

Implementing Ecosystem-based Management on the Central Coast of BC

Heiltsuk Participation in the Strategic Landscape Reserve Design
Process as part of a strategy for sustainable management and
protection of natural resources

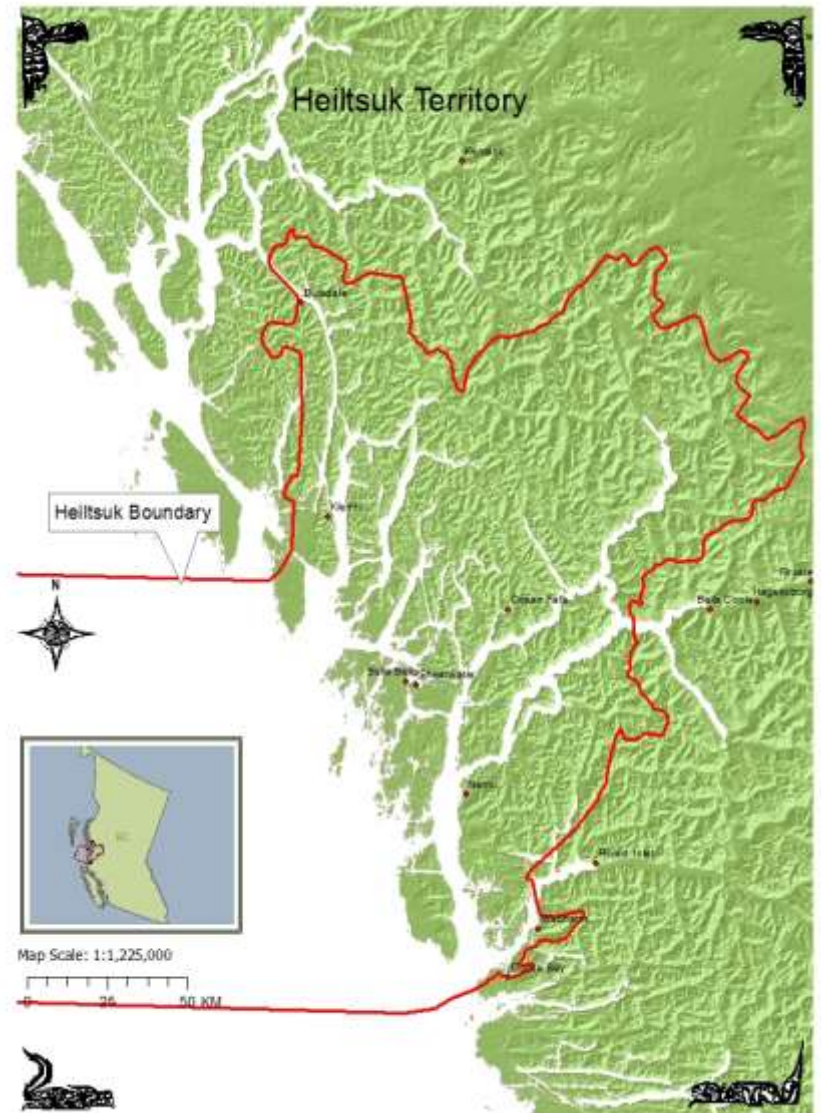
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Presentation Overview

- Heiltsuk Territory
- Ecosystem-Based Management
- Heiltsuk Planning Processes - Land + Marine Use Plans
- Government to Government Planning and Agreements
- Legal Land Use Objectives for Central and North Coast (Ministerial Order)
- Strategic Landscape Reserve Design (SLRD) Project
 - Methodology, sample results and Yeo Pilot Project
 - Conservancy Planning
 - Inventory and Baseline Data to inform Climate Change Research
- Acknowledgements





What is ecosystem-based management?

EBM was defined at G2G level as: “an adaptive approach to managing human activities that seeks to ensure the coexistence of healthy, fully functioning ecosystems and human communities. The intent is to maintain spatial and temporal characteristics of ecosystems so species and ecological processes can be sustained, and human wellbeing supported and improved.”

Heiltsuk and Government to Government Planning

▫ Heiltsuk Plans

- Land Use Plan (1997 - 2005) - Heiltsuk identified areas to set aside as conservancies and EBM areas
- Marine Use Plan (2001 – present) - Marine Spatial Plan and Best Management Practices to protect Heiltsuk values and ensure sustainable use of marine resources; agreed on Regional Central Coast FN Harmonized Plan

▫ Government to Government Agreements

- Strategic Land Use Plan Agreement (2006) - to develop EBM areas and Conservancies within Heiltsuk territory; look at human well-being and develop a framework for shared decision making and economic opportunities
- Land and Resource Protocol Agreement (2006) - regional approach to land use planning and designations in overlap areas, develop EBM legal objectives, provisions for revenue sharing, Conservancy Management Agreements and Plans, and identify funds to carry out implementation of land use agreements
- Detailed Strategic Plan (2008) - addresses and maps economic interests, cedar stewardship areas, cultural heritage and traditional forest resource areas, archaeological sites, fish sensitive watersheds, area-based risk targets, wildlife management and habitat areas, and visual management zones
- Reconciliation Protocol Agreement (2009-2010) – elements include Engagement Framework for shared decision-making replaces provincial consultation policy; carbon offsets/revenues from Conservancies and EBM implementation; economic opportunities in forestry/tenures, tourism in and outside of conservancies; economic strategies via alternative energy, infrastructure projects

