



Gambier Island Local Trust Committee

Regular Meeting Agenda

Date: November 21, 2019
Time: 4:30 pm
Location: Delbrook Community Centre
Oak Room
851 West Queens Road
North Vancouver, BC V7N 4E3

	Pages
1. CALL TO ORDER	4:30 PM - 4:35 PM
“Please note, the order of agenda items may be modified during the meeting. Times are provided for convenience only and are subject to change.”	
2. APPROVAL OF AGENDA	
3. REPORTS	4:35 PM - 4:50 PM
3.1 Trustee Reports	
3.2 Chair's Report	
3.3 Electoral Area Director's Report	
4. TOWN HALL	4:50 PM - 5:00 PM
5. MINUTES	5:00 PM - 5:05 PM
5.1 Local Trust Committee Meeting dated October 10, 2019 - for adoption	4 - 12
5.2 Section 26 Resolutions-Without-Meeting - none	
5.3 Advisory Planning Commission Minutes - none	
6. BUSINESS ARISING FROM MINUTES	5:05 PM - 5:20 PM
6.1 Follow-up Action List dated November 13, 2019	13 - 14
7. APPLICATIONS AND REFERRALS	5:20 PM - 6:00 PM
7.1 GM-DVP-2019.2 (Werkema) - Staff Report - for decision	15 - 29
7.2 GM-BP-2018.18 (Spindrift Properties (Keats) Inc. - (477 and 479 Skyline Road, Keats Island) - for discussion	30 - 59

8.	LOCAL TRUST COMMITTEE PROJECTS	6:00 PM - 6:15 PM	
8.1	Keats Shoreline Protection Project - verbal update		
8.2	Riparian Areas Regulation Project - verbal update		
9.	DELEGATIONS		
10.	CORRESPONDENCE		
	<i>(Correspondence received concerning current applications or projects is posted to the LTC webpage)</i>		
11.	NEW BUSINESS	6:15 PM - 6:25 PM	
11.1	Climate Change Mitigation and Adaptation		
11.2	Letter of Congratulations to Patrick Weiler - for discussion and decision		
11.3	Updated Management Plans for Brigade Bluffs and Long Bay Wetland Nature Reserves - Briefing Note		60 - 180
11.4	Sunshine Coast Regional District (SCRD) Protocol Meeting - verbal update		
11.5	First Nation Standing Resolution - Staff Report - for decision		181 - 183
11.6	Live Streaming of Local Trust Committee Meetings - Request for Decision		184 - 185
12.	REPORTS	6:25 PM - 6:35 PM	
12.1	Trust Conservancy Report - none		
12.2	Applications Report dated November 13, 2019		186 - 189
12.3	Trustee and Local Expense Report dated September, 2019		190 - 190
12.4	Adopted Policies and Standing Resolutions		191 - 192
12.5	First Nations Activities		
12.6	Local Trust Committee Webpage		
13.	WORK PROGRAM	6:35 PM - 7:00 PM	
13.1	Top Priorities Report dated November 13, 2019		193 - 193
13.2	Projects List Report dated November 13, 2019		194 - 195
14.	CLOSED MEETING - none		

15. UPCOMING MEETINGS

- 15.1 Next Regular Meeting Scheduled for Thursday, January 30, 2020 at 10:30 AM at John Braithwaite Community Centre, Meeting Room 3, 145 West 1st Street, North Vancouver, BC**

16. ADJOURNMENT

7:00 PM - 7:00 PM



Gambier Island Local Trust Committee Minutes of Regular Meeting

Date: October 10, 2019
Location: John Braithwaite Community Centre
 145 West 1st Street
 North Vancouver, BC

Members Present: Sue Ellen Fast, Chair
 Dan Rogers, Local Trustee
 Kate-Louise Stamford, Local Trustee

Staff Present: Heather Kauer, Regional Planning Manager
 Bronwyn Sawyer, Planner 2 (by telephone, 12:30-2:15 pm)
 Jaime Dubyna, Planner 2 (by telephone, 1:35-2:15 pm)

Also Present: Diane Corbett, Recorder
 Members of the Public – 6 (in part); 1 agent by telephone 2:03-2:08 pm)

1. CALL TO ORDER

"Please note, the order of agenda items may be modified during the meeting. Times are provided for convenience only and are subject to change."

Chair Fast called the meeting to order at 12:02 pm. She acknowledged that the meeting was being held in territory of the Coast Salish First Nations.

Chair Fast introduced Trustees, Staff and the Recorder, and announced that planners from the Gabriola office would be joining the meeting by telephone.

2. APPROVAL OF AGENDA

The following additions to the agenda were presented for consideration:

- 11.6 Second phase Islands 2050 engagement meeting
- 11.7 SCR D protocol meeting

By general consent the agenda was approved as amended.

3. REPORTS

3.1 Trustee Reports

Trustee Stamford reported on the following:

- Stated she had sent out her report the previous day; it would be posted to the website.
- Still awaiting word on the Squamish First Nation's intent in moving forward with the New Brighton dock.

Trustee Rogers reported on the following:

- Since the summer he had been involved in a lot of executive work, including meetings on other islands.
- At the Union of BC Municipalities (UBCM) conference in September, he spent time interacting with Sunshine Coast Regional District (SCRD) representatives regarding issues relevant to the islands.
- Was in the process of setting up time to make a presentation to the SCRD regarding what is happening on the islands.
- SCRD has a new contractor for its docks, who did some substantial work to the Eastbourne dock.
- Has been encouraging people to remove material from beaches and docks as the storm season is approaching; there was much debris in the water last winter due to storms.

3.2 Chair's Report

Chair Fast reported on the following:

- Trust Council was on Bowen Island last month; twenty-six trustees came together in Howe Sound for two days.
- Some issues discussed were provided by islanders.
- Next meeting will be in December in Victoria.
- All three members of the Gambier Island Local Trust Committee (LTC) went to UBCM, where attendees voted on resolutions to recommend to the Province that included resolutions on Development Permit Areas and enforcement, and cumulative marine effects. Trustees met with several provincial ministers. There was an Islands Trust breakfast that brought together MLAs from around the Trust Area, including MLA Sheila Malcolmson, and members of Bowen Council.

3.3 Electoral Area Director's Report – none

Trustee Stamford noted in her written report that Sunshine Coast Regional District Director, Mark Hiltz, had nominated Camilla Berry, full-time resident of Gambier Island, as Alternate Director for Area F.

4. TOWN HALL

There were no speakers for the Town Hall session.

5. MINUTES

5.1 Local Trust Committee Meeting dated July 25, 2019

By general consent the Local Trust Committee meeting minutes of July 25, 2019 were adopted.

5.2 Local Trust Committee Special Meeting Minutes dated July 25, 2019

The following amendment was proposed:

- p. 2, third paragraph in middle of page, end of sentence should read: “within 15 metres, a Development Permit *and* Development Variance Permit *are* required.”

By general consent the Local Trust Committee Special Meeting minutes of July 25, 2019 were adopted as amended.

5.3 Local Trust Committee Public Hearing Record dated July 25, 2019

Received.

5.4 Section 26 Resolutions-Without-Meeting Report dated October 1, 2019

Received.

5.5 Advisory Planning Commission Minutes – none

6. BUSINESS ARISING FROM MINUTES

6.1 Follow-up Action List dated October 1, 2019

Received.

Trustee Stamford requested confirmation regarding whether the activity for 27-Apr-2017 was completed. Discussion ensued. It was noted the activity pertained to the first version for Bylaws 140 and 141; trustees wanted to see what was done with respect to the adopted bylaws of July 25, 2019.

The Regional Planning Manager will follow up.

By general consent, the order of agenda items was changed as follows:

- Move 6.2 to after 8.1

(Item 6.2 was moved to after 8.1 in the minutes.)

7. APPLICATIONS AND REFERRALS

7.1 GM-RZ-2019.1 (South Keats Investments Ltd. – 255 Esplanade Rd, Keats Island)

Planner 2 Sawyer reviewed the staff report on an application proposing a bylaw text amendment for the Comprehensive Development 1 (CD1) zone in order to legalize three existing docks.

Jim Maynard, current president of South Keats Investment Ltd., clarified the applicant's participation and involvement in the Islands Trust planning process since 1992. He noted the applicant's history of trying to be conforming and doing what is right. The intent of the applicant was that each of the lots that have been there for 35-40 years would still have access, and that the zoning recognizes the three docks that are already there. Mr. Maynard emphasized that this was not an effort to try to do something new, but rather to recognize history.

Further comments on the history of the property and the zoning were offered by some of the strata owners.

Discussion ensued:

- Clarity regarding the zoning;
- The rezoning application and process;
- Keats Shoreline Protection Project currently underway;

- Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) policy and permitting; and
- History of the planning process for this property. It was emphasized that one dock for water access, as permitted in the current CD1 zoning, would not work for this property due to geographic/topographic reasons.

The applicant was encouraged to review the staff report, read the zoning carefully, and note that there were other structures within the setback.

The Regional Planning Manager recommended that trustees give thought to how the docks are maintained and whether they would be expanded; the rezoning application could be used as an opportunity to look at environmental impacts for the application.

GM-2019-043

It was MOVED and SECONDED

that the Gambier Island Local Trust Committee:

1. Request the applicant to provide a plan signed by a B.C. Land Surveyor showing the present natural boundary of the sea in proximity to existing and proposed structures within 7.5 metres of the natural boundary of the sea;
2. Request the applicant to provide a biologist report assessing the environmental impact of the docks and will use the Marine Guide to Small Boat Moorage Fact Sheet checklist prepared by Fisheries and Oceans Canada to determine if any modifications to the docks are necessary to reduce environmental impacts;
3. Request staff to draft a Comprehensive Development 1 (CD1) Zone amendment to the Keats Island Land Use Bylaw, 2002 permitting a maximum of three docks in the marine area abutting PID 008-861-102.

CARRIED

Chair Fast recessed the meeting at 1:26 pm and recalled the meeting to order at 1:35 pm.

7.2 GM-DVP-2019.3 and GM-DP-2019.1 (McDonnell and Barlow – Andy's Bay Road, Gambier Island)

Planner 2 Dubyna reviewed the staff report on GM-DVP-2019.3 and GM-DP-2019.1 proposing to vary the front lot line setbacks for an existing building and amend a Development Permit which authorized construction of a Single Family Dwelling with attached deck located within Development Permit Area (DPA) No. 3 – Riparian Areas.

There were no issues raised by trustees.

GM-2019-044

It was MOVED and SECONDED

that the Gambier Island Local Trust Committee:

1. Approve issuance of Development Variance Permit GM-DVP-2019.3;
2. Approve issuance of Development Permit GM-DP-2019.1.

CARRIED

7.3 GM-BP-2019.18 (Spindrift Properties (Keats) Inc. – 477 and 479 Skyline Road, Keats Island)

Planner Sawyer reviewed the staff report on SCRD building permit referral GM-BP-2019.18 for construction of a second house on Strata Lot 1, DL 1467, Group 1, NWD Strata Plan BCS1947 together with an interest in the Common Property in proportion to the unit entitlement of the strata lot.

Discussion ensued on the statutory right of way (SROW) and the lack of clarity regarding its actual location and whether it was a new SROW, in addition to the right of way granted with the original subdivision. There was difficulty interpreting the mapping provided in the staff report, and concern that the SROW may not have been ground-truthed. There was concern about a lack of information regarding the geographic conditions and connectivity with existing trails.

The agent responded to questions and agreed to meet with Trustee Rogers to look at the property and the location of the statutory right of way. Trustee Rogers will report back to staff.

GM-2019-045

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

that the Gambier Island Local Trust Committee move that this matter be deferred to next Local Trust Committee meeting, and that a more detailed map be provided for the Local Trust Committee showing the trail connections.

CARRIED

8. LOCAL TRUST COMMITTEE PROJECTS

8.1 Keats Shoreline Protection Project

Planner 2 Dubyna gave a verbal update on activities of the Keats Shoreline Protection Project Working Group.

- Met in August for boat tour of the Keats shoreline; stopped at points of interest. Members shared local history and expertise.
- Next Working Group meeting will be at 8:00 am, October 22. Topics will include why changes to the Land Use Bylaw will be needed, and information on foreshore islands similar to Keats. Staff is reviewing OCP policies that could be relevant to the project.
- Working Group will be asked to review draft engagement and consultation strategy.

Trustees suggested topics of discussion for the Working Group should include:

- What members would like to explore;
- Types of docks; and
- Winter storms.

6.2 Meeting Participation Guidelines – Memorandum dated June 13, 2019 and suggested changes

Chair Fast reviewed the memorandum regarding Meeting Participation Guidelines. In ensuing discussion, trustees expressed support for guidelines to give some timelines for

staff, and an interest in the guidelines providing flexibility for the LTC to adjust the agenda.

GM-2019-046

It was MOVED and SECONDED

that the Gambier Island Local Trust Committee endorse the Guidelines for Public Participation as received at the Local Trust Committee meeting of October 10, 2019.

CARRIED

GM-2019-047

It was MOVED and SECONDED

that the Gambier Island Local Trust Committee request that staff include the Guidelines for Public Participation during Local Trust Committee Meetings on the Local Trust Committee webpage.

CARRIED

9. DELEGATIONS

Members of the public discussed application GM-RZ-2019.1 during section 7.1 of the agenda.

10. CORRESPONDENCE

(Correspondence received concerning current applications or projects is posted to the LTC webpage)

11. NEW BUSINESS

11.1 Climate Change Mitigation and Adaptation

11.1.1 Climate Change Adaptation and Mitigation Strategies Memorandum

Trustee Rogers explained that this item was on the agenda because of a motion passed at Trust Council. Trustees considered where to focus regarding climate adaptation and mitigation actions. The resolutions made by the LTC on July 25, 2019 were noted, regarding having climate change adaptation and mitigation as a standing LTC agenda item, and that recommendations on climate change adaptation and mitigation be included within staff reports on applications and projects.

Trustee Stamford expressed interest in moving forward on the Gambier OCP and noted that a lot of things to consider regarding climate have to be done through OCPs. The Trustee wanted to see a focus on maintaining the forest canopy on Gambier, as supporting climate action. This could include workshops for building awareness and supporting maintenance of the forest on Gambier, one of the major assets of Gambier.

Trustee Rogers noted there is also the Douglas Fir Toolkit that could be a useful source for resolutions pertaining to climate action.

11.2 District of Sechelt – Request for Support for Union of BC Municipalities (UBCM) Community to Community Funding

Correspondence from the Mayor of the District of Sechelt dated September 11, 2019 regarding an opportunity to apply for funding from UBCM to support upcoming meetings was received. Trustees noted:

- The LTC would not be bound by an SCRD regional growth strategy;
- Support for the SCRD work on regional water conservation; and
- Interest in staying on the SCRD mailing list.

GM-2019-048

It was MOVED and SECONDED

that the Gambier Island Local Trust Committee respond to the Mayor of Sechelt's letter of September 11, 2019, thanking them for consideration of the Local Trust Committee.

CARRIED

The Chair will draft a letter for staff to forward to the mayor.

11.3 Request to Support the Alt'kat7sem/Howe Sound Biosphere Initiative

Discussion ensued regarding the request in the letter dated August 5, 2019 from Howe Sound Biosphere Region Initiative Society to support the Alt'kat7sem/Howe Sound Biosphere Initiative.

GM-2019-049

It was MOVED and SECONDED

that the Gambier Island Local Trust Committee authorize Chair Sue Ellen Fast to sign the endorsement section of the UNESCO Alt'kat7sem/Howe Sound Biosphere Initiative application.

CARRIED

11.4 2020 Local Trust Committee Meeting Schedule

Trustees considered the proposed meeting schedule for 2020.

GM-2019-050

It was MOVED and SECONDED

that the Gambier Island Local Trust Committee schedule its regular business meetings on the following dates in 2020: January 30, March 26, May 28, July 23, October 1, and November 19.

CARRIED

11.5 Metro Vancouver Regional District Protocol Meeting

Trustees discussed the upcoming Metro Vancouver Regional District Protocol meeting; date to be confirmed.

11.6 Second Phase Islands 2050 Engagement Meeting

Trustees discussed the Islands 2050 engagement process, and ways to reach and engage with more residents within the Local Trust Area.

Trustee Rogers will take this discussion to the Executive Committee.

GM-2019-051**It was MOVED and SECONDED**

that the Gambier Island Local Trust Committee request a second Islands 2050 engagement process be considered using *Stormaway*.

CARRIED**11.7 SCRD Protocol Meeting**

Discussion ensued regarding the SCRD Protocol meeting scheduled for Tuesday, November 19, 2019.

12. REPORTS**12.1 Trust Conservancy Report**

Trustee Stamford reported that Islands Trust Conservancy presented at a breakfast at UBCM. Most of the work done through the Conservancy is done in camera, and may involve ongoing negotiations. The Conservancy had a very active summer, and hoped to have a new manager soon.

12.2 Applications Report dated October 1, 2019

Received.

12.3 Trustee and Local Expense Report dated August, 2019

Received.

12.4 Adopted Policies and Standing Resolutions

Received.

12.5 First Nations Activities

Trustee Rogers was part of an Islands Trust contingent that met with the Minister of Indigenous Relations at the legislature after UBCM. There was discussion of the work Islands Trust is doing in reconciliation. The Minister shared that the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) legislation is going to be extremely meaningful and impactful, and will put a lot of obligations on local governments. There was a motion at UBCM wanting to know the responsibilities as local governments.

12.6 Local Trust Committee Webpage

Staff will post the public participation principles (mentioned in item 6.2).

Trustee Stamford planned to attend a meeting the following day with the Islands Trust Director of Trust Area Services and consultants combining Islands Trust and Islands Trust Conservancy webpages.

13. WORK PROGRAM**13.1 Top Priorities Report dated October 1, 2019**

Received.

There was discussion regarding moving forward on the Gambier Island Official Community Plan. The Regional Planning Manager will follow up with the Director of Local Planning Services regarding this item.

13.2 Projects List Report dated October 1, 2019

Received.

14. CLOSED MEETING – none

15. UPCOMING MEETINGS

15.1 Next Regular Meeting Scheduled for Thursday, November 21, 2019 at 4:30 pm at Delbrook Community Centre, Oak Room, 851 West Queens Road, North Vancouver, BC

16. ADJOURNMENT

By general consent the meeting was adjourned at 3:25 pm.

Sue Ellen Fast, Chair

Certified Correct:

Diane Corbett, Recorder

Follow Up Action Report

Gambier Island

27-Apr-2017

Activity	Responsibility	Dates	Status
1 Staff to prepare written communication materials for distribution to Gambier Island residents regarding the adoption of Bylaws 148 and 149 (RAR). Update: pending DPA 3 minor amendments	Sonja Zupanec	Target: 31-Aug-2017	In Progress

19-Apr-2018

Activity	Responsibility	Dates	Status
1 LTC requests staff to coordinate a meeting with Trustees and MOTI Sechelt branch staff.	Sonja Zupanec Wil Cottingham		In Progress

28-Jun-2018

Activity	Responsibility	Dates	Status
1 Gambier Official Community Plan Comprehensive Review Project: -post revised, endorsed project charter to project website with June 2018 staff report -prepare budget work plan for Director's approval -notify LTC of status of budget approval and commence Phase 1 work. -incorporate Howe Sound Sustainable Development Framework (ie goals)	Sonja Zupanec		In Progress

Follow Up Action Report

Gambier Island

13-Dec-2018

Activity	Responsibility	Dates	Status
1 Bring forward a revised project charter for the Gambier OCP review to address LTC request (Dec 2018) to take projects on the projects list related to Gambier and add to OCP review project - including review of shipping container regulations; DAI for Gambier; review of water zones and recreational/institution zones. As these are part of a comprehensive LUB review, the current OCP project charter does not include a LUB review and would need to be expanded.	Sonja Zupanec		In Progress

File No.: GM-DVP-2019.2
(Werkema)

DATE OF MEETING: November 21, 2019

TO: Gambier Island Local Trust Committee

FROM: Sonja Zupanec, Island Planner
Local Planning Services

SUBJECT: Development Variance Permit application GM-DVP-2019.2
Applicants/Owners: Christine Werkema and Klaas Werkema
Location: Strata Lot 2A, Sea Ranch, Gambier Island (PID 003-460-011)
Strata Lot 2 Plan VAS793 District Lot 1258 1653 3201 Land
District 1 District 36 Except Plan 16695 together with a share in
the common property.

RECOMMENDATION

1. That the Gambier Island Local Trust Committee not approve the requested variance for the existing tram extending from Strata Lot 2A, across Limited Common Property and Common Property, as it is not consistent with the Gambier Island Official Community Plan Policies 3.1.v); 3.1.viii); and 3.7.iii).
2. That the Gambier Island Local Trust Committee amend draft Development Variance Permit GM-DVP-2017.2 by:
 - a. Removing paragraphs 2 a) and 2 b) in their entirety;
 - b. Renumbering paragraph "2 c)" to "2 a)"; and
 - c. Adding a label which reads "AS-BUILT TRAM NOT APPROVED BY GM-DVP-2019.2" to 'Schedule "A" Site Plan'.
3. That the Gambier Island Local Trust Committee issue GM-DVP.2019.2 (Werkema), as amended.

REPORT SUMMARY

This application for a Development Variance Permit (DVP) is a result of an Islands Trust bylaw enforcement file and Sunshine Coast Regional District (SCRD) stop work order. The application requires three variances to Gambier Island Land Use Bylaw No. 86, 2004 (LUB) in order to permit the siting of an existing tram structure (hillside elevator) and an existing utility shed attached to a cabin currently under construction. Staff recommend the LTC amend the draft DVP (Attachment 1) to remove the requested variance for the tram structure specifically, and only issue the permit for the siting of the existing utility shed attached to the cabin under construction.

BACKGROUND

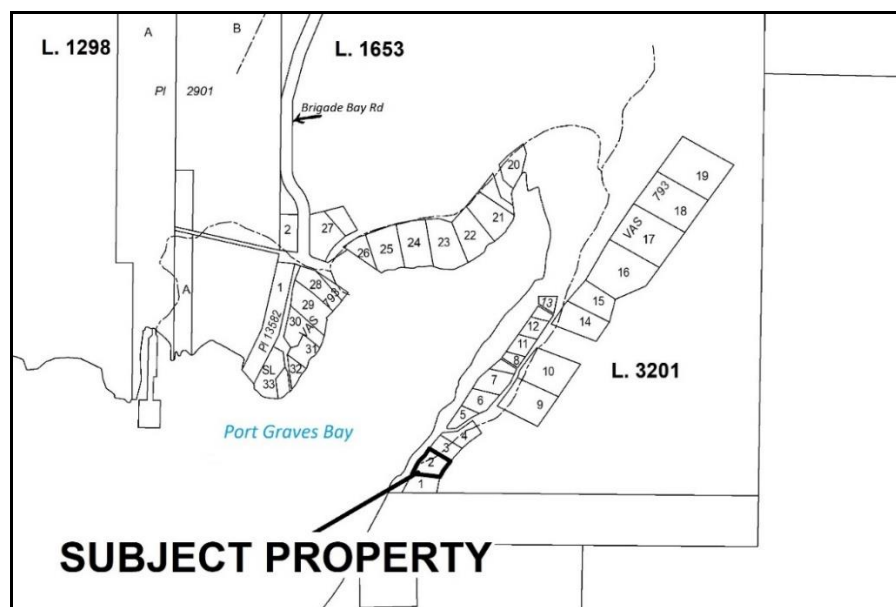
The applicants applied for a building permit with the SCRD in 2013 to construct a small cabin on Strata Lot 2A. Islands Trust planning staff noted in the building permit referral to the SCRD that a utility building was sited within the 2.5 metre strata interior side lot line setback and that the hillside elevator/lift (tram) was not in compliance with regulations. The applicant noted the lift was concept only and they would not be going ahead with

construction. Since 2013 the cabin has been replaced, or converted into, a shed, which has now been attached to a new dwelling currently under construction and subject to a REAR (not interior strata lot line setback as previously noted). The SCRD issued a stop work order in 2018. The new dwelling was deemed to be over height and Islands Trust Planning staff noted the cabin being converted to a utility shed was within 7.5 metres of the rear strata lot line. In addition, the hillside elevator/tram was in fact constructed, and still did not comply with setback provisions as it is located within 15 metres of the natural boundary of the sea and within 7.5 metres of common property lot lines.

The path of the tram runs from Strata Lot 2A, over a walking trail on limited common property that provides primary access to a dwelling on Strata Lot 1B, down to common property by the shoreline. Adjacent owners have expressed concerns that the tram is obstructive and dangerous. The tram, including wires, rises more than 0.6 metres above ground and in some cases over 1.6 metres above ground. Although the tram did not require a building permit from the SCRD, the tram is considered a structure that is subject to the siting and setback provisions of the LUB and currently it contravenes two separate setback requirements. Planning and Bylaw Enforcement staff conducted a site visit in 2018 to examine the siting and size of the existing buildings and structures.

The location of the subject property is shown in figure 1 below.

Figure 1: Subject Property Map



The Islands Trust has received correspondence from the owner of Strata Lot 2B not in support of the draft variance. Bylaw enforcement staff have received correspondence from the owner of Strata Lot 1 not in support of the siting of the tram. No engineering or geotechnical reports were submitted as part of the DVP application to support the siting of the structure. The Sea Ranch Strata Corporation has not provided formal correspondence regarding the Strata Council's acceptance of the siting of the tram over limited common and common property, nor evidence they were consulted on the siting of the tram over common property prior to the construction.

ANALYSIS

Policy/Regulatory

Attachment 2 addresses the site context in greater detail, including reference to Islands Trust policies and Gambier Island local bylaws; however, the following is a summary:

- The subject property is designated Settlement Residential (SR) under the Official Community Plan (OCP), and the proposed development is generally compatible with the objectives of this OCP designation;
- The subject property is neither within a Development Permit Area, Environmentally Sensitive Area, nor within the Hazard Lands Area;
- The subject property is zoned Comprehensive Development 1 (CD-1) under the (LUB);
- The applicant is requesting a relaxation to LUB regulation 3.3(1), in order to reduce the natural boundary of the sea setback from a minimum of 15 metres to: a minimum of 6.5 metres for a proposed tram structure, and a minimum of 0.0 metres for the common property lot lines;
- The applicant is requesting a relaxation to the LUB regulation 5.22.8.a), in order to reduce the REAR setback from a minimum of 7.5 metres to 3.7 metres for the existing utility shed attached to the proposed cabin.
- The existing tram is at variance with three policies in the Gambier Island Official Community Plan (OCP):

3.1 Criteria for determining land and foreshore use:

v) 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;

viii) land disturbance, site clearing, or road building that is detrimental to the use or enjoyment of properties or to the environment should be kept to a minimum in any land development;

3.7 General Land Use Policies

The zoning regulations should establish setbacks for buildings and structures, in accordance with good planning practices, from:

iii. the sea...to maintain a view of the coastline that is rural in character and relatively pristine in appearance.

Issues and Opportunities

Siting of the Utility Shed:

All structures on Strata Lot 2A must be set back 7.5 metres from the strata lot lines that mark the boundary with common property including limited common property. Although in 2013 an Islands Trust building permit referral noted a requirement of 2.5 metres, the 7.5 metre setback should have been applied in this case. Because the shed portion of the dwelling is attached to the rest of the dwelling, it is considered to be one building. The shed is larger than what is shown on the 2013 building permit plans. This proposed variance request for the utility shed appears to be minor in nature. The maximum floor area for the single family dwelling, including roofed exterior spaces, decks does not appear to exceed the 275 square metre maximum permitted in the CD-1 zone. Staff support the requested variance for the siting of the existing utility shed attached to the dwelling under construction.

Siting of the Tram Structure:

The existing tram is:

- sited within 6.5 metres of the natural boundary of the sea where 15 metres is required; sited across limited common property and common property and within 100 metres of two recorded archaeological sites.
- over 0.6 metres in height above the natural grade of the sloped landscape and visible from the foreshore. Neighbours assert the siting impedes safe access to Strata Lot 1B as it crosses above a pedestrian stairway with inadequate clearance. Planning and Bylaw enforcement staff conducted a site visit in 2018 and verify that the tram was constructed over the access staircase to Strata Lot 1B with inadequate clearance.
- sited in the absence of any formal Strata Council approvals, engineering or geotechnical assessments or supporting documentation.

Access to the lot is secured through strata common property and limited common property along the front and rear of the strata lot. Despite sloped topography of the strata lots in this portion of the Sea Ranch property, access is from the Common Property driveway along the foreshore is by way of pedestrian trails and staircases. The tram is obstructive to pedestrian access, potentially dangerous, visible from the foreshore and inconsistent with the rural character of the adjacent recreational properties. Staff do not support the requested variance for the siting of the tram in proximity of the natural boundary of the sea, across common property or limited common property.

Consultation

No Community Information Meeting is required or recommended for this application. Public notice of the proposed Development Variance Permit is required under the *Local Government Act*. Notice was distributed to neighbouring property owners (Attachment 1) in accordance with statutory requirements and in order for neighbouring property owners to make additional comments for consideration by the Gambier Island Local Trust Committee.

One piece of correspondence been received at the time of preparing this report not in support of the requested variance. Additional correspondence may be received before or during the LTC meeting on November 21, 2019. All correspondence received on or before the LTC meeting will form part of the public record and will be considered by the Gambier Island Local Trust Committee.

Rationale for Recommendation

As noted on Page 1 of the report, staff recommend that the draft variance permit be amended, under the following rationale:

- The proposed development appears to be contrary to at least three policies in the Gambier OCP;
- The proposed tram appears to be over the maximum permitted height, inconsistent with the island's rural character and impedes safe public access to an adjacent Strata Lot. Although the potential impact on the natural environment appears to be minimal, the structure is visible from the foreshore and inconsistent with the rural character of this area of Gambier Island.

ALTERNATIVES

1. Approve the draft permit as presented.

The LTC may approve the permit as presented.

Resolution: *“That the Gambier Island Local Trust Committee issue GM-DVP-2019.2 (Werkema).”*

2. Defer consideration - request the applicant submit additional information.

The LTC may request that the applicant supply supporting information pertaining to the geotechnical or engineering aspects of the existing tram prior to consideration of the DVP.

Resolution: *“That the Gambier Island Local Trust Committee request the applicant for GM-DVP-2019.2 (Werkema) provide the LTC with the following information (specify request) prior to the LTC consideration of the application.”*

3. Not issue the permit.

The LTC may deny all the requested variances. If this alternative is selected, the LTC should state the reasons for denial.

Resolution: *“That the Gambier Island Local Trust Committee not issue GM-DVP-2019.2 for the following reasons [note specific reasons].”*

NEXT STEPS

If the LTC concurs with the staff recommendations, the applicant will be advised to remove the portions of the unauthorized tram structure so that it is consistent with the LUB siting regulations.

Submitted By:	Sonja Zupanec, RPP, MCIP Island Planner	November 12, 2019
Concurrence:	Heather Kauer, RPP, MCIP, AICP Regional Planning Manager	November 12, 2019

ATTACHMENTS:

1. Site Context
2. Public Notice and Proposed Permit

 Islands Trust	NOTICE GM-DVP-2019.2 – WERKEMA GAMBIER ISLAND LOCAL TRUST COMMITTEE
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NOTICE is hereby given that the Gambier Island Local Trust Committee will be considering a resolution allowing for the issuance of a Development Variance Permit, pursuant to Section 498 of the *Local Government Act*, varying the Gambier Island Land Use Bylaw No. 86, 2004, in general terms, as follows:

- The minimum setback to the natural boundary of the sea would be varied from the required 15.0 metres to 6.5 metres to permit the siting of an existing aerial tram from Strata Lot 2A down to the foreshore passing through Limited Common Property and ending on Common Property abutting the natural boundary of the sea.
- The minimum setback to the front lot line of Strata Lot 2A would be varied from the required 7.5 metres to 0.0 metres to permit the siting of an existing tram over the Limited Common Property and Common Property adjacent to Strata Lot 2A.
- The minimum setback to the rear lot line of Strata Lot 2A would be varied from the required 7.5 metres to 3.7 metres to permit the siting of an existing utility shed attached to the dwelling.

The property is legally described as:

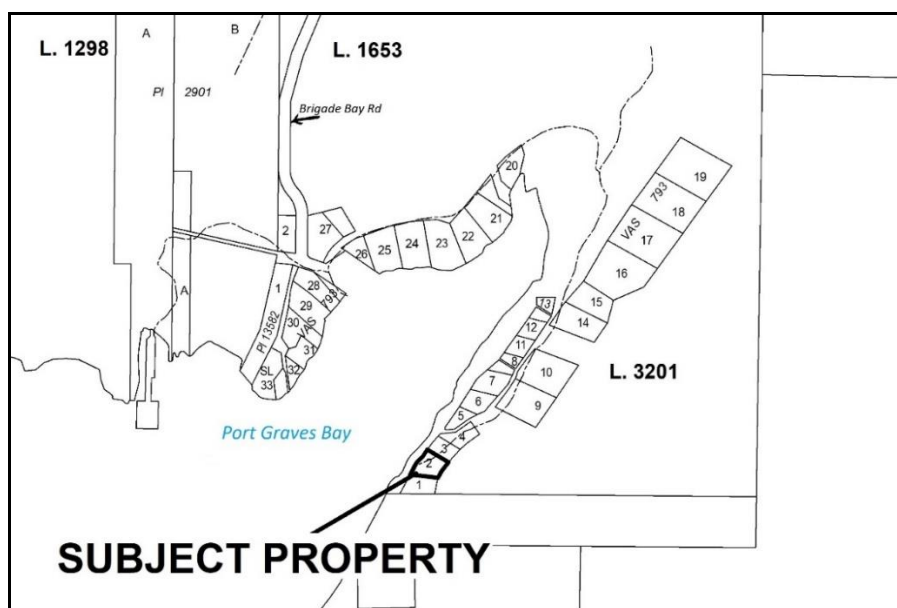
AS TO AN UNDIVIDED $\frac{1}{2}$ INTEREST

PID 003-460-011

STRATA LOT 2, DISTRICT LOTS 1258, 1653 AND 3201 STRATA PLAN VR 793

TOGETHER WITH AN INTEREST IN THE COMMON PROPERTY IN PROPORTION TO THE UNIT ENTITLEMENT OF THE STRATA LOT AS SHOWN ON FORM 1

The general location of the subject area is shown in the following sketch:



A copy of the proposed Permit may be inspected at the Islands Trust Northern Office, 700 North Road, Gabriola Island, BC, V0R 1X3, between the hours of 8:30 am and 4:00 pm, Monday to Friday inclusive, excluding Statutory Holidays, commencing **November 7, 2019** and continuing up to and including **November 20, 2019**.

If you have any questions or comments regarding the proposed Permit, please contact Sonja Zupanec, Island Planner, at 250-247-2211; for Toll Free Access, request a transfer via Enquiry BC: in Vancouver 604-660-2421 and elsewhere in BC at 1-800-663-7867.

Written submissions should be sent to: **Mail:** Islands Trust, 700 North Road, Gabriola, BC V0R 1X3;
Fax: 250-247-7514 or **Email:** szupanec@islandstrust.bc.ca

Following the end of the notice period, the Gambier Island Local Trust Committee may consider issuance of the proposed Permit at its Regular Business Meeting to be held at 4:30 pm, Thursday, November 21, 2019, at Delbrook Community Centre, Oak Room, 851 West Queens Road, North Vancouver, BC

All applications are available for review by the public. Written comments made in response to this notice will also be available for public review.

Becky McErlean
Deputy Secretary

DRAFT



Islands Trust

GAMBIER ISLAND LOCAL TRUST COMMITTEE

DEVELOPMENT VARIANCE PERMIT

GM-DVP-2019.2

TO: KLAAS WERKEMA AND CHRISTINE WERKEMA

1. This Development Variance Permit applies to the land described below:

AS TO AN UNDIVIDED ½ INTEREST

PID: 003-460-011

STRATA LOT 2, DISTRICT LOTS 1258, 1653 AND 3201 STRATA PLAN VR 793

TOGETHER WITH AN INTEREST IN THE COMMON PROPERTY IN PROPORTION TO THE UNIT ENTITLEMENT OF THE STRATA LOT AS SHOWN ON FORM 1

2. Pursuant to Section 498 of the *Local Government Act*, the *Gambier Island Land Use Bylaw No. 86, 2004* is varied as follows:

- a) **PART 3 – GENERAL REGULATIONS, Section 3.3 Siting and Setback Regulations, Subsection 3.3 (1):** “No building or structure shall be sited within 15 metres of the natural boundary of the sea, lake, wetland or watercourse, or constructed with the underside of any floor system or the top of any pad supporting any space or room that is used for dwelling purposes, business or the storage of goods less than 1.5 metres above the natural boundary of the sea, lake or watercourse unless otherwise provided for in this Bylaw.”
- Is varied from the required 15.0 metres to 6.5 metres to permit the siting of an existing aerial tram from Strata Lot 2A down to the foreshore passing through Limited Common Property and ending on Common Property abutting the natural boundary of the sea, as shown on the site plan in Schedule “A” dated June 11, 2019 attached to and forming part of this permit.
- b) **PART 5 – ZONE REGULATIONS, Section 5.22 Gambier Island Sea Ranch Comprehensive Development 1 (CD1) Zone, Subsection 5.22(8)(a):** “The minimum setback for any building or structure from a strata lot line is (a) 7.5 metres from any front or rear strata lot line;”
- Is varied from the required 7.5 metres to 0.0 metres to permit the siting of an existing tram over the Limited Common Property and Common Property adjacent to Strata Lot 2A, as shown on the site plan in Schedule “A” dated June 11, 2019 attached to and forming part of this permit.
- c) **PART 5 – ZONE REGULATIONS, Section 5.22 Gambier Island Sea Ranch Comprehensive Development 1 (CD1) Zone, Subsection 5.22(8)(a):** “The minimum setback for any building or structure from a strata lot line is (a) 7.5 metres from any front or rear strata lot line;”
- Is varied from the required 7.5 metres from the rear strata lot line to 3.7 metres to permit the siting of an existing utility shed connected to the dwelling on Strata Lot 2A, as shown on the site plan in Schedule “A” dated June 11, 2019 attached to and forming part of this permit.

3. All buildings and structures shall be consistent with Schedule "A" which is attached to and form part of this permit. This permit is not a building permit and does not remove any obligation on the part of the permittee to comply with all other requirements of the *Gambier Island Land Use Bylaw No. 86, 2004* including use and density, and to obtain other appropriate approvals necessary for completion of the proposed development.

AUTHORIZING RESOLUTION PASSED BY THE GAMBIER ISLAND LOCAL TRUST COMMITTEE THIS ____ DAY OF _____, 2019.

Deputy Secretary, Islands Trust

Date of Issuance

IF THE DEVELOPMENT DESCRIBED HEREIN IS NOT COMMENCED BY THE ____ DAY OF _____ 2021, THIS PERMIT AUTOMATICALLY LAPSES.

