



Executive Committee Agenda

Date: Friday, August 25, 2023
Time: 9:15 am
Location: Electronic meeting, Public venue
Islands Trust
200-1627 Fort Street
Victoria, BC V8R 1H8

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1. CALL TO ORDER	
2. APPROVAL OF AGENDA	
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8. EXECUTIVE COMMITTEE PROJECTS	

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 - 8.1.1 Executive
 - 8.1.2 Trust Area Services
 - 8.1.3 Planning Services
 - 8.1.4 Administrative Services
- 8.2 Executive Committee Initiated
 - 8.2.1 Executive
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- 9. NEW BUSINESS
 - 9.1 Executive/Trust Council
 - 9.2 Trust Area Services
 - 9.2.1 LTC Chairs Report on Local Advocacy Topics
 - 9.3 Planning Services
 - 9.4 Administrative Services
- 10. CORRESPONDENCE (for information unless raised for action)
 - 10.1 Oceans Protection Plan Pacific Dialogue Forum November 1-2, 2023 307 - 307
- 11. WORK PROGRAM
 - 11.1 Review and amendment of current work program 308 - 310
- 12. NEXT MEETING

The next Executive Committee meeting is scheduled to be held September 13, 2023, in-person at the Victoria office boardroom beginning at 9:15 a.m.
- 13. CLOSED MEETING

None scheduled
- 14. ADJOURNMENT



**Executive Committee
Agenda – Context Notes
For the meeting of August 25, 2023**

Agenda No.	From	Context Notes
3.	Exec Coord	<p>RISE AND REPORT DECISIONS FROM PREVIOUSLY CLOSED MEETING</p> <p>Chair Luckham to rise and report from the in-camera August 2 meeting that:</p> <ul style="list-style-type: none"> • The July 12, 2023 in-camera minutes were adopted as presented and, • A legal opinion summary letter will be made public regarding a Galiano Island Local Trust Committee development permit exemption
7.1.1	DLS	<p>TRUST COUNCIL MEETING SCHEDULE AND AGENDA RE: TRUSTEE BOLAND - BRIEFING</p> <p>This item has not been considered regarding timing or inclusion in the September Trust Council agenda or schedule and is presented for Executive Committee’s consideration.</p>



Executive Committee Minutes of Regular Meeting

Date: August 2, 2023
Location: Electronic meeting, Public venue
Islands Trust
200-1627 Fort Street
Victoria, BC V8R 1H8

Members Present: Peter Luckham, Chair, Thetis Trustee
Tobi Elliott, Vice-Chair, Gabriola Trustee
David Maude, Vice-Chair, Mayne Trustee (Victoria boardroom)
Timothy Peterson, Vice-Chair, Lasqueti Trustee

Staff Present: Russ Hotsenpiller, Chief Administrative Officer (CAO)
David Marlor, Director, Legislative Services (DLS)
Stefan Cermak, Director, Planning Services (DPS)
Lori Foster, Executive Coordinator/Recorder

Members of the Public Present: One person attended electronically

1. CALL TO ORDER

Chair Luckham called the meeting to order at 9:20 a.m. and gave a land acknowledgement that the meeting was being held across Coast Salish First Nations territory.

2. APPROVAL OF AGENDA

2.1 Introduction of New Items

Late items addendum circulated with the following:

- 6.1.1 Correspondence re: Bowen Island Municipality (BIM) OCP Amendment Bylaw No. 608 & LUB amendment Bylaw No. 609
 - Julie Vic email dated August 1, 2023
 - Michelle Taylor email dated August 1, 2023
 - Liz Ian email dated August 1, 2023
 - Chris Arnold-Forster email dated August 2, 2023
 - 10.2 Correspondence re: Islands Trust Media Release - Commercial ship operators to avoid nighttime anchorages around Southern Gulf Islands
- And, consideration to add the following at:
- 9.1.3 Galiano Island Local Trust Committee – consideration to issue a bylaw enforcement news release
 - 9.1.4 Islands Trust to host Union of BC Municipalities breakfast event

2.2 Approval of Agenda

By general consent, the agenda was adopted as amended.

2.2.1 Agenda Context Notes

Included in the agenda package, notes as presented for the following items:

- 3. Rise and Report Decisions from Previously Closed Meeting
- 9.1.1 EC Request from Salt Spring Island Local Trust Committee re: UBCM attendance
- 9.1.2 Vancouver Island Coastal Communities (VICC) Leadership Steering Committee request
- 12. Next Meeting

3. RISE AND REPORT DECISIONS FROM PREVIOUSLY CLOSED MEETING

Chair Luckham reported that, from the in-camera July 12 closed meeting, the June 14th in-camera minutes were adopted as presented.

4. ADOPTION OF MINUTES

4.1 July 12, 2023, draft minutes

By general consent, the July 12, 2023, draft Executive Committee business meeting minutes were adopted as presented.

5. FOLLOW UP ACTION LIST AND UPDATES

5.1 Follow Up Action List (FUAL)/Director/CAO Updates

Chief Administrative Officer (CAO) Hotsenpiller provided an update regarding CAO FUAL item #3, re Minister Kang, that he has been speaking with ministry staff and the item continues to be in progress.

5.2 Local Trust Committee Chair Updates

Local Trust Committee (LTC) chairs offered updates from recently attended LTC meetings including the following:

- A theme for many LTC's is to review meeting procedures and meeting notification processes.

5.3 Islands Trust Conservancy (ITC) Liaison Update

EC/ITC liaison, Vice-Chair Elliott noted that Chair Linda Adams term with the ITC board has concluded and that ITC board member Risa Smith will now occupy the role of ITC Chair.

6. BYLAWS FOR APPROVAL CONSIDERATION

6.1 Bowen Island Municipality (BIM) OCP Amendment Bylaw No. 608 & LUB amendment Bylaw No. 609

Executive Committee discussed the late items correspondence received (see item 6.1.1) pertaining to the BIM bylaws and addressed the writers concerns regarding particular Islands Trust Policy Statement check list items 5.5.6 and 5.2.3.

EC-2023-085

It was Moved and Seconded,

That Executive Committee request Islands Trust staff request Bowen Island Municipality staff respond to the following questions on 5.5.6 (re: how were the high impact recreational activities addressed and the number of potential persons camping) and 5.2.3, specifically the social impacts of development addressed, regarding Islands Trust Policy Statement checklist and return to this item the August 25th Executive Committee meeting.

CARRIED

6.1.1 Correspondence re: Bowen Island Municipality (BIM) OCP Amendment Bylaw No. 608 & LUB amendment Bylaw No. 609

1. Julie Vic email dated August 1, 2023
2. Michelle Taylor email dated August 1, 2023
3. Liz Ian email dated August 1, 2023
4. Chris Arnold-Forster email dated August 2,2023

Received for information.

6.2 Saturna Island LTC Bylaw No. 138 (LUB amendment) – RFD

Director of Planning Services (DPS) Cermak spoke to the bylaws as presented in the request for decision (RFD).

EC-2023-086

It was Moved and Seconded,

THAT the Islands Trust Executive Committee approve Saturna Island Local Trust Committee Bylaw No. 138, cited as Saturna Island Land Use Bylaw No. 119, 2018, Amendment No. 1, 2023 in accordance with Section 27 of the *Islands Trust Act*.

CARRIED

7. TRUST COUNCIL MEETING PREPARATION

7.1 Executive

7.1.1 Discussion of Visioning Process for Trust Council 2022-26 – Briefing

Executive Committee discussed the visioning exercise planned for September Trust Council.

The meeting recessed for a break at 10:15 a.m. and reconvened at 10:30 a.m.

Discussion continued regarding the 6 key question on pages 72-73 of the agenda package, to allow enough time during Trust Council to address the exercise, consideration to have breakout groups and, offering example statements created by the previous term as show in the agenda package.

The vision process will be further refined and returned to Executive Committee at its next business meeting.

7.1.2 DRAFT September Trust Council 3-day schedule

Executive Committee (EC) reviewed the draft schedule as presented and discussed the following:

- Defer San Juan County Council item to December's Trust Council agenda
- Move "Closed Meeting" session to Tuesday as a working session with a follow-up in-camera session on Thursday to address closed administrative items
- Move "Trustee Roundtable" to Thursday
- Address Corporate Planning Process Tuesday at 4:30 p.m. time slot

Chair Luckham's electronic connection dropped at 11:23 a.m.

Vice-Chair Maude continued to chair the meeting.

The meeting recessed for a break at 11:30 a.m., and reconvened at 11:45 a.m.

Chair Luckham returned at 11:45 a.m.

- On Thursday following the administrative closed session, hold a recap of the Visioning Session.

By general consent, the above changes to the draft 3-day September Trust Council schedule, as discussed, to be incorporated and returned to the next Executive Committee meeting.

7.2 Planning Services - None

7.3 Administrative Services - None

7.4 Trust Area Services - None

8. EXECUTIVE COMMITTEE PROJECTS - None

8.1 Trust Council Initiated - None

- 8.1.1 Executive - None
- 8.1.2 Trust Area Services - None
- 8.1.3 Planning Services - None
- 8.1.4 Administrative Services – None

8.2 Executive Committee Initiated

8.2.1 Executive

8.2.1.1 Assessment of Provision of Trust Council and LTC Streaming Services - Briefing

Information Services (IS) Manager, Mark van Bakel, joined the meeting electronically to present the briefing and spoke to a report being created by Collaborate Video (streaming provider) which will be able to provide LTC streaming statistics once the logistics are in place.

- 8.2.2 Trust Area Services - None
- 8.2.3 Planning Services - None
- 8.2.4 Administrative Services – None

9. NEW BUSINESS

9.1 Executive/Trust Council

9.1.1 Executive Committee request from Salt Spring Island Local Trust Committee regarding UBCM attendance

As presented in the Agenda Context Notes at item 2.2.1.

EC-2023-087

It was Moved and Seconded,

That Executive Committee approve expenses for travel and accommodation to September's Union of BC Municipalities convention for Trustee Patrick.

CARRIED

9.1.2 VICC Climate Leadership Steering Committee Funding Request for Islands Trust Council Agenda

As presented in the Agenda Context Notes at item 2.2.1.

EC-2023-088

It was Moved and Seconded,

That Executive Committee fulfill the request for funding of \$250.00 from Vancouver Island Coastal Communities Climate Leadership request.

CARRIED

9.1.3 Galiano Island Local Trust Committee (GL LTC) – consideration to issue a bylaw enforcement news release

Executive Committee discussed the Supreme Court judgement in favour of the GL LTC released August 1, 2023, regarding the Galiano Forest Lot Owners Association vs Galiano Island Local Trust Committee.

EC-2023-089

It was Moved and Seconded,

That the Executive Committee request that a news release be prepared regarding the Galiano forest lot owners versus Galiano Island Local Trust Committee BC Supreme Court decision.

CARRIED

9.1.4 Islands Trust to host Union of BC Municipalities (UBCM) breakfast event

Executive Committee discussed holding its traditional UBCM breakfast meeting at the upcoming September UBCM convention being held September 18-22 in Vancouver.

EC-2023-090

It was Moved and Seconded,

That Executive Committee request staff make arrangements for Islands Trust UBCM hosted breakfast inviting related local governments.

CARRIED

9.2 Trust Area Services

9.2.1 LTC Chairs Report on Local Advocacy Topics

Vice-Chair Elliott reported on a letter of support written to the Ministry of Transportation and Infrastructure (MOTI) on behalf of the Gabriola Island LTC endorsing an expanded playground on Gabriola Island.

9.3 Planning Services - None

9.4 Administrative Services – None

10. CORRESPONDENCE (for information unless raised for action)

10.1 Liquor and Cannabis Regulation Branch re: engagement on proposed amendments to regulation email dated July 14, 2023

By general consent, forward item 10.1 to local trust committees for information.

10.2 Responses received re: Islands Trust Media Release - Commercial ship operators to avoid nighttime anchorages around Southern Gulf Islands

Received for information.

11. WORK PROGRAM

11.1 Review and amendment of current work program

Received for information.

12. NEXT MEETING

Executive Committee discussed rescheduling its August 23, 2023, business meeting due a scheduling conflict for Vice-Chair Maude.

EC-2023-091

It was Moved and Seconded,

That Executive Committee reschedule its August 23, 2023 regular business meeting to Friday, August 25, to be held electronically commencing at 9:15 a.m.

CARRIED

Vice-Chair Maude acknowledged the passing on June 29, 2023, of former Mayne Island trustee Richard Tamboline, at the age of 91, who served Islands Trust for two terms (1996-1999 and 1999-2002).

Chair Luckham acknowledged the passing of former Cabinet Minister/ Senator/ Member of Parliament (MP), and Saturna Island resident, The Honourable Pat Carney, on July 25, 2023 at the age of 88 noting her extensive contributions and history of service to British Columbia and Canada.

The meeting recessed for lunch 12:30 p.m., and reconvened at 1:00 p.m.

13. CLOSED MEETING – scheduled

At 1:03 p.m., the meeting was closed to the public.

EC-2023-092

It was Moved and Seconded,

That the meeting be closed to the public subject to Sections 90(1)(g) and (i) of the Community Charter in order to consider matters related to litigation affecting the Islands Trust and receipt of advice that is subject to solicitor-client privilege and that staff attend the meeting.

CARRIED

At 2:26 p.m., the meeting was reopened to the public.

14. ADJOURNMENT

By general consent, at 2:26 p.m., the meeting was adjourned.

Peter Luckham, Chair

Certified Correct

Lori Foster, Executive Coordinator

DRAFT

Follow Up Action Report

Executive Committee

Chief Administrative Officer

Activity	Responsibility	Dates	Status
1 Staff to provide a report on online viewership of Council Meetings.	Russ Hotsenpiller	Meeting: 22-Mar-2023 Target: 12-Jul-2023	Completed
2 Initiate a reconciliation learning group comprised of trustees who indicate interest; and a learning plan be developed and implemented through monthly, virtual meetings.	Clare Frater Russ Hotsenpiller	Meeting: 07-Mar-2023 Target: 27-Sep-2023	In Progress
3 Trust Council respond to Minister Kang to the effect that Trust Council will revisit the request for a review of Islands Trust mandate, governance and structure, at September Trust Council and provide the minister with an update.	Russ Hotsenpiller	Meeting: 08-Mar-2023 Target: 27-Sep-2023	In Progress
4 Coordinate a round table on housing, to include BC Housing, key ministers, housing leaders from island communities, and others, within the first six months of the new term and a panel session about housing challenges and solutions in the Islands Trust Area as part of trustee education	Russ Hotsenpiller Stefan Cermak	Meeting: 22-Sep-2022 Target: 06-Dec-2023	In Progress
5 Determine a visioning exercise for trustees at September Trust Council. EC, GC, and FPC subgroup to collaborate.	Russ Hotsenpiller	Meeting: 03-May-2023 Target: 26-Sep-2023	In Progress
6 Explore future education/workshop sessions on decision-making to benefit trustees.	Russ Hotsenpiller	Meeting: 24-May-2023 Target: 26-Sep-2023	In Progress

Follow Up Action Report

Executive Committee

Chief Administrative Officer

Activity	Responsibility	Dates	Status
<p>7 Amend the Strategic Plan to extend the Strategic Plan through 2024/25 as an interim strategic plan with the following changes:</p> <ol style="list-style-type: none"> 1. Corporate Planning is adopted as a priority for Trust Council 2. Prioritizing elements of the strategic projects that support land use decision making 3. Update the strategic initiatives related to housing to focus on projects that will develop healthy, resilient island communities by employing two lenses: mitigating and adapting to the effects of climate change, and managing growth by cultivating equitable, inclusive and resilient communities and the natural environment 	Russ Hotsenpiller	Meeting: 28-Jun-2023 Target: 06-Dec-2023	In Progress
<p>8 Staff to discuss, with interested trustees, requirements and options and report back on possibilities and effort required to improve Trustee access to key documents.</p>	David Marlor Russ Hotsenpiller	Meeting: 29-Jun-2023 Target: 27-Sep-2023	In Progress
<p>9 Staff consider options and report back on possibilities and effort required to provide Trustee view access to integrated calendar of Trust Meetings.</p>	Russ Hotsenpiller	Meeting: 29-Jun-2023 Target: 28-Sep-2023	In Progress
<p>10 Coordinate a strategy and prepare a request that the Province revisit the provincial grant funding formula to the Islands Trust.</p>	Russ Hotsenpiller	Meeting: 08-Mar-2023 Target: 06-Dec-2023	In Progress
<p>11 Staff to report on preparing a strategic approach to request additional funding from the Province.</p>	Russ Hotsenpiller	Meeting: 12-Jul-2023 Target: 27-Sep-2023	In Progress

Follow Up Action Report

Executive Committee

Chief Administrative Officer

Activity	Responsibility	Dates	Status
12 Notify Trustee Patrick and Finance dept re: approval of travel and accommodation expenses for Trustee Patrick's attendance at UBCM.	Russ Hotsenpiller	Meeting: 02-Aug-2023 Target: 13-Sep-2023	Completed
13 Notify VICC and Finance Dept of EC's approval of the \$250.00 VICC funding request via resolution.	Russ Hotsenpiller	Meeting: 02-Aug-2023 Target: 13-Sep-2023	In Progress
14 Make arrangements for Islands Trust UBCM hosted breakfast inviting related local governments.	Russ Hotsenpiller	Meeting: 02-Aug-2023 Target: 13-Sep-2023	In Progress
15 Reschedule EC August 23, 2023 regular business meeting to Friday, August 25, to be held electronically commencing at 9:15 a.m.	Russ Hotsenpiller	Meeting: 02-Aug-2023 Target: 25-Aug-2023	Completed

Director Legislative Services

Activity	Responsibility	Dates	Status
1 Staff to draft amendments for replacement of those Trust Council policies deemed as top priority for updating, based on policy review analysis, for consideration of approval by Trust Council. As of March 2022, amendments to 11 out of 17 policies deemed out of date have been adopted.	David Marlor	Meeting: 03-Feb-2021 Target: 27-Sep-2023	In Progress

Follow Up Action Report

Executive Committee

Director Legislative Services

Activity	Responsibility	Dates	Status
2 Review the Executive Committee sponsorship policy and report back recommendations on local trust committee approvals, communications, and funding mechanisms.	David Marlor	Meeting: 14-Apr-2021 Target: 13-Sep-2023	In Progress
3 Staff to report back on recording of meetings by members of the public re clarity on recording and report on recording of electronic meetings.	David Marlor	Meeting: 22-Mar-2023 Target: 13-Sep-2023	In Progress
4 Staff to provide a briefing with respect to options for better understanding of the policy regarding Code of Conduct for vice-chairs, trustees and the public.	David Marlor	Meeting: 12-Apr-2023 Target: 13-Sep-2023	In Progress
5 Develop model bylaws with regards to public notice guidance, as a priority.	David Marlor	Meeting: 14-Jun-2023 Target: 13-Sep-2023	In Progress
6 Staff to discuss, with interested trustees, requirements and options and report back on possibilities and effort required to improve Trustee access to key documents.	David Marlor Russ Hotsenpiller	Meeting: 29-Jun-2023 Target: 27-Sep-2023	In Progress
7 Finish administrative work associated with appointing R. Pingle as a Legislative Clerk.	David Marlor	Meeting: 12-Jul-2023 Target: 25-Aug-2023	Completed
8 Provide the legal opinion on mooring buoys and report to Executive Committee after its receipt.	David Marlor	Meeting: 12-Jul-2023 Target: 13-Sep-2023	In Progress

Follow Up Action Report

Executive Committee

Director Legislative Services

Activity	Responsibility	Dates	Status
9 Send news release re: Supreme Court judgement in favour of the GL LTC released August 1, 2023, regarding the Galiano Forest Lot Owners Association vs Galiano Island Local Trust Committee.	David Marlor	Meeting: 02-Aug-2023 Target: 25-Aug-2023	In Progress

Director of Planning Services

Activity	Responsibility	Dates	Status
1 Develop a communications strategy and materials to support awareness of the housing affordability advocacy request and rationale.	Clare Frater Stefan Cermak	Meeting: 22-Sep-2022 Target: 27-Jun-2023	In Progress
2 Coordinate a round table on housing, to include BC Housing, key ministers, housing leaders from island communities, and others, within the first six months of the new term and a panel session about housing challenges and solutions in the Islands Trust Area as part of trustee education	Russ Hotsenpiller Stefan Cermak	Meeting: 22-Sep-2022 Target: 06-Dec-2023	In Progress
3 Director of Planning Services request the Office of the Ombudsperson to undertake a comprehensive review of the enforcement-related policies and practices of the Islands Trust, and recommend such improvements and changes to them as may be required to bring the policies and practices into conformity with best practices for local government bylaw enforcement.	Stefan Cermak	Meeting: 08-Mar-2023 Target: 27-Sep-2023	In Progress

Follow Up Action Report

Executive Committee

Director of Planning Services

Activity	Responsibility	Dates	Status
4 Staff to: a) evaluate the implications of a longer referral response window, and; b) consider how Trust Council and local trust committees (LTC's) might consult with First Nations to better understand what changes to the current referral process should be made to both improve communication and to further reconciliation, and report back to Trust Council.	Clare Frater Stefan Cermak	Meeting: 29-Jun-2023 Target: 06-Dec-2023	In Progress
5 Return BIM Bylaws No. 608 and 609 to BIM requesting further information re: Policy Statement items 5.5.6 and 5.2.3 bring back to EC Aug 25 meeting.	Stefan Cermak	Meeting: 02-Aug-2023 Target: 25-Aug-2023	Completed
6 Notify Saturna LTC that Bylaw No. 138 was approved by Executive Committee.	Stefan Cermak	Meeting: 02-Aug-2023 Target: 25-Aug-2023	Completed

Director, Administrative Services

Activity	Responsibility	Dates	Status
1 Review Islands Trust Policy 6.5.2 as a whole and specifically make recommendations to amend the policy to ensure the policy is clear in regards to the process and decision making authority related to proposed 'overspends' for any particular budget item.	Julia Mobbs	Meeting: 21-Oct-2020 Target: 06-Dec-2023	In Progress
2 Staff to research the possibility of self-insurance for the organization.	Julia Mobbs	Meeting: 29-Jun-2023 Target: 06-Dec-2023	In Progress

Follow Up Action Report

Executive Committee

Director, Trust Area Services

Activity	Responsibility	Dates	Status
<p>1 Investigate options for local trust committees with respect to being notified of aquaculture and mariculture license changes including changes in species in its negotiation of protocol agreements with the province.</p>	Clare Frater	Meeting: 30-Jan-2019 Target: 06-Dec-2023	In Progress
<p>2 Legislative Monitoring Chart (bi-annually to Trust Council) Staff to produce the Legislative Monitoring briefing every 6 months with the next one being September 2023.</p>	Clare Frater	Meeting: 23-Feb-2022 Target: 13-Sep-2023	In Progress
<p>3 Staff to work with trustees to organize two film screenings of the movie Dust n Bones and reconciliation discussions subject to support of affected local trust committees. (A grant in aid of 4,500 (from History and Heritage Grants in Aid program was provided in 2020 to host screenings on three islands but due to Covid-19 restrictions only one screening occurred.) EC previously indicated interest from Gabriola and Salt Spring Islands.</p>	Clare Frater	Meeting: 26-Feb-2020 Target: 27-Sep-2023	In Progress
<p>4 That Trust Council request that the Executive Committee support Bowen Island Municipality in its efforts to oppose recreational use of motorized vehicles on Mount Gardner Crown land, subject to consultation with First Nations. (ongoing).</p>	Clare Frater	Meeting: 17-Jun-2020 Target: 06-Dec-2023	In Progress

Follow Up Action Report

Executive Committee

Director, Trust Area Services

Activity	Responsibility	Dates	Status
5 Investigate options for policies or policy updates for formal opportunities for First Nations presentations and engagement at Trust Council meetings.	Clare Frater	Meeting: 07-Oct-2021 Target: 06-Sep-2023	In Progress
6 Staff to develop policy regarding s. 8 (2) (h.1) (iii) and (iv) of the Islands Trust Act.	Clare Frater	Meeting: 12-Apr-2022 Target: 20-Sep-2023	In Progress
7 Initiate rekindling of the San Juan County/Islands Trust relationship, work with Chair for September	Clare Frater	Meeting: 11-Jan-2023 Target: 27-Sep-2023	In Progress
8 Staff advance the question of responding to delegates with thank you letters, for June Trust Council, and that staff prepare a briefing on practices in other local governments.	Clare Frater	Meeting: 11-Jan-2023 Target: 27-Jun-2023	In Progress
9 Initiate a reconciliation learning group comprised of trustees who indicate interest; and a learning plan be developed and implemented through monthly, virtual meetings.	Clare Frater Russ Hotsenpiller	Meeting: 07-Mar-2023 Target: 27-Sep-2023	In Progress
10 Develop a communications strategy and materials to support awareness of the housing affordability advocacy request and rationale.	Clare Frater Stefan Cermak	Meeting: 22-Sep-2022 Target: 27-Jun-2023	In Progress
11 Bring a report/briefing/RFD to get direction from TC on further action regarding the Climate Change Emergency include materials from last terms trustee led messaging.	Clare Frater	Meeting: 03-May-2023 Target: 26-Sep-2023	In Progress

Follow Up Action Report

Executive Committee

Director, Trust Area Services

Activity	Responsibility	Dates	Status
<p>12 Request Trustee Middleton provides a timeline and sequence of events regarding \$850 for funding request re: Wetland Project, Saturna Booktalk event.</p>	Clare Frater	Meeting: 14-Jun-2023 Target: 02-Aug-2023	Completed
<p>13 Staff to: a) evaluate the implications of a longer referral response window, and; b) consider how Trust Council and local trust committees (LTC's) might consult with First Nations to better understand what changes to the current referral process should be made to both improve communication and to further reconciliation, and report back to Trust Council.</p>	Clare Frater Stefan Cermak	Meeting: 29-Jun-2023 Target: 06-Dec-2023	In Progress

To: Executive Committee **For the Meeting of:** August 25, 2023
From: Director, Planning Services **Date Prepared:** August 18, 2023
SUBJECT: Bowen Island Municipality – OCP Amendment Bylaw No. 608 & LUB Amendment Bylaw No. 609 – Staff Response to Questions

PURPOSE

The purpose of this briefing is for the Executive Committee to consider further information provided by Bowen Island Municipal staff as requested. Attached to this briefing is the Request for Decision repeating staff’s assessment that the proposed Bowen Island Municipal Bylaws 608 and 609 are not contrary to or at variance with the Islands Trust Policy Statement.

BACKGROUND

On August 2, 2023, the Executive Committee (EC) considered Bowen Island Municipal (BIM) Bylaws No. 608 & 609. After consideration, EC carried the following [draft] resolution:

“That Executive Committee request Islands Trust staff request Bowen Island Municipality staff respond to the following questions on 5.5.6 (re: how were the high impact recreational activities addressed and the number of potential persons camping) and 5.2.3, specifically the social impacts of development addressed, regarding Islands Trust Policy Statement (ITPS) checklist and return to this item the August 25th Executive Committee meeting.”

BIM staff’s complete response is attached (Attachment 1). BIM staffs response in brief is the following:

Policy 5.5.6:

- Neither passive, nor active recreational activities are specifically defined in either the BIM OCP or the Islands Trust Policy Statement (ITPS). However, staff found numerous supportive OCP policies including “low-impact activities that enhance a visitors enjoyment of the islands natural amenities, without detracting from those amenities”.
- Staff suggest that one campsite per hectare is not “high impact” and cites examples of other campsites in the Islands Trust area.

Policy 5.2.3:

- Social concerns were captured in key concerns expressed in letters sent to BIM Council. The top concerns were: ferry capacity, fire hazard, traffic, water, and access.
- BIM Council required a number of technical reports to address the above, these are attached in BIM staffs response and include: Transportation Impact Assessment, a Water Study, an Emergency Response Plan, a Water study, and a Visitor Use Management Plan.
- BIM Council has used the reports to create conditions of bylaw approval.

BIM Bylaw Referral Process

BIM Official Community Plans (OCP) (Proposed Bylaw No. 608) must not be contrary to or at variance with the ITPS. In the event that the Executive Committee identifies that the provisions of the bylaw may be contrary to or at variance with the ITPS, the Islands Trust must respond in writing to BIM stating the reasons for its decision. As per the [Islands Trust Council/Bowen Island Municipality Protocol Agreement](#), The EC must provide the BIM with “clear reasons and directions as to changes to the bylaw that would be required for approval, and any staff reports, correspondence or other materials that it considered in making its decision.” A meeting must be held within 60 days of the decision and no public hearing may be held in that time.

After the meeting, BIM may choose various steps including proceeding to Public Hearing with the Islands Trust response forming part of the public hearing documents. The proposed BIM OCP bylaw must be referred back to the Executive Committee for approval after third reading. If EC refuses to approve the bylaw, BIM may request that Islands Trust Council consider the bylaw and must notify the Minister of Municipal Affairs of the request. The Minister may resolve the issue in various ways.

For clarity, the Islands Trust may only refuse to approve an OCP amendment bylaw on the basis that it believes that the provisions of the proposed bylaw are contrary to or at variance with the ITPS, and BIM may only submit a proposed bylaw to the minister where it believes that the Islands Trust has not reviewed the proposed bylaw correctly with reference to the ITPS. [Islands Trust Policy 1.3.i](#) [Policy Statement Implementation] states that “as interpreted by the courts, “contrary to or at variance with,” means that there is an absolute and direct collision between the ... island municipality bylaw and the Policy Statement.”

BIM Land Use Bylaw (proposed Bylaw No. 609) must be referred to the Islands Trust prior to third reading of the proposed bylaw. The Islands Trust must advise BIM if it has any objections to the proposed bylaw. Where the Islands Trust advises BIM that the provisions of the proposed bylaw may be contrary to or at variance with the policy statement, BIM must notify the Minister who will provide advice regarding the proposed bylaw or require use of the a specified dispute resolution mechanism.

KEY ISSUES/CONCEPTS

- Referral of OCP Bylaw No. 608 is under s.14.3 of the Bowen Island Municipality Letters Patent and Referral of LUB Bylaw No. 609 under s.15 of the Letters Patent.
- Islands Trust Council/Bowen Island Municipality Protocol Agreement (January 13, 2014) endorses the bylaw referral process contained within the agreement.
- OCP referral is after first reading and before public hearing. OCP referral is also after third reading for EC approval.
- LUB referral is before third reading.
- Written response to Bowen Island Municipality required by August 27, 2023 (45 days after date of receipt of the referral on July 13, 2023).
- Comments from Executive Committee is limited to whether or not Bylaw No. 608 and Bylaw No. 609 are contrary to or at variance with the ITPS.
- Islands Trust Policy 1.3.i [Policy Statement Implementation] states that “as interpreted by the courts, “contrary to or at variance with,” means that there is an absolute and direct collision between the local trust committee or island municipality bylaw and the Policy Statement.”
- Staff’s assessment is that Bylaw No. 608 and Bylaw No. 609 are not contrary to or at variance with the ITPS.

The original Request for Decision dated August 2, 2023 is attached for further background information, recommendations, and alternatives. The relevant correspondence received by the Executive Committee is also included (Attachment 3).

ATTACHMENT(S):

- 1. BIM Staff Response with Reports attached**
- 2. RFD to EC dated August 2, 2023**
- 3. Correspondence**

FOLLOW-UP: Staff will respond to Bowen Island Municipality with Executive Committee's resolutions.