Forest Stewardship: Implement 2009 Legal Land Use Objective Orders*

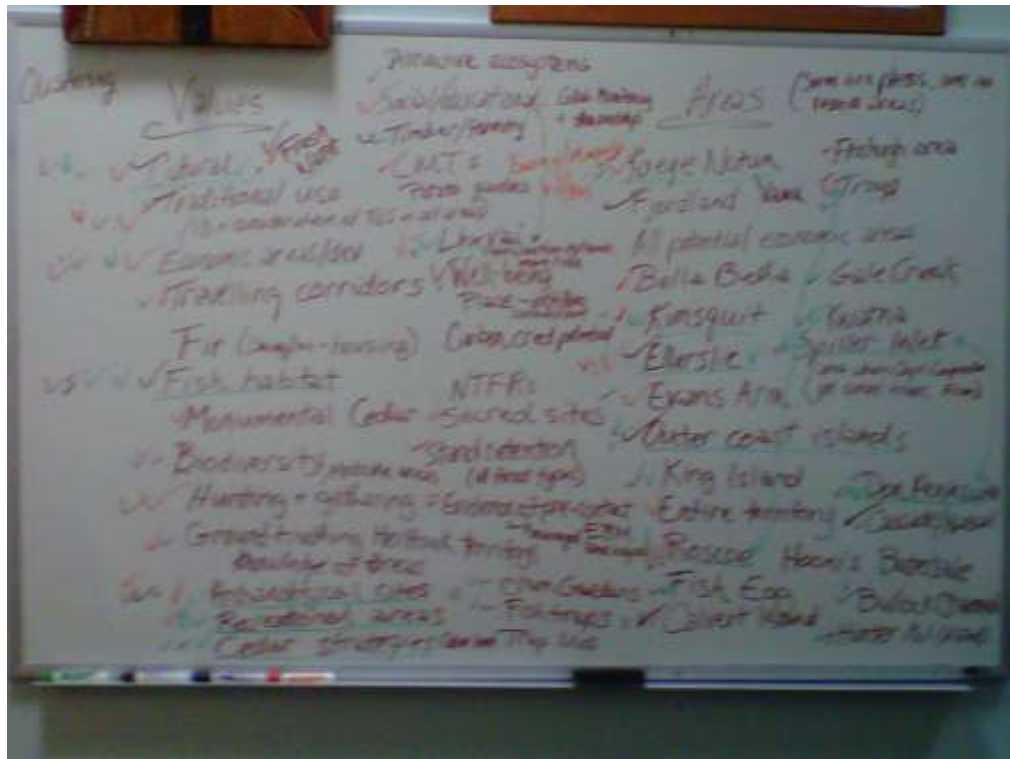
- First Nation Values:
 - Maintain traditional forest resources
 - Protect traditional heritage features
 - Protect culturally modified trees
 - Maintain “sufficient” volume/quality monumental cedar
 - Retain red and yellow cedar in stands
- Aquatic Habitats:
 - “equivalent clearcut area” < 20% in important fisheries watersheds
 - Buffer high value fish habitat – 1.5 tree reserve zones
 - Maintain riparian forest adjacent to streams, lakes, fens that are not high value fish habitat
 - Retention around forest swamps, upland streams, active fluvial units
- Biodiversity:
 - Landscape level biodiversity - old growth forest and habitat for species at risk, ungulate winter range, and regionally important wildlife including mountain goats, grizzly bears, northern goshawks, tailed frogs, marbled murrelet
 - Protect rare, threatened, endangered and special concern plant communities
 - Retain 15% trees at stand level (where clearcut)
 - Maintain grizzly bear and Kermode (black bear) habitat

* Legal objectives are presently under review

Strategic landscape reserve design

- Landscape reserve planning is being pursued to implement the legal orders - to identify areas to set aside from harvest to achieve the ecological, aquatic and First Nation land use objectives – through designation of landscape level reserves
- Forest companies and the province developed draft SLRDs through computer modeling and pilot projects, focused on biodiversity and maintaining access to timber (2010-2011)
- Heiltsuk participating to achieve Aquatic and First Nation objectives (2010 – 2015)
 - Identify priority areas from Traditional Use Studies and local knowledge, archaeological record, and provincial data on productive streams and forest areas
 - Prepare maps that apply buffers to potentially important sites
 - Hire field technicians, train, ground truth by collecting GPS waypoints and photos of features like big cedar, medicinal and food plants, and habitation evidence, (2013 and 2014 summer field seasons)
 - Community verification, review maps with focus groups, and with community, revise maps
 - Participate in Yeo Landscape Unit Pilot Project
 - Further community verification, review and revision of maps
 - G2G negotiations, identify and set aside areas that will maintain Heiltsuk values in EBM areas over time and enable improvements in human wellbeing and ecological integrity

Project Initiation Workshop and Mapping



Data drawn on for Heiltsuk SLRD

TUS and Forest Resource Sites

- Traditional Use Areas other than most hunting (kill locations) and trapping
 - Seek community input on treatment of traplines, wildlife habitat
- Burial sites
- Village sites
- Provincial forest cover data for areas with high potential for monumental and other cedar and forest and heritage resources