24

ATTACHMENT 1 – SITE CONTEXT – GM-DVP-2019.2 (WERKEMA)

LOCATION

Legal Description	AS TO AN UNDIVIDED ½ INTEREST STRATA LOT 2, DISTRICT LOTS 1258, 1653 AND 3201 STRATA PLAN VR 793 TOGETHER WITH AN INTEREST IN THE COMMON PROPERTY IN PROPORTION TO THE UNIT ENTITLEMENT OF THE STRATA LOT AS SHOWN ON FORM 1
PID	003-460-011
Civic Address	1310 Sea Ranch Shoreline, Gambier Island
Lot Size	0.18 hectares (0.44 acres)

LAND USE

Current Land Use	Recreational, Residential
Surrounding Land Use	Recreational, Residential



FIGURE 1. 2014 ORTHOPHOTO OF SUBJECT PROPERTY (SHOWN IN YELLOW).



FIGURE 2. 2017 SCRD MAPPING ORTHOPHOTO OF SUBJECT PROPERTY (SHOWN IN YELLOW).



Figure 3. Existing Tram Structure

HISTORICAL ACTIVITY

File No.	Purpose
GM-DVP-2002.4	Variance to permit a secondary dwelling larger than bylaw permits
GM-DVP-2009.3	Variance to permit a secondary dwelling larger than bylaw permits
GM-BP-2013.7	Building Permit application showing utility shed, decks, hillside elevator
GM-RZ-2013.2	Rezoning to amend the CD-1 zone
GM-BE-2013.7	Bylaw Enforcement
GM-SUB-2018.1	Subdivision of 33 Strata Lots into A and B portions
GM-BE-2018.2	Bylaw Enforcement
GM-BP-2019.2	Construction of a single family dwelling.
GM-DVP-2019.2	Variance to permit siting of existing tram and utility shed

POLICY/REGULATORY

Official Community Plan Designations	<i>Land Use Designation: SR – Settlement Residential</i> <i>Development Permit Area: None</i> <i>Relevant OCP policies include:</i> 3.1 Criteria for determining land and forshore use: v) 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; viii) land disturbance, site clearing, or road building that is detrimental to the use or enjoyment of properties or to the environment should be kept to a minimum in any land development; 3.7 General Land Use Policies <i>The zoning regulations should establish setbacks for buildings and structures, in accordance with good planning practices, from:</i> <i>iii. the sea...to maintain a view of the coastline that is rural in character and relatively pristine in appearance.</i>
Land Use Bylaw	Zone: CD-1 (Comprehensive Development 1) Relevant LUB regulations include: PART 3 – GENERAL REGULATIONS, Section 3.3 Siting and Setback Regulations, Subsection 3.3 (1): “No building or structure shall be sited within 15 metres of the natural boundary of the sea, lake, wetland or watercourse, or constructed with the underside of any floor system or the top of any pad supporting any space or room that is used for dwelling purposes, business or the storage of goods less than 1.5 metres above the natural boundary of the sea, lake or watercourse unless otherwise provided for in this Bylaw.” PART 5 – ZONE REGULATIONS, Section 5.22 Gambier Island Sea Ranch Comprehensive Development 1 (CD1) Zone, Subsection 5.22(8)(a): “The minimum setback for any building or structure from a strata lot line is (a) 7.5 metres from any front or rear strata lot line;”

Other Regulations	None
Covenants	Not applicable
Bylaw Enforcement	Open file GM-BE-2018.2 and 2013.7

SITE INFLUENCES

Islands Trust Conservancy	This proposal does not directly affect an Islands Trust Conservancy Board (ITC)-owned property or conservation covenant, nor directly affects a property adjacent to an ITC-owned property or conservation covenant. Therefore referral to ITC for comment is not required.
Regional Conservation Strategy	The Islands Trust Conservancy - Regional Conservation Plan 2018-2027 identifies this area of Gambier Island as medium priority for conservation. There are currently no protected areas within close proximity to the subject property.
Species at Risk	None mapped
Sensitive Ecosystems	None mapped
Hazard Areas	The Gambier OCP does not designate this area as a steep slope or hazardous development permit area.
Archaeological Sites	Remote Access to Archaeological Data (RAAD) mapping indicates two known archaeological sites within 100 metres of the subject property. Notwithstanding the foregoing, and by copy of this report, the owners and applicant should be aware that there is still a chance that the lot may contain previously unrecorded archaeological material that is protected under the <i>Heritage Conservation Act</i> . If such material is encountered during development, all work should cease and Archaeology Branch should be contacted immediately as a <i>Heritage Conservation Act</i> permit may be needed before further development is undertaken. This may involve the need to hire a qualified archaeologist to monitor the work.
Climate Change Adaptation and Mitigation	Site clearing, including vegetation removal, and construction of the existing and proposed buildings are anticipated to result in associated greenhouse gas emissions. Authorizing the siting of the tram and associated platform infrastructure as close as 6.5 m from the natural boundary of the sea in this location may be inconsistent with Provincial Flood Hazard Area Land Use Management Guidelines require local governments to incorporate sea level rise into the determination of building setbacks and flood construction levels in coastal areas. Setbacks are to be determined based on the year 2100 natural boundary of the sea (incorporating projected sea level rise). The LUB setbacks have not been reviewed against the 2018 provincial guidelines and no coastal engineering or professional verification as to the associated risks in this location have been provided to support this application.
Shoreline Classification	Boulder, cobble beach
Shoreline Data in TAPIS	Boulder, cobble beach

MEMORANDUM

File No.: GM-BP-2019.8
(X-REF GM-BP-2019.23 and GM-SUB-02-2000)

DATE OF MEETING: November 21, 2019
TO: Gambier Island Local Trust Committee
FROM: Bronwyn Sawyer, Planner 2
Northern Team

SUBJECT: Maps for GM-BP-2019.8 and background information from GM-SUB-02-2000

PURPOSE

The purpose of this memorandum is to provide the Gambier Island Local Trust Committee (LTC) with maps that were requested at the October 10th, 2019 LTC meeting and to offer additional background to assist the LTC in their review of Section 4.4.10 of the Keats Island Land Use Bylaw, 2002 and how it pertains to GM-BP-2019.23. A full review and comparison of the various bylaws in effect at the time (between 2000 and 2006) has not been done.

On October 10, 2019, the Gambier Island Local Trust Committee (LTC) passed the following motion:

GM-2019-045

It was MOVED and SECONDED

that the Gambier Island Local Trust Committee move that this matter be deferred to next Local Trust Committee meeting, and that a more detailed map be provided for the Local Trust Committee showing the trail connections.

Two maps were emailed to the LTC on October 17, 2019 and form Attachments 1 and 2 of this memorandum. Following the distribution of maps, Trustee Rogers travelled to the property by boat with a representative of the property owner to view the site of the proposed house development and to locate the trail.

BACKGROUND

The property in question was part of a two-lot strata subdivision application in 2000 (GM-SUB-02-2000). Staff found no documentation in the subdivision files indicating that two houses were contemplated on the subject strata lot. A covenant was registered on the common property lot restricting future subdivision and residential use on that lot, however, that covenant does not apply to the lot associated with the building permit application currently being considered.

The applicant originally proposed two trails as part of the subdivision: one trail was to provide access for neighbours through an easement just upland of the homes, and the second was to provide a public trail right of way that would connect to Plumper Cove Provincial Park. Attachment 3 shows the proposed locations of these trails. In January of 2001, staff sent a referral form (Attachment 4) to the Ministry of Transportation and Infrastructure (MOTI) indicating that the LTC supported both the upper and lower trail.

The subdivision file includes an unsigned staff report to the LTC dated October 25, 2002 (Attachment 5) indicating that the subdivision applicant was requesting that the LTC communicate to MOTI that they no longer supported the lower easement. The LTC at that point appears to have asked staff to send a letter to the affected neighbouring properties to ask for their opinion on the easement and staff sent that letter on November 7, 2002 (Attachment 6). On December 4, staff reported back to the LTC (Attachment 7) on responses indicating that of the seven properties surveyed, responses from three of the properties were received. The three responses communicated that the property owners did not want to be a party to the easement.

The LTC appears to have taken the request of the applicant and the neighbour responses into consideration; on December 17, 2002, staff sent a revised referral form to MOTI (Attachment 8) indicating that the LTC, as a result of neighbour feedback, was reconsidering its recommendation for dedication of the lower easement. Ultimately, Islands Trust staff indicated to MOTI in a February 15, 2006 letter (Attachment 9) that the subdivision had met the requirements of the Gambier Local Trust Committee and the subdivision was registered.

Around the same time, staff was in communication with an adjacent property owner who appeared to have first-hand knowledge of trails on the property. In the subdivision file, there is a letter dated April 17, 2001 from this immediate neighbour stating “We have one long range plan to link the two existing skid roads as shown on the attached sketch so that it will form a more level route. The present trail...wanders downhill then back up to meet the skid road that runs around the back of the cove towards the Marine Park. The relocation will take considerable time, as there are many deadfalls to be cleared. I suggest that the trail easement be noted at this time and formalized at some later date when we have the final alignment work completed”. The author of the letter provided the suggested relocation of the trail as depicted in Attachment 3, labelled “Revised Trail Location (SROW)”. In a November 13, 2002 memo (Attachment 10), staff asked the LTC if they wished to accept the revised trail location. While no documents were found in the files to confirm the LTC’s decision, it appears from the final registered covenant that the SRW aligns with the “Revised Trail Location (SROW)” indicated in Attachment 3.

As part of preparing for this memorandum, staff have contacted the Sunshine Coast Regional District (SCRD) parks planning staff to obtain information on whether there are any other statutory rights of way in the vicinity of the subject property. This would help to ascertain whether amending the location of the SRW would affect connection to SRWs on adjoining properties. As of the time of posting the agenda package, staff had not yet received a response.

Section 4.4.10 of the current LUB (Attachment 12) requires that “a...pedestrian trail right of way” be “dedicated.” This section does not state where that right of way must be located, nor does it specify that a trail must be constructed on the ground. It is management staff’s understanding that the LTC does not have the discretion to ask for amenities or conditions when considering building permit referrals.

SUMMARY

- Staff concludes that the 219 covenant that was registered on the common property lot of the 2002 subdivision is evidence that the possibility of future development was contemplated; however, there is no direct evidence that two homes were considered for either of the strata lots (a review of the bylaws in effect at the time has not been completed as part of this memorandum). Only the common property/remainder lot was subject to the covenant that prohibited further subdivision and residential use;
- The location of the SRW that was dedicated at time of subdivision appears to have been acceptable to the LTC at the time and accepted by the SCRD. That SRW covenant was approved by MOTI with the subdivision and remains on title currently (Attachment 11).

Submitted By:	Bronwyn Sawyer Planner 2	November 12, 2019
Concurrence:	Heather Kauer, RPP, MCIP, AICP Regional Planning Manager	November 13, 2019

ATTACHMENTS

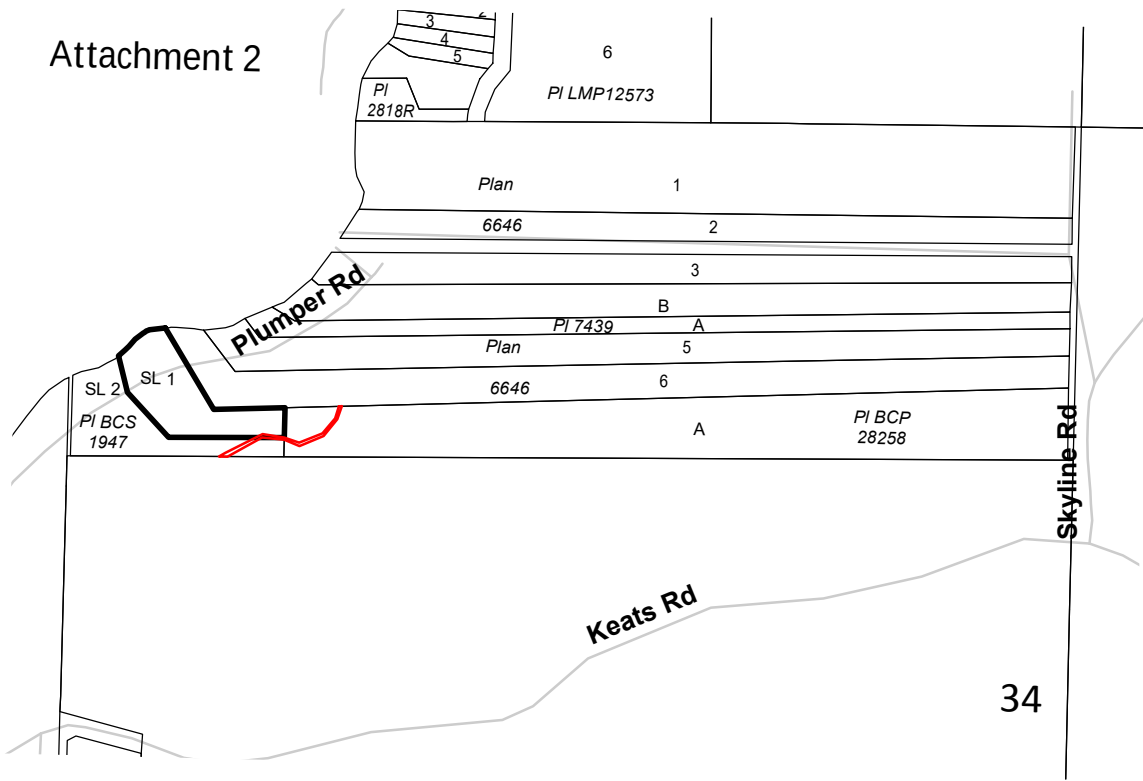
- Attachment 1 – Map of current statutory right of way (1)
- Attachment 2 – Map of current statutory right of way (2)
- Attachment 3 – Proposed Trail Plan dated August 13, 2003
- Attachment 4 – Initial referral letter to MOTI dated January 16, 2001
- Attachment 5 – Request for Release from Trail Easement unsigned staff report dated Oct. 25, 2002
- Attachment 6 - Letter to adjacent property owners date November 7, 2002
- Attachment 7 - Staff report on adjacent property owner responses dated December 4, 2002
- Attachment 8 - Revised referral letter to MOTI dated December 17, 2002
- Attachment 9 – Staff letter to MOTI indicated LTC requirements met
- Attachment 10 - Staff memo to LTC asking for consideration of revised SRW location dated Nov. 13, 2002
- Attachment 11 – Statutory right of way
- Attachment 12 – Keats Island Land Use Bylaw, 2002 Section 4.4.10

Attachment 1

-  statutory right of way
-  PID 026-953-412
-  Property Boundaries

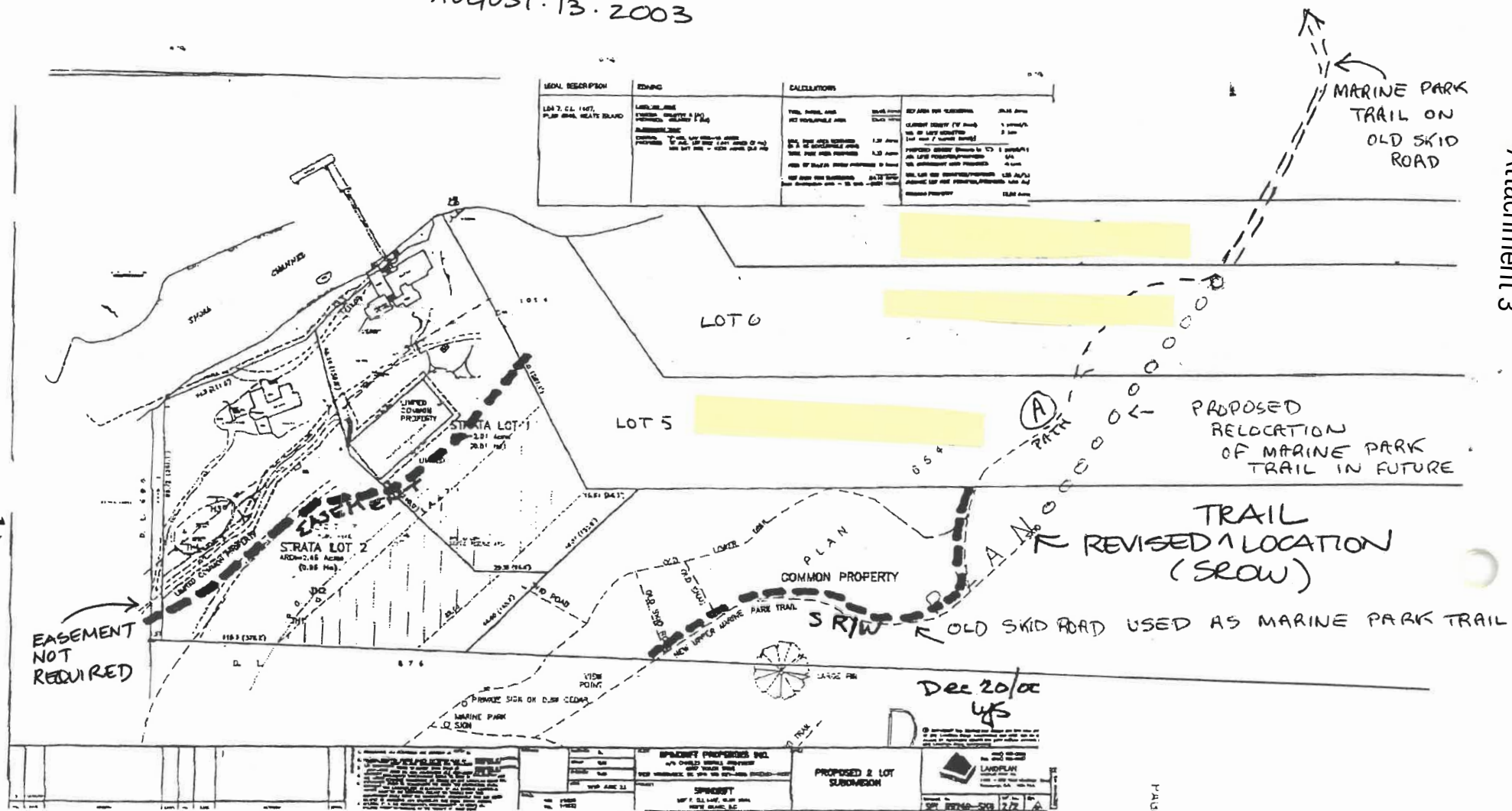


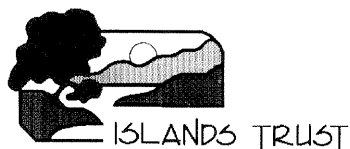
Attachment 2



REVISED TRAIL LOCATION
GM-SUB-02-2000
AUGUST. 13. 2003

Attachment 3





SUBDIVISION REFERRAL FORM

2nd Floor, 1627 Fort St.
Victoria, B. C., V8R 1H8
Phone: (250) 952-4182
Fax: (25) 952-4193
E-mail: info@islandstrust.bc.ca
WWW: http://www.islandstrust.bc.ca

TO: Jack F. Leighton
TITLE: District Development Technician

DATE: January 16, 2001
I.T. FILE NO.: GM-SUB-02-2000
FILE NUMBER: 01-005-14265

☐ COURTENAY	☐ PORT ALBERNI
☒ GIBSONS	☐ VICTORIA
☐ NANAIMO	☐ NORTH VANCOUVER

PROPOSED SUBDIVISION OF:

LEGAL DESCRIPTION:

Block 7, District Lot 1467, Plan 6646

SITE SIZE:

10.5 hectares (25.45 acres)

DETAILS OF PROPOSAL:

Subdivide (by Bare Land Strata) Block 7 into two lots and common property. Proposed Lots 1 & 2 are each proposed to be 1.0 ha (2.5 ac.) and common property 8.3 ha (20.4 acres).

RELEVANT COMMUNITY PLAN POLICIES:

N/A

ZONING CLASSIFICATION:

Country 4 (A4)

DEVELOPMENT PERMIT AREA:

N/A

ZONING BYLAW NO.:

No. 96

SUBDIVISION BYLAW NO.:

No. 103

SUBDIVISION REGULATIONS:

Subdivision District B

MINIMUM PARCEL SIZE:

4.0 ha (10 acres)

WATER SUPPLY REQUIREMENTS:

Independent Supply – proof by a qualified person of a minimum year round independent potable water supply of 2000 litres (440.0 gallons) per day available on that parcel. Water source shall be at least 30 metres (98.44') from a sewage disposal field or property boundary.
Common Water Supply – each common water system shall be constructed in compliance with the Health Act and as a minimum to the standards of the Regional District, and shall be approved by the Regional District prior to construction.

10% FRONTAGE REQUIREMENT:

Meets the 10% frontage requirement.

5% PARK DEDICATION REQUIREMENTS:

N/A

ACCESS REQUIREMENTS UNDER SECTION 75.1 OF THE LAND TITLE ACT:

Road allowance exists between DL 696 and DL 1467

RECOMMENDATION OF THE PLANNER:

The Planner recommends approval provided that:

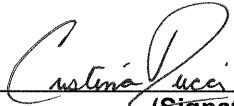
- The subdivision does not create any further non-conforming buildings or structures with respect to siting and density.
- There is compliance with all Gambier Island Local Trust Committee Bylaws.
- Proof that sewage disposal systems for both lots meet the provisions of B.C. Regulations pertaining to the sewage capacity of the parcel (Section 5.4 of Subdivision Bylaw No. 103).
- Proof that the common water supply system is constructed in compliance with the Health Act and as a minimum to the standards of the Regional District, and shall be approved by the Regional District prior to construction (Section 5.5.2 of

Bylaw No. 103). If the applicants choose to have independent water systems, then the approving officer shall require proof by qualified person of a minimum year round water supply of 2000 litres (440.0 gallons) per day available to that parcel.

- A covenant is registered on the common property to ensure that there is no residential development and no further subdivision. The applicant may have their own legal counsel draft the covenant, but the Islands Trust will have their legal counsel review the covenant at the applicants' expense. Islands Trust can provide an estimate of cost. Alternatively, the applicant can arrange to have Islands Trust legal counsel draft the covenant at the applicants' expense.

RECOMMENDATIONS OF THE GAMBIER LOCAL TRUST COMMITTEE:

- The Gambier Island LTC supports the location of a lower trail easement as outlined in the attached plan for the benefit of neighbouring property owners as per the proposal by the applicants.
- The Gambier Island LTC supports the location of the Upper Plumper Cove Trail. Islands Trust Planning staff will contact the SCRD to see if they are willing to hold the trail as a statutory right of way.


(Signature)

Name: CRISTINA RUCCI
Title: PLANNER

Copy to: Spindrift Properties Inc.
Bill Sievwright, Land Plan Group Inc.
Gambier Island Local Trust Committee
Keats Island Advisory Planning Group
Brodie Porter, Regional Planning Coordinator



STAFF REPORT

File No.: GM-SUB-02-2000

To: Gambier Island Local Trust Committee

From: Brodie Porter, Regional Planning Coordinator

*Oct 25/02
Telecon
Discussion*

Re: Request for Release from Trail Easement

Owner: Spindrift Properties Inc.
Applicant: LandPlan – Bill Sievwright
Location: Block 7, DL 1467, Plan 6646, Keats Island

Preliminary Report: ☒

Final Report: ☐

THE PROPOSAL:

The applicants are requesting that the Gambier Island Local Trust Committee advise the Ministry of Transportation that they no longer recommend a lower trail easement as part of this subdivision to benefit neighbouring property owners.

ISSUES SUMMARY:

In January, 2001 a response to a proposed two lot subdivision referral was given to the Ministry of Transportation. In the referral response the Gambier Island Local Trust Committee recommended support for the location of a lower trail easement as outlined on the attached plan for the benefit of neighbouring property owners. This was a proposal from the applicants after discussions with the local trust committee.

The applicant's agent has now advised that the neighbours were canvassed again and they were unanimous in their opposition to a registered easement and were satisfied with the current informal arrangements for access.

STAFF COMMENTS:

There is no legal authority for the Local trust Committee to require that the trail be dedicated. The discussions to date have resulted from voluntary considerations by the applicants. While planning for trail routes is advocated to address access and recreational interests, such acquisition should only be secured through subdivision requirements or through voluntary donation by the applicants. The only other basis for dedication of the trail would be if the Approving Officer was of the opinion that such dedication was in the public interest and such interest was paramount to the actual subdivision. No such position has been established by the Approving Officer. It should be noted that an upper trail is still part of the subdivision proposal.

Staff Report

The Islands Trust has not undertaken an independent review of neighbour's opinion on the proposed trail.

OPTIONS:

1. That the recommendation of the Gambier Island Local Trust Committee for a lower trail easement as outlined on the attached plan be rescinded as a requirement of subdivision in response to the opinions of the neighbours; or
2. That Islands Trust staff be directed to secure opinion from the neighbours regarding the proposed lower trail easement as outlined on the attached plan for the information of the Local Trust Committee; or
3. The Local Trust Committee uphold its original recommendations

RECOMMENDATIONS:

Option 1 is recommended if the general consensus is that the trail dedication is not supported.

Respectfully submitted by:

Name

Date

K:\LTC\GAMBIER\APPLICAT\SUB\sub-02-00 trail.doc

Attachment 6

November 7, 2002

File Number: GM-SUB-02-2000

Neighbours of Proposed Sprindrift 2 Lot Subdivision
(Lot 7, DL1467, Plan 6646)
Keats Island BC

Dear Neighbours of Proposed Sprindrift Subdivision:

Re: Sprindrift Subdivision Private Access Easement

The Gambier Island Local Trust Committee is seeking your opinion regarding a proposed private access easement across proposed strata lots 1 & 2 within the "Sprindrift" subdivision (Lot 7, DL1467, Plan 6646). The proposed location of the private access easement is shown on the attached plan (labeled 'lower easement').

The subdivision applicant has requested the Local Trust Committee to advise the Approving Officer that it no longer recommends this private access easement. The Trust Committee is of the opinion that a formal easement should be registered on proposed strata lots 1 and 2 to secure long-term access by owners of the neighbouring properties. The Trust Committee has been advised by the applicant that neighbours may not wish this formality.

The Trust Committee is concerned that future lot owners may not be as successful with current informal arrangements for access across Lot 7 as you may be, and is therefore maintaining its recommendation to Highways at this time. The Trust Committee is willing to re-examine its recommendation on the 'lower easement' but requires neighbourhood input in order to do so.

For your information the proposal is for a private access easement (the 'lower easement') over proposed strata lots 1 and 2 to the benefit of specific properties. A public trail right-of-way is not being proposed across these proposed strata lots. A public trail right-of-way is being proposed over the common property in the general location of the traditional trail to the marine park (labeled S R/W).

A plan is attached showing the properties that this letter has been sent to. Your written response to the above address or by email to fadams@islandstrust.bc.ca by the end of November 2002 would be greatly appreciated. If you require further

Neighbours of Proposed Sprindrift Subdivision
November 7, 2002

information please contact me at 250-753-7211 (toll-free via Enquiry BC at 604-660-2421 or 1-800-663-7867) or the applicant Bill Sieviewright at 604-682-2122.

Sincerely,

Felicity Adams
Senior Planner

Attachments: - Plan showing proposed easement location on proposed strata
 lots 1 & 2
 - Plan showing properties this letter sent to

pc: Gambier Island Local Trust Committee
 Bill Sieviewright, P. Eng., LandPlan Group Inc. (applicant)

STAFF REPORT

December 4, 2002

File No.: GM-SUB-02-2000

To: Gambier Island Local Trust Committee

From: Felicity Adams, Senior Planner

CC: Brodie Porter, Regional Planning Coordinator

Re: Spindrift Subdivision – Lower Easement

Owner: Spindrift Properties Inc.

Applicant: LandPlan Group Inc. – Bill Sievwright

Location: Plumper Cove, Keats Island

Preliminary Report:

☐

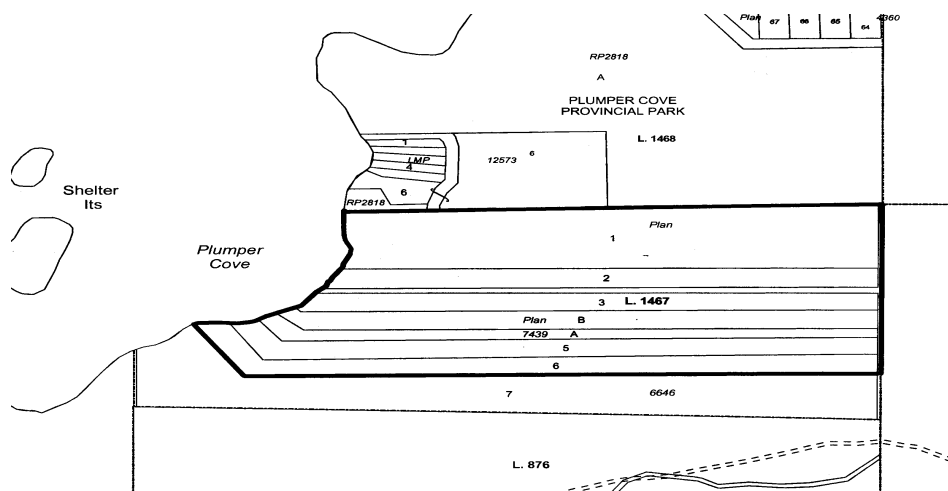
**Supplementary
Report:**

☒

This report follows a staff report reviewed by the Local Trustee Committee during a telephone discussion on October 25, 2002.

ISSUES SUMMARY:

The Local Trustees requested that staff communicate with the property owners that would be the beneficiary of the private easement over Block 7 to ensure that there was full understanding of the proposal. Letters were mailed on November 7, 2002 with written response requested by the end of November 2002. Letters were sent to the owners of the properties included in the outline shown below.



RESULTS OF THE CIRCULATION:

Correspondence was received as follows:

Lot	Number of Owners	Responses
Block 1	2	
Block 2	2	no x 2
Block 3	2	no x 2
Block 4, Lot A	2	
Block 4, Lot B	3	
Block 5	1	
Block 6	4	no - for family

Comments are as follows:

- See no need for a private access easement, we operate under a code of mutual trust.
- Satisfied with the current arrangements.
- Private access easement is unnecessary; current arrangement has worked for 50 years or so.

STAFF COMMENTS:

The proposed location of the private easement was reviewed at a site visit held on November 26, 2002. The proposed easement would be registered in a location above an existing tennis court to allow for private access at some future time but would not be constructed at this time. The informal trail used currently is in a different location, and as noted in a letter from the adjacent property owner it "travels between cottages, through yards and along the shoreline in places".

RECOMMENDATION:

While the private access easement is desirable to protect the future public interest, the Local Trust Committee may wish to reconsider its recommendation to the Provincial Approving Officer as the neighbours' opinion is that there is no need for a formal private trail easement.

Respectfully submitted by:

Felicity Adams, MCIP
Name

Senior Planner

December 4, 2002
Date



ISLANDS TRUST

Attachment 8
**SUBDIVISION
 REFERRAL FORM**

Suite 200 - 1627 Fort St.
 Victoria, B. C., V8R 1H8
 Phone: (250) 405-5151
 Fax: (250) 405-5155
 information@islandstrust.bc.ca
 www.islandstrust.bc.ca

TO: David Lee-Young
 TITLE: Sr. District Development Technician

DATE: December 17, 2002
 I.T. FILE NO.: GM-SUB-02-2000
 FILE NUMBER: 1-5-14265

☐ COURTENAY ☐ PORT ALBERNI
☐ GIBSONS ☐ VICTORIA
☐ NANAIMO ☐ NORTH VANCOUVER

☒ NEW WESTMINSTER

PROPOSED SUBDIVISION OF:

LEGAL DESCRIPTION:

Block 7, District Lot 1467, Plan 6646

SITE SIZE:

DETAILS OF PROPOSAL:

Trail location and private access easement - supplemental review.

RELEVANT COMMUNITY PLAN POLICIES:

ZONING CLASSIFICATION:

DEVELOPMENT PERMIT AREA:

ZONING BYLAW NO.:

SUBDIVISION BYLAW NO.:

SUBDIVISION REGULATIONS:

MINIMUM PARCEL SIZE:

WATER SUPPLY REQUIREMENTS:

10% FRONTAGE REQUIREMENT:

5% PARK DEDICATION REQUIREMENTS:

ACCESS REQUIREMENTS UNDER SECTION 75.1 OF THE LAND TITLE ACT:

RECOMMENDATION OF THE ISLAND LOCAL TRUST COMMITTEE:

FURTHER TO THE RECOMMENDATIONS DATED JANUARY 16, 2001.

TRAIL LOCATION:

THAT THE GAMBIER ISLAND LOCAL TRUST COMMITTEE ACCEPT THE REVISED LOCATION OF THE UPPER PLUMPER COVE TRAIL ACROSS LOT 7, DL 1467, PLAN 6646 AS SHOWN ON THE ATTACHED PLAN LABELLED 'REVISED TRAIL LOCATION'.

LOWER EASEMENT:

THAT WHILE THE PRIVATE ACCESS EASEMENT ACROSS THE SPINDRIFT SUBDIVISION IS DESIRABLE TO PROTECT THE FUTURE PUBLIC INTEREST, THE ADJACENT PROPERTY OWNERS ARE NOT INTERESTED IN HOLDING THE ACCESS EASEMENT AND HAVE INDICATED TO THE TRUST COMMITTEE THAT THERE IS NO NEED FOR A FORMAL PRIVATE EASEMENT, THEREFORE THE LOCAL TRUST COMMITTEE RECONSIDERS ITS RECOMMENDATION TO THE PROVINCIAL APPROVING OFFICER FOR A LOWER TRAIL EASEMENT.

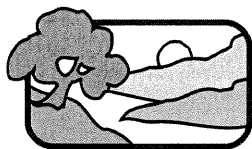
PLANNER COMMENTS:

ONLY 1 TRAIL RIGHT OF WAY IS REQUIRED IN THE LOCATION SHOWN ON THE ATTACHED PLAN.


(Signature)

Name: Felicity Adams
Title: Senior Planner

Copy to: Bill Sievwright, LandPlan Group (applicant)
Judy Skogstad, Director of Planning, Sunshine Coast Regional District



Islands Trust

Fax Memorandum

700 North Road Gabriola Island BC V0R 1X3

Telephone (250) 247-2063 FAX: (250) 247-7514

Toll Free via Enquiry BC in Vancouver 660-2421. Elsewhere in BC 1.800.663.7867

northinfo@islandstrust.bc.ca www.islandstrust.bc.ca

FAXED

File: GM-SUB-2000.2

Date February 15, 2006

From Felicity Adams, MCIP, Senior Planner

To Terry Christie

Of Northern Office

Of Ministry of Transportation

Telephone (250) 247-2203

Fax 604. 740-8988

Fax (250) 247-7514

E-Mail fadams@islandstrust.bc.ca

Number of Pages (including cover page) 1

Re Spindrift, Keats Island (MOT File No. 1-5-14265)

Further to Item #2 in your PLA for the above noted file dated 2001/11/08, I am writing to advise that the requirements of the Gambier Island Local Trust Committee dated January 16, 2001 and supplementary comments dated December 17, 2002 have been satisfied.

Please ensure that the SRW to be held by SCRD for the upper trail is registered.

A restrictive covenant regarding the common property (no build, no subdivision) is to be registered against Lot A, District Lot 1467, Group 1, New Westminster District, Plan BCP1659, Keats Island. This covenant has been executed by the parties and we have a solicitor's undertaking regarding registration.

✓ cc Bill Sievwright, Applicant

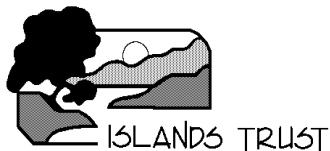
604 682 2087. Fax.

k:\lrc\northern gambier\applications & referrals\subdivision referrals\2000\gm-sub-02-2000\fax final sign off.doc

Preserving *island* communities, culture and environment

Bowen, Denman, Hornby, Gabriola, Galiano, Gambier, Lasqueti, Mayne, N. Pender, Salt Spring, Saturna, S. Pender, Thetis

STATEMENT OF CONFIDENTIALITY: The Information in this facsimile transmission is intended only for the person or entity named above, and may contain information that is privileged, confidential and exempt from disclosure. If you have received this facsimile in error and are not the named recipient please notify us by telephone at the number listed on this cover sheet immediately and/or return the original message to us at the above address via the Canadian Postal Service. You are hereby notified that any dissemination, distribution, copying or other use of the communication or the information contained herein is strictly prohibited. Thank you.



Attachment 10

Fax Memorandum

VICTORIA OFFICE
SUITE 200, 1627 FORT STREET
information@islandstrust.bc.ca
www.islandstrust.bc.ca

VICTORIA, BC, V8R 1H8
PH: (250) 405-5151
FAX: (250) 405-5155

Toll Free: (Through Enquiry B.C.): 1-800-663-7867

"PRESERVING THE TRUST AREA SINCE 1974"

Date: November 13, 2002

File No.:

GM-SUB-02-2000

☐

CONFIRM RECEIPT

☐

CONFIDENTIAL

☐

URGENT

Original to Follow by Mail:

YES

☐

NO

☒

To: Gambier Island Local Trustees

From: Felicity Adams

Fax:

Title: Senior Planner

Phone: 1-250-753-7211

E-mail: fadams@islandstrust.bc.ca

CC:

We are transmitting 5 PAGE(S), including this page.

Re: Spindrift Subdivision - upper trail location

Attached is correspondence received from Trevor Roote dated April 17, 2002 in response to the subdivision referral completed by Islands Trust staff and copied to the APG and neighbouring property owners in January 2002. It appears that this letter was not copied to the Approving Officer.

Mr. Roote notes that the location of the upper trail is being changed to form a more level route (shown on the attached plan by open circles). He suggests that the trail right of way be noted but formalized at some later date when the final alignment work is completed.

The Local Trust Committee's recommendation to the Approving Officer dated January 16, 2002 is that "the Gambier Island LTC supports the location of the Upper Plumper Cove Trail" (as shown by the heavy dashed line on the attached plan).

Do you wish to accept the revised trail location suggested by Mr. Roote? If so, staff will advise the Approving Officer. A RWM is attached.

STATEMENT OF CONFIDENTIALITY: The Information in this facsimile transmission is intended only for the person or entity named above, and may contain information that is privileged, confidential and exempt from disclosure. If you have received this facsimile in error and are not the named recipient please immediately notify us by telephone at the number listed on this cover sheet immediately and/or return the original message to us at the above address via the Canadian Postal Service. You are hereby notified that any dissemination, distribution, copying or other use of the communication or the information contained herein is strictly prohibited. Thank you.

Status: Registered

Doc #: BA302860

RCVD: 2006-07-14 RQST: 2017-10-23 14.16.07

**LAND TITLE ACT
FORM C**

14 JUL 2006 14:35

BA302860

(Section 181(1))

Province of

British Columbia

GENERAL INSTRUMENT - PART 1

(This area for Land Title Office use)

Page 1 of 9 pages

1. APPLICATION: (Name, address, phone number and signature of applicant, applicant's solicitor or agent)

Kuhn & Company, Legal Counsel
#300-31935 South Fraser Way
Abbotsford, B.C. V2T 9J6 (604) 864-8877



signature of applicant, applicant's solicitor or agent

2. PARCEL IDENTIFIER(S) AND LEGAL DESCRIPTION(S) OF LAND: *

(PID)

NPA

(LEGAL DESCRIPTION)

Strata Lots 1, 2 and Part of the Common Property, D.L. 1467 Gp 1 NWD Strata Plan
BCS 1947

3. NATURE OF INTEREST: *

DESCRIPTION

DOCUMENT REFERENCE

(page and paragraph)

Entire Document

PERSON ENTITLED TO INTEREST

Section 218 Statutory Right
Of Way over Part Shown on
Plan BCP 24870

Sunshine Coast Regional District

4. TERMS: Part 2 of this instrument consists of (select one only)

(a) Filed Standard Charge Terms

☐ D.F. No.