Prepared By: Stefan Cermak, Director, Planning Services

Reviewed By/Date: David Marlor, Acting Chief Administrator, August 18, 2023

From: Daniel Martin <DMartin@bimbc.ca>
Sent: Tuesday, August 15, 2023 6:48 PM
To: Stefan Cermak; Sophie Idsinga
Cc: Drew Bakken; Liam Edwards
Subject: RE: Bylaw Referral - Nos. 608 & 609
Attachments: Attachment 9 - CRC Visitor Use Management Plan June 8 2023.pdf; Attachment 10 - Incoming TIA Cape_Roger_Curtis.pdf; Attachment 11 - Emergency Response BIM - June 7, 2023.pdf; Attachment 12 - DRAFT Concept and Program June 2023.pdf; Attachment 13 - Cape Roger Curtis Water Study.pdf; Attachment 14 - Updated Phasing Summary.pdf; Attachment 7 - Proposed Regional Park at Cape Roger Curtis Ecological Background_23 Mar....pdf; All_Attachments(7).pdf

Follow Up Flag: Follow up
Flag Status: Completed

Hello Stefan,
Thank you for passing on these questions regarding Bylaws 608 & 609.

Policy 5.2.3

My latest staff report highlighted the key concerns expressed in letters sent to Bowen Council .
The top concerns were:

1. Ferry capacity (122 occurrences)
2. Fire hazard (93 occurrences)
3. Traffic (66 occurrences)
4. Water (64 occurrences)
5. Access (49 occurrences)

Bowen Council has required and received a number of technical reports looking at environmental and social impact of the proposed development. Looking at the list of concerns of potential social and environmental impact, Council has considered a Transportation Impact Assessment, a Water Study, an Emergency Response Plan, a Water study, and a Visitor Use Management Plan. I have attached these here.

Although all details of conditions of the rezoning and park management have not been finalized, Council has considered potential impacts and taken steps to address any environmental and social impacts of the proposed development. For example, the applicant has committed to completing the required conditions in the Transportation Impact Assessment Plan and the Visitor Management Plan, as well as entering into an agreement to phase development and amenities in accordance with the Updated Phasing Summary.

Policy 5.5.6

The Islands Trust Policy Statement and Bowen's OCP doesn't define "low-impact" or "high-

impact” recreational activities. Without a clear definition my assessment looked at Policy 185 of our OCP. Using this definition, low-impact activities would be ones “that enhance a visitors enjoyment of the islands natural amenities, without detracting from those amenities.” Then, conversely, high impact activities would be “Facilities that are designed to be destination attractions are not supported.” I’d also considered existing facilities on Bowen that have not been considered “high impact” – for example the golf course, Nectar Yoga, or the sea kayak tours.

I’m also aware, that most other ferry accessible gulf islands have at least one, if not multiple campsites, frequently that permit RVs. For example, Ruckle Park on Saltspring seems to have 89 campsites, and there are three further private campsites on Salt Spring which seem to be in the 20-30 range.

Finally, the proposed 100 campsites would take place on a site that is roughly 100 hectares in area, which to me suggests that even if some threshold of campsites became considered “high-impact,” I would imagine it would have to be at a level greater than 1 site per hectare.

I’ve included other OCP policies and language below that might be helpful.

OCP Text:

Encouraging more visitors to Bowen Island should be about attracting and managing the kind of visitor that appreciates the authentic character of the island, rather than attracting “more cars and cameras”.

Objective 180

To recognize tourism as an integral part of the island economy, with a focus on sustainable practices.

Objective 181

To support opportunities to nurture the further development of low-impact tourism.

Policy 419

Tourist commercial facilities are supported that enhance visitors’ enjoyment of the island’s natural amenities, without detracting from those amenities. Facilities that are designed to be primarily destination attractions are not supported.

Policy 185

Tourist commercial facilities are supported that enhance visitors’ enjoyment of the island’s natural amenities, without detracting from those amenities. Facilities that are designed to be destination attractions are not supported.

Policy 192

The following considerations will be taken into account in the location of sites suitable for tourist accommodation:

- the scale of the facility is consistent with the size of the lot and the surrounding neighbourhood character;
- the location and number of the facilities relative to other accommodation facilities on the island; and
- the ability of the property to provide adequate water, sewage, and other infrastructure services.

Thank you,

Daniel Martin
Manager of Planning & Development
Bowen Island Municipality
981 Artisan Lane, Bowen Island, BC V0N 1G2
dmartin@bimbc.ca<<mailto:dmartin@bimbc.ca>>
604-947-4255<<tel:604-947-4255>> ext. 230
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From: Stefan Cermak <scermak@islandstrust.bc.ca>
Sent: Thursday, August 3, 2023 12:26 PM
To: Sophie Idsinga <SIdsinga@bimbc.ca>; Daniel Martin <DMartin@bimbc.ca>
Cc: Drew Bakken <dbakken@bimbc.ca>
Subject: RE: Bylaw Referral - Nos. 608 & 609

Hello Sophie and Drew,

Thank you both for your responses.

As you likely know, BIM bylaws are referred to Islands Trust Executive Committee (EC) as per your letters patent. The letters patent require the EC to advise BIM whether or not the proposed bylaws are contrary to or at variance with the Islands Trust Policy Statement. The EC has 45 days to respond – that deadline is August 27th. The EC will have to make a decision on August 25th one way or another and have asked for some information to aid in that decision.

More specifically, the EC had specific questions regarding Islands Trust Policy Statement polices 5.2.3 and 5.5.6.

For policy 5.2.3, EC asked how were the “social impacts of development” assessed in order to check it of as met.

-

5.2.3

Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address policies related to the aesthetic, environmental and social impacts of development.

EC also struggled to assess if the proposed use was indeed “passive” or if allowing up to 100 campers or campsite were in fact better assessed as “high impact recreational activities”.

-

5.5.6

Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and designation of areas for low impact recreational activities and discourage facilities and opportunities for high impact recreational activities.

So in summary, EC would like a response as to how staff assessed social impacts of development and what the threshold of low impact recreational activities is vs. high impact...for example: how many campers would it take to become high impact?

Take Care,

Stefan Cermak
Director, Planning Service
Islands Trust |T 250-405-5178

From: Sophie Idsinga <SIdsinga@bimbc.ca<mailto:SIdsinga@bimbc.ca>>

Sent: Thursday, August 3, 2023 10:49 AM

To: Stefan Cermak <scermak@islandstrust.bc.ca<mailto:scermak@islandstrust.bc.ca>>; Daniel Martin <DMartin@bimbc.ca<mailto:DMartin@bimbc.ca>>

Subject: RE: Bylaw Referral - Nos. 608 & 609

Hi Stefan,

I'm afraid Daniel is away on vacation until August 21, so I don't think we will be able to get a response together for the Executive Committee meeting on the 25th. Can this be added to the next agenda?

Many thanks,

Sophie Idsinga
Interim Corporate Officer
Bowen Island Municipality
981 Artisan Lane
Bowen Island BC V0N 1G2

604-947-4255 ext 246

sidsinga@bimbc.ca<<mailto:sidsinga@bimbc.ca>>

[www.bowenlandmunicipality.ca](https://can01.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.bowenlandmunicipality.ca%2F&data=05%7C01%7CDMartin%40bimbc.ca%7C1607cb5cfad04447182408db94576d70%7Ce5ff6449937c4d9a9e8293b57c23e6ad%7C0%7C0%7C638266876167025453%7CUnknown%7CTWFpbgZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ikk1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=j7hy8qxBKFGuMFsSsqCFR4gTNtOxIyhS2wwm7RYO9ys%3D&reserved=0)<<https://can01.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.bowenlandmunicipality.ca%2F&data=05%7C01%7CDMartin%40bimbc.ca%7C1607cb5cfad04447182408db94576d70%7Ce5ff6449937c4d9a9e8293b57c23e6ad%7C0%7C0%7C638266876167025453%7CUnknown%7CTWFpbgZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ikk1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=j7hy8qxBKFGuMFsSsqCFR4gTNtOxIyhS2wwm7RYO9ys%3D&reserved=0>>

From: Stefan Cermak <scermak@islandstrust.bc.ca<<mailto:scermak@islandstrust.bc.ca>>>

Sent: Wednesday, August 2, 2023 10:16 AM

To: Daniel Martin <DMartin@bimbc.ca<<mailto:DMartin@bimbc.ca>>>

Cc: Sophie Idsinga <SIdsinga@bimbc.ca<<mailto:SIdsinga@bimbc.ca>>>

Subject: RE: Bylaw Referral - Nos. 608 & 609

Hello Daniel,

The EC deferred making a decision to their August 25, 2023 meeting in order to receive some information from you. Specifically they passed the following resolution:

“That Executive Committee request Islands Trust staff request Bowen Island Municipality staff respond to the following questions on 5.5.6 (re: how were the high impact recreational activities addressed and the number of potential persons camping) and 5.2.3, specifically the social impacts of development addressed, regarding Islands Trust Policy Statement checklist and return to this item the August 25th Executive Committee meeting.”

If we could touch base or get your response within two weeks would be great.

Take Care,

Stefan Cermak

Director, Planning Services

Islands Trust |T 250-405-5178

From: Stefan Cermak

Sent: Wednesday, July 26, 2023 2:00 PM

To: 'Daniel Martin' <DMartin@bimbc.ca<<mailto:DMartin@bimbc.ca>>>

Cc: Sophie Idsinga <SIdsinga@bimbc.ca<<mailto:SIdsinga@bimbc.ca>>>

Subject: RE: Bylaw Referral - Nos. 608 & 609

Hi Daniel,

Just a heads up that I've put the referrals on the Aug. 2, 2023 EC Agenda.

Take Care,

Stefan Cermak
Director, Planning Services
Islands Trust |T 250-405-5178

From: Daniel Martin <DMartin@bimbc.ca<mailto:DMartin@bimbc.ca>>
Sent: Thursday, July 13, 2023 1:29 PM
To: Stefan Cermak <scermak@islandstrust.bc.ca<mailto:scermak@islandstrust.bc.ca>>; Clare Frater <cfrater@islandstrust.bc.ca<mailto:cfrater@islandstrust.bc.ca>>
Cc: Sophie Idsinga <SIdsinga@bimbc.ca<mailto:SIdsinga@bimbc.ca>>
Subject: Bylaw Referral - Nos. 608 & 609

Hello Stefan and Clare,
I have two bylaws that have been referred to the Islands Trust from Bowen Island Council, both related to the proposed regional parking with overnight camping from Metro Vancouver. The timeline of these referrals is a bit different – Council gave First Reading to the Bylaws at their April 24th meeting, but did not direct the referrals until the July 10th meeting earlier this week. They were waiting for the competition of additional studies from the applicant, which were submitted in late June.

I have attached the two amendment bylaws here as well as the Islands Trust Policy Checklist, and included links to the five staff reports below.

Staff report – July 10th

meeting<

Staff Report – April 24th

meeting<

Staff Report – April 11th

meeting<

Staff Report – March 27th

meeting<

[cb5cfad04447182408db94576d70%7Ce5ff6449937c4d9a9e8293b57c23e6ad%7C0%7C0%7C638266876167025453%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=JQk%2BkYBP6cCOofPkmHg9Hs94DvHGGoAQ9PMaUyQUUV6A%3D&reserved=0](https://can01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fbowenisland.civicweb.net%2Fdocument%2F281407%2F230227%2520-%2520CRC%2520Introduction%2C%2520dmartin.pdf%3Fhandle%3D31DA53E84A39405DBDB759428FF73229&data=05%7C01%7CDMartin%40bimbc.ca%7C1607cb5cfad04447182408db94576d70%7Ce5ff6449937c4d9a9e8293b57c23e6ad%7C0%7C0%7C638266876167025453%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=JQk%2BkYBP6cCOofPkmHg9Hs94DvHGGoAQ9PMaUyQUUV6A%3D&reserved=0)

Staff Report – February 27th

Meeting<<https://can01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fbowenisland.civicweb.net%2Fdocument%2F281407%2F230227%2520-%2520CRC%2520Introduction%2C%2520dmartin.pdf%3Fhandle%3D31DA53E84A39405DBDB759428FF73229&data=05%7C01%7CDMartin%40bimbc.ca%7C1607cb5cfad04447182408db94576d70%7Ce5ff6449937c4d9a9e8293b57c23e6ad%7C0%7C0%7C638266876167025453%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=mvjOIo2NEpFKxEZK8HzFoOkmMmUy0LfBz6pusCelVGE%3D&reserved=0>>

Please let me know if you have any questions regarding this referral, or if you would like any of the many reports and studies provided as separate pdfs.

Finally, I know that our Council does not meet in August and our deadline for reports for the last July meeting has passed, so I'm anticipating that this might be the case for you as well. Could you let me know when you know which EC meeting you would be targeting for this referral, and I can update Council accordingly.

Thank you,

Daniel Martin

Manager of Planning & Development

Bowen Island Municipality

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Cape Roger Curtis
Transportation Impact
Assessment
Version 3

Prepared for
Metro Vancouver

Date
June 22, 2023

Project No.
04-22-0272

June 22, 2023
04-22-0272

Jeffrey Fitzpatrick
Division Manager, Regional Parks, Design, and Development
Parks and Environment
Metro Vancouver

Dear Jeffrey:

**Re: Cape Roger Curtis
Transportation Impact Assessment (TIA) – Version 3**

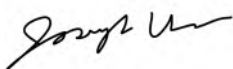
This Transportation Impact Assessment has been prepared to support Metro Vancouver with the rezoning application for Cape Roger Curtis Regional Park on Bowen Island.

Our strategy focuses on the analysis of the ferry service impacts, and traffic analysis of the intersections within the study area whilst explaining the measure Metro Vancouver are seeking to achieve a reduced level of access via private vehicle.

We trust the outputs from this study can positively move forward the planning work of Cape Roger Curtis Regional Park whilst also assisting in providing an understanding of the overall impacts of the proposals.

Yours truly,

Bunt & Associates



Joseph Chow, P. Eng
Transportation Engineer



Hugo Johnston, B. Sc
Transportation Planner

cc: Lydia Mynott – Landscape Architect, MetroVancouver

CORPORATE AUTHORIZATION

Prepared By:	Hugo Johnston, B. Sc - Transportation Planner Joseph Chow, P. Eng - Transportation Engineer	Bunt & Associates Engineering Ltd. 1550-1050 West Pender Street Vancouver, BC V6E 3S7 Canada
Reviewed By:	Daniel Fung, M. Sc, P. Eng Principal	Telephone: +1 604 685 6427 Facsimile: +1 604 685 6579 Date: 2023-06-21 Project No. 04-22-0272 Status Version 3

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1. INTRODUCTION

1.1 Study Purpose & Objectives

Bunt and Associates Engineering Ltd (Bunt) has been retained by Metro Vancouver to provide transportation consulting services to Metro Vancouver for the proposed Regional Park including day and overnight use, at Cape Roger Curtis (CRC) on Bowen Island. The proposed park is located in the southwest region of Bowen Island, British Columbia.

Metro Vancouver is currently in the preliminary design process of the park and the municipality requires that the current site is rezoned before approving the proposed park. As part of this rezoning process, Bowen Island Municipality (BIM) identified a Transportation Impact Assessment (TIA) as a requirement to support the application.

The key objectives of a TIA may include the following:

- Forecast the future traffic demand from the proposed development in addition to future background traffic.
- Determine if onsite and off-site improvements are needed to accommodate background traffic and the traffic from a proposed development.
- Demonstrate the traffic generation in accordance with the land uses.
- Review Parking and Loading requirements.
- Conduct a site design review assessing vehicle turning movements.
- Develop a transportation demand measures plan to support the reduction of single occupancy vehicular trips.

Given the purpose of the development, it will see its primary operational months within the summer peak. Therefore, the worst-case scenario has been analyzed, ensuring that when every service, ferry, traffic, and bus is at peak operational demand, the proposals should still operate with minimal impact on the residents and visitors to Bowen Island.

Appendix A includes the study's Terms of Reference which was approved by the municipality.

1.2 Study Outline

This study structure covers the following key components:

- **Section 2** describes the CRC's context within Bowen Island and the overall context of the nearby streets.
- **Section 3** assesses CRC's existing multi-modal accessibility.

- **Section 4** explains the proposed CRC development.
- **Section 5** estimates CRC’s visitor arrival and travel patterns.
- **Section 6** examines the future impact on travel caused by the proposed CRC.
- **Section 7** undertakes a preliminary review of the access options for the proposed CRC site, including the day-use parking provision on-site.
- **Section 8** identifies Transportation Demand Management measures that could be implemented at the site to improve the connectivity and reliance on private vehicles. This includes the provision of a shuttle bus service to and from Snug Cove.
- **Section 9** summarizes the study’s findings and provides recommendations.

1.3 Proposed Park

Metro Vancouver Board approved the purchase of 24 lots on April 29th, 2023. The first reading for the OCP Amendment was undertaken by BIM on April 24, 2023, under Bylaw No. 608. The OCP Amendment proposed to alter the wording to include the following:

‘Objective 69 To support the creation of a Regional Park at Cape Roger Curtis that may include supervised overnight camping.’

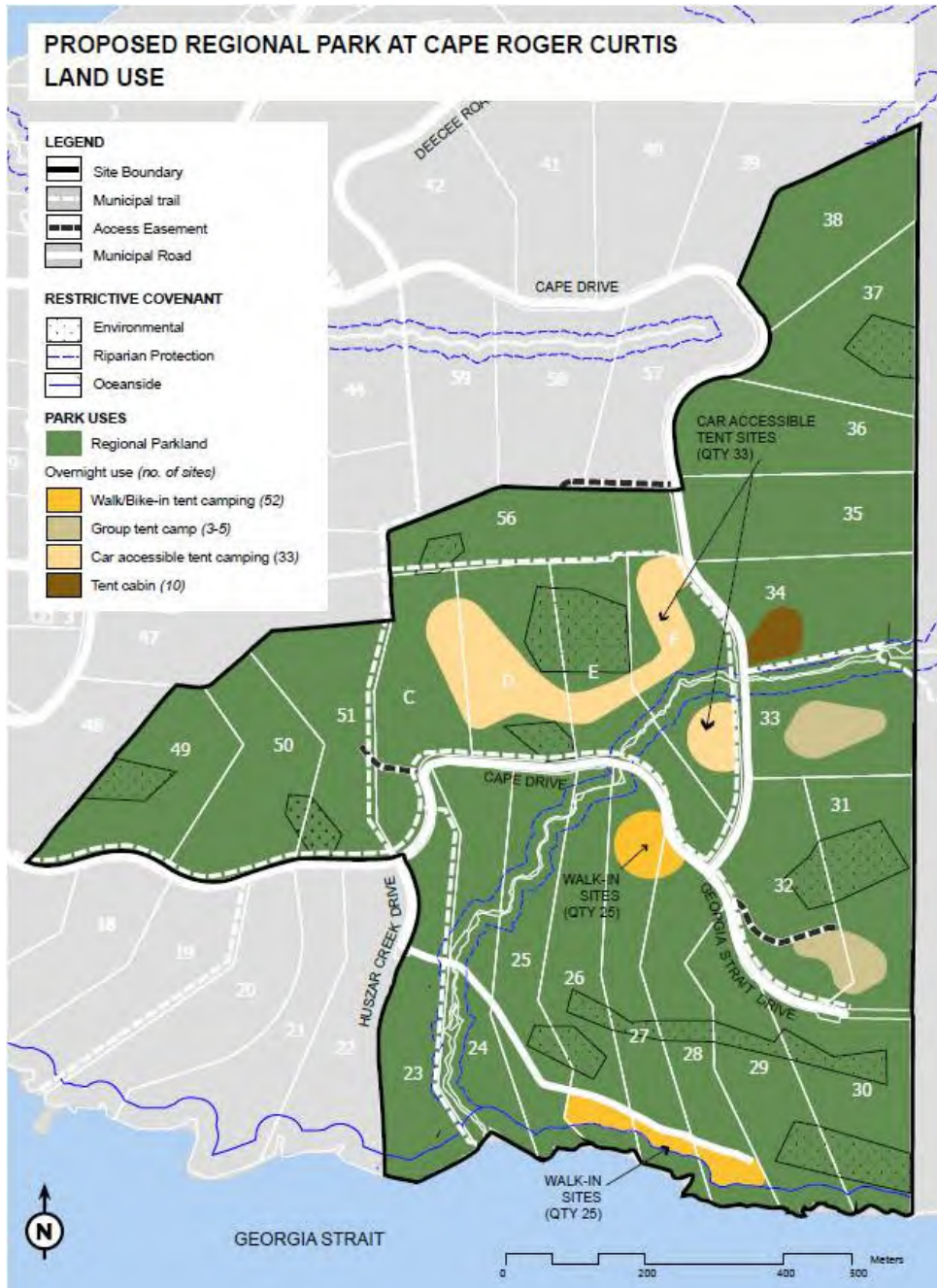
The lots purchased by Metro Vancouver are located to the east and southeast of Cape Roger Curtis, with a few lots facing the waterfront but it is yet to be determined if waterfront access is possible. Further to the east of the site is Fairy Fen Nature Reserve. There is no vehicle access through to Cowan Point and the Seymour Landing and the southeast of the island, from this location. Drivers would have to travel via Whitesails Drive.

Metro Vancouver has proposed to provide a total of 100 campsites, as outlined in **Table 1.1**. The overall park footprint is proposed to be approximately 97 Acres. The proposed land use plan of the complete site is set out in **Figure 1.1**.

Table 1.1: Proposed Land Uses

LAND USE	UNITS
Group Camping	5
Vehicle-accessible camping	35
Walk-In / Bike-In	50
Tent Cabins	10
Day-Use	97 Hectares
Total	100

Figure 1.1: Proposed Regional Park Masterplan



2. SITE CONTEXT

2.1 Context

The land use to which the Park will be situated, is currently zoned as rural residential, or RR1 (Rural Residential 1), with a minimum lot size of 4.0 hectares. The rezoning and Official Community Plan (OCP) amendment propose a park, with a variance to allow for supervised tent camping. This land use designation will allow for the creation of a regional park complete with conservation areas, and day-use amenities such as trails, picnic areas, viewpoints, tent camping, day-use amenities including trails, open space and interpretation areas will also be included in the park.

These amenities are not part of the rezoning and OCP amendment application and will be proposed following the rezoning process. Metro Vancouver will focus on day-use access through the proposed park shuttle, trail, and greenway connections, with some limited car parking areas.

Rural Residential 1 rezoning allows for the development of the following land uses:

- Dwellings
- Agriculture
- Horticulture
- Domestic Agriculture
- Stable; and
- Kennel.

Accessory uses of land, buildings, and structures for RR1 are as follows:

- Home Occupation – Five guest bedrooms on lots 2ha or greater
- Bed and Breakfast (BnB) use – No separate kitchens
- Portable Sawmill
- Mini storage; and
- Dwellings with a secondary suite.

The 24 lots included in the proposed Regional Park by Metro Vancouver are currently vacant. The site location is located in **Exhibit 2.1**.

Within the vicinity of the site, spread across the 32 privately owned lots, there are several single-family residential dwellings with the potential for Airbnb additional units, a distributed learning school and several trails and beach fronts. Further to the northwest of the site is Tunstall Bay, which has beach access, public sports facilities and BnBs.

The 24 lots included in the proposed Regional Park by Metro Vancouver are currently vacant.

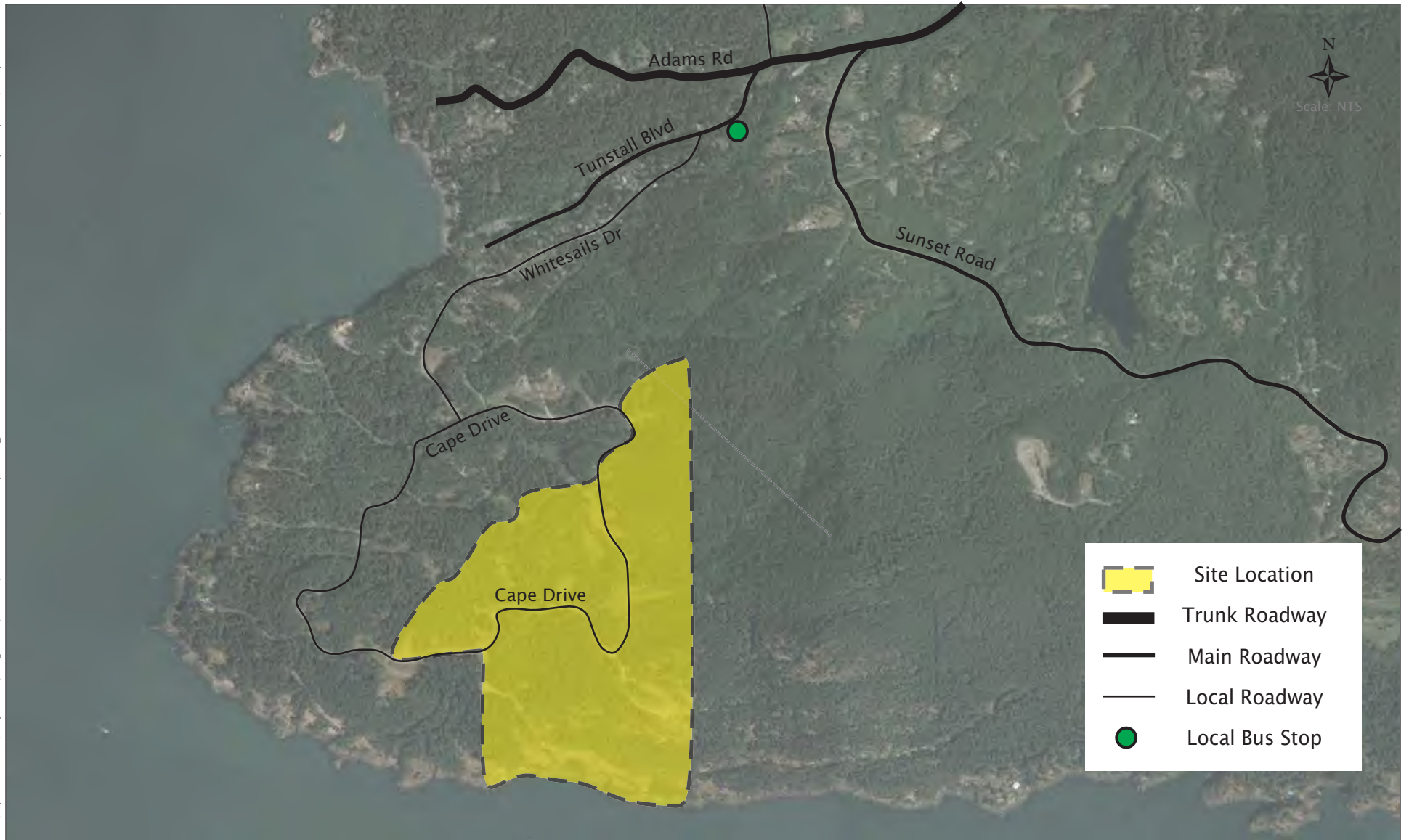


Exhibit 2.1 Site Plan

Cape Roger Curtis
June 2023

04-22-0272

2.2 Cape Roger Curtis

The Cape Roger Curtis Comprehensive Development Area is in the southwest corner of Bowen Island. The location of the park is set out in **Figure 2.1**.

Figure 2.1: Cape Roger Curtis



The full Cape Roger Curtis masterplan area is comprised of 59 lots, a breakdown of the lot ownership and use is set out in **Table 2.1**.

Demonstrated in the table below, Metro Vancouver has purchased 24 of the 59 lots. The remaining 35 lots, not included within the Metro Vancouver purchase agreement, made up of 14 developed lots, 3 lots are used as a nature park and 18 are privately sold but undeveloped. The subject proposal will only have an impact on the 24 lots within Metro Vancouver's control.

Table 2.1: Masterplan Lot Breakdown

OWNERSHIP	NUMBER OF LOTS
Developed Lots	14 lots
Sold Lots (undeveloped or under development)	18 lots
Wildcoast Nature Refuge (nature park and sanctuary)	3 lots
Proposed Metro Vancouver Regional Park	24 lots
Total CRC RR1 Zone	59 Lots

Day-use amenities including trails, open space and interpretation areas will also be included in the park. The Day-use amenities currently exist within Bowen Island; therefore, the day use will be considered as an existing operation, only generating trips from those visitors already located on Bowen Island. Metro Vancouver will focus on day-use access through the proposed park shuttle, trail, and greenway connections, with some limited car access.

3. EXISTING CONDITIONS

3.1 Existing Transportation Network

3.1.1 Road Network

As previously shown in Figure 1.1, the site is accessed via Cape Drive, a circular route travelling around the interior of CRC, that connects to Whitesails Drive to the north via a stop control T junction. Cape Drive provides access to some residential units within CRC. All roads within the vicinity of the site have a single lane of travel in each direction. The road network within the vicinity of the site is set out in **Exhibit 3.1 A & B**.

Further north, Whitesails Drive is a residential road that connects Tunstall Blvd, it is subject to a 30km/h restriction with the southern section, connecting to Cape Drive, increasing to 40km/h. No on-street parking is provided alongside either road. However, there are no restrictions situated on Whitesails Road, which results in a number of people parking on the apron of the roadway. Tunstall Blvd, also restricted to 30kph accesses Tunstall Bay and the public tennis facilities to the west and Adams Road to the east. A bus stop is located on Tunstall Blvd and is closest to the site.

Adams Road, which travels east-west across the island, merges with Grafton Road and ultimately provides access to Snug Cove. Snug Cove is the location of the BC Ferry terminal and retail/restaurant facilities. Local roads within the vicinity of the site have been set in **Table 3.1**.

Table 3.1: Existing Street Characteristics

STREET	CLASSIFICATION	NUMBER OF TRAVEL LANES	POSTED SPEED	PARKING FACILITIES
Cape Drive	Residential	2	30 kph	N/A
Whitesails Drive	Residential	2	30 kph	N/A
Tunstall Blvd	Main Roadway	2	40 kph	N/A
Adams Road / Grafton Road	Trunk Roadway*	2	40 kph	N/A

Source: Bowen Island Municipality Subdivision and Development Servicing – Bylaw No. 447, 2017

3.2 Existing Traffic Volumes

3.2.1 Traffic Data Collection Program

Intersection traffic counts were undertaken by Bunt & Associates for the study area on May 19th (Friday) & 20th (Saturday), 2023. The study area has been set out in **Exhibit 3.2 A & B** with the turning count movements. **Table 3.2** provides a summary of the traffic count data program and the peak hours associated with each period.

It should be noted that on Saturday 20th there was a disruption to BC Ferries’ schedule, both in and out of Snug Cove. The cancellations of ferries started at 3:30 PM and therefore, could have caused a minimal impact on the levels of traffic witnessed on the island during the Saturday Peak. However, it is not deemed to be a significant issue for the intersections within the eastern study network.

Counts were undertaken during the Victoria Day long weekend on Friday and Saturday to represent summer weekday and weekend traffic conditions when traffic is expected to be highest more closely for the proposed campgrounds and park. Developments are typically observed against the typical weekday traffic. However, due to the project site characteristics and as agreed with Metro Vancouver, this time frame has been selected to represent the peak traffic conditions during a summer month, and therefore, seen as a worst-case scenario. At the request of BIM, MV also commissioned additional traffic surveys throughout the summer of 2023, which will survey as a future comparison to this report.