Archaeological Sites

- Recorded Archaeological Sites
- CMTs – recorded and those identified as part of field work

Aquatic Sites

- Streams known to Heiltsuk to be important fish habitat – Heiltsuk data
- Streams with observed and inferred fish – provincial, federal and ENGO data

Training - in class and experiential

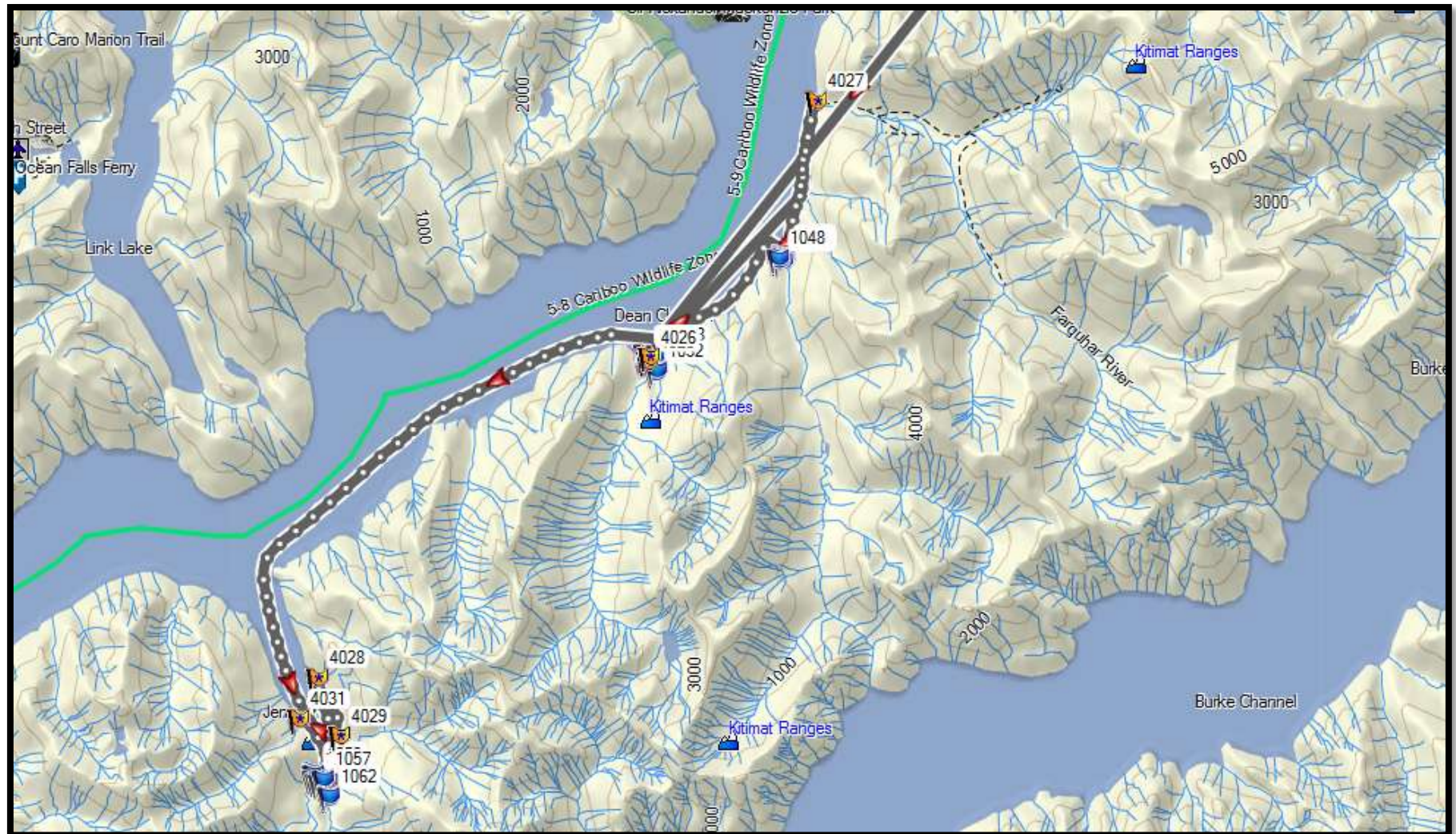
Data cards for plants, arch features, streams