(b) Express Charge Terms

☒ Annexed as Part 2

(c) Release

☐ There is no Part 2 of this instrument

A selection of (a) includes any additional or modified terms referred to in Item 7 or in a schedule annexed to this instrument. If (c) 06/02/00, 04/30/00, 03/01/00 in Item 719279

3 is released or discharged as a charge on the land described in item 2.

CHARGE

\$65.20

5. TRANSFEROR(S):*

SPINDRIFT PROPERTIES (KEATS) INC. (Inc. No. 417834)

THE OWNERS, STRATA PLAN BCS 1947

6. TRANSFEREE(S): (including postal address(es) and postal code(s))*

SUNSHINE COAST REGIONAL DISTRICT, 5477 Wharf Road, Box 800, Sechelt, British Columbia, V0N 3A0

7. ADDITIONAL OR MODIFIED TERMS:*

N/A

8. EXECUTION(S):** This instrument creates, assigns, modifies, enlarges, discharges or governs the priority of the interest(s) described in Item 3 and the Transferor(s) and every other signatory agree to be bound by this instrument, and acknowledge(s) receipt of a true copy of the filed standard charge terms, if any.

Execution Date

Officer Signature(s)

(as to all signatures of Spindrift Properties (Keats) Inc.)
DEAN A. O'LEARY

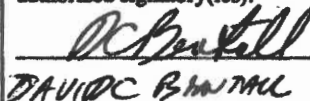
Barrister & Solicitor

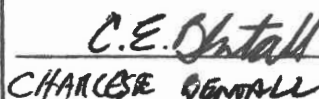
26th Floor,
Toronto Dominion Bank Tower,
700 West Georgia Street
Vancouver, B.C.
V7Y 1B3

Y	M	D
05	10	04

Party(ies) Signature(s)

Spindrift Properties (Keats) Inc. by its
authorized signatory(ies):


DAVID C. BENNETT


CHARLES BENNETT

OFFICER CERTIFICATION:

Your signature constitutes a representation that you are a solicitor, notary public or other person authorized by the Evidence Act, R.S.B.C. 1996, c. 124, to take affidavits for use in British Columbia and certifies the matters set out in Part 5 of the Land Title Act as they pertain to the execution of this instrument.

* If space insufficient, enter "SEE SCHEDULE" and attach schedule in Form E.

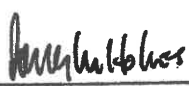
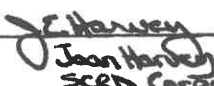
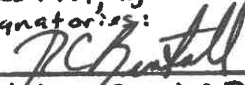
** If space insufficient, continue executions on additional page(s) in Form D.

DYE & DURHAM CLIENT No. 11061
SURVEY DEPT.

LAND TITLE ACT
FORM D

Page 2 of 9 pages

EXECUTIONS CONTINUED

Officer Signature(s)	Execution Date			Transferee Signature(s)
	Y	M	D	
 Douglas Adams, A Commissioner for taking Affidavits for British Columbia P.O. Box 800, 5477 Wharf Road Sechelt, B.C. V0N 3A0 (604) 885-2261	2005	05	11	SUNSHINE COAST REGIONAL DISTRICT by its authorized signatory  Jean Harvey SCR D Corporate Officer
 Judith A. Janzen Barrister and Solicitor 20-800 Howe Street Vancouver, B.C. V6Z 2M4 (604) 684-8888	2006	12	13	THE OWNERS, STRATA PLAN BCS 1947, by their authorized signatories:  Print Name: David C. Bentall
(As to both signatures)				Print Name:

OFFICER CERTIFICATION:

Your signature constitutes a representation that you are a solicitor, notary public or other person authorized by the *Evidence Act*, R.S.B.C. 1996, c. 124, to take affidavits for use in British Columbia and certifies the matters set out in Part 5 of the *Land Title Act* as they pertain to the execution of this instrument.

TERMS OF INSTRUMENT

THIS AGREEMENT made the 4 day of October, 2005.

BETWEEN:

SPINDRIFT PROPERTIES (KEATS) INC.
(Inc. No. 417834), #300-31935 South Fraser
Way, Abbotsford, BC V2T 5N7 and
THE OWNERS, STRATA PLAN BCS 1947
(hereinafter called the "Grantor")



OF THE FIRST PART

AND:

SUNSHINE COAST REGIONAL DISTRICT
Post Office Box 800
Sechelt, BC V0N 1V0
(hereinafter called the "Grantee")

OF THE SECOND PART

WHEREAS:

A. The Grantor is the registered owner of all and singular that certain tract of land laying, situate and being in the North Shore – Squamish Valley Assessment Area, Province of British Columbia, more particularly known and described as:

Parcel Identifier: NPA
Strata Lots: 1, 2 and ~~Part of~~ the Common Property
District Lot: 1467
Strata Plan: BCS 1947

(hereinafter called the "Lands");

B. Section 218 of the Land Title Act provides, inter alia that there may be registered as a charge against the title to land an easement without a dominant tenement to be known as a Statutory Right of Way;

C. The Grantee requires and the Grantor wishes to grant to the Grantee a Statutory Right of Way for a pedestrian pathway over a portion of the Lands;

D. This Statutory Right of Way is necessary for the operation and maintenance of the Grantee's undertaking;

NOW THEREFORE THIS AGREEMENT WITNESSETH that pursuant to Section 218 of the Land Title Act, and in consideration of the sum of ONE DOLLAR (\$1.00) now paid to the Grantor by the Grantee (the receipt and sufficiency whereof is hereby acknowledged) the parties hereby covenant and agree with the other as follows:

1. The Grantor hereby grants and conveys in perpetuity and at all times to the Grantee and its invitees the full, free and uninterrupted right, license, liberty, privilege, easement and right of way in common with the Grantor over that portion of the Lands within the area outlined in a heavy black line as shown on Explanatory Plan prepared by PETER M. GORDON, Land Surveyor, a copy of which is attached as Schedule "A" (the "Right of Way") to this agreement.

- (a) to pass and repass over and across the Right of Way on foot or on bicycle but excluding motorized vehicles;
- (b) to enter over, on, in, and under the Statutory Right of Way to:
 - (i) conduct surveys and examinations;
 - (ii) dig up, remove and replace soil;
 - (iii) construct an unpaved pathway; (the "Works")

- (c) to bring on to the Statutory Right of Way all materials and equipment the Grantee requires or desires for the Works;
- (d) to clear the Statutory Right of Way and keep it clear of anything which in the opinion of the Grantee constitutes or may constitute an obstruction to the use of the Statutory Right of Way or to the Works;
- (e) to cross over the Lands for reasonable access to the Statutory Right of Way and make reasonable ancillary use of the Lands for carrying out the Works; and
- (f) to do all acts which in the opinion of the Grantee are incidental to the foregoing.

2. The Grantor will not at any time hereafter make, place, erect, operate, use or maintain any building, structure, foundation, pavement, excavation, well, obstruction, equipment, or thing, or to plant any growth upon any part of the portion of the said Lands described in paragraph A of these Terms and the adjacent areas if any such actions will interfere with the use of the Statutory Right of Way and the rights herein granted.

3. All chattels, equipment, supplies, fixtures or other materials used to develop and maintain the Works or are otherwise installed by the Grantee over, on, in or under the Statutory Right of Way are and shall remain the property of the Grantee and rule of law or equity to the contrary notwithstanding.

4. The Grantor will not do or knowingly permit to be done any act or thing which might in any way whatsoever interfere with or injure or endanger the Works or any part thereof or impair the operation or efficiency thereof or create or increase any hazard to persons or equipment.

5. The Grantor indemnifies, save harmless, releases and forever discharges the Grantee and its servants and agents from and against all manner of actions, causes of actions, claims, debts, lawsuits, demands, and promises whatsoever at law or equity, whether known or unknown, which the Grantor now has or may at any time have by reason of the granting, existence or use of the Statutory Right of Way or of the pathway or of the carrying out or failing to carry out of any of the Works or improvements thereon, save and except for negligence by the Grantee.

6. No term, condition, covenant or other provision of this agreement will be considered to have been waived by the Grantee unless the waiver is expressed in writing by the Grantee. Any waiver by the Grantee of any term, condition, covenant, or other provision of this agreement or any waiver by the Grantee of any breach, violation, or non-performance of any term, condition, covenant or other provision of this agreement does not constitute and will not be construed as a waiver of any further or other breach, violation or non-performance of any term, condition, covenant or other provision of this agreement.

7. Subject to the provision of Section 218 of the Land Title Act the Grantor's covenant contained in this Agreement shall burden and run with the Lands and shall enure to the benefit and be binding upon the Grantor, his heirs, executors, administrators, successors and assigns and the Grantor and his assigns.

8. Nothing in the Agreement shall prejudice or affect the rights, powers and remedies of the Grantee in relation to the Grantors or the Lands under any law, by-law, order or regulation or in equity of all which rights, powers and remedies may be fully and effectively exercised by the Grantee as if this Agreement had not been made by the parties.

9. The Grantor will do or cause to be done at his expense all acts reasonably necessary for the Grantee to gain priority for this agreement over all liens, charges and encumbrances which are or may be registered against the Lands save and except those in favour of the Grantee and those specifically approved in writing by the Grantee.

C:\DOCUME~1\paul\LOCALS~1\Temp\SRW for Spindrift.may3.cab.doc

10. The parties agree that this Agreement shall not be modified or discharged except in accordance with the provisions of Section 218 of the Land Title Act.
11. The Grantor shall do or cause to be done all things and execute or cause to be executed all documents and give such further and other assurances which may be reasonably necessary to give proper effect to the intent of this Agreement.
12. Wherever the singular or masculine or neuter is used herein, the same shall be construed as including the plural, feminine, body corporate or politic unless the context requires otherwise.
13. If any section or any part of this Agreement is found to be illegal or unenforceable, then such sections or parts shall be considered to be separate and severable from this Agreement and the remaining sections or parts of this Agreement as the case may be shall be unaffected thereby and shall remain and be enforceable to the fullest extent permitted by law as though the illegal or unenforceable parts or sections has never been included in this Agreement.
14. This Agreement shall be interpreted according to the laws of the Province of British Columbia.
15. Where there is a reference to an enactment of the Province of British Columbia in this Agreement, that reference shall include a reference to any consequent enactment of the Province of British Columbia of like effect, and unless the context otherwise requires, all statutes referred to herein are enactments of the Province of British Columbia.

Page 8 of 9

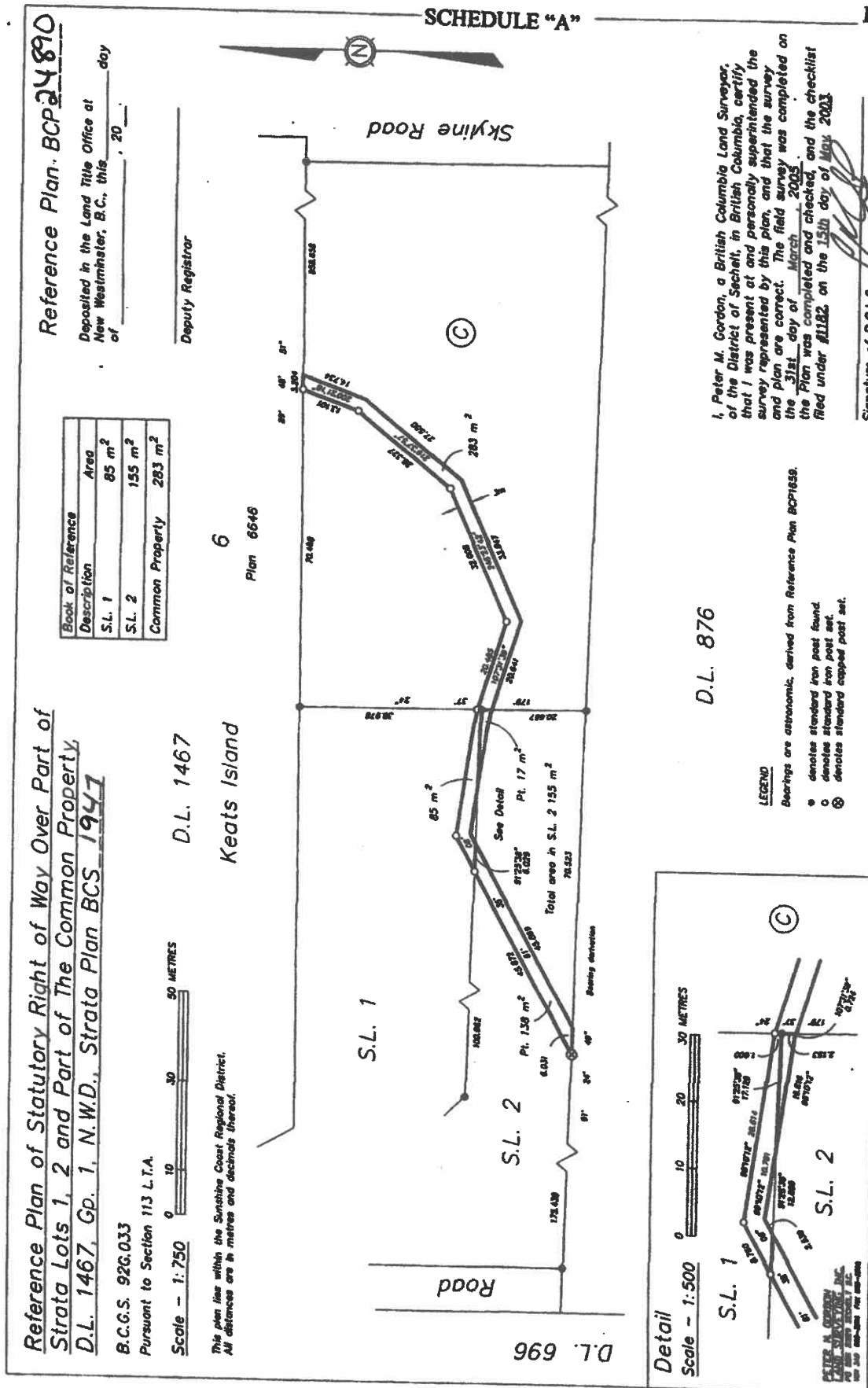
IN WITNESS WHEREOF the parties hereto hereby acknowledge that this Agreement has been duly executed and delivered by the parties executing Form C (page 1) and Form D (page 2) attached hereto.

This instrument creating the condition or covenant entered into under Section 218 of the Land Title Act by the registered owners referred to herein and shown on the print of the plan annexed hereto and initialed by me.

APPROVING OFFICER

END OF DOCUMENT

C:\DOCUME~1\paul\LOCALS~1\Temp\SRW for Spindrift.may3.cab.doc



Strata Property Act

FORM E

CERTIFICATE OF STRATA CORPORATION

(Sections 78, 79, 80, 100, 214, 257, 259, 261, 262, 263, 266, 269, 274, 283)

CERTIFICATE FOR SECTION 80

The Owners, Strata Plan BCS 1947 as represented by the owner developer, Spindrift Properties (Keats) Inc. (Inc. No. 417834), certify that the attached resolution was passed under section ~~80~~ of the *Strata Property Act* by the owner developer on August 1, 2006.

For the purposes of section 165(4)(f) of the *Land Title Act*, execution of the attached instrument has been approved by a resolution passed by the owner developer pursuant to Section ~~80~~ of the *Strata Property Act*, and the instrument conforms to the resolution.

Signed by the Owner Developer
Spindrift Properties (Keats) Inc. by its
authorized signatory:



DAVID C. BENTALL

4.4 RURAL RESIDENTIAL (RR) ZONE

Permitted Uses

- .1 The following uses of land, buildings and structures are permitted in the land-based area:
- single family residential;
 - home occupation, subject to Section 2.2;
 - horticulture;
 - agriculture on lots larger than 2.0 hectares;
 - public service utility uses; and
 - natural area parks and conservation.
- .2 The following uses of land, buildings and structures are permitted in the marine-based area:
- non-commercial anchorage and moorage of private vessels, where such use is accessory to a permitted residential use on the adjacent upland.

Permitted Buildings and Structures

- .3 The following buildings and structures are permitted in the land-based area:
- single family dwelling;
 - buildings and structures accessory to a permitted use;
 - boathouse, on lots larger than 2.0 hectares;
 - community water storage and distribution;
 - community sewer system facilities;
 - electrical and telecommunication utilities;
 - pedestrian trails;
 - fences, subject to Section 2.4;
 - fire huts;
 - pump/ utility houses;
 - utility poles, wires, traffic controls and underground utility systems; and
 - signs, subject to Part 5.
- .4 The following structures are permitted in the marine-based area:
- mooring buoys, floats, docks, dock ramps, stairs, and piers providing marine access to a lot abutting the water area in which the structure is located; including dolphins and pilings necessary for the establishment or operation of a use permitted in this zone;
 - marine navigational aids; and
 - signs, subject to Part 5.

Marine-Based Structures Limitations

- .5 No building may be erected, constructed or placed on any float, dock, ramp, stairs or pier.
- .6 The maximum area that may be covered by dock floats in the marine-area is 65 square metres (700 square feet).
- .7 Despite Subsection 4.4.6, the maximum float area may be increased by 47 square metres (500 square feet) per residential lot served up to a maximum float size of 158 square metres (1,700 square feet), provided a restrictive covenant subject to Subsection 1.2.4 is registered.
- .8 The maximum width of a ramp associated with a dock is 2.4 metres (8 feet).

Density

- .9 A maximum of:
- one single family residential dwelling and one sleeping cabin per lot are permitted on lots smaller than 0.8 hectares (2 acres);
 - one single family residential dwelling and one accessory guest cottage are permitted on lots of 0.8 hectares (2 acres) or larger but less than 8.0 hectares (20 acres); and
 - two single family residential dwellings are permitted on lots of 8.0 hectares (20 acres) or larger.
- .10 Despite Subsection 4.4.9:
- one additional single family residential dwelling per lot is permitted lots of 2.0 hectares (5 acres) or larger in which a conservation covenant or pedestrian trail right of way has been dedicated to satisfaction of the Gambier Island Local Trust Committee; and
 - two single family residential dwellings are permitted per strata lot on bare land strata developments where the average overall lot area density is at least 4.0 hectares (10 acres) (including common property) and the lot area is at least 1.0 hectare (2.5 acres) or larger in which a conservation covenant or pedestrian trail right of way has been dedicated to the satisfaction of the Gambier Island Local Trust Committee.
- .11 A maximum of one dock is permitted in the marine-area abutting each waterfront lot.
- .12 A maximum of one boat house is permitted per lot.

Floor Area

- .13 The maximum floor area of an accessory guest cottage is 95 square metres (1027 square feet).
- .14 The maximum floor area of a boat house is 25 square metres (269 square feet).
- .15 The maximum floor area of a fire hut is 9.3 square metres (100 square feet).
- .16 The maximum floor area of a sleeping cabin is 37.2 square metres (400 square feet),

Setbacks

- .17 The setback requirements of Section 2.7 apply.

Height

- .18 The height requirements of Section 2.8 apply except to boathouses which are restricted to a maximum height of 4.6 metres (15.0 feet).

Lot Coverage

- .19 The maximum combined lot coverage of buildings and structures is 25 per cent of the lot area.

Subdivision Lot Area Requirements

- .20 The minimum lot area permitted by subdivision is 1.0 hectare (2.5 acres).
- .21 the minimum average lot area permitted by subdivision is 4.0 hectares (10 acres);

BL 108

BRIEFING

To: Gambier Local Trust Committee **For the Meeting of:** November 21, 2019
From: Islands Trust Conservancy staff **Date Prepared:** November 7, 2019
SUBJECT: Updated management plans for Brigade Bay Bluffs and Long Bay Wetland nature reserves

PURPOSE:

To inform the Gambier LTC of updated management plans for Brigade Bay Bluffs and Long Bay Wetland nature reserves on Gambier Island.

BACKGROUND:

A combined management plan for Brigade Bay Bluffs Nature Reserve and Long Bay Wetland Nature Reserve was originally prepared in 2005 by Cascade Environmental Resource Group Ltd. following the transfer of the two properties to Islands Trust Conservancy (then the Islands Trust Fund). Islands Trust Conservancy Board policy ([ITC 2.3](#)) states that management plans are to be updated approximately every 10 years. In 2018-19, contract biologists undertook extensive ecosystem mapping, wildlife inventories, and community engagement to update these plans. On October 1, 2019, the ITC Board approved the updated management plans.

These management plans are the first to be published following the Islands Trust Conservancy Board's adoption of its [Reconciliation Declaration](#) on July 16, 2019. In the spirit of reconciliation, the updated management plans include content that better acknowledges the significant present-day and historic relationships of First Nations to the land. The updated management plans also state a commitment to develop a parallel *Management Plan for Areas of Cultural Heritage and Sacred Significance* that would set out guiding principles for collaboration between ITC and First Nations with interest in the land.

Key management recommendations for both nature reserves are to remove invasive species, continue restoration of historically logged areas, conduct wildfire management planning, and undertake further inventories for species at risk to provide a clearer picture of the ecology of the reserve and guide future management. Additional recommendations for maintenance of trails and signage are made for Long Bay Wetland Nature Reserve.

ATTACHMENT(S):

1. Brigade Bay Bluffs Nature Reserve Management Plan
2. Long Bay Wetland Nature Reserve Management Plan

FOLLOW-UP:

Staff will publish Brigade Bay Bluffs and Long Bay Wetland nature reserve management plans on the ITC website once notified of final approval by the nature reserves' co-covenant holders, the Gambier Island Conservancy and the Sunshine Coast Conservation Association.

Prepared By: Jemma Green, Covenant Management and Outreach Specialist, Islands Trust Conservancy

Reviewed By/Date: Kate Emmings, A/Manager, Islands Trust Conservancy / Nov 7, 2019

Brigade Bay Bluffs Nature Reserve Management Plan Gambier Island, BC



PREPARED FOR:



Brigade Bay Bluffs and Long Bay Wetland Nature Reserves
joint management plan prepared: November 30, 2005

REVISED February 2019 by: Carrina Maslovat, R. P. Bio. #1407
and Laura Matthias, Consultant Biologist, Salt Spring Island, BC

APPROVED BY:

Islands Trust Conservancy, October 1, 2019: ITC-2019-037

Gambier Island Conservancy, **Date**

Sunshine Coast Conservation Association, **Date**

i. Executive Summary

Islands Trust Conservancy acknowledges and respects that Gambier Island is within the traditional territory of multiple Coast Salish peoples, whose historical relationship to the land, culture, and spirit of this place continues to this day. Islands Trust Conservancy is committed to honoring the rich history of Indigenous stewardship in the lands and waters of the Islands Trust Area and to building mutually respectful relationships between Indigenous and non-Indigenous partners in conservation. Therefore, this Management Plan for Brigade Bay Bluffs Nature Reserve is a living document that will evolve as opportunities for knowledge sharing arise and understanding grows.

In January 2005, the Islands Trust Conservancy (then the Islands Trust Fund) protected two parcels of land west of Brigade Bay on eastern Gambier Island. The Brigade Bay Bluffs (5.14 hectares/12.7 acres) and Long Bay Wetland (38 hectares/94 acres) areas were transferred as part of the Brigade Bay subdivision development. Cascade Environmental Resource Group Ltd. prepared the initial joint management plan for the Brigade Bay Bluffs and Long Bay Wetland properties. In 2018, the Management Plans were updated as separate documents for each reserve.

The Brigade Bay Bluffs Nature Reserve (BBNR) is located to the northwest of Brigade Bay. The reserve consists of a steep forested area with rocky bluffs and outcroppings. The elevation ranges from 60 to 240 m. The area has been selectively harvested, resulting in large deciduous species and pole/sapling-sized conifers. Some large veteran trees (bigleaf maple, Douglas-fir, and western hemlock) remain in areas with steeper terrain. Although the forests are young, they will mature into blue- and red-listed ecological communities. Some reforestation and protection of seedlings from deer browsing has been done within the reserve. BBNR is an important part of a large, contiguous natural area within the Coastal Western Hemlock Very Dry Maritime (CWHxm) subzone on Gambier Island.

The management objectives for BBNR are to:

- preserve and protect the natural ecosystems, biological diversity and natural values of the site;
- restore plant and animal communities and ecological process at the site;
- support ongoing inventory, mapping and monitoring to guide management;
- manage invasive plant species throughout the reserve; and
- allow natural forest succession and natural ecological processes and functions to proceed unimpeded without human intervention, except in the case of wildfire or other exceptional situations where remediation is considered imperative.

Key management recommendations are to remove invasive species, continue restoration of areas with slow regeneration, and develop a wildfire management plan. Further inventories for species at risk would provide a clearer picture of the ecology of the reserve and guide future management.

ii. Tables and Lists

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iii. Acknowledgements

Table 1. The primary author and other contributors to the management plan, and their contributions, affiliations, and professional qualifications.

Name	Position/Affiliation	Professional Accreditation or subject expertise	Contribution
Carrina Maslovat	Botanist/Contractor	R.P. Bio.	Primary author, field data collection
Laura Matthias	Species at Risk Biologist/Subcontractor		Secondary author, field data collection
Nuala Murphy	Property Management Specialist/Islands Trust Conservancy		Background information and mapping, local contacts
Jemma Green	Property Management Specialist/Islands Trust Conservancy		Document review
Doug Hopwood	Biologist	R.P.F.	Provided background history, prepared the baseline report
Peter Scholefield	Volunteer/Gambier Island Conservancy		Background data, assistance with field logistics, document review
Jason Herz	Conservation Committee Chair/Sunshine Coast Conservation Association		Review of document

Ruth Simons	Volunteer/Gambier Island Conservancy		Background data and assistance with field logistics, facilitated access via Brigade Bay Marina
Cascade Environmental Resource Group Ltd.	Consultant		Prepared the original (2005) management plan

1.0 Introduction

Gambier Island is situated within the traditional territory of the Coast Salish peoples, who share a rich history of stewardship in the lands and waters of the Islands Trust Area that inspires the work of Islands Trust Conservancy and its partners. The Brigade Bay Bluffs Nature Reserve (BBNR), along with Long Bay Wetland Nature Reserve (38 ha), on Gambier Island was protected by the Islands Trust Conservancy (ITC) in 2005. The properties were transferred by Coastland Wood Industries Ltd. and Mike Jenks as part of the Brigade Bay subdivision development (see survey, Appendix A).

Cascade Environmental Resource Group Ltd. developed the initial Management Plan for both the Brigade Bay Bluffs and Long Bay Wetland Nature Reserves in 2005 (Cascade 2005). In 2018/19, the Management Plans for both properties were updated and written as separate documents for each property.

The Gambier Island Conservancy and the Sunshine Coast Conservation Association co-hold the conservation covenant on the land.

1.1 Islands Trust Conservancy

Since time immemorial, the lands and waters between Vancouver Island and mainland British Columbia have been home to the Coast Salish people, whose ecological, cultural, and spiritual connections to this place continue to this day. In 1974, the Province of British Columbia recognized this region as a special place within the province where the unique beauty, rural character and diverse ecosystems should be protected for future generations. Through the Islands Trust Act, the province established the Islands Trust, a local government, with the following mandate (known as the Object of the Islands Trust):

To preserve and protect the trust area and its unique amenities and environment for the benefit of the residents of the trust area and of British Columbia generally, in cooperation with municipalities, regional districts, improvement districts, other persons and organizations and the government of British Columbia. (Islands Trust 2018a)

In 1990, through the enactment of a section of the Islands Trust Act, the Islands Trust Conservancy (originally called the Islands Trust Fund) was established as a conservation land trust to assist in carrying out the “preserve and protect” mandate. Part 6 of the Islands Trust Act establishes the corporate status, responsibilities, and governance structure of the Islands Trust Conservancy. The Islands Trust Conservancy is one of fifteen corporate entities charged to

uphold the Object of the Islands Trust and since 1990 has protected over 1,267 hectares (3,130 acres) of land as nature reserves, nature sanctuaries and conservation covenants.

The vision of the Islands Trust Conservancy is that the islands and waters of the Strait of Georgia and Howe Sound will be a vibrant tapestry of culture and ecology where humans live and work in harmony with the natural world. This special place will have a network of protected areas that preserve in perpetuity the native species and natural systems of the islands. Engaged residents and conservation partners will work together to protect large natural areas and key wildlife habitat. Viable ecosystems will flourish alongside healthy island communities.

The mission of the Islands Trust Conservancy is to protect special places by encouraging, undertaking and assisting in voluntary conservation initiatives within the Islands Trust Area. Islands Trust Conservancy nature reserves are managed to maintain, preserve and protect the natural features and values of ecosystems. This level of protection is similar to the International Union for Conservation of Nature (IUCN) protected area Category 1B: Wilderness area: “large area of unmodified or slightly modified land and/or sea; retaining its natural character and influence, without permanent or significant habitation, which is protected and managed in order to preserve its natural condition” (Lockwood 2006).

1.2 Purpose of Islands Trust Conservancy Management Plans

ITC management plans provide background information and set out the direction of property management as follows:

- Provide general and descriptive information on the property, including location, history, and land use.
- Set out the conservation goals and objectives for the property.
- Identify the property's ecological and/or cultural values and features.
- Describe the management issues associated with the property.
- Provide short, medium and long-term management recommendations (action items or tasks) on issues such as: Species at Risk protection; ecological restoration; public access; educational and research opportunities; invasive species management; and signage needs.
- Preserve and protect cultural, spiritual, and sacred locations.

Once the management plan process is complete, the ITC will work to carry out the management actions or strategies identified in the plan, as resources allow. Following general practice and as outlined in the conservation covenant and statutory right of way, the ITC will revise the Management Plan every ten years.

1.3 Scope of Islands Trust Conservancy Management Plans

Consistent with the Islands Trust Reconciliation Declaration (Islands Trust 2019), ITC recognizes that its nature reserves may be places of great cultural and spiritual significance to First Nations. Cooperative management of these protected places will provide opportunities to establish and maintain mutually respectful relationships between the Islands Trust Conservancy and First Nations. Relationship-building, knowledge-sharing, healing, and establishment of trust

are long-term processes that do not necessarily conform to the timeline required for many management activities (e.g. protecting species at risk, maintaining trails and signage, controlling invasive species, etc.); therefore, Islands Trust Conservancy is committed to developing a parallel *Management Plan for Areas of Cultural Heritage and Sacred Significance* with a flexible timeline. This parallel Management Plan sets out guiding principles for cooperative collaboration between ITC and those First Nations with historical and cultural interests in the area defined by one or more nature reserves. Moreover, the Management Plan defines the common vision, objectives, policies, and best management practices for the nature reserve(s) to ensure that its natural values and cultural and sacred heritage are maintained for future generations. As with this plan, the *Management Plan for Areas of Cultural Heritage and Sacred Significance* must be in accordance with the conservation covenant registered on the land.

1.4 Protected Area Purpose

The purpose of the BBNR is to preserve and protect the representative ecosystems and natural values of the site (including any rare and endangered plant and animal species), and to maintain the biodiversity of the site for the benefit of the flora and fauna of the reserve, the residents of the island, and the province generally. The site is to be protected in accordance with the objectives of the Islands Trust Conservancy and the Islands Trust.

1.5 Protected Area Objectives

The objectives for the BBNR are:

1. Preserve and protect the representative ecosystems, biological diversity and natural values.
2. Restore plant and animal communities and ecological processes where necessary.
3. Support and enhance continued use of areas of sacred and cultural significance by First Nations where such uses are compatible with protection of ecological values and in compliance with the conservation covenant held by Gambier Island Conservancy and the Sunshine Coast Conservation Association.
4. Support ongoing inventory, mapping and monitoring to guide management.
5. Allow natural forest succession and natural ecological processes and functions to proceed unimpeded without human intervention, except in the case of wildfire or other exceptional situations where remediation is considered imperative.
6. Remove invasive species throughout the reserve where they compromise natural values.

2.0 Property Information

Brigade Bay Bluffs Nature Reserve is 5.14 hectares (12.70 acres) in size.

2.1 Location

Gambier Island can be accessed by a passenger ferry that sails between the BC Ferries Langdale

Terminal in Gibsons and the New Brighton Dock, located on the west side of Gambier Island. There is no road access to BBNR from the dock at New Brighton. There is a Gambier Island trail network but the route to the BBNR from New Brighton is lengthy, not direct, and the trail is not well marked or signed in places.

BBNR is best accessed from the public dock at Camp Artaban, at the head of Long Bay. There is a short public trail through the camp property, then along the Brigade Bay Road easement through the Gambier Island Sea Ranch property to Mt Artaban Road in the Brigade Bay subdivision. This is about a 30 minute hike. It is another 5 minute walk north on Mt Artaban Road to the Nature Reserve. The public dock at Camp Artaban can be reached by regularly scheduled water taxi runs from Horseshoe Bay on weekends and on Wednesday evenings in the summer. There are two nearby private marinas, one at the Sea Ranch and the other at Brigade Bay. For those who are not property owners at either location, permission is required to access the marinas.

There are currently no designated trails within the reserve.

2.2 Legal description

The BBNR is legally described as PID: 015-940-870, District Lot 1257, Group 1, New Westminster District, Except, Firstly Part in Reference Plan 2829, Secondly Part Subdivided by Plan BCP15304.

2.3 Legal Access

Legal access to the BBNR is off Mt. Artaban Road, 1 km north of Brigade Bay Marina, which goes through the Brigade Bay subdivision (Figure 1). There is no trail.

2.4 Landscape Context

Gambier Island is located in Howe Sound, one of the many islands governed by the Islands Trust (see Figure 1 for location and protected area context). The BBNR is located on the east side of Gambier Island, northwest of Brigade Bay, overlooking Howe Sound. Directly to the north is privately-managed land and directly south is the Brigade Bay subdivision with 68 privately managed lots. To the east is a municipal park (38 ha) and to the west is provincially-managed land (3517 ha). Although it is a small parcel, the BBNR plays an important role in enhancing the habitat values of the area through connectivity and proximity to other undeveloped and protected lands on the island.

Approximately 275 m to the south along Mt. Artaban Road, there is another large, contiguous protected area which includes Long Bay Wetland Nature Reserve (ITC), Mt. Artaban Nature Reserve (ITC), Halkett Bay Provincial Marine Park (BC Parks), Pete Shields Park (Sunshine Coast Regional District), and provincially-managed lands (totaling 790.45 ha).



Photo 2. View of Howe Sound from BBNR, looking south to Mt. Artaban and Brigade Bay.

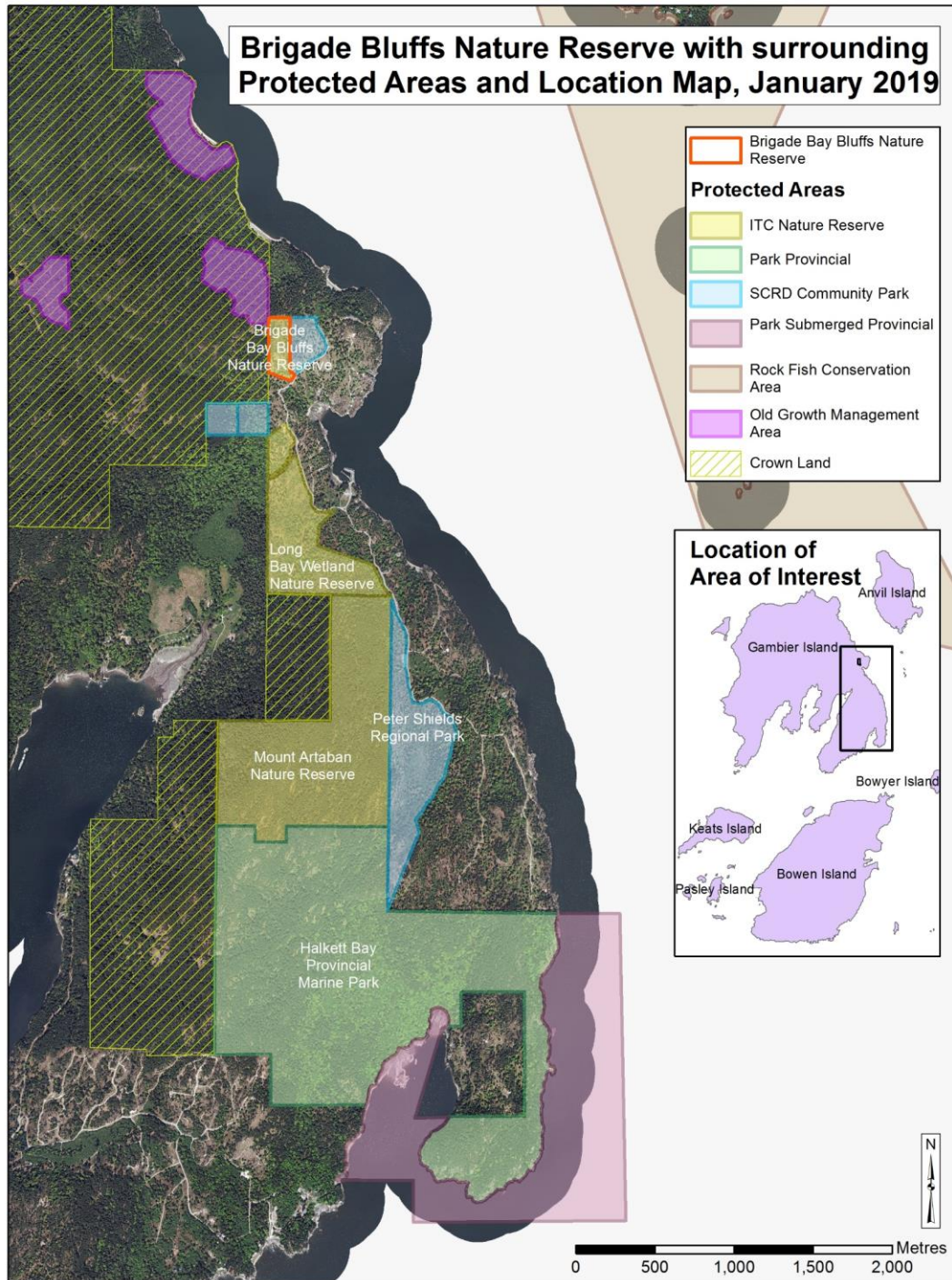


Figure 1. Location of Gambier Island (inset), and protected areas context surrounding the BBNR (reserve boundary outlined in orange). A complimentary map of marine protected area zones is provided in Schedule B of Gambier Island Land Use Bylaw #86 (Islands Trust 2004).

2.5 Site History¹

Gambier Island is within the traditional territory of several Coast Salish First Nations who have called this place home since time immemorial. The Coast Salish peoples maintained a vital, dynamic, and sustainable connection to their territory and developed rich cultural, spiritual, and traditional ecological knowledge. However, cultural heritage and sacred sites of Gambier Island and the greater Islands Trust Area were negatively impacted by European settlement. Past archeological activities, vandalism, and land use have disturbed sites of cultural and spiritual importance. Nevertheless, the land and the greater territory remains an embodiment of the stories, oral history, and culture of these First Nations.