Table 3.2: Summary of Available and Counted Traffic Data

INTERSECTION	SOURCE	DATE OF COUNT	PEAK HOURS	
			Friday PM	Saturday
Tunstall Blvd / Whitesails Drive	Bunt	May 19 th & 20 th	2:30 PM - 3:30 PM	12:45 PM - 1:45 PM
Tunstall Blvd / Adams Road	Bunt	May 19 th & 20 th	2:30 PM - 3:30 PM	1:15 PM - 2:15 PM
Adams Road / Bowen Bay Road	Bunt	May 19 th & 20 th	12:00 PM - 1:00 PM	1:15 - 2:15 PM
Bowen Island Trunk Road / Dorman Rd / Miller Road	Bunt	May 19 th & 20 th	12:30 PM - 1:30 PM	11:15 AM - 12:15 PM
OVERALL STUDY PEAK			2:30 PM - 3:30 PM	1:15 PM - 2:15 PM

The PM Peak hour was found to occur between 2:30 PM - 3:30 PM for all study intersections. The overall Saturday peak was found to occur between 1:15 PM - 2:15 PM. Individual peaks of each intersection in the PM were more varied but the busier study intersection of Bowen Island Trunk Road / Dorman Road / Miller Road, which was most likely due to the ferry demand for returning commuter traffic.

3.2.2 Peak Hour Vehicle Traffic Volumes

The peak hour vehicle volumes are presented in **Exhibit 3.2 A & B**.

Table 3.3 presents a summary of the two-way peak-hour movements for the streets in the study area. This is based on the highest two-way location along each road link during the PM Peak and Saturday Peak hours, rounded to the nearest ten.

Table 3.3: Existing Peak Hour Roadway Link Volumes

ROAD LINK	TWO-WAY LINK VOLUMES (VEH/HR)	
	Friday PM Peak Hour	Saturday Afternoon Peak Hour
Whitesails Drive	85	60
Tunstall Blvd	110	125
Adams Road	140	155
Bowen Bay Road	110	115
Grafton Road	210	230
Bowen Island Trunk Road	330	495

Two-way traffic volume along Whitesails Drive was observed to be about 85 and 60 vehicles in the Friday PM and Saturday peak hours, respectively. Along Tunstall Blvd, two-way traffic volumes were found to be 110 and 125 in the Friday PM and Saturday peak hours, respectively, observed to the east of the intersection of Whitesails Road.

The roadway link volumes are generally higher during Saturday peak hour except for on Whitesails Drive. The higher volumes on Bowen Island Trunk Road, about 500 trips per hour, are likely due to the weekend traffic arriving from the ferry service in Snug Cove.

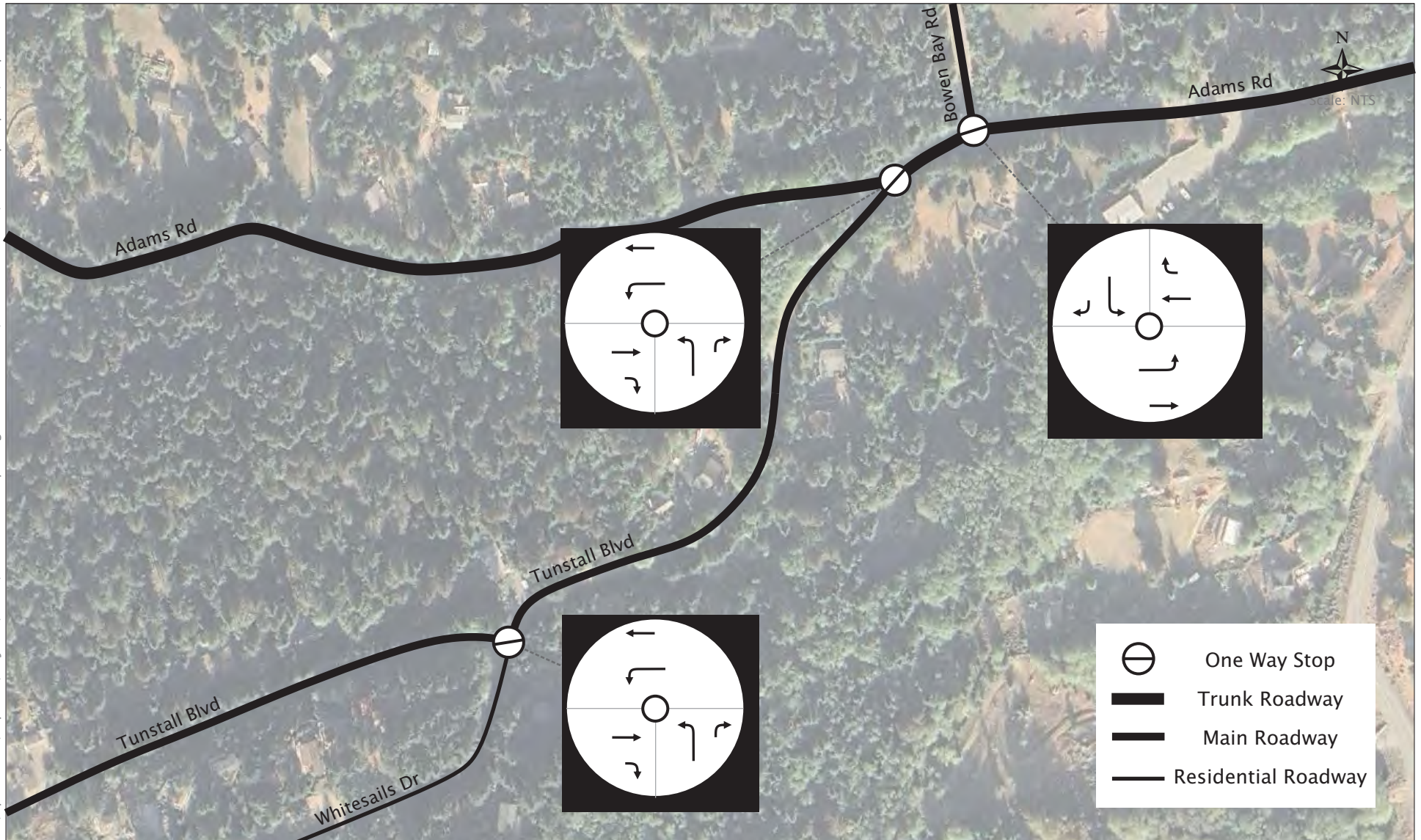


Exhibit 3.1A Existing Road Network - West

04-22-0272

Cape Roger Curtis
June 2023

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Exhibit 3.1B Existing Road Network - East

04-22-0272
Cape Roger Curtis
June 2023



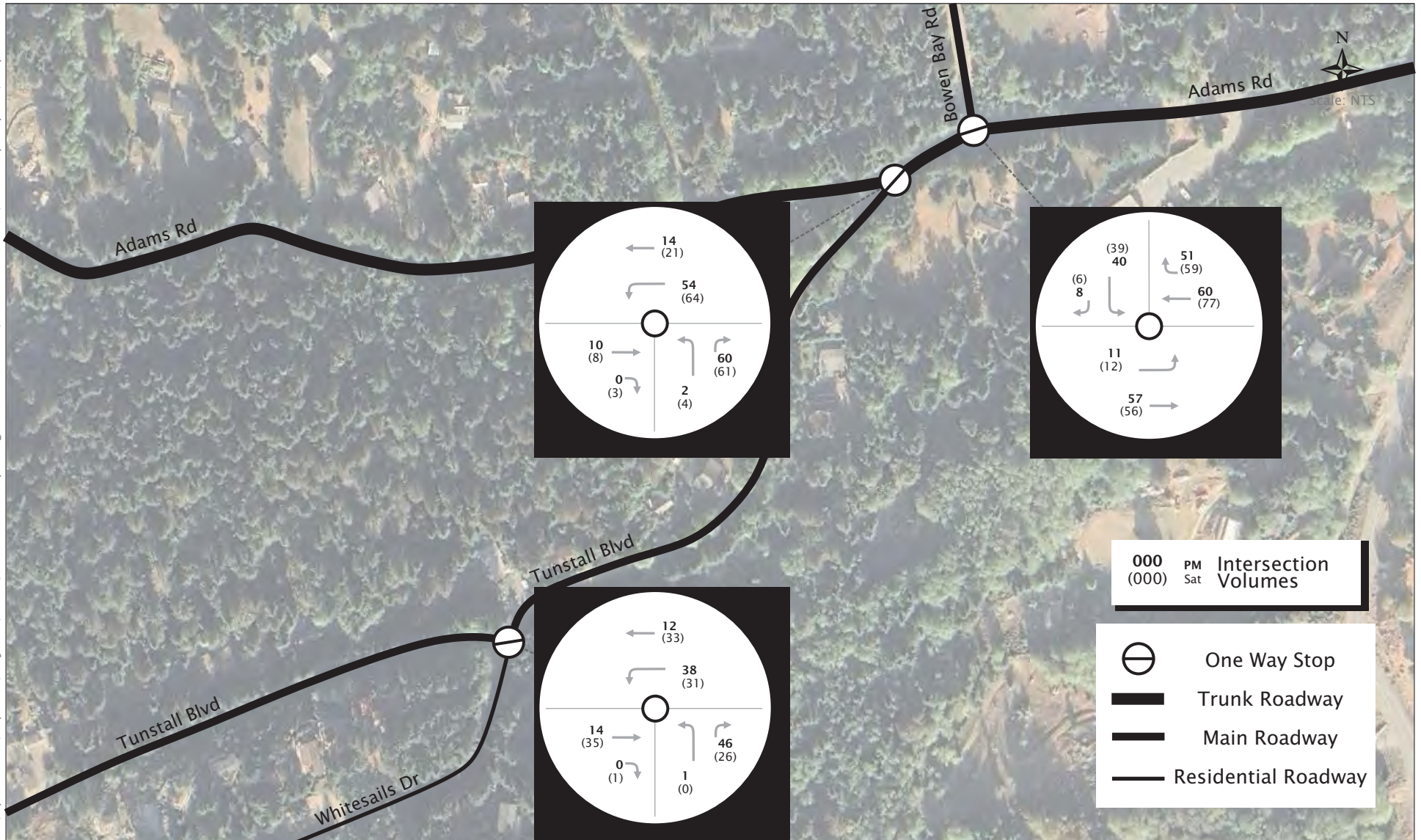


Exhibit 3.2A Existing Peak Hour Vehicle Traffic Volumes (West)



Exhibit 3.2B Existing Peak Hour Vehicle Traffic Volumes (East)

3.3 Existing Operations

3.3.1 Performance Thresholds

The existing operations of study area intersections and access points were assessed using the methods outlined in the 6th edition of the Highway Capacity Manual (HCM), using Synchro 11 & SimTraffic 11 analysis software. The traffic operations were assessed using the performance measures of Level of Service (LOS) and 95th percentile queues.

The LOS rating is based on average vehicle delay and ranges from “A” to “F” based on the quality of operation at the intersection. LOS "A" represents optimal, minimal delay conditions while LOS "F" represents an over-capacity condition with considerable congestion and/or delay. Delay is calculated in seconds and is based on the average intersection delay per vehicle.

Table 3.4 below summarizes the LOS thresholds for the six Levels of Service, for both signalized and unsignalized intersections.

Table 3.4: Intersection Level of Service Thresholds

LEVEL OF SERVICE	AVERAGE CONTROL DELAY PER VEHICLE (SECONDS)	
	SIGNALIZED	UNSIGNALIZED
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50

Source: Highway Capacity Manual

The performance thresholds that were used to trigger consideration of roadway or traffic control improvements to support roadway or traffic control improvements employed in this study are listed below:

Unsignalized Intersections and Roundabouts:

- Individual movement Level of Service = LOS E or better unless the volume is very low, in which case LOS F is acceptable.

In interpreting the analysis results, note that the HCM methodology reports performance differently for various types of intersection traffic control. In this report, the performance reporting convention is as follows:

- For unsignalized intersections: For ease of reference, HCM 6 LOS, and 95th Percentile Queues (meters) are reported for critical lanes only. HCM 6 reports 95th percentile queues in units of vehicles for

unsignalized intersections and these have been converted to meters for consistency with signalized intersections assuming a Synchro standard of 7.6m per vehicle.

The performance reporting conventions noted above have been consistently applied throughout this document and the detailed outputs are provided in **Appendix B**.

3.3.2 Existing Conditions Analysis Assumptions

All the intersections within the study zones are unsignalized and therefore, no signal plans were required.

Synchro / SimTraffic Parameters

- Peak Hour Factor: Existing peak hour factors were informed by available counts.
- Pedestrian Volumes: pedestrian crossing demands were entered as per Bunt's counts.
- Heavy Vehicle Percentages: Most intersections use heavy vehicle percentages informed by existing counts, with low-volume intersections assuming a Synchro default of 2%.

3.3.3 Existing Operational Analysis Results

Table 3.5 summarizes the operational analysis for existing traffic conditions in the study area. Note that only critical movements are reported for unsignalized intersections. Results that exceed the thresholds noted in Section 3.3.1 are bolded.

Table 3.5: Existing Traffic Operations

INTERSECTION / TRAFFIC CONTROL	MOVEMENT	FRIDAY PM PEAK		SAT AFTERNOON PEAK	
		LOS	95 TH Q (M)	LOS	95 TH Q (M)
Whitesails Drive / Tunstall Blvd - <i>Unsignalized Stop Control</i>	EBRT	A	0	A	0
	WBLT	A	5	A	5
	NBLR	A	10	A	10
Tunstall Blvd / Adams Road - <i>Unsignalized Stop Control</i>	EBRT	A	10	A	10
	WBLT	A	0	A	0
	NBLR	A	0	A	0
Adams Road / Bowen Bay Road - <i>Unsignalized Stop Control</i>	EBLT	A	0	A	5
	WBRT	A	0	A	0
	SBLR	A	15	A	15
Miller Road / Bowen Island Trunk Road / Dorman Road / Grafton Road - <i>Unsignalized Stop Control</i>	EBLRT	A	5	A	10
	WBLRT	A	10	A	15
	NBLRT	A	15	B	20
	SBLRT	A	15	A	30

The table above demonstrates that every intersection and movement operate without issue in either of the peak hours. The 95th queue rarely exceeds 3 vehicles on the Friday peak or 5 vehicles during the Saturday peak.

3.4 Transit Network

A bus stop is located approximately 3km to the north of the site and is located on Tunstall Blvd. the location of the bus stop is shown in Exhibit 3.1A. The bus stop is served by service 280, which travels towards Bluewater before travelling east towards Snug Cove. This service operates 6 services in the AM and PM peak. In addition, there are a further 6 services across the day during the weekends and on Public Holidays. The details of the bus stop located to the north of the site and the services operating at this stop have been set out in **Tables 3.6** and **3.7**.

Table 3.6: Transit Stops within 800m Walking Distance of Site

STOP LOCATION	DIRECTION	STOP #	AMENITY	ROUTES SERVICED	WALKING DISTANCE
Tunstall Blvd @ Whitesails Dr	Eastbound	58011	No facilities	280	3.4km

Table 3.7: Existing Transit Service Frequency

ROUTE		STOP	WEEKDAY SERVICE SPAN		HEADWAY (MIN.)				
#	DIRECTION		START	END	AM	MID-DAY	PM	EVENING	WEEKEND
280	Bluewater	58011	5:00 AM	7:55 PM	60-65	120	65-70	65-70	105
	Snug Cove		5:35 AM	7:35 PM	60-70	120	65-70	65-70	105

As can be seen, a limited service is provided connecting the site to Snug Cove.

3.5 Local Cycling Network

Whilst there are no off-road cycling routes within the vicinity of the site, most roads are considered to be quiet routes, with relatively low speeds that are cyclist friendly. There are 6 primary routes identified within the '*Explore Bowen Island by Bike Guidebook*' hosted on the Tourism of Bowen Island website. Two of the routes identified are located to the north of the site. The first travels from the Roger Curtis Beaches in the west to Sung Cove, travelling via Cape Drive, and Whitesails Drive before continuing east on Adams Road before converging into Grafton Road. This route is approximately 18.6km in length with a varying slope. These gradients might not be suitable for all cyclists. The second route travels from Tunstall Bay towards Snug Cove, this route shares a similar direction to the Roger Curtis route. To the north of the site, Bowen Bay Road is considered acceptable for cyclists. Sunset Rd, travelling to Seymour Bay in the southeast, is also listed as a bicycle-friendly route.

3.6 Local Pedestrian Network

Walking is an everyday activity whether as a single-purpose journey or linked with transit and driving. Typically, people are willing to walk up to 10 minutes for certain activities (i.e., work, school, and recreational activities, which is circa 800m in distance. The pedestrian network surrounding the

development is primarily recreational routes with several routes dissecting the site and travelling in and around Cape Drive, with several travelling south towards the coastline, connecting east into the Fairy Fen Nature Reserve.

There are no pedestrian sidewalks provided alongside the local roads within the vicinity of the site. However, verges on the side of the roads are provided which provide a safe refuge for pedestrians to utilise. Due to the low number of pedestrians within the area, there are no crossing facilities required or provided throughout the site.

Walking and cycling facilities within the vicinity of the site have been set out within **Exhibit 3.3** and **Exhibit 3.4**, respectively.

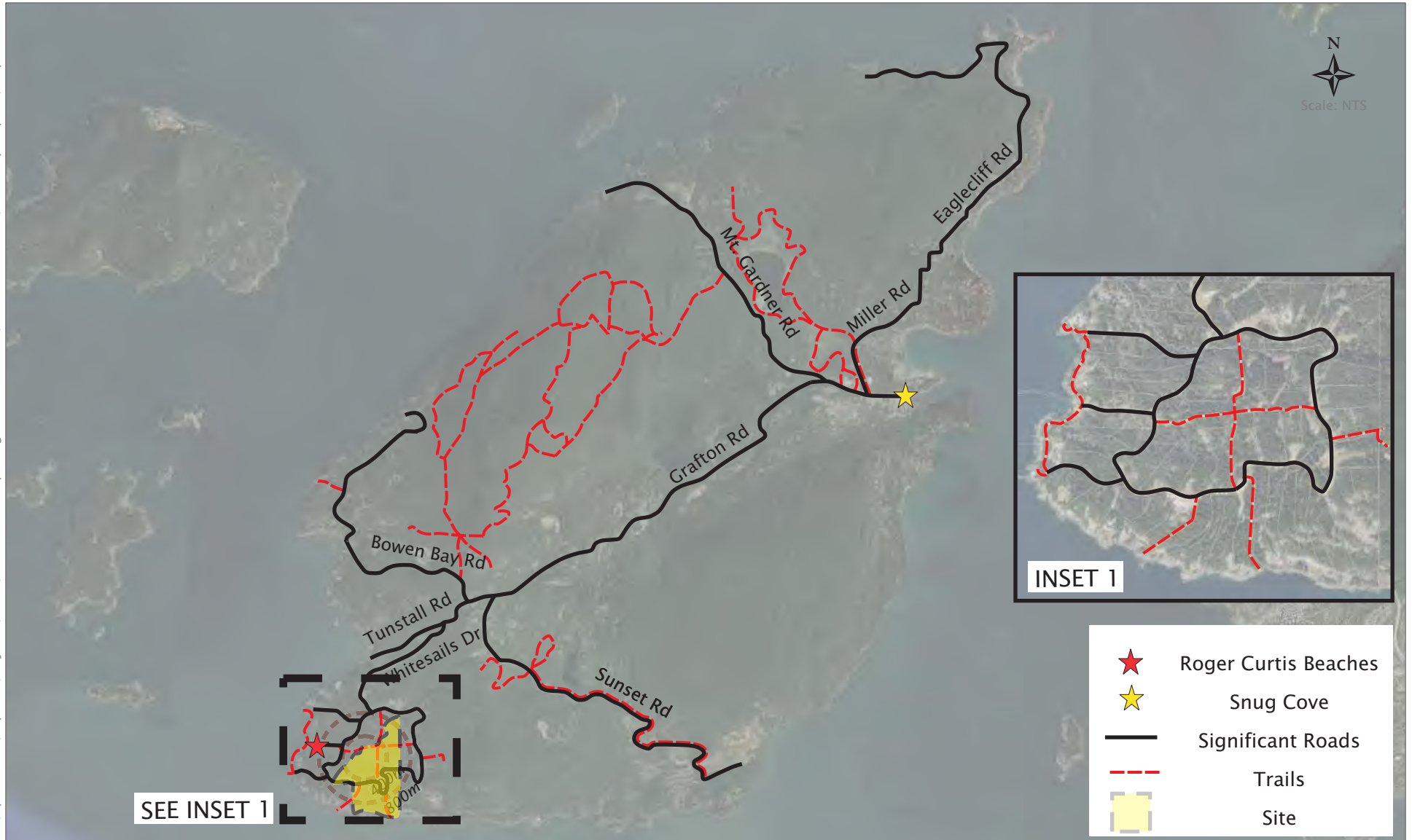


Exhibit 3.3 Pedestrian Facilities

04-22-0272

Cape Roger Curtis
June 2023



Exhibit 3.4 Cycling Facilities

04-22-0272

Cape Roger Curtis
June 2023

3.7 Waterborne Access

3.7.1 BC Ferries

Currently, the only access to Bowen Island is via a BC Ferries service between Horseshoe Bay and Snug Cove. Snug Cove, located on the east coast of Bowen Island, is approximately 10km to the east of the site, accessed via Grafton Road / Bowen Island Trunk Road. The vessel operating on this route is the 'Queen of Capilano' which has a capacity of approximately 87 Automobile Equivalent Units (AEQ) or 427 passengers.

The Automobile Equivalent Unit (AEQ) is a way of balancing the number of vehicles that can board the vessel given the difference in size of each vehicle. In accordance with the BC Ferries calculation methodologies, the vehicle equivalents are as follows:

- 1 Bus = 3 AEQ.
- 1 Commercial Truck or Semi = 2.5 AEQ
- 1 Private Vehicle - Over Height = 1.5 AEQ; and
- 1 Private Vehicle - Under Height or Motorcycle = 1 AEQ.

One AEQ is 2.6 m X 6.1 m of deck space. It is not known which factor dictates the maximum capacity and this is not clear from the BC Ferries data. Therefore, in some circumstances more vehicles maybe able to access the crossing if the number of larger vehicles is lower, therefore, more 1 AEQ vehicles.

The weight is also a controlling factor, or the size of the car deck can also restrict the maximum capacity. The total number of passengers also includes those that travel in the private vehicles, they are not considered to be just made up of foot / cycling passengers. Another issue that BC Ferries are currently facing is staffing issues, this restricts the number of people that can access the services if there are less staff on board.

Several of assumptions and calculations have been made utilising data obtained of BC Ferries, however, the operations of the ferries are not always clear and several details such as traffic management and what determines capacity are not clear.

Two lanes of queuing capacity are located on Grafton Road / Bowen Island Trunk Road, travelling approximately 800m along the southern side of the footway. This is sufficient space for approximately 290 vehicles to queue before embarking within affecting the travel lane along Grafton Road. A sign is located within queuing space that indicates if the vehicle will be likely to get onto the next service or not. If they are unable to get onto the current service, they will move forward in the queue and be the priority for the next service. The lanes are numbered 1 and 2 to dictate in which order the vehicles should go.

The duration of the voyage between Horseshoe Bay and Snug Cove is 20 minutes in length non-stop. The ferry service frequencies are set out in **Table 3.8**. A total of 16 services operate between Snug Cove to Horseshoe Bay with 15 services a day travelling in the other direction.

Table 3.8: Snug Cove - Horseshoe Bay Ferry frequency

ROUTE		WEEKDAY SERVICE SPAN		HEADWAY (MIN.)				
	DIRECTION	START	END	AM	MID-DAY	PM	EVENING	WEEKEND
Bowen Island to Vancouver	Snug Cove	5:50 AM	10:00 PM	60-70	65-70	65-70	60	60-75
	Horseshoe Bay	5:20 AM	10:30 PM	60-70	65-70	65-70	60	60-75

It should be noted, there are two services Wednesday 9:05 AM to Snug Cove and Wednesday 4:00 PM to Horseshoe Bay, that are labelled for Dangerous Goods services and therefore, those vehicles carrying items such as propane tanks are required to use this service.

Passenger Volumes

Two Freedom of Information (FOI) requests were submitted by individuals and Metro Vancouver to BC Ferries to request passenger volume information. These requests were completed in June and October 2022 and sought to obtain the passenger/vehicle statistics for the years 2000 to 2022. One request focused on July 2022 data, which was seen to be the most conservative travel time for BC Ferries as it combines the residents on the island and an increase in summer tourism.

The July 2022 data set out the overall passenger and vehicle capacity for each ferry service across the month for both routes. The passenger vehicle levels are inclusive of the number of passengers within the private motor vehicles, it is not possible to determine the levels of foot passengers only. The average passenger numbers for Horseshoe Bay to Snug Cove are in **Table 3.9** and the Snug Cove to Horseshoe Bay in **Table 3.10**.

Table 3.9: Horseshoe Bay -> Snug Cove Passenger Numbers - (July 2022)

SERVICE	SUN	MON	TUES	WEDS	THURS	FRI	SAT
5:50:00 AM	2	13	12	8	14	11	7
6:50:00 AM	18	91	103	83	97	77	31
8:00:00 AM	60	123	126	124	123	135	108
9:05:00 AM	147	127	157	32	125	152	245
10:10:00 AM	255	160	164	262	240	217	371
11:15:00 AM	290	196	219	236	223	263	381
12:40:00 PM	263	144	183	179	170	242	341
1:55:00 PM	213	161	176	188	199	238	295
3:20:00 PM	200	176	169	189	202	223	238
4:40:00 PM	142	183	197	168	198	201	211
5:45:00 PM	113	176	182	163	183	205	150
6:50:00 PM	115	136	143	129	170	159	110
7:50:00 PM	68	83	102	83	114	117	
9:20:00 PM	59	67	102	85	98	88	104
10:20:00 PM	36	25	34	37	34	48	35

Table 3.10: Snug Cove -> Horseshoe Bay Passenger Numbers - (July 2022)

SERVICE	SUN	MON	TUES	WEDS	THURS	FRI	SAT
5:20:00 AM		49	54	42	46	33	20
6:20:00 AM	35	112	142	93	110	66	33
7:20:00 AM	56	149	189	134	159	105	49
8:35:00 AM	92	146	158	127	160	122	104
9:35:00 AM	161	153	154	160	162	139	142
10:40:00 AM	195	171	149	171	174	141	129
12:05:00 PM	220	177	155	169	169	118	146
1:15:00 PM	221	135	132	172	119	129	121
2:40:00 PM	247	171	218	255	234	211	219
4:00:00 PM	281	216	241	59	236	208	295
5:10:00 PM	305	129	225	298	210	187	328
6:15:00 PM	266	132	148	202	159	163	333
7:20:00 PM	230	76	75	118	82	122	
8:50:00 PM	127	56	63	83	90	96	327
9:50:00 PM	100	31	35	42	37	33	102
10:50:00 PM	24	9	12	13	10	25	37

This was compared to the overall capacity for ferry passengers and as demonstrated in Tables 3.11 and 3.12 respectively.

Table 3.11: Passenger % demand - Horseshoe Bay to Snug Cove

SERVICE	SUN	MON	TUES	WEDS	THURS	FRI	SAT
5:50:00 AM	1%	3%	3%	2%	3%	3%	2%
6:50:00 AM	4%	21%	24%	20%	23%	18%	7%
8:00:00 AM	14%	29%	29%	29%	29%	32%	25%
9:05:00 AM	35%	30%	37%	8%	29%	36%	57%
10:10:00 AM	60%	37%	38%	61%	56%	51%	87%
11:15:00 AM	68%	46%	51%	55%	52%	62%	89%
12:40:00 PM	62%	34%	43%	42%	40%	57%	80%
1:55:00 PM	50%	38%	41%	44%	47%	56%	69%
3:20:00 PM	47%	41%	40%	44%	47%	52%	56%
4:40:00 PM	33%	43%	46%	39%	46%	47%	50%
5:45:00 PM	26%	41%	43%	38%	43%	48%	35%
6:50:00 PM	27%	32%	33%	30%	40%	37%	26%
7:50:00 PM	16%	19%	24%	19%	27%	27%	
9:20:00 PM	14%	16%	24%	20%	23%	21%	24%
10:20:00 PM	8%	6%	8%	9%	8%	11%	8%

As can be seen above the highest observed passenger demands on service was observed on Saturday, with all services between 10:10 AM and 12:40 AM having at least 80% of the passenger capacity, the equivalent of a minimum of 341 passengers out of a possible 427. During the weekday period, the passenger demand did not surpass 60%. The services in the late afternoon/evening (beyond 3:20 PM) have a lower demand, with services rarely reaching 50% passenger capacity.

Table 3.12: Passenger % demand - Snug Cove to Horseshoe Bay

SERVICE	SUN	MON	TUES	WEDS	THURS	FRI	SAT
5:20:00 AM		11%	13%	10%	11%	8%	5%
6:20:00 AM	8%	26%	33%	22%	26%	15%	8%
7:20:00 AM	13%	35%	44%	31%	37%	25%	11%
8:35:00 AM	22%	34%	37%	30%	38%	29%	24%
9:35:00 AM	38%	36%	36%	37%	38%	33%	33%
10:40:00 AM	46%	40%	35%	40%	41%	33%	30%
12:05:00 PM	52%	41%	36%	40%	40%	28%	34%
1:15:00 PM	52%	31%	31%	40%	28%	30%	28%
2:40:00 PM	58%	40%	51%	60%	55%	49%	51%
4:00:00 PM	66%	51%	56%	14%	55%	49%	69%
5:10:00 PM	72%	30%	53%	70%	49%	44%	77%
6:15:00 PM	62%	31%	35%	47%	37%	38%	78%
7:20:00 PM	54%	18%	18%	28%	19%	29%	
8:50:00 PM	30%	13%	15%	20%	21%	22%	77%
9:50:00 PM	23%	7%	8%	10%	9%	8%	24%
10:50:00 PM	6%	2%	3%	3%	2%	6%	9%

Return services back to the mainland are seen to be busier in the PM peaks, with services in the AM peak and around midday, up until 1:55 PM, do not surpass 52% capacity demand. Again, the highest demand from passengers can be seen during the weekend peaks, with a maximum capacity of 78%, representing 22% spare passenger capacity. From these numbers, it can be assumed that the island sees a high number of day-trippers and weekend tourism.

This data is restricted, as mentioned, it includes the operators and passengers of private vehicles. Therefore, it is not possible to know if the passenger demand was limited due to the number of vehicles reaching capacity. However, it could be assumed that foot passengers and cyclists would probably be able to access all these services given there is at least 11% or more capacity on both routes and all services.

The passenger demand for the services in comparison to the overall provision is demonstrated in **Figures 3.1** and **3.2**, these provide a visual representation of the spare capacity for passengers on Friday, Saturday, and Sunday. The time periods are summarized as follows: Early Morning (5 am -7 am), Morning (7 am -11 am), noon (11 am – 3 pm), afternoon (3 pm – 7 pm), and evening (7 pm – 11 pm).

