 877(1)(d) of the Local Government Act says that an official community plan must include statements and map designations for the area covered by the Plan respecting restrictions on the use of land that is subject to hazardous conditions, or that is environmentally sensitive to development. It is policy of the Islands Trust Council that protection must be given to the natural

processes, habitats, and species of the Trust Area, including those of open coastal grasslands, the vegetation of dry rocky areas, estuaries, tidal flats, saltwater marshes, drift sectors, lagoons, kelp and eel grass beds 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: the protection of sensitive coastal areas; and the planning for and regulation of development in coastal regions to protect natural coastal processes.

Land Use Bylaws also regulate Shoreline uses. North Pender Island, for example has 1 Ecological Zone and 6 Water Zones.

Developments to ensure they meet the policies and objectives of the Official Community Plan (OCP) as well as the regulations of the Zoning Bylaw. The OCP specifies areas that fall under a Development Permit Area (DPA).

Local governments may designate areas of land as development permit areas to be used for one or more purposes. The eligible purposes of a development permit area are:

- Protection of:
  - The natural environment, its ecosystems and biological diversity
  - Development from hazardous conditions. Protection of development from wildfire, land slide, flooding, erosion, and other hazards
  - Farming
- Revitalization of an area in which a commercial use is permitted
- Establishment of objectives for the form and character of:

- Intensive residential development
- Commercial, industrial, or multi-family residential development
- Development in a resort region
- Promotion of:
  - Energy conservation
  - Water conservation
  - Reduction of greenhouse gas emissions

### Designating a Development Permit Area

Local governments may designate a development permit area in an official community plan. The plan must describe the special conditions or objectives that justify the designation.

The local government must also specify guidelines for how proposed development in that area can address the special conditions or objectives. These guidelines may be specified by zoning bylaw.

In the Islands Trust many locations include Development Permit Areas within Official Community Plans to implement Islands Trust Policy Statements to Preserve and Protect mandate.

The promote high quality developments in terms of design, performance, and environmental protection. Most lands within jurisdictions are subject to the provisions of one or more development permit areas. Therefore, prior to commencing subdivision, construction, or the clearing or alteration of land, a development permit may be required for one or more of the following purposes:

The Island Trust Shoreline DPA (DP-3) is an example of a policy that has designated an area for which development approval

information may be required as authorized by Section 484 of the Local Government Act.

Examples of Coastal Development Permit Guidelines are included:

1. [northcowichan.ca/assets/MarineWaterfront.pdf](http://northcowichan.ca/assets/MarineWaterfront.pdf)  
(North Cowichan Development Permit)
2. [foreshore-development-permit-area.pdf](http://foreshore-development-permit-area.pdf)  
(Campbell River)

Development Permit Areas can help local government achieve development objectives by providing guidelines on the design, appearance, and performance of a development. A development permit cannot vary the use or density of land, or a flood plain specification. The only exception is where the permit is essential to health, safety, and protection of development from hazardous conditions.

Keats Island community in conjunction with the Island Trust planners conducted a Shoreline Review Project. This action was taken in response to community concerns related to the general increase in development on Keats, and more specifically to the increase in dock development. The attached report outlines a strategy that encompasses the findings from the consultation and a review of Land Use Policies in the Islands Trust.  
[gm-ltc-2020-06-15\\_keats-shoreline\\_rpt-discussion-paper-working-group.pdf](http://gm-ltc-2020-06-15_keats-shoreline_rpt-discussion-paper-working-group.pdf) ([islandstrust.bc.ca](http://islandstrust.bc.ca))

### Zoning Bylaws and Setbacks

One area of inconsistency is between zoning Bylaws and specifically setback requirements. Zoning bylaws regulate Marine Riparian setbacks, and they may differ across local governments and regional districts.

Most jurisdictions now require setbacks on lands within 15 metres upland of the highest high tide mark of the ocean, or the top of bank, whichever is the larger. This is consistent with the Provincial Guidelines as part of its strategy to address climate change impacts. When development is proposed within a specified distance from the high tide mark of the ocean, a report is required from a qualified environmental professional, to eliminate or mitigate impacts of the development on all parcels with marine shorelines.

Often a measure that may stabilize one site can lead to instability on other sites in the area, as wave and tidal actions combined with longshore drift energy are redirected in response to human interventions. To minimize the degree to which this may happen it is preferred that natural measures are deployed to protect marine shores wherever possible. Section 524 of the Local Government Act enables local governments to develop flood hazard area bylaws. When adopting these bylaws, local governments are required to consider the Province's "Flood Hazard Area Land Use Management Guidelines" (the Provincial Guidelines).

Amended in 2018, the Provincial Guidelines incorporate sea level rise (SLR) into land use planning and future development and require that local governments adjust setbacks according to the Year 2100 Global SLR prediction of 1.0 metre, with adjustments made for regional uplift and subsidence. Using the Year 2100 SLR prediction of 1.0 metre as the minimum elevation, local governments can regulate flood construction levels (FCL) of buildings and structures, including docks.

The Provincial Guidelines requires a setback of 15 metres from the future estimated natural boundary (NB) of the sea at Year 2100, or landward of the location where the natural ground elevation contour is equivalent to the Year 2100. It is noted that where sea

frontage is protected from natural bedrock formation, setback requirements may be adjusted as recommended by a qualified Professional Engineer experienced in coastal engineering. Conversely, the recommended setback may be increased based on the site-specific conditions, for example in low-lying areas or areas of known erosion hazard. The Islands Trust is no exception as can be seen from the following table.

The Capital Region District (CRD) Flood Inundation Project 2020 provides detailed information for some of the more southern Islands within the Islands Trust regarding future hazards associated with coastal flooding

related to sea level rise and tsunamis. The following map shows information for Ganges and adjacent area on Salt Spring Island. (Source: Task 2 Sea Level Rise Modelling and Mapping Report Map 2 )

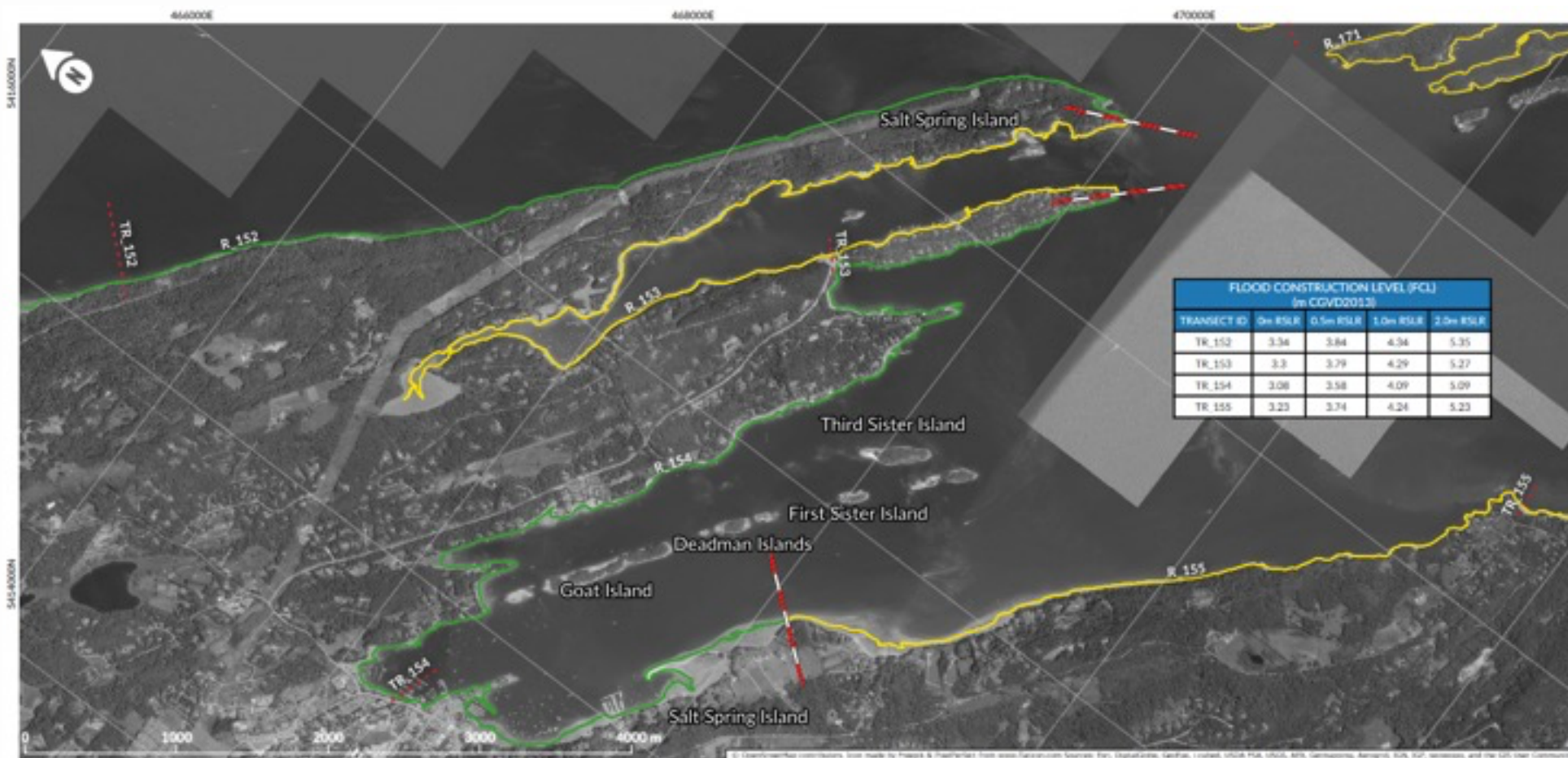


Table 1 Summary of Local Trust Committee (LTC) regulations.