Two archaeological sites are located on Brigade Bay, which are protected under the *Heritage Conservation Act* (Cascade 2005). The adjacent properties in Brigade Bay subdivision have covenants that allow “the right of passage by members of the Squamish Nation for the purposes related to continuation of current use of lands or resources for traditional purposes” (FOC 2004 in Cascade 2005). Consultation between Squamish Nation and Fisheries and Oceans Canada during the Brigade Bay subdivision development determined that the Brigade Bay Site, Ho-mahmk, and surrounding environs are well known for deer hunting, plant collection, and as a camp site and safe haven for members of the Squamish Nation traveling in Howe Sound (FOC, December 2, 2003 in Cascade 2005).

The Brigade Bay area had a settler homestead, probably during the 1920s, and the buildings remained until the 1980s (Hopwood 2013). A questionnaire respondent noted that there may have been a smelting facility in the Brigade Bay area.

The reserve area was burned by a human-caused fire, which ignited on July 9, 1922 (Parminter pers. comm. in Hopwood 2009).

The reserve was logged, probably in the 1920s (shortly before or after the fires), and regrowth was from natural regeneration (Hopwood 2013). A recent selective harvest in most of the reserve occurred in 2000-2001 (Cascade 2005).

An Environmental Assessment was completed in 2001 for the Brigade Bay subdivision (CERG 2001 in Cascade 2005). Planning for the subdivision began in 2000 and residential lots were put on the market in 2004. The Islands Trust Conservancy acquired the Nature Reserve through a transfer in 2005.



Photo 3. Large stump from logged Western Redcedar with new regrowth.

¹ The Islands Trust Conservancy recognizes that the language commonly used to refer to land may be disrespectful to First Nations. For example, notions of ‘private’ and ‘Crown’ land do not appropriately recognize aboriginal title. The words “provincially-managed land” or “federally-managed land” will be used in place of “Crown.” “Privately managed” will be used in place of “private” and “land holder” instead of “land owner.”

2.6 Anthropogenic Features

There are no structures or buildings within the reserve. At this time, no archaeological sites have been identified within BBNR.

Table 2. Anthropogenic features in BBNR.

Anthropogenic Feature	Description	Condition	Photopoint Location
Boundary marker	Small Covenant Boundary sign near Mt. Artaban Road on lower slopes of reserve.	Good	No photo 475522; 5482227
Boundary sign	Boundary sign behind large rock at northern road edge of Nature Reserve.	Good	P9; Figure 3 475548; 5482280
Caging around replanted native trees	Douglas-fir planted and caged during restoration efforts in cleared area below bluffs.	Good	P8, P11; Figure 3 475541; 5482271
Boundary iron pin	Boundary marker along southern boundary of reserve	Good	No photo 475439; 5482267
Corner boundary marker	Iron pin at southwest corner of reserve	Good	No photo 475373; 5482287
Boundary iron pin	Boundary marker along southern boundary of reserve	Good	No photo 475515; 5482236
Corner boundary marker	Boundary marker in northeast corner of reserve	Good	No photo 475502; 5482628

2.7 Undersurface Rights

The title shows no undersurface rights designated for BBNR.

2.8 Notations, Charges, Liens and Interests

A Section 219 Conservation Covenant (Registration Number: CA3219707) and Section 218 Statutory Right of Way (Registration Number: CA3219708) were registered over the lands in 2013 in favour of Gambier Island Conservancy and Sunshine Coast Conservation Association.

The general intent of the covenant agreement is:

- (a) to protect, preserve, conserve, maintain, enhance and, if applicable from time to time restore, the natural state of the Land and the Amenities as described in the Report (baseline documentation); and
- (b) to prevent any occupation or use of the Land that will impair or interfere with the natural state of the Land and the Amenities as described in the Report.

The Statutory Right of Way outlines permitted access and activities for the Covenant Holders.

2.9 Local Planning Designations

BBNR is within Development Permit Area #3 which protects all mapped and unmapped streams on Gambier Island under the Riparian Areas Regulation (Islands Trust 2018b).

The reserve is zoned G2 (Nature Reserve). The purpose of this zone is to maintain and enhance the ecological values, ecosystems and unique areas of nature reserves and sanctuaries. Permitted uses within the zone include ecosystem preservation use, water recharge use, trail use, fish and wildlife habitat protection use, and accessory use including but not limited to fire protection (Islands Trust 2018b).

2.10 Existing Public, First Nations, and Other Use

Brigade Bay Bluffs Nature Reserve falls within the territory of multiple First Nations, and as such has been a site of cultural activity for thousands of years. There is knowledge and oral history relating to this site that may or may not be shared outside of the membership of a First Nation. As a first step toward strengthening cultural connections to the land that were negatively impacted by European settlement, ITC is exploring the potential of a Management Plan for Areas of Cultural Heritage and Sacred Significance that will support and enhance the continued use of the site by First Nations.

There are no existing public trails in the reserve and public use is minimal. Access to the reserve is from the southeast corner that abuts the Mt. Artaban Road.

3.0 Inventory by Ecological Community

Islands Trust Conservancy acknowledges that there is a wealth of traditional ecological knowledge and a long history of ecosystem stewardship among the First Nations whose territory encompasses BBNR. ITC will strive to work with First Nations knowledge holders to deepen its understanding, improve its stewardship practices, and, ultimately, support the transfer of traditional ecological knowledge to younger generations within First Nations communities to ensure that it is not lost. At this time, the ecological information presented in this management plan was formed using systems that are based in foundations of Western science.

3.1 Ecological Significance

The BBNR ranges in elevation from 60-240 m and includes steep rocky outcrops and mossy bluffs. The site has been selectively logged, leaving behind large deciduous trees, a few veteran coniferous trees in steep areas and regenerating pole-sapling conifers in much of the reserve. Most of the reserve is within the Coastal Western Hemlock Very Dry Maritime subzone although at elevations above 200 m the subzone transitions to the dry maritime subzone. There are no significant hydrological features and most surface water flows south to feed Gambier Creek on the adjacent privately-managed property and east to the ocean.

No species at risk have been recorded. Black-tailed deer (*Odocoileus hemionus*) sign was noted throughout the reserve. Turkey Vultures (*Cathartes aura*) were flying over the bluffs and may use the cliff sites for basking or nesting.

Table 3. Ecological Communities in BBNR.

Ecological Community Name		Status		
English	Scientific	Provincial	BC List	Global
Western Hemlock–Douglas-fir/Oregon beaked-moss Very Dry Maritime (CWHxm1/01)	<i>Tsuga heterophylla</i> – <i>Pseudotsuga menziesii</i> / <i>Eurynchium oreganum</i>	S2 (2013)	Red	G3G4
Douglas-fir–Lodgepole Pine/Grey Rock-moss Very Dry Maritime (CWHxm1/02)	<i>Pseudotsuga menziesii</i> – <i>Pinus contorta</i> / <i>Racomitrium canescens</i>	S2 (2004)	Red	GNR
Douglas-fir–Western Hemlock/Salal Very Dry Maritime (CWHxm1/03)	<i>Pseudotsuga menziesii</i> – <i>Tsuga heterophylla</i> / <i>Gaultheria shallon</i>	S2S3 (2013)	Blue	G3G4
Western Redcedar/Sword Fern Very Dry Maritime (CWHxm1/05)	<i>Thuja plicata</i> / <i>Polystichum munitum</i>	S2S3 (2009)	Blue	GNR
Western Redcedar/Three-leaved Foamflower Very Dry Maritime (CWHxm1/07)	<i>Thuja plicata</i> / <i>Tiarella trifoliata</i>	S2S3 (2013)	Blue	G3

3.2 Climate

The southern Gulf Islands, which include the islands in Howe Sound, have a climate pattern of warm, dry summers and mild, wet winters. The maritime influence moderates the effect of elevation, latitude, and aspect on local temperature and precipitation.

The weather statistics for the adjacent Bowen Island station show the annual precipitation is approximately 1507 mm and most of it comes in the form of rain rather than snow (The Weather Network 2018). On Bowen Island, average daily temperatures peak in the summer months (July and August) at 23°C and are lowest in the winter at 0°C (December and January) (Figure 2). The reverse is true for precipitation, with the winter months from November to January having the highest rainfall (averaging 506-420 mm) and July and August being the driest months (58-78 mm) (Meteoblue 2018).

Average temperatures and precipitation

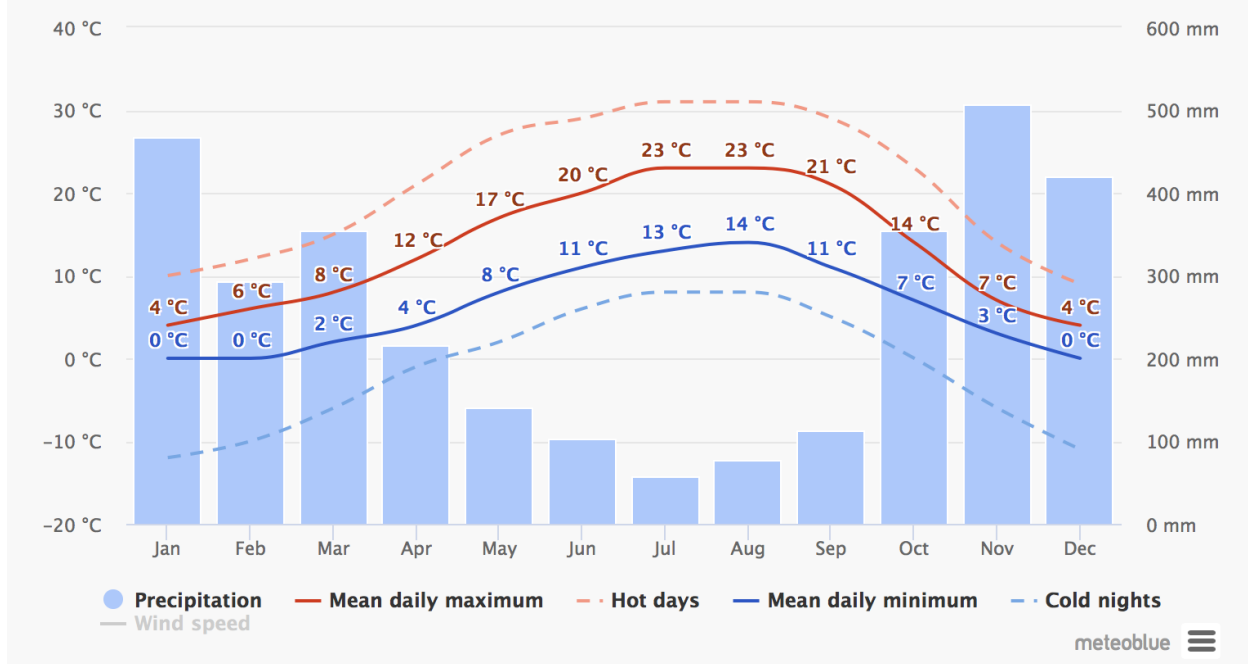


Figure 2. Canadian climate normals for temperature and precipitation at Bowen Island weather station, British Columbia from 1985-2018 (Meteoblue 2018).

The future impacts from climate change are unknown, although a summer drying trend and an increase in storm events are predicted (Mauger et.al. 2015). More powerful storms may cause increasing erosion. Drier summers may impact the wetlands and riparian hydrology and may shift the vegetation community away from western redcedar (*Thuja plicata*), allowing the spread of Douglas-fir (*Pseudotsuga menziesii*). Higher temperatures and less precipitation may lead to localized stress on trees and plants. Maintaining habitat connectivity, biodiversity and ecosystem resilience may assist the flora and fauna adapting to climate change stresses.

3.3 Geology and Physiology

Granitic rocks of the Jurassic to Cretaceous Coast Plutonic Complex (approximately 160 million years old) underlie the southern part of the island (BC Ministry of Energy, Mines and Petroleum Resources 2009 in Hopwood 2009). These stratified rock formations are composed of andesitic to dacitic tuff, breccia agglomerate, andesite, argillite, conglomerate, lesser marble,

greenstone, and phyllite (BC Ministry of Energy and Mines 2005 in Cascade 2005). Intrusive rock of the Coast Plutonic complex, such as quartz diorite and diorite, occur in the vicinity (Cascade 2005). Regional fault systems are predominantly northwest striking.

The Howe Sound region was covered by glaciers from approximately 29,000 to 12,000 years ago. During glaciation, the weight of the ice depressed the land surface so that some lower elevation portions of Gambier Island were below sea level. As the glaciers retreated and the land rebounded, marine and coastal processes eroded loose materials from the higher and steeper parts of the island and laid down finer-textured soil parent materials on many of the lower-lying and more gently sloping areas of the island (Hopwood 2009).

Within the reserve, the topography is dominated by rocky outcrops and bluffs that are roughly southwest to northeast in direction. Bedrock is overlain by a veneer of colluvium and glacial till, except where glacial processes removed these materials and only a thin organic layer has since accumulated (Cascade 2005).

3.4 Hydrology

Most of the reserve is upper slope and moisture shedding. There are no wetlands or streams within the reserve. Surface water sheds primarily to the south to Gambier Creek and to the west to the ocean.

3.5 Soils

Humo-Ferric Podzols are the most widely distributed soils of the area, with glacial till overlying bedrock that results in well drained soils. Primary mineral deposits are colluvial and glacial derived. Soil processes that are characteristic of this submaritime forest include Mor humus formation (associated with the accumulation of acid organic matter), leaching, eluviation, and illuviation (Meidinger and Pojar 1991 in Cascade 2005).

3.6 Ecological Classifications

The BBNR area is within the Very Dry Maritime subzone (xm) of the Coastal Western Hemlock Zone (CWH) (Green and Klinka 1994). Climatic factors, in conjunction



Photo 5. Rocky bluff habitat in higher elevations of BBNR.



Photo 5. Moisture-shedding steep gully with stumps from previous logging.

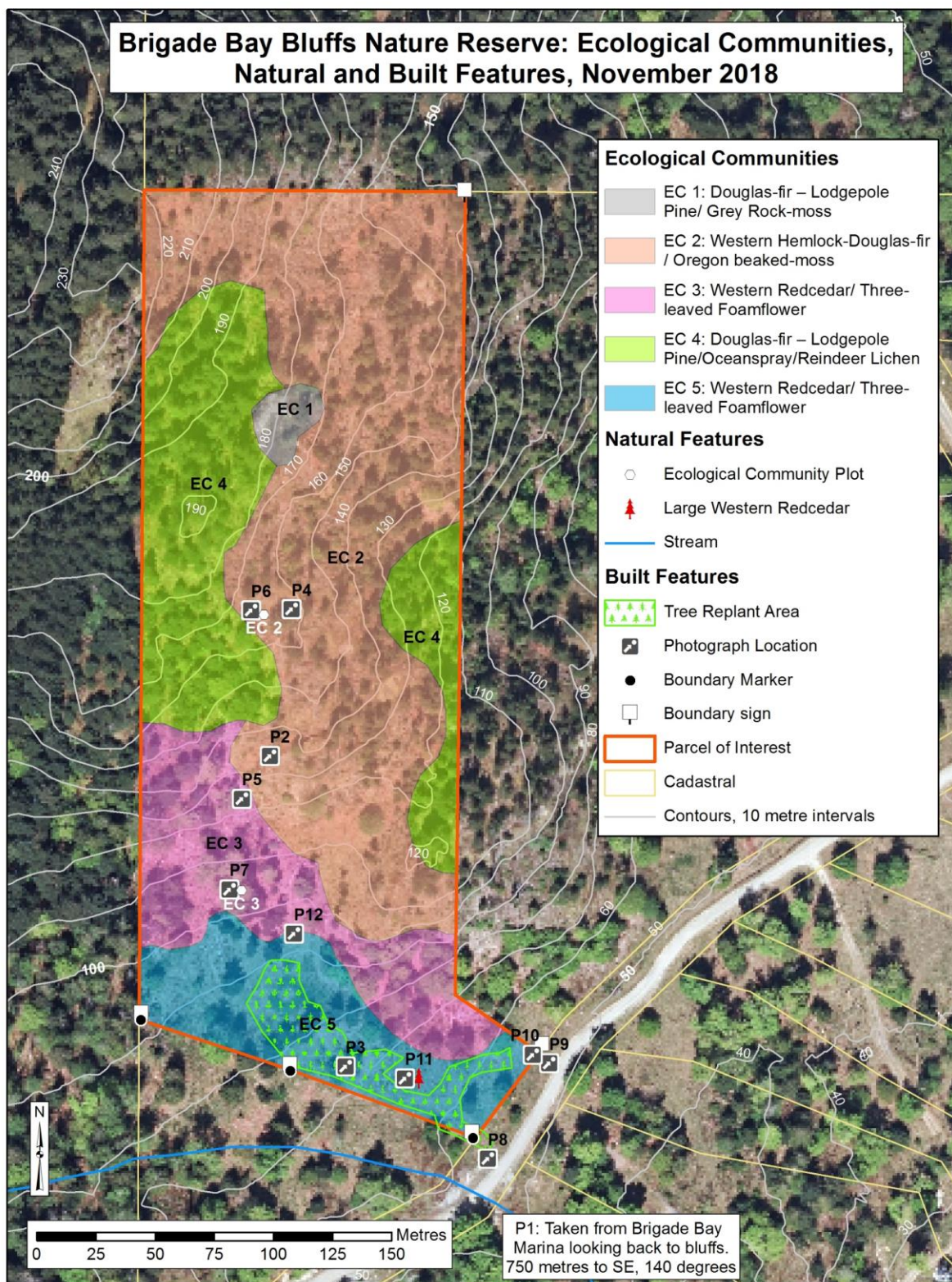
with existing soil conditions, result in a productive coastal forest with a long growing season, although water deficits may occur on zonal sites. The Reserve is within the Pacific Maritime Ecozone and the Georgia Puget Basin Ecoregion (Lands Directorate 1986).

3.7 Ecological Communities and Site Series

The previous management plan for BBNR delineated one ecological community based on Terrestrial Ecosystem Mapping (TEM). The baseline inventory for the Reserve identified five units (Hopwood 2013). This updated management plan follows the latter delineation of five types. The ecological descriptions were collected on August 8th, 2018 with supplemental details added from the baseline report (Hopwood 2013).

Site series were identified using *A Field Guide for Site Identification and Interpretation for the Vancouver Forest Region* (Green and Klinka 1994) (Map 3). Structural stage was as defined in “Standards for Terrestrial Ecosystems Mapping in British Columbia” (RIC 1998).

A list of all plant species is included in Appendix B. Locations of photopoints and other photograph locations are given in Appendix C.



Ecological Community 1. Douglas-fir–Lodgepole Pine/Grey Rock Moss

Ecological Community 1 is at the summit of a rocky bluff and is dominated by mosses and lichens. The site is dry and well drained with a small number of shrubs, forbs and grasses growing in small soil pockets. Because of its lack of trees, the community was not disturbed by the logging that occurred in the remainder of the reserve.

Table 4. Description of Ecological Community 1.

Polygon ID:	Ecological Community 1
Ecological Community:	Douglas-fir–Lodgepole Pine/Grey Rock Moss
Classification:	CWHxm1/02
Structural Stage:	Sparse/bryoid
Status (BC List):	Red-list
Photopoint(s):	None
Ecological Community Description:	Dry cliffs and rock outcrops at top of slope. Dominated by moss and lichens with scattered herbs and shrubs in crevices with more soil depth. Tree layer absent due to drought and thin soils. Shrub layer sparse.
Disturbance Notes:	Undisturbed by prior logging since trees are absent. Fires and drought may influence vegetation patterns over time.
Anticipated Change/Succession:	Minor changes expected
Wildlife observations:	Visual: Turkey Vultures soaring over bluffs

Table 5. Vegetation Species in Ecological Community 1.

VEGETATION SPECIES	PERCENT COVER (%)						NOTES
	Main Canopy	Secondary Canopy	Shrub Layer	Herb Layer	Moss, Lichen Layer	Non-natives	
<i>Amelanchier alnifolia</i> (saskatoon)			1				
<i>Holodiscus discolor</i> (oceanspray)			1				
<i>Dicentra Formosa</i> (Pacific bleeding heart)				T			
<i>Digitalis purpurea</i> (foxglove)				T			
<i>Polypodium glycyrrhiza</i> (licorice fern)				T			
Grasses				20			
Moss and Lichen Layer							Total Moss Layer: 40-80 %
<i>Cladina portentosa</i> (maritime reindeer lichen)							
<i>Dicranum</i> species							
<i>Polytrichum juniperinum</i> (juniper haircap moss)							
<i>Racomitrium canescens</i> (grey rock-moss)							
<i>Selaginella wallacei</i> (Wallace's selaginella)							
Cover by Layer (%)	0	0	2	20	40-80		Total Canopy Cover: 0%

Ecological Community 2. Western Hemlock–Douglas-fir/Oregon beaked-moss

Ecological Community 2 represents early seral forest that is slowly recovering after logging in 2000 or 2001. Soils are very dry and thin with some minor tree re-establishment in soil pockets. Aspect is primarily east to south. Vegetation consists of a regenerating secondary canopy of Douglas-fir, western hemlock, western redcedar and bigleaf maple, with variation depending on microsite moisture, generally dry upper slopes, and moist lower slopes. There are a few scattered residual trees that were not logged.



Photo 6. Steeply sloped terrain; note stump in photo from previous logging.

Table 6. Description of Ecological Community 2.

Polygon ID	Ecological Community 2
Ecological Community	Western Hemlock–Douglas-fir/Oregon Beaked-moss; Western Redcedar/ Three-leaved Foamflower; with small portions of Douglas-fir–Western Hemlock/Salal
Classification	CWHxm1/01; CWHxm1/07; (CWHxm1/03)
Structural Stage	Shrub/herb
Status (BC List)	Red-listed/Blue-listed
Photopoint(s)	P6
Ecological Community Description	Shrubs and scattered trees on logged-over dry to moist sites with steep terrain and bluffs. Extremely thin soils with soil pockets in hollows that support sparse regenerating trees and shrubs.
Disturbance Notes	Seventy year-old second growth Douglas-fir stand clear-cut in 2000/2001 with very little subsequent tree regeneration. Fire scars evident on remnant trees. One Douglas-fir stump and one Douglas-fir with fire scar in plot.
Anticipated Change/Succession	Low regeneration due to steep terrain and deer browsing. May be impacted by future wildfire or windthrow. Minor changes expected.
Wildlife observations	Visual: Black-tailed deer (<i>Odocoileus hemionus</i>) scat, Turkey Vultures (<i>Cathartes aura</i>) flying overhead. There are perching sites for raptors, browse for deer, and seeds for birds and small mammals.

Table 7. Vegetation Species in Ecological Community 2.

VEGETATION SPECIES	PERCENT COVER (%)						NOTES
	Main Canopy	Secondary Canopy	Shrub Layer	Herb Layer	Moss, Lichen Layer	Non-natives	
<i>Pseudotsuga menziesii</i> (Douglas-fir)	4	2					MC: 30-80yrs, Ht: 7-18m, DBH: 25-80cm. Old Douglas-fir with fire scars in plot. SC: 5-10yrs, Ht: 3-5m, DBH: 5-15cm
<i>Thuja plicata</i> (western redcedar)	1	1					MC: 20-30yrs, Ht: 15-20m, DBH: 30-40cm SC: 10yrs, Ht: 3m, DBH: 8-10cm
<i>Pinus contora</i> (lodgepole pine)		2					SC: 15-20yrs, Ht: 7-8m, DBH: 18cm
<i>Prunus emarginata</i> (bitter cherry)		T					
<i>Achillea millefolium</i> (yarrow)			T				
<i>Berberis nervosa</i> (dull Oregon-grape)			T				
<i>Danthonia spicata</i> (poverty oatgrass)			T				
<i>Gaultheria shallon</i> (salal)			T				
<i>Holodiscus discolor</i> (oceanspray)			T				
<i>Rosa gymnocarpa</i> (baldhip rose)			T				
<i>Rubus ursinus</i> (trailing blackberry)			T				
<i>Salix scouleriana</i> (Scouler's willow)			T				
<i>Elymus glaucus</i> (blue wildrye)				T			
<i>Festuca idahoensis</i> (Idaho fescue)				T			
<i>Goodyera oblongifolia</i> (rattlesnake plantain)				T			
<i>Holcus lanatus</i> (common velvetgrass)				T			
<i>Luzula multiflora</i> (many-flowered wood-rush)				T			
<i>Polystichum munitum</i> (sword fern)				T			
<i>Pteridium aquilinum</i> (bracken fern)				T			

<i>Zigadenus venenosus</i> (death camas)				T			
<i>Digitalis purpurea</i> (foxglove)						T	
<i>Senecio jacobaea</i> (tansy ragwort)						T	
Moss and Lichen Layer							Total Moss Layer: 80%
<i>Cladina spp.</i> (reindeer lichen)							
<i>Hylocomium splendens</i> (step moss)							
<i>Rhytidiadelphus triquetrus</i> (electrified cat's-tail moss)							
Cover by Layer (%)	5	4	1	1		1	Total Canopy Cover: 5%

Ecological Community 3. Western Redcedar/Three-leaved Foamflower

This ecological community represents a mixed residual forest on moist mid and lower slopes in the southern portion of the BBNR. The moisture regime supports a relatively dense understory of ferns and other shrubs. There are larger bigleaf maple veteran trees and a mixture of scattered smaller conifer trees. Limited conifer regeneration has occurred due to deer browsing pressure, keeping the forest relatively open.



Photo 7. Dense sword fern understory with large bigleaf maple and Douglas-fir trees.

Table 8. Description of Ecological Community 3.

Polygon ID:	Ecological Community 3
Ecological Community:	Western Redcedar/Three-leaved Foamflower; with small portions of Western Redcedar/Sword Fern
Classification:	CWHxm1/07; (CWHS1/05)
Structural Stage:	Shrub/herb (poor regeneration areas) to Mature Forest (residual deciduous species)
Status (BC List):	Blue-listed
Photopoint(s):	P7
Ecological Community Description:	Disturbed mid-seral mixed residual forest on moist mid and lower slopes. Dominated by residual bigleaf maple with understory composed of sparse vegetation with leaf litter and duff. South-facing, moderate slope at toe of bluffs. Elevation 95 m. One red alder (<i>Alnus rubra</i>) snag in plot.
Disturbance Notes:	Small residual patch of forest beside cleared area. Bigleaf maple trees are older but conifers are younger with poor regeneration outside of residual patch.
Anticipated Change/Succession:	Over time, the site will shift to more coniferous species with regeneration and maturing forest.
Wildlife observations:	Aural: Common Raven (<i>Corvus corax</i>), Western Tanager (<i>Piranga ludoviciana</i>) Visual: Oregon lancetooth (<i>Ancotrema hybridum</i>)

Table 9. Vegetation species in Ecological Community 3.

VEGETATION SPECIES	PERCENT COVER (%)						NOTES
	Main Canopy	Secondary Canopy	Shrub Layer	Herb Layer	Moss, Lichen Layer	Non-natives	
<i>Acer macrophyllum</i> (bigleaf maple)	55						MC: 80-120yrs, Ht: 15-20m, DBH: 50-75cm
<i>Pseudotsuga menziesii</i> (Douglas-fir)	15	1					MC: 20-40yrs, Ht: 10-15m, DBH: 25-35cm. SC: 15-20yrs, Ht: 10-12m, DBH: 10-15cm
<i>Thuja plicata</i> (western redcedar)	5	1					MC: 50-70yrs, Ht: 15-18m, DBH: 45cm SC: 10-15yrs, Ht: 3-5m, DBH: 10-15cm
<i>Tsuga heterophylla</i> (western hemlock)	5						MC: 30-40yrs, Ht: 15m, DBH: 30cm
<i>Vaccinium parvifolium</i> (red huckleberry)			T				
<i>Polystichum munitum</i> (sword fern)				40			
<i>Bromus pacificus</i> (Pacific brome)				T			
<i>Rubus ursinus</i> (trailing blackberry)				T			
<i>Digitalis purpurea</i> (foxglove)						T	
<i>Mycelis muralis</i> (wall lettuce)						T	
Moss and Lichen Layer							Total Moss Layer: 0%
Cover by Layer (%)	80	2	<1	40		< 1	Total Canopy Cover: 80%

Ecological Community 4. Douglas-fir – Lodgepole Pine/Oceanspray/Reindeer Lichen

This ecological community is a complex of steep rugged rock outcrops and bluffs interspersed with narrow, moisture-receiving draws. Most residual trees are immature, but a few patches of mature and older trees were left unlogged. The dominant tree canopy is Douglas-fir with lodgepole pine (*Pinus contorta*) at higher elevations and small amounts of western redcedar and western hemlock in more moisture-receiving sites. There are scattered veteran Douglas-fir trees. The aspect is primarily to the east.

Table 10. Description of Ecological Community 4.

Polygon ID:	Ecological Community 4
Ecological Community:	Douglas-fir–Lodgepole Pine/Oceanspray/Reindeer Lichen; Douglas-fir–Western Hemlock/Salal; Western Hemlock–Douglas-fir/Oregon beaked-moss; Western Redcedar/Sword Fern
Classification:	CWHxm1/02; CWHxm1/03; CWHxm1/01; CWHxm1/05
Structural Stage:	Young Forest
Status (BC List):	Red-listed/blue-listed
Photopoint(s):	None
Ecological Community Description:	Steep rock outcrop and bluffs interspersed with narrow draws.
Disturbance Notes:	Selective logging has led to variable tree cover and age. Most residual trees are immature but a few patches of mature and old trees were left unlogged.
Anticipated Change/Succession:	Over time the forest will mature and diversify.
Wildlife observations:	Veteran Douglas-fir trees will provide perching and possibly nesting habitat for raptors.

Table 11. Vegetation Species in Ecological Community 4.

VEGETATION SPECIES	PERCENT COVER (%)						NOTES
	Main Canopy	Secondary Canopy	Shrub Layer	Herb Layer	Moss, Lichen Layer	Non-natives	
<i>Pseudotsuga menziesii</i> (Douglas-fir)	30	5					MC: 60-80yrs, Ht:10-25m, DBH: 15-60cm with vets up to 28 m tall and 120 cm DBH. SC: 1-50 years, Ht: 1-10 m; DBH: 0-15 cm
<i>Pinus contorta</i> (lodgepole pine)	10						MC: 60-80yrs, Ht:10-25m, DBH: 15-60cm
<i>Thuja plicata</i> (western redcedar)	1						
<i>Tsuga heterophylla</i> (western hemlock)	1						
<i>Cornus nuttallii</i> (Pacific dogwood)							
<i>Gaultheria shallon</i> (salal)			10				
<i>Holodiscus discolor</i> (oceanspray)			5				
<i>Mahonia nervosa</i> (dull Oregon-grape)			5				
<i>Rosa gymnocarpa</i> (baldhip rose)			T				
<i>Rubus ursinus</i> (trailing blackberry)			T				
<i>Vaccinium parvifolium</i> (red huckleberry)			T				
<i>Polystichum munitum</i> (sword fern)				40			
<i>Pteridium aquilinum</i> (bracken fern)				10			
Grasses				2			
<i>Digitalis purpurea</i> (foxglove)						T	
<i>Ilex aquifolium</i> (English holly)						T	
Moss and Lichen Layer							Total Moss Layer: 20%
<i>Dicranum</i> sp.							
<i>Eurhynchium oregonum</i> (Oregon beaked moss)							
<i>Hylocomium splendens</i> (step moss)							
<i>Polytricum juniperinum</i> (juniper haircap moss)							

<i>Rhytidiadelphus loreus</i> (lanky moss)							
Cover by Layer (%)	40	5	20	52		<1	Total Canopy Cover: 40%

Ecological Community 5: Western Redcedar/Three-leaved Foamflower

Ecological Community 5 consists of dense non-native grasses with scattered trees and shrubs on moist, rich slopes below the bluffs. The 70-year-old second growth forest was clear cut and forest regeneration is slowed by the dense thatch of the invasive grasses. Trees are isolated but restoration efforts, which include planting and caging conifer seedlings, will help re-establish forest canopy over time.



Photo 8. Previously logged area with planted and caged native tree reforestation.

Table 12. Description of Ecological Community 5.

Polygon ID:	Ecological Community 5
Ecological Community:	Western Redcedar/Three-leaved Foamflower
Classification:	CWHxm1/07
Structural Stage:	Herb
Status (BC List):	Blue-list
Photopoint(s):	P8
Ecological Community Description:	Dense non-native grass community with scattered trees and shrubs on moist, rich lower slopes
Disturbance Notes:	Clear cut in 2000/2001, followed by colonization by primarily non-native grass species (either intentionally sown or seeded in from nearby agricultural areas). The site is capable of supporting a western redcedar/ Three-leaved Foamflower community but the clearcut logging and subsequent colonization by grasses has altered the community to the point that development of a natural ecological community may require ongoing restoration actions.
Anticipated Change/Succession:	With successful restoration, over time the forest will mature and develop the characteristics of a maturing forest. Eventually, the non-native grasses and thistles will be shaded out. Infrequent fires may replace the stand.
Wildlife observations:	Pine white (<i>Neophasia menapia</i>) and woodland skipper (<i>Ochlodes sylvanoides</i>) butterflies observed nectaring on tansy ragwort (<i>Jacobaea vulgaris</i>) and thistles (<i>Cirsium</i> spp.) just outside of the ecological community plot.

Table 13. Vegetation Species in Ecological Community 5.

VEGETATION SPECIES	PERCENT COVER (%)						NOTES
	Main Canopy	Secondary Canopy	Shrub Layer	Herb Layer+	Moss, Lichen Layer	Non-natives	
<i>Tsuga heterophylla</i> (western hemlock)		1					SC:50-70 years; Ht: 2-10 m; DBH: 20-50cm
<i>Pseudotsuga menziesii</i> (Douglas-fir)		1					
<i>Alnus rubra</i> (red alder)		1					
<i>Thuja plicata</i> (western redcedar)		1					
<i>Gaultheria shallon</i> (salal)			3				
<i>Ilex aquifolium</i> (English holly)						T	
<i>Mahonia nervosa</i> (dull Oregon-grape)			2				
<i>Sambucus racemosa</i> (red elderberry)			T				
<i>Vaccinium parvifolium</i> (red huckleberry)			T				
<i>Digitalis purpurea</i> (foxglove)						T	
<i>Polystichum munitum</i> (sword fern)				1			
<i>Pteridium aquilinum</i> (bracken fern)				4			
Grasses				80			
<i>Urtica dioica</i> (stinging nettle)				T			
Moss and Lichen Layer							Total Moss Layer: 5-15%
<i>Atrichum selwynii</i>							
<i>Eurhynchium oreganum</i> (Oregon beaked-moss)							
<i>Plagiomnium insigne</i> (badge moss)							
Cover by Layer (%)		4	5	90	5		Total Canopy Cover: %

3.8 Wildlife Species

The open rocky bluffs and outcrops provide excellent habitat for reptiles such as the northern alligator lizard. Black-tailed deer scat was noted in the lower slopes of the reserve. Turkey vultures were soaring over the bluffs and likely use the area for basking and they may have nest sites in the rocky outcrops. The reserve likely provides habitat for a wide range of birds but the field surveys were not done at an ideal time for assessing bird activity. An anonymous questionnaire respondent noted that Bald Eagles (*Haliaeetus leucocephalus*) nest in the reserve. A few butterfly species were noted in the lower open slopes of the reserve.

Table 14. Wildlife Species Observed in BBNR in 2018.

Common Name	Latin Name
Mammals	
Black-tailed deer	<i>Odocoileus hemionus</i>
Invertebrates	
Lorquin's admiral	<i>Limenitis lorquini</i>
Oregon lancetooth	<i>Ancotrema hybridum</i>
Pine white	<i>Neophasia menapia</i>
Woodland skipper	<i>Ochlodes sylvanoides</i>
Reptiles	
Northern alligator lizard	<i>Elgaria coerulea</i>
Birds	
Common Raven	<i>Corvus corax</i>
Northern Flicker	<i>Colaptes auratus</i>
Turkey Vulture	<i>Cathartes aura</i>
Western Tanager	<i>Piranga ludoviciana</i>

3.9 Expected Change over Time

There may be ongoing regeneration of forest trees over time in areas previously logged, although regeneration is limited by the thick grasses coupled with high herbivory pressure. Additional reforestation efforts and protection of tree seedlings from browse would assist in regeneration. Remnant forested areas and new conifer growth will continue to mature and diversify over time.

4.0 Threats

Table 15. Threats to Natural Values in BBNR.

Threats (examples below)	Mixed Bluff Forest	Rocky Bluffs	Mixed Lower Forests	Overall Threat Rank
Recreational Activities: Hiking can impact conservation targets through wildlife disturbance, soil disturbance, vegetation trampling, and erosion. With potential for increasing population and development near the protected area, this threat to conservation targets is expected to increase in severity over time. There are no hiking trails in the reserve; however, off-trail pedestrian activity is a concern, particularly in sensitive rocky bluff habitat near Mt. Artaban Road.	Low	Medium	Low	Low
Fire (Catastrophic Wildfire): Fire suppression results in a change of fire regime to lower-frequency and higher-intensity fires. Higher-intensity fires are also generally larger in size. A less frequent, more intense fire would potentially replace the mixed forests. Vegetation recovery post-catastrophic fire is slow and invasive terrestrial species are likely to invade into areas with bare soil.	Medium	Low	Low	Low
Lack of Tree Regeneration: After logging in 2000-2001, there has been little regeneration of native trees in some areas of the reserve due to deer browsing pressure. The lack of regeneration in Vegetation Types 2, 3 and 4 presents a risk of increasing colonization by invasive non-native plant species, such as English holly (<i>Ilex aquifolium</i>), Scotch broom (<i>Cytisus scoparius</i>), foxglove (<i>Digitalis purpurea</i>) and non-native grasses.	Medium	N/A	Medium	Medium
Invasive Non-Native Species: Invasive non-native species are a significant threat to biodiversity, second only to habitat loss (IUCN 2018). The impact on native ecosystems, habitats and species can be severe and often irreversible. Invasive non-native English holly is established in Vegetation Types 3, 4 and 5, and foxglove is established in Vegetation Types 1, 2, and 4.	Low	Low	High	Low

Ecological Community 5 is dominated by non-native grasses.				
Problematic Native Species: Hyper-abundant black-tailed deer (<i>Odocoileus hemionus</i>) can be problematic, limiting natural regeneration, dramatically altering understory vegetation structure and composition, and adversely affecting songbird populations (Martin et al. 2011).	Medium	Low	Medium	Medium
Human Disturbance: Increased human activity in adjacent private land lots (e.g. Brigade Bay subdivision) may increase the potential risk of unauthorized human activities such as land clearing, trail building, construction, or other incursions into the Nature Reserve boundaries (Carey et. al. 2000).	Low	Low	Low	Low
Climate Changes: The trend towards longer, drier summers and droughts in the region may impact the survival of tree seedlings over time.	Unknown	Unknown	Unknown	Unknown
Overall Threat Status for Protected Area	Low-Medium	Low	Low	Low

4.1 Expected Change to Threats over Time

Recreational activities and unauthorized human disturbance and infractions into the reserve are likely to increase over time given the increased development pressure on Gambier Island and spread of human population from the Greater Vancouver region.