Figure 3.1: Horseshoe Bay -> Snug Cove Ferry Demand and capacity - Passenger (July 2022)

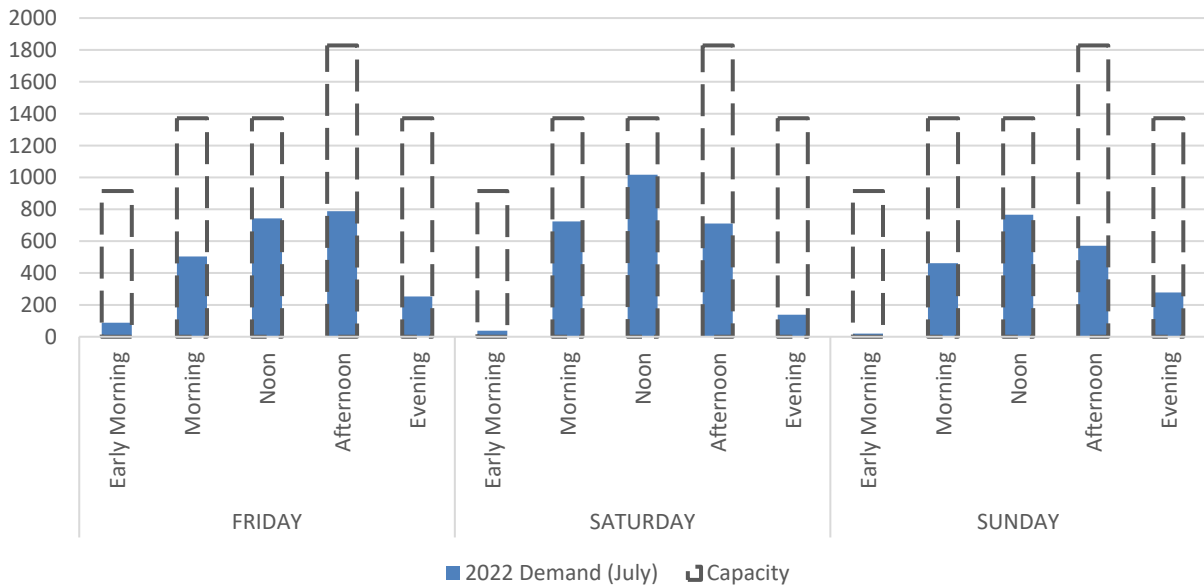
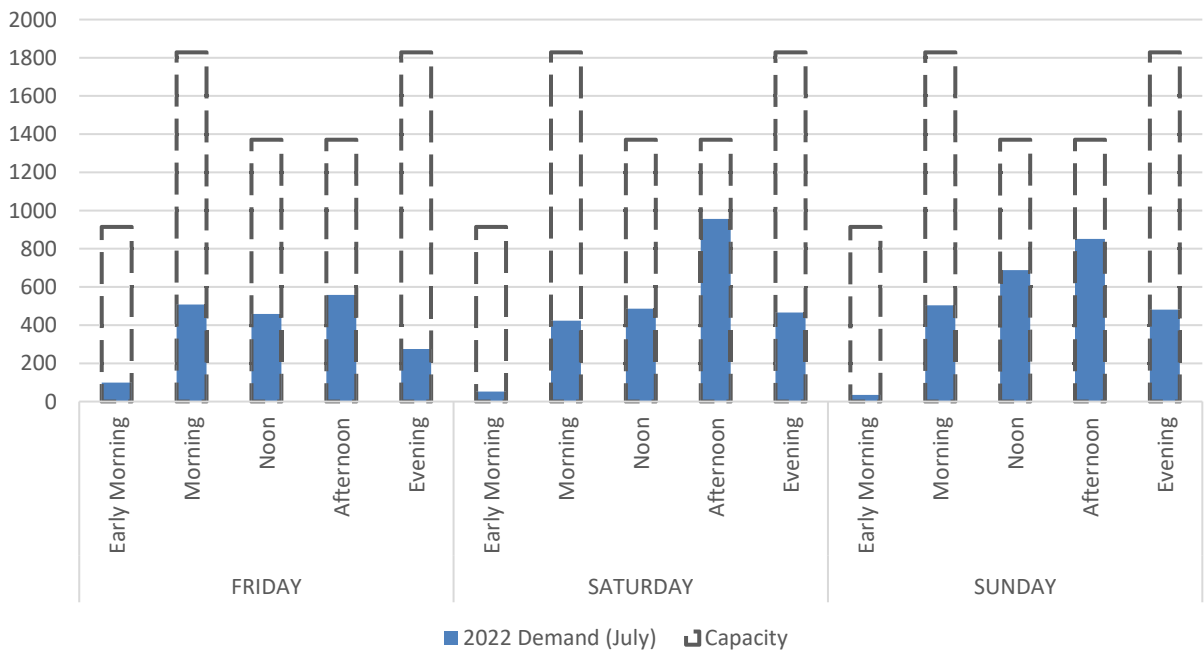


Figure 3.2: Snug Cove -> Horseshoe Bay Ferry Demand & Capacity - Passenger (2022 July)



As can be seen from the above chart, not one time period reaches the maximum available passenger capacity across the three days. As mentioned before, Saturday sees the greatest demand across the day, with Horseshoe Bay to Snug Cove busiest during the AM peak and Snug Cove to Horseshoe Bay in the PM peak. Given none of the services reach the peak capacity, this assumes that passenger capacity is far greater than demand and not restricted by space as much as vehicle capacities.

Vehicle volumes

As previously mentioned, the listed ferry capacity is 87 AEQ, however, as will be demonstrated below, there are several services that exceed this level.

The average vehicle demand for each service on the Horseshoe Bay to Snug Cove route for July 2002 is set out in **Table 3.13**, and the return service of Snug Cove to Horseshoe Bay is shown in **Table 3.14**.

Table 3.13: BC Ferries July 2022 Vehicle Demand Horseshoe Bay -> Snug Cove

SERVICE	SUN	MON	TUES	WEDS	THURS	FRI	SAT
5:50:00 AM	2	13	12	8	15	9	5
6:50:00 AM	9	71	80	63	72	53	15
8:00:00 AM	25	78	84	73	83	72	42
9:05:00 AM	42	53	72	15	64	59	70
10:10:00 AM	70	63	72	85	77	78	95
11:15:00 AM	77	74	81	80	81	89	94
12:40:00 PM	74	66	77	72	74	98	93
1:55:00 PM	72	74	70	79	89	95	94
3:20:00 PM	74	92	90	94	97	100	85
4:40:00 PM	60	97	99	91	99	92	87
5:45:00 PM	47	96	103	88	101	90	73
6:50:00 PM	48	70	77	71	91	75	48
7:50:00 PM	29	40	50	46	66	56	*
9:20:00 PM	29	37	50	44	55	45	48
10:20:00 PM	16	13	19	19	18	20	14

Table 3.14: BC Ferries July 2022 Vehicle Demand Snug Cove -> Horseshoe Bay

SERVICE	SUN	MON	TUES	WEDS	THURS	FRI	SAT
5:20:00 AM		32	33	29	30	24	11
6:20:00 AM	19	76	84	63	71	42	22
7:20:00 AM	30	92	99	81	95	56	29
8:35:00 AM	49	93	104	84	99	72	52
9:35:00 AM	72	94	89	92	99	76	67
10:40:00 AM	89	95	91	89	96	72	61
12:05:00 PM	92	93	98	94	90	64	62
1:15:00 PM	94	74	59	86	93	70	44
2:40:00 PM	90	62	89	97	87	79	54
4:00:00 PM	88	84	95	22	90	75	68
5:10:00 PM	88	79	81	97	94	61	72
6:15:00 PM	84	50	49	89	59	48	77
7:20:00 PM	76	31	25	40	27	29	
8:50:00 PM	47	22	21	29	24	28	86
9:50:00 PM	31	11	13	15	11	9	35
10:50:00 PM	9	3	3	5	4	8	9

The vehicle capacities for these routes have been set out in **Table 3.15** and **Table 3.16** for the Horseshoe Bay and Snug Cove routes respectively.

Table 3.15: Horseshoe Bay Vehicle Capacity % July 2022

	SUN	MON	TUES	WEDS	THURS	FRI	SAT
5:50:00 AM	2%	15%	13%	9%	17%	10%	6%
6:50:00 AM	10%	82%	92%	73%	83%	61%	18%
8:00:00 AM	29%	89%	96%	84%	96%	83%	48%
9:05:00 AM	48%	61%	83%	18%	73%	68%	80%
10:10:00 AM	81%	72%	83%	97%	89%	90%	109%
11:15:00 AM	89%	85%	93%	92%	93%	102%	108%
12:40:00 PM	85%	75%	88%	83%	85%	112%	107%
1:55:00 PM	83%	85%	80%	91%	102%	110%	108%
3:20:00 PM	86%	106%	103%	108%	111%	115%	98%
4:40:00 PM	69%	111%	113%	105%	113%	106%	100%
5:45:00 PM	54%	110%	118%	102%	116%	103%	84%
6:50:00 PM	55%	80%	88%	81%	105%	86%	56%
7:50:00 PM	34%	46%	57%	53%	76%	64%	
9:20:00 PM	33%	43%	57%	50%	64%	52%	55%
10:20:00 PM	18%	15%	21%	22%	20%	23%	16%

As can be seen from the above table, the capacity of services between 10:10 AM – 4:40 PM on Saturdays is all above 98%. There is capacity available during the AM and PM peak periods. Across the remainder of the week, the highest average capacity demand was 118%, which was observed on Tuesday at 5:45 PM.

The average capacity demand for all services between 3:20 PM -5:45 PM Monday to Friday was calculated at 98% or more. Therefore, with no spare capacity for vehicles. Typically, services, in the AM peak tend to have more vehicle capacity available.

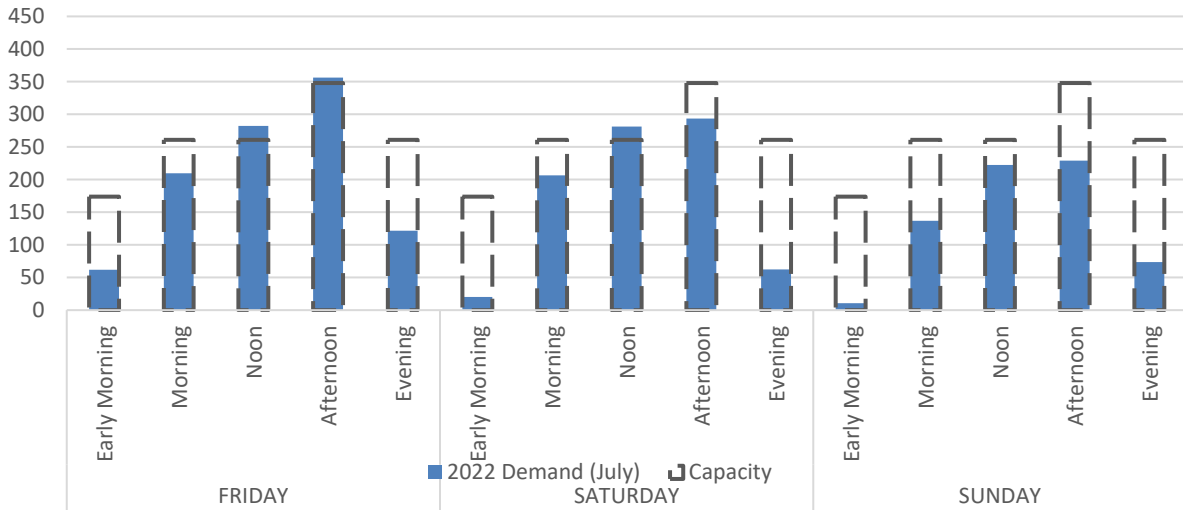
Table 3.16: Snug Cove Vehicle Capacity % July 2022

	SUN	MON	TUES	WEDS	THURS	FRI	SAT
5:20:00 AM		36%	38%	33%	34%	28%	13%
6:20:00 AM	22%	88%	97%	72%	81%	48%	25%
7:20:00 AM	35%	106%	114%	93%	109%	65%	33%
8:35:00 AM	56%	107%	120%	97%	114%	83%	59%
9:35:00 AM	82%	108%	102%	106%	113%	88%	77%
10:40:00 AM	102%	109%	105%	102%	110%	83%	70%
12:05:00 PM	105%	107%	113%	108%	104%	73%	71%
1:15:00 PM	108%	85%	68%	99%	107%	81%	50%
2:40:00 PM	103%	71%	103%	111%	100%	91%	62%
4:00:00 PM	101%	96%	109%	25%	103%	86%	79%
5:10:00 PM	101%	90%	93%	111%	108%	70%	83%
6:15:00 PM	97%	58%	56%	102%	68%	55%	88%
7:20:00 PM	87%	35%	28%	46%	32%	34%	
8:50:00 PM	54%	25%	24%	34%	28%	32%	98%
9:50:00 PM	36%	12%	14%	17%	12%	11%	40%
10:50:00 PM	11%	3%	3%	6%	4%	9%	10%

For services from Bowen Island to Horseshoe Bay, the busiest services are typically observed within the AM peaks, with a maximum demand of 120% at 8:35 AM. After 7:20 PM (except on a Saturday and Sunday) there is a minimum spare capacity of at least 50 % on all services. On Sunday, services between 10:40 AM – 5:10 PM, all services are above or at capacity, and there is between 13% to 89% spare capacity on all other Sunday services. No services on Friday are above capacity, with a minimum of 9% of spare capacity.

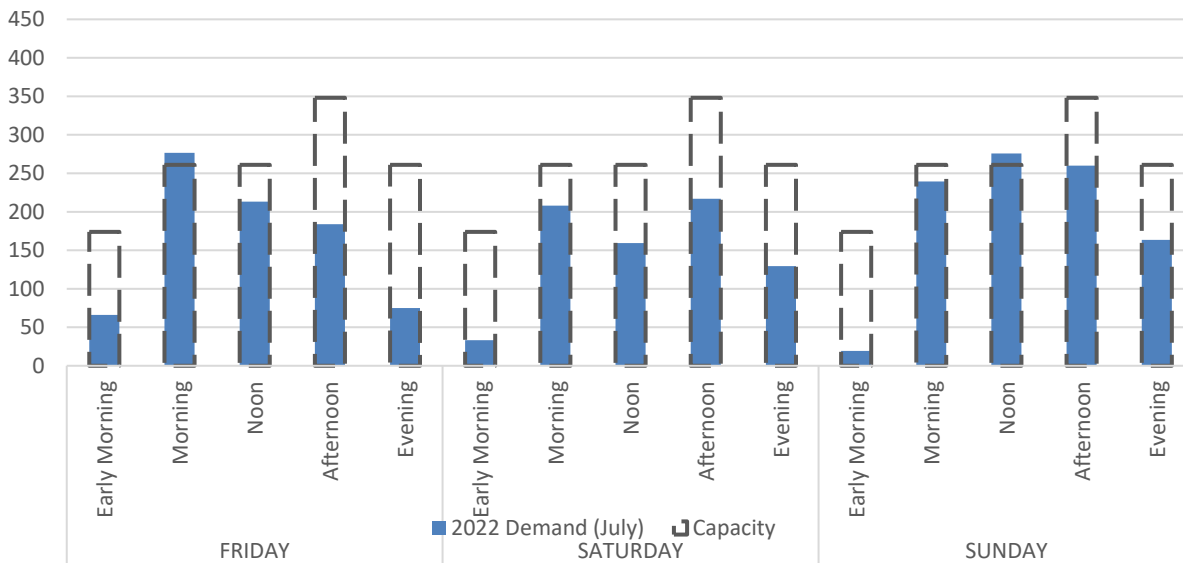
The graphs demonstrated in **Figure 3.3** and **Figure 3.4** show these demands against all the services during the peak times, Friday to Sunday. The time periods are summarized as follows: Early Morning (5 am -7 am), Morning (7 am -11 am), noon (11 am – 3 pm), afternoon (3 pm – 7 pm), and evening (7 pm – 11 pm).

Figure 3.3: Horseshoe Bay -> Snug Cove Ferry Demand and capacity - Vehicles (July 2022)



As the figure demonstrates, there is plenty of spare capacity when looking at all the services provided across the month, with three time periods reaching capacity across all services.

Figure 3.4: Snug Cove -> Horseshoe Bay Ferry Demand and capacity - Vehicles (July 2022)



Similarly, across all services in July, only two services are seen as overcapacity, on Friday morning and Sunday at noon. Saturday services are all under capacity.

Summary

The existing ferry demand demonstrates that whilst the ferry vehicle capacity is listed as 87 AEQs, there are several services that have AEQ levels above 87. This indicates that the demand during the midday Friday and Saturday services are all at or above capacity, however the backlog of demand is typically cleared by 7.00 PM. When observing the existing passenger demand, there is available capacity across all services, indicating the total number of passengers from vehicles and on foot or by bike are less than the maximum 427 capacity.

3.8 Current Relevant Policies & Plans

3.8.1 Bowen Island Parking Bylaw

The site is currently zoned RR1, which is included within BIM Land Use Bylaw 57, 2002 Section 5 of the off-street parking for motor vehicles and bicycles within Bowen Island. In addition, the bylaw sets out the requirements for the loading and unloading of motor vehicles and passengers.

Section 7 of the bylaw sets out The Cape Roger Curtis Development Permit Area, including all the required guidelines.

3.8.2 Bowen Island Municipality Official Community Plan

The Official Community Plan (OCP) was developed by BIM in 2010 and labelled as Bylaw No.282. Within the OCP, objective 40 focuses on Cape Roger Curtis Lands and Shoreline, defining the region as an area of sensitivity. Objective 68 is pertinent to Cape Roger Curtis Lands with the municipality promoting to the public the interest in CRC. Developments are encouraged to achieve the following:

- "conserve the majority of the coastline for eco-system protection, but especially the south-facing ecologically sensitive and unique coastal bluff.
- where there are no adverse ecological impacts, develop public, waterfront, walking trails along much of the coastline, connecting to the cross-island greenway.
- protect environmentally sensitive areas and rare species.
- cluster homes and any other structures in any new development to reduce land disturbance, maximize green space and the opportunity for trails, and facilitate transportation alternatives; and
- minimize and mitigate any negative impacts from Cape Roger Curtis development on the adjacent neighbourhoods and the island community as a whole."

As part of the objective, Policy 153 indicates that alterations/changes to the transportation accesses or rezoning requirements will require future master transportation planning exercises to be submitted to Bowen Island.

An OCP amendment submission and rezoning, of the 24 lots, was commenced with BIM in January 2023. The variant looked to rezone to Park Zone (Passive Park) 1 with overnight camping pitches.

3.8.3 Bowen Island Climate Action Strategy

Bowen Island is among many locations, cities and municipalities around the world, and the Metro Vancouver region in declaring a climate emergency and committing to reduce pollution. The Climate Action Strategy was approved by BIM in 2020 which contained several big shifts to reduce Bowen Island's transportation-related carbon pollution including:

- **Promote a shift from single occupancy vehicles to alternatives:** Developing residential dwellings near transportation hubs and adding an E-Bike rental fleet.
- **Bowen Island's Transportation Plan:** Accelerating investments in active travel and increasing the accessibility to multi-use transport options.
- **Zero Emission Transportation:** Developing homes with electrical charging facilities and further implementation of fast charging stations on Bowen Islands.
- **Transportation requirement reductions:** Developing and providing facilities to residents that reduce the need to travel further afield.

3.9 Metro Vancouver Regional Parks – Crippen

In addition to the proposed park, Crippen Regional Park (CRP) is another park located approximately 6.5km to the northeast of CRC and in 2022 attracted just over 355,565 annual visitors. There are several access points to CRP, from Doman Road, Orchard Lane, and Bowen Island Trunk Road. 3 parking lots make up the vehicle parking provision for CRP for a total of 81 spaces, 46 accessed via Dorman Road Entrance, 17 at Killarney Lake Roadside and a further 8 at the Miller Parking lot. The number of visitors accessing the park has been utilized to influence assumptions for CRC.

Metro Vancouver undertook park visitor surveys in 2013, 2019 and 2022 to understand the travel patterns and home address of the visitors to Crippen Park. These surveys have formed the basis of visitor projections and modal splits for CRC.

4. PROPOSED DEVELOPMENT

This section will set out the proposed development characteristics and anticipated access proposals for each element of the site, the location of the proposed parking lots and sustainable access provisions.

Primary access to the campgrounds and day use will be retained as per the existing scenario, with Cape Drive continuing through the site. Other municipal roads already provided, such as Huszar Creek Drive and Georgia Strait Drive will all be retained as part of the proposals. No additional connections will be provided, and all traffic will be required to travel through Whitesails Drive. The proposed land use plan of the complete site is set out in Figure 1.1.

4.1 Day Use

Across the 24 lots, the majority will be retained as regional parkland, with several municipal trails and access easements throughout. Sections of the proposed parkland will be restricted by environmental covenants. Visits to the park are typically from those residing or visiting the island as part of their wider plans. It is not seen as an attraction or destination for those living outside of Bowen Island.

4.1.1 Vehicle Parking

Two or three parking lots will be provided as part of the day-use provisions, the first will be located to the north of the site, in Lot 56, close to the access of the vehicle campgrounds and one of the municipal trails, this parking lot will be accessible to the west of Cape Drive.

The second parking lot will be in Lot 24, this parking lot will be accessible to the south of Cape Drive via Huszar Creek Drive. This lot will be located alongside the driveway, in the centre of Lot 24, adjacent to the municipal trails and water source. The parking lot will be outside of the riparian protection area.

The total number of vehicle parking spaces will be provided in **Section 7** below. This will include a couple of accessible spaces as well.

4.1.2 Bicycle Parking

As part of the proposed development, short-stay cycle stands will be provided. The total number has yet to be determined but will be in line with anticipated demand. These will be in a visible and covered area to encourage visitors to the park to arrive by bicycle.

4.2 Campground

As previously mentioned, the campground will contain 100 campsites, including 5 group campsites provided across 12 of the 24 lots purchased by Metro Vancouver. The breakdown of campsites has been set out in **Table 4.1**. The campsites will be available by reservation only with campground facilities provided, such as toilet blocks and waste collection.

Table 4.1: Metro Vancouver’s Proposed Camping Program

TYPE	# SITES	ACCESS TYPE
Walk-In/Bike-In	52	Bike/hike/shuttle
Group	5	Shuttle/Van
Tent Cabin	10	5 vehicles, 5 bike/hike/shuttle
Vehicle-Accessible Camp	33	1 vehicle per site
Total	100	

As demonstrated in the masterplan, Figure 1.1, the camping program will be broken down as follows:

- 52 Walk-in/Bike-in Campsites- These pitches will be accessible by sustainable modes only (Walk, Bike or Shuttle Bus). The 52 Walk-in / Bike-in sites will be split equally between two locations. The first half (26 spaces) will be located to the south of Cape Drive within lots 27 & 28. The second group of 26 campsites will be located to the south of the overall site and accessed via Huszar Creek Drive. These campsites will be spread across Lots 26, 27 & 28 adjacent to the Georgia Strait coastline.
- 33 Standard Car campsites - Accessible by all modes, including private vehicles. These campsites will be split across two locations, within lots C, D E & F. Both locations from Cape Drive and the primary campsite will be in the northern section, with a small campground located to the south of the creek running through the site. The split of the campsites across the two lots has not been defined.
- 5 Group Campsites – These pitches are split across two locations, the first is within Lot 33, to the east of Cape Drive, and a second area for group campsites will be split across Lots 32 and 31. An access easement from Georgia Strait Drive will be provided.
- 10 Tent Cabins - Located in Lot 34 and to the north of the creek. It is located to the east of Cape Drive.

As can be seen, a total of 100 camp pitches will be provided across 7 different campgrounds. Half of the tent cabins will also be accessible by private vehicles, therefore, resulting in 38 vehicle-accessible spaces. Access to the campsite will be restricted by gates during the evening and will be monitored by Metro Vancouver staff throughout the PM and evening peaks.

4.2.1 Vehicle Parking

No visitor parking will be provided as part of the campsite, those guests with a vehicle-accessible pitches will be able to accommodate their vehicle on their camp pitch, but no other vehicles will be able to access the campgrounds.

It is assumed that each standard campsite will accommodate one vehicle, while group pitches will have space for two vehicles.

4.2.2 Bicycle Parking

As several sites will be walk-in / bike-in, secure bike parking will be required and anticipated on a number of the campsites. These spaces will accompany each of the campsites.

5. CAPE ROGER CURTIS PARK PROJECTED VISITOR PROFILE

This section will set out the anticipated number of visitors to the site, both for the Day use and campground facilities. Due to the different land uses, two different methodologies have been utilized to calculate the anticipated trip demand. As part of the analysis, the day-use visitors and campground visitors will be combined to generate a total number of visitors to the overall site. This is to determine the overall visitors and trips that will be generated by all aspects of the site.

A memorandum demonstrating the comparison between the existing land use, potential buildout and the potential future development was submitted to BIM in March 2023.

5.1 Trip Generation

5.1.1 Day Use

Projected Visits

The estimated number of park visits to Cape Roger Curtis was generated by MV and is set out in **Table 5.1**. As described previously in **Section 2.2**, the Day-use amenities currently exist within Bowen Island; therefore, the day use will be considered as an existing operation, only generating trips from those visitors already located on Bowen Island. Metro Vancouver will focus on day-use access through the proposed park shuttle, trail, and greenway connections, with some limited car access. It is not anticipated that the Day use will generate any additional visits from off-island residents, in so doing, not impacting the BC Ferries patronage.

Table 5.1: Estimated Monthly Visits to CRC

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
4,167	5,009	5,331	5,578	6,827	7,117	8,836	8,741	7,331	6,262	4,615	3,478	73,291

As can be seen above, July and August represent the peak months, with a total of 8,836 visits estimated in the peak month. The annual projected visits to the park day-use facilities are estimated to be 73,291 visits. It should be noted that 1 visitor can undertake several visits in one day.

The day-use visitation estimates for the proposed park do not consider phased implementation. Additionally, estimates do not distinguish between Bowen Island Residents and off-island visitors. Based on Metro Vancouver visitor survey data and factoring in the location of the proposed regional park (8km from the Snug Cove ferry terminal),

Table 5.2: Estimated Weekday Daily Visits

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
134	179	172	186	220	237	285	282	244	202	154	112

When looking at the daily numbers, this represents an average peak weekday of 285 visits a day. The park is anticipated to be operational between 7:00 AM -8:00 PM, a 13-hour opening period. This equates to approximately 22 visits per hour. It is understood that weekends would attract more visits than during the weekday. The above tables set out the daily visitors during the weekday.

A weekend increase of 26% has been applied to understand the number of visits anticipated. The weekend factor was calculated based on daily visitation counts to Crippen through July 2022. The difference between the average day (an average of 1,388 per day) and weekends (an average of 1,742 per day) for all days in July (seen as the peak month at Crippen Regional Park) produced a weekend factor of 1.26. This factor was applied to the July and August weekday visits.

Table 5.3: Weekend Peak Daily Visits

JUL	AUG
358	354

The peak weekend daily visits are anticipated to be 358 trips during July.

Method of Travel

Based on surveys conducted in 2013, 2019, and 2022 for Crippen, a method of travel to the parks was calculated. This was utilized as the only available data for an operational park which is similar in nature. This method of travel was then estimated for Cape Roger Curtis. The method of travel was then weighted to account for the those travelling to visit the proposed CRC site. The overall mode split has been set out in **Table 5.4**.

Table 5.4: Estimated CRC visits Modal Split

	WEIGHTED AVERAGE
Private vehicle	37%
Walked the whole way	21%
Bike	4%
Public Transit	38%
Total	100%

The table above demonstrates that it is anticipated that 37% of the internal visits will be undertaken by car, with 38% of those utilizing public transit. It is anticipated that all trips will be undertaken via active modes of transportation, with 25% either travelling on foot or by bicycle.

Further to this, as part of the Crippen survey, the average car occupancy per visit was 1.9 passengers per private vehicle. Therefore, 37% of private car visits will be reduced to account for vehicle occupancy. This has been applied to the number of visits.

The estimated daily visits for both the weekday and weekend have been applied to the above mode share and are set out in **Table 5.5**.

Table 5.5: Weekday and Weekend Daily Visitor Modal Split

MODE	FRIDAY TOTAL	SATURDAY TOTAL
Private vehicle	55	69
Walk	61	76
Bike	12	15
Public Transit	107	135
Total	235	295

It is anticipated that the total daily vehicle demand trip demand during the Saturday peak would be 69 trips. The total number of trips to the existing day use is anticipated to be 295 trips.

Daily and Peak Hour Trip Generation

To determine the anticipated daily visitor rate, the visitor profile from an existing Metro Vancouver Park, Minnekhada, was utilized as this was the only available data owned by Metro Vancouver. Minnekhada is located to the northeast of Greater Vancouver, within the City of Coquitlam. Minnekhada is a regional park, approximately 200 acres in size. The regional park has two small car parking lots, like what is proposed at CRC. During a 2021 survey the number of visitors arriving at the park between 7:00 AM-6:00 PM on Friday, Saturday, and Sunday. A visitor profile rate throughout the day was calculated by using vehicle access numbers, the profiles are set out in **Table 5.6**.

Table 5.6: Friday and Saturday visitor profile – Minnekhada

TIME	FRIDAY	SATURDAY
7:00 AM	3%	1%
8:00 AM	7%	2%
9:00 AM	8%	4%
10:00 AM	11%	9%
11:00 AM	8%	8%
12:00 PM	13%	11%
1:00 PM	11%	14%
2:00 PM	11%	13%
3:00 PM	10%	13%
4:00 PM	9%	11%
5:00 PM	6%	8%
6:00 PM	3%	5%

The Friday peak profile was seen at noon, whilst the Saturday peak was observed at 1:00 PM, with 14% of all trips. It is acknowledged that there might be trips outside of the daily profile, but no data is available for these periods, therefore, it is not possible to calculate the number and this outside of the peak hours.

Table 5.7 demonstrates the Friday modal profile and **Table 5.8** sets out the Saturday trips by mode.

Table 5.7: Friday Trips profile by mode

TIME	PROFILE	PRIVATE	WALK	BIKE	TRANSIT	Total
7:00 AM	3%	2	2	0	4	8
8:00 AM	7%	4	4	1	7	16
9:00 AM	8%	5	5	1	9	20
10:00 AM	11%	6	6	1	11	25
11:00 AM	8%	5	5	1	9	20
12:00 PM	13%	7	8	1	13	29
1:00 PM	11%	6	7	1	12	26
2:00 PM	11%	6	6	1	11	25
3:00 PM	10%	5	6	1	10	23
4:00 PM	9%	5	6	1	10	22
5:00 PM	6%	3	4	1	7	14
6:00 PM	3%	2	2	0	4	8
Total		55	61	12	107	235

The peak (12:00 PM) number of trips is generated at noon where 13% of all trips are anticipated with a maximum of 7 vehicle trips and 13 transit trips.

Table 5.8: Saturday Trips Profile by Mode

TIME	PROFILE	PRIVATE	WALK	BIKE	TRANSIT	Total
7:00 AM	1%	2	3	0	4	10
8:00 AM	2%	5	5	1	9	19
9:00 AM	4%	6	6	1	11	25
10:00 AM	9%	7	8	2	14	31
11:00 AM	8%	6	6	1	11	25
12:00 PM	11%	9	10	2	17	37
1:00 PM	14%	8	9	2	15	33
2:00 PM	13%	7	8	2	14	31
3:00 PM	13%	7	7	1	13	29
4:00 PM	11%	7	7	1	13	28
5:00 PM	8%	4	5	1	8	18
6:00 PM	5%	2	3	0	4	10
Total		69	76	15	135	295

The Saturday peak period (1:00 PM) is anticipated at 14% of daily visitor trips, which equates to 9 private vehicle trips, 17 transit trips, and 12 trips by active mode.