Shoreline Regulation Overview Table	Private Docks permitted (zone specific)	Setback from Natural Boundary of the Sea	Permits Structures in Setback from NB	Exemptions to Setback from NB	Shoreline (or Marine) Development Permit Area
Ballenas-Winchelsea	✓	15 m	-	✓	✓
Bowyer and Passage Islands (Gambier LTA)	✓	7.6 m	Property specific min. setbacks based on historical buildings and structures	✓	-
Denman	✓	15 m	✓	-	-
Gabriola	✓	15 m**	✓	-	✓
Galiano	✓	7.5 m	✓	-	✓
Gambier	✓	15 m	✓	✓	✓
Gambier Associated Islands	✓	7.5 m	✓	-	-
Hornby	-	15 m	-	✓	-
Lasqueti	✓*	15 m**	✓	-	-
Mayne	✓	7.5 m	✓	✓	-
North Pender	✓	15 m	✓	✓	✓
North Pender Associated Islands	✓	15 m	-	-	✓
Salt Spring	✓	15 m**	✓	✓ (zone specific)	✓
Saturna	✓	7.6 m	✓	-	-
South Pender	✓	7.6 m	✓	✓	-
Thetis	✓	7.6 m	✓	✓	-
Thetis Associated Islands	✓	10 m	✓	-	-

\*Docks permitted on specific lots only. Rezoning required for additional docks.

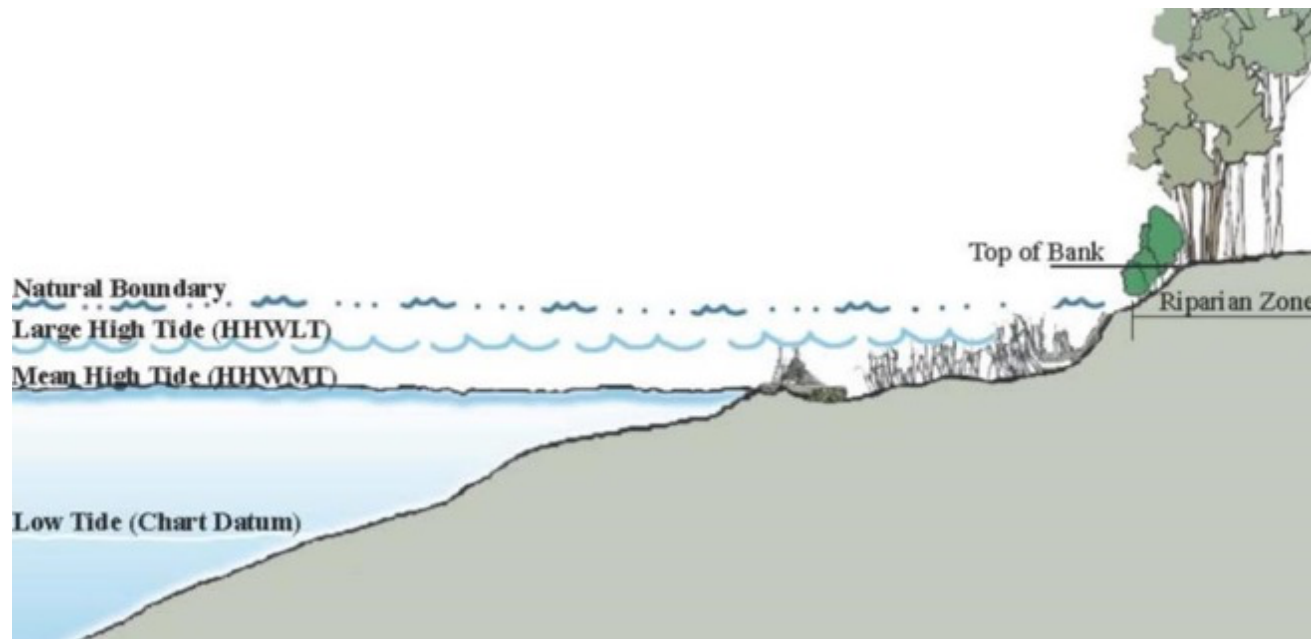
\*\*May be reduced with engineer certification.

## Natural Boundary Considerations

One of the key components of Development Permit requirements is establishing setback requirements. With regards to Shoreline protection, the establishment of the Natural Boundary is a key component as it impacts setback distances from hightide.

The 2010 BC Supreme Court case *Lawrence v. British Columbia* (Attorney General) 2010 accepted of the method of determining the natural boundary as shown in the figure below.

The Natural Boundary means the visible high-water mark of the sea, a lake, a stream, or other body of water, where the presence and action of water are so common and usual and so long continued in all ordinary years as to mark upon the soil or rock of the bed of the body of water a character distinct from that of the ban. (The definition is defined in the BC Land Act <https://www.bclaws.gov.bc.ca/civix/document/id/91consol15/91consol15/79214#section14>.) and in the case of a lot having a surveyed high-water mark means the high-water mark. LUB should provide the following regulations for siting of buildings and structures in relation to the natural boundary of the sea:



Source: *Greenhores Credits and Ratings Guide*

The following features may project into a required setback area:

- o steps, eaves gutters, cornices, sills, chimneys, or similar features, provided they do not project more than 1.0 metre

(3 feet) into the required setback area or 0.5 metres (1.5 feet) in the case of a side yard setback area;

- o balconies, decks, and sunshades, provided that they do not project more than 1.0 metre (3 feet) into the required setback area;
- o retaining walls may be located in any required setback area except the setback from the natural boundary of the sea.

### **Marine/Coastal Policies**

- a. Develop and implement a Marine Action Strategy to identify, prioritize and resource local actions for protecting and maximizing waterfront and marine resources as important assets providing valuable ecological services, and social, cultural, and economic benefits.
- b. Continue to build partnerships and collaborate to monitor and protect waterfront and marine areas. Establish a Marine Working Group to coordinate and align efforts of all coastal stakeholders and agencies with jurisdictional authority and interests in the local marine environment.

### **Objectives**

- a. Recognize, value, and promote ecosystem services provided by coastal and marine environments.
- b. Protect, restore, and enhance the ecological features and functions of coastal and near shore areas.
- c. The Islands Trust should continue to work collectively across each of the Gulf Islands to help sustain a healthy marine environment.
- d. Play a proactive leadership role and work with First Nations and senior governments to monitor and address marine issues such as unauthorized mooring, derelict vessels, and ship and non-point source pollution of the coastal environment.
- e. Continue to participate in initiatives and forums to enhance dialogue and collective action among First Nations, local and regional governments, marine stakeholders, and community

organizations to support the health and sustainability of the Gulf Islands.

f. Support participation and benchmarking activities in the provincially led cumulative impacts project for the Gulf Islands. Work with other agencies and groups to inventory and more closely to define environmentally sensitive areas in the marine environment.

g. Plan and design waterfront sites to minimize impacts on the marine environment, in accordance with best management practices, all federal and provincial regulations. Refer to [Province's Develop with Care](#) resource, and Island Trust's development permit guidelines. The purpose of a Development Permit Area (DPA) guidelines is to designate for the protection of the natural environment, its ecosystems and biodiversity. DPA requires applicants to provide information on the anticipated impact of development activities on the natural environment, pursuant to the Development Approvals Information requirements outlined in sec 30 of the Local Government Act.

h. Infill of marine areas to create additional upland developable area beyond the natural boundary is strongly discouraged. Where required for contaminated sites remediation and coastal flood protection, the location and shoreline alignment of structures should wherever possible follow High Water to maintain marine channel area. Wherever possible, apply 'Green Shores' principles in their planning and design for shoreline restorations projects.

i. Ensure foreshore development is undertaken in a manner that secures and enhances public shoreline access without adversely affecting aquatic habitat. Access points should be practical and universally accessible for public use and enjoyment.

j. Support opportunities for coordinated project review with senior governments and First Nations for projects proposed within the marine environment. It is strongly encouraged to contact the Archaeological Branch to prior to development along shorelines

to determine if there could be the presence of culturally significant artifacts.