The threat of catastrophic high-intensity wildfire remains high in the region as climate appears to be shifting to increasingly drier summers and fire suppression remains active in the region.

Lack of native tree regeneration will likely remain consistent given the ongoing threat of herbivory and landscape changes from logging in 2000-2001. Ongoing replanting of native trees will help restore areas with poor regeneration and may shade out some invasive species in the long-term.

Invasive species spread will likely increase without a concerted effort at control. Ongoing removal and control efforts will be required because these invasive species form large, persistent seed banks.

5.0 Community Engagement

5.1 Adjacent Landholders

In preparation for the development of the Management Plan, letters were sent to all landholders and neighbours within a 100 m radius of the reserve. A total of 113 letters were sent by email on November 23rd, 2018 (Appendix D). The letters contained information about Brigade Bay Bluffs, Long Bay Wetland and Mount Artaban Nature Reserves, an invitation to a web conference, and a link to an online questionnaire (see Appendix E).

5.2 First Nations

At this time ITC staff have and will be engaging with Musqueam, Squamish, and Tsleil-waututh First Nations regarding management planning on Gambier Island.

5.3 Conservation Partners and Community Members

The Islands Trust Conservancy held a public web conference on December 14th, 2018. People attending the online conference were asked to provide input on the draft Management Plan and management planning for the reserve. Maps and photographs were presented during a brief slideshow presentation and residents were asked for their input at that time. There were six members of the public who attended online. Notice of the online questionnaire was given to the general public by ITC and its partners through social media.

5.4 Engagement Results

The questionnaire was completed by nine people (four online and five mail-in responses). The nine respondents were primarily non-residents, with 78% living in Vancouver and three respondents having a second residence on Gambier Island. Most respondents (44%) have visited the reserve a few times and all who have visited the reserve engage in hiking/walking; many visitors brought their dogs (88%). The most important values for respondents were protection of habitat for at-risk species (89%), conservation for the sake of the intrinsic value of nature (78%), ecosystem services (67%), and low-impact recreational opportunities (67%).

6.0 Management Recommendations

The general management direction of the BBNR is to allow natural successional processes. With the exception of fire, natural disturbance factors due to wind (windthrow), pest infestation, disease, and wildlife use should proceed without intervention. Only the removal of invasive plant species is permitted. Trails will not be developed and public use will not be encouraged in order to limit fragmentation and reduce potential future infractions into the reserve from additional access points. The terrain in the reserve makes it impossible to create safe trails that will not jeopardize public safety. Restoration is recommended to help re-establish trees in areas with low recruitment.

6.1 Management Roles

The Islands Trust Conservancy is the sole landholder of the BBNR but will rely on its partnership with the Gambier Island Conservancy and the Sunshine Coast Conservation Association to assist with on-the-ground management (Table 16). Since 2009, Islands Trust Conservancy has held a management agreement with the Gambier Island Conservancy (Islands Trust Fund 2009). It specifies that the Reserve should be managed by Gambier Island Conservancy in a manner consistent with the Reserve Purposes, the Management Plan, and the policies of the Board. The Islands Trust Conservancy will monitor the property annually to detect any management issues. Any issues will be reported to the covenant co-holders, Gambier Island Conservancy and Sunshine Coast Conservation Association.

Table 16. Conservation Partners in BBNR.

Partner	Role
Island Trust Conservancy	Landholder
Gambier Island Conservancy	Covenant Holder and Management Group
Sunshine Coast Conservation Association	Covenant Holder

6.2 Permitted and Prohibited Uses

The reserve is open to the public for hiking and nature appreciation; however, there are no existing trails in the reserve as a strategy to discourage use due to the steep terrain and sensitive rocky bluff habitat.

The following activities by the public are prohibited:

- Hunting
- Use of motorized vehicles
- Bicycling
- Horseback riding
- Camping
- Fires
- Forestry
- Livestock grazing
- Trail development
- Tree cutting
- Collection of plants or animals

6.3 Proposed Monitoring Program

Annual monitoring by the covenant holders and by managers of the Reserve is important to ensure that there are no infractions or management issues occurring within the protected area. The main focus of monitoring should be along Mt. Artaban Road since this is the primary access into the reserve. Monitoring should determine if any prohibited uses are occurring, such as tree

cutting, unauthorized trail development, use of motorized vehicles, etc., and inspect for any damage to sensitive habitats by hikers. The proposed monitoring route (roadside monitoring from Mt. Artaban Road, as there is no trail access and terrain is very challenging) is in agreement with the route used by previous monitors (Figure 3).

Species at risk surveys and monitoring are encouraged during appropriate times of year to assess which species are present. Monitoring of invasive species spread is advisable over time so that control measures can be taken as required. The regrowth of planted trees should be monitored and the protective cones removed as needed.

6.4 Public Access

There are no existing public trails in the reserve. Access is located off Mt. Artaban Road (see Section 2.1 for additional details).



Photo 9. BBNR boundary signage along Mt Artaban Rd.

Alternative access opportunities for First Nations may be established through a separate Management Plan for Areas of Cultural Heritage and Sacred Significance, which must be in compliance with the conservation covenant on the land.

6.5 Signage

There is one roadside boundary sign. See Map 2 for locations. Signage is sufficient and should be maintained. When signs are updated, it is recommended that general contact information for the Islands Trust Conservancy be included on signs. If more adjacent development occurs bordering the Nature Reserve, additional signage should be considered. Trail counters could be installed in likely high-traffic access areas to determine how many people are accessing the bluffs. If public access becomes a concern, an interpretive sign identifying the sensitivity of the area and directing or discouraging pedestrian use of the rocky bluff habitat could be added at the road access point.

6.6 Trail Use, Maintenance and Development

There are no trails within the Nature Reserve due to the steep terrain and limited access. Development of trails is not recommended; this is to ensure public safety and avoid habitat fragmentation and degradation, particularly in the sensitive rocky bluff areas.

6.7 Protection Initiatives for Sensitive Ecosystems and Species and Ecosystems at Risk

Trails should not be developed in the Reserve to avoid impacts or degradation and erosion to sensitive steep rocky bluff habitat.

6.8 Ecological Restoration Options

In 2017, a 0.25-ha area of the lower slopes adjacent to the Mt. Artaban Road access received the following restoration: planting of nursery seedlings (22 Douglas-fir), protecting natural seedlings in situ (3 Douglas-fir, 17 western redcedar), and transplanting and protecting natural seedlings from nearby areas (14 western redcedar) (Hopwood 2017). Trees that have been planted in restoration efforts should be monitored annually and cages removed once the trees have grown to a suitable size to be able to withstand some browsing by deer. Further restoration efforts may be required in other areas with poor regeneration and native shrubs could be planted to increase diversity. Species chosen for restoration should be those currently found within the reserve (Appendix A). Site-specific planting recommendations should be made by a biologist because differences in microsite will support different vegetation.



Photo 11. Uncaged western redcedar seedling heavily browsed by deer.



Photo 11. Caged Douglas-fir seedling.

6.9 Scientific Research/Education Opportunities

No research has been conducted to date on the property. Possible future research could include species at risk surveys and monitoring during peak season for a variety of species, such as rare plants, mosses and lichens, bats, birds, gastropods, and amphibians.

6.10 Exotic and Invasive Species Management

Invasive tansy ragwort has established in Vegetation Types 2 and 5 and foxglove has established in Vegetation Types 2 and 3. Efforts should be made to remove these species because they produce large, long-lasting seedbanks and will continue to spread into adjacent habitats.

6.11 Wildfire Risk Management

Wildfire and wildfire suppression can be extremely damaging to sensitive ecosystems. Developing a fire management plan in consultation with the Gambier Fire Equipment Group and BC Wildfire Service to identify optimum (i.e. least damaging) fire suppression techniques is recommended. This information should be provided to the province to be included in their annual fire plan. If possible, it is preferred that salt water or fire retardants are not used for fire suppression since both can cause ecological damage to sensitive ecosystems. There are two freshwater lakes on Gambier that should be used for bucketing in case of a wildfire (Gambier Island Community 2018).



Photo 12. Invasive species including Tansy Ragwort, Foxglove, and Bull Thistle in logged area (Ecological Community 5) of BBNR.

6.12 Climate Change Impacts and Management

Climate change may impact the distribution of ecosystems across the landscape, affecting vegetation patterns, hydrology, and outbreaks of pests. Hotter, drier summers may lead to premature drying of wetlands and altered flow rates in seasonal streams. Trends that may prevail in this region include upslope migration of tree lines and ecosystem boundaries, and increased fire frequency. Douglas-fir-dominated stands will expand at the cost of Coastal Western Hemlock (CWH) forests, which are expected to shift upslope (Hebda 1997). Ensuring ongoing protection and connectivity between large areas of protected ecosystems will aid the dispersal of species into new habitats and across elevations as vegetation patterns shift. These protected area matrices will provide potential reservoirs for dispersal into suitable habitats in adjacent areas as climate change shifts the distribution of these ecosystem types (McCloskey et al. 2009).

7.0 Action Items

7.1 Immediate Actions (1-2 years)

1. Continue to work with the Gambier Island Conservancy and Sunshine Coast Conservation Association to complete management activities as funds allow.
2. Monitor planted trees for survival and remove cages as necessary.

3. Identify opportunities for cooperative management with First Nations.

7.2 Short Term Actions (3-5 years)

1. Prepare a wildfire management plan that considers both forest ecology and prevention of damage to surrounding neighbourhoods in consultation with the local fire authorities.
2. Plant and cage native shrubs and trees in areas with poor natural regeneration.
3. Initiate development of parallel Management Plan for Areas of Cultural Heritage and Sacred Significance documents with First Nations.

7.3 Long Term Actions (5+ years)

1. Conduct surveys for species at risk and other wildlife (e.g. amphibians, bats) to provide a better understanding of the natural values of the reserve.

7.4 Ongoing or Annual Action Items

1. Conduct annual monitoring to identify management concerns, including off-trail public use and invasive species.
2. Communicate annually with the Gambier Island Conservancy and Sunshine Coast Conservation Association to provide updates on the reserve, seek approvals for stewardship activities as necessary and maintain compliance with the conservation covenant.
3. Conduct ongoing maintenance of signs.
4. Continue to inform the general public of the natural values of the site and the permitted and prohibited uses through information placed in local publications.
5. Work with First Nations towards cooperative management of the reserve using a Management Plan for Areas of Cultural Heritage and Sacred Significance as a guide.

8.0 Conclusion

Brigade Bay Bluffs Nature Reserve is an important protected area on eastern Gambier Island. Although impacted by logging, over time the land will develop into a young forest and reforestation efforts can help enhance degraded habitats. The Reserve provides important connectivity and wildlife habitat across a large, significant network of protected areas on Gambier Island.

Islands Trust Conservancy will act on the management action items identified in this plan to achieve the vision, objectives and purpose of the Nature Reserve. Future management issues may lead to further action items that will be identified in work plans and in future revisions of this plan.

9.0 References

- BC Ministry of Energy and Mines. 2005. Surficial Geology Map Index of BC (GSB Open File 1992-13). Website: http://webmap.em.gov.bc.ca/mapplace/minpot/OF_13map.cfm
- Cascade Environmental Resource Group Ltd. 2005. Brigade Bay Bluffs Nature Reserve and Long Bay Wetland Nature Reserve Management, Gambier Island, BC. November 30, 2005.
- Carey, C., N. Dudley, and S. Stolton. 2000. Squandering Paradise? The importance and vulnerability of the world's protected areas. WWF-World Wildlife Fund for Nature International, Gland, Switzerland. Pp. 227.
- CERG. 2001. Environmental Assessment: Gambier Island, DL's 1257, 1259 and part DL 1780; except part in Ref. Plan 2829, Group 1, NWD, Gambier Island BC. Prepared for 586329 BC Ltd. September 17, 2001.
- Fisheries and Oceans Canada (FOC). February 25, 2004. Authorization for Works or undertakings Affecting Fish Habitat. Authorization No. 02-HPAC-PA2-000-000006 Brigade Bay Developments.
- Fisheries and Oceans Canada (FOC). December 2, 2003. Proposed Brigade Bay Development Project; 586329 BC Ltd. Ho-mahmk, Cha7elknech (Brigade Bay, Gambier Island, Howe Sound). First Nations Interests.
- Gambier Island Community. 2018. Gambier Island Fire District Map. Web site: <http://www.gambierisland.org/Documents/Gambier%20Fire%20District%202016.pdf>
- Green, R.N. and K. Klinka. 1994. A Field Guide to Site Identification and Interpretation for the Vancouver Forest Region. Land Management Handbook No .28. Ministry of Forests. Victoria, B.C.
- Hebda, R.J. 1997. Chapter 13: Impacts of Climate Change on Biogeoclimatic Zones of British Columbia and Yukon *In* Responding to Global Climate Change in British Columbia and Yukon, Volume 1 of the Canada Country Study: Climate Impacts and Adaptations. Eds E.Taylor and B. Taylor. Pp. 13-1 - 13-15.
- Hopwood, D. 2009. Management Plan for Mount Artaban Nature Reserve. Unpublished Report prepared for the Islands Trust Fund.
- Hopwood, D. 2013. Baseline Report: Long Bay Wetland Nature Reserve. Prepared for Islands Trust Conservancy, Schedule A of Conservation Covenant (CA3219709).
- Hopwood, D. 2017. Notes on Gambier Conservancy Restoration Work Party, February 25, 2017. Unpublished report prepared for the Islands Trust Conservancy.
- International Union for Conservation of Nature (IUCN). 2018. Invasive Species. <https://www.iucn.org/theme/species/our-work/invasive-species>
- Islands Trust. 2004. Gambier Island Land Use Bylaw No. 86. <http://www.islandstrust.bc.ca/media/339774/lub-sch-b-march2016-bl128.pdf>

Islands Trust. 2018a. Islands Trust Object. <http://www.islandstrust.bc.ca/trust-council/islands-trust-act/>

Islands Trust 2018b. MapIt.

<http://mapit.islandstrust.bc.ca/Html5Viewer/Index.html?configBase=http://mapit.islandstrust.bc.ca/Geocortex/Essentials/REST/sites/MapIT/viewers/MapIT/virtualdirectory/Resources/Config/Default&runworkflow=Startup&Proceed=Prop>

Islands Trust. 2019. Reconciliation Declaration.

<http://www.islandstrust.bc.ca/media/347494/reconciliation-declaration.pdf>

Islands Trust Fund. 2009. Brigade Bay Bluffs Nature Reserve Management Agreement.

Unpublished agreement between the Trust Fund Board and Gambier Island Conservancy.

Lands Directorate. 1986. Terrestrial Ecozones Of Canada, Ecological Land Classification No. 19, 1986, p. 107-113.

Lockwood, M. 2006. Global protected area framework. *In* M. Lockwood, M. Lockwood, G. L. Worboys, and A. Kothari (Eds.). *Managing Protected Areas: A Global Guide* (p. 84). London: Earthscan.

McCloskey, S.P.J., L.D. Daniels, and J.A. McLean. 2009. Potential impacts of climate change on Western Hemlock Looper outbreaks. *Northwest Science*. 83(3):225-238.

Martin, T.G., P. Arcese, and N. Scheerder. 2011. Browsing down out natural heritage: Deer impacts on vegetation structure and songbird populations across an island archipelago. *Biological Conservation* 144(2011):459-469.

Mauger, G.S., J.H. Casola, H.A. Morgan, R.L. Strauch, B. Jones, B. Curry, T.M. Busch Isaken, L. Whitely Binder, M.B. Krosby, and A.K. Snover. 2015. State of Knowledge: Climate Change in Puget Sound. Report prepared for the Puget Sound Partnership and the National Oceanic and Atmospheric Administration. Climate Impacts Group, University of Washington, Seattle.

Meidinger, D. and J. Pojar. 1991. *Ecosystems of British Columbia*. BC Ministry of Forests. Victoria, B.C.

Meteoblue. 2018. Climate Gambier Island: Average Temperature and Precipitation.

https://www.meteoblue.com/en/weather/forecast/modelclimate/gambier-island_canada_5959241

Parminster. 2009. Personal Communication with Doug Hopwood regarding Gambier Island historic fires. (*In* Hopwood 2009).

Resource Inventory Committee (RIC). 1998. *Field Manual for Describing Terrestrial Ecosystems*. Co-published by Ministry of Forests and Ministry of Environment, Province of BC, Victoria, BC.

The Weather Network. 2018. Bowen Island Average Annual Precipitation.

<https://www.theweathernetwork.com/ca/api/sitewrapper/index?b=%2Fstatistics%2F&p=%2Fforecasts%2Fstatistics%2Findex&url=%2Fstatistics%2Fcab0037%2Fbowen-island%2F%2F%2F3F>

Appendix A. Subdivision Plan for Brigade Bay Bluffs Nature Reserve.



Appendix B. Vegetation found in Brigade Bay Bluffs Nature Reserve.

Common Name	Latin Name	Status
<i>Acer macrophyllum</i>	Bigleaf maple	
<i>Achillea millefolium</i>	Yarrow	
<i>Agrostis capillaris</i>	Colonial bentgrass	Introduced
<i>Aira praecox</i>	Early hairgrass	Introduced
<i>Amelanchier alnifolia</i>	Saskatoon	
<i>Anaphalis margaritacea</i>	Pearly everlasting	
<i>Anthoxanthum odoratum</i>	Sweet vernalgrass	Introduced
<i>Asplenium trichomanes</i>	Maidenhair spleenwort	
<i>Berberis nervosa</i>	Dull Oregon-grape	
<i>Cirsium arvense</i>	Canada thistle	Introduced
<i>Cirsium vulgare</i>	Bull thistle	Introduced
<i>Cladonia portentosa</i>	Reindeer lichen	
<i>Dactylis glomerata</i>	Orchard grass	Introduced
<i>Danthonia spicata</i>	Poverty oatgrass	
<i>Dicranum spp.</i>		
<i>Digitalis purpurea</i>	Foxglove	Introduced
<i>Elymus glaucus</i>	Blue wildrye	
<i>Festuca idahoensis</i>	Idaho fescue	
<i>Gaultheria shallon</i>	Salal	
<i>Goodyera oblongifolia</i>	Rattlesnake plantain	
<i>Hieracium albiflorum</i>	White-flowered hawkweed	
<i>Holcus lanatus</i>	Common velvet-grass	Introduced
<i>Holodiscus discolor</i>	Oceanspray	
<i>Hylocomium splendens</i>	Step moss	
<i>Hypochaeris radicata</i>	Hairy cat's-ear	Introduced
<i>Ilex aquifolium</i>	English holly	Introduced
<i>Juncus effusus</i>	Common rush	
<i>Luzula multiflora</i>	Many-flowered wood-rush	
<i>Mycelis muralis</i>	Wall lettuce	Introduced
<i>Phleum pratense</i>	Timothy	Introduced

<i>Pinus contorta</i>	Lodgepole pine	
<i>Plagiomnium insigne</i>	Badge moss	
<i>Polystichum munitum</i>	Sword fern	
<i>Prunus emarginata</i>	Bitter cherry	
<i>Pseudotsuga menziesii</i>	Douglas-fir	
<i>Pteridium aquilinum</i>	Bracken fern	
<i>Racomitrium spp.</i>		
<i>Rhytidiadelphus triquetrus</i>	Electrified cat's-tail moss	
<i>Ribes lacustre</i>	Black gooseberry	
<i>Rubus leucodermis</i>	Black raspberry	
<i>Rubus spectabilis</i>	Salmonberry	
<i>Rubus ursinus</i>	Trailing blackberry	
<i>Salix scouleriana</i>	Scouler's willow	
<i>Senecio jacobaea</i>	Tansy ragwort	Introduced
<i>Thuja plicata</i>	Western redcedar	
<i>Tsuga heterophylla</i>	Western hemlock	
<i>Urtica dioica</i>	Stinging nettle	
<i>Vaccinium parvifolium</i>	Red huckleberry	
<i>Zigadenus venenosus</i>	Death camas	

Appendix C. Photographic Documentation.

PHOTO STATION	LOCATION (UTM Coordinates)	DIRECTION	PHOTO-GRAPHER	DATE YYYY-MM-DD	DESCRIPTION
Anthropogenic Features as noted on Figure 3					
P8	475522; 5482227	360°	LM	2018-08-09	Looking upslope from road to bluffs in background. Carrina Maslovat in photo with small Covenant Boundary sign in foreground and caged trees from replanting efforts visible.
P9	475548; 5482280	270°	LM	2018-08-09	Boundary sign behind large rock at northern road edge of Nature Reserve.
P10	475541; 5482271		LM	2018-08-09	Douglas-fir planted and caged during restoration efforts in cleared area of lower bluffs.
Natural Features as noted on Figure 3					
P1	475894; 5481513	320°	LM	2018-08-09	Looking from Brigade Bay (marina) towards Brigade Bay Bluffs in the background.
P2	475430; 5482397	140°	LM	2018-08-09	Howe Sound, lower slopes of Mt. Artaban and Brigade Bay. Note smoky haze from nearby forest fire in Horseshoe Bay.
P3	475462; 5482266	270°	LM	2018-08-09	Western Redcedar stump with Douglas-fir and Western Hemlock trees growing out of it. Botanist Carrina Maslovat in photo.
P4	475439; 5482459	0°	LM	2018-08-09	Turkey Vulture flying over bluffs.

P5	475418; 5482379	350°	LM	2018-08-09	Looking upslope onto bluff habitat, small draw/gully with boulders and woody debris.
P6	475428; 5482457	110°	LM	2018-08-09	Centre of Ecological Community 2 plot, with view of Howe Sound in background.
P7	475418; 5482340	350°	LM	2018-08-09	Centre of Bigleaf Maple plot, looking upslope.
P11	475493; 5482261		LM	2018-08-09	Browsed Western Redcedar in cleared area where tree-planting efforts occurred near roadside.
P12	475440; 5482322	135°	LM	2018-08-09	Canada Thistle and Tansy Ragwort

* LM=Laura Matthias

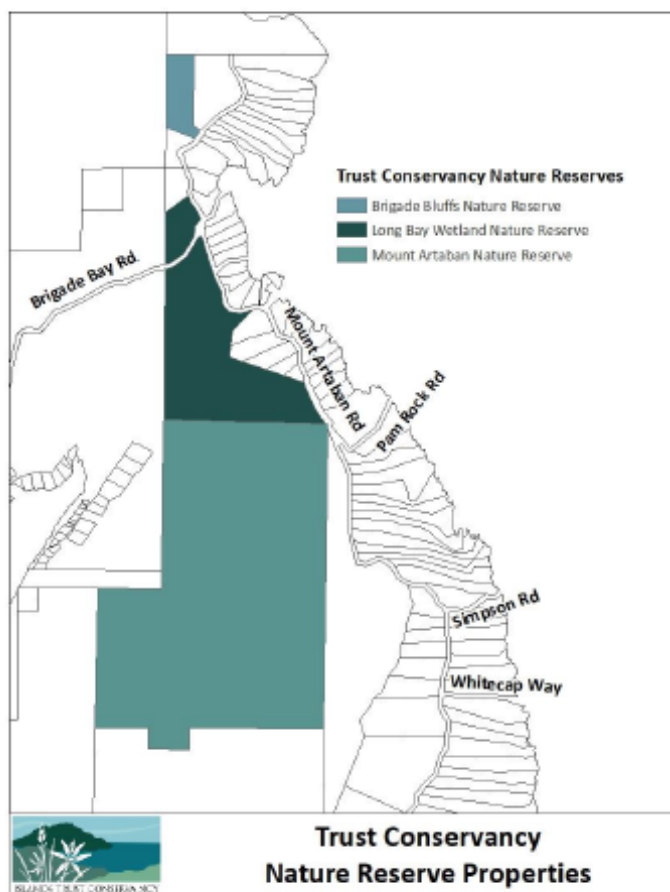
Appendix D. Letter to Neighbours.



November 23, 2018

Dear Neighbour,

The Islands Trust Conservancy is updating the management plans for three nature reserves on eastern Gambier Island (see map below) and we want to hear from you.



Brigade Bay Bluffs Nature Reserve is a 5.14 hectare (12.70 acre) parcel located northwest of Brigade Bay marina off Mt. Artaban Road.

Long Bay Wetland Nature Reserve is 38 hectares (91 acres) and is located west of Brigade Bay marina and borders Mt. Artaban Road.

Mount Artaban Nature Reserve is 107 hectares (264 acres) and is south of Brigade Bay marina and can be accessed via a trail through Long Bay Wetland Nature Reserve or from the south through Halkett Bay Provincial Marine Park.

The Islands Trust Conservancy manages

the nature reserves in partnership with the Gambier Island Conservancy and the Sunshine Coast Conservation Association to protect their unique ecological values. The

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properties contain open bluffs, maturing forests, streams, wetlands and the peak of Mount Artaban. The reserves are important for their connections to other undeveloped and protected lands on the island.

There are restrictions on the use of the properties outlined in conservation covenants that are held by the Gambier Island Conservancy and Sunshine Coast Conservation Association. These covenants were put in place to protect the native plants and animals on the reserve. The previous management plans written in 2005 and 2009 can be found on our website as follows

- Management Plan for Mount Artaban:
<http://www.islandstrustconservancy.ca/media/10352/itfmgmtplanartaban.pdf>
- Management Plan for Brigade Bay Bluffs and Long Bay Wetland:
<http://www.islandstrustconservancy.ca/media/10346/itfmgmtplanbbay.pdf>

How to Participate

- 1) Fill in our survey: We would like to hear your ideas and concerns regarding the long-term management of these special places. Please complete a questionnaire on our website: <http://www.islandstrustconservancy.ca/gambier-survey/> or complete the enclosed questionnaire and send it to me by email or mail.
- 2) Join our web conference: To learn more about the management of the nature reserves and to share your questions and ideas, join the conference on your computer, tablet or smartphone:
Gambier Nature Reserves
Wed, Dec 12, 2018 7:00 PM - 8:00 PM PST
<https://global.gotomeeting.com/join/375421301>
If you contact us, we can also send you the link electronically.

Many thanks for taking the time to consider the management of these three nature reserves. For more information, please contact me at the number or email below.

Yours sincerely,



Nuala Murphy
Property Management Specialist, Islands Trust Conservancy
Phone: 250-405-5193
Email: nmurphy@islandstrust.bc.ca

The Islands Trust Fund has changed its legal name to the Islands Trust Conservancy. Please visit us on our updated website at www.islandstrustconservancy.ca



Brigade Bay Bluffs, Long Bay Wetland and Mount Artaban Nature Reserves, Gambier Island Questionnaire

Brigade Bay Bluffs (5.14 hectare/12.70 acre), Long Bay Wetland (38 hectares/91 acres) and Mount Artaban (107 hectares/264 acres) Nature Reserves are protected areas on east Gambier Island. They have significant watershed values and contain rare ecosystems which are listed as either threatened or endangered in British Columbia. They are important because of their connectivity to large areas of contiguous protected lands.

Mount Artaban Nature Reserve was protected in 2008 through the Provincial Free Crown Grant Program. Brigade Bay Bluffs and Long Bay Wetland Nature Reserves were donated in 2005 as part of the Brigade Bay subdivision development. All three properties are protected by conservation covenants held by the Gambier Island Conservancy and the Sunshine Coast Conservation Association.

The Islands Trust Conservancy's primary goal is to protect and nurture the sensitive ecosystems on these lands. To do that, we create a management plan, with revisions approximately every 10 years, to guide the management of the property. We are asking you to help us with the update for these three plans. Please share your thoughts on the protection and long-term management of these nature reserves.

1. Where do you live?

- ☐ Gambier Island
- ☐ Sunshine Coast
- ☐ Vancouver
- ☐ Other

2. Have you ever visited Mount Artaban, Brigade Bay Bluffs or Long Bay Wetland Nature Reserve? If so, how often?

- ☐ No, never
- ☐ Once
- ☐ A few times
- ☐ Once a year or less
- ☐ Once a month or more

3. Which reserve do you visit most frequently?

- ☐ Brigade Bay Bluffs Nature Reserve
- ☐ Long Bay Wetland Nature Reserve
- ☐ Mount Artaban Nature Reserve

4. If you have visited the Nature Reserves on Gambier Island, what did you do there?

- ☐ Hiking/walking
- ☐ Dog walking
- ☐ Wildlife viewing
- ☐ Other (please list)

5. Please list any wildlife and unique plant species you have seen at or near any of these Nature Reserves (please indicate which reserve for each species).

6. What do you believe to be the most important values of nature reserves (choose three)?

- ☐ Protection of habitat for at-risk species
- ☐ Ecosystem services (e.g. clean water and air, erosion control, groundwater recharge, etc.)
- ☐ Low impact recreational opportunities
- ☐ Education and research opportunities
- ☐ Tourism
- ☐ Aesthetic appeal
- ☐ Conservation for the intrinsic value of nature
- ☐ Other (please specify):

7. What activities do you believe are incompatible with the protection of natural features, and should not be allowed within any of these nature reserves?

8. What do you feel could be the greatest threat to each of these nature reserves, and should be the highest management priority for the Islands Trust Conservancy?

Brigade Bay Bluffs:

Long Bay Wetland:

Mount Artaban:

9. Please provide any other relevant information that will help us make the best management decisions for any of these nature reserves.

10. Please share with us any history you know about these properties or any knowledge you have about unique cultural or other special features on the properties or nearby (please indicate which reserve).

11. If you would like to receive periodic updates from the Islands Trust Conservancy on this and other conservation projects on the islands, please provide your name and email address or sign up for our latest news at www.islandstrustconservancy.ca:

Thank you for your time spent helping us plan the future of the Brigade Bay Bluffs, Long Bay Wetland, and Mount Artaban Nature Reserves.

Long Bay Wetland Nature Reserve Management Plan

Gambier Island, BC



PREPARED FOR:



Brigade Bay Bluffs and Long Bay Wetland Nature Reserves
joint management plan prepared: November 30, 2005

REVISED February 2019 by: Carrina Maslovat, R. P. Bio. #1407
and Laura Matthias, Consultant Biologist, Salt Spring Island, BC

APPROVED BY:

Islands Trust Conservancy, October 1, 2019: ITC-2019-038

Gambier Island Conservancy, **Date**

Sunshine Coast Conservation Association, **Date**

i. Executive Summary

Islands Trust Conservancy acknowledges and respects that Gambier Island is within the traditional territory of multiple Coast Salish peoples, whose historical relationship to the land, culture, and spirit of this place continues to this day. Islands Trust Conservancy is committed to honoring the rich history of Indigenous stewardship in the lands and waters of the Islands Trust Area and to building mutually respectful relationships between Indigenous and non-Indigenous partners in conservation. Therefore, this Management Plan for Long Bay Wetland Nature Reserve is a living document that will evolve as opportunities for knowledge sharing arise and understanding grows.

In January 2005, the Islands Trust Conservancy protected two parcels of land west of Brigade Bay on eastern Gambier Island: Brigade Bay Bluffs Nature Reserve (5.14 hectares/12.7 acres) and Long Bay Wetland Nature Reserve (38 hectares/94 acres). These lands were transferred by Coastland Wood Industries Ltd. and Mike Jenks as part of the Brigade Bay subdivision development. Cascade Environmental Resource Group Ltd. prepared the initial joint management plan for the Brigade Bay Bluffs and Long Bay Wetland Nature Reserves. In 2018, the Management Plans were updated as separate documents for each reserve.

The Long Bay Wetland Nature Reserve (LBWNR) consists of upland areas surrounding a large wetland area. The Nature Reserve includes a wetland and three tributaries that were significantly damaged by logging in 2000 and 2001. Riparian restoration efforts completed in 2002 and 2003 included removal of excessive slash and channel blockages, de-compaction of affected soils and re-vegetation of riparian areas (Cascade 2005). The wetland and tributaries are part of the headwaters of the Long Bay watershed and Long Bay Creek, a fish bearing stream. The upland portions of the reserve were selectively logged prior to reserve establishment, resulting in a young forest with large numbers of mature deciduous species and pole/sapling sized conifers. Although the forests are young, they will mature into blue- and red-listed ecological communities. The adjacent Brigade Bay subdivision used the north end of the reserve area as a quarry borrow pit for sand and gravel. Some reforestation and protection of seedlings from deer browsing has been initiated (2015, 2017) within the reserve. LBWNR is an important part of a large contiguous natural area within the Coastal Western Hemlock Very Dry Maritime (CWHxm) subzone on Gambier Island.

The management objectives for management of the LBWNR are:

- Preserve and protect the ecosystems, biological diversity and other natural values of the site;
- Restore plant and animal communities and ecological processes where necessary;
- Allow low-impact pedestrian access on existing trails while ensuring ecological values are not compromised (further development of the trail system is not recommended);
- Support ongoing inventory, mapping and monitoring to guide management;
- Protect the water quality and flow regimes of all streams and wetlands within

the reserve;

- Remove invasive plant species throughout the reserve and hazard trees around the trail system; and
- Allow natural forest succession and natural ecological processes and functions to proceed unimpeded without human intervention, except in the case of wildfire or other exceptional situations where remediation is considered imperative. Only the removal of hazard trees around the trail system and invasive plant species is permitted.

Key management recommendations are to maintain trails and signage, remove invasive species, continue restoration of highly degraded sites and to develop a wildfire management plan. Further inventories for Species at Risk would provide a clearer picture of the ecology of the reserve and guide future management.

ii. Tables and Lists

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iii. Acknowledgements

Table 1. Acknowledgement of thanks

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Carrina Maslovat	Botanist/Consultant	R.P. Bio.	Primary Author, field data collection
Laura Matthias	Independent Biologist/ Subcontractor	Species at Risk Biologist	Secondary Author, field data collection

Cascade Environmental Resource Group	Consultant		Preparation of previous management plan
Nuala Murphy	Property Management Specialist/Islands Trust Conservancy		Background information and mapping, local contacts
Jemma Green	Property Management Specialist/Islands Trust Conservancy		Review of document
Doug Hopwood	Biologist/Consultant	R.P. Forester	Providing background information, writing baseline report, assisting with access logistics
Peter Scholefield	Volunteer/Gambier Island Conservancy		Background data, assistance with field logistics, document review
Jason Herz	Conservation Committee Chair/Sunshine Coast Conservation Association		Review of document
Ruth Simons	Volunteer/Gambier Island Conservancy		Background data and assistance with field logistics; allowing access via Brigade Bay Marina.

1.0 Introduction

Gambier Island is situated within the traditional territory of the Coast Salish peoples, who share a rich history of stewardship in the lands and waters of the Islands Trust Area that inspires the work of Islands Trust Conservancy and its partners. The Long Bay Wetland Nature Reserve (LBWNR) on Gambier Island was protected by the Islands Trust Fund (now the Islands Trust Conservancy – ITC) in 2005, along with Brigade Bay Bluffs Nature Reserve. The properties were part of a transfer by Coastland Wood Industries Ltd. and Mike Jenks as part of the Brigade Bay subdivision development (survey in Appendix A).

Cascade Environmental Resource Group Ltd. developed the initial Management Plan for both the Brigade Bay Bluffs and LBWNR (Cascade 2005). In 2018, the Management Plans for both properties were scheduled to be updated and written as separate independent documents for each property.

The Gambier Island Conservancy and the South Coast Conservation Association co-hold a conservation covenant on the land.

1.1 Islands Trust Conservancy

Since time immemorial, the lands and waters between Vancouver Island and mainland British Columbia have been home to the Coast Salish people, whose ecological, cultural, and spiritual connections to this place continue to this day. In 1974, the Province of British Columbia recognized this region as a special place within the province where the unique beauty, rural character and diverse ecosystems should be protected for future generations. Through the Islands Trust Act, the province established the Islands Trust, a local government, with the following mandate (known as the Object of the Islands Trust):

To preserve and protect the trust area and its unique amenities and environment for the benefit of the residents of the trust area and of British Columbia generally, in cooperation with municipalities, regional districts, improvement districts, other persons and organizations and the government of British Columbia. (Islands Trust 2018)

In 1990, through the enactment of a section of Islands Trust Act, the Islands Trust Conservancy (originally called the Islands Trust Fund) was established as a conservation land trust to assist in carrying out the “preserve and protect” mandate. Part 6 of the Islands Trust Act establishes the corporate status, responsibilities, and governance structure of the Islands Trust Conservancy. The Islands Trust Conservancy is one of fifteen corporate entities charged to uphold the Object of the Islands Trust and since 1990 has protected over 1,267 hectares (3,130 acres) of land as nature reserves, nature sanctuaries and conservation covenants.

The vision of the Islands Trust Conservancy is that the islands and waters of the Strait of Georgia and Howe Sound will be a vibrant tapestry of culture and ecology where humans live and work in harmony with the natural world. This special place will have a network of protected areas that preserve in perpetuity the native species and natural systems of the islands. Engaged residents and conservation partners will work together to protect large natural areas and key wildlife habitat. Viable ecosystems will flourish alongside healthy island communities.

The mission of the Islands Trust Conservancy is to protect special places by encouraging, undertaking and assisting in voluntary conservation initiatives within the Islands Trust Area. Islands Trust Conservancy nature reserves are managed to maintain, preserve and protect the natural features and values of ecosystems. This level of protection is similar to the International Union for Conservation of Nature (IUCN) protected area Category 1B: Wilderness area: a “large area of unmodified or slightly modified land and/or sea; retaining its natural character and influence, without permanent or significant habitation, which is protected and managed in order to preserve its natural condition” (Lockwood 2006).

1.2 Purpose of Islands Trust Conservancy Management Plans

ITC management plans provide background information and set out the direction of property management as follows:

- Provide general and descriptive information on the property, including location, history, and land use;
- Set out the conservation goals and objectives for the property;
- Identify the property's ecological and/or cultural values and features;
- Describe the management issues associated with the property; and,
- Provide short, medium and long-term management recommendations (action items or tasks) on issues such as: species at risk protection; ecological restoration; public access; educational and research opportunities; invasive species management; and signage needs.
- Preserve and protect cultural, spiritual, and sacred locations.

Once the management plan process is complete, the ITC will work to carry out the management actions or strategies identified in the plan, as resources allow. Following general practice and as outlined in the conservation covenant and statutory right of way, the ITC will revise the Management Plan every ten years.

1.3 Scope of Islands Trust Conservancy Management Plans

Consistent with the Islands Trust Reconciliation Declaration (Islands Trust 2019), ITC recognizes that its nature reserves may be places of great cultural and spiritual significance to First Nations. Cooperative management of these protected places will provide opportunities to establish and maintain mutually respectful relationships between the Islands Trust Conservancy and First Nations. Relationship-building, knowledge-sharing, healing, and establishment of trust are long-term processes that do not necessarily conform to the timeline required for many management activities (e.g. protecting species at risk, maintaining trails and signage, controlling invasive species, etc.); therefore, Islands Trust Conservancy is committed to developing a parallel *Management Plan for Areas of Cultural Heritage and Sacred Significance* with a flexible timeline. This parallel Management Plan sets out guiding principles for cooperative collaboration between ITC and those First Nations with historical and cultural interests in the area defined by one or more nature reserves. Moreover, the Management Plan defines the

common vision, objectives, policies, and best management practices for the nature reserve(s) to ensure that its natural values and cultural and sacred heritage are maintained for future generations. As with this plan, the *Management Plan for Areas of Cultural Heritage and Sacred Significance* must be in accordance with the conservation covenant registered on the land.