Vehicle Trips Arrival and Departure

Based on ticket sales collected by Metro Vancouver at Lynn Valley Regional Park and Belcarra Regional Park between the months of March - Oct and April - September respectively demonstrated that visitors typically stay at the parks for approximately 2.7 hours in total or 162 minutes. Based on this analysis, the vehicle trip departures have been sperate across two hours to account for the duration of stay, this is demonstrated in **Table 5.9** and will provide the foundation of the total vehicle trip generation profile. The departures have been split in a very conservative 50/50 split, which means after 2 hours 50% of the hourly arrivals will depart, then the following hour, the remaining 50% will depart This crude calculation has been undertaken based on the limited accessible data.

Table 5.9: Vehicle Arrival and Departure Trip Generation

TIME	FRIDAY			SATURDAY		
	Arrival	Departure	Total	Arrival	Departure	Total
7:00 AM	2	0	2	1	0	1
8:00 AM	4	0	4	2	0	2
9:00 AM	5	1	6	3	0	3
10:00 AM	6	3	9	6	1	7
11:00 AM	5	4	9	5	2	8
12:00 PM	7	5	12	8	5	12
1:00 PM	6	5	11	10	6	16
2:00 PM	6	6	12	9	6	16
3:00 PM	5	7	12	9	9	18
4:00 PM	5	6	11	8	10	17
5:00 PM	3	6	9	6	9	15
6:00 PM	2	5	7	3	8	12
Total	55	47	103*	69	56	126*

*Any discrepancies are caused by rounding

As shown in the table above, the Friday peak would result in 12 two-way vehicle trips in the peak period, while the Saturday peak would result in a maximum of 18 two-way trips. The impact on the network is anticipated to be limited.

5.1.2 Campground

Campgrounds typically reach peak occupancy during the PM and evening hours, with a lower turnover than the day-use would see per the Institute of Transportation Engineers (ITE) trip generation guidelines, where the weekend peak hour rates are not provided. However, with the locale for this site, it is anticipated that the PM peak hour occupancy would translate into weekend use. Checking out for most campgrounds is typically before 11:00 AM on the final day of a reservation, while check-in for those arriving is normally after 1:00 PM. Therefore, campgrounds have a defined arrival and departure profile.

The following assumptions have been assumed, with the trip rates set out within **Table 5.10**:

- All campsites are reserved and/or occupied during the peak periods - i.e., summer weekends.
- Vehicle(s) per standard campsite is 1 vehicle and 2 vehicles per group campsite.

- Trip rates for the vehicle campsites have been obtained from the ITE manual for occupied sites. The PM peak (and assumed weekend peak) arrival rate was 0.75 vehicle trips per occupied site when comparing the average and fitted curve rate.

Table 5.10: Vehicle Trip Generation Rates

USE	SOURCE	PARAMETER	PM VEHICLE TRIP RATES			DAILY VEHICLE TRIP RATES		
			In	Out	Total	In	Out	Total
Standard Campsites	ITE LUC 416	Camp pitches	0.75	-	0.75	0.75	0.50	1.25
Group Site	Metro Vancouver Data	# of group sites	1.60	-	1.60	1.60	1.0	2.60

Application of these vehicle trip rates to the proposed camping provision is outlined in **Table 5.11** to estimate the anticipated number of vehicle trips generated by the proposed campgrounds.

Table 5.11: Vehicle Trip Generation

USE	DENSITY	PM VEHICLE TRIPS			DAILY VEHICLE TRIPS		
		In	Out	Total	In	Out	Total
Campground (Vehicle Accessible)	38-vehicle accessible - campsites	29	-	29	29	19	48
Campground (Group Site)	5 Group Sites	8	-	8	8	5	13
TOTAL CAMPGROUND		37	0	37	37	24	61

As can be seen, the proposed site will generate around 37 vehicle trips in the PM peak for the full site. The anticipated peak day trips would generate 61 total two-way vehicle trips across a 24hr period. For the Saturday Peak, a reduced number of arrivals are anticipated, most people camp for more than two days and will remain on-site during the full day. Some people might depart on a Saturday, but this is unlikely. As reservations are required for all sites, this will ensure that vehicle numbers are limited, and that people will not be able to arrive in the hope of getting a campsite.

It is recognised that all inbound trips occur in the PM peak given the check-in times, typically, campsites see a wider spread of inbound over the PM. However, for a more conservative approach and due to a lack of data, all PM peaks have been analysed as arriving at once. As demonstrated, the PM peak will see a total of 37 inbound trips, with no outbound trips. This equates to fewer than 1 vehicle per minute.

5.2 Potential Build-Out Comparison

To assist Metro Vancouver, a memorandum regarding trip was provided to BIM in March 2023. This memo was created to make a comparison between the potential build-out of the 24 lots, this was based on the RR1 zoning of the lots and then a future trip generation for the proposed park. The memo is attached within **Appendix C**.

As part of the memo, a trip rate for 24 single detached dwellings was utilized as a low range scenario, this was based on a resident’s rate of 3.6 residents per dwelling. BIM indicated that on the island, residency for each dwelling is typically 2.5 residents per dwelling. Therefore, a new trip generation for the 24 lots was calculated and has been compared to the campground program trip generation, as this is considered as the new trips within the lots. The potential-build out trips in comparison to the campground trip generation is demonstrated in **Table 5.12**.

Table 5.12: Potential Build-Out Trip Generation Comparison

USE	DENSITY	PM VEHICLE TRIPS			SATURDAY DAILY VEHICLE TRIPS		
		In	Out	Total	In	Out	Total
Potential Build-Out (Detached Housing)	2.5 residents per dwelling (60 Total)	11	6	17	75	75	149
Campground (vehicle accessible / group camping)	38- Accessible & 5 Group Sites	37	0	37	37	24	61
TRIP GENERATION COMPARIION		+26	-6	+20	-38	-51	-88

As can be seen, the campground generates more trips within the Weekday PM peak, with a total of 20 more two-way trips when compared to the potential build-out of the 24 lots. However, when compared to the total daily two-way trips, the campground will generate 88 two-way trips fewer than the potential 24 lots overall.

Therefore, overall, the campground will generate significantly fewer trips across the day both of weekdays and weekends, with the exception being the PM peak, which sees a higher number of trips than the single use dwellings. The campground will be kept for all the remaining analysis.

5.3 Total Site Traffic

The combined vehicle trip generation for both land uses, day-use and campground has been set out within **Table 5.13**.

Table 5.13: Combined Vehicle Trip Generation – Day Use (Internal) & Campground

TIME	FRIDAY			SATURDAY		
	Arrival	Departure	Total	Arrival	Departure	Total
7:00 AM	2	0	2	1	0	1
8:00 AM	4	0	4	2	0	2
9:00 AM	5	1	6	3	0	3
10:00 AM	6	15	21	6	13	19
11:00 AM	5	16	21	5	14	20
12:00 PM	7	5	12	8	5	12
1:00 PM	6	5	11	10	6	16
2:00 PM	42	6	48	46	6	52
3:00 PM	5	7	12	9	9	18
4:00 PM	5	6	11	8	10	17
5:00 PM	3	6	9	6	9	15
6:00 PM	2	5	7	3	8	12
Total	92	71	163	106	80	186

The Friday PM peak is seen at 2:00 PM, with a total 48 vehicle two-way trips, this represents a trip to all parts of the site every minute. The largest portion of the trips are the inbound campground arrivals, which as previously mentioned is a conservative approach and 37 of the trips would be more likely to spread through the PM period.

The Saturday Peak is at 2:00 PM, and a total of 52 two-way trips are anticipated, this represents less than 1 trip every minute. In the peak period, there will be a vehicle arriving at the site every minute.

The total vehicle trips anticipated in a worst-case scenario are anticipated to be between 160 and 190 two-way trips across 12 hours. This represents 1 car every 2-3 minutes during the weekday and 1 trip rough every 3 minutes on the weekend.

6. FUTURE TRAVEL CONDITIONS

Future traffic conditions were developed based on a combination of existing traffic, background growth (made up of significant development site trips generated within Cape Roger Curtis 24 undeveloped lots), and the development-generated site trips based on the full build-out of the proposed Campground. A traffic impact will be undertaken initially before any modelling results, understanding the percentage impact of the additional traffic associated with the site.

6.1 Study Horizons

A single horizon year was agreed to with the terms of reference for future analysis, which correspondence to the opening day of the proposed development. The scenarios analysed are as follows:

- Opening Day Background (2030): Existing + 7 years growth; and
- Opening Day Total: Background + MV Campground site traffic generation

6.2 Traffic Forecasts

6.2.1 Background Traffic Forecasts

Background traffic is traffic that would be present on the road network if the project site was not developed, with a 7-year growth rate it is understood that will represent a full buildout of all the remaining 18 vacant lots within Cape Roger Curtis which are not part of the 24 lots that are owned and operated by Metro Vancouver. An annual growth rate of 1% linear growth has been applied, therefore, providing an increase of approximately 7% from 2023 to 2030. 2030 represents the anticipated completion and opening day of the full campground build out. Whilst aspects will be open prior to this date, the full park will open in phase hat are yet to be determined. The flows are set out in **Exhibit 6.1**.

6.2.2 Site Traffic

The site total vehicle trip generation was set out within **Table 5.12**, above, and will generate 275 two-way trips in the PM peak and 412 two-way trips in the Saturday Peak. This equates to 1 vehicle every 2-3 vehicles arriving or leaving the site (combined uses) every minute across the site's multiple access.

6.2.3 Trip Distribution and Assignment

Vehicle trip generation has been split into different land uses as they have very differing distributions. The camping distribution will be all direct to and from the ferry at Snug Cove.

Day-use will have a differing distribution that will be based on an analysis of the existing traffic flow patterns across the study area road network. The trip assignment was based on observed travel patterns and directional splits as well as engineering judgement, considering logical routing from site access points to the study's external origins and destinations. The trip distribution used to assign the existing traffic generated by the day-use and proposed park is summarised in **Table 6.1 A & B**.

Table 6.1: Estimated Trip Distribution

ORIGIN / DESTINATION	CAMPGROUND				DAY USE			
	FRIDAY PM PEAK HOUR		SATURDAY PEAK HOUR		FRIDAY PM PEAK HOUR		SATURDAY PEAK HOUR	
	IN (%)	OUT (%)	IN (%)	OUT (%)	IN (%)	OUT (%)	IN (%)	OUT (%)
Cape Roger Curtis	0	0	0	0	5%	5%	5%	5%
Tunstall Bay	0	0	0	0	5%	5%	5%	5%
Adams Road	0	0	0	0	5%	5%	5%	5%
Bowen Bay	0	0	0	0	20%	20%	20%	20%
Seymour Landing	0	0	0	0	10%	10%	10%	10%
Snug Cove	100%	100%	100%	100%	25%	25%	25%	25%
North Island	0	0	0	0	30%	30%	30%	30%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%

The trip distribution for the campground has been calculated based on the assumption that all vehicle traffic will arrive via BC Ferries, no visitors from Bowen Island are anticipated to visit the proposed parking by car. The day-use distribution has been calculated based on the distribution of residential dwellings across the island and assisted by the traffic data collected.

Based on the trip generation and distribution shown above, the trips were assigned to the road network for both the weekday PM and Weekend peak hours. The distribution of the site-generated vehicle traffic is highlighted in **Exhibit 6.2 A & B**.

6.2.4 Total Traffic

The future Total traffic volumes were forecasted by adding the new site trips to the Background traffic volumes. No major roadway network changes were assumed for the base analysis of total traffic conditions. Total traffic volumes are summarized in **Exhibit 6.3 A & B**.

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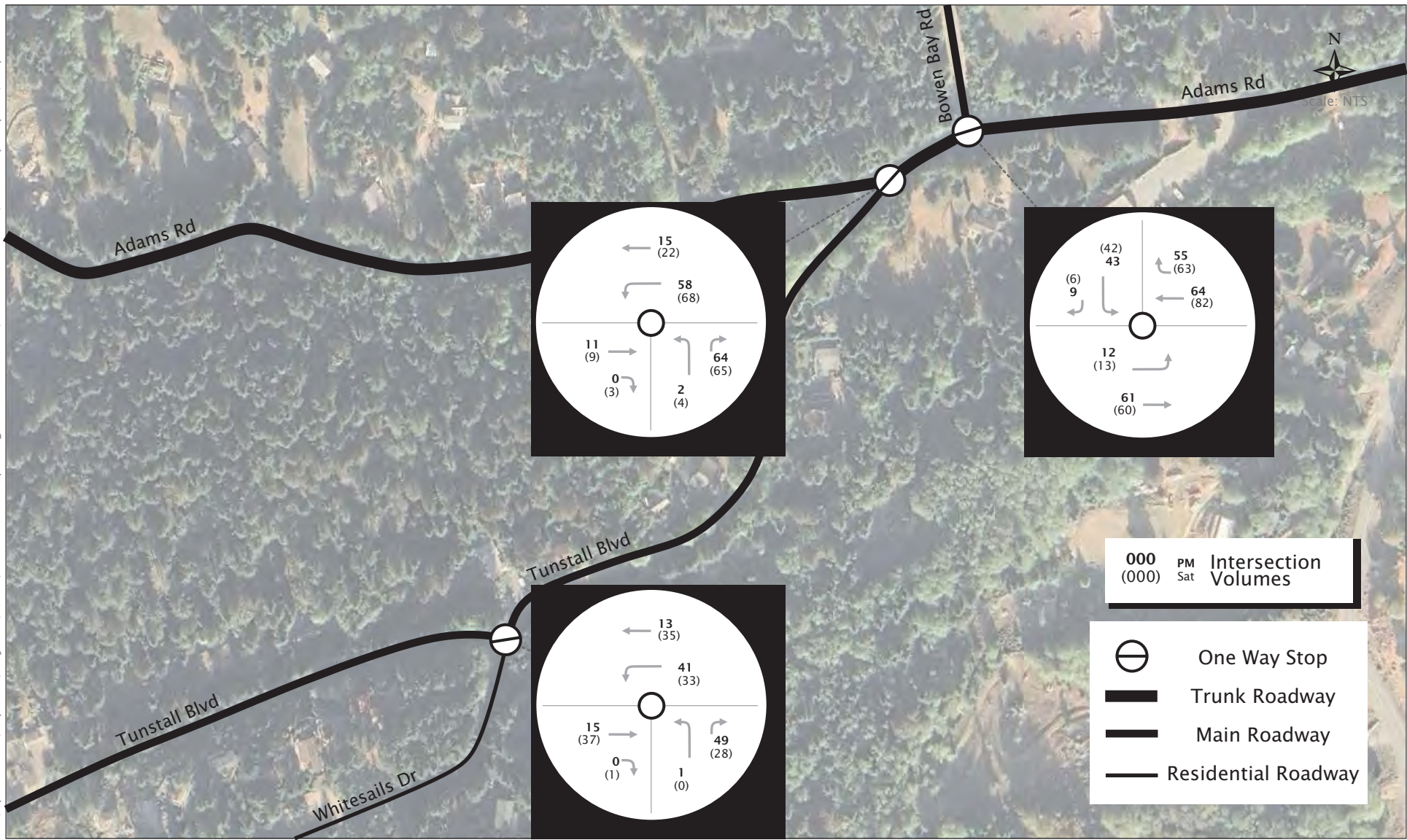


Exhibit 6.1A Opening Day Background 2030 Traffic Volumes (West)

04-22-0272

Cape Roger Curtis
June 2023





Exhibit 6.2B Opening Day Background 2030 Traffic Volumes (East)

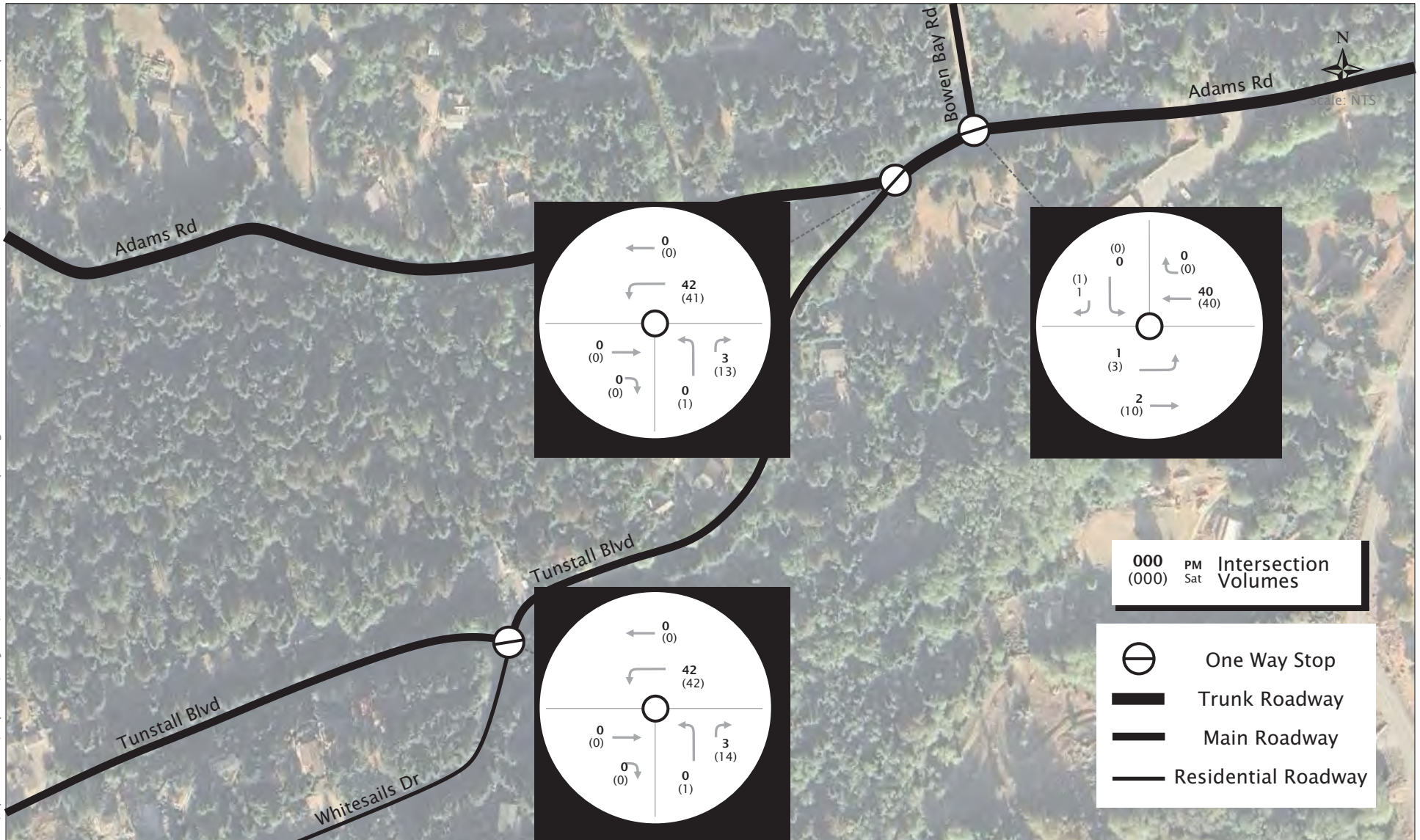


Exhibit 6.3A
Site Traffic Distribution and Site Traffic Volumes (West)



Exhibit 6.4B Site Traffic Distribution and Site Traffic Volumes (East)

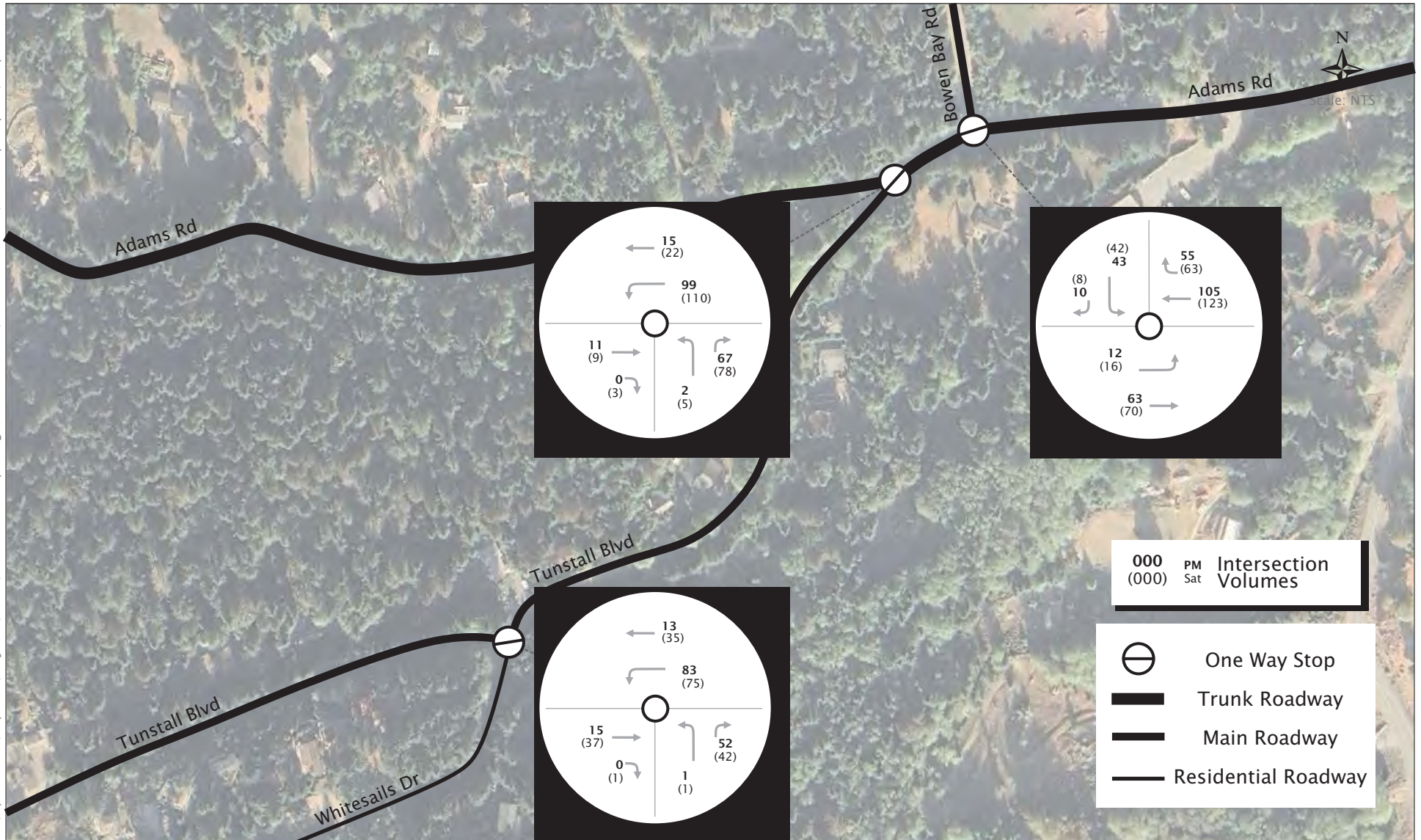


Exhibit 6.5A Total Day Peak Hour Vehicle Traffic Volumes (West)

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Exhibit 6.6B Total Day Peak Hour Vehicle Traffic Volumes (East)

04-22-0272

Cape Roger Curtis
June 2023

6.3 Future Traffic Operations and Impact Assessment

6.3.1 Future Background Impact Assessment

Table 6.2 summarizes the operational analysis for existing traffic conditions in the study area. Traffic operations that exceed the performance thresholds have been bolded.

Table 6.2: Opening Day Background Traffic Operations

INTERSECTION / TRAFFIC CONTROL	MOVEMENT	FRIDAY PM PEAK		SAT AFTERNOON PEAK	
		LOS	95 TH Q (M)	LOS	95 TH Q (M)
Whitesails Drive / Tunstall Blvd	EBRT	A	0	A	0
	WBLT	A	5	A	5
	NBLR	A	15	A	10
Tunstall Blvd / Adams Road	EBRT	A	10	A	10
	WBLT	A	0	A	0
	NBLR	A	0	A	0
Adams Road / Bowen Bay Road	EBLT	A	0	A	5
	WBRT	A	0	A	0
	SBLR	A	15	A	15
Miller Road / Bowen Island Trunk Road / Dorman Road / Grafton Road	EBLRT	A	5	A	10
	WBLRT	A	10	A	15
	NBLRT	A	20	C	25
	SBLRT	A	15	C	25

The additional growth from the additional lots and development within the vicinity of the area results in minimal impacts at several intersections and movements in the network. As can be seen, the only intersection impacted by the increase in background traffic is Miller Road / Bowen Island Trunk Road / Dorman Road / Grafton Road during the Saturday peak hour. Whilst the LOS deteriorates to LOS C on the north and southbound movements of Miller Rd / Bowen Island Trunk Road / Dorman Road / Grafton Road, this is still considered to operate within the capacity of the intersection. The difference in 95th queue is minimal at a maximum increase of one vehicle and this change is considered negligible.

6.3.2 Future Total Traffic Operations

Table 6.3 demonstrates the distribution of traffic across the network, while **Table 6.4** examines the % impact of the additional site traffic in comparison to the background traffic. This shows the increase in traffic generated by the development and how this will be spread across the Bowen Island road network.

Table 6.3: Peak Hour Vehicle Trips

ORIGIN / DESTINATION	TOTAL TRIPS			
	FRIDAY PM PEAK HOUR		SATURDAY AFTERNOON PEAK HOUR	
	INBOUND	OUTBOUND	INBOUND	OUTBOUND
Tunstall Bay	0	0	0	1
Adams Road	0	0	0	1
Bowen Bay	2	1	1	3
Seymour Landing	1	0	1	2
Snug Cove	37	1	38	4
North Island	2	1	2	5
Total Cape Roger Curtis	42	3	42	15

As can be seen, most of the traffic generated by the site travels towards Snug Cove. The remainder of the trips are distributed across the island.

The increase in traffic generated by the site has been compared to the anticipated background 2030 traffic at each intersection to determine how the proposed site will increase the traffic.

The percentage increase for both the Friday AM and Saturday Peak has been set out in **Table 6.4**.

Table 6.4: 2030 Site Traffic Impact Assessment Weekday and Weekend Peaks

INTERSECTION	FRIDAY	SATURDAY
Whitesails Drive / Tunstall Blvd	+45 (27%)	+57 (30%)
Tunstall Blvd / Adams Road	+45 (23%)	+56 (25%)
Adams Road / Bowen Bay Rd	+45 (16%)	+55 (17%)
Bowen Island Trunk Rd / Dorman Rd / Miller Rd	+41 (7%)	+49 (6%)

Given the low traffic flows observed in the existing and background traffic scenarios, the additional traffic generated by the proposed site will result in an increase of approximately 27% and 30% in the PM and Saturday Peak scenarios respectively. This increase may look significant; however, it represents an increase from 135 to 192 on all movements at Whitesails Drive / Tunstall Blvd, this is approximately 3 vehicles per minute travelling through the intersection.

Table 6.5 summarises the intersection operation results for the PM and Saturday Peak for the Opening Day Total scenario.

Table 6.5: Opening Day Total Traffic Operations

INTERSECTION / TRAFFIC CONTROL	MOVEMENT	FRIDAY PM PEAK HOUR		SAT AFTERNOON PEAK HOUR	
		LOS	95 TH Q (M)	LOS	95 TH Q (M)
Whitesails Drive / Tunstall Blvd	EBRT	A	0	A	0
	WBLT	A	5	A	10
	NBLR	A	10	A	10
Tunstall Blvd / Adams Road	EBRT	A	10	A	10
	WBLT	A	0	A	0
	NBLR	A	0	A	5
Adams Road / Bowen Bay Road	EBLT	A	5	A	5
	WBRT	A	0	A	0
	SBLR	A	15	A	15
Miller Road / Bowen Island Trunk Road / Dorman Road / Grafton Road	EBLRT	A	5	A	10
	WBLRT	A	10	A	15
	NBLRT	A	15	C	30
	SBLRT	A	20	C	25

The addition of site traffic to the network was shown to have no negligible impact on any intersection within the study area. All the intersections continue to operate within the capacity and are operational with the proposed level of traffic. There is a slight increase in the 95th percentile queue, from approximately 4 vehicles to 5 vehicles in the Saturday peak hour.

6.4 Future Ferry Impact

As discussed in **Section 3.7**, based on existing BC Ferries data (July 2022), vehicle demand has shown to surpass ferry service vehicle capacity during peak service hours during the summer. Vehicle demand over capacity percentages (87 AEQ per ferry) range between 102% to 115% during peak service hours and direction from 11 am to 5 pm on Friday and Saturday from Horseshoe Bay to Snug Cove, based on the Automobile Equivalent Units (AEQs) methodology in estimating vehicle demand but could still be a total of 87 physical vehicles.

However, it has also been shown there is available ferry passenger capacity as passenger demand is below ferry passenger capacity (427 passengers per ferry) which ranges between 47% to 89% during the same time peak service time-period and route as above.

This section provides a high-level assessment of the potential increase in ferry vehicles and passenger demand due to the proposed park and campground access. This assessment:

- focuses on summer Friday, Saturday, and Sunday in which park and campground activities are expected to be the highest.
- focuses on the horizon year 2030 (opening day).
- factors in existing ferry demand increases based on the BC Ferries forecast provided.

- assumes the BC Ferry capacity for the Horseshoe Bay to/from Snug Cove routes remains unchanged from the current schedule; and
- focuses only on analysis periods for this assessment rather than individual services due to the nature of forecasting assumptions and data limitations. The time periods are broken down as follows: Early Morning (5 am - 7 am), Morning (7 am - 11 am), noon (11 am - 3 pm), afternoon (3 pm - 7 pm), and evening (7 pm - 11 pm).

Passenger Volumes

As discussed in **Section 3.7**, the existing ferry passenger count from July 2022 set out the overall passenger and vehicle capacity for each ferry service across the month for both inbound and outbound Bowen Island routes and it is utilized as the basis for the ferry demand forecast. The passenger vehicle levels are inclusive of the number of passengers within the private motor vehicles, it is not possible to determine the level of foot passengers only. An annual growth rate of 1.2% is assumed and based on the ferry demand forecast from September 2022.

Figure 6.1 and **Figure 6.2** show the projected ferry passenger demand which includes the predicted campground users against current ferry capacity and schedule. It is seen that there is available ferry passenger capacity across Friday, Sunday, and most of Saturday for either direction of the ferry route. However, the peak demand during Saturday noon services is shown to surpass ferry capacity as peak activity for existing ferry users, campground, and park day use users coincide.