GPS Units and water proof cameras

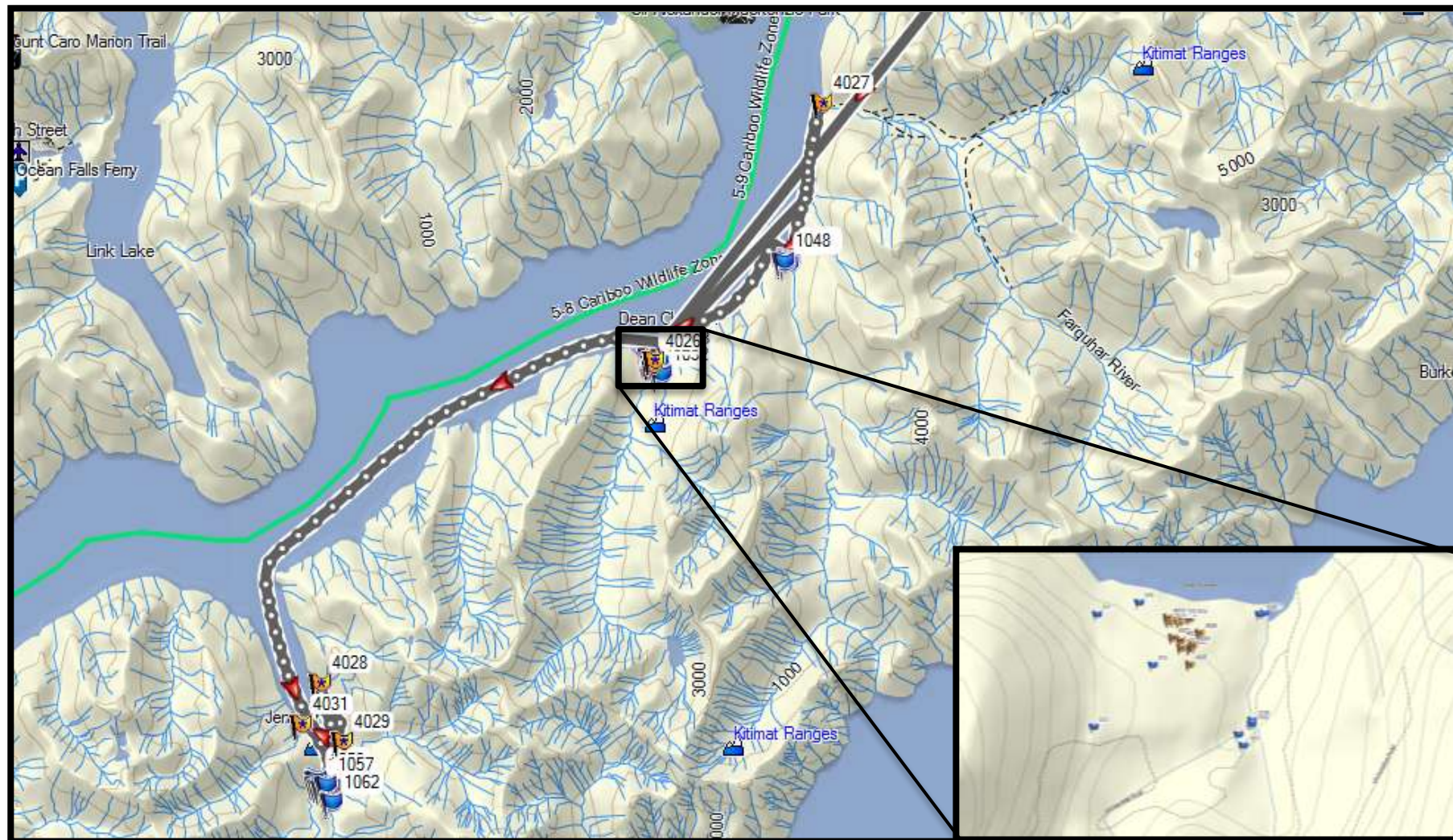
- **Cultural and Ecological Observation** Date _____ Reporter(s) _____
_____ Landscape Unit _____ Location description: e.g. on beach, in forest, on island, on water...
Camera # _____
- GPS Unit # _____
- Cultural observation type: Habitation site Midden Fishtrap Clam Garden/Bed Canoe Run
Other _____ Picture Taken? Picture number _____
- GPS Waypoint # _____ Notes _____
- Cultural observation type: **Other – Burial Site Rock Art Carved Post Cave**
- Other _____ Picture Taken? Picture number _____
- GPS Waypoint # _____ Notes _____
- Ecological observation type: **Medicinal/Food Plants observed? Plant Name** _____
- Picture Taken? Picture number _____ GPS Waypoint # _____
- Notes e.g. size of grouping... _____
- Cultural observation type: **CMT - Bark Strips Aboriginally Logged**
- Other _____ Picture Taken? Picture number _____ DBH _____
- GPS Waypoint # _____ Notes _____
- Ecological observation type: **Monumental Tree observed? Species** _____ **DBH** _____
- **Cedar Stand observed? Picture Taken? Picture number** _____ **GPS Waypoint #** _____
- Notes e.g. size of grouping... _____



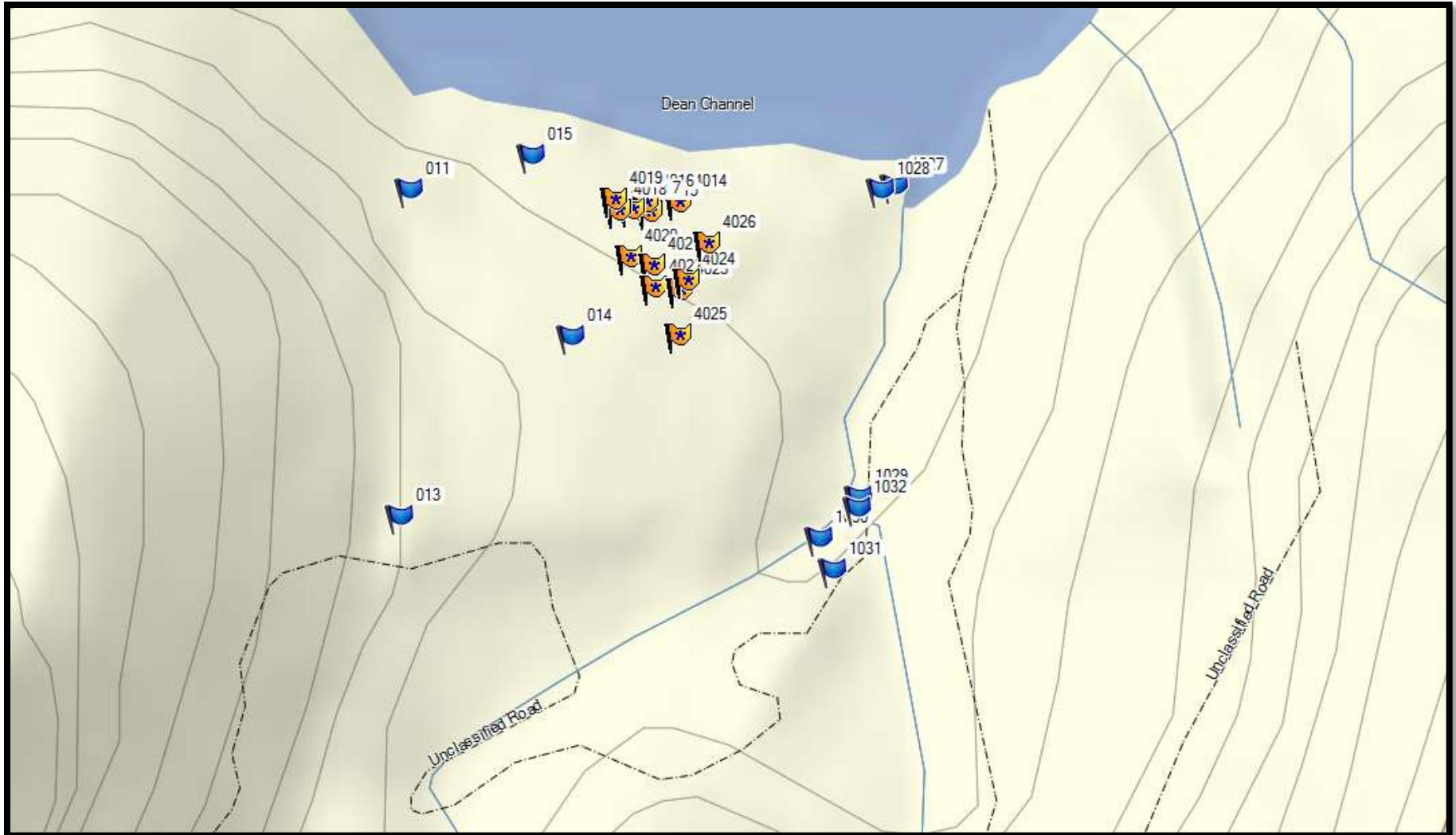
Sample results: King Island Landscape Unit