1.4 Protected Area Purpose

The purpose of the LBWNR is to preserve and protect the natural ecosystems and natural values of the site (including any rare and endangered plant and animal species), and to maintain the biodiversity of the site for the benefit of the flora and fauna of the reserve, the residents of the island and the province generally. The site is to be protected in accordance with the objectives of the Islands Trust Conservancy and the Islands Trust.

1.5 Protected Area Objectives

The objectives for the LBWNR are as follows:

1. Preserve and protect the natural ecosystems, biological diversity and natural values.
2. Restore plant and animal communities and ecological process.
3. Allow low-impact pedestrian access on existing trails (further development of the trail system is not recommended), while ensuring that significant ecological values are not compromised by recreation use.
4. Support and enhance continued use of areas of sacred and cultural significance by First Nations where such uses are compatible with protection of ecological values and in compliance with the conservation covenant held by Gambier Island Conservancy and the Sunshine Coast Conservation Association.
5. Support ongoing inventory, mapping and monitoring to guide management.
6. Protect the water quality and flow regimes of all streams and wetlands within the reserve.
7. Remove invasive plant species throughout the reserve and hazard trees around the trail system.
8. Allow natural forest succession and natural ecological processes and functions to proceed unimpeded without human intervention, except in the case of wildfire or other exceptional situations where remediation is considered imperative.

2.0 Property Information

The LBWNR is 38 hectares (91 acres) in size with a degraded low-lying wetland (impacted from logging operations in 2000-2001) measuring 10.7 ha (26.5 acres). The remaining area consists primarily of forested slopes spanning an elevation range from 27 m (90 feet) to 151 m (500 feet) above sea level.

2.1 Location

Gambier Island is approximately 10 km from Horseshoe Bay.

Gambier Island can be accessed by passenger ferry from the BC Ferries Langdale Terminal, which docks at New Brighton Dock on the west side of Gambier Island. There is no road access to LBWNR from the dock at New Brighton. There is a Gambier Island trail network but the route to the LBWNR from New Brighton is lengthy, not direct, and the trail is not well marked or signed in places.

LBWNR can be accessed from two public dock locations on Gambier Island. From the public dock at Camp Artaban, at the head of Long Bay, there is a short public trail through the camp property that continues along the Brigade Bay Road easement, through the Gambier Island Sea Ranch property, and onto Mt. Artaban Road in the Brigade Bay subdivision. This hike takes approximately 30 minutes. Alternatively, the trailhead to the Mt. Artaban trail, which starts off in the LBWNR, can be reached from the public dock in the Halkett Bay Provincial Marine Park by hiking north on a trail through the park, then walking north along Mt. Artaban Road. This route takes about one hour.

To travel to these two public docks, there are regularly scheduled water taxi runs from Horseshoe Bay on weekends and on Wednesday evenings in the summer. There are two nearby private marinas, one at the Sea Ranch and the other at Brigade Bay. For those who are not property owners at either location, permission is required to access the marinas.

2.2 Legal description

The LBWNR is legally described as PID: 015-921-034, District Lot 1259, Group 1, New Westminster District, Except Part Subdivided by Plan BCP15304.

2.3 Legal Access

Legal access to the LBWNR is off of Mt. Artaban Road, which goes through the Brigade Bay subdivision (see Figure 1 for trailhead locations). The reserve is west of the road along much of its length.



Photo 2. Trailhead signs off of Mt. Artaban Road in LBWNR on connector trail to Mt. Artaban Nature Reserve.

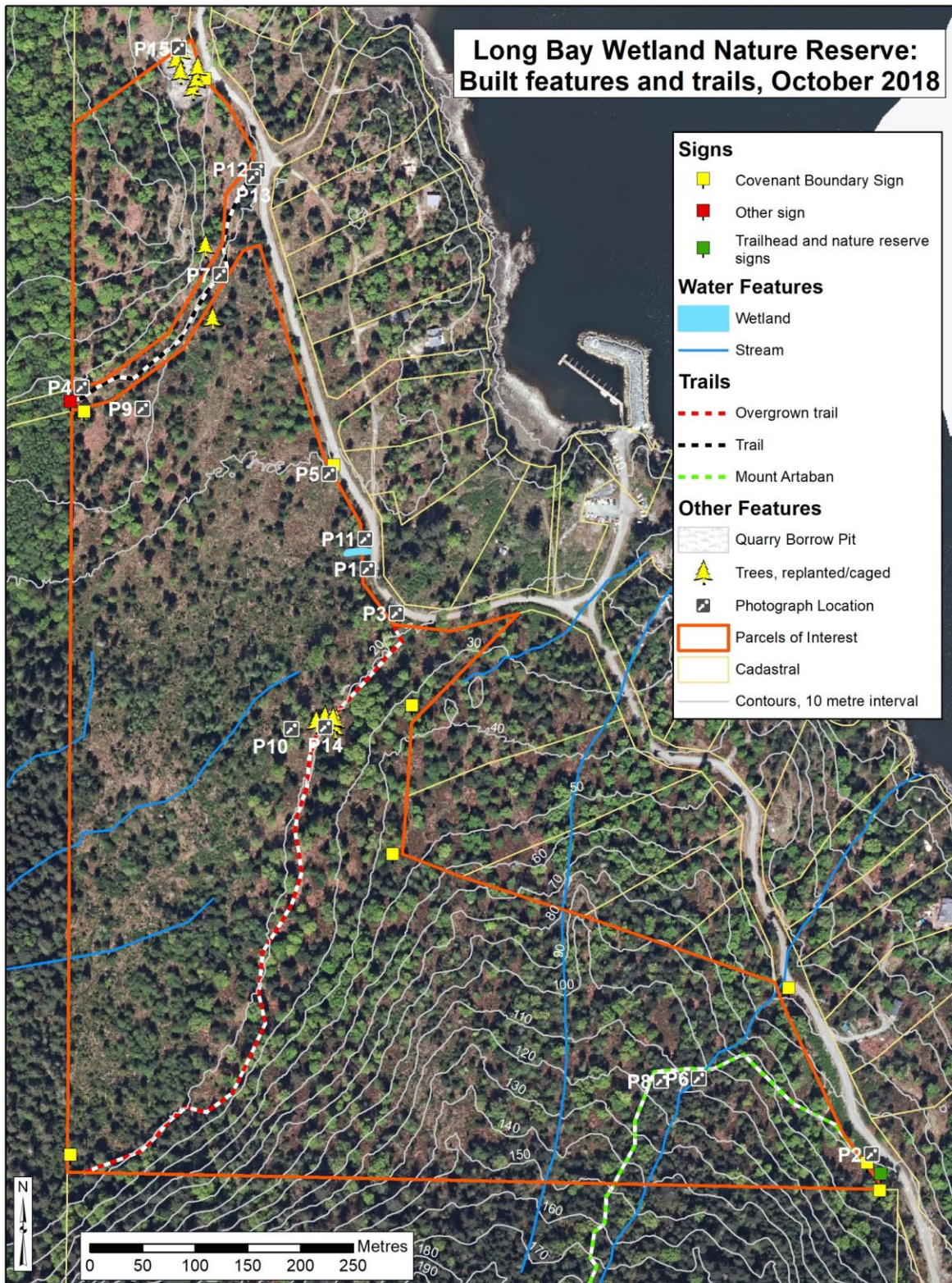


Figure 1. Map of trail access to LBWNR, including photopoint stations (photograph locations).

2.4 Landscape Context

Gambier Island is located in Howe Sound and is one of the many islands governed by the Islands Trust (see Figure 2 for location and protected area context). LBWNR is located on the east side of Gambier Island, west of Brigade Bay. Directly to the north and east are a number of privately-managed lots in the Brigade Bay subdivision. Directly south is the Mt. Artaban Nature Reserve, managed by the Islands Trust Conservancy, and a provincially-managed parcel. To the west is Sea Ranch strata common property.

LBWNR faces threats from the six adjacent, privately-managed properties that are part of a 68-lot, privately-managed Brigade Bay subdivision (map in Appendix A). The reserve also abuts one strata property. All of the privately-managed properties may impact management of the reserve.

LBWNR is the most northern part of a contiguous protected area of parks and nature reserves (469.12 ha) including Mt. Artaban Nature Reserve (ITC), Halkett Bay Provincial Marine Park (BC Parks), Pete Shields Regional Park (Sunshine Coast Regional District), and provincially-managed lands (171.35 ha) for a total 640.47 ha of contiguous protected lands. There is an additional marine portion of the Halkett Bay Provincial Marine Park (149.99 ha).

To the north (275 m) is a matrix of protected areas (30.97 ha) including Brigade Bay Bluffs Nature Reserve (ITC), two small community parks (Sunshine Coast Regional District), and a large network of undeveloped provincially-managed parcels and old-growth management areas (3345.83 ha), totaling 3376.81 ha of contiguous protected areas. Although a moderately-sized parcel on its own, the LBWNR plays an important role in enhancing the habitat values of the area through connectivity and proximity to other undeveloped and protected lands on the island. The wetland and streams provide ecological diversity.

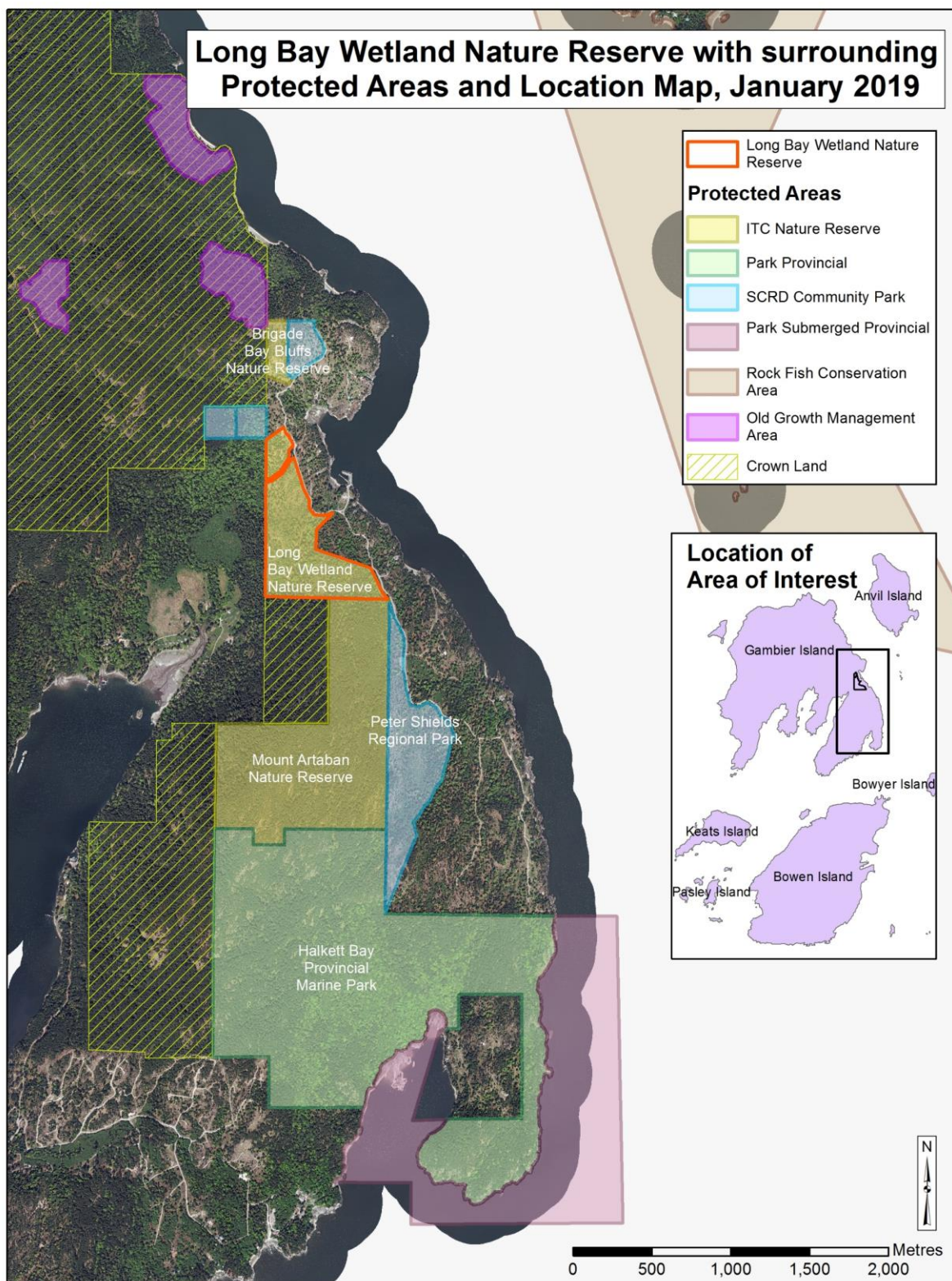


Figure 2. Map showing location of Gambier Island (inset) and protected areas context surrounding LBWNR (reserve boundary outlined in orange).

2.5 Site History¹

Gambier Island is within the traditional territory of multiple Coast Salish First Nations who have called this place home since time immemorial. The Coast Salish peoples maintained a vital, dynamic, and sustainable connection to their territory and developed rich cultural, spiritual, and traditional ecological knowledge. However, cultural heritage and sacred sites of Gambier Island and the greater Islands Trust Area were negatively impacted by European settlement. Past archeological activities, vandalism, and land use have disturbed sites of cultural and spiritual importance. Nevertheless, the land and the greater territory remains an embodiment of the stories, oral history, and culture of these First Nations.

There are two archaeological sites on Brigade Bay, which are protected under the *Heritage Conservation Act* (Cascade 2005). The adjacent properties in Brigade Bay subdivision have covenants that allow “the right of passage by members of the Squamish Nation for the purposes related to continuation of current use of lands or resources for traditional purposes” (FOC 2004 in Cascade 2005). Consultation between Squamish Nation and Fisheries and Oceans Canada during the Brigade Bay subdivision development determined that the Brigade Bay Site, Ho-mahmk, and surrounding environs are well known for deer hunting, plant collection, and as a camp site and safe haven for members of the Squamish Nation traveling in Howe Sound (FOC, December 2, 2003).

The Brigade Bay area had a settler homestead, probably during the 1920s, and the buildings remained until the 1980s (Hopwood 2013). The reserve area was burned by a human-caused fire that ignited on July 9, 1922 (Parminster pers. comm. in Hopwood 2009). The reserve was logged, probably in the 1920s (shortly before or after the fire), and regrowth was from natural regeneration (Hopwood 2013). A recent selective harvest in most of the reserve occurred in 2000-2001 (Cascade 2005). In 2001, an Environmental Assessment was completed for the Brigade Bluffs subdivision (CERG 2001 in Cascade 2005). Planning for the Brigade Bluffs subdivision began in 2000 and residential lots were put on the market in 2004. Islands Trust Conservancy acquired the reserve in 2005.

2.6 Anthropogenic Features

There are no structures or buildings within the reserve. At this time, no archaeological sites have been identified within LBWNR. The following is a table of other anthropogenic features in the reserve.

¹ The Islands Trust Conservancy recognizes that the language commonly used to refer to land may be disrespectful to First Nations. For example, notions of ‘private’ and ‘Crown’ land do not appropriately recognize aboriginal title. The words “provincially-managed land” or “federally managed land” will be used in place of “Crown”. “Privately managed” will be used in place of “private” and “land holder” instead of “land owner”.

Table 2. Anthropogenic features in LBWNR

Anthropogenic Feature	Description	Condition	Photopoint Location (including UTM's)
Trail	There is a trail in the northern portion of the reserve along the Brigade Bay Road easement from Mt. Artaban Road to Sea Ranch strata and another trail in the southeast of the reserve from Mt. Artaban Road to Mt. Artaban Nature Reserve	Good	P4 (photo is of end of trail) 475380; 5481633
Boundary sign	Nature Reserve Boundary Sign on Mt. Artaban Road	Good	P3 475679; 5481419
Boundary sign	Nature Reserve Boundary Sign on Mt. Artaban Road	Good	P13 475543; 5481832
Boundary sign and Private Property sign	Private Property and No Hunting signs at Mt. Artaban Road at northern trailhead at eastern end	Good	P12 475547; 5481839
Caging around replanted trees	Caged western redcedar and Douglas-fir trees in restoration area at old quarry at the north end of the reserve and along the Brigade Bay Road easement.	Caging good, some trees in poor condition	P14 475611; 5481311
Boundary sign, Private Property sign	Trailhead Boundary Sign and Private Property sign for adjacent strata (No Motorized Vehicles); at end of northern trail at western boundary of Nature Reserve	Good	P4 475380; 5481633
Boundary sign	Nature Reserve Boundary sign on Mt. Artaban Road	Good	475621; 5481556
Boundary and trailhead signs	Boundary sign and trailhead sign to Mt. Artaban Nature Reserve trail connector	Good	P2 476130; 5480906
Boundary sign	On corner of eastern boundary of reserve	Good	No photo 475689; 5481309
Boundary sign	On corner of eastern boundary of reserve	Good	No photo 475680; 5481185
Boundary sign	Covenant boundary sign in southwest corner of reserve	Good	No photo 475357; 5480877



Photo 3. Reserve boundary signage roadside on Mt. Artaban Rd.

2.7 Undersurface Rights

The title shows no undersurface rights designated for LBWNR.

2.8 Notations, Charges, Liens and Interests

A Section 219 Conservation Covenant (Registration Number: CA3219709) and Section 218 Statutory Right of Way (Registration Number: CA3219710) were registered on the lands in 2013 in favour of Gambier Island Conservancy and Sunshine Coast Conservation Association. The general intent of the agreement is:

- a) to protect, preserve, conserve, maintain, enhance and, if applicable from time to time restore, the natural state of the Land and the Amenities as described in the Report (baseline documentation); and
- b) to prevent any occupation or use of the Land that will impair or interfere with the natural state of the Land and the Amenities as described in the Report.

The Statutory Right of Way outlines permitted access and activities for the Covenant Holders.

2.9 Local Planning Designations

LBWNR is within Development Permit Area #3 which protects all mapped and unmapped streams on Gambier Island under the Riparian Areas Regulation (Islands Trust 2017).

The southeast corner of the reserve is zoned G2 (Nature Reserve). The purpose of this zone is to maintain and enhance the ecological values, ecosystems and unique areas of nature reserves and sanctuaries. Permitted uses within the zone include ecosystem preservation use, water

recharge use, trail use, fish and wildlife habitat protection use, and accessory use including but not limited to fire protection (Islands Trust 2004).

The remainder of the reserve is within the Agricultural Land Reserve (ALR), zoned Agriculture (A) (see Figure 3 for ALR zone). The purpose of the zone is to provide regulations to support the retention of small-scale farming on Gambier Island in areas with agricultural potential and on land in the Provincial Agricultural Land Reserve. According to the Gambier Island Land Use Bylaw No. 86, permitted uses within the Agriculture zone include agriculture use, single family residential use, associated secondary dwelling use, and accessory uses including but not limited to home occupations (Islands Trust 2004).

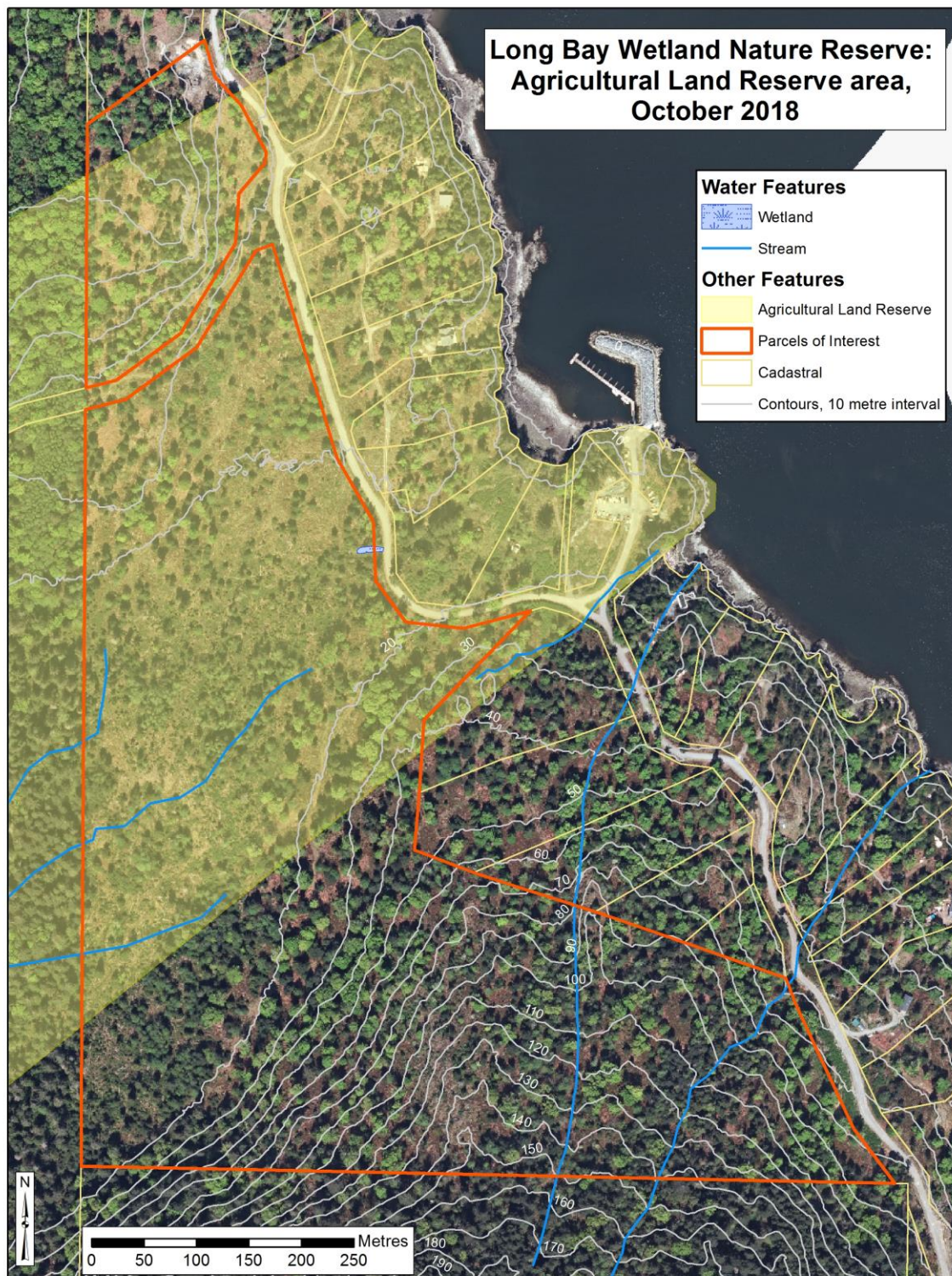


Figure 3. Map of ALR zoned area within the LBWNR (yellow shading)

2.10 Existing Public, First Nations, and Other Use

Long Bay Wetland Nature Reserve falls within the territory of multiple First Nations, and as such has been a site of cultural activity for thousands of years. There is knowledge and oral history relating to this site that may or may not be shared outside of the membership of a First Nation. As a first step toward strengthening cultural connections to the land that were negatively impacted by European settlement, ITC is exploring the potential of a Management Plan for Areas of Cultural Heritage and Sacred Significance that will support and enhance the continued use of the site by First Nations.

There is light recreational activity on existing public trails in the reserve. A signed trail follows the Brigade Bay Road dedication that divides the reserve into two portions in the northern portion of the reserve (Figure 1). The trail follows an old logging road, from Mt. Artaban Road to the Sea Ranch strata common property and on to Camp Artaban in Long Bay. A second signed trail is found in the southeast corner of the reserve and provides a connector link into the adjacent Mt. Artaban Nature Reserve to the south. The trail leads over the summit of Mt. Artaban and through Halkett Bay Provincial Marine Park (Figure 2).

A trail that bisected the reserve in the middle of the reserve, west of Brigade Bay Marina, has been decommissioned and is becoming overgrown. Trees have been caged where the decommissioned trail meets the old roadway (Figure 1) (information on restoration provided in



Photo 4. Trail leading west to privately-managed, Sea Ranch Strata, west of LBWNR. Note overgrown ITC trailhead sign in sword ferns, and private property sign below bigleaf maple.

Section 6.8 Ecological Restoration Options).

3.0 Inventory by Ecological Community

Islands Trust Conservancy acknowledges that there is a wealth of traditional ecological knowledge and a long history of ecosystem stewardship among the First Nations whose territory encompasses LBWNR. ITC will strive to work with First Nations knowledge holders to deepen its understanding, improve its stewardship practices, and, ultimately, support the transfer of traditional ecological knowledge to younger generations within First Nations communities to ensure that it is not lost. At this time, the ecological information presented in this management plan was formed using systems that are based in foundations of Western science.

3.1 Ecological Significance

The LBWNR includes lowland forests with steep rocky outcrops and mossy bluffs. The upland portions of the reserve were selectively logged prior to reserve establishment, leaving behind large, mature deciduous trees and pole/sapling sized conifers. Although the forests are young, they will mature into blue- and red-listed ecological communities (Table 3). The hydrology of the wetland site, its three small tributaries, and two streams was significantly altered by logging in 2000-2001.

The adjacent Brigade Bay Subdivision utilized the northern portion of the reserve as a borrow pit for sand and gravel. Some reforestation and protection of seedlings from deer browsing has been initiated (2015, 2017) within the reserve.

A search of BC Conservation Data Centre (CDC) data revealed no species at risk occurrences in the reserve and only one blue-listed species on Gambier Island: the northern red-legged frog (*Rana aurora*) (BC CDC 2018). During site visits in August 2018, no rare species were noted within the reserve, though it is likely that some rare species would be detected if surveys were completed at appropriate times of the year. The wetland likely supports frog and salamander breeding habitats and important foraging habitat for bats and other wildlife. Butterflies and dragonflies were noted around the wetland habitat areas. Fish, likely juvenile coho (*Oncorhynchus kisutch*), use at least one of the three small tributaries within the reserve (Hopwood 2013).

Table 3. Ecological communities and their status

Ecological Community Name		Status		
English	Scientific	Provincial	BC List	Global
Douglas-fir–Lodgepole Pine/Grey Rock-moss Very Dry Maritime	<i>Pseudotsuga menziesii</i> – <i>Pinus contorta</i> / <i>Racomitrium canescens</i>	S2 (2004)	Red	GNR
Douglas-fir–Western Hemlock/Salal Very Dry Maritime	<i>Pseudotsuga menziesii</i> – <i>Tsuga heterophylla</i> / <i>Gaultheria shallon</i>	S2S3 (2013)	Blue	G3G4
Western Redcedar/Three-leaved Foamflower Very Dry Maritime	<i>Thuja plicata</i> / <i>Tiarella trifoliata</i>	S2S3 (2013)	Blue	G3
Western Redcedar–Sitka Spruce/Skunk Cabbage Very Dry Maritime	<i>Thuja plicata</i> – <i>Picea sitchensis</i> / <i>Lysichiton americanus</i>	S3S4 (2001)	Yellow	GNR

3.2 Climate

The southern Gulf Islands, which include the islands in Howe Sound, have a climate pattern of warm, dry summers and mild, wet winters. The maritime influence moderates the effect of elevation, latitude, and aspect on local temperature and precipitation.

The weather statistics for the adjacent Bowen Island station show that annual precipitation is approximately 1507 mm and most of it comes in the form of rain rather than snow (The Weather Network 2018). On Bowen Island, average daily temperatures peak in the summer months at 23°C (July and August) and are lowest in the winter at 0°C (December and January) (Figure 4). Precipitation is highest in the winter months, from November to January (averaging 506-420 mm), and July and August are the driest months (58-78 mm) (Meteoblue 2018).

Average temperatures and precipitation

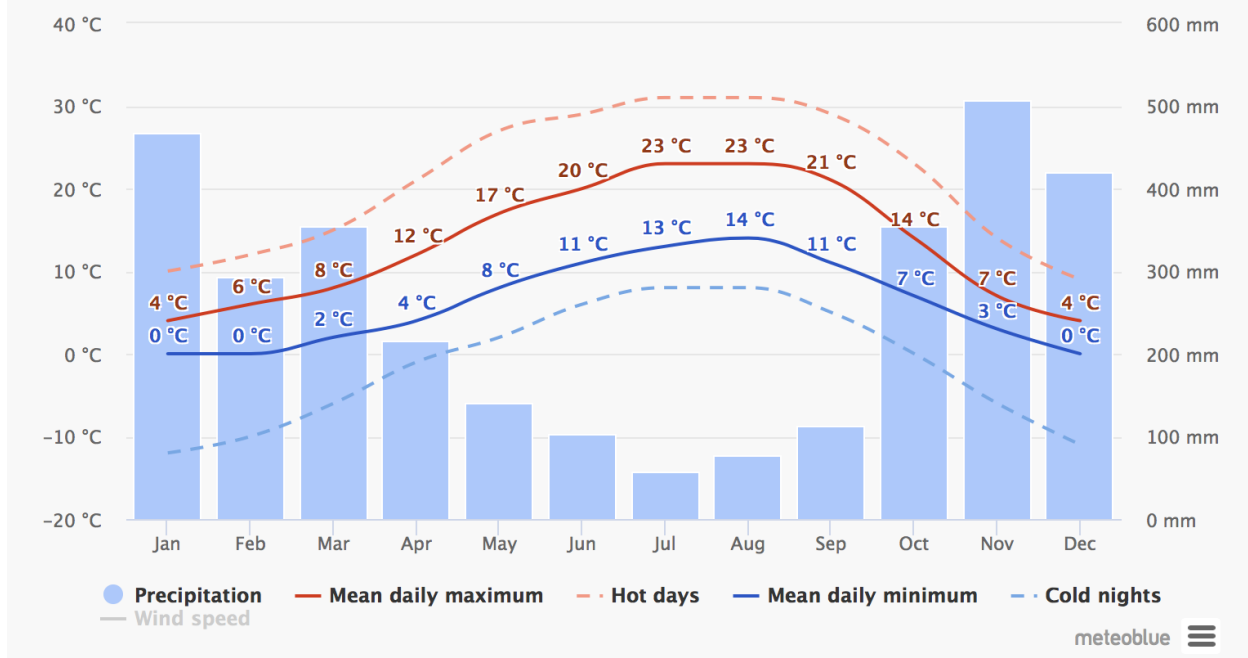


Figure 4. Average temperature and precipitation at Bowen Island weather station from 1985-2018 (Meteoblue 2018)

The future impacts from climate change are unknown, although a summer drying trend and an increase in storm events are predicted (Mauger et.al. 2015). More powerful storms may cause increasing erosion, especially in areas with exposed soil such as trails and in riparian areas due to increased flows. Drier summers may impact the wetlands and riparian hydrology causing premature drying. Over time, there may be shifts to the vegetation community away from western redcedar (*Thuja plicata*), allowing the spread of Douglas-fir (*Pseudotsuga menziesii*). Higher temperatures and less precipitation may lead to localized stress on trees and plants. Maintaining habitat connectivity, biodiversity and ecosystem resilience may assist the flora and fauna adapting to climate change stresses.

3.3 Geology and Physiology

Granitic rocks of the Jurassic to Cretaceous Coast Plutonic Complex (approximately 160 million years old) underlie the southern part of the island (BC Ministry of Energy, Mines and Petroleum Resources 2009 in Hopwood 2009). These stratified rock formations are composed of andesitic to dacitic tuff, breccia agglomerate, andesite, argillite, conglomerate, lesser marble, greenstone, and phyllite (BC Ministry of Energy and Mines, 2005 in Cascade 2005). Intrusive rock of the Coast Plutonic complex, such as quartz diorite and diorite, occur in the vicinity (Cascade 2005).

The Howe Sound region was covered by glaciers from approximately 29,000 to 12,000 years ago. During glaciation, the weight of the ice depressed the land surface so that some lower elevation portions of Gambier Island were below sea level. As the glaciers retreated and the land rebounded, marine and coastal processes eroded loose materials from the higher and

steeper parts of the island and laid down finer-textured soil parent materials on many of the lower-lying and more gently sloping areas of the island (Hopwood 2009).

Within the reserve, the topography is dominated by rocky outcrops and bluffs that are roughly southwest to northeast in direction. In the center of the reserve is a large gently sloping wet area with a smaller more intact wetland as mapped. Bedrock is overlain by a veneer of colluvium and glacial till, except where glacial processes removed these materials and only a thin organic layer has since accumulated (Cascade 2005).

3.4 Hydrology

The reserve includes three stream tributaries of Long Bay Creek, which flow southwest from the wetland into Long Bay. There is also un-channelized flow through the wetland in a southwesterly direction across the western boundary of the covenant area (Hopwood 2013). The runoff from the upland areas and the streams feeds the wetland depression in the center of the reserve (Photo 5), with the wettest portion mapped in Figure 1 and Figure 5.

Two streams flow north from Mt. Artaban Nature Reserve into the southeast corner of the reserve and into the ocean just south of Brigade Bay Marina (Photo 6).

All the streams and the wetland were significantly damaged by streamside logging in 2000 and 2001, to the point that in 2001 pre-existing channels could not be identified (Cascade 2005). Restoration efforts prior to 2004 included removal of excessive slash and channel blockages, de-compaction of affected soils, and revegetation of riparian areas (Cascade 2005).



Photo 5. Wetland vegetation in ecological community 5 (disturbed from logging) shifting towards Horsetail dominated understory.

3.5 Soils

Humo-Ferric Podzols are the most widely distributed soils in the upland areas, with glacial till overlying bedrock that results in well drained soils. Primary mineral deposits are colluvial and glacial derived. Soil processes that are characteristic of this subarctic forest include Mor humus formation (associated with the accumulation of acid organic matter), leaching, eluviation, and illuviation (Meidinger and Pojar 1991 in Cascade 2005).

Deep, organic Folisols are prominent in the wetland and permanent seepage areas. Soil profiles feature an LFH (organic litter) horizon, underlain by a light gray eluviated (Ae and Ae_j) horizon, followed by a light reddish-brown (becoming yellowish with depth) B horizon containing large, coarse fragments in a silty matrix (Cascade 2005).

3.6 Ecological Classifications

The LBWNR is within the Very Dry Maritime subzone (xm) of the Coastal Western Hemlock biogeoclimatic zone (CWH) (Green and Klinka 1994). Climatic factors, in conjunction with existing soil conditions, result in a productive coastal forest with a long growing season although water deficits may occur on zonal sites. The Reserve is within the Pacific Maritime Ecozone and the Georgia Puget Basin Ecoregion (Lands Directorate 1986).

3.7 Ecological Communities and Site Series

The previous Management Plan for the LBWNR (Cascade 2005) delineated three vegetation types based on Terrestrial Ecosystem Mapping (TEM) units. The baseline inventory for the Reserve (Hopwood 2013) delineated six units. An ecological inventory of biological features was conducted in the reserve on August 7th and 8th, 2018. Site series were identified using *A Field Guide for Site Identification and Interpretation for the Vancouver Forest Region* (Green and Klinka 1994) (Figure 5). This updated management plan has followed the latter delineation of six vegetation types, with the removal of one vegetation type (6) from the baseline inventory which separated the quarry borrow pit into a separate classification. In this plan, the former quarry has been amalgamated into Vegetation Type 4.

A list of all plant species is included in Appendix B. Locations of photopoints and other photograph locations are given in Appendix C.

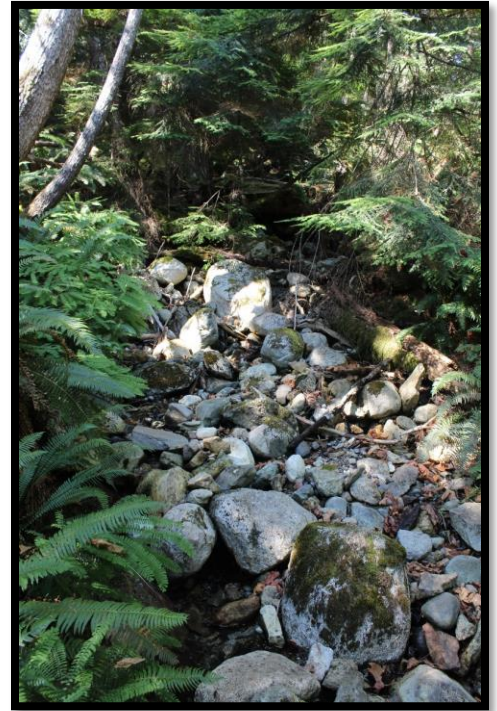


Photo 6. Creek bed that flows north from Mount Artaban Nature Reserve into LBWNR.

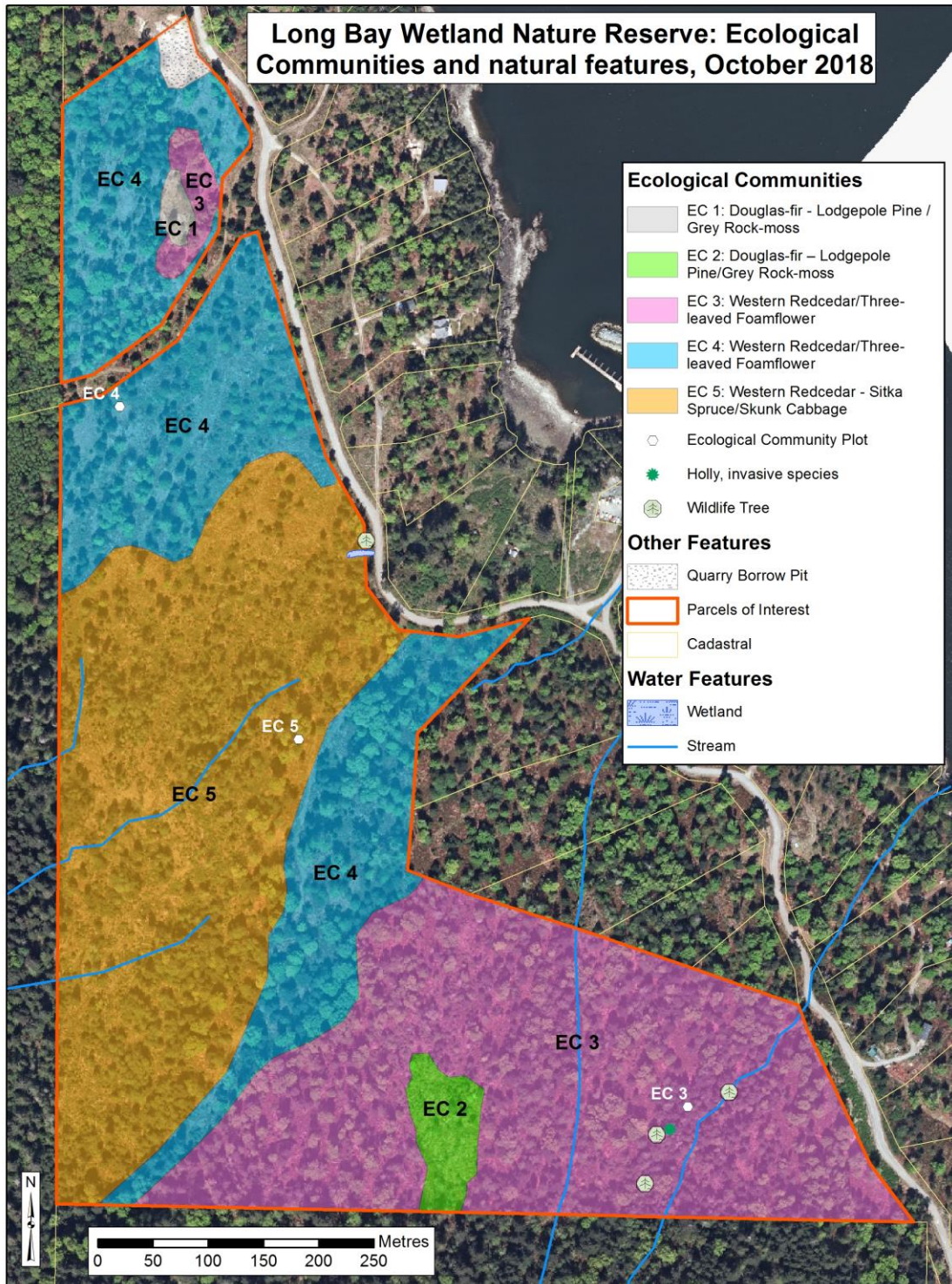


Figure 5. Map showing ecological communities and locations of vegetation plots within LBWNR

Ecological Community 1. Douglas-fir—Lodgepole Pine/Grey Rock-moss (CWHxm1/02)

This ecological community makes up a very small portion of the reserve and is found in the northeastern portion of the reserve, north of the road dedication. It is found at higher elevations on a small hilltop. The site is well-drained, very dry and nutrient poor with thin soils. It is dominated by steep terrain, sparse vegetation and a grey rock-moss community with Reindeer Lichen (*Cladina portentosa*) cover. There are no dominant tree species due to the steep slopes.



Photo 5. Ecological community 1 with rocky bluffs.

Table 4. Description of Ecological Community 1

Polygon ID:	Ecological Community 1
Ecological Community:	Douglas-fir – Lodgepole Pine/Grey Rock-moss
Classification:	CWHxm1/02
Structural Stage:	1-Sparse/bryoid
Status (BC List):	Red-listed
Photopoint(s):	P7
Ecological Community Description:	Hilltop, steep rocky terrain with predominantly moss and Reindeer Lichen cover; dry site with no trees present; lower foot of slope below rocky outcrop has sparse bigleaf maple, western hemlock, western redcedar and Douglas-fir, as well as sparse oceanspray, foxglove, sword fern and sweet vernalgrass in lower crevices.
Disturbance Notes:	Some natural turnover in plant community due to drought years, ground fire.
Anticipated Change/Succession:	No significant changes anticipated.
Wildlife observations:	Observed during site visit: none Habitat: Perching sites for raptors, seeds for birds and small mammals, thermoregulation sites for reptiles.

Table 5. Vegetation in Ecological Community 1.

VEGETATION SPECIES	PERCENT COVER (%)						NOTES
	Main Canopy	Secondary Canopy	Shrub Layer	Herb Layer	Moss, Lichen Layer	Non-natives	
<i>Amelanchier alnifolia</i> (Saskatoon)			1				
<i>Holodiscus discolor</i> (oceanspray)			1				
<i>Anthoxanthum odoratum</i> (sweet vernalgrass)						20	
<i>Polystichum munitum</i> (sword fern)				2			
<i>Polypodium glycyrrhiza</i> (licorice fern)				T			
<i>Digitalis purpurea</i> (foxglove)						T	
Moss Layer			2	3		20	Total Moss Layer: 75%
<i>Cladina portentosa</i>							
<i>Dicranum species</i>							

<i>Polytrichum juniperinum</i>							
<i>Racomitrium canescens</i>							
<i>Selaginella wallacei</i>							
Cover by Layer (%)			2	3	75	20	Total Canopy Cover: 0%

T stands for Trace or less than 1%

**Ecological Community 2. Douglas-fir – Lodgepole Pine/Grey Rock-moss (CWHxm1/02);
Douglas-fir – Western Hemlock/Salal (CWHxm1/03)**

This ecological community is found along the southern boundary of the reserve. It is a higher elevation site at the crest of the slope. It was logged in 2000 and there has been little tree regeneration. Previously, it was a 70 year-old second growth Douglas-fir (*Pseudotsuga menziesii*) forest. At the highest elevation, it transitions to Douglas-fir – Lodgepole Pine/Grey Rock-moss community in disturbed, early seral condition. At lower elevations, it is more consistent with Douglas-fir – Western Hemlock/Salal community.

Table 6. Description of Ecological Community 2

Polygon ID:	Ecological Community 2
Ecological Community:	Douglas-fir – Lodgepole Pine/Grey Rock-moss Douglas-fir – Western Hemlock/Salal
Classification:	CWHxm1/02; CWHxm1/03
Structural Stage:	2-Shrub/herb
Status (BC List):	Blue-listed/Red-listed
Photopoint(s):	none
Ecological Community Description:	Upland forest in early seral condition due to recent logging; shrubs and scattered small trees on logged-over, very dry ridge crest
Disturbance Notes:	Seventy year-old second growth Douglas-fir stand was clear-cut in 2000, followed by almost no tree regeneration
Anticipated Change/Succession:	No significant changes anticipated; slow conifer regeneration may occur but will be limited by drought conditions
Wildlife observations:	Observed during site visit: none Habitat: Perching sites for raptors, seeds for birds and small mammals, thermoregulation sites for reptiles

Table 7. Vegetation in Ecological Community 2.

VEGETATION SPECIES	PERCENT COVER (%)						NOTES
	Main Canopy	Secondary Canopy	Shrub Layer	Herb Layer	Moss, Lichen Layer	Non-natives	
<i>Pinus contorta</i> (lodgepole pine)		2					
<i>Pseudotsuga menziesii</i> (Douglas-fir)		2					
<i>Amelanchier alnifolia</i> (saskatoon)			1				
<i>Berberis nervosa</i> (dull Oregon-grape)			6				
<i>Gaultheria shalon</i> (salal)			10				
<i>Holodiscus discolor</i> (oceanspray)			3				
<i>Rubus ursinus</i> (trailing blackberry)			T				
<i>Polystichum munitum</i> (sword fern)				20			
<i>Pteridium aquilinum</i> (bracken fern)				5			
Grasses				20			
<i>Digitalis purpurea</i> (foxglove)						T	
Moss Layer		4	20	45			Total Moss Layer: 50%
<i>Dicranum species</i>							
<i>Hylocomium splendens</i> (step moss)							
<i>Polytrichum juniperinum</i> (juniper haircap moss)							
<i>Racomitrium canescens</i> (grey rock-moss)							
Cover by Layer (%)		4	20	45	50	<1	Total Canopy Cover: 4%

Ecological Community 3. Western Redcedar/Three-leaved Foamflower (CWHxm1/07) with small pockets (<5%) of Douglas-fir/Sword Fern (CWHxm1/04) and Western Redcedar/Sword Fern (CWHxm1/05)

This ecological community is found predominantly in the southeast portion of the reserve, with a small patch also occurring in the northeast portion of the reserve, east of Ecological Community 1. In the reserve, it is found on level to moderate slopes with rich mineral soils that are moderate-well to imperfectly drained. The humus forms are thin because of rapid decomposition. The forests are highly productive, although logging in the reserve in 2000 and 2001 removed all merchantable timber. Large bigleaf maple (*Acer macrophyllum*) remain and red alder (*Alnus rubra*) snags are present as wildlife trees in many areas. There are patches of young regenerating western redcedar (*Thuja plicata*), Douglas-fir, western hemlock (*Tsuga heterophylla*), and Sitka spruce (*Picea sitchensis*) in the secondary canopy. There is dense understory of sword fern (*Polystichum munitum*) and grasses in areas where trees could be planted to help restore the site. Invasive English holly (*Ilex aquifolium*) has established in some areas.



Photo 6. Maturing Douglas-fir trees surrounded by dense sword fern understory. Red alder wildlife trees and woody debris provide diverse wildlife habitat.

Table 8. Description of Ecological Community 3

Polygon ID:	Ecological Community 3
Ecological Community:	Western Redcedar/Three-leaved Foamflower with small pockets (<5%) of Douglas-fir/Sword fern (CWHsm1/04) and Western Redcedar/Sword Fern (CWHxm1/05)
Classification:	CWHxm1/07
Structural Stage:	5-Young Forest
Status (BC List):	Blue-listed
Photopoint(s):	P8
Ecological Community Description:	Open mixed residual forest on rocky mid slopes. Several small red alder snags and woody debris. Gently sloping, NE facing. Riparian area (creek) along edge of plot.
Disturbance Notes:	Larger trees within clearcut with much younger trees.
Anticipated Change/Succession:	Conifer regeneration may be limited due to browsing pressure and dense understory. With tree-planting efforts and protection with caging, reforestation would be greatly enhanced. Bigleaf maples will eventually die off or may re-sprout from base. Remaining conifers will mature although understory will likely remain fairly open.
Wildlife observations:	Audio: Spotted Towhee (<i>Pipilo maculatus</i>)

Table 9. Vegetation in Ecological Community 3.

VEGETATION SPECIES	PERCENT COVER (%)						NOTES
	Main Canopy	Secondary Canopy	Shrub Layer	Herb Layer	Moss, Lichen Layer	Non-natives	
<i>Pseudotsuga menziesii</i> (Douglas-fir)	32	T					MC: 20-40yrs, ht: 20m, DBH: 25-40cm SC: 10-15yrs, ht: 10m, DBH: 5-10cm
<i>Tsuga heterophylla</i> (western hemlock)	10	T					MC: 20-30yrs, ht: 15m, DBH: 25-30cm SC: 10-15yrs, ht: 1-2m, DBH: 2-10cm
<i>Thuja plicata</i> (western redcedar)	2	T					MC: 60-80yrs, ht: 20m, DBH: 70cm SC: 10-15yrs, ht: 5m, DBH: 10cm
<i>Alnus rubra</i> (red alder)	1						MC: 30yrs, ht: 15m, DBH: 30cm
<i>Picea sitchensis</i> (Sitka spruce)		T					SC: 5-10yrs, ht: 1-2m, DBH: <5cm
<i>Polystichum munitum</i> (sword fern)			60				
<i>Vaccinium parvifolium</i> (red huckleberry)			1				
<i>Berberis nervosa</i> (dull Oregon-grape)			T				
<i>Dryopteris expansa</i> (spiny wood fern)			T				
<i>Gaultheria shallon</i> (salal)			T				
<i>Ilex aquifolium</i> (English holly)						T	
Moss Layer							Total Moss Layer: 5%
<i>Eurynchium oreganum</i> (Oregon-beaked moss)					2		
<i>Hylocomium splendens</i> (step moss)					1		
<i>Plagiothecium undulatum</i> (flat moss)					1		

<i>Rhytidiadelphus loreus</i> (lanky moss)					1		
Cover by Layer (%)	45		61		5	<1	Total Canopy Cover: 45%

Ecological Community 4. Western Redcedar/Three-leaved Foamflower (CWHxm1/07)

This ecological community is very open, mixed residual forest. In the reserve, it is found on level to moderate lower slopes with rich mineral soils that are moderate-well to imperfectly drained. The humus forms are thin because of rapid decomposition. The forests are highly productive, although logging in the reserve in 2000 and 2001 removed all merchantable timber. Until 2000, these were 70 year-old second-growth Douglas-fir forests. Large bigleaf maple and red alder trees remain. Limited tree regeneration has occurred due to heavy deer browse and there is a dense understory of ferns and grasses in areas. This site would benefit from tree-planting efforts to aid in reforestation. Invasive English holly is established.



Photo 7. Young regenerating forest with western redcedar and bracken fern.

Table 10. Description of Ecological Community 4.

Polygon ID:	Ecological Community 4
Ecological Community:	Western Redcedar/Three-leaved Foamflower
Classification:	CWHxm1/07
Structural Stage:	5-Young Forest
Status (BC List):	Blue-listed
Photopoint(s):	P9
Ecological Community Description:	Open mixed residual and regenerating forest on moist, rich lower slopes with dominant forest cover of large deciduous species and smaller sapling/pole size conifers. Gentle east-facing slope.
Disturbance Notes:	Selectively logged in 2000, resulting in disturbed ground cover and low regeneration. In the northeast corner of the reserve, a 'quarry borrow pit' was used during the subdivision and some replanting of trees has occurred for restoration efforts (see Section 5.8).
Anticipated Change/Succession:	Larger deciduous trees (bigleaf maple, red alder) will likely die off and scattered conifers will replace them. However, the low success rate of regeneration due to dense understory competition (e.g. graminoids, ferns) and black-tailed deer herbivory will likely maintain the relatively open forest structure unless reforestation efforts with protection from herbivory occur.
Wildlife observations:	Visual: Red-breasted Sapsucker holes in bigleaf maple trees, black-tailed deer scat. Audio: Northern Flicker

Table 11. Vegetation in Ecological Community 4.

VEGETATION SPECIES	PERCENT COVER (%)						NOTES
	Main Canopy	Secondary Canopy	Shrub Layer	Herb Layer	Moss, Lichen Layer	Non-natives	
<i>Alnus rubra</i> (red alder)	5						MC: 40-60yrs, ht: 10-15m, DBH: 40cm
<i>Tsuga heterophylla</i> (western hemlock)	5	T					MC: 50-60yrs, ht: 10-15m, DBH: 30-40cm SC: 15yrs, ht: 4m, DBH: 20cm
<i>Acer macrophyllum</i> (bigleaf maple)	3						MC: 20-30yrs, ht: 10m, DBH: 25-45cm
<i>Thuja plicata</i> (western redcedar)	3						MC: 40-60yrs, ht: 15m, DBH: 70cm
<i>Pseudotsuga menziesii</i> (Douglas-fir)	3						MC: 30-60yrs, ht: 10-15m, DBH: 35-50cm
<i>Abies grandis</i> (grand fir)	1						MC: 30-40yrs, ht: 10-15m, DBH: 30cm
<i>Prunus emarginata</i> (bitter cherry)		T					
<i>Rubus spectabilis</i> (salmonberry)			T				
<i>Sambuca racemosa</i> (red elderberry)			T				
<i>Vaccinium parvifolium</i> (red huckleberry)			T				
<i>Polystichum munitum</i> (sword fern)				30			
<i>Pteridium aquilinum</i> (bracken fern)				10			
<i>Elymus glaucus</i> (blue wildrye)				T			
<i>Juncus effusus</i> (common rush)				T			
<i>Rubus leucodermis</i> (black raspberry)				T			
<i>Rubus ursinus</i> (trailing blackberry)				T			
<i>Agrostis spp.</i> (bentgrass)						20	
<i>Dactylis glomerata</i> (orchard grass)						10	
<i>Ilex aquifolium</i> (English holly)						5	

<i>Anthoxanthum odoratum</i> (sweet vernalgrass)						T	
<i>Cirsium arvense</i> (Canada thistle)						T	
<i>Digitalis purpurea</i> (foxglove)						T	
Moss Layer							Total Moss Layer: 0 %
<i>Eurynchium oreganum</i> (Oregon-beaked moss)							
<i>Hylocomium splendens</i> (step moss)							
<i>Plagiothecium undulatum</i> (flat moss)							
<i>Rhytidiadelphus loreus</i> (lanky moss)							
Cover by Layer (%)	20	<1	<1	40		35	Total Canopy Cover: 20 %



Photo 8. Large bigleaf maple veteran trees with dense sword fern understory.

Ecological Community 5. Western Redcedar – Sitka Spruce/Skunk Cabbage (CWHxm1/12)

This ecological community is found on lower, wet, rich soils. The site is moisture receiving and the topography is predominantly level. Three tributaries of Long Bay Creek start in this area and

flow to the southwest. The site had very large western redcedar trees (logged in the 1920s) and the remaining 70 year-old second-growth Douglas-fir were logged in 2000. There is little natural regeneration at this site, and the area would benefit from additional planting of native trees using caging to protect the trees from browse. There is a small wetland (as mapped) with standing water and wetland vegetation. Much of the rest of the vegetation type has wetland-characteristic species, including small-flowered bulrush (*Scirpus microcarpus*), which has been overgrown by non-native grasses and horsetail (*Equisetum* sp.), possibly due to hydrology changes associated with logging.

Table 12. Description of Ecological Community 5.

Polygon ID:	Ecological Community 5
Ecological Community:	Western Redcedar – Sitka Spruce/Skunk Cabbage
Classification:	CWHxm1/12
Structural Stage:	4-Pole/sapling
Status (BC List):	Red-listed Western Redcedar/Three-leaved Foamflower Very Dry Maritime community in disturbed mid seral condition
Photopoint(s):	P10
Ecological Community Description:	Shrubs, herbs and patchy young mixed forest on wet, rich site; forested wetlands occurring in a slight depression with poor drainage that collects water from runoff, groundwater and precipitation; deep organic soils and level slopes. Vegetation within the polygon is typical of both stand initiating and young forest stages.
Disturbance Notes:	The forest cover has recently been selectively harvested, and piles of slash have been left. Seventy year-old second growth mixed forest was heavily logged in 2000, leaving bigleaf maple “veterans” and scattered alders and smaller conifers, followed by limited tree regeneration. Indication of infrequent stand-replacing fires and windthrow.
Anticipated Change/Succession:	Older bigleaf maples will die off over next 50 years or so, possibly re-sprouting from the base. Scattered conifers will grow larger, but stand will remain very open with lush understory due to the moisture regime. Minor conifer regeneration may occur but is likely to be impeded by competition from ferns, grasses and shrubs.
Wildlife observations:	No wildlife observed

Table 13. Vegetation in Ecological Community 5.

VEGETATION SPECIES	PERCENT COVER (%)						NOTES
	Main Canopy	Secondary Canopy	Shrub Layer	Herb Layer	Moss, Lichen Layer	Non-natives	
<i>Picea sitchensis</i> (Sitka spruce)	5						MC: 40-60yrs, ht: 20-25m, DBH: 55cm
<i>Acer macrophyllum</i> (bigleaf maple)	15						MC: 100-150yrs, ht: 15-20m, DBH: 150cm
<i>Thuja plicata</i> (western redcedar)	3						MC: 30-40yrs, ht: 15-20m, DBH: 30cm
<i>Alnus rubra</i> (red alder)	1						MC: 30-40yrs, ht: 15m, DBH: 30cm
<i>Tsuga heterophylla</i> (western hemlock)	1	T					MC: 60-80yrs, ht: 25m, DBH: 70cm SC: 15-20yrs, ht: 3-4m, DBH: 17cm
<i>Abies amabilis</i> (amabilis fir)		T					SC: 10-15yrs, ht: 3m, DBH: 7-10cm
<i>Pseudotsuga menziesii</i> (Douglas-fir)		T					SC: 10yrs, ht: 2m, DBH: 5cm
<i>Rubus spectabilis</i> (salmonberry)			T				
<i>Rubus ursinus</i> (trailing blackberry)			T				
<i>Sambuca racemosa</i> (red elderberry)			T				
<i>Vaccinium parvifolium</i> (red huckleberry)			T				
<i>Polystichum munitum</i> (sword fern)				60			
<i>Festuca campestris</i> (rough fescue)				T			
<i>Dactylis glomerata</i> (orchard grass)						10	
<i>Arctium minus</i> (common burdock)						T	
<i>Ilex aquifolium</i> (English holly)						T	
<i>Mycelis muralis</i> (wall lettuce)						T	
<i>Poa pratensis</i> (Kentucky bluegrass)						T	
<i>Rubus laciniatus</i> (cutleaf evergreen blackberry)						T	

Moss Layer							Total Moss Layer: 0 %
Cover by Layer (%)	25	<1	<1	60		10	Total Canopy Cover: 25%

3.8 Wildlife Species

The wetland habitat likely provides important foraging habitat for a variety of local native bat species, breeding habitat for amphibians, and important sources of drinking water for other wildlife. Black-tailed deer (*Odocoileus hemionus*) scat and Douglas's squirrel (*Tamiasciurus douglasii*) caches were noted in the reserve. The reserve likely provides habitat for a wide range of birds, but the late-summer field season was not ideal timing for assessing bird life. A few butterfly and dragonfly species were noted in the open upland and wetland habitats. Juvenile coho salmon (*Oncorhynchus kisutch*) are known to inhabit small streams and wetlands in the reserve (Hopwood 2013).

Table 14. Wildlife species observed in LBWNR in 2018

Common Name	Latin Name
Mammals	
Black-tailed deer	<i>Odocoileus hemionus</i>
Douglas's squirrel	<i>Tamiasciurus douglasii</i>
River otter (scat)	<i>Lontra canadensis</i>
Invertebrates	
Lorquin's admiral	<i>Limenitis lorquini</i>
Pine white	<i>Neophasia menapia</i>
Woodland skipper	<i>Ochlodes sylvanoides</i>
Reptiles	
Common gartersnake	<i>Thamnophis sirtalis</i>
Gartersnake (dead on road)	<i>Thamnophis sp.</i>
Northern alligator lizard	<i>Elgaria coerulea</i>
Birds	
American Goldfinch	<i>Spinus tristis</i>
American Robin	<i>Turdus migratorius</i>
Cedar Waxwing	<i>Bombicilla cedrorum</i>
Chestnut-backed Chickadee	<i>Poecile rufescens</i>
Common Raven	<i>Corvus corax</i>

Downy Woodpecker	<i>Dryobates pubescens</i>
Hairy Woodpecker	<i>Dryobates villosus</i>
Northern Flicker	<i>Colaptes auratus</i>
Pileated Woodpecker	<i>Dryocopus pileatus</i>
Red-breasted Sapsucker	<i>Sphyrapicus ruber</i>
Red Crossbill	<i>Loxia curvirostra</i>
Spotted Towhee	<i>Pipilo maculatus</i>
Turkey Vulture	<i>Cathartes aura</i>
Western Tanager	<i>Piranga ludoviciana</i>
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>
Willow Flycatcher	<i>Empidonax traillii</i>
Fish	
Coho salmon	<i>Oncorhynchus kisutch</i>

3.9 Expected Change Over Time

There may be ongoing regeneration of forests overtime in areas previously logged, although regeneration has been minimal to date due to dense understory vegetation, compaction, and high herbivory pressure. Additional reforestation efforts and protection of tree seedlings from browse would assist in regeneration. Remnant forested areas and new conifer growth will continue to mature and diversify over time. In areas with older bigleaf maple and red alder, the older trees may die opening up the understory for coniferous species.

The wetland areas are unlikely to experience significant changes. Dense grasses and forbs will limit tree establishment and without further restoration, hydrology patterns are unlikely to change.

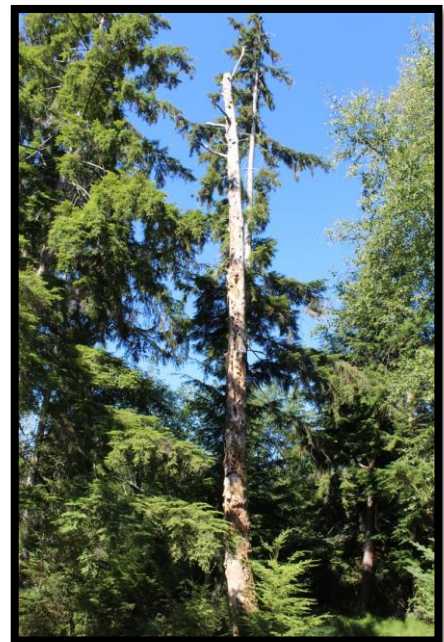


Photo 9. Wildlife trees provide important habitat for a variety of wildlife.

4.0 Threats

Table 15. Summary of threats

Threats	Mixed Forests	Rocky Bluffs	Wetlands & Creeks	Overall Threat Rank
Recreational Activities: Hiking can impact conservation targets through wildlife disturbance, soil disturbance, vegetation trampling, and erosion. With potential for increasing population and development nearby the protected area, pressure from this threat to conservation targets is expected to increase over time. Off-trail use is expected to be minimal in the reserve.	Low	Low	Low	Low
Fire (Catastrophic wildfire): Fire suppression results in a change of fire regime to lower frequency and higher intensity fires. Higher intensity fires are also generally larger in size. A less frequent, more intense fire would potentially replace the forests. Stand-replacing fires will also have potential impacts on wetlands and riparian areas due to soil erosion. Vegetation recovery post-catastrophic fire is slow and invasive species are likely to invade into areas with bare soil.	Medium	Low	Low	Low
Lack of Tree Regeneration: After logging in 2000-2001, there has been little regeneration of native trees in some areas of the reserve. A lack of regeneration limits successional processes and increases the risk on non-native species.	Medium	N/A	Medium	Medium
Invasive Non-Native Species: According to the International Union for the Conservation of Nature (IUCN 2018), invasive non-native species are a significant threat to biodiversity, second only to habitat loss. The impact on native ecosystems, habitats and species can be severe and often irreversible. The lack of regeneration in Ecological Communities 2, 3 and 4 presents a risk of increasing colonization by invasive non-native plant species. Invasive non-native English holly (<i>Ilex aquifolium</i>) is established in Ecological Communities 3, 4 and 5, and foxglove (<i>Digitalis purpurea</i>) is established in Ecological Communities 1, 2, and 4.	Medium	Medium	Medium	Medium
Problematic Native Species: Hyperabundant black-tailed deer (<i>Odocoileus hemionus</i>) can be	Medium	Medium	Medium	Medium

problematic, limiting natural regeneration, dramatically altering understory vegetation structure and composition, and adversely affecting songbird populations (Martin et al. 2010).				
Human Disturbance: Increased human activity in adjacent privately-managed lots (e.g. Brigade Bay subdivision) may increase the potential risk of unauthorized human activities such as firewood removal, land clearing, trail building, construction, camping or other incursions into the Nature Reserve boundaries (Carey et. al. 2000).	Low	Low	Low	Low
Climate Changes: The trend towards longer, drier summers and droughts in the region may have effects on the vegetation and hydrology of the site in the long term (Erwin 2009).	Unknown	Unknown	Unknown	Unknown
Overall Threat Status for Protected Area	Low-Medium	Low	Low	Low

4.1 Expected Change to Threats Over Time

Recreational activities and unauthorized human disturbance and infractions in the reserve are likely to increase over time given the increased development pressure on Gambier Island from the Greater Vancouver region and surrounding areas.

The threat of catastrophic, high-intensity wildfire remains high in the region as the climate appears to be shifting to increasingly drier summers and fire suppression remains active.

Lack of native tree regeneration will likely remain constant given the ongoing herbivory, dense understory, and disturbance associated with former logging. Additional replanting of native trees will help restore logged areas and control invasive species through shading.

Invasive species spread will likely increase without a concerted effort at control. Ongoing removal and control efforts will be required because these invasive species form large, persistent seed banks.

5.0 Community Engagement

5.1 Adjacent Landholders

In preparation for the development of the Management Plan, letters were sent to all landholders and neighbours within a 100 m radius of the reserve. A total of 113 letters were sent by email on November 23rd, 2018 (Appendix D). The letters contained information about Brigade Bay Bluffs, Long Bay Wetland and Mount Artaban Nature Reserves, an invitation to a web conference and a link to an online questionnaire (see Appendix E).

5.2 First Nations

ITC is currently in discussion with three First Nations who have asserted traditional rights on Gambier Island to discuss management planning. Meetings are being held with the Musqueam Nation, Tsleil-Waututh Nation and the Squamish Nation and this communication will continue.

5.3 Conservation Partners and Community Members

The Islands Trust Conservancy held a public web conference on December 14th, 2018. People attending the online conference were asked to provide input on the draft Management Plan and management planning for the reserve. Maps and photographs were presented during a brief powerpoint presentation and residents were asked for their input at that time. There were six members of the public who attended online. Notice of the online questionnaire was provided to the public by ITC and partners through social media.

5.4 Engagement Results

The questionnaire was completed by nine people (four online and five mail-in responses). The nine respondents were primarily non-residents, with 78% living in Vancouver and 3 respondents had a second residence on Gambier Island. Most respondents (44%) have visited the reserve a few times and all who have visited the reserve engage in hiking/walking; many visitors brought their dogs (88%). The most important values for respondents were protection of habitat for at-risk species (89%), conservation for the sake of the intrinsic value of nature (78%), ecosystem services (67%), and low-impact recreational opportunities (67%).

6.0 Management Recommendations

The general management direction of the LBWNR is to allow natural successional processes to continue while allowing low-impact recreational use. With the exception of fire, natural disturbance factors due to wind (windthrow), pest infestation, disease and wildlife use should proceed without intervention. Only the removal of invasive plant species throughout the reserve and of hazard trees around the trail system are permitted. No further trail development is recommended; this is to limit fragmentation and reduce potential future impacts to the reserve associated with additional access points. Restoration is recommended to help re-establish trees in areas with low recruitment.

6.1 Management Roles

The Islands Trust Conservancy is the sole owner of the LBWNR but will rely on its partnership with the Gambier Island Conservancy and the Sunshine Coast Conservation Association to assist with on-the-ground management (Table 16). Since 2009, Islands Trust Conservancy has held a management agreement with the Gambier Island Conservancy (Islands Trust Fund 2009). It specifies that the Reserve should be managed by Gambier Island Conservancy in a manner consistent with the Reserve Purposes, the Management Plan, and the policies of the Board. The Islands Trust Conservancy will monitor the property annually to detect any management issues. Any issues will be reported to the covenant co-holders, Gambier Island Conservancy and Sunshine Coast Conservation Association.

Table 16. Partners involved in management of LBWNR.

Partner	Role
Island Trust Conservancy	Landholder
Gambier Island Conservancy	Covenant Holder and Management Group
Sunshine Coast Conservation Association	Covenant Holder

6.2 Permitted and Prohibited Uses

The reserve is open to the public for recreational hiking and nature appreciation on existing trails. Visitors are requested to keep dogs on a leash.

The following activities by the public are prohibited:

- Hunting
- Use of motorized vehicles
- Bicycling
- Horseback riding
- Camping
- Fires
- Forestry
- Livestock grazing
- Trail development (outside of established trails)
- Tree cutting
- Collection of plants or animals

6.3 Proposed Monitoring Program

Annual monitoring by the covenant holders and by managers of the Reserve is important to ensure that there are no covenant breaches or management issues occurring within the protected area. The main focus of monitoring should be on the existing trail system and the boundary along Mt. Artaban Road since these are the primary access routes into the reserve (Figure 1). Monitoring should assess usage intensity of authorized trails and evaluate trail condition (e.g., levels of erosion and root exposure/damage), and determine if any prohibited uses are occurring, such as tree cutting, unauthorized trails development, use of motorized vehicles, etc.

Species at Risk surveys and monitoring are encouraged during appropriate times of year to assess which species are present. Acoustic bat monitoring and amphibian surveys at wetland sites would provide insightful data. Monitoring of invasive species spread is advisable over time so that control measures can be taken as required.

Monitor regrowth of trees replanted in the borrow pit and other areas of the reserve and remove protective cones as needed.

6.4 Public Access

There are two existing public access trails located off Mt. Artaban Road: one in the northern part of the reserve in the road right of way and a second in the southeast corner of the reserve that provides a linkage to Mt. Artaban Nature Reserve (see Section 2.1 for additional details). No additional access sites or trails will be developed in order to minimize habitat fragmentation and degradation.

Alternative access opportunities for First Nations may be established through a separate Management Plan for Areas of Cultural Heritage and Sacred Significance, which must be in compliance with the conservation covenant on the land.



Photo 10. Private property sign at trailhead off Mt. Artaban Road leading into Brigade Bay subdivision at north end of LBWNR.

6.5 Signage

There are six boundary signs, six “Covenant Boundary” signs, one trailhead sign (on the trail that leads to Mt. Artaban Nature Reserve) and two other private property signs at access points to the reserve (Figure 1 and Table 2). When signs are updated, it is recommended that general contact information for the Islands Trust Conservancy be included on signs. Installing interpretive signage explaining why dogs must be on leash is recommended. Additional signage should be considered if further development occurs on adjacent properties, as this will increase public use of the reserve.



Photo 11. Trailhead sign leading into north end of LBWNR from Brigade Bay subdivision on Mt. Artaban Rd.

6.6 Trail Use, Maintenance and Development

There is limited recreational use of two trails within the Nature Reserve (see Section 2.10 and Figure 1). The trails are in good condition and have been regularly maintained. There is a decommissioned trail through the center of the reserve that runs approximately east to west and it is largely overgrown. The location of the decommissioned trail should not be shown on maps or other public documents.

No additional trails should be installed; this is to prevent fragmentation within the reserve and limit any potential additional hydrological impacts.

6.7 Protection Initiatives for Sensitive Ecosystems and Species and Ecosystems at Risk

Given the paucity of wetlands throughout the Islands Trust area (ITC 2018), the riparian and wetland habitats within the reserve deserve the highest protection. Wetlands and riparian areas provide important habitat for numerous wildlife and care should be taken to avoid impact on these sensitive ecosystems. Limiting further trail development and maintaining the existing trail to limit erosion will help protect these sensitive areas.

6.8 Ecological Restoration Options

In 2013, a restoration plan was developed for the quarry borrow pit which included roughening and loosening the substrate to address compaction, tree planting, caging of trees and potential hydroseeding. Due to challenges associated with access for heavy equipment, trees were planted and caged but the site was not loosened or hydroseeded. Instead, blown on or 'terrased' growth medium and native tree species seeds were added. In 2015, 28 western redcedar trees were caged to protect from deer browse (Scholefield 2015). In 2017, eight 1-gallon nursery Douglas-fir seedlings were planted and caged, and 10 naturally established Douglas-fir seedlings were caged *in situ* (Hopwood 2017). An additional 30 trees were caged in more southern portions of the reserve along the trails (Scholefield 2015), and dense young red alder trees were removed from the trailhead areas. Only a portion of the caged trees in the southern portion of the reserve were mapped (Figure 1).

Monitoring the survivorship of trees is important for gauging restoration success and to determine when the cages should be removed once the trees have grown to a suitable size to withstand some browsing by deer.

Future ecological restoration could include planting of native trees and shrubs with protective caging in areas with poor regeneration to create more diversity in the canopy and understory vegetation. Encouraging more woody vegetation may eventually help shade out invasive species, such as tansy ragwort, that are invading the disturbed site. Species chosen for restoration should be those currently found within the reserve (Appendix B). A biologist should be consulted for site-specific species recommendations because differences in microsite will support different vegetation.

Although some wetland restoration was done to remove excessive slash and channel blockages and address soil compaction prior to 2004, the hydrology has been altered from its original state. A long-term priority, if the budget allows, is to restore the impacted wetland to a more natural state, and to develop a more comprehensive restoration plan for the impacted wetland habitat.



Photo 12. Caged western redcedar and Douglas-fir trees in central portion of reserve along decommissioned trail.

6.9 Scientific Research/Education Opportunities

To date, no research has been conducted on the property. Future research could include species at risk surveys and monitoring during peak season for a variety of species including rare plants, mosses and lichens, bats, birds, gastropods and amphibians.

6.10 Exotic and Invasive Species Management

Invasive English holly (*Ilex aquifolium*) is found in Vegetation Types 3, 4, and 5 and foxglove (*Digitalis purpurea*) is found in Vegetation Types 1, 2, and 4. Efforts should be made to remove these species since they can produce large, long-lasting seedbanks and will continue to spread into adjacent habitats. There is some tansy ragwort present in the former quarry, which should also be controlled.



Photo 13. Invasive tansy ragwort (center foreground) at disturbed quarry site, with young regeneration of red alders along edges of the quarry.

6.11 Wildfire Risk Management

Wildfire and wildfire suppression can be extremely damaging to sensitive ecosystems. Developing a fire management plan in consultation with the Gambier Fire Equipment Group and the BC Wildfire Service to identify optimum fire suppression techniques is recommended. This information should be provided to the province for inclusion in their annual Fire Plan. The use of salt water or fire retardants is not recommended for fire suppression since both can damage sensitive ecosystems. There are two freshwater lakes on Gambier that should be used for bucketing in the event of a wildfire (Gambier Island Community 2018).

6.12 Climate Change Impacts and Management

Climate change may impact the distribution of ecosystems across the landscape, affecting vegetation patterns, hydrology, and outbreaks of pests. Hotter, drier summers may lead to premature drying of wetlands and altered flow rates in seasonal streams. Trends that may prevail in this region include up-slope migration of the tree line and ecosystem boundaries, and increased fire frequency. Douglas-fir-dominated stands will expand at the cost of Coastal Western Hemlock (CWH) forests, which are expected to shift upslope (Hebda 1997). Ensuring ongoing protection and connectivity between large protected areas will aid the dispersal of

species into new habitats and across elevations as vegetation patterns shift with climate change. These protected area matrices will provide potential reservoirs for dispersal into suitable habitats in adjacent areas as climate change shifts the distribution of these ecosystem types (McCloskey et.al. 2009).

7.0 Action Items

7.1 Immediate Actions (1-2 years):

1. Continue to work with the Gambier Island Conservancy and Sunshine Coast Conservation Association to complete management activities as funds allow.
2. Monitor planted trees for survival and remove cages as necessary.
3. Identify opportunities for cooperative management with First Nations.

7.2 Short term Actions (3-5 years):

1. Prepare a wildfire management plan that considers both forest ecology and prevention of damage to surrounding neighbourhoods in consultation with the local fire authorities.
2. Plant and cage native shrubs and trees in areas with poor natural regeneration.
3. Initiate development of parallel Management Plan for Areas of Cultural Heritage and Sacred Significance documents with First Nations.

7.3 Long term Actions (5+ years)

1. Conduct surveys for species at risk and other wildlife (e.g. amphibians, bats) to provide a better understanding of the natural values of the reserve.
2. Develop a wetland restoration plan, if the budget allows.

7.4 Ongoing or Annual Action Items

1. Conduct annual monitoring to identify management concerns, including public use (e.g. trail monitoring) and invasive species.
2. Communicate annually with the Gambier Island Conservancy and Sunshine Coast Conservation Association to provide updates on the reserve, seek approvals for stewardship activities as necessary, and maintain compliance with the conservation covenant.
3. Conduct ongoing maintenance of trails and signs.
4. Continue to inform the general public of the natural values of the site and the permitted and prohibited uses through information placed in local publications.
5. Work with First Nations towards cooperative management of the reserve using a Management Plan for Areas of Cultural Heritage and Sacred Significance as a guide.

8.0 Conclusion

Long Bay Wetland Nature Reserve is an important protected area that is surrounded by a combination of privately- and provincially-managed land and other protected areas. Although impacted by past logging, over time the land will develop into a young forest and reforestation efforts can help enhance degraded habitats. The Reserve provides important connectivity and wildlife habitat across a large, significant network of protected areas on Gambier Island.

Islands Trust Conservancy will act on the management action items identified in this plan to achieve the vision, objectives and purpose of the Nature Reserve. Future management issues may lead to further action items that will be identified in work plans and in future revisions of this plan.