Figure 6.1: Horseshoe Bay -> Snug Cove Ferry Demand and capacity – Passenger (Opening Day)

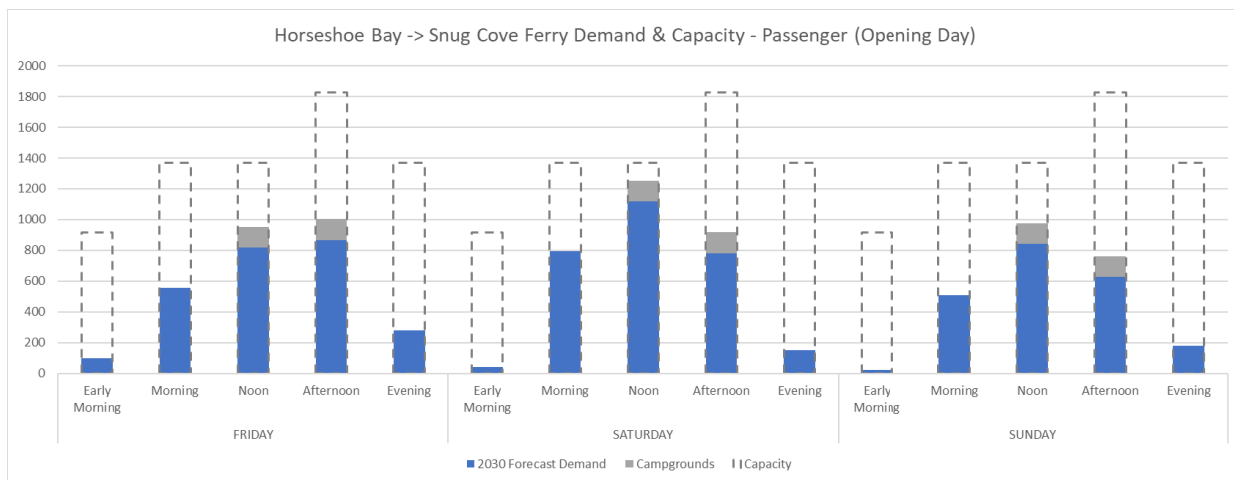
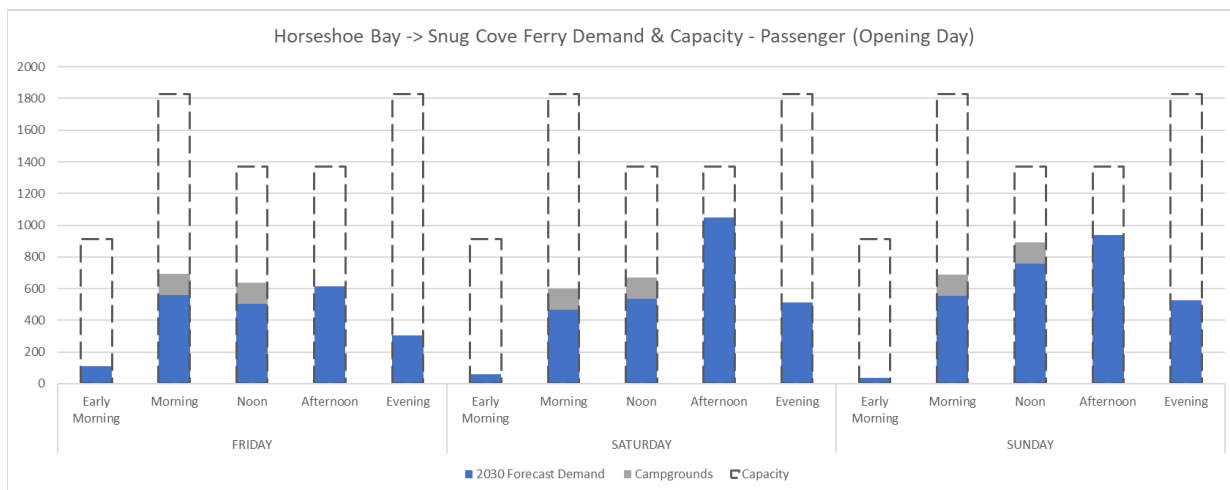


Figure 6.2: Snug Cove-> Horseshoe Bay Ferry Demand & Capacity - Passenger (Opening Day)



Vehicle volumes

As discussed in Section 3.7, the ferry vehicle capacity is listed as 87 vehicles, to differentiate the size of the vehicles, each vehicle is assigned an Automobile Equivalent Unit (AEQ), in accordance with the BC Ferries calculation methodologies these are as follows:

- 1 Bus = 3 AEQ.
- 1 Commercial Truck or Semi = 2.5 AEQ.
- 1 Private Vehicle – Over Height = 1.5 AEQ; and
- 1 Private Vehicle – Under Height or Motorcycle = 1 AEQ.

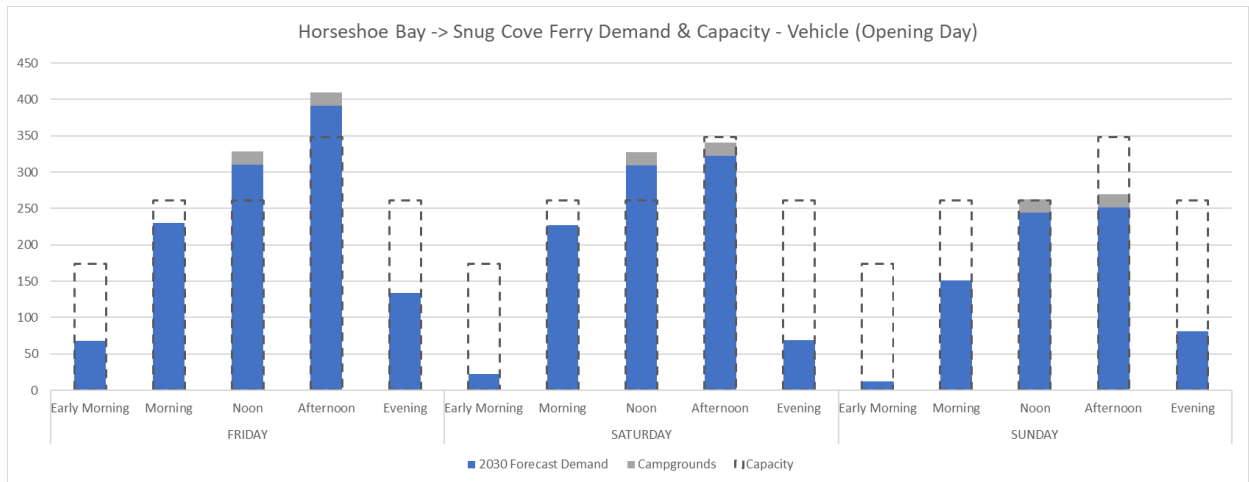
The projected vehicle demand (as AEQs) for the services in comparison to the overall provision has been demonstrated in Figures 6.3 and 6.5, for Friday, Saturday, and Sunday.

In line with Metro Vancouver’s expectations, all visitors to the day use facilities will be on island residents or visitors that are already visiting the island and include a stop in CRC as part of their trip, Therefore, it will not generate any vehicle trips that will require the utilization of the ferry. This will be assisted via extensive TDM measures and no advertisement for parking facilities.

In the Horseshoe Bay to Snug Cove ferry direction, Friday noon and afternoon and Saturday noon periods will continue to increase in demand due to ferry demand increases based on BC Ferries forecast. However, additional vehicle demand from campground arrivals will coincide with this peak period surpassing ferry capacity. In addition, increases in vehicle demand also caused other periods including Saturday and Sunday noon periods to be near or at capacity. To assist in offsetting this, as part of the TDM measures, Metro Vancouver will explore options to move check in and check out times to persuade people to utilize off-peak ferry services.

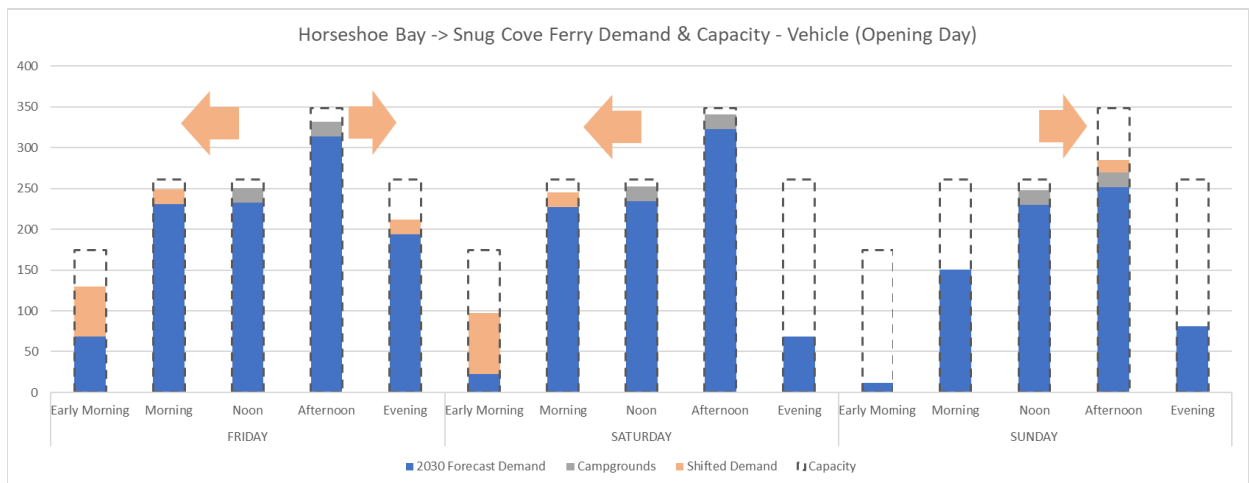
There may be effects of “peak spreading” not captured in this analysis as ferry users travelling to Bowen Island may consider travelling just outside of the current peak demand hours due to availability in vehicle capacity in other time periods.

Figure 6.3: Horseshoe Bay -> Snug Cove Ferry Demand and capacity - Vehicles (2030 Opening Day)



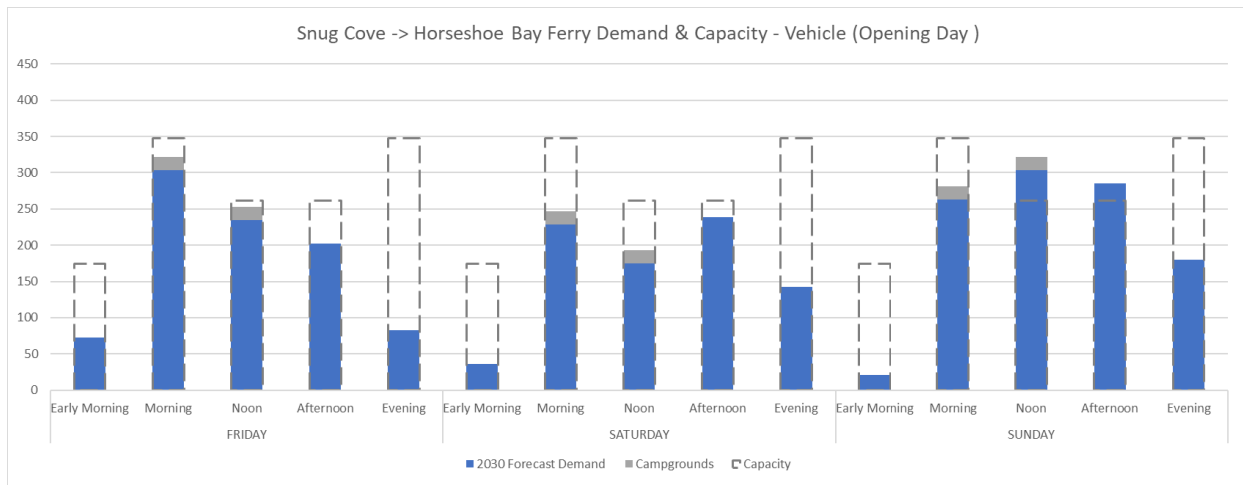
Services from Horseshoe Bay will be reaching peak typically around noon with the addition of the camping demand. As can be seen, Friday has the highest demand, with both noon and afternoon services all reaching maximum capacity. **Figure 6.4** demonstrates that these vehicles can be accommodated when spread across the remaining services throughout the day.

Figure 6.4: Horseshoe Bay -> Snug Cove Ferry Demand and alternative service - Vehicles (2030 Opening Day)



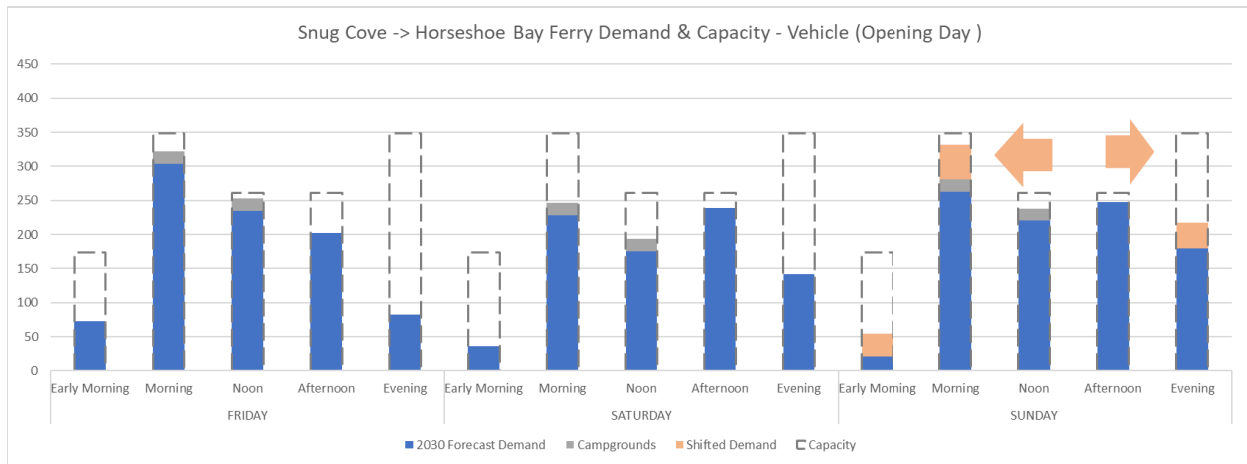
Whilst there is still high demand for the noon and afternoon services on Friday and Saturday, both periods are now below the peak capacity of the ferries, demonstrating that there is sufficient capacity for all services to accommodate the additional demand generated by the camping.

Figure 6.5: Snug Cove -> Horseshoe Bay Ferry Demand and capacity - Vehicles (2030 Opening Day)



In the Snug Cove to Horseshoe Bay direction, vehicles are shown to be under capacity on both Friday and Saturday during the summer including users from the campgrounds. However, Sunday noon and afternoon periods surpass ferry vehicle capacity but there is considerable capacity available in the early morning, morning, and evening periods. To demonstrate there is sufficient capacity, the excess demand from those services has been moved onto other services that are not reaching capacity to demonstrate that there is sufficient capacity throughout the day, this is shown in **Figure 6.6**. The graph shows that some patrons will be required to wait on the island for the service.

Figure 6.6: Snug Cove -> Horseshoe Bay Ferry Demand passenger demand and alternative service - Vehicles (2030 Opening Day)



Any delays to visitors to the park will only increase the demand for the shuttle bus service. While people are waiting in their cars, the shuttle bus service will have direct access to the front of the queue and will drop off foot passengers and cyclists at the front of the queue.

6.5 Ferry Impact Mitigation

6.5.1 Off Peak Demand and Parking Regulations

To mitigate the impact due to the surge in vehicle demand impact during current ferry peak times due additional expected demand generated from the campgrounds, there are potential measures which can promote non-Bowen Island residents going to/from Bowen Island to travel from outside of peak ferry times or travel to/from Bowen Island without vehicles. These are listed below but will be further explained within section 8 (these measures may be applied during peak summer times only):

- Campground check-in & check-out times: enforce campground check-in and check-out times to campground users with vehicles to be outside of the ferry peak travel times.
- Consider options for a day-use reservation system for vehicle visits during peak periods.
- Consider restricting access to the day-use parking lots.
- Provide financial incentive to park day users (i.e., parking rebate for using park and ride facilities at Horse Bay terminal).
- Shuttle services directly to/from parks/campgrounds. Further discussed in **Section 8**.
- BC ferries off pricing schemes: increase ferry pricing during ferry sailing times (offer discount to Bowen Island residents at pay booth).
- Other TDM measures as discussed in **Section 8**.

Such potential measures are theoretical in the current stage and concrete discussions with Metro Vancouver and BC Ferries are needed in the next steps of the project to ensure optimal user experience for local residents and Bowen Island travelers.

6.5.2 GreenLine Ferries

GreenLine Ferries are currently exploring the opportunities of starting a passenger-only (bicycles and pedestrians) service from downtown Vancouver to Bowen Island. The location of the terminus at Bowen Island and downtown Vancouver has not been decided but GreenLine ferries are proposing to have a service operational within the coming years. This service, as mentioned, will not be available for vehicles and therefore will improve the modal split for visitors.

6.6 Improved Cycling Facilities

As part of BIMs Transportation Plan 2018-2038, it is proposed that a cross-island multi-use pathway (MUP) will be developed from Snug Cove to Tunstall Bay. A portion of this MUP from Snug Cove has already been developed but the remaining cross island section is yet to be implemented. Several other phases have also been identified in Metro Vancouver's Regional Greenway Network, Transport 2050: Regional cycling network, and BIMs Transportation Plan' 2018-2038.

7. SITE DESIGN

The site design has not been finalised at the current time but will be produced before the development permit application. However, this section will provide a brief description of the proposed parking supply, access, and servicing operations.

7.1 Day Use Parking Provisions

No parking bylaw is provided for day use. The day-use parking supply has been calculated based on the arrival and departure rates of the proposed day-use. As has been set out in section 5, it demonstrated that vehicles would remain at the site for approximately 2.7hr. Resulting in an arrival and departure profile and a maximum parking accumulation of 64, as shown in **Table 7.1**.

Table 7.1: Vehicle Parking

	FRIDAY			SATURDAY		
	DAY-USE VEHICLE ARRIVAL	DEPARTURE	TOTAL ACCUMULATION	DAY-USE VEHICLE ARRIVAL	DEPARTURE	TOTAL ACCUMULATION
7:00 AM	2	0	2	1	0	1
8:00 AM	4	0	5	2	0	2
9:00 AM	5	1	9	3	0	5
10:00 AM	6	3	12	6	1	10
11:00 AM	5	4	13	5	2	13
12:00 PM	7	5	14	8	5	16
1:00 PM	6	5	15	10	6	20
2:00 PM	6	6	16	9	6	23
3:00 PM	5	7	14	9	9	23
4:00 PM	5	6	13	8	10	21
5:00 PM	3	6	11	6	9	18
6:00 PM	2	5	8	3	8	13

As demonstrated above, the day-use would require a maximum peak of 23 vehicles. This would be split across 2-3 parking lots in different locations, it is not clear at this stage whether the parking will be an even split or will be dependent on the available space. To allow for a small buffer whilst people are maneuvering around the site and the overlap between those departing and arriving it is recommended that a buffer is considered to ensure that an efficient parking strategy is in place. Therefore, an additional 10% is proposed on top of the total accumulation, for a total demand of 26 spaces. As mentioned, these 26 spaces are to be split across two or three parking lots.

7.2 Campground Parking Provisions

As previously mentioned, there are no parking bylaw requirements provided by Bowen Island. Therefore, as proposed, each vehicle-accessible campsite will have a space for a vehicle, and no additional parking capacity will be available.

7.3 Parking Layout & On-Site Vehicle Circulation

The layout of the campsites and accesses will be finalised prior to the Development Permit submission. However, it will be recommended that all laneways are provided with sufficient width to accommodate vehicles travelling around the site. A minimum width of 3.5m carriageways. The orientation of the roadway has been discussed but where possible single direction routing will be provided.

The current Cape Drive is in good condition and does not require any alterations to it.

7.4 Service Vehicle Operations

The servicing program for the site has yet to be formalised, currently, the only vehicles that will be required to access the site will be waste collection.

Refuse collection will be in a central location and will be easily accessible. All waste requirements will be confirmed with a waste management company.

The cleaning requirements for the washroom facilities and emergency vehicle access are to be confirmed.

8. TDM & ACTIVE MODES

8.1 Definition

Transportation Demand Management (TDM) is defined as the “application of strategies and policies to reduce travel demand (specifically that of single-occupancy private vehicles), or to redistribute this demand in space or in time”. A successful TDM program can influence travel behaviour away from Single Occupant Vehicle (SOV) travel during peak periods towards more sustainable modes such as High Occupancy Vehicle (HOV) travel, transit, cycling or walking. The responsibility for the implementation of TDM measures can range across many groups, including regional and municipal governments, transit agencies, private developers, residents/resident associations, or employers.

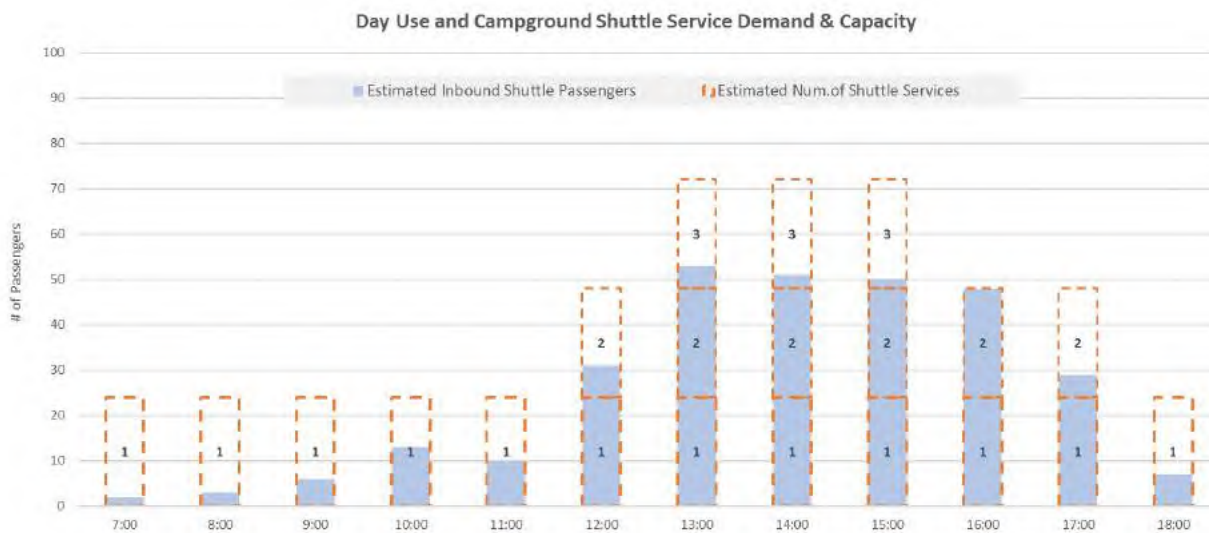
8.2 Shuttle Bus provision

Metro Vancouver has committed to providing a shuttle bus service that will travel between the site and Snug Cove from May to September. The Shuttle bus offers an alternative form of transport for those arriving for both camping and day-use visitors. All those arriving at the ferry by foot or from public transit will be able to utilize the ferry, but the bus service will be primarily aimed at private car travelers who will be looking to visit the park and campgrounds but provide an alternative.

The details regarding the number of services and location of pick and drop-off are yet to be confirmed. However, the proposals are that the shuttle service would operate a 7-hour work schedule and coincide the arrival and departure of the shuttle service with that of the ferry service. MV will collaborate with TransLink around shared objectives to access nature using sustainable transportation.

Through a successful TDM program, there will be approximately 303 passengers that will potentially utilize the shuttle bus to access the proposed campground and park. Based on the total shuttle capacity of 24 passengers (typical TransLink Shuttle / Mini-Bus), it is estimated that during peak hours, the capacity equating to three shuttle services per hour is needed to meet arriving passenger demand from the Ferry. The hourly profile is shown in **Figure 8.1** below.

Figure 8.1: Day Use and Campground Shuttle Service Demand & Capacity



8.3 Potential Measures

Table 8.1 below summarizes possible suites of measures for non-residential land uses that, based on Bunt's research, may be appropriate for this site. The strategy is identified in the left column, and the measure in the centre column. The right column on the table shows which parties would be responsible for administering and managing each initiative. While this is a comprehensive listing of all possible measures, the site developer's potential role in TDM for the site would be limited to those items identified as "Site Developer" on the far right of this table.

Table 8.1: Potential TDM Strategies Summary Table: Proposed Park

STRATEGY	MEASURE	RESPONSIBILITY FOR IMPLEMENTATION
TDM Site Coordinator & Monitoring Program	Appoint a Site TDM Coordinator, responsible for developing, implementing, and maintaining the TDM program	Site Developer/Operator
	Establish mode split targets, monitoring methods and surveys and reporting	Site Operator/
Marketing & Promotion	Provide wording on the Metro Vancouver website to deter visitors to travel by car, this could be via listening access by car last on the website etc.	Site Developer/Site Operator
	Participation in Bike to Work Week and other community and regional promotions/events for sustainable transportation	Regional Transportation Authority/Municipality/Site Operator
	Cheaper rates are provided to those who travel by sustainable forms of travel	Site Developer
Cycling Infrastructure Improvements	Provide cycling facilities leading to, adjacent to and on the site	Site Developer, Municipality
	Provide safe, marked cycling lanes alongside the roadway surrounding the site	Municipality
Cycling Amenities	Provide bicycle maps and way-finding signage throughout the site	Site Developer
	Provide a bicycle repair station	Site Developer
End of Trip Cycling Facilities	Provide long-term secure and convenient bicycle storage facilities for employees	Site Developer
	Provide short-term bicycle rack parking at all building entrances (well-lit and protected, within view of lobbies for residential visitors and patrons)	Site Developer
Pedestrian Infrastructure Improvements	Provide an off-street pathway system to minimize walking distances; provide sidewalks on both sides of all site and site-fronting streets with boulevard improvements to buffer pedestrians from moving traffic	Site Developer
Pedestrian Amenities	Provide amenities such as benches, fountains, etc. on the site and along the site frontages	Site Developer
Transit	Provide funding for improvements to adjacent bus stops, such as benches and shelters at existing bus stops adjacent to the site	Site Developer
	Provide subsidized transit passes to employees	Site Developer/Operator
	Provide a private shuttle service for residents to nearby key destinations	Site Developer/Operator

8.3.1 Marketing & Promotion

Marketing of the site will be one of the key strategies used to assist in reducing the level of private vehicles anticipated to access the site. This could be achieved through several measures, such as:

- Promote transit and active modes when booking a vehicle-accessible camp pitch. This would be undertaken throughout the booking process, with reminders of limited ferry capacity, the proximity of the island to downtown Vancouver and the alternative transit options in place.
- Market day-use by active transportation and park shuttle/transit only.
- Provide accessibility options in the booking confirmation, including bicycle maps, transit timetables etc.
- Promote the shuttle bus timetable accessible and easy to find and provide the option to book a slot on the shuttlebus (Free) immediately before or after booking a pitch.
- Work with BC Ferries, MoTI and BIM on a signage strategy to communicate that bookings are required to access the proposed campgrounds.

8.3.2 Cycling Parking and Provisions

- Offer free shower facilities to any users that turn up by bike for both the campground and the day-use.
- Improve the cycle parking security, each campsite has a secure stand with a shelter to protect from the elements at each campsite.
- Increase the provision of Class B (short style) cycle spaces at the day-use, making these spaces as secure and visible as possible to any staff on-site.
- Provision of funding for the proposed cycling network.

8.3.3 Pricing Strategies

- Provide financial incentive to park day users (i.e., parking rebate for using park and ride facilities at Horse Bay terminal).
- Metro Vancouver to explore options to negotiate with BC ferries to offer off pricing schemes to visitors: increase ferry pricing during peak ferry sailing times (offer discount to Bowen Island residents at pay booth).
- Charging higher fees if booking a camp pitch with a vehicle, this will be undertaken in the booking system for the site.

8.3.4 Off-Site Park and Ride

As part of future considerations, Metro Vancouver are looking into ways to reduce the number of people arriving at the ferry in a private vehicle. MetroVancouver to explore partnerships to provide staging for the park at locations with North and West of Vancouver.

8.3.5 Wayfinding

The provision of wayfinding for cyclists and pedestrians from Snug Cove to the site will improve the accessibility of the park. Similarly, wayfinding should be provided throughout the park to ensure that users are able to access the day-use areas as best as possible.

8.3.6 Other Measures

Ideas for other measures that could be undertaken are:

- Do not allow additional vehicles on the site.
- Provide real time information about ferry capacities on the website so that people can determine prior to travel if they are likely to make it onto a service, or if another form of travel would be beneficial.
- Implement a parking sticker or ticket that can be displayed to indicate resident, whilst enforcing the parking fines on non-residential cars.
- BC Parks reservation system for non-Bowen Island residents: reservation to specific park entrance time and to be allocated outside the ferry peak time periods.
- Campground check-in & check-out times: synchronize campground check-in and check-out times to be outside of the ferry peak travel times. Look at bringing the check-out time to 10am to get guests to use the earlier services.
- Partner with BIM on active transportation connections within and to the proposed park.

9. CONCLUSIONS & RECOMMENDATIONS

Bunt's conclusions and recommendations are presented in the sections below.

9.1 Conclusions

Existing Conditions

- The proposed park will be located within the Cape Roger Curtis region of Bowen Island, accessed by Cape Drive. The lots are currently vacant.
- The site has very limited access to public transit, with one service, the 280, located approximately 3km to the north of the site. Many pedestrian walking trails are set out across the site and within the vicinity. There are no dedicated cycle lanes on the surrounding road network, but it is acknowledged that traffic speeds are low and therefore, accessible for cyclists.
- Traffic surveys were conducted in May 2023 to understand the existing traffic volumes. Existing ferry capacity data for July 2022 was obtained from BC Ferries and demonstrated that there was remaining capacity on several services within the early mornings and evening services during the weekday peak.
- All intersections within the study area reported acceptable performances, significantly under the thresholds, the 95th percentile queues anticipated were a maximum of 5 vehicles on certain movements.

Proposed Site

- A total of 24 lots were purchased by Metro Vancouver, with the proposal to develop a total of 100 camping pitches, made up of 52 walk-in-in/bike-in sites, 33 vehicle-accessible sites, 5 group sites, and 10 tent cabin sites.
- Day-use facilities will be the number of hiking routes across the Regional Park, with limited access to the coastline.
- No parking is provided for the campsites, except for accommodating a vehicle on the vehicle-accessible sites. The day-use will have two parking lots for a total of 26 spaces.

Future Traffic and Ferry Conditions

- The proposed development is forecast to generate between 45 to 55 vehicle trips in the Weekday PM and Saturday Peak hours, respectively. This is anticipated to be the worst-case scenario, with all calculations based on the summer peak occupancy, during the remainder of the year, the number of trips will decrease.

- A background growth of 7 years was included to account for the remaining lots that are undeveloped within Cape Roger Curtis. The 2030 horizon also represents the full buildout and operation of the campground program.
- An increase in growth on ferry services between Horseshoe Bay and Snug Cove of 1.2% was applied, whilst also adding all bicycles, transit, and foot passengers onto the passenger numbers of the anticipated demand. The additional vehicle demand would be generated by campground sites only. With a maximum of 61 two-way daily trips, 37 inbound (Horseshoe Bay – Snug Cove) and 24 outbound (Snug Cove - Horseshoe Bay) services spread across the available ferry services.
- The increased traffic volumes at the intersections within the study area during the future total scenario result in a negligible difference in the delays and the 95th percentile queue lengths. With results showing a maximum increase of 2 vehicles in the vehicle queues.

TDM and Shuttle Bus Improvements

- To ensure the site maintains a low level of vehicle demand, several TDM measures are being proposed, including the provision of a shuttle bus and marketing materials.
- A shuttle bus would operate between Snug Cove and the site. The operational details of the shuttle have yet to be determined, with the number of services, operational hours, and size of the service to be determined at the development permit stage.
- The analysis indicated that a maximum of 53 passengers would potentially require shuttle bus services, when considering all-day use and campground active travellers that may wish to utilise the site.

9.2 Recommendations

Based on the findings:

- Produce a significant and tangible TDM plan that will target users of the parks to achieve a reduction in vehicle traffic where possible.
- Explore further opportunities to develop a concrete plan of how to reduce the number of visitors arriving by car.
- Provide a shuttle bus service that will be operated to a similar timetable to that of the ferry schedule.
- Partner with BIM to implement the cross-island MUP part of the regional greenways network.

APPENDIX A

Terms of Reference

May 5th, 2023
04-22-0272

Jeffrey Fitzpatrick, MCIP, BCSLA
Division Manager, Regional Parks, Design and Development Parks and Environment
MetroVancouver
VIA E-MAIL: jeffrey.fitzpatrick@metrovancover.org

Dear Jeffrey,

**Re: Cape Roger Curtis
Terms of Reference – Transportation Impact Assessment (TIA)**


We have prepared the following Terms of Reference (ToR) for Bunt & Associates Engineering Ltd. (Bunt) to undertake a Transportation Impact Assessment (TIA) for the rezoning application for 24 lots operated by MetroVancouver (MV) within the Cape Roger Curtis area of Bowen Island. This ToR incorporates guidance from within schedule C6 – Transportation. As part of this Rezoning Application submission, Bunt will provide the required transportation planning and engineering documents, anticipated at this time to be a TIA with a Transportation Demand Management (TDM) Plan for the site, including shuttle bus provisions.

This ToR is based on our previous involvement and understanding of the project scope, the surrounding road network and previous submissions to municipality staff regarding the anticipated trip generation at a high level and existing ferry impact. We anticipate that our involvement will be focused on current and future traffic analysis for the campsite and day use, the anticipated ferry impact, including a TDM Plan. Furthermore, we also anticipate that our services will be required for the site design review and to provide commentary / guidance on the parking and loading access, supply, and operation.

'The terms of reference is provided for coordination with Bowen Island Municipality. Upon confirmation that Metro Vancouver and Bowen Island Municipality and in agreement with the Terms of Reference, we will proceed with the proposed work. Should Metro Vancouver or Bowen Island Municipality have any questions or proposed adjustments to Terms of Reference we are available to meet to discuss.'

Yours truly,
Bunt & Associates

Hugo Johnston, B.Sc
Transportation Planner

A handwritten signature in black ink, appearing to read "Joseph Chow".

Joseph Chow, P.Eng
Senior Transportation Engineer

1. SCOPE OF WORK

The following items will all be included within a Traffic Impact Assessment (TIA) report to be provided to the municipality.

1.1 Existing Network

- *Existing Network – Identify vehicle, transit, pedestrian and cycling facilities near the site.*
- *Ferry Use – Review the existing level of use by residents and tourists on the ferry route between Snug Cove and Horseshore Bay. Using data received within the 2000-2022 Snug Cove Route (FOI-2023-005 – BC Ferries) and more data from the July 2022 sailing data (FOI-2023-012 – BC Ferries).*
- *Development Plan Review – Outline the proposed development plan and statistics. Define the uses proposed on the site.*
- *Policies – Review any relevant policies or plans from the municipality, including the adopted rezoning statement.*
- *Existing Use – The current site is vacant and therefore, any future trip will be considered as a new trip.*

It is not anticipated that any existing traffic analysis will be undertaken.

1.2 Initial Site Design

- *AutoTurn – A review of the internal access roads of the park, the day use access, loading layout (inc toilet block cleaning) and waste collection will all be undertaken. This review will be high level and based on the initial site design.*
- *Exhibits – All the AutoTurn analysis will be displayed in PDF exhibits within the TIA.*

1.3 Future Conditions

- *Trip Generation – Calculate a trip generation for the proposed campgrounds and the day use trip generation. The trip rates, based on ITE campsites were included within the Trip Generation Memo. The trip rates are set out in **Table 1**.*

Table 1: Proposed Campground and Day use Trip Generation

USE	SOURCE	PARAMETER	PM VEHICLE TRIP RATES			DAILY VEHICLE TRIP RATES		
			In	Out	Total	In	Out	Total
Standard Campsites	ITE LUC 416	Camp pitches	0.75	-	0.75	0.75	0.50	1.25
Group Site	Metro Vancouver Data	# of group sites	1.60	-	1.60	1.60	1.0	2.60
Day Use		Per Hectare	-	-	-	-	-	2.94

The day-use AM and PM peaks will be outside of the campground peak; therefore, a daily total will be used for this study.

The anticipated trip generation is anticipated to be below 100 two-way trips in either of the peak periods. This is typically below the requirements for a full TIA modelling study as per several municipalities within Greater Vancouver.

1.4 Proposed Shuttle Bus Service

- *Shuttle Bus Requirements* – Calculate the number of shuttle buses will be required to support the proposed modal split.
- *Starting Point* – Determine the starting point of the shuttle bus service, whether it collects campers from Snug Cove to increase the reduction in car use on the Ferry service.

The size of the shuttle bus has yet to be determined. However, a few rows of seats will be removed to allow for luggage capacity.

1.5 Future Ferry Usage

- *Discussions* – Organise a meeting with BC Ferries to co-ordinate the study approach, determining the capacity levels and how best to calculate requirements against the capacity.
- *Ferry Demand* – Determine the level of trips that will require the use of the ferry service based on the trip generation. To determine the future background levels a growth rate will be applied to the 2022 levels. The growth has been provided by BC Ferries and will be between 0.4-0.2% annually.
- *Capacity* – Utilising the proposed trip generation and information attained via freedom of information analysis will be undertaken to which services have spare capacity to accommodate the required levels.
- *Transportation Demand Management (TDM) Reductions* - With the provision of a shuttle bus service and other TDM measures, determine the level of reduction in private vehicle demand and how this will impact capacity.
- *Methodology* – Ferry capacity analysis will be based on the capacity of the Queen of Capilano, with 100 vehicle capacity, 457 passenger & crew members. A bus/coach represents 2.5 passenger vehicles.

1.6 Transportation Demand Management (TDM) Strategy

- *Measures – In consultation with the applicant and the Municipality of Bowen Island, develop an appropriate TDM strategy, including the provision of a shuttle bus, that would provide alternatives to campsite visitors and reduce the number of private car users.*

1.7 Reporting

- *TIA's – Summarise findings, recommendations, and conclusions in a Draft TIA's report to be submitted to the municipality staff for review and comment.*
- *2nd Reading – Respond to the municipality staff comments and submit the finalised TIA's report.*

Bunt will continue to support MetroVancouver Park as part of the application process – providing transportation consultation services and response on transportation issues, where necessary.

cc. Lydia Mynott, MetroVancouver
Jeffrey Fitzpatrick, MetroVanouver

*The attached information is provided to support the agency's review process
and shall not be distributed to other parties without written consent from
Bunt & Associates Engineering Ltd.*

APPENDIX B

SimTraffic Reports

4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.0	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1
Total Del/Veh (s)	1.7	0.7	0.9	1.5	0.2	0.2	5.6	6.4	4.0	5.4	6.2	2.9

4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	2.4

Total Network Performance

Denied Del/Veh (s)	0.3
Total Del/Veh (s)	2.9

Intersection: 4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (m)	6.3	5.1	8.4	0.6	17.1	15.4
Average Queue (m)	1.0	0.5	1.8	0.1	10.4	9.4
95th Queue (m)	5.2	4.3	7.5	1.2	17.4	15.5
Link Distance (m)		320.6	308.4	308.4	119.7	316.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)	6.0					
Storage Blk Time (%)	1	0				
Queuing Penalty (veh)	1	0				

Network Summary

Network wide Queuing Penalty: 1

1: Tunstall Blvd & Adams Rd Performance by movement

Movement	EBT	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.2	0.0	0.0		0.0	0.0
Total Del/Veh (s)	6.7	0.1	0.2		0.1	0.7

2: Adams Rd & Bowen Bay Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.2	0.1	0.1	0.1
Total Del/Veh (s)	1.6	0.5	0.3	0.2	4.4	2.8	1.1

3: Sunset Rd & Adams Rd Performance by movement

Movement	EBT	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	0.3	0.4

5: Whitesails Dr & Tunstall Blvd Performance by movement

Movement	EBT	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.1	0.0	0.0		0.1	0.1
Total Del/Veh (s)	0.0	1.1	0.0		2.4	1.3

Total Network Performance

Denied Del/Veh (s)		0.1
Total Del/Veh (s)		2.6

Intersection: 1: Tunstall Blvd & Adams Rd

Movement	EB
Directions Served	TR
Maximum Queue (m)	9.1
Average Queue (m)	3.5
95th Queue (m)	11.1
Link Distance (m)	91.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Adams Rd & Bowen Bay Rd

Movement	SB
Directions Served	LR
Maximum Queue (m)	10.4
Average Queue (m)	7.6
95th Queue (m)	13.6
Link Distance (m)	51.6
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Sunset Rd & Adams Rd

Movement
Directions Served
Maximum Queue (m)
Average Queue (m)
95th Queue (m)
Link Distance (m)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (m)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 5: Whitesails Dr & Tunstall Blvd

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	3.9	10.8
Average Queue (m)	0.6	6.0
95th Queue (m)	5.1	12.1
Link Distance (m)	105.8	58.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.2	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1
Total Del/Veh (s)	2.6	1.1	0.9	2.4	0.8	0.5	7.9	13.3	6.4	9.9	9.4	7.9

4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	3.5

Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	4.1

Intersection: 4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (m)	7.8	3.0	11.4	5.3	18.4	24.4
Average Queue (m)	2.4	0.6	4.8	0.9	12.0	13.6
95th Queue (m)	7.7	4.5	13.4	5.4	20.2	27.9
Link Distance (m)		320.6	308.4	308.4	119.7	316.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)	6.0					
Storage Blk Time (%)	2	0				
Queuing Penalty (veh)	4	0				

Network Summary

Network wide Queuing Penalty: 4

1: Tunstall Blvd & Adams Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0		0.0	0.0
Total Del/Veh (s)	5.3	2.9	0.2	0.2	0.1		0.1	0.5

2: Adams Rd & Bowen Bay Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.2	0.1	0.1	0.1
Total Del/Veh (s)	1.9	0.3	0.3	0.2	4.2	2.3	1.0

3: Sunset Rd & Adams Rd Performance by movement

Movement	EBT	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	0.3	0.3

5: Whitesails Dr & Tunstall Blvd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBR	All
Denied Del/Veh (s)	0.1		0.0	0.0	0.1	0.1
Total Del/Veh (s)	0.0		1.0	0.0	2.3	0.7

Total Network Performance

Denied Del/Veh (s)			0.1
Total Del/Veh (s)			2.0

Intersection: 1: Tunstall Blvd & Adams Rd

Movement	EB	WB
Directions Served	TR	LT
Maximum Queue (m)	9.2	0.9
Average Queue (m)	2.9	0.1
95th Queue (m)	9.8	1.9
Link Distance (m)	91.8	35.3
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Adams Rd & Bowen Bay Rd

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (m)	3.6	10.6
Average Queue (m)	0.5	6.9
95th Queue (m)	4.0	13.6
Link Distance (m)	35.3	51.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Sunset Rd & Adams Rd

Movement
Directions Served
Maximum Queue (m)
Average Queue (m)
95th Queue (m)
Link Distance (m)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (m)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 5: Whitesails Dr & Tunstall Blvd

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	4.3	8.5
Average Queue (m)	0.7	4.1
95th Queue (m)	5.1	11.1
Link Distance (m)	105.8	58.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1
Total Del/Veh (s)	1.7	0.9	1.0	1.8	0.4	0.2	5.6	8.1	4.5	5.9	6.5	3.1

4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	2.5

Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	3.0

Intersection: 4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (m)	7.4	4.7	8.5	0.6	18.0	16.0
Average Queue (m)	1.2	0.4	2.2	0.1	10.9	10.0
95th Queue (m)	5.7	3.4	8.3	1.2	19.0	16.5
Link Distance (m)		320.6	308.4	308.4	119.7	316.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)	6.0					
Storage Blk Time (%)	1	0				
Queuing Penalty (veh)	1	0				

Network Summary

Network wide Queuing Penalty: 1

1: Tunstall Blvd & Adams Rd Performance by movement

Movement	EBT	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.1	0.0	0.0		0.0	0.0
Total Del/Veh (s)	5.6	0.1	0.2		0.1	0.7

2: Adams Rd & Bowen Bay Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.2	0.1	0.1	0.1
Total Del/Veh (s)	1.3	0.5	0.4	0.2	4.3	3.1	1.1

3: Sunset Rd & Adams Rd Performance by movement

Movement	EBT	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	0.4	0.4

5: Whitesails Dr & Tunstall Blvd Performance by movement

Movement	EBT	WBL	WBT	NBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.2	0.1
Total Del/Veh (s)	0.0	1.1	0.0	2.4	1.4

Total Network Performance

Denied Del/Veh (s)		0.1
Total Del/Veh (s)		2.6

Intersection: 1: Tunstall Blvd & Adams Rd

Movement	EB
Directions Served	TR
Maximum Queue (m)	9.3
Average Queue (m)	3.7
95th Queue (m)	11.1
Link Distance (m)	91.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Adams Rd & Bowen Bay Rd

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (m)	0.9	10.5
Average Queue (m)	0.1	8.1
95th Queue (m)	1.9	13.3
Link Distance (m)	35.3	51.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Sunset Rd & Adams Rd

Movement
Directions Served
Maximum Queue (m)
Average Queue (m)
95th Queue (m)
Link Distance (m)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (m)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 5: Whitesails Dr & Tunstall Blvd

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	6.2	12.2
Average Queue (m)	0.9	6.6
95th Queue (m)	7.1	12.6
Link Distance (m)	105.8	58.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.2	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total Del/Veh (s)	3.1	1.3	1.0	3.3	0.8	0.4	12.8	17.7	9.5	13.0	17.7	6.8

4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	4.5

Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	5.0

Intersection: 4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (m)	8.7	10.8	11.9	4.8	24.0	23.4
Average Queue (m)	3.5	1.8	4.9	1.2	14.7	13.9
95th Queue (m)	9.1	8.9	12.9	6.4	26.0	24.4
Link Distance (m)		320.6	308.4	308.4	119.7	316.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)	6.0					
Storage Blk Time (%)	3	0				
Queuing Penalty (veh)	6	0				

Network Summary

Network wide Queuing Penalty: 6

1: Tunstall Blvd & Adams Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.1		0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.1		0.1	0.2	0.3	0.1	0.1	0.4

2: Adams Rd & Bowen Bay Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.2	0.2	0.1	0.1
Total Del/Veh (s)	2.0	0.4	0.3	0.2	4.3	2.3	1.0

3: Sunset Rd & Adams Rd Performance by movement

Movement	EBT	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	0.3	0.3

5: Whitesails Dr & Tunstall Blvd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBR	All
Denied Del/Veh (s)	0.1		0.0	0.0	0.1	0.1
Total Del/Veh (s)	0.0		1.0	0.1	2.3	0.7

Total Network Performance

Denied Del/Veh (s)		0.2
Total Del/Veh (s)		2.0

Intersection: 1: Tunstall Blvd & Adams Rd

Movement	EB
Directions Served	TR
Maximum Queue (m)	8.2
Average Queue (m)	2.5
95th Queue (m)	9.2
Link Distance (m)	91.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Adams Rd & Bowen Bay Rd

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (m)	6.7	10.6
Average Queue (m)	1.0	7.5
95th Queue (m)	6.3	14.2
Link Distance (m)	35.3	51.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Sunset Rd & Adams Rd

Movement
Directions Served
Maximum Queue (m)
Average Queue (m)
95th Queue (m)
Link Distance (m)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (m)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 5: Whitesails Dr & Tunstall Blvd

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	3.4	8.5
Average Queue (m)	0.6	3.9
95th Queue (m)	4.6	10.5
Link Distance (m)	105.8	58.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.0	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2
Total Del/Veh (s)	2.1	0.9	0.9	1.6	0.4	0.2	6.7	7.2	4.2	6.8	7.2	3.5

4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	2.6

Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	3.1

Intersection: 4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (m)	8.2	5.2	9.2	2.3	16.6	16.2
Average Queue (m)	1.7	0.5	2.5	0.3	10.7	10.8
95th Queue (m)	6.8	4.7	9.1	3.6	17.2	17.5
Link Distance (m)		320.6	308.4	308.4	119.7	316.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)	6.0					
Storage Blk Time (%)	1	0				
Queuing Penalty (veh)	2	0				

Network Summary

Network wide Queuing Penalty: 2

1: Tunstall Blvd & Adams Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.1		0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.7		0.2	0.2	0.6	0.1	0.5

2: Adams Rd & Bowen Bay Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.2	0.1	0.2	0.1
Total Del/Veh (s)	1.6	0.4	0.5	0.2	4.6	3.6	1.1

3: Sunset Rd & Adams Rd Performance by movement

Movement	EBT	EBR	WBT	NBL	All
Denied Del/Veh (s)	0.0		0.1	0.1	0.0
Total Del/Veh (s)	0.3		0.0	1.9	0.3

5: Whitesails Dr & Tunstall Blvd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	0.0	0.0	1.0	0.1	3.6	2.3	1.3

Total Network Performance

Denied Del/Veh (s)			0.2				
Total Del/Veh (s)			2.6				

Intersection: 1: Tunstall Blvd & Adams Rd

Movement	EB	NB
Directions Served	TR	LR
Maximum Queue (m)	9.2	0.9
Average Queue (m)	3.0	0.1
95th Queue (m)	10.0	1.9
Link Distance (m)	91.8	63.1
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Adams Rd & Bowen Bay Rd

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (m)	2.7	10.6
Average Queue (m)	0.6	7.5
95th Queue (m)	4.1	13.8
Link Distance (m)	35.3	51.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Sunset Rd & Adams Rd

Movement	NB
Directions Served	LR
Maximum Queue (m)	0.8
Average Queue (m)	0.1
95th Queue (m)	0.7
Link Distance (m)	146.2
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Whitesails Dr & Tunstall Blvd

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	4.5	10.0
Average Queue (m)	0.5	7.1
95th Queue (m)	4.0	12.4
Link Distance (m)	105.8	58.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.1	0.3	0.3	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.2
Total Del/Veh (s)	2.7	1.2	1.0	2.5	1.0	0.8	13.9	18.6	9.7	13.9	17.3	6.5

4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	4.5

Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	5.0

Intersection: 4: Dorman Rd/Miller Rd & Bowen Island Trunk Rd

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (m)	6.6	4.4	12.1	8.6	25.7	25.2
Average Queue (m)	2.8	0.5	5.5	1.3	15.7	14.9
95th Queue (m)	7.7	4.8	14.1	7.4	28.6	26.1
Link Distance (m)		320.6	308.4	308.4	119.7	316.3
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (m)	6.0					
Storage Blk Time (%)	2	0				
Queuing Penalty (veh)	5	0				

Network Summary

Network wide Queuing Penalty: 5

1: Tunstall Blvd & Adams Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0		0.0	0.0
Total Del/Veh (s)	8.9	3.2	0.2	0.3	1.4		0.2	0.5

2: Adams Rd & Bowen Bay Rd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.2	0.1	0.1	0.1	0.1
Total Del/Veh (s)	2.1	0.3	0.5	0.4	4.9	3.4	1.1

3: Sunset Rd & Adams Rd Performance by movement

Movement	EBT	EBR	WBT	NBL	All
Denied Del/Veh (s)	0.0		0.1	0.1	0.0
Total Del/Veh (s)	0.4		0.1	2.7	0.3

5: Whitesails Dr & Tunstall Blvd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0		0.1	0.0
Total Del/Veh (s)	0.0	0.0	1.1	0.3		2.3	1.1

Total Network Performance

Denied Del/Veh (s)			0.2				
Total Del/Veh (s)			2.6				

Intersection: 1: Tunstall Blvd & Adams Rd

Movement	EB	NB
Directions Served	TR	LR
Maximum Queue (m)	8.2	1.8
Average Queue (m)	3.1	0.3
95th Queue (m)	10.5	2.8
Link Distance (m)	91.8	63.1
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Adams Rd & Bowen Bay Rd

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (m)	5.0	0.7	10.6
Average Queue (m)	0.8	0.1	7.8
95th Queue (m)	6.1	1.4	13.7
Link Distance (m)	35.3	338.0	51.6
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Sunset Rd & Adams Rd

Movement	NB
Directions Served	LR
Maximum Queue (m)	0.8
Average Queue (m)	0.1
95th Queue (m)	0.8
Link Distance (m)	146.2
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Whitesails Dr & Tunstall Blvd

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	7.0	10.0
Average Queue (m)	1.4	6.6
95th Queue (m)	7.5	12.2
Link Distance (m)	105.8	58.4
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

The attached information is provided to support the agency's review process and shall not be distributed to other parties without written consent from Bunt & Associates Engineering Ltd.

APPENDIX C

Trip Generation Memorandum

MEMO

DATE: March 28, 2023
PROJECT NO: 04-22-0272
PROJECT: **Cape Roger Curtis Park / Campsite – Bowen Island**
SUBJECT: **Trip Generation Review (Preliminary Memo)**

TO: Lydia Mynott, Landscape Architect
MetroVancouver

PREPARED BY: Hugo Johnston, B. Sc, Transportation Planner
Joseph Chow, P. Eng, Transportation Engineer

REVIEWED BY: Daniel Fung, M. Sc, P. Eng, Principal

1. INTRODUCTION

Metro Vancouver has retained Bunt & Associates Engineering Ltd. to provide transportation planning advice regarding a proposed park/campground at Cape Roger Curtis (CRC), Bowen Island, BC. Metro Vancouver has an agreement to purchase 24 parcels of land on the southwest tip of Bowen Island at Cape Roger Curtis, totalling 97 hectares that Metro Vancouver proposes to a new regional park that will incorporate both day-use and overnight camping areas.

1.1 Background

The land use is currently zoned as rural residential, or RR1 (Rural Residential 1), with a minimum lot size of 4.0 hectares. The rezoning and Official Community Plan (OCP) amendment propose a park, with a variance to allow for supervised tent camping. This land use designation will allow for the creation of a regional park complete with conservation areas, and day-use amenities such as trails, picnic areas, viewpoints, and tent camping.

The proposed regional park would preserve a significant area of ecological importance and sensitive ecosystems; and also provide opportunities for residents of the region, including the Bowen Island community, to connect with nature. Metro Vancouver has submitted a rezoning and (OCP) amendment application to Bowen Island Municipality for the proposed regional park.

Metro Vancouver will prioritize non-vehicular access to the park. Strategies include a seasonal park shuttle, improved trail and greenway connections to the park, and a focus on providing

walk/cycle/shuttle access tent camping opportunities. Some vehicular access will be provided to support accessibility and day-use.

1.2 Purpose and Methodology

The purpose of this preliminary analysis focuses on estimating and comparing the potential number of vehicle trips generated from the existing and proposed land use on the 24 undeveloped lots purchased by Metro Vancouver. These scenarios include:

- Potential Build-out (Low): 24 Single Detached House
- Potential Build-out (High): 15 Single Detached Houses, 6 Single detached homes with 6 additional suites, and 3 five bed Airbnb's
- Campground Trip Generation (incl. 50 Walk-in, 5 Group Sites, 10 Tent Cabins, and 35 vehicle-accessible camps)

Two scenarios have been assumed for the existing rural residential land use as the specificity is not known at the time of this analysis which would impact the number of vehicles generated. These two scenarios represent the high and low range of the anticipated vehicle trip generations. In addition, it is acknowledged that some of the detached single family might have additional land uses attached, such kennels or stables, however, there is a lack of data available to calculate these land uses. Therefore, the high range will be more conservative than the potential build out could result in.

This memorandum summarises the methodology and findings of a trip generation comparison analysis between the allocated/zoned future development at CRC and the trips generated by the CRC proposal taking into account:

- Land uses effected;
- Trip generation information from Metro Vancouver;
- Trip generation information from the Institute of Transportation Engineers (ITE) 11th Edition trip generation database; and
- High-level BC Ferries capacity impact was also reviewed.

This preliminary trip generation estimate for the park/campground does not consider the characteristics for the proposed park/campground such as the ferry access and proximity to the City of Vancouver. Furthermore, the analysis does not account for mitigating factors such as modal splits or highway connections. This analysis has been undertaken to represent the peak day and peak hours for the busiest day of the year, likely impacted by tourism, for example, a weekend in August.

As mentioned, the park will include day-use activities. For this exercise, it is proposed that the park will be ancillary to the campgrounds. The rezoning application will not consider day-use parking and will focus on the provision of camping activities.

1.3 Report Structure

The structure of the report will be as follows:

- Section 2 – Site Description – a brief overview of the site location
- Section 3 – Existing Ferry Capacity – Initial review of the BC Ferry usage data
- Section 4 – Potential Build-out (non-Park/Campground) Vehicle Trip Generation – A calculation of the potential trip generation based on the zoning land use category that the site is allowed to be developed.
- Section 5 – Proposed Park / Campground Vehicle Trip Generation – Proposed campground vehicle trip generation.
- Section 6 – Transportation Demand Management (TDM) – Potential TDM Shuttle Bus Service
- Section 7 – Summary

2. SITE DESCRIPTION

2.1 Cape Roger Curtis Masterplan Area

The Cape Roger Curtis Comprehensive Development Area is in the southwest corner of Bowen Island. The full Cape Roger Curtis masterplan area is comprised of 59 lots, a breakdown of the lot ownership is set out in **Table 2.1**.

As the below table demonstrates, Metro Vancouver has a purchase agreement for 24 of the 59 lots. The remaining 35 lots, not included within Metro Vancouver purchase agreement, but within CRC RR1 Zoning Bylaw are made up of 14 developed lots, 3 lots are used as a nature park and 18 privately sold but undeveloped. The subject proposal will only have an impact on the 24 lots within Metro Vancouver’s control.

Table 2.1: Masterplan Lot Breakdown

OWNERSHIP	NUMBER OF LOTS
Developed Lots	14 lots
Sold Lots (as yet undeveloped or underdevelopment)	18 lots
Wildcoast Nature Refuge (nature park and sanctuary)	3 lots
Proposed Metro Vancouver Regional Park	24 lots
TOTAL CRC RR1 ZONE	59 LOTS

Day-use amenities including trails, open space and interpretation areas will also be included in the park. These amenities are not part of the rezoning and OCP amendment application and will be proposed following the rezoning process. Metro Vancouver will focus on day-use access through the proposed park shuttle, trail, and greenway connections, with some limited car parking areas.

2.2 Bowen Island Accessibility

Bowen Island is a small coastal island within the Strait of Georgia, in the northwest of the Metro Vancouver area. Currently, the island is only accessible by water transport; primarily provided by BC Ferries via the ferry, between the Snug Cove (Bowen Island) and Horseshoe Bay (West Vancouver) Terminals, which depart approximately every hour from 05:00 to 23:00.

There is only one route to CRC from the Snug Cove Ferry Terminal. Grafton Road travels southeast from Snug Cove from the Ferry Terminal before merging into Adams Road halfway along the route. Adams Road continues southeast towards Tunstall Bay and provides connections to several local roads within the vicinity of the site, including Whitesails Drive. Whitesails Drive is a residential road that connects Tunstall Blvd and Cape Drive to the south. Cape Drive travels around the interior of CRC and will provide primary access to the site. All roads within the vicinity of the site are two-way municipal roads.

Currently, there are no transit options to CRC. The nearest route is the #280 bus which runs approximately every hour from the Snug Cove Terminal to the northwest corner of the Island via Grafton Road and Adams Road but does not continue onto Whitesails Road and towards CRC.

2.3 Proposed Campsite Breakdown

CRC is proposing a rezoning and OCP amendment application for approximately 100 campsites, as outlined in **Table 2.1**. The overall park footprint is proposed to be approximately 250 Acres and will be located within the 24 lots with a purchase agreement from Metro Vancouver.

Table 2.1: Proposed Campground Park Program

CAMP PITCH TYPE	NUMBER OF SITES
Group Camping	5
Vehicle-accessible camping	35
Walk-In / Bike In	50
Tent Cabins	10
Total	100

3. EXISTING FERRY CAPACITY

As Bowen Island is served via ferry externally, it is important to understand Ferry operations to consider the potential effects of the trip generation on the island regardless of existing or future conditions. This section reviews the existing ferry service.

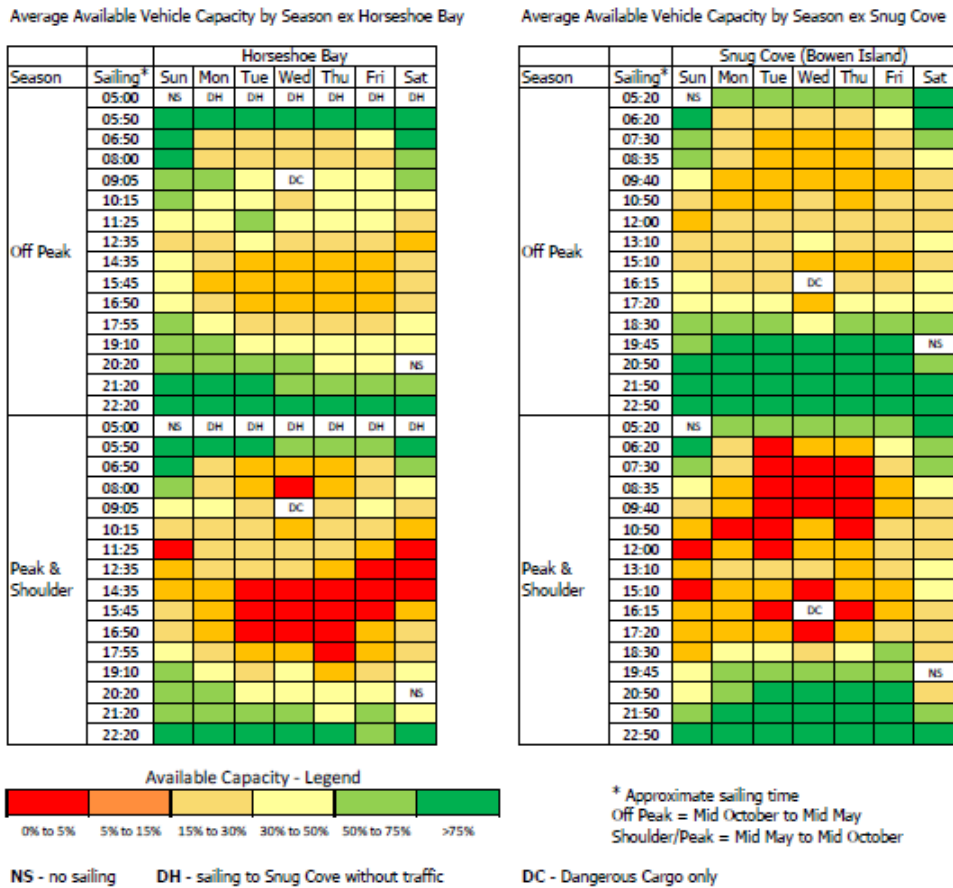
The BC Ferries's average capacity tables for 2022 were provided to Metro Vancouver, dated February 28th, and as seen in **Figure 3.1**, demonstrate the existing vehicle capacity on BC Ferries across the year in 2022. It is assumed that the 14 developed lots (Table 1.1) have been included within that

dataset. The remaining 47 lots, 18 sold / undeveloped lots, 3 lots used a nature refuge and the 24 Metro Vancouver lots are not considered to be included in the 2022 data.