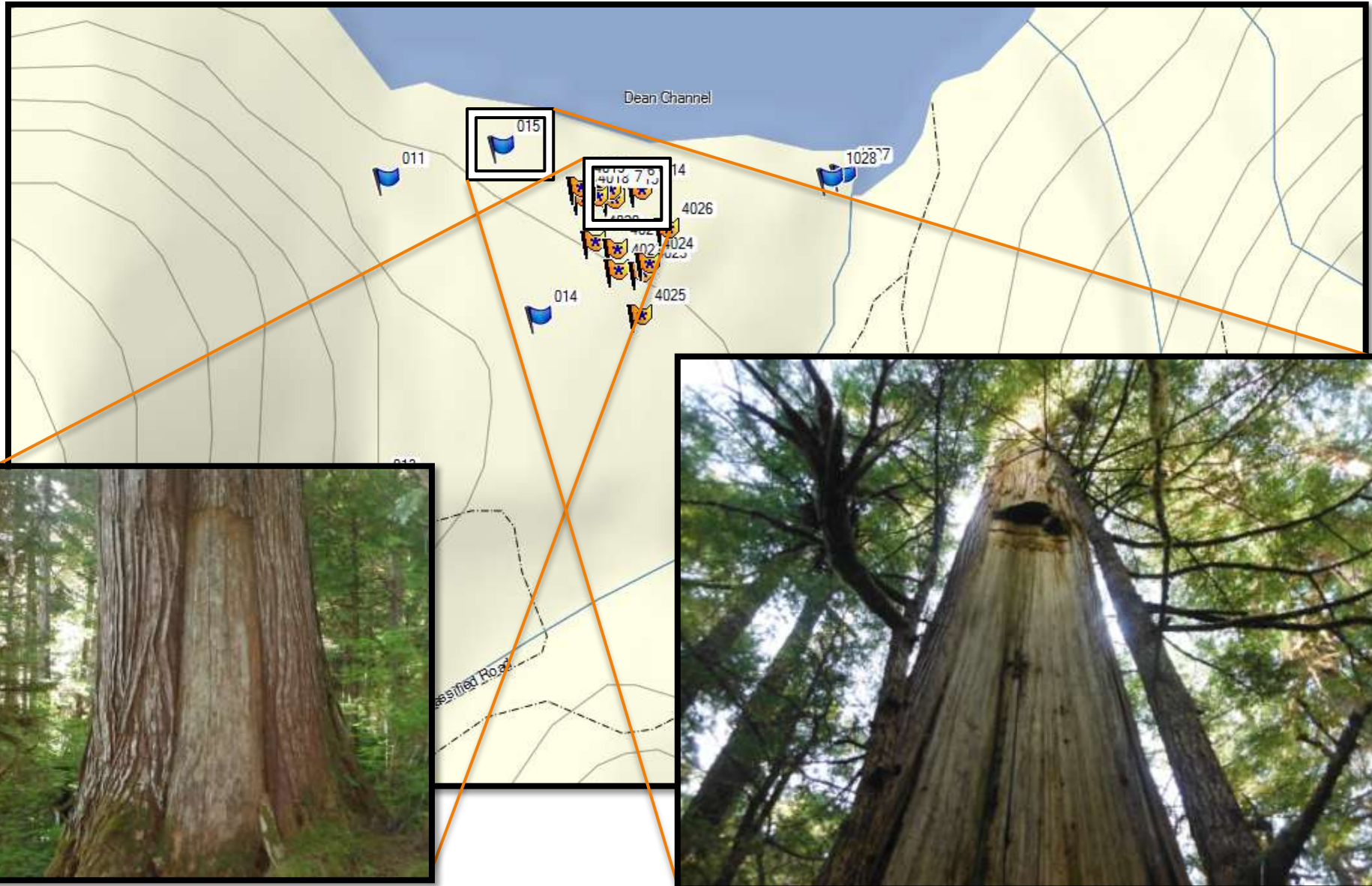
King Island - Fog Creek sub-unit



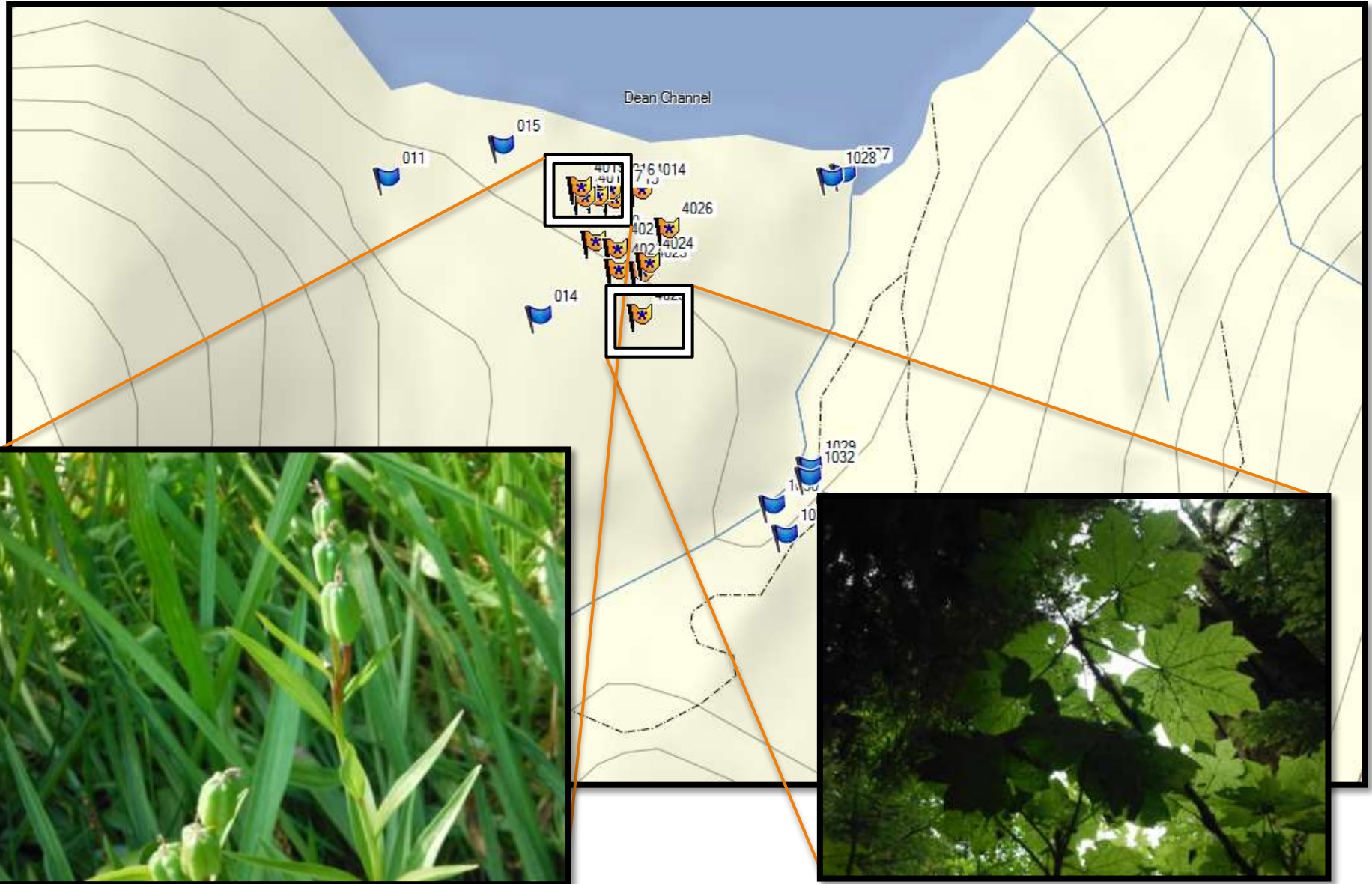
King Island - Fog Creek sub-unit



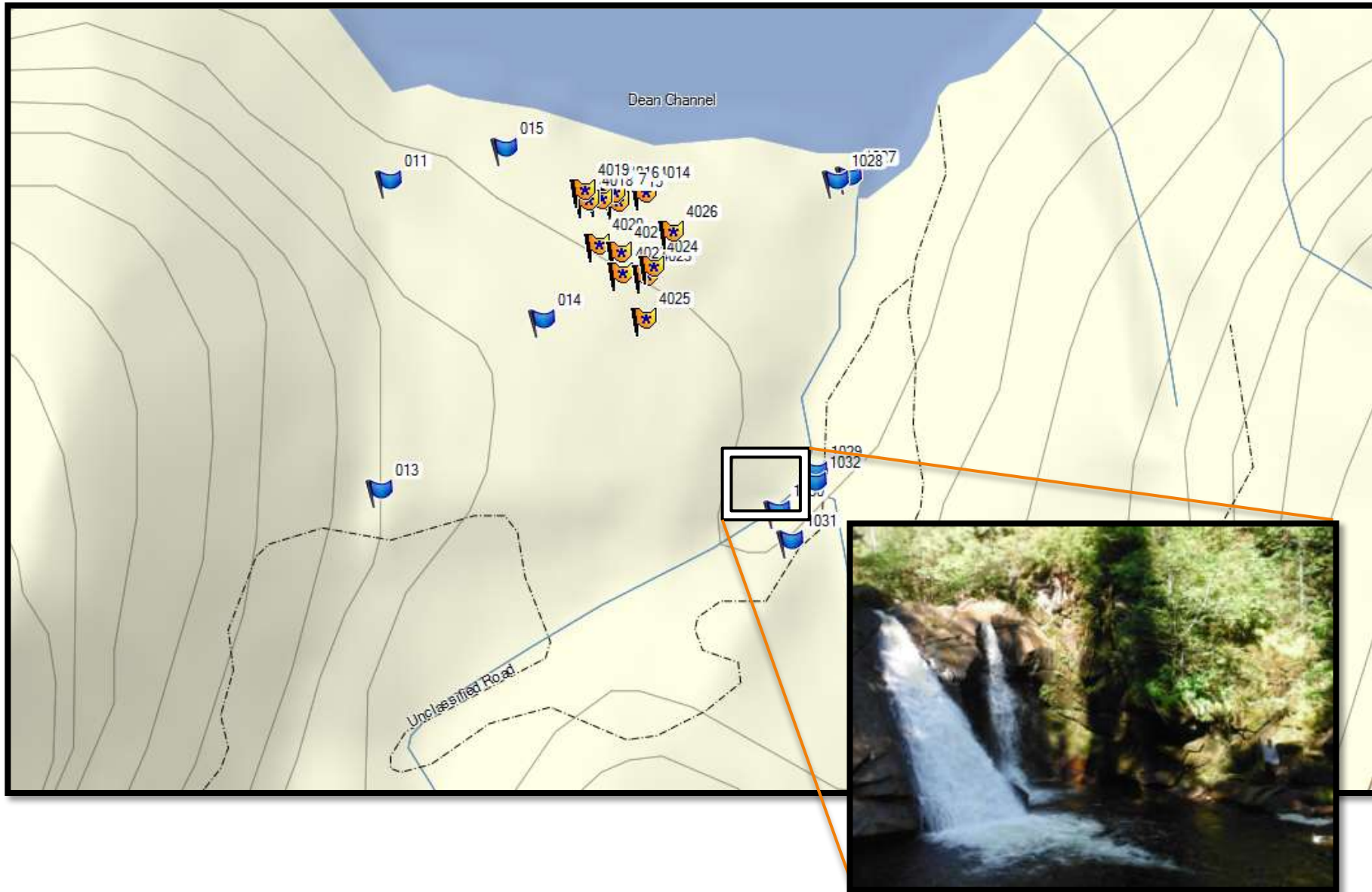
King Island - Fog Creek sub-unit



King Island - Fog Creek sub-unit



King Island - Fog Creek sub-unit



SLRD field technicians

Summer 2013

Photo Credit: Elroy White

Implementation of Heiltsuk SLRD

Preliminary Implementation

- Engagement Framework - As part of information sharing that precedes our referrals process – we overlay proposed log handling sites, roads and cutting permits (engineered and projected) with our draft SLRD GIS polygons
 - Where areas were engineered we work with licensees to find mutually beneficial ways for their plans to proceed
 - Where areas are projected we request they look elsewhere if the projection overlaps one of our SLRD polygons