9.0 References

- BC CDC 2018. British Columbia Conservation Data Centre iMap.
<http://maps.gov.bc.ca/ess/hm/cdc/> [Accessed November 2018].
- BC Ministry of Energy and Mines. 2005. Surficial Geology Map Index of BC (GSB Open File 1992-13). http://webmap.em.gov.bc.ca/mapplace/minpot/OF_13map.cfm [Accessed October 2018]
- Cascade Environmental Resource Group Ltd. 2005. Brigade Bay Bluffs Nature Reserve and Long Bay Wetlands Nature Reserve Management Plan, Gambier Island, BC. November 30, 2005. Unpublished report prepared for The Islands Trust Fund.
- Carey, C., N. Dudley, and S. Stolton. 2000. Squandering Paradise? The importance and vulnerability of the world's protected areas. WWF-World Wildlife Fund for Nature International, Gland, Switzerland. Pp. 227.
- CERG. 2001. Environmental Assessment: Gambier Island, DL's 1257, 1259 and part DL 1780; except part in Ref. Plan 2829, Group 1, NWD, Gambier Island BC. Prepared for 586329 BC Ltd. September 17, 2001.
- Erwin, K.L. 2009. Wetlands and global climate change: the role of wetland restoration in a changing world. *Wetlands Ecological Management* 17:71-84.
- Fisheries and Oceans Canada (FOC). 2004. Authorization for Works or undertakings Affecting Fish Habitat. Authorization No. 02-HPAC-PA2-000-000006 Brigade Bay Developments. February 25, 2004.
- Fisheries and Oceans Canada (FOC). 2003. Proposed Brigade Bay Development Project; 586329 BC Ltd. Ho-mahmk, Cha7elknech (Brigade Bay, Gambier Island, Howe Sound). First Nations Interests. December 2, 2003.
- Gambier Island Community. 2018. Gambier Island Fire District Map. Web site:
<http://www.gambierisland.org/Documents/Gambier%20Fire%20District%202016.pdf>

Green, R.N. and K. Klinka. 1994. A Field Guide to Site Identification and Interpretation for the Vancouver Forest Region. Land Management Handbook No. 28. Ministry of Forests. Victoria, B.C.

Hebda, R.J. 1997. Chapter 13: Impacts of Climate Change on Biogeoclimatic Zones of British Columbia and Yukon *In* Responding to Global Climate Change in British Columbia and Yukon, Volume 1 of the Canada Country Study: Climate Impacts and Adaptations. Eds E.Taylor and B. Taylor. Pp. 13-1 - 13-15.

Hopwood, D. 2009. Management Plan for Mount Artaban Nature Reserve. Unpublished Report prepared for the Islands Trust Fund.

Hopwood, D. 2013. Baseline Report: Long Bay Wetland Nature Reserve. Prepared for Islands Trust Conservancy, Schedule A of Conservation Covenant (CA3219709).

Hopwood, D. 2017. Notes on Gambier Conservancy Restoration Work Party, February 25, 2017. Unpublished report prepared for the Islands Trust Conservancy.

International Union for Conservation of Nature (IUCN). 2018. Invasive Species.

<https://www.iucn.org/theme/species/our-work/invasive-species> [Accessed October 8, 2018].

Islands Trust. 2004. Gambier Island Land Use Bylaw No. 86, 2004. Adopted September 15, 2005.

Islands Trust. 2017. Gambier Island Official Community Plan. Bylaw No. 783, 2001. Schedule 1 Development Permit Areas. <http://www.islandstrust.bc.ca/islands/local-trust-areas/gambier/bylaws/> [Accessed November 9, 2018].

Islands Trust. 2018. Islands Trust Object. <http://www.islandstrust.bc.ca/trust-council/islands-trust-act/> [Accessed October 8, 2018].

Islands Trust. 2019. Reconciliation Declaration. Web site: <http://www.islandstrust.bc.ca/media/347494/reconciliation-declaration.pdf> Accessed March 2019.

Islands Trust Conservancy (ITC). 2018. Regional Conservation Plan 2018-2027. January 30, 2018. Pp. 146.

Islands Trust Fund. 2009. Brigade Bay Bluffs Nature Reserve Management Agreement. Unpublished agreement between the Trust Fund Board and Gambier Island Conservancy.

Lands Directorate, Terrestrial Ecozones Of Canada, Ecological Land Classification No. 19, 1986, p. 107-113.

Lockwood, M. 2006. Global protected area framework. *In* M. Lockwood, M. Lockwood, G. L. Worboys, and A. Kothari (Eds.). *Managing Protected Areas: A Global Guide* (p. 84). London: Earthscan.

Martin, T.G., P. Arcese, and N. Scheerder. 2011. Browsing down our natural heritage: Deer impacts on vegetation structure and songbird populations across an island archipelago. *Biological Conservation* 144(2011):459-469.

Mauger, G.S., J.H. Casola, H.A. Morgan, R.L. Strauch, B. Jones, B. Curry, T.M. Busch Isaken, L. Whitely Binder, M.B. Krosby, and A.K. Snover. 2015. State of Knowledge: Climate Change in Puget Sound. Report prepared for the Puget Sound Partnership and the National Oceanic and Atmospheric Administration. Climate Impacts Group, University of Washington, Seattle. doi:10.7915/CIG93777D

McCloskey, S.P.J., L.D. Daniels, and J.A. McLean. 2009. Potential impacts of climate change on Western Hemlock Looper outbreaks. *Northwest Science*. 83(3):225-238.

Meidinger, D. and J. Pojar. 1991. *Ecosystems of British Columbia*. BC Ministry of Forests. Victoria, B.C.

Meteoblue. 2018. Climate Gambier Island: Average Temperature and Precipitation. https://www.meteoblue.com/en/weather/forecast/modelclimate/gambier-island_canada_5959241 [Accessed October 8, 2018].

Parminter, J. 2009. Personal Communication to D. Hopwood (unreferenced in Hopwood 2009).

Scholefield, P. 2015. Gambier Nature Reserve Restoration – Island Trust Fund Project No 2104-0061 Work Party Report. Unpublished Report for Islands Trust Conservancy. Gambier Island Conservancy, February 16, 2015.

The Weather Network. 2018. Bowen Island Average Annual Precipitation. <https://www.theweathernetwork.com/ca/api/sitewrapper/index?b=%2Fstatistics%2F&p=%2Fforecasts%2Fstatistics%2Findex&url=%2Fstatistics%2Fcabc0037%2Fbowen-island%2F%2F%3F> [Accessed October 8, 2018].

Appendix A. Survey Plan for LBWNR



Appendix B. Vegetation Found in LBWNR

Common Name	Latin Name	Status
Amabilis fir	<i>Abies amabilis</i>	
Bigleaf maple	<i>Acer macrophyllum</i>	
Maidenhair fern	<i>Adiantum aleuticum</i>	
Bentgrass sp.	<i>Agrostis sp.</i>	Introduced
Silver hairgrass	<i>Aira caryophyllea</i>	
Red alder	<i>Alnus rubra</i>	
Pearly everlasting	<i>Anaphalis margaritacea</i>	
Sweet vernalgrass	<i>Anthoxanthum odoratum</i>	Introduced
Common burdock	<i>Arctium minus</i>	Introduced
Lady fern	<i>Athyrium filix-femina</i>	
Dull Oregon-grape	<i>Berberis nervosa</i>	
Deer fern	<i>Blechnum spicant</i>	
Sedge sp.	<i>Carex sp.</i>	
Canada thistle	<i>Cirsium arvense</i>	Introduced
Bull thistle	<i>Cirsium vulgare</i>	Introduced
Orchard grass	<i>Dactylis glomerata</i>	Introduced
	<i>Dicranum spp.</i>	
Foxglove	<i>Digitalis purpurea</i>	Introduced
Spiny wood fern	<i>Dryopteris expansa</i>	
Swamp horsetail	<i>Equisetum fluviatile</i>	
	<i>Plagiothecium undulatum</i>	
Slender beaked-moss	<i>Eurynchium praelongum</i>	
Rough fescue	<i>Festuca campestris</i>	
Western fescue	<i>Festuca occidentalis</i>	
Sweet-scented bedstraw	<i>Galium triflorum</i>	
Salal	<i>Gaultheria shallon</i>	
Common velvet-grass	<i>Holcus lanatus</i>	Introduced
Oceanspray	<i>Holodiscus discolor</i>	
Step moss	<i>Hylocomium splendens</i>	
Hairy cat's ear	<i>Hypochaeris radicata</i>	Introduced

English holly	<i>Ilex aquifolium</i>	Introduced
Common rush	<i>Juncus effusus</i>	
Rush sp.	<i>Juncus sp.</i>	
Common nipplewort	<i>Lapsana communis</i>	Introduced
Hairy honeysuckle	<i>Lonicera hispidula</i>	
Skunk cabbage	<i>Lysichiton americanus</i>	
Wall lettuce	<i>Mycelis muralis</i>	Introduced
Timothy	<i>Phleum pratense</i>	Introduced
Sitka spruce	<i>Picea sitchensis</i>	
Spruce sp.	<i>Picea sp.</i>	
Flat moss	<i>Plagiothecium undulatum</i>	
Kentucky bluegrass	<i>Poa pratensis</i>	Introduced
sword fern	<i>Polystichum munitum</i>	
Bitter cherry	<i>Prunus emarginata</i>	
Douglas-fir	<i>Pseudotsuga menziesii</i>	
Bracken fern	<i>Pteridium aquilinum</i>	
Creeping buttercup	<i>Ranunculus repens</i>	Introduced
Lanky moss	<i>Rhytidiadelphus loreus</i>	
Black gooseberry	<i>Ribes lacustre</i>	
Cutleaf evergreen blackberry	<i>Rubus laciniatus</i>	Introduced
Black raspberry	<i>Rubus leucodermis</i>	
Thimbleberry	<i>Rubus parviflorus</i>	
Salmonberry	<i>Rubus spectabilis</i>	
Trailing blackberry	<i>Rubus ursinus</i>	
Red elderberry	<i>Sambucus racemosa</i>	
Wool-grass	<i>Scirpus atrocinctus</i>	
Small-flowered bulrush	<i>Scirpus microcarpus</i>	
Tansy ragwort	<i>Senecio jacobaea</i>	Introduced
Long-leaved starwort	<i>Stellaria longifolia</i>	
Western redcedar	<i>Thuja plicata</i>	
Broad-leaved starflower	<i>Trientalis borealis</i>	
Western hemlock	<i>Tsuga heterophylla</i>	

Common cattail	<i>Typha latifolia</i>	
Red huckleberry	<i>Vaccinium parvifolium</i>	

Appendix C. Photographic Documentation

All photo locations are shown in the map in Figure 1.

PHOTO STATION	LOCATION (UTM Coordinates)	DIRECTION	PHOTO-GRAPHER	DATE YYYY-MM-DD	DESCRIPTION
P2	476130; 5480906	270°	LM	2018-08-07	Trailhead and boundary signs.
P3	475679; 5481419	225°	LM*	2018-08-07	Nature Reserve Boundary Sign on Mt. Artaban Road.
P4	475380; 5481633	270°	LM	2018-08-08	Trailhead Boundary Sign and Private Property Sign for adjacent strata (No Motorized Vehicles). At end of northern trail at western boundary of Nature Reserve.
P12	475547; 5481839	270°	LM	2018-08-07	Private Property and No Hunting signs at Mt. Artaban Road northern trailhead at eastern boundary.
P13	475543; 5481832	270°	LM	2018-08-07	Nature Reserve Boundary Sign on Mt. Artaban Road.
P14	475611; 5481311	208°	LM	2018-08-07	Caged western redcedar and Douglas-fir trees on decommissioned trail.
Natural Features as noted in Figure 5					
P1	475653; 5481475	270°	LM	2018-08-08	Small wetland (20 m x 5 m) beside road with skunk cabbage, small-flowered bulrush, cattail, wool-grass, common rush, horsetail and lady fern by road. Carrina Maslovat in centre of wetland. No standing water.

P5	475615; 5481551	280°	LM	2018-08-09	Roadside wetland near boundary sign, seems to have shifted to mostly sword fern, horsetail, orchard grass and timothy.
P6	475966; 5480978	270°	LM	2018-08-07	Creekbed with rocks, some water still flowing.
P7	475511; 5481738	285°	LM	2018-08-08	Looking upslope to steep, rocky bluff with reindeer lichen and mosses. There is some oceanspray, foxglove, sweet vernal-grass, present with sword fern below and sparse bigleaf maple, western hemlock and Douglas-fir. Large western redcedar at bottom of steep outcrop.
P8	475937; 5480977	200°	LM	2018-08-08	Centre Plot of Vegetation Type 3. Sword fern understory.
P9	475424; 5481610	128°	LM	2018-08-08	Centre of Vegetation Type 4 showing cleared area with browsed English holly, sword fern understory.
P10	475586; 5481309	324°	LM	2018-08-07	Centre plot of Vegetation Type 5, large older bigleaf maple trees and dense sword fern cover.
P11	475647; 5481489		LM	2018-08-07	Red alder wildlife tree.
P15	475472; 5481954	225°	LM	2018-08-09	Quarry borrow pit showing tansy ragwort and replanted trees.

* LM=Laura Matthias

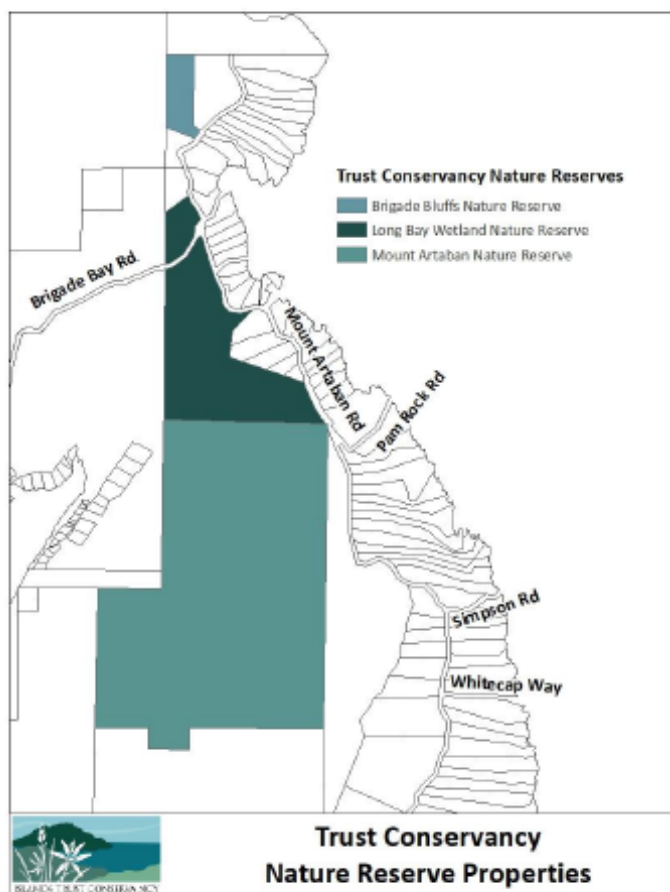
Appendix D. Letter to Neighbours



November 23, 2018

Dear Neighbour,

The Islands Trust Conservancy is updating the management plans for three nature reserves on eastern Gambier Island (see map below) and we want to hear from you.



Brigade Bay Bluffs Nature Reserve is a 5.14 hectare (12.70 acre) parcel located northwest of Brigade Bay marina off Mt. Artaban Road.

Long Bay Wetland Nature Reserve is 38 hectares (91 acres) and is located west of Brigade Bay marina and borders Mt. Artaban Road.

Mount Artaban Nature Reserve is 107 hectares (264 acres) and is south of Brigade Bay marina and can be accessed via a trail through Long Bay Wetland Nature Reserve or from the south through Halkett Bay Provincial Marine Park.

The Islands Trust Conservancy manages

the nature reserves in partnership with the Gambier Island Conservancy and the Sunshine Coast Conservation Association to protect their unique ecological values. The

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properties contain open bluffs, maturing forests, streams, wetlands and the peak of Mount Artaban. The reserves are important for their connections to other undeveloped and protected lands on the island.

There are restrictions on the use of the properties outlined in conservation covenants that are held by the Gambier Island Conservancy and Sunshine Coast Conservation Association. These covenants were put in place to protect the native plants and animals on the reserve. The previous management plans written in 2005 and 2009 can be found on our website as follows

- Management Plan for Mount Artaban:
<http://www.islandstrustconservancy.ca/media/10352/itfmgmtplanartaban.pdf>
- Management Plan for Brigade Bay Bluffs and Long Bay Wetland:
<http://www.islandstrustconservancy.ca/media/10346/itfmgmtplanbbay.pdf>

How to Participate

- 1) Fill in our survey: We would like to hear your ideas and concerns regarding the long-term management of these special places. Please complete a questionnaire on our website: <http://www.islandstrustconservancy.ca/gambier-survey/> or complete the enclosed questionnaire and send it to me by email or mail.
- 2) Join our web conference: To learn more about the management of the nature reserves and to share your questions and ideas, join the conference on your computer, tablet or smartphone:
Gambier Nature Reserves
Wed, Dec 12, 2018 7:00 PM - 8:00 PM PST
<https://global.gotomeeting.com/join/375421301>
If you contact us, we can also send you the link electronically.

Many thanks for taking the time to consider the management of these three nature reserves. For more information, please contact me at the number or email below.

Yours sincerely,



Nuala Murphy
Property Management Specialist, Islands Trust Conservancy
Phone: 250-405-5193
Email: nmurphy@islandstrust.bc.ca

The Islands Trust Fund has changed its legal name to the Islands Trust Conservancy. Please visit us on our updated website at www.islandstrustconservancy.ca



Brigade Bay Bluffs, Long Bay Wetland and Mount Artaban Nature Reserves, Gambier Island Questionnaire

Brigade Bay Bluffs (5.14 hectare/12.70 acre), Long Bay Wetland (38 hectares/91 acres) and Mount Artaban (107 hectares/264 acres) Nature Reserves are protected areas on east Gambier Island. They have significant watershed values and contain rare ecosystems which are listed as either threatened or endangered in British Columbia. They are important because of their connectivity to large areas of contiguous protected lands.

Mount Artaban Nature Reserve was protected in 2008 through the Provincial Free Crown Grant Program. Brigade Bay Bluffs and Long Bay Wetland Nature Reserves were donated in 2005 as part of the Brigade Bay subdivision development. All three properties are protected by conservation covenants held by the Gambier Island Conservancy and the Sunshine Coast Conservation Association.

The Islands Trust Conservancy's primary goal is to protect and nurture the sensitive ecosystems on these lands. To do that, we create a management plan, with revisions approximately every 10 years, to guide the management of the property. We are asking you to help us with the update for these three plans. Please share your thoughts on the protection and long-term management of these nature reserves.

1. Where do you live?

- ☐ Gambier Island
- ☐ Sunshine Coast
- ☐ Vancouver
- ☐ Other

2. Have you ever visited Mount Artaban, Brigade Bay Bluffs or Long Bay Wetland Nature Reserve? If so, how often?

- ☐ No, never
- ☐ Once
- ☐ A few times
- ☐ Once a year or less
- ☐ Once a month or more

3. Which reserve do you visit most frequently?

- ☐ Brigade Bay Bluffs Nature Reserve
- ☐ Long Bay Wetland Nature Reserve
- ☐ Mount Artaban Nature Reserve

4. If you have visited the Nature Reserves on Gambier Island, what did you do there?

- ☐ Hiking/walking
- ☐ Dog walking
- ☐ Wildlife viewing
- ☐ Other (please list)

5. Please list any wildlife and unique plant species you have seen at or near any of these Nature Reserves (please indicate which reserve for each species).

6. What do you believe to be the most important values of nature reserves (choose three)?

- ☐ Protection of habitat for at-risk species
- ☐ Ecosystem services (e.g. clean water and air, erosion control, groundwater recharge, etc.)
- ☐ Low impact recreational opportunities
- ☐ Education and research opportunities
- ☐ Tourism
- ☐ Aesthetic appeal
- ☐ Conservation for the intrinsic value of nature
- ☐ Other (please specify):

7. What activities do you believe are incompatible with the protection of natural features, and should not be allowed within any of these nature reserves?

8. What do you feel could be the greatest threat to each of these nature reserves, and should be the highest management priority for the Islands Trust Conservancy?

Brigade Bay Bluffs:

Long Bay Wetland:

Mount Artaban:

9. Please provide any other relevant information that will help us make the best management decisions for any of these nature reserves.

10. Please share with us any history you know about these properties or any knowledge you have about unique cultural or other special features on the properties or nearby (please indicate which reserve).

11. If you would like to receive periodic updates from the Islands Trust Conservancy on this and other conservation projects on the islands, please provide your name and email address or sign up for our latest news at www.islandstrustconservancy.ca:

Thank you for your time spent helping us plan the future of the Brigade Bay Bluffs, Long Bay Wetland, and Mount Artaban Nature Reserves.



File No.:

DATE OF MEETING: November 6, 2019

TO: Gambier Island Local Trust Committee

FROM: Lisa Wilcox, Senior Intergovernmental Policy Advisor
Heather Kauer, Regional Planning Manager
Northern Team

SUBJECT: Standing Resolution - Reconciliation

RECOMMENDATION

1. That the Gambier Island Local Trust Committee adopt the following standing resolution with respect to First Nations in the Local Trust Area:

Whereas the Local Trust Committee seeks to engage in Reconciliation with local First Nations, governments and the island community by honouring the Truth and Reconciliation Commission (TRC) Calls to Action, United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), Draft Principles that Guide the Province of British Columbia's Relationship with Indigenous Peoples, and Islands Trust First Nations Engagement Principles, the Local Trust Committee endeavours to:

- a) Annually, write a letter to First Nations, (re)introducing trustees and staff and provide a schedule of known Local Trust Committee meetings for the upcoming year, as well as, provide an update of current projects and advocacy activities;
- b) For various Local Trust Committee meetings, invite elders from local First Nations to attend and provide a traditional welcome to the territory;
- c) Work with First Nation governments on cooperative initiatives, including and not limited to, language, place names, territorial acknowledgements, and community education on Coast Salish and local First Nations' cultural heritage and history;
- d) Work with First Nation governments on engagement principles for inclusive land use, marine use, and climate change planning; advocacy, protection and stewardship; and knowledge and information sharing protocols;
- e) Establish and maintain government-to-government dialogue with First Nations, now and into the future, based on respect and recognition of Aboriginal rights and title, treaty rights, and First Nations' traditional territories within the Islands Trust Area.

REPORT SUMMARY

The Gambier Island Local Trust Committee (LTC) is asked to consider adopting the above-noted standing resolution as a mechanism to guide reconciliation within the Local Trust Area.

BACKGROUND

From 2015 to the present, the Gambier Local Trust Committee has passed resolutions that acknowledge First Nations territory, and looked for ways to develop and create joint relationship building, and engage on issues of environment, naming and recognition, and advocacy.

ANALYSIS

Issues and Opportunities

Standing Resolution

Staff have prepared a draft standing resolution for LTC consideration that will enable the LTC to transition from reconciliation being a First Nations “project” to incorporating reconciliation more holistically into the LTC’s business and work program.

The draft standing resolution references key documents to guide the LTC’s journey of reconciliation with local First Nations. These include:

- Truth and Reconciliation Commission (TRC) Calls to Action
https://nctr.ca/assets/reports/Calls_to_Action_English2.pdf
- United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP);
https://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf
- Draft Principles that Guide the Province of BC’s Relationship with Indigenous Peoples;
https://www2.gov.bc.ca/assets/gov/careers/about-the-bc-public-service/diversity-inclusion-respect/draft_principles.pdf
- Islands Trust First Nations Engagement Principles.
<http://www.islandstrust.bc.ca/media/342128/firstnationsengagementprinciples.pdf>

The draft standing resolution includes five areas in which the LTC can endeavour to take action:

- a) Annually, write a letter to First Nations, (re)introducing trustees and staff and provide a schedule of known Local Trust Committee meetings for the upcoming year, as well as, provide an update of current projects and advocacy activities;
- b) For various Local Trust Committee meetings, invite elders from local First Nations to attend and provide a traditional welcome to the territory;
- c) Work with First Nation governments on cooperative initiatives, including and not limited to, language, place names, territorial acknowledgements, and community education on Coast Salish and local First Nations’ cultural heritage and history;
- d) Work with First Nation governments on engagement principles for inclusive land use, marine use, and climate change planning; advocacy, protection and stewardship; and knowledge and information sharing protocols;
- e) Establish and maintain government-to-government dialogue with First Nations, now and into the future, based on respect and recognition of Aboriginal rights and title, treaty rights, and First Nations’ traditional territories within the Islands Trust Area.

From Engagement to Reconciliation

The draft standing resolution is similar to one prepared for the Gabriola Island LTC in 2018, with an emphasis on the work that the LTC will do as part of their Reconciliation process. The intent is to provide processes that focus

on best practices and provide workable first steps for staff and Trustees to progress and develop a Reconciliation plan. The process acknowledges that reconciliation requires both internal and external knowledge building and will focus on processes to help and advise on First Nations engagement. It also provides a framework for the LTC to engage with all local First Nations with interests in the Local Trust Area.

Rationale for Recommendation

The Gambier Island LTC has made a significant progress in its recent efforts toward reconciliation. These efforts may continue, as an integral part of routine LTC business and work program activities. The LTC may also seek opportunities with other local First Nations that have asserted rights and title, treaty, or overlapping territory in the area. The draft standing resolution provides a framework to support reconciliation and continued relationship building, where capacity is available. The staff recommendation is included on Page 1 of the report.

ALTERNATIVES

The LTC may consider the following alternatives to the staff recommendation:

- 1. Request further information**
- 2. Amend the Standing Resolution**
- 3. Receive for information**

NEXT STEPS

Should the LTC adopt the recommended standing resolution, staff will draft letters of introduction to all First Nations within interests in the Local Trust Area, as noted in item (a) of the resolution and welcome input, dialogue and opportunities to address items (b) through (e) of the resolution.

Submitted By:	Lisa Wilcox, kwakwemtenaat Senior Intergovernmental Policy Advisor	November 6, 2019
Concurrence:	Heather Kauer, RPP, MCIP, AICP Regional Planning Manager	November 13, 2019

ATTACHMENTS

None



REQUEST FOR DECISION

To: Local Trust Committees **For the Meeting of:** November 21, 2019

From: David Marlor, Director, Local Planning Services **Date Prepared:** October 23, 2019

SUBJECT: Live Streaming of Local Trust Committee Meetings

RECOMMENDATION:

That the Local Trust Committee communicate to Trust Council its interest (or lack thereof) in filming and streaming its public meetings.

CHIEF ADMINISTRATIVE OFFICER COMMENTS:

Meeting streaming provides a new way for island constituents to engage in Islands Trust work. Challenges and opportunities related to this topic will be explored in a report to Trust Council in coming months.

1 PURPOSE:

To determine the level of interest in streaming local trust committee meetings.

2 BACKGROUND:

At its June 19, 2019 meeting Trust Council made the following resolutions:

"That Trust Council request that each local trust committee and Trust Council committees indicate whether it has an interest in filming and streaming its public meetings."

And,

"That Trust Council request staff to prepare a report about the costs and feasibility of filming and streaming videos of public meetings through the new Islands Trust website and social media."

The report requested in the latter resolution is currently being prepared by staff.

Forming part of this discussion will be the level of interest of Council committees in pursuing this initiative for their own public meetings. As such, a committee decision is required for communication to Trust Council to inform dialogue and appropriate resource allocation.

3 IMPLICATIONS OF RECOMMENDATION

ORGANIZATIONAL: A change in procedures for how local trust committee meetings are organized and conducted.

FINANCIAL: Additional costs for equipment, processing and storage of recordings and staff resources to operate the equipment.

POLICY: None.

IMPLEMENTATION/COMMUNICATIONS: The interest or lack thereof of the Local Trust Committee will be communicated to Trust Council as requested.

FIRST NATIONS: None.

OTHER: None.

4 RELEVANT POLICY(S):
None.

5 ATTACHMENT(S):
None.

RESPONSE OPTIONS

That the Local Trust Committee communicate to Trust Council its interest in filming and streaming its public meetings.

OR

That the Local Trust Committee communicate to Trust Council that it is not interested in filming and streaming its public meetings.

Prepared By: David Marlor, Director, Local Planning Services

Reviewed By: Clare Frater, Director, Trust Area Services



Development Variance Permit

File Number	Applicant Name	Date Received	Purpose
GM-DVP-2002.1	Land Plan Group Inc.	24-Jan-2002	PID: 014-385-694\nKeats Island - Keats Camp cottage lots - siting variances\nDL 696

Planner: Sonja Zupanec

Planning Status

Status Date: 10-Apr-2008

still on hold pending rezoning

Status Date: 13-Aug-2007

on hold pending rezoning application

Status Date: 16-May-2006

Met with applicant. Outstanding items forwarded for attention. May be add'l fees.

File Number	Applicant Name	Date Received	Purpose
GM-DVP-2018.2	Treloar, DEBRA	15-Oct-2018	PID: 009-414-649 Adding on to cabin, need to vary set backs Civic address: 460 Vaucroft Road, Thormanby Island, BC

Planner: Jaime Dubyna

Planning Status

Status Date: 17-Sep-2019

Revised site plans received.

Status Date: 11-Sep-2019

Applicant submitted letter to LTC requesting that the LTC waive the requirement for a current survey plan signed by a BC Land Surveyor, pursuant to Section 2.8(1) of LUB No. 120.

Status Date: 28-Jun-2019

Applicant notified planner that revised plans are pending.



Applications

Development Variance Permit

File Number	Applicant Name	Date Received	Purpose
GM-DVP-2019.2	Werkema, Klaas	16-Apr-2019	PID: 003-460-011 Building a tram. Civic address: Lot 2A - Sea Ranch, Gambier Island, BC

Planner: Sonja Zupanec

Planning Status

Status Date:

Rezoning

File Number	Applicant Name	Date Received	Purpose
GM-RZ-2004.1	LandPlan Group Inc.	16-Jun-2004	PID: 014-385-694 Keats Island - Keats Camp rezoning application DL 696

Planner: Sonja Zupanec

Planning Status

Status Date: 28-Dec-2018

Bylaw 143 given 1st, 2nd, 3rd readings and approved by Executive Committee. X-ref GM-SUB-2018.1 subdivision referral conditions. Applicant advised of next steps before bylaw can be adopted.

Status Date: 25-May-2017

CIM scheduled for July 27th to provide draft bylaw amendments to enable a comprehensive development zone; transfer LUC provisions and enable subdivision.

Status Date: 20-Apr-2017

Revised draft ToR for hydro.assessment sent to applicant for review.



Applications

Rezoning

File Number	Applicant Name	Date Received	Purpose
GM-RZ-2019.1	South Keats Investments Ltd.	16-Jan-2019	PID: 008-861-102 Civic address: 255 Esplanade Road, Keats Island, BC. LUB No. 78 Amendment
Planner: Bronwyn Sawyer			
Planning Status			
<u>Status Date:</u> 10-Jul-2019			
Applicant in process of providing staff with additional project details			
<u>Status Date:</u> 24-Jun-2019			
Planner review started			

Subdivision

File Number	Applicant Name	Date Received	Purpose
GM-SUB-2018.1	Gambier Island Sea Ranch c/o Miller Thomson	08-Nov-2018	PIDs: Various (29) Subdivision application - Gambier Island Sea Ranch
Planner: Sonja Zupanec			
Planning Status			
<u>Status Date:</u> 31-Dec-2019			
Referral response sent to MOTI and applicant. Several conditions listed for PLA which must be met prior to final subdivision approval.			
File Number	Applicant Name	Date Received	Purpose
GM-SUB-2018.2	CONVENTION OF BAPTIST CHURCHES OF BC	14-Dec-2018	PID: 014-385-694 110 lot subdivision Civic address: 900 Keats Road, Gibsons, BC
Planner: Sonja Zupanec			
Planning Status			
<u>Status Date:</u> 28-Dec-2018			
Referral response sent to MOTI and applicant. Several conditions for PLA must be met prior to final subdivision approval.			

Applications

Subdivision

File Number	Applicant Name	Date Received	Purpose
GM-SUB-2019.1	G.L. Development Corp. Planner: Bronwyn Sawyer	10-Sep-2019	PID: 012-824-941 Two lot subdivision. Civic address: 650 Dulcie Road, Gambier Island, BC.
Planning Status			
<u>Status Date:</u>			

Islands Trust
LTC EXP SUMMARY REPORT F2020
Invoices posted to Month ending September 2019

630 Gambier	Invoices posted to Month ending September 2019	<u>Budget</u>	<u>Spent</u>	<u>Balance</u>
65000-630	LTC "Trustee Expenses"	657.00	233.85	423.15
LTC Local				
65200-630	LTC - Local Exp - LTC Meeting Expenses	4,578.00	853.38	3,724.62
65210-630	LTC - Local Exp - APC Meeting Expenses	411.00	0.00	411.00
65220-630	LTC - Local Exp - Communications	250.00	0.00	250.00
65230-630	LTC - Local Exp - Special Projects	294.00	0.00	294.00
TOTAL LTC Local Expense		<u>5,533.00</u>	<u>853.38</u>	<u>4,679.62</u>
Projects				
73001-630-3003	Gambier RAR	2,000.00	2,718.64	-718.64
73001-630-4094	Gambier Keats Island Shoreline Protection Review	5,000.00	798.96	4,201.04
73001-630-4099	Gambier Howe Sound Forum	3,000.00	2,000.00	1,000.00
TOTAL Project Expenses		<u>10,000.00</u>	<u>5,517.60</u>	<u>4,482.40</u>

Gambier Island Local Trust Committee Policies & Standing Resolutions

No	Meeting Date	Resolution No.	Issue	Policy
1.	October 6, 2010	GM-082-2010	Guidelines for the appointment of members to the advisory planning commission	It was MOVED and SECONDED that the Gambier Island Local Trust Committee endorses the following guidelines for the appointment of members to the advisory planning commission and requests that such guidelines be posted on the Islands Trust website and are used in any posting to solicit expressions of interest from candidates for advisory planning commission membership: “The Gambier Island Local Trust Committee shall make all reasonable efforts, in the consideration of appointments to the advisory planning commission that members are: - Representative of a broad cross section of the geographical areas of the Gambier Island Local Trust Committee area; - Representative of a range of backgrounds and expertise that is supportive to each other in the consideration of matters referred to the advisory planning commission; - Where feasible and practical of a balanced representation of gender and age groups. Consideration shall be given to the following criteria in any appointment: • Previous experience as a member of a Board of Variance; • Experience on a local government council, board, local trust committee, commission or other body; • Experience with other volunteer boards, commissions or committees; • Experience and credential in a planning, design or related profession; • Experience and credentials in a building or design trade; • Educational background; • Length of residency in the local trust area; • Availability, and willingness to travel between local trust areas.
2.	March 26, 2015	GM-2015-018	Amend APC appointment guidelines	It was MOVED and SECONDED, that the Gambier Island Local Trust Committee amend the APC appointment guidelines to allow for representation of members to be weighted to a geographic area subject to a current top priority project.

3.	October 26, 2017	GM-2017-065	Development Permit Area (DPA) No. 3: Riparian Areas administration	It was MOVED and SECONDED that the Gambier Island Local Trust Committee adopt a Standing Resolution which directs staff to administer Development Permit Area (DPA) No. 3: Riparian Areas in the interim before formal amendments are made to the DPA, as follows: a. The “Designated Area” provisions of Section 12.3.1 of Gambier Island Official Community Plan No. 73 should be used to determine whether or not a proposed development is subject to DPA No. 3: Riparian Areas; b. When development is proposed within the “Designated Area”, applicants shall be required to have a Qualified Environmental Professional assess the water feature to determine whether or not it is subject to the Riparian Areas Regulation; c. When development is proposed within the “Designated Area” of a water feature which is determined to be subject to the Riparian Areas Regulation, a DPA No. 3: Riparian Areas Development Permit shall be required; d. When development is proposed within the “Designated Area” of a water feature which is determined not to be subject to the Riparian Areas Regulation, a DPA No. 3: Riparian Areas Development Permit shall not be required.
4.	December 11, 2017	GM-2017-078	Adding item to agenda	It was MOVED and SECONDED that the Gambier Island Local Trust Committee request staff to add to each agenda “First Nations Activities” under the Reports section.
5.	January 25, 2018	GM-2018-009	First Nations Words, Phrases and Place Names	It was MOVED and SECONDED that the Gambier Island Local Trust Committee adopt the following standing resolution: a) That staff incorporate First Nations’ words, phrases, and place names in Local Trust Committee communications, as appropriate.

Top Priorities Report

Gambier Island

1. *Riparian Areas Regulation*

Implement RAR and protect all watercourses across the Gambier Island Local Trust Area

Responsible

Sonja Zupanec

Dates

Rec'd: 26-Oct-2011

2. *Gambier OCP Comprehensive Review*

Revised Project Charter scope Dec. 2018

Responsible

Sonja Zupanec

Dates

Rec'd: 12-Feb-2015

3. *Keats Island Shoreline Protection Project - Phase 2*

Review of OCP and LUB to implement shoreline protection measures.

Responsible

Jaime Dubyna
Sonja Zupanec

Dates

Rec'd: 31-Jan-2019

4. *OCP Advocacy Policies - Implementation & Support*

Supporting the advocacy policies of the Gambier, Keats, and Associated Islands
OCPs, and Islands Trust Strategic Plan (e.g. woodlots, industrial facilities, Howe Sound)

Responsible

Dan Rogers
Kate-Louise
Stamford

Dates

Rec'd: 24-Oct-2013



Projects Report

Gambier Island

1. Development Approval Information Bylaw

Responsible

Date Received

Develop and adopt a D.A.I bylaw for the Gambier Trust Area.

2. Squamish First Nation Consultation

Responsible

Date Received

Scope interim strategies pending completion of a possible protocol agreement to address protection of archaeological and heritage resources.

31-Jan-2012

3. Gambier LUB Review

Responsible

Date Received

Review Gambier LUB to address:

22-May-2014

- definition of breakwater
 - trams (currently silent)
 - advocacy policies around pump out stations
 - review of title Wilderness Conservation
 - 2013: REVIEW KEATS AND GAMBIER LUBS FOR ACCOMMODATION of OCEAN LOOP GEO-EXCHANGE SYSTEMS
 - 2010: GHG Emissions (a more proactive approaches to plan for GHG reductions especially in relation to Policies 6.1 and 6.2 in consultation with SCRD.) Initiative arises from recommendation of SCRD in comments about bylaws 111 & 112.
-

4. Gambier Site-specific Water Zones

Responsible

Date Received

Staff to research the history of Site-Specific water zones on Gambier.

26-Sep-2013



Projects Report

Gambier Island

5. *Recreational Camp and Private Institutional Regulation Review*

Responsible

Date Received

Review Recreational Camp and Private Institutional regulations in all Local Trust Area land use bylaws.
Review to ensure that regulations properly balance ecological protection with current realities re: rentals as income source for rec camps.

28-Jul-2016

6. *Keats Island LUB review*

Responsible

Date Received

review definition of 'structure' to ensure adequate regulation of the siting of underground sewage disposal systems with setbacks to lot lines and the natural boundary of the sea
-review regulations for accessory uses, buildings and structures occurring on parcels where no principal use exists (April 2018 LTC resolution).

11-Dec-2017

7. *Thormanby Islands Foreshore Protection Pilot Project*

Responsible

Date Received

Review of setback regulations and designation of a development permit area for the purposes of protecting the natural environment, its ecosystems and biological diversity and protection of development from hazardous conditions.

26-Jul-2018