For Shore line development made to the BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development for private docks and floats, these applications will only be accepted by the Islands Trust if the following criteria are met: Adherence to the Integrated Land Management Bureau (ILMB) policies regarding public notification e.g. Local First Nations and is in keeping with best management practises, planning and design standards, e.g. shared access and dock usage whenever possible.

### **Environmentally Sensitive Areas**

a. Marine Shoreline guidelines apply to environmentally sensitive areas. These areas are mapped and included in each of the Islands Trust OCPs, and accompanying Development Permit Applications. Shoreline developments within the Islands Trust may lie within multiple development permit areas. It is advised Property owners work with a Qualified Environment Professional to meet the requirements within each DPA. In the case of guidelines for areas designated for the protection of development from hazardous conditions, development proposals which include marine or riparian areas must also be submitted to Fisheries and Oceans (Canada) for authorization and should be subject to any conditions or limitations determined necessary or appropriate by Fisheries and Oceans (Canada).

### **Objectives and Justification**

The objectives of Development Permit Areas are to:

- i. protect areas of highest biodiversity and ecological sensitivity within the Gulf Islands including ground and surface water, shorelines, forests, wildlife habitat features and rare and endangered ecosystems and species.

- ii. ensure that ecosystem protection and enhancement values are elevated and prioritized, and to specify where and how lands are developed in and around environmentally sensitive areas.

- iii. conserve and steward the natural environment, ecosystems, and biodiversity within the community.

- iv. support the movement of various species by connecting ecosystems through undisturbed open space corridors.

- vi. restore, enhance and protect marine ecosystems; Shoreline ecosystems such as stream corridors, slopes, and nearshore beaches to preserve fish habitat, improve water quality for shellfish harvests.

- vii. minimize and mitigate the environmental and visual impacts of development.

- viii. accommodate recreational and complementary land uses, where appropriate that contribute to the above objectives.

- ix. restore and enhance sites previously degraded or denuded of vegetation.

- x. Discourage any new development in within designated ecological reserves.

b. The Islands Trust has some mapping for designated Environmental Review Areas (ERAs) that are based on Sensitive Ecosystem Mapping completed to provincial standards that describe and classify the ecological diversity, type, and extent of vulnerable or rare ecosystem elements in a given area. [Islands Trust Conservancy - Sensitive Ecosystems and Land Use Planning](#). The terrestrial ecosystems can be viewed using the Islands Trust interact mapping application MapIT and PDF versions of the maps can be downloaded.

These areas have rare or restricted distribution, high biodiversity, and habitat values, and are sensitive to disturbance and human

impacts. Within the Gulf Islands, sensitive ecosystems are not limited to Shorelines but include old forest, mature forest, woodlands, riparian areas, wetlands, and sparsely vegetated, estuarine, intertidal, fresh water and ocean areas.

c. Areas of recent disturbance or modification are not considered sensitive, and include urban and rural residential areas, industrial sites, golf course (excluding natural areas within some courses), gravel pits, roads, hydro corridors, dikes, farmland, and recently logged areas. The Gulf Islands has designated some areas as environmentally sensitive and there are several Environmental Review Areas (ERAs) based on Sensitive Ecosystem Mapping completed to Provincial standards that describe and classify the ecological diversity, type, and extent of vulnerable or rare ecosystem elements in a given area.

The Islands Trust has Sensitive Ecosystem Mapping available on the Islands Trust Geographic Information System to identify Environmentally Sensitive Area (ESA) rankings (Medium or High) based on an ecosystem's sensitivity to disturbance, ecological importance, and provincial rarity according to its BC Conservation Data Centre status. Ecosystems with high percent of recent disturbance are ranked as Low (not highlighted on ESA mapping).

ERAs may not represent all sensitive ecosystems present within a given area or site. The Islands Trust relies on the most updated information, acquired through site-level bio-inventories and assessments as required for Development Permits. As new information becomes available, and buffer areas are determined by Qualified Environmental Professionals (QEPs) to maintain ESAs,

OCP's and Development Permit areas can be amended along with Geographic Information System ESA map layers, which should be referenced for detailed ESA information over time.

d. Development within and adjacent to these sensitive ecosystem areas will be reviewed against and subject to OCP environmental objectives and policies that seek to ensure ecologically sensitive development. Development should be carried out according to permits issued pursuant to these guidelines.

**Conclusion:**

This discussion paper is intended to identify and document existing policies and regulations related to updating LUB and policies for shoreline in LTC's and to make recommendations as to potential updates to these policies and regulations.

The options presented in this report outline initiatives underway in other communities and jurisdictions. One of the major issues impacting changes in regulations is the impacts of Climate Change on coastal communities specifically sea level rise. The goal of the Islands Trust is to support policies to improve Shoreline Protection and to include Indigenous perspectives in project planning. The report represents some potential regulations that could be enacted that response to specific concerns from the community. It is recommended that Climate Change and Indigenous reconciliation be used as the catalyst to review and update LUB's specifically to introduce Shoreline Development Permit Areas as this regulatory tool as this has the best potential for impacting the areas of concern.

# RECOMMENDATIONS

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## First Nations

1. To recognize areas of cultural significance the Local Trust Committee could consider designation of a Heritage Conservation Areas or adopt Heritage Bylaws to protect heritage cultural resources similar the projects completed on South Pender and Saturna.
2. Through government-to-government meetings, Local Trust Committee may wish to commit to meeting regularly with Indigenous First Nations stakeholders on land use planning issues. Also, the internal referral/advisory role between Islands Trust planning staff and the Intergovernmental Liaison appears to still be in a growth phase as new processes work towards collaboration on meeting the mandate of the Islands Trust.
3. The LTC Policy Statement should be revised to incorporate UNDRIP and DRIPA & the Islands Trust Reconciliation Declaration. The goal is to support more thorough Islands Trust project work to improve Shoreline Protection from an Indigenous perspective.
4. Based on feedback from Islands Trust staff it was mentioned that the Islands Trust Staff Report template could be updated to support a requirement to consult based on the intent of UNDRIP and DRIPA and the Islands Trust Reconciliation Declaration. This would give clear direction for greater consistency in approaches toward reconciling Indigenous Rights. In addition, to the Provincial public notification process the Islands Trust could develop a referral letter and provided to property owners regarding shoreline development for docks.

5. Consider working with First Nations and the Department of Fisheries and Oceans (DFO) to establish conservation areas to protect shellfish aquaculture, traditional shellfish harvesting, water quality and the protection of the marine environment. Due to the depuration areas such as the Sooke Basin and the closures of fisheries and shellfish harvesting (mandated by the Department of Fisheries and Oceans, DFO). Applications are no longer accepted for private moorage structures. Private moorage structures are not compatible with Designated Use Areas.

## Land Use Planning Documents

6. Consider the establishment of Development Permit Areas (DPA) in Official Community Plans pursuant to the Local Government Act Section 488(1)(a) for the protection of the natural environment, its ecosystems and shoreline biological diversity; and Section 488(1)(b) for the protection of development from hazardous conditions. Consider updating Land Use Bylaws to clarify under what circumstances a development permit is triggered. Also revise Zoning Bylaws in regard to regulations to setbacks on Uplands from Shorelines.
7. DP requirements need to be consistent with the intent of Shoreline/Floodplain and the Riparian areas policies. This is required to balance development with protection of the environment. Mayne Island Official Community Plan includes a section on coastal waters and foreshore in which it states the local trust committee may: a) amend its bylaws to allow erosion protection structures to be

- regulated through development permits; and b) consider on a case-by-case basis.
8. Shoreline Development Permit Area could be added to Land Use Bylaws. Islands Trust Staff have suggested that all surrounding islets also be included in the DP area.
  9. Consider Implementation of a Shoreline Bylaw to strengthen the Land Use Bylaws and Official Community Plans. Develop LUB using shoreline mapping for all islands and highlight unique characteristics of the shoreline within the six beach types. For example, many Islands have flat beaches, cliff bluffs, rock, clay or marsh till. This will help to focus on more site-specific regulations and better protect marine ecology and support salmon spawning grounds, eel grass, and shellfish fishery. Problem areas for habitat protection and erosion of cliffs affecting setbacks should be identified as this could be a precursor to development of bylaws. Exemptions may be necessary if a specific issue does not exist. Shoreline mapping is available on MapIT and can be leveraged for shoreline protective bylaws.

#### Definitions:

10. Have a consistent definition for “shoreline” and “development” on the shoreline in all Islands Trust documents in accordance with the BC Land Act definition.

Setbacks are the primary tool for regulating where buildings locate. Need to define consistent setbacks for marine shoreline s. Implement consistent requirements for measuring Natural Boundary and have surveyor confirm exact High-Water Mark. Need to define “natural boundary” and “natural grade” in relation to “shoreline” and Sea Level Rise (SLR). The table

highlights LUB setback requirements from the natural boundary of the sea for buildings and structures and requires amendments to be consistent with the Provincial Guideline of 15metres. Rather than amending the LUB to update the setback measurement, one option would be to amend the LUB to refer to the flood protection bylaw for setbacks from the natural boundary of the sea. This would align with the existing Provincial Guidelines, and with any future amendments to the setbacks to the sea as required by the Province.

#### Climate Change

11. Washington State requires all local governments to develop Shoreline Management Plans: Oak Harbour. WA. U.S. Appendix A: Summary List of Recommended Actions Page 1 ([washington-apa.org](http://washington-apa.org)) is an example we have included. This may be an option for LTC. to outline how protection of marine ecology will be managed and provide Climate Change Policy Recommendations: Undertake study of sea-level rise, and floodplain regulations. The Province of BC has provided Coastal floodplain maps to identify coastal flood hazards, such as sea level rise, and to provide guidance to coastal communities in land use planning, bylaw development and sea level rise adaptation strategies. [Microsoft Word - TEXT-20110627.doc \(gov.bc.ca\)](http://www2.gov.bc.ca/gov/content/spe/spe_collections/20110627.doc) These maps will help to shape future policies with regards Flood Construction Levels and Sea Level Rise.
12. The Islands Trust mapping for the 21 Islands, supplemented by BC and CRD Mapping continue to be used to provide an evidence-based approach for identification and appraisal of options for future bylaws

that deal with Sea Level Rise Management management for in the Islands Trust communities. In particular, the analysis provides the types of land use, key assets, services and indicative economic values that exist in areas at inundation risk and this evidence will help to develop the objectives for and assess the impacts of different management options.

13. The Islands Trust should continue to conduct assessments of areas where Sea Level Rise risks exist and communicate these risks to Island Trust Committees and the community. The methods and mapping data sets used should be standardized so it can be applied to all Trust Communities. It is essential to consider the value in assessing inundation risk that could occur from flooding of drainage and other water systems. Data generated from this project could be used to create maps to show where such non-connected low-lying areas are located.

#### **Best Practices – Islands Trust**

16. There has been considerable work undertaken by Island planners and with the knowledge, and thorough

research and policy analysis of work it makes the most sense to utilize this project work for proposed Development Permit Areas. There are valuable best practices and details included in the shoreline projects for Keats Island and Lasqueti which is applicable to other islands. While there are differences for each of the islands, therefore these differences such as size, transportation needs, the purpose and function of docks will vary. [gm-ltc\\_2020-06-15\\_keats-shoreline\\_rpt-discussion-paper-working-group.pdf](https://islandstrust.bc.ca/gm-ltc_2020-06-15_keats-shoreline_rpt-discussion-paper-working-group.pdf) (islandstrust.bc.ca)

17. Recognizing the organizational structure and directives guided by the LTCs, perhaps it is worthwhile conducting a feasibility study to determine which LTCs are interested in building off of the extensive work carried out over a 2+ year span of time for the Lasqueti Shoreline Protection project and again recently for the Keats Shoreline Protection project?

# APPENDICES

## REGULATIONS – ISLANDS TRUST AND OTHER EXAMPLES

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Across the Islands Trust, each Local Trust Area has adopted individual Official Community Plans (OCP) and Land Use (Zoning) bylaws.

### **Bowen Island Municipality**

Marine Resources/Foreshore: The sea provides visual, auditory, recreational, and other tangible and intangible values that can be experienced from island and off island locations, as well as providing habitat for marine life and birds. Pollution of the foreshore can preclude its use by people and by all or some forms of wildlife. Excessive building and tree clearing on the shoreline can destroy fragile plant communities and the views for residents and the boating public. Objectives are to protect the natural and scenic values of the coastline that provide the rural maritime atmosphere of the island; to protect coastline habitat areas for marine life and to identify, protect and preserve sensitive coastal vegetation. The Land Use Bylaw will set out detailed provisions related to siting, setbacks, size, configuration, width, materials, and projections for private moorage. The importance of the marine environment as a recreational resource for island residents and visitors will be affirmed through the continued maintenance of existing beach and shoreline access and establishment of new beach and shoreline access where such access does not detrimentally affect the marine environment and associated wildlife.

### **Denman Island Local Trust Area**

A guiding objective is to protect the foreshore, coastal waters, and native marine life and to retain sufficient natural habitat to ensure the preservation of native species...The foreshore (or intertidal) area is defined as the land located between highest and lowest tides.

### **Gabriola Island Local Trust Area**

The objectives include to manage coastal marine resources in keeping with the Islands Trust preserve and protect mandate; To preserve and protect unique, rare, or representative marine plant and animal communities in their natural habitats; To protect the natural and scenic values of the coastline; To provide opportunities for the commercial uses of the foreshore and coastal waters; To recognize the importance of the existing log storage areas in the; To promote the recreational and commercial use of the area's aquaculture resources; and To encourage the sharing of docks and wharves. Within Development Permit Areas there are policies regarding no alteration or disturbance causing a negative impact to the foreshore habitat or erosion in upland areas.

## **Mudge Island**

Since there is no ferry service, large or bulky items such as vehicles and building materials are transported by boat or barge to and from the island. Barges use either Moonshine Cove's beach or the deeper foreshore nearby at a public access point. Davidson Bay is also used for launching and retrieving boats. Objectives are to minimize disturbance and pollution of the foreshore and the surrounding waters and conflicts between marine and foreshore users and uses.

## **DeCourcy Island**

The Official Community Plan notes that the foreshore and the ocean are fragile and valuable components of human and marine life habitat. Interference with the natural systems and their appearance should therefore be kept to a minimum. 1) Moorage space for residents and owners should be centralized at one or more locations. 2) Private floats and docks serving only individual lots should be discouraged. 3) Houseboats should not be permitted. Water General (W-1) Zone (i) Boat and seaplane moorage associated with single family uses located on adjacent upland.

## **Gambier Island Local Trust Area**

Marine and Foreshore Areas Policy states that zoning should allow: cooperatively owned or operated docks to provide marine access to residential areas as a means of minimizing the need for upland road links between residential communities and to limit the need for multiple dock development along the shoreline. Also, property owners are encouraged to retain natural vegetation on any land sloping towards the shoreline. The Local Trust Committee may issue development permits to protect the natural environment, its ecosystems and biological diversity for Marine and Foreshore designated areas considered to have potential fishery resource values.

## **Keats Island**

The Official Community Plan states that the integrity of foreshore features, shoreline features, and intertidal processes should be maintained by: a) discouraging uses that disrupt natural features and processes, and encouraging owners of shoreline properties to retain, wherever possible, natural vegetation and natural features on areas sloping towards the foreshore; b) supporting the prohibition of filling, deposit, excavation, or removal of foreshore and seabed materials, except for maintenance of navigational channels and existing wharfage areas; c) land use regulations should provide for waterfront developments to be setback sufficiently to allow for natural erosion and accretion processes, without endangering structures; d) where land use regulations provide for private docks, the use of communal or shared docks is encouraged, where feasible, to limit the need for multiple dock development along the shoreline. The location of new buildings and structures should be regulated so as to protect public access to, from and along the marine shoreline and to minimize negative impacts on sensitive coastal environments.

## **Gambier Associated Islands**

Policies in the Official Community Plan state that the LTC should identify and consider protecting ecologically sensitive marine areas. The

LTC should permit and encourage the construction and use of common, community, or communal docks where feasible but permit individual private docks accessory to residential uses where required for access. The LTC should use bylaw provisions to protect public access to, from, and along the marine shoreline. The LTC should, through zoning, the use of setbacks and, where there is supporting mapping, the use of development permit areas: (a) protect the integrity of the foreshore, shoreline, and natural coastal and intertidal processes; (b) discourage uses that disrupt natural features and processes; (c) allow for natural erosion and accretion processes, without endangering structures; (d) encourage owners of shoreline properties to retain, wherever possible, natural vegetation and natural features on areas adjacent to the foreshore; and (e) discourage filling, deposit, excavation, or removal of foreshore and seabed materials, except for maintenance of navigational channels and existing facilities. modification of the shoreline, such as seawalls, where it can be demonstrated to be necessary to support or protect a permitted or existing use or structure. Preference should be given to shoreline structures that have a lesser impact or enhance ecological functions, including vegetation enhancement, drainage control, beach enhancement, anchor trees, and gravel placement. Shoreline stabilization should not interrupt natural processes solely to reduce erosion of undeveloped land. Vegetation which helps stabilise banks, reduce erosion and provide habitat should be retained or enhanced.

### **Galiano Island Local Trust Area**

The Official Community Plan explains the complex geography and geology of Galiano Island and surrounding islands and waters have produced a tremendous diversity of coastal and marine habitats. Unique relationships exist between terrestrial, fresh water and marine areas; as a result, coastal ecosystems are the most diverse and productive of all ecosystems. Significant recreational, commercial, industrial, and residential activities occur within the shoreline area and this sensitive area is under intense pressure from development and human activity. The Shoreline and Marine designation incorporate as all waters beyond high tide line up to the full boundary of the Galiano Island Local Trust Area. The objectives are: 1) to protect shoreline and marine ecosystems in the local trust area, 2) to ensure public access to the foreshore, and 3) to encourage safe and considerate use of the marine environment. There is a Shoreline and Marine Development Permit Area. Shorelines within the Galiano Island Local Trust Area have high ecological function and values and may be subject to shoreline erosion in some locations. Due to their physical and biological characteristics and situation they need to be carefully managed to avoid potential negative impacts of development. Development and associated shoreline improvements or protection measures can threaten the ecological and physical integrity of the foreshore and upland. The Objectives of the development permit area are:

1. To plan and regulate new development in a manner that preserves and protects the long-term physical integrity and ecological values of shorelines and associated foreshore and upland areas.
2. To manage development to minimize disruption of natural features and processes and to retain, wherever possible, natural vegetation and natural features.
3. To balance development opportunities with the ecological conservation of the shoreline environment.
4. To maintain the public's use and access to these important recreation areas in a way that does not compromise the ecological integrity of the shoreline or put users at undue risk.

5. To adapt to the anticipated effects of climate change.
6. To protect development from hazardous conditions resulting from shoreline erosion.
7. To ensure the form and character of marina development is compatible with the rural environment and minimizes impact to the aquatic environment.

The DPA includes Guidelines and provides information on Shoreline Protection Measures, Guidelines for specific Shoreline Types, Guidelines for Subdivision, Guidelines for Shore Protection Measures Design, Guidelines for Beach Nourishment and Fill, and Guidelines for Shore Access and Parking. There is also a Sensitive Ecosystem Development Permit area with some policies for shorelines.

#### **Hornby Island Local Trust Area**

The objectives of the Official Community Plan include, to promote the conservation, preservation or restoration of shoreline, foreshore, and the Island's surrounding marine ecosystem. Policies include 6.7.2.1 All uses of the waters within 1000 metres of the shoreline should be regulated by zoning.

#### **Lasqueti Island Local Trust Area**

Objectives include the support conservation-based subdivision layout that protects sensitive ecosystems, heritage resources and reduces parcelization of the natural boundary of the sea and limitation of the density of waterfront parcels.

#### **Mayne Island Local Trust Area**

Official Community Plan Objectives include: to retain the public accesses to shoreline and beach areas. The coastal waters within the Mayne Island Trust Area include the surface of the water extending from the shoreline of Mayne Island out to the middle of the Georgia Strait, except where the jurisdictional boundary overlaps with another Local Trust Area when the boundary becomes a line mid-channel. The objectives of this section are to limit the impact of foreshore uses on adjacent uses and on the visual appearance of the shoreline. Private floats, docks or wharves shall be permitted by zoning only for owners of land adjacent to the shoreline of the water area subject to the zone.

#### **North Pender Island Local Trust Area**

Sensitive Ecosystem Development Permit Areas are included in the Official Community Plan. Stipulations include: Shoreline structural modifications should be limited in number and extent and should be necessary to support or protect a permitted or existing use or structure. Preference should be given to shoreline structures that have a lesser impact or enhance ecological functions, including vegetation enhancement, drainage control, beach enhancement, anchor trees, gravel placement. Harder construction measures should be avoided where possible. Shoreline stabilization should not interrupt natural processes solely to reduce erosion of undeveloped land, except for agriculture. Vegetation which helps stabilise banks, reduce erosion and provides habitat should be retained or enhanced.

#### **Salt Spring Island**

The Official Community Plan objectives include: To give particular attention to the streams, wetlands, and shorelines. The Ministry of Transportation and Infrastructure and other responsible agencies are encouraged to support efforts to create a harbour shoreline that offers access to the harbour and opportunities for walking and traditional recreational activities. Shoreline and Aquatic Use Objectives and Policies are: To protect our marine and freshwater shorelines. To protect the most significant ecological and physical processes of marine and freshwater shorelines; To identify those shoreline areas that are most uniquely suited to or traditionally used for specific purposes such as conservation, First Nations sites, public recreation, boat moorage, aquaculture, industry or transportation; To avoid conflicts between shoreline uses and uses allowed on the adjacent upland; To avoid shoreline uses that impede public access to and along the shoreline; Shoreline identified as uniquely suited to or traditionally used for a specific purpose is designated for that use. Other parts of the shoreline and areas of water are designated Marine; The Local Trust Committee could undertake an integrated coastal area management (ICAM) planning process to identify other appropriate areas where specific designations should be placed. Such planning should take place in consultation with the community, First Nations, and other levels of government; The Local Trust Committee may consider shoreline rezoning applications adjacent to marine dependent general employment zoning which may make upland uses economically viable without detriment to the shoreline/riparian habitat. Shoreline Conservation Designation Objectives are: To protect the island's most environmentally sensitive shoreline areas such as tidal flats, fish and wildlife habitat, sensitive lake ecosystems, estuaries and wetlands that is not suitable for intensive development. and Policies include: Zones created in this Designation should not result in negative impacts to sensitive natural habitat areas. The Local Trust Committee will not consider rezoning applications that would locate large new developments in or next to this Designation. Zoning should recognize the existing aquaculture operation in Walker Hook. However, zoning changes to allow expansion of the operation will not be made, unless it can be demonstrated that there will be no impacts on the area's sensitive environment or First Nation's interests. The Local Trust Committee should support the efforts of other agencies to maintain existing public accesses to the Shoreline Conservation Designation. However, if the adjacent upland is being subdivided, the Subdivision Approving Officer is encouraged to ensure that any new public accesses provide viewing areas rather than direct physical access to sensitive habitat areas. In providing referral responses to Integrated Land Management Bureau, Islands Trust staff will identify any known and identified environmentally sensitive areas or habitat that may be impacted by the proposed use.

### **Saturna Island Local Trust Area**

The Harbours section within the Official Community Plan states that Permanent private moorage facilities, including docks, ramps, floats, and breakwaters, should be as small as practicable given the particular conditions, including shoreline topography, depth of navigable water, exposure to weather and other navigational considerations. These facilities shall be designed to facilitate public access along the foreshore.

The DPA for Lyall Creek states that i) In general, development of the foreshore should be limited, should minimize negative impacts on the ecological health of the immediate area, and should not impede public access. ii) Shoreline protection measures should be limited to those necessary to prevent damage to existing structures or established uses on the adjacent upland. Softer shore protection measures should be considered first, and only if all options to locate and design without the need for shore protection works have been demonstrated to have been exhausted should such works be considered.

### **South Pender Island Local Trust Area**

Marine Use Objectives in the Official Community Plan are a) To allow dock and wharf development for access to and from the foreshore in locations appropriate for public transportation, commercial, park, and residential purposes. b) To allow for access to beaches suitable for recreation and maintain them free from development.

c) To retain areas of foreshore in an undeveloped state. d) To protect against impacts of mariculture operations, marine shipping, or marine based activities. e) To protect the marine areas subject to this OCP from use and development that would detract from present marine, and upland uses or conflict with existing marine life. f) To protect and maintain important foreshore and marine features and habitats. g) To provide for and support foreshore and marine waters use in a manner that does not significantly alter important natural features and habitat. Policies include: The Local Trust Committee may regulate the size and location of docks and other shoreline developments. Coastal Environment Objectives include: To preserve the aesthetic quality of the natural shoreline as viewed from the water and adjacent lands and related policies: Where development is allowed along shorelines, it shall be designed to conform to, rather than conceal, the natural contours of the land that borders the shoreline.

### **Thetis Island**

Official Community Plan includes the entire Island and the seaward area from the shoreline of Thetis Island as identified by the natural boundary of the sea and encompasses all other islands, islets, reefs, the seabed, surface water, and air space. Policies include: Public access to the Crown land foreshore should remain unobstructed and the right to pass around shoreline structures. The integrity of foreshore features, shoreline features, and intertidal processes may be maintained by a) Discouraging uses that disrupt natural features and processes and encouraging owners of shoreline properties to retain, wherever possible, natural vegetation and natural features on areas sloping towards the foreshore. b) Supporting the prohibition of filling, deposit, excavation, or removal of foreshore and seabed materials, except for maintenance of navigational channels and existing wharfage areas. c) Land use regulations should provide for upland waterfront developments to be setback sufficiently to allow for natural erosion and accretion processes, without endangering structures. d) Where land use regulations provide for private docks, the use of communal docks is to be encouraged where feasible and breakwaters are to be prohibited.

### **Thetis Associated Islands (Ruxton, Reid, Pylades, Hudson, Scott, Dayman, Tree, and Whaleboat)**

Official Community Plan Policy: considers the location of future land uses so that their appearance and impact are compatible with and do not degrade or otherwise negatively impact the natural environment, community resources, and the character of existing land uses; the protection of sensitive ecosystems, ecological values and wildlife and fisheries habitats, especially in inter-tidal, estuarine, stream and riparian areas, in accordance with the current published guidelines as expressed in the Forest Practices Code, the Fish Protection Act and other guidelines published by the provincial and federal governments.

### **Ballenas and Winchelsea**

Official Community Plan Policies include: LTC should identify and consider protecting ecologically sensitive marine areas; Zoning should permit shellfish aquaculture within existing tenures; LTC may consider rezoning applications for new leases for aquaculture, other than finfish farms; LTC should recognize and support the marine dependent nature of land uses; LTC should permit one dock adjacent to each private island in order to limit the need for multiple private dock development along the shoreline; LTC should only consider individual private docks accessory to residential uses where necessary for access. These docks should be regulated by zoning; LTC should not permit commercial marinas; LTC should use bylaw provisions to protect public access to, from and along the marine shoreline; use bylaw provisions

to limit structures within the setback from the sea to those related to permitted marine uses and those necessary for access to the foreshore; through zoning, the use of setbacks, and the use of development permit areas: (a) protect the integrity of the foreshore, shoreline, and natural coastal and intertidal processes; (b) discourage uses that disrupt natural features and processes; (c) allow for natural erosion and accretion processes; (d) encourage owners of shoreline properties to retain natural vegetation and natural features on areas adjacent to the foreshore; and (e) discourage filling, deposit, excavation, or removal of foreshore and seabed materials. The LTC should not permit the hardening of the shoreline. LTC should not support ocean disposal applications within the Plan area. LTC should not support the creation of artificial reefs within the Plan area.

## Review other Examples

- Oak Harbour SMP  
Shoreline Environment Designations  
The basic intent of a shoreline environment designation is to preserve and enhance shoreline ecological functions and to encourage development that will enhance the present or desired future character of the shoreline as described in the Comprehensive Plan, other adopted plans and this SMP. To accomplish this, shoreline segments are given an environment designation based on existing development patterns, biological capabilities and limitations, and community objectives. This Master Program establishes seven shoreline environments for the City of Oak Harbor. These shoreline environments include shorelands, surface waters, and bed lands. These environments are derived from and build on policy direction contained in the Oak Harbor Shoreline Inventory and Characterization Report, the Oak Harbor Comprehensive Plan, the Shoreline Management Act, and the Shoreline Master Program Guidelines. The seven Oak Harbor shoreline environment designations are: Maritime, Urban Mixed Use, Residential, Residential - Bluff Conservancy, Urban Public Facility, Conservancy, and Aquatic.
- Natural Resources Canada, Land Use Planning Tools 2012  
This publication describes a variety of planning tools being used across Canada to help communities prepare for climate change, increase adaptive capacity, and build resilience. It is directed to individuals and groups interested in climate change adaptation at the local level, including planners and other local government staff, elected officials, community organizations, local residents and business leaders.  
  
Climate Change Land use planning tools for local adaptation to climate change describes seven of the most prominent land use planning tools in use across Canada and explains how communities can use them to more effectively adapt to climate change.  
  
The land use planning processes and instruments employed to manage the use of land and the physical development of a community for the common interest includes a variety of statutory and other measures – bylaws, incentives, information and guidance, spending

programs – may be applied to control how land is used. [Land use planning tools for local adaptation to climate change \(publications.gc.ca\)](http://publications.gc.ca)

- Rural Comox Valley OCP 2014

*Natural Environment: Objectives*

(4) To protect, restore and enhance coastal shorelines, streams, wetlands, and the marine environment.

*Climate change – policies (adaptation)*

14. (1) Develop strategies to reduce the environmental, social, and economic impact of sea level rise and increasing extreme storm surge events in coastal areas through development permit area designations and conditions and submission of development approval information in accordance with policies included within this OCP.

14. (2) Work with stakeholders to complete an assessment of risk and susceptibility of the coastal areas to increasing sea level and extreme storm surge impacts.

Rural settlement areas – policies (industrial) (d) public access to the coastal waterfront, where applicable.

*Coastal areas*

68. Coastal areas are those lands that run parallel to the full waterfront of the CVRD, generally extending from the present natural boundary to the 30-metre bathymetric contour as illustrated on map 3. Activities are typically environmental protection, aquaculture, marine industry, and recreation. This plan seeks to protect such uses while discouraging activities both on the water and the abutting upland areas that could compromise the environmental integrity of the aquatic environment.

*Coastal area - objectives*

69. (1) To minimize any negative impacts of settlement on the coastal areas. (2) To steward these areas for their environmental and economic benefits. (3) To encourage appreciation of the marine environment, by providing for public access to, and enjoyment of, the shoreline and foreshore in ways that avoid negative impacts to natural systems and processes. (4) To ensure that coastal shoreline development does not alter sediment supply to the coastal environment or sediment transport within the coastal environment. (5) To reduce lighting impacts on species and ecosystems within the coastal area.

*Coastal areas - policies*

70. The following policies apply to the lands designated as “coastal areas” Rural Comox Valley Official Community Plan 2014 Bylaw No. 337 – Schedule ‘A’ (1) Permit industrial marine and aquaculture uses in the coastal area designation, except for areas within the K’ómoks Estuary where they are prohibited. (2) Notwithstanding above sub-section (1) sustainability and productivity of the K’ómoks Estuary is recognized as being critical for harvesting of aquaculture to K’ómoks First Nation, and it is recognized that the KFN may choose to proceed with aquaculture activities within the estuary at any time. (3) Protect coastal areas per the provisions stated in the natural environment sections of this OCP. (4) Respect the Islands Trust area of jurisdiction that includes the ocean area to the high-water mark of the eastern coast of Vancouver Island from Mud Bay to Comox Point and ensure development within the buffer

extending from the high-water mark to the 30-metre bathymetric contour considers the Islands Trust policy statement. (5) Support dock-side sales and limited on-site sales of aquaculture products that meet legislative requirements to promote economic activities. (6) Work with aquaculture industry stakeholders and small-scale aquaculture operations to support water flow into fish-bearing river systems of the Comox Valley. (7) Apply environmental best practices to all uses within the coastal designation (8) Recognize and support the need of the aquaculture industry to effectively grow seed to replenish existing oyster beds and support in principle the use of power supplies from wharfs for the growing of seed for the aquaculture industry, providing legislative requirements are met. (9) Generally, prohibit hardening of the coastal shoreline through the use of rip rap, concrete embankments and revetment walls, and other similar structural interventions that alter the ecological function and service of the coastal shoreline, disturb natural vegetation, disrupt natural coastal processes, redirect wave energy to adjacent properties, and/or destroy coastal shore habitat, including forage and spawning areas. If a qualified professional has submitted development approval information that concludes that shoreline hardening is required to protect life or a principal building on the property and that the impacts of the proposed hardening can be mitigated, the board may consider issuance of a shoreline protection device development permit. (10) Require preparation of a shore access plan by a qualified environmental professional for development proposals that include shore access and require rezoning or a development permit process to protect against sensitive environmental features and processes being disturbed. (11) Regulate by the development permit process to reduce light trespass (i.e., light that crosses property lines including the present natural boundary) and light glare (i.e., excessive illumination applied to a single area) within the coastal area to avoid disruption of natural activity patterns of coastal and marine species. (12) Assess proposed land uses or development within the K'ómoks Estuary in accordance with a completed and finalized K'ómoks Estuary management plan that has been endorsed by all affected jurisdictions.

### ***Shoreline protection devices***

Guidelines where an applicant proposes the installation, replacement, or repair of a shoreline protection device under these guidelines, the design of the device shall contribute to shoreline resiliency by following soft shore (e.g., “Green shore”) principles:

- Conserve or restore natural coastal or riparian processes (e.g., sediment transfer).
- Maintain habitat function and diversity.
- Prevent pollutants from entering the aquatic or riparian environment.
- Avoid or reduce cumulative impacts on the shoreline environment, including coastal or riparian processes. All proposals shall incorporate design elements that contribute to coastal resiliency by protecting or restoring natural coastal processes and habitat. Except when a hardened shoreline is proposed (i.e., based on the findings of a qualified professional that shoreline hardening is required to protect life and/or a principal building), shoreline protection device development permits can be approved under delegated authority. Proposals to harden a shoreline, including replacement and/or maintenance of an existing hard shoreline with similar hard design elements shall require board approval of the development permit.

- Campbell River Sustainable OCP n/a
- Sydney OCP – n/a
- Ucluelet OCP (2011)

#### 3.4 Small Craft Harbour, Marine

The water areas of Ucluelet are generally designated as either: Small Craft Harbour (three water lots); Water Lot (majority of water lots); or Managed Water (remaining water areas not in registered water lots) In addition to these three designations, several water lots are designated in conjunction with the adjacent land-based designation (e.g. Village Square or Residential) Each registered water lot is inextricably linked to various adjacent land uses; hence the relationship between land and water requires careful consideration, which could include parking needs, water and sewer servicing and visual impacts. In conjunction with the sustainability objectives noted in the OCP, the District should consider protecting environmentally sensitive areas and shoreline habitat.

The District shall work with the Department of Fisheries and Oceans to: i. Identify environmentally sensitive areas; ii. Support marine ecology and marine education facilities within the Harbour; iii. Consider alternate long-term uses, such as residential, including a private marina, for the former BC Packers Plant; iv. Consider enhancing public access to the District owned water lot at the foot of Alder Street; v. Support transient boat moorage provided adequate sanitation facilities are located nearby; vi. Require all water lot uses to properly treat and dispose sanitary sewer waste and connect into the District’s sewer collection system and access District potable water; vii. Require all structures to apply for and obtain a Building Permit, which addresses health and safety regulations; and viii. Explore ways and means of generating revenue to fund Harbour infrastructure.

2. iii. Managed Water All water areas located between the shoreline and the District boundaries, excluding all registered water lots, are designated as “Managed Water”. Managed Water Policies: A comprehensive review of the area within the Managed Water designation will be carried out by the District. Until this time, no uses are permitted within the area, including boat or houseboat moorage.

+ Policies for Development Permit Areas

- Victoria OCP –

SHORELINE ECOSYSTEMS 10.9 Protect and enhance shoreline and marine habitat by: 10.9.1 Considering the establishment of Development Permit Area guidelines that consider best practices such as appropriate building setbacks, guidance for enhancing habitat values and the integration of climate change adaptation planning; 10.9.2 Establishing a Development Permit Area for the east side of the Upper Selkirk Waters to protect the unique natural features of this area; 10.9.3 Investigating the acquisition and designation of shoreline ecosystems through a Parks Acquisition Strategy; 10.9.4 Integrating restoration of natural shoreline features into the development of the Harbour Pathway, where appropriate; 10.9.5 Enhancing the Dallas Road Bluffs through the development of management zones and restoration targets; and, 10.9.6 Developing management strategies and initiatives for shoreline parklands that maintain and enhance coastal sediment processes. 10.10 Work in partnership with the Capital Regional District, the Township

of Esquimalt, the Town of View Royal, the District of Saanich, and other partners to increase coordination in the protection and restoration of Victoria Harbour and the Gorge Waterway. 10.11 Work with partners to assess the projected impacts of sea level rise on marine and shoreline ecosystems and respond to changing conditions through management strategies and development of a Climate and Energy Resiliency Plan [SEE ALSO SECTION 12 – CLIMATE CHANGE AND ENERGY].

- Powell River OCP 2014

5.5 Tidal / Saltwater Riparian Areas. The City is bounded on the west and south by Malaspina Strait. Due to exposure, topography, and historic private/industry ownership of much of the waterfront, direct community interaction, enjoyment, and exposure to the tidal water edge is limited. Increased public access to the waterfront and protection of the environmental quality of that waterfront is a priority for Powell River residents. Upland improvements to support expansion of harbour or any waterfront development must include environmentally sustainable measures.

5.5.1 Tidal/Saltwater Riparian Areas Objectives (a) Protect the shoreline along Malaspina Strait through the use of measures that take natural processes into consideration and do not detrimentally impact adjacent properties. (b) Plan for long-term climate change including sea level rise and associated storm impacts.

5.5.2 Tidal/Saltwater Riparian Areas Policies

(a) All development along the shoreline of Malaspina Strait must plan for a sea level rise of 1.0 metre and associated storm surge and coastal erosion.

(b) Except for shoreline protection measures and marine based structures such as ferry terminals, aquaculture facilities, breakwaters and moorage facilities, new buildings must be located a minimum of 15 metres from the natural boundary.

(c) Minimize the degradation of natural systems through steps such as protecting the foreshore from erosion, by retaining embankment vegetation and through construction that does not require vertical sea walls.

(d) All shoreline protection measures should include environmentally sustainable practices such as the retention and restoration of natural shoreline vegetation, and landscaping strategies that require little or no revetment and minimize erosion but augment bank stabilization, in conformance with the guidelines contained in the 2003 Federal/Provincial publication entitled Coastal Shore Stewardship: A Guide for Planners, Builders and Developers.

(e) Parking lots at or near the water's edge should consider permeable surfaces (e.g., grass, gravel, or open interlocking paving systems) to ensure bio-filtration of hydrocarbons and heavy metals from the undercarriage of vehicles from surface water drainage.

(f) It is recognized that the coastal shoreline undergoes a natural progression of accretion and erosion gradually over the long term or suddenly in severe storm events. The City shall endeavour to map and track this process as it relates to the shoreline for the purposes of land use planning.

(g) The City supports ensuring that storm water runoff from buildings and land is managed through a stormwater management system or other natural bio-filtration system where possible.

## REFERENCES

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[www.islandstrust.bc.ca/islands/island-ecosystems/caring-for-my-shoreline/greenshores-approach-your-marine-waterfront-canadian-edition-final-web-version.pdf](http://www.islandstrust.bc.ca/islands/island-ecosystems/caring-for-my-shoreline/greenshores-approach-your-marine-waterfront-canadian-edition-final-web-version.pdf) (islandstrust.bc.ca)

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[www.crd.ba.ca/docs/default-source/climate-action--pdf/sea-level-rise-planning-approaches-project-report.pdf?sfvtsn=d29757ca\\_0](http://www.crd.ba.ca/docs/default-source/climate-action--pdf/sea-level-rise-planning-approaches-project-report.pdf?sfvtsn=d29757ca_0)

### Sea Level Rise:

[coastal-flood-inundation-mapping-project-summary.pdf](#) (crd.bc.ca)

<https://www2.gov.bc.ca/assets/gov/environment/climate-change/adaptation/resources/slr-primer.pdf>

[Coastal Floodplain Maps - Province of British Columbia](#) (gov.bc.ca)

City of Delta Sea Level Rise Strategy (2015): [119360](#) (civicweb.net)

[Sea Level - Environmental Reporting BC](#) (gov.bc.ca)

### Island Ecosystems:

[Marsh Fine Sediment](#) (islandstrust.bc.ca)

Planning Tools | OCP + Development Permit Areas

District of Squamish OCP (2018): Development Permit Area guidelines: page 170

### Specific Projects:

Bowen Island: [PowerPoint Presentation - Slide 1 \(civicweb.net\)](#)

] [June 2017 Attachment 2 Draft DPA Marine Shoreline Protection \[48138](#)

Lasqueti: [Shoreline Protection Project \(islandstrust.bc.ca\)June 2017 Attachment 1 Shoreline Protection OCP LUB.pdf](#)  
[aug-2017-la-shoreline-mailout.pdf \(islandstrust.bc.ca\)](#)

[Sharing Our Shorelines Presentation.pdf \(islandstrust.bc.ca\)](#)

North Pender:

(brochure): [shorelinesmatterbrochure.pdf \(islandstrust.bc.ca\)](#)

Thetis:

[Thetis-Shoreline-Data-Compilation-for-workshop.pdf \(islandstrust.bc.ca\)](#)

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[Microsoft Word - 1214420001-001-R-Rev0-Thetis Island Shoreline 24MAY 13.docx \(islandstrust.bc.ca\)](#)

Mapping:

Bowen Island: [Bowen Island Shoreline Maps - Briefing for BIM.pdf \(civicweb.net\)](#)

Lasqueti: [lasquetishorelinemapping.pdf \(islandstrust.bc.ca\)](#)

North Pender: [Map\\_NPShorelineFeatures1.pdf \(islandstrust.bc.ca\)](#)

Forage Fish: [foragefishreport.pdf \(islandstrust.bc.ca\)](#)

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Thetis: [Review of Thetis Island Shoreline Classification and Recommendations for Shoreline Development - March 31, 2010, Archipelago Marine Research Ltd. \(islandstrust.bc.ca\)](#)

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[Landowners-Guide-September-draft-revised.pdf \(islandstrust.bc.ca\)](#)

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[KFN Marine Plan 2012.pdf \(komoks.ca\)](#)

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## Policy Compliance Checklist

### Policies for Ecosystem Preservation and Protection

CONSISTENT	NO.	DIRECTIVE POLICY
	<b>3.1</b>	<b>Ecosystems</b>
	<b>3.1.3</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and protection of the environmentally sensitive areas and significant natural sites, features and landforms in their planning area.
	<b>3.1.4</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning, establishment, and maintenance of a network of protected areas that preserve the representative ecosystems of their planning area and maintain their ecological integrity.
	<b>3.1.5</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the regulation of land use and development to restrict emissions to land, air and water to levels not harmful to humans or other species.
	<b>3.2</b>	<b>Forest Ecosystems</b>
	<b>3.2.2</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of unfragmented forest ecosystems within their local planning areas from potentially adverse impacts of growth, development, and land-use.
	<b>3.3</b>	<b>Freshwater and Wetland Ecosystems and Riparian Zones</b>
	<b>3.3.2</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address means to prevent further loss or degradation of freshwater bodies or watercourses, wetlands and riparian zones and to protect aquatic wildlife.
	<b>3.4</b>	<b>Coastal and Marine Ecosystems</b>
	<b>3.4.4</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of sensitive coastal areas.

	<b>3.4.5</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning for and regulation of development in coastal regions to protect natural coastal processes.
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PART IV: Policies for the Stewardship of Resources

CONSISTENT	NO.	DIRECTIVE POLICY
	4.1	<b>Agricultural Land</b>
	4.1.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and preservation of agricultural land for current and future use.
	4.1.5	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the preservation, protection, and encouragement of farming, the sustainability of farming, and the relationship of farming to other land uses.
	4.1.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the use of adjacent properties to minimize any adverse affects on agricultural land.
CONSISTENT	NO.	DIRECTIVE POLICY
	4.1.7	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the design of road systems and servicing corridors to avoid agricultural lands unless the need for roads outweighs agricultural considerations, in which case appropriate mitigation measures shall be required to derive a net benefit to agriculture
	4.1.8	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address land uses and activities that support the economic viability of farms without compromising the agriculture capability of agricultural land.
	4.1.9	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the use of Crown lands for agricultural leases.
	4.2	<b>Forests</b>
	4.2.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the need to protect the ecological integrity on a scale of forest stands and landscapes.

4.2.7	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the retention of large land holdings and parcel sizes for sustainable forestry use, and the location and construction of roads, and utility and communication corridors to minimize the fragmentation of forests.
4.2.8	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the designation of forest ecosystem reserves where no extraction will take place to ensure the preservation of native biological diversity.
4.3	<b>Wildlife and Vegetation</b>
4.4	<b>Freshwater Resources</b>
4.4.2	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure neither the density nor intensity of land use is increased in areas which are known to have a problem with the quality or quantity of the supply of freshwater, water quality is maintained, and existing, anticipated, and seasonal demands for water are considered and allowed for.
4.4.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure water use is not to the detriment of in-stream uses
4.5	<b>Coastal Areas and Marine Shorelands</b>
4.5.8	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the needs and locations for marine dependent land uses.
4.5.9	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the compatibility of the location, size and nature of marinas with the ecosystems and character of their local planning areas.
4.5.10	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the location of buildings and structures so as to protect public access to, from and along the marine shoreline and minimize impacts on sensitive coastal environments.
4.5.11	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address opportunities for the sharing of facilities such as docks, wharves, floats, jetties, boat houses, board walks and causeways.
4.6	<b>Soils and Other Resources</b>

	4.6.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of productive soils.
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**PART V: Policies for Sustainable Communities**

CONSISTENT	NO.	DIRECTIVE POLICY
	<b>5.1</b>	<b>Aesthetic Qualities</b>
	<b>5.1.3</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of views, scenic areas and distinctive features contributing to the overall visual quality and scenic value of the Trust Area.
	<b>5.2</b>	<b>Growth and Development</b>
	<b>5.2.3</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address policies related to the aesthetic, environmental and social impacts of development.
	<b>5.2.4</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address any potential growth rate and strategies for growth management that ensure that land use is compatible with preservation and protection of the environment, natural amenities, resources and community character.
	<b>5.2.5</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address means for achieving efficient use of the land base without exceeding any density limits defined in their official community plans.
	<b>5.2.6</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of areas hazardous to development, including areas subject to flooding, erosion or slope instability, and strategies to direct development away from such hazards.
	<b>5.3</b>	<b>Transportation and Utilities</b>
	<b>5.3.4</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the development of a classification system of rural roadways, including scenic or heritage road designations, in recognition of the object of the Islands Trust.

	<b>5.3.5</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the impacts of road location, design, construction and systems.
	<b>5.3.6</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the designation of areas for the landing of emergency helicopters.
	<b>5.3.7</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the development of land use patterns that encourage establishment of bicycle paths and other local and inter-community transportation systems that reduce dependency on private automobile use.
	<b>5.4</b>	<b>Disposal of Waste</b>
	<b>5.4.4</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of acceptable locations for the disposal of solid waste.

CONSISTENT		NO.	DIRECTIVE POLICY
	<b>5.5</b>	<b>Recreation</b>	
	<b>5.5.3</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the prohibition of destination gaming facilities such as casinos and commercial bingo halls.	
	<b>5.5.4</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the location and type of recreational facilities so as not to degrade environmentally sensitive areas, and the designation of locations for marinas, boat launches, docks and anchorages so as not to degrade sensitive marine or coastal areas.	
	<b>5.5.5</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of sites providing safe public access to beaches, the identification and designation of areas of recreational significance, and the designation of locations for community and public boat launches, docks and anchorages.	

	<b>5.5.6</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and designation of areas for low impact recreational activities and discourage facilities and opportunities for high impact recreational activities.
	<b>5.5.7</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning for bicycle, pedestrian and equestrian trail systems.
	<b>5.6</b>	<b>Cultural and Natural Heritage</b>
	<b>5.6.2</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification, protection, preservation and enhancement of local heritage.
	<b>5.6.3</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the preservation and protection of the heritage value and character of historic coastal settlement patterns and remains.
	<b>5.7</b>	<b>Economic Opportunities</b>
	<b>5.7.2</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address economic opportunities that are compatible with conservation of resources and protection of community character.
	<b>5.8</b>	<b>Health and Well-being</b>
	<b>5.8.6</b>	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address their community's current and projected housing requirements and the long-term needs for educational, institutional, community and health-related facilities and services, as well as the cultural and recreational facilities and services.

POLICY STATEMENT COMPLIANCE	
	<b>COMPLIANCE WITH TRUST POLICY</b>
	<b>NOT IN COMPLIANCE WITH TRUST POLICY for the following reasons:</b>