Site Verification

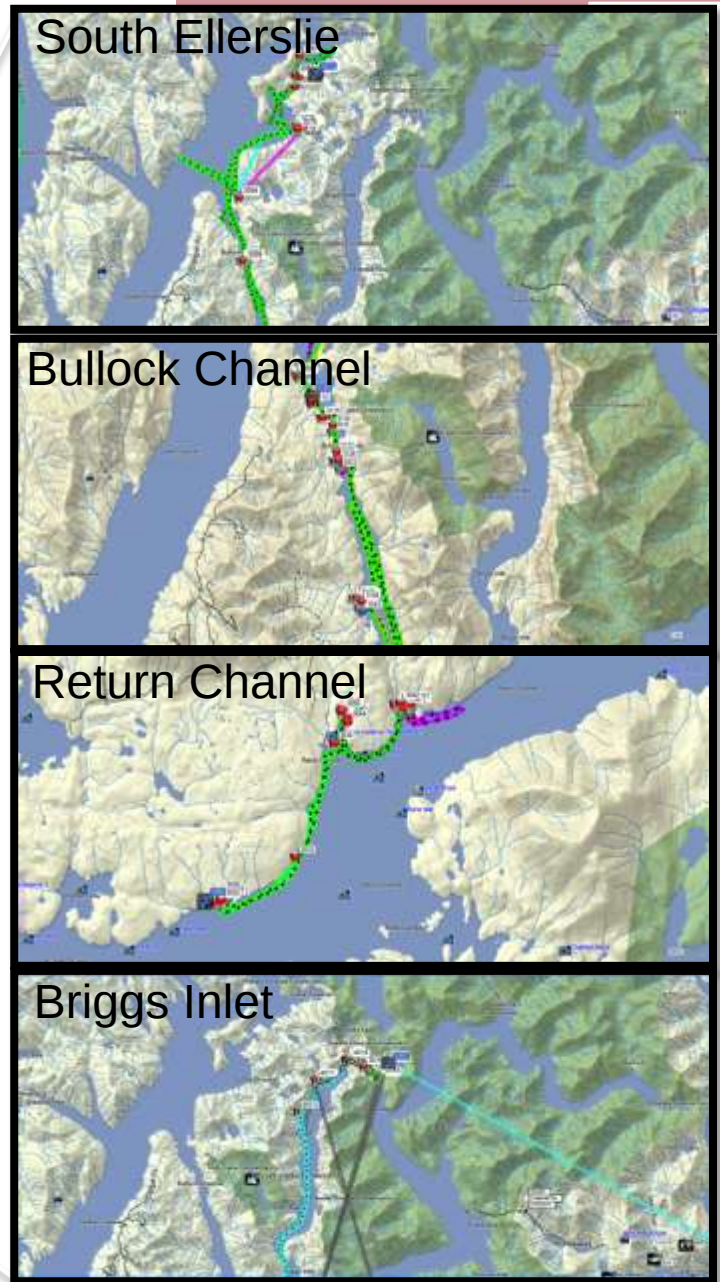


South Ellerslie

Bullock Channel

Return Channel

Briggs Inlet



Strategic Landscape Reserve Design

Feature	Option 1 Buffer Size	Option 2 Buffer Size
<i>HTUS Map Biography Sites</i>		
Traditional Use Areas other than hunting and trapping	100m	Polygon (where several values known to exist in an area)
Coast Shoreline Scenario	100m	
Burial sites	200m	
Village and habitation sites	500m	
<i>Forest Resources Sites</i>		
Areas with high potential for monumental and other cedar and forest and heritage resources	100m where confirmed	
<i>Archaeological Sites</i>		
Recorded Archaeological Sites	100	500 (if midden or other habitation)
CMTs	100m where identified in forested area	As per HCA*
<i>Aquatic Sites</i>		
Streams known to Heiltsuk to be important fish habitat	100m	
Provincial Inferred fish streams with observed fish	100m	1.5 tree height (to include S4)

Yeo Landscape Unit Pilot Project



Yeo Landscape Unit - Heiltsuk Research to Improve Archaeological Evidence

Research project driven by Heiltsuk wish to better understand the extent of old village and habitation sites

- Previous investigations were limited and focused on intertidal sites, specific features such as stone fish traps, and culturally modified trees (forestry context)
- Auger and shovel tests confirmed 2 village/habitation sites and provide evidence for 2 sites not presently known to provincial archaeology branch



Conservancy and Protected Area Planning



Photo Credit: Ian McAllister

Inventory Data and Climate Change



Photos: Jordan Wilson, taken by Max Johnson

Acknowledgements

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- A photograph of several bald eagles perched on a large, green, needle-covered tree branch. The eagles are dark brown with white heads and necks. They are positioned at various heights and angles on the branch, some facing forward and others in profile. The background is a bright, overcast sky.
- North Pacific Landscape Conservation Cooperative
 - Provincial Government
 - Hakai Network for Coastal People, Ecosystems and Management
 - Coast Opportunity Fund
 - Coastal Guardian Watchmen Network
 - QQS Projects Society
 - HIRMD and SLRD field technicians, skipper and boat charters
 - Heiltsuk Traditional Use Study Map Biography participants