Route 8 between Horseshoe Bay and Snug Cove is operated by BC Ferries. The ferry that travels the route is called 'Queen of Capilano', with a capacity of 85 vehicles and approximately 451 people (including staff).

Figure 3.1: BC Ferries's average weekly average capacity

Route 8 - Horseshoe Bay to Snug Cove Available Vehicle Capacity Analysis Jan to Dec 2022



As can be seen, the majority of services within the midday period of the peak & shoulder season are 5% from capacity or fully occupied between Horseshoe Bay to Snug Cove. On Sunday and Monday, there is a 15% or more capacity. Earlier and later services on this leg typically see capacity available, with frequently more than 30% capacity available across the week.

The Snug Cove to Horseshoe Bay sees most of the busiest services towards the end of the weekends or within the early part of the week. Services from 07:30 to 10:50 are frequently at 95% capacity or fully occupied. Services later than 18:30 typically have 30% spare capacity or more.

Further analysis of the BC Ferry services will be undertaken within a full Transportation Impact Assessment (TIA) as part of the next steps of the project scope.

4. POTENTIAL BUILD-OUT VEHICLE TRIP GENERATION

This section summarises the existing land use trip generation (based on non-Park/Campground zoning) for the 24 lots included within the purchase agreement with Metro Vancouver.

4.1 Existing Lot Vehicle Trip Generation

An estimated number of two-way trips (arrival and departures) to be generated by the existing lots with potential zoning built-out lots include as part of the proposed Regional Park by Metro Vancouver was calculated. As previously mentioned, Metro Vancouver has an agreement to purchase a total of 24 lots which are currently zoned as Rural Residential 1 (RR1), as are the remaining lots within CRC.

Rural Residential 1 rezoning allows for the development of the following land uses:

- Dwellings
- Agriculture
- Horticulture
- Domestic Agriculture
- Stable; and
- Kennel.

Accessory uses of land, buildings and structures for RR1 are as follows:

- Home Occupation – Five guest bedrooms on lots 2ha or greater
- Bed and Breakfast use – No separate kitchens
- Portable Saw Mill
- Mini-storage; and
- Dwellings with a secondary suite.

The 24 lots included in the proposed Regional Park by Metro Vancouver are currently vacant. However, any of the above land-use could be developed on these lots should the ownership change. Therefore, to determine the potential trip generation of these lots, two scenarios have been assumed based on direction as provided by Metro Vancouver. These assumptions are:

- Low Range - Single Family / Detached Residential Units – 24 rural residential dwellings have been anticipated, with no secondary units assumed. The residential trip rates will be calculated based on vehicle movements. From the ITE trip generation manual, this review is based on the averages of 3.6 residents per dwelling unit and 1.5 vehicles per dwelling unit from 30 surveys. With a PM two-way vehicle trip rate of 0.94 (veh/unit) and two-way all-day trip rate of 9.43 (veh/unit)
- High Range – Potential - Single Family / Detached Residential Units with accessory uses of land and building. This includes:
 - 12 of the lots will likely have single detached family dwellings. Using the same trip rate as those used in the low range.
 - 6 of the lots will be made up of single family detached homes with an additional unit attached. As no such rates exist for residential units with a secondary unit in ITE, an assumption has been made that the units will be calculated as single detached family dwellings with a multifamily-low rise apartment on the ground floor, this is seen as a conservative estimate.
 - Furthermore, MetroVancouver anticipate that 3 of the lots will be used by single detached family units with additional land uses associated, such as a kennel or stables. Unfortunately, due to a lack of data, these units have been considered as just single-family units. Further to this, the peak hours of the kennels and stables may not be consistent with the peaks of a park/campground.
 - Finally, 3 x 5-bedroom B&B with no individual kitchens will occupy the remaining 3 lots. Each unit with the B&B will not have separate access to communal facilities such as kitchens and some shower facilities. Due to limited data, a motel trip rate is assumed as the representative land use to represent a B&B land use. These sites typically provide sleeping accommodations with few additional facilities. A two-way daily vehicle trip rate of 3.35 (veh/room) was used, with 0.36 (veh/room) two-way vehicle trip rate in the PM peak.
 - Therefore, for vehicle trip generation purposes, a total of 21 family detached homes, 6 secondary suites, and 3 five bedroom B&B is assumed.

The highest trip generation scenario that could be observed within the 24 lots would be for all 24 lots to develop multiple room BnB accommodation, this would generate a significant level of traffic during the summer peak but is deemed to be unrealistic.

Presented in **Table 4.1** are the vehicle trip rates applicable to the proposed development based on the 'ITE Trip Generation Manual 11th Edition + Supplement'. For both residential and B&B land uses, 'Rural or General Suburban' settings were applied to extract the vehicle trip rate estimate.

The AM vehicle trip rates and vehicle trip generation was not analysed as it generates a low level of trips in comparison to the PM and daily rates. Furthermore, the proposed use does not have sufficient AM peak generation data available to compare to the potential build-out trip generations.

Table 4.1: Vehicle Trip Generation Rates

ITE CLASS USE	SOURCE	PARAMETER	WEEKDAY PM PEAK			WEEKDAY		
			Average Vehicle Trip Rate	% Entering	% Exiting	Average Vehicle Trip Rate	% Entering	% Exiting
Single Family Scenario - Detached Residential Dwellings	ITE Land Use Code 210	Dwelling Units	0.94	63%	37%	9.43	50%	50%
Secondary Unit - Multifamily House (Low-Rise)	ITE Land Use Code 220	Dwelling Units	0.51	63%	37%	6.72	50%	50%
5-bed B&B - Motel	ITE Land Use Code 320	Dwelling Units	0.36	54%	46%	3.35	50%	50%

Application of these vehicle trip rates to the existing land use zoning is outlined in **Table 4.2** to estimate the potential number of vehicle trips should each of the 24 lots be developed per the current zoning allocation.

Table 4.2: Vehicle Trip Generation

USE	DENSITY	WEEKDAY PM PEAK			WEEKDAY		
		In	Out	Total	In	Out	Total
Low Range Scenario							
Detached Residential dwellings	24 x Single Family Homes	14	8	23	113	113	226
	<i>Low Range Total</i>	<i>14</i>	<i>8</i>	<i>23</i>	<i>113</i>	<i>113</i>	<i>226</i>
High Range Scenario							
Detached Residential dwellings	21 x Single Family Homes	12	7	20	99	99	198
Multifamily House (Low-Rise)	6 x Secondary Suites	2	1	3	20	20	40
Motel	3 x 5 bedrooms B&Bs	3	2	5	25	25	50
	<i>High Range Total</i>	<i>17</i>	<i>11</i>	<i>28</i>	<i>144</i>	<i>144</i>	<i>289</i>

The existing land use zoning could generate around 23 vehicles in the PM peak for the large residential units. The anticipated weekday trips could generate 226 total two-way trips across a

24hr period. In comparison, should the 24 lots be developed as mixed uses including single family homes, secondary suites, and B&B, the existing lots would generate 289-weekday trips two-way trips across a 24hr period and 28 PM Peak hour trips.

5. PROPOSED LAND USE VEHICLE TRIP GENERATION - CAMPGROUND

This section presents the approach to assess the anticipated number of new vehicle movements that the development project could potentially generate.

5.1 Campground Vehicle Trips

Campgrounds typically reach peak occupancy during the PM and evening hours, with a lower turnover than the day-use would see per the Institute of Transportation Engineers (ITE) trip generation guidelines where the weekend peak hour rates are not provided. However, with the locale for this site, we suspect the PM evening hour peak occupancy would translate into weekend use. Checking out for most campsites is typically before 11:00 on the final day of a reservation, while check-in for those arriving is normally after 13:00.

As previously mentioned, a campground containing 100 campsites, including 5 group campsites provided across 11 of the 24 lots purchased by Metro Vancouver. The campsites will be available by reservation only with campground facilities provided, such as toilet blocks and waste collection. 55 (50 Walk-in/Bike-in and 5 Tent cabins) of the proposed sites are to be accessible by sustainable modes only (Walk, Bike or Shuttle Bus). These will have no car trips associated with them. For this study, only 35 standard campsites, 5 Group sites and 5 Tent campsites are proposed to have vehicle access. The following assumptions were provided by Metro Vancouver as input for the group camp pitches and are set out in **Table 5.1**.

Table 5.1: Metro Vancouver’s Proposed Camping Program

TYPE	# SITES	ACCESS TYPE
Walk-In/Bike-In	50	Bike/hike/shuttle
Group	5	Shuttle/Van
Tent Cabin	10	5 vehicles, 5 bike/hike/shuttle
Vehicle-Accessible Camp	35	1 vehicle per site
Total	100	

And as with the previous campground trip generation calculations, the following assumptions have been assumed, with the trip rates set out within **Table 5.2**:

- All campsites are reserved and/or occupied during the peak periods.
- Vehicles per standard campsite is 1 vehicle and 2 vehicles per group campsite. (Group campsites are booked as one but can accommodate up to 5 tents/vehicles).

- Trip rates for the vehicle campsites have been obtained from the ITE manual for occupied sites. The PM peak (or assumed weekend peak) arrival rate was 0.40 vehicle trips per occupied site.
- Whilst day-use parking is being provided, it is not being considered as part of this memorandum.

Table 5.2: Vehicle Trip Generation Rates

USE	SOURCE	PARAMETER	PM VEHICLE TRIP RATES			DAILY VEHICLE TRIP RATES		
			In	Out	Total	In	Out	Total
Standard Campsites	ITE LUC 416	Camp pitches	0.75	-	0.75	0.75	0.50	1.25
Group Site	Metro Vancouver Data	# of group sites	1.60	-	1.60	1.60	1.0	2.60

Application of these vehicle trip rates to the proposed camping provision is outlined in **Table 5.3** to estimate the anticipated number of vehicle trips generated by the proposed campgrounds.

Table 5.3: Vehicle Trip Generation

USE	DENSITY	PM VEHICLE TRIPS			DAILY VEHICLE TRIPS		
		In	Out	Total	In	Out	Total
Campground (Vehicle Accessible)	40-vehicle accessible - campsites	30	0	30	30	20	50
Campground (Group Site)	5 Group Sites	8	0	8	8	5	13
TOTAL CAMPGROUND		38	0	38	38	25	63

As can be seen, the proposed site will generate around 38 vehicle trips in the PM peak for the full site. The anticipated peak day trips would generate 63 total two-way vehicle trips across a 24hr period.

5.2 Day Use

The focus of this study is traffic associated with the proposed campground park use. Which is the subject of the Bowen Island Municipality rezoning and OCP amendment process. Future park day-use access will be focused on sustainable modes such as the proposed park shuttle, trail, and greenway connections. It is anticipated that some day-use parking will be required for accessibility and to support local resident access. Day use parking supply will be determined and managed to avoid impacts to local residents and will be included in the complete Transportation Impact Assessment that is underway for the project but is not considered for the land use comparison.

5.3 Net Trip Generation

As the campground will replace the existing zoning bylaw on the 24 lots purchased by Metro Vancouver, a comparison in the number of trips generated by the existing land use allocation

against the proposed campgrounds has been undertaken. The comparison is demonstrated in **Table 5.4**. Both land uses set out in Table 4.2 have been compared against the proposed campground to demonstrate the worst-case and the most realistic situation.

The net trip rates demonstrate the level of the difference the proposed campground will have compared to the zoning bylaw.

Table 5.4: Net Vehicle Trip Generation

USE	DENSITY	PM VEHICLE TRIPS			DAILY VEHICLE TRIPS		
		In	Out	Total	In	Out	Total
Low range scenario (detached housing)	24 homes	14	8	23	113	113	226
High range scenario (mixed of detached homes, secondary suites, secondary uses, and B&B)	12 homes 6 secondary suites 3 secondary uses 3 x 5 room B&B	17	11	28	144	144	289
Park / Campground	40 vehicle accessible campsites + 5 Group Sites	38	0	38	38	25	63
Net - low range scenario		24	-9	15	-75	-88	-163
Net - high range scenario		21	-11	10	-106	-119	-226

As is demonstrated, the net impact of the proposed campground against the potential detached residential units will result in a reduction of 163 vehicle trips during the peak day but an increase of 15 vehicle trips in the PM peak. As mentioned, the proposed day use has not been considered within the trip generation exercise above, however, it will form part of the rezoning application.

When the proposed campground is compared to the potential high range mixed-use scenario, it will result in a decrease in a total of 226 two-way vehicles during the peak day and an increase of 10 two-way vehicle trip in the PM peak.

Overall, the campground would result in a reduced trip rate in the Peak day two-way trips when compared to both the potential land uses accepted within the bylaw.

Therefore, any campsite developed will result in a reduction in trips when compared to the land use currently accepted within the zoning bylaw.

5.4 Potential Ferry Impact

The 63 peak-day two-way campground vehicle trips represent a 72% reduction when compared to the potential impact generated by the single-family units and 78% in comparison to the high range potential build-out. A significant reduction on the capacity demands of the potential build-out impact of the ferry services.

The daily outbound trips for the proposed campsite would be 25-30 trips, 29-35% of the ferry capacity and 35-40 inbound trips, approximately 35 - 47% of the capacity. In each direction, 3-5 services are indicating they have above 30% spare capacity outside of the peak crossing times.

When visitors to the campground book their campsite, they will be directed to sailing on off-peak ferries, outside of 10:00-18:00 as part of their travel to Bowen Island.

As previously mentioned, a detailed review of the BC Ferry capacities will be produced within the TIA report.

6. TRANSPORTATION DEMAND MEASURES

As part of the rezoning application, a Transportation Demand Management Plan (TDM) is to be included. Within, a detailed list of the measure will be set out with additional details about how the TDM will be implemented and maintained. The purpose of the TDM plan will be to reduce the number of vehicle trips generated by the site and ensure that sustainable transportation options are widely accessible.

One such TDM measure that has already been proposed by Metro Vancouver is the provision of a shuttle bus. The ferry service pick-up location has yet to be confirmed, whether this will take place at Snug Cove or Horseshoe Bay. These details will be finalised through conversations with stakeholders, Metro Vancouver and BC Ferries.

The shuttle bus service will encourage campers to arrive on the island by sustainable non-private motorised vehicles. Pedestrians can use travel on the ferry as foot passengers before travelling to CRC.

7. SUMMARY

The following summarizes the potential and anticipated vehicle trip generated based on various land use options for the 24 undeveloped CRC lots.

- The masterplan area of CRC is made up of 53 lots, Metro Vancouver has a purchase agreement on 24 of these lots, all currently zoned as RR1 – Rural Residential 1 bylaw. The anticipated vehicle trip generated based on the current zoning bylaw for the 24 lots in the purchase agreement with by Metro Vancouver has been evaluated as two potential scenarios:
 - i. Low range scenario: 24 single family homes or
 - ii. High range scenario: mixed uses including 12 single family homes, 6 single family homes with secondary suite, 3 single-family homes with secondary uses (stable/kennel), and 3 five room B&B.

- The potential development assumed under the current zoning of the low range scenario is estimated to generate 23 two-way vehicle trips in the PM peak hour and 226 two-way vehicle trips on a weekday. The anticipated trip generation for the high range scenario is estimated to generate approximately 28 to-way vehicle trips in the PM peak hour and 289 two-way vehicle trips on the weekday.
- The vehicle trip generation for the proposed campground is 38 vehicle trips in the PM peak hour and 63 weekday vehicle trips. The net impact of the campsite results in a reduction of 163 and 226 total two-way trips when compared to the potential low range and high range scenarios, respectively.
- The net impact trips generated by the proposed campsite can be spread across the ferry as current data has shown ferry capacity outside of the peak periods. Further traffic and capacity analysis will be completed as part of the next steps of the project.

cc: Jeffrey Fitzpatrick - jeffrey.fitzpatrick@metrovancover.org

Emergency Management Overview

Proposed Regional Park at Cape Roger Curtis, Bowen Island

EMERGENCY MANAGEMENT OVERVIEW

Proposed Regional Park at Cape Roger Curtis, Bowen Island

Background

On March 27, 2023, the Bowen Island Municipality (BIM) Emergency Program Executive Committee provided summary comments on Metro Vancouver's rezoning and Official Community Plan (OCP) amendment application for the proposed regional park at Cape Roger Curtis. The Committee identified a number of questions related to evacuation, fire risk management and response, emergency services and other considerations.

This memo outlines Metro Vancouver's approach to emergency management in regional parks and its application to the proposed regional park at Cape Roger Curtis. The principles, approaches and resources outlined herein reflect Metro Vancouver's experience in emergency preparedness and commitment to safety, collaboration and readiness.

Regional Parks and Emergency Response

Metro Vancouver works closely with local emergency service providers and municipalities to manage risk and respond to emergencies as they arise.

The proposed regional park at Cape Roger Curtis will be staffed with dedicated, trained, full time and seasonal staff and equipped with vehicles and equipment that staff use in park operations, including emergency management. These staff and resources will be in addition to the existing complement of full time and seasonal staff, vehicles and equipment already allocated to operate Crippen Regional Park on Bowen Island.

Regional Parks operations staff are qualified in bylaw enforcement, first aid, emergency management, resource management and wildfire response. Regional Park staff co-ordinate, train and share information with local municipalities to manage risks and advance emergency preparedness at a community level.

In addition to dedicated on-island staff and resources, Metro Vancouver has a dedicated Emergency Management Division, extensive wildfire response resources from its Watershed Protection Division, and communications, engineering, resource management, regulation and compliance and other system resources that are available, that can be mobilized in short order to support emergency management requirements at local levels.

Metro Vancouver maintains strong relationships with the Ministry of Emergency Management and Climate Readiness and has a proven record of coordinated successful emergency response, across the region.

Every regional park has a site-specific emergency plan, dedicated equipment and infrastructure on

hand to respond to emergency situations, including wildfire. Following completion of the municipal rezoning and OCP amendment application, a site-specific emergency management plan will be developed as part of the detailed park design process, including additional technical studies, collaboration with Bowen Island Municipality and local emergency service providers.

Interim Park Operation

On May 9, 2023, Metro Vancouver finalized the purchase of the proposed regional park at Cape Roger Curtis.

At this time, the land is not open to the public for day or overnight use. Regional Park staff are taking steps to secure and maintain the property while the park planning, municipal rezoning and OCP amendment processes proceed. To protect the site's ecology and ensure public access, Metro Vancouver is implementing the following:

- site monitoring, oversight and bylaw compliance;
- a Wildfire Preparedness and Response Plan;
- continued public access to existing municipal trails and roads;
- restriction of unauthorized vehicle access to parkland.

Public access, capital improvements and ecological enhancements will follow successful completion of the park planning, municipal rezoning and OCP amendment processes.

Jurisdiction

Regional parks fall within the jurisdiction of local first responders for police, ambulance and fire service. Because regional parks are staffed with highly trained, uniformed staff, and facilities and programming are designed to minimize risk, regional parks generate low volumes of emergency calls.

A significant proportion of visitors to the proposed regional park at Cape Roger Curtis are expected to be local residents. Emergency calls to the park have a high likelihood of being in response to a local resident experiencing an emergency while enjoying the park.

Regional Park staff are responsible for enforcement of the Regional Park Bylaw.

Metro Vancouver Wildfire Risk Management and Response

Metro Vancouver has a comprehensive fire management system that includes nine fire weather stations around the region. Regional Parks' fire response protocols follow the Provincial wildfire response model and staff work closely with the Province in its planning and suppression efforts.

Led by the Metro Vancouver Emergency Management Division, a regional scale Fire Conditions Task Group meets regularly during the wildfire season to guide Metro Vancouver's preparedness and response. Staff from multiple departments come together using available data and fire danger ratings to advise upon expected staff and public behaviors across the region during the fire season.

Each regional park has a Wildfire Preparedness and Response Plan that includes a description of access for fire vehicles, possible staging areas for fire trucks and command stations, location of fire hydrants, water standpipes and other water sources, and special circumstance areas. A Wildfire Preparedness and Response Plan will be developed for the proposed regional park at Cape Roger Curtis.

Each park also has wildfire suppression equipment, supplemented by an equipped systems fire trailer that can be transported to any park site quickly, and staff with S-100 Fire Suppression and Safety training. In the case of the proposed park at Cape Roger Curtis, dedicated pumps, water storage and other fire suppression equipment will be acquired and stored on site.

During HIGH and EXTREME wildfire conditions, Metro Vancouver Regional Parks dramatically increases its staff patrols and monitoring of all parks, greenways and conservation areas. Increased signage informing members of the public about fire danger is also posted. Website advisories are managed for each regional park indicating fire danger ratings restrictions and closures.

In the case of an emergency, trained park staff are often first to respond and immediately notify the local fire departments who have authority over fire incidents, unless the Province assumes command. Metro Vancouver has a specialized Watershed Fire Protection Program with highly trained staff that are on-call 24 hours a day during fire season. Initial attack crews are available all season to respond to fires in parks.

The Province also stands ready to support local response. Metro Vancouver has a resource sharing agreement in place with BC Wildfire Service – Metro Vancouver and Provincial fire response teams are deployed together every year.

During the fire season, all residents and parks visitors are urged to use caution in outdoor spaces, to be aware of all spark sources and immediately report all fires to 911. Park visitors are asked to obey posted signs and fire danger guidelines. Under EXTREME fire risk, briquette barbecues are prohibited everywhere. There will be no open fires in the proposed regional park.

The municipal Fire Chief is the local authority and Metro Vancouver will always follow any site specific restrictions imposed by the Fire Chief.

The Regional Parks Regulation Bylaw includes prohibitions for starting fires, smoking, and unauthorized cooking devices. Fines for each offence are \$500 to \$1000.

Evacuation, Emergency Response and Planning

In the case of an emergency situation requiring the need for planned or tactical evacuation or shelter in place, Metro Vancouver would work closely with local authorities to manage the response in the proposed regional park.

Should an evacuation, or shelter-in-place order be installed by local authorities, the needs of overnight campers at the proposed regional park at Cape Roger Curtis would be managed as follows:

- Metro Vancouver would activate an Emergency Operations Centre (EOC) or Department Operations Centre (DOC). Park staff would provide information to park visitors on evacuation or shelter-in-place requirements, working closely with local RCMP and emergency management officials
- For park visitors without personal vehicles, Metro Vancouver would provide transportation to evacuation points via the park shuttle or contracted helicopter services, if necessary
- In a worst-case scenario of local roads, ferry and emergency evacuation options being unsafe or overcapacity – additional staff, equipment and supplies would be delivered to the site via contracted boat or helicopter service
- Metro Vancouver will maintain stores of emergency supplies on site including first aid, fire suppressions equipment, backup generator, fuel, food and other emergency supplies
- The dedicated park shuttle will be on hand to support evacuation efforts.
- Through the camping reservation system, overnight park visitors will be advised to come prepared with basic emergency supplies and some additional food in case of emergency

Bowen Island Municipality Emergency Preparedness and Plans

Metro Vancouver works closely with municipalities across the region to ensure public safety, and to plan and train for emergency response.

For the proposed regional park at Cape Roger Curtis, Metro Vancouver will work with Bowen Island Municipality to update emergency response and evacuation plans. Metro Vancouver will contribute to costs associated with updating municipal emergency plans related to the proposed regional park.

Summary

- Metro Vancouver is actively monitoring the site and managing risks as the park planning and municipal rezoning and OCP amendment process proceeds.
- The park will be staffed with highly trained, uniformed staff in addition to existing on-island staff in place to operate Crippen Regional Park. In the case of an emergency, these staff will support the response.
- Metro Vancouver Regional Parks staff actively manage parks to minimize risk; these parks generate a very low volume of emergency calls.
- Metro Vancouver has extensive resources dedicated to wildfire risk management and response including initial attack and wildfire suppression crews.
- Dedicated emergency management supplies and fire response equipment will be procured and stored on site.
- Following completion of the municipal rezoning and OCP amendment application, a site-specific emergency management plan will be developed as part of the detailed park design process, including additional technical studies, collaboration with Bowen Island Municipality and local emergency service providers.

- Metro Vancouver will work collaboratively with Bowen Island Municipality to update municipal emergency response and evacuation plans. Metro Vancouver will cover any cost incurred to update those plans directly related to the park.
- Metro Vancouver will work with Bowen Island Municipality to co-ordinate with emergency service providers annually, and seek opportunities for collaborative training and emergency planning exercises.



Proposed Regional Park at Cape Roger Curtis

Draft Concept and Program
June 2023

Executive Summary

The draft park concept, program and guiding principles have been developed based on research, inventory, analysis, and engagement with First Nations, the public, stakeholders, and government agencies during phase one of the park planning process.

The draft park concept, program and guiding principles illustrate key values and a foundational park program, including environmental protection, restoration, and opportunities for day and over-night uses.

Phase two engagement will seek feedback on the draft park concept, program and guiding principles and share information from technical studies on traffic and access, phasing, visitor management, and emergency planning. Metro Vancouver is engaging First Nations to explore opportunities to work collaboratively to incorporate traditional and current knowledge into the park's concept and long-term management.

First Nations Acknowledgement

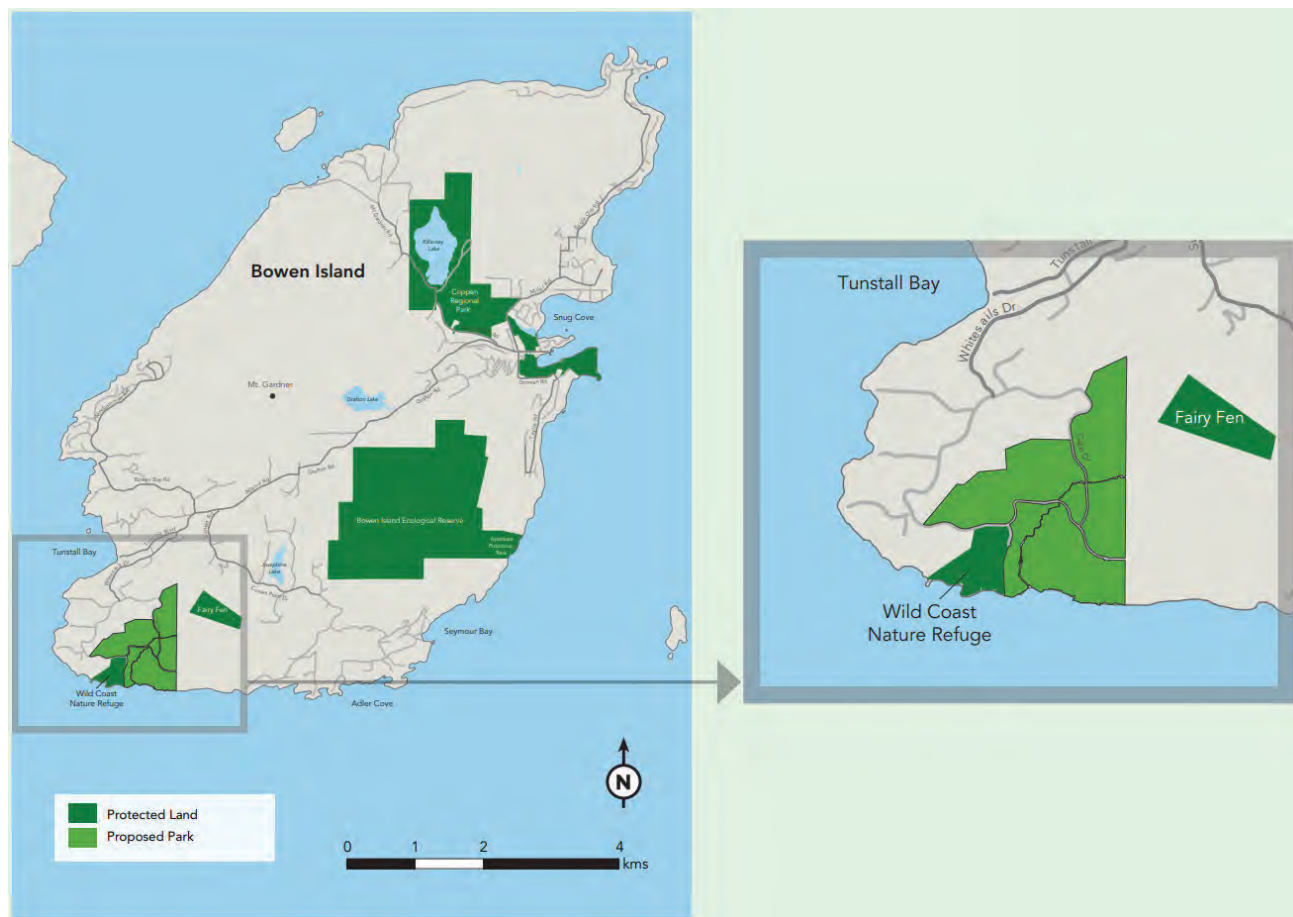
The proposed regional park at Cape Roger Curtis on Bowen Island is within the territories of the Skwxwú7mesh Úxwumixw/Squamish Nation, xʷməθkʷəyəm/Musqueam Indian Band and səlíl-wətaʔ/Tsleil-Waututh Nation. We respectfully acknowledge the significance of Bowen Island and the Howe Sound for all three Nations, particularly the Skwxwú7mesh Úxwumixw/ Squamish Nation.

The proposed regional park presents an opportunity to advance collaboration and reconciliation with First Nations. Metro Vancouver is engaging local First Nations to explore opportunities to work collaboratively on this project over the long term.

Context

In May 2023, Metro Vancouver finalized the purchase of 24 parcels of land at Cape Roger Curtis on Bowen Island for the purpose of establishing a new regional park. The proposed park preserves a large area of ecologically important and sensitive dry coastal bluff ecosystem and provides opportunities for residents of the region and the Bowen Island community to connect with nature.

Metro Vancouver initiated the park planning process for the proposed park at Cape Roger Curtis in January 2023. Developing a concept plan for the park will run concurrently with an application to Bowen Island Municipality to rezone the properties from rural residential to park, as well as an amendment to the Official Community Plan from residential to regional park use.



Draft Guiding Principles



Draft Guiding Principles

The draft guiding principles describe values and aspirations that will guide the proposed regional park's planning, design, implementation and operation. These principles have been developed based on the project purpose and outputs from phase one.

- protect and enhance sensitive natural areas and strengthen ecological connectivity on Bowen Island;
- Ensure access, enjoyment and participation in the park by local residents, and minimize any impacts on local infrastructure;
- provide sustainable and inclusive park access, including opportunities for day and overnight use;
- foster relationships with First Nations to ensure meaningful opportunities for participation during planning, design and operation and programming;
- Incorporate public safety, stewardship and ecological resilience in all aspects of park planning design and management practices;
- create opportunities for learning and knowledge sharing through research, stewardship, programming and interpretation;
- integrate park design with the natural landscape, focus uses on disturbed areas and establish buffers to neighbouring land uses; and
- improve and adapt management and policies continually.

Park Sub-Areas



TRAIL NEAR AN ENVIRONMENTAL COVENