

## PRE-IDENTIFICATION OF POTENTIAL PLACES OF REFUGE GUIDE

### Purpose

The intent of this guide is to assist the TC Regional MSS Offices in the planning and development of Regional Annexes which will provide technical, logistical and resource information about specific sites that may be evaluated as **Potential Places of Refuge (PPOR)** within a region. The pre-survey of notional Places of Refuge and the gathering of site-specific information is a preliminary step prior engaging with Indigenous partners. The desired outcome of engagement is to seek Indigenous partners collaboration and to reach common accord as to which pre-surveyed site would qualify as being a suitable Potential Place of Refuge for a vessel in need of assistance.

### Introduction

TC MSS Regional Offices should identify and develop pre-incident information for all Potential Places of Refuge in their regions before an actual event. This document supports the collection of general information on the regional area as well as specific information on sites such as docks and piers, anchorages, and possible beaching sites. The lists in this document provide a basis for the **Decision Support Tool** for choosing a Place of Refuge for a vessel in need of assistance. They are therefore crucial to expedite promptly a POR decision-making process.

While information on possible sites may be pre-inventoried, this does not imply that any of these sites will be the location of choice in a future event. Selection of a Place of Refuge by Transport Canada's representative, in consultation with other agencies and stakeholders, will always be made on a case-by-case basis. An inventory of Potential Places of Refuge enables for a wider range of options when a time-sensitive situation occurs.

TC MSS Regions may want to establish a working group to pre-survey Potential Places of Refuge. The workgroup could include representatives of the Canadian Coast Guard, the province and/or federal environmental agency (e.g., ECCC and BC Ministry of Environment), appropriate federal provincial and territorial natural resources agencies (e.g., NRCan, Ministère de l'Énergie et des Ressources Naturelles du Québec), local environmental NGOs, response organizations, marine pilots associations and port authorities. In addition, Indigenous partners and other interested and knowledgeable stakeholders may be invited to participate.

The following lists are not prescriptive, nor exhaustive as other factors or criteria deemed important may also be considered.

### **1. General Information to collect by the Regions over their area of jurisdiction prior the identification of PPOR**

- Casualty risks associated with the routine vessel traffic routes in the jurisdiction area
- General information on coastal vessel traffic patterns
- Availability of rescue tugs/tow vessels of sufficient size and power to aid the vessel in distress and predicted arrival times
- Salvage, lightering, and spill response resources available to this jurisdiction, including delivery times
- Transnational or trans-jurisdictional coordination agreements/plans, if applicable
- Description of sensitive resources/areas along the coastlines likely to be impacted, including fisheries, aquaculture sites, cultural and historic sites, threatened and endangered species, subsistence use, recreation/tourism, or specially designated lands or waters
- General wind/wave/current information and source for real-time tide/wind/wave/current information
- Seasonal conditions, such as ice
- Other pertinent information

### **2. Criteria to consider when pre-surveying suitable PPOR**

- Protected anchorage suitable for large commercial vessels
- Location that does not obstruct navigation of other vessels
- Easily accessed from offshore or coastal shipping routes
- Limited social/cultural/commercial/recreational exposures
- Limited ecological sensitivities – species, habitat, shoreline
- Amenable to pollution containment
- Exposure to wind/wave/current/tidal stream
- Seabed material/bathymetry/slope degree
- Mooring arrangement and ease of access to the dock/pier (including towage consideration)
- Emergency services (medical, firefighting)
- Land/air transportation
- Pollution prevention and response resources
- Salvage and lightering services
- Repair and docking facilities

**3. Once the pre-surveying of Potential Places of Refuge is completed and engagement with Indigenous partners is achieved, a description may be set out for each approved site with the following information:**

**A. For Docks and Piers**

- Site number [to correspond to map showing location]
- Site name
- Site location (descriptive and latitude/longitude coordinates)
- Water depths at mean low tide
- Beach/shoreline types and generally accepted cleaning methods
- Bottom types
- General wind/wave/current information
- Openness of the site to ocean waves/currents
- Source for real-time tide/wind/wave/current information
- Seasonal conditions, such as ice
- Standard navigational approach, including vessel traffic patterns and associated risks
- Pilotage requirements
- Nearby port operations and potential impacts
- Brief description of port facilities
- Brief description of repair facilities/capabilities/skilled labor
- Availability of cargo transfer and storage facilities
- Land and/or air access
- Risks to persons at or near the location with regard to explosion, fire and pollution; availability of evacuation routes
- Description of sensitive resources/areas at the site and along potential access routes to that site, including fisheries, aquaculture sites, cultural and historic sites, threatened and endangered species, subsistence use, recreation/tourism, or specially designated lands or waters
- Existing resource protection strategies
- Availability of salvage, spill response, and emergency response resources including police and firefighting
- Security measures in place
- Identification of stakeholders including 24/7 contact information
- Other pertinent information

**B. For Anchorages**

- Site number [to correspond to map showing location]
- Site name
- Site location (descriptive and latitude/longitude coordinates)
- Water depths at mean low tide
- Beach/shoreline types and generally accepted cleaning methods
- Bottom types
- General wind/wave/current information
- Openness of the site to ocean waves/currents
- Source for real-time tide/ wind/wave/current information
- Seasonal conditions, such as ice
- Standard navigational approach, including vessel traffic and associated risks
- Pilotage requirements
- Nearby port operations, if any, and potential impacts
- Brief description of facilities (if any)
- Availability of cargo transfer and storage vessels
- Land and/or air access
- Risks to persons at or near the location with regard to explosion, fire and pollution; availability of evacuation routes
- Description of sensitive resources/areas at the site and along potential access routes to that site, including fisheries, aquaculture sites, cultural and historic sites, threatened and endangered species, subsistence use, recreation/tourism, or specially designated lands or waters
- Existing resource protection strategies
- Availability of salvage, spill response, and emergency response resources including police and firefighting, and their potential access to the site
- Security measures in place
- Identification of stakeholders including 24/7 contact information
- Other pertinent information

**C. For Beaching sites**

- Site number [to correspond to map showing location]
- Site name
- Site location (descriptive and latitude/longitude coordinates)
- Water depths at mean low tide

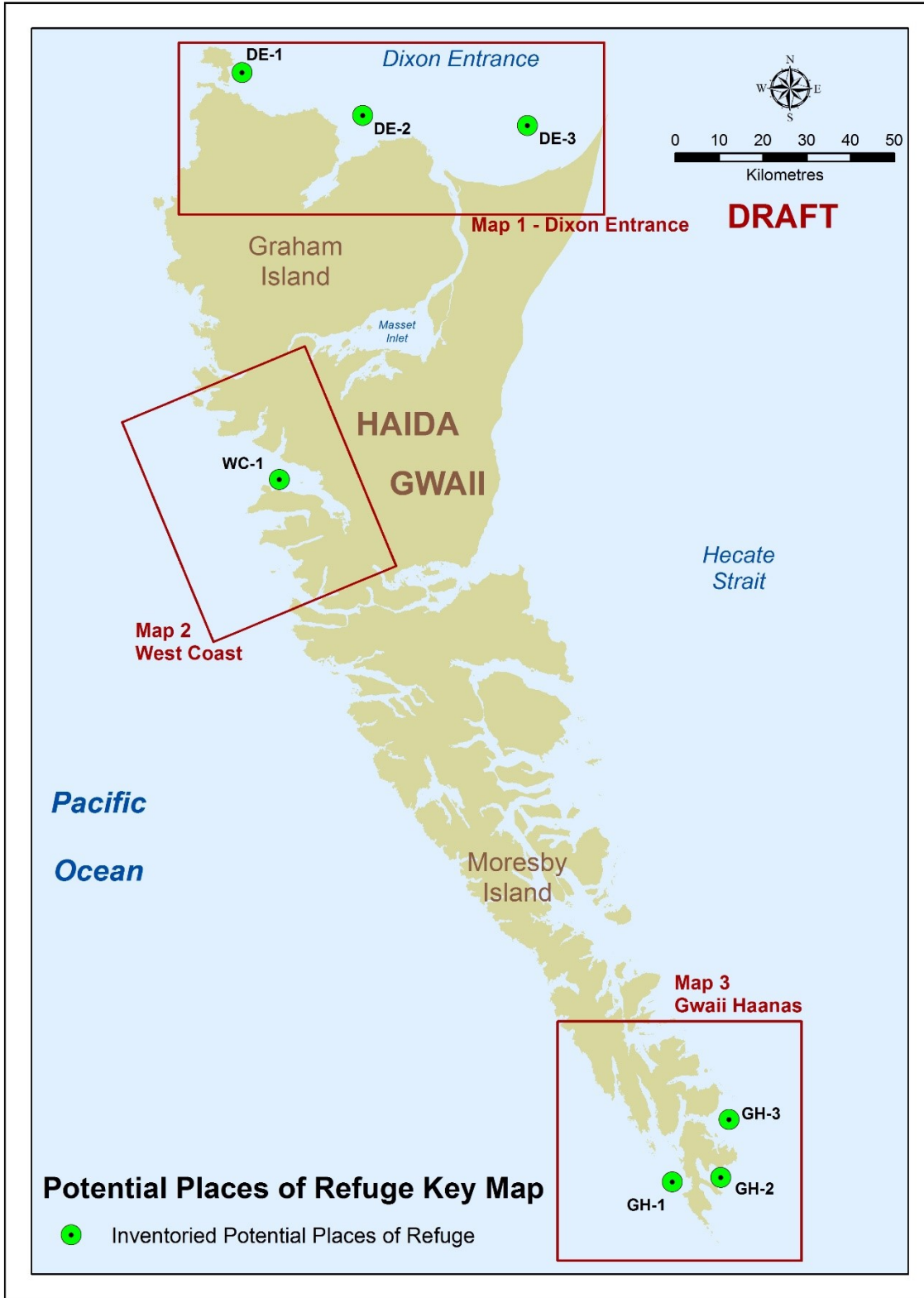
- Beach/shoreline types and generally acceptable cleaning methods
- Bottom types
- General wind/wave/current information
- Openness of the site to ocean waves/currents
- Source for real-time tide/wind/wave/current information
- Seasonal conditions, such as ice
- Standard navigational approach, including vessel traffic and associated risks
- Pilotage requirements
- Nearby port operations, if any, and potential impacts
- Brief description of facilities (if any)
- Availability of cargo transfer and storage vessels and their potential access to the beaching site
- Land and/or air access
- Risks to persons at or near the location with regard to explosion, fire and pollution; availability of evacuation routes
- Description of sensitive resources/areas at the site and along potential access routes to that site, including fisheries, aquaculture sites, cultural and historic sites, Threatened and Endangered species, subsistence use, recreation/tourism, or specially designated lands or waters
- Existing resource protection strategies
- Availability of salvage, spill response, and emergency response resources including police and firefighting, and their potential access to the beaching site
- Security measures in place
- Requirements for permission from area landowners/managers, if applicable
- Identification of stakeholders including 24/7 contact information
- Other pertinent information

Note: List #3 provides only guidance for elements to incorporate in the Regional Annexes for each sites identified as PPOR.

**Important:** The **Matrix to Assist with the Pre-Identification of Potential Places of Refuge (RDIMS# [15333749](#))** must be used to gather the appropriate information for each potential site.

**The Pacific Region Haida Gwaii Regional Annex is illustrated on the following pages as an example.**





**Map 1: Dixon Entrance - Haida Gwaii Potential Places of Refuge**

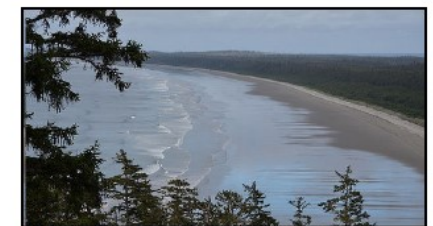
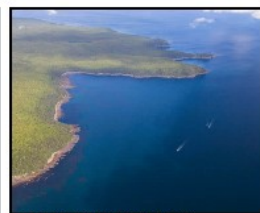
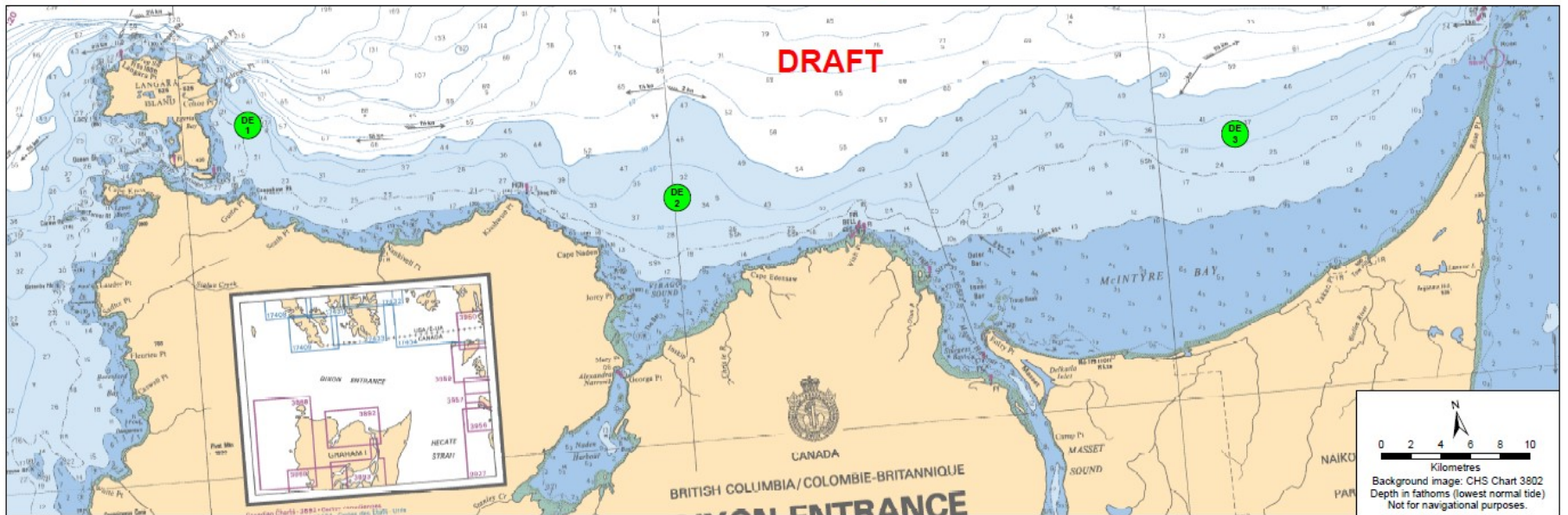




Table 1.1 Dixon Entrance: Physical and Operational Characteristics - Haida Gwaii Potential Places of Refuge

DRAFT			
Site Name	Egeria Bay	Virago Sound	McIntyre Bay
Site Code	DE-1	DE-2	DE-3
Location (lat./long.)	54° 12.7' N / 132° 56.1' W	54° 08.8' N / 132° 29.9' W	54°09.4' N / 131° 55.3' W
Presence of Pacific Pilotage Auth. pilot	required	required	required
Maximum Vessel Size	up to 350 metres	up to 350 metres	up to 350 metres
Swing Room	1300 metres	1300 metres	1300 metres
Minimum Water Depth (in swing area)	40 metres	55 metres	45 metres
Maximum Water Depth (in swing area)	80 metres	65 metres	75 metres
Maximum Vessel Draft (excluding height of tide and under normal weather conditions)	18 metres	18 metres	18 metres
Bottom Type / Holding Ground	Rocks.	Sand	Sand, Shells
Dock / Moorage Information	none, anchorage	none, anchorage	none, anchorage
Navigational Approach	n/a	n/a	n/a
Entrance Width (m or km)	n/a	n/a	n/a
Shelter Provided	Langara and Graham Islands provide shelter from S, SW and W'ly swell and winds.	Graham Islands provides shelter from S and W'ly swell.	Graham Island provides some shelter from S'ly swell. Southeast winds from Hecate Strait flow across low-lying Rose Spit and affect areas around McIntyre.
Tides and currents	Tide ranges from chart datum to 5.20 metres above datum. Tidal streams E to SW up to 1.5 Kts.	Tidal ranges from 0.1 metre below datum to 3.50 metres above datum. Tidal streams E to W up to 2.0 Kts.	Tidal ranges from 0.1 metre below datum to 3.50 metres above datum. Tidal streams E to W up to 2.0 Kts.
Hazards	Tidal rips and rocks off East Langara Island	Off shore reefs and rocks at Virago Sound	Rose spit. Waves break close to shore during heavy swell.
Navigational Aids	Langara Pt. light & Lucy Island light	Shag Rock light / Wiah Pt. light	Rose Pt. (Ra) / Striae Island light / Wiah Pt. light
VHF and Cellular coverage: VHF Peripheral Radio Sites at Rose Inlet, Barry Inlet, Van Inlet, Naden Harbour, Cumshewa MF/HF Peripheral Radio Site at Hunter Point	Prince Rupert Traffic" on VHF Channel 11 covers upto 50miles west of the Haida Gawaii. Cell coverage cuts off around Naden (Central Dixon Entrance). MCTS coverage	Prince Rupert Traffic" on VHF Channel 11 covers upto 50miles west of the Haida Gawaii. Cell coverage cuts off near Naden (Central Dixon Entrance). MCTS coverage	Prince Rupert Traffic" on VHF Channel 11, 16 and 68. Spotty cell coverage. MCTS coverage
Other considerations	Rocky bottom is not considered great holding ground.	This is an open site with limited navigational hazards and an open approach. Under certain circumstances the pilot requirement may be waived.	This is an open site with limited navigational hazards and an open approach. Under certain circumstances the pilot requirement may be waived.
<b>Response and Salvage Resource Considerations</b>			
Containment / Ability to Boom Vessel	Weather and swell dependent.	Weather and swell dependent.	Weather and swell dependent.
Response Infrastructure Available	Masset - limited; Prince Rupert	Masset - limited; Prince Rupert	Masset - limited; Prince Rupert
Geographic Response Strategies	none developed	none developed	none developed
Security - remove for now?			
Beaching capability - remove for now?			
Access (road and/or air)	boat and air access only	boat and air access only	road access to Hiellen River; vehicle access to beach is tide dependent
Air support (proximity)	Masset airport; heli-pad at Langara lodge (floating), West Coast Fishing Club (land-based)	Masset airport, heli-pad at Queen Charlotte Lodge and Peregrine Lodge	Masset airport
Proximity to repair facilities/technical support	Prince Rupert	Prince Rupert	Prince Rupert

Table 1.2: Dixon Entrance: Site Considerations (Health, Ecological, Cultural &amp; Socio-economic) - Haida Gwaii Potential Places of Refuge

Table 1.2: Dixon Entrance: Site Considerations (Health, Ecological, Cultural & Socio-economic) - Haida Gwaii Potential Places of Refuge			
<b>DRAFT</b>			
Site Name	Egeria Bay	Virago Sound	McIntyre Bay
Site Code	DE-1	DE-2	DE-3
<b>Human Health &amp; Safety</b>			
Communities – distances - km (approx. as crow flies)	Masset and Old Massett (53 km)	Masset and Old Massett (25 km)	Masset and Old Massett (20 km); Tow Hill (15 km)
<b>Ecological Values</b>			
Species of Conservation Concern (e.g., SARA, COSEWIC, BC listed)	Whales: Critical habitat (Humpback), Important Area (various including Killer and Gray); Seabirds: nearby Pelagic Cormorant, Ancient Murrelett, Cassin's Auklet, Tufted Puffin, Marbled Murrelet (feeding); Other: Northern abalone, Rockfish including copper and quillback; Peregrine falcon; Steller Sea Lion haulout on North side of Langara	Whales: Important Area (Killer and Humpback) Seabirds: Rhinoceros Auklets feeding in area Other: Northern abalone	Whales: Important Area (Killer and Humpback) Other: Northern abalone; Steller Sea lion haulout at Rose Spit
Birds (non-listed)	Multiple nesting seabird colonies; Important Bird Area (BC003 - Langara Island) <a href="http://www.ibacanada.ca/site.jsp?siteID=BC003">http://www.ibacanada.ca/site.jsp?siteID=BC003</a>		Important Bird Area (BC161 - McIntyre Beach and Rose Spit) <a href="http://www.ibacanada.ca/site.jsp?siteID=BC161">http://www.ibacanada.ca/site.jsp?siteID=BC161</a>
Marine/coastal mammals (non-listed)		Harbour seal haulout (Cape Naden)	Harbour seal haulout (Rose Spit)
Fish and invertebrates (non-listed)	Salmon (coho, sockeye, spring) migration path -May-Sept	Nearby important salmon streams: Christie River; Herring spawn (Naden Harbour and Virago Sound); Dungeness crab	Nearby important salmon streams: Hiellen River, Sangan/Skonun River; Pacific halibut rearing area; Aggregation area for Dungeness crab; Habitat for various shellfish including razor clams, cockles, butter clams, scallops;
Marine/coastal plants (non-listed)	bull kelp beds, black seaweed	eelgrass, bull and giant kelp beds, black seaweed	bull and giant kelp beds along shoreline in some areas, seaweed in rocky areas
Other important natural resources considerations (e.g., estuaries, seamounts, corals/sponges)	Nearby identified cold water coral and sponge aggregation area (EBSA Phase I)	Major estuaries: Christie River (PECP 3)	Major estuaries: Hiellen (PECP 4), Sangan/Skonun (PECP 3) Other: DFO EBSA - McIntyre Bay
BC Shorezone Shoreline Sensitivity/Vulnerability Rating	East side Langara Isl.	Virago Sound	McIntyre Bay
Shoreline Sensitivity/Vulnerability Rating - Bunker C Dominant + (highest) in area	Sensitivity: Low + (Very High) Vulnerability: Very High + (Very High)	Sensitivity: Moderate + (Very High) Vulnerability: Very High + (Very High)	Sensitivity: Very Low + (High) Vulnerability: Very Low + (Very High)
Shoreline Sensitivity and Vulnerability Rating - Diesel Dominant + (highest) in area	Sensitivity: Low + (Very High) Vulnerability: Very High + (Very High)	Sensitivity: Moderate + (Very High) Vulnerability: Very High + (Very High)	Sensitivity: Very Low + (High) Vulnerability: Very Low + (Very High)
<b>Cultural Values</b>			
Food - Fishing / Harvesting (ranking)	Very high	High	Very high - critical food harvesting area for Old Massett and Massett communities
Other (e.g. Seasonal Camps, Spiritual Place)	Village sites, seasonal camps, other	Village sites, seasonal camps, other	Village sites, seasonal camps, other
Archaeological	TBD	TBD	TBD
Social and Economic Values	East side Langara Isl.	Virago Sound	McIntyre Bay
Fisheries - Commercial (all types) <i>Note: Bold font indicates major local area for the fishery.</i>	salmon, halibut, red sea urchin, rockfish, groundfish trawl	salmon, halibut, geoduck, red sea urchin (outside abalone stewardship area); Dungeness crab, rockfish	salmon, halibut, Dungeness crab, groundfish trawl, razor clam (critical fishery for local employment)
Fisheries - Sport / Recreational <i>Note: Particularly popular sites have been bolded.</i>	popular area for salmon, halibut, rockfish (Cohoe Pt.)	popular area for salmon, halibut, rockfish	popular area for shellfish harvesting including clams (various) and Dungeness crab
Aquaculture - Shellfish	none	none	none
Tourism/Recreation (e.g. Coastal Trails, Kayaking, Surfing)			surfing, beach walking, Cape Fife Trail, general tourism
Waterfront Public Facilities/Parks (e.g. Marina, Boat Launch etc.)	none	none	Hiellen longhouse village campground, Agate Beach campground, Tow Hill trail and blow hole
Waterfront Private Facilities (e.g. Lodge)	multiple nearby fishing lodges (Henslung Cove)	multiple nearby fishing lodges (Naden Harbour)	
Administrative - Zoning Designations (e.g. MPA, RCA)	Haida Gwaii Marine Plan PMZ - IUCN Type VI; Duu Guusd PA;	Haida Gwaii Marine Plan PMZ - IUCN Type Ib, II, IV; Duu Guusd and Nang Xaldangaas PA; Abalone Stewardship Recovery Area	nearby Haida Gwaii Marine Plan PMZs - IUCN Type II and III; Naikoon Provincial Park, Ecological Reserve (Tow Hill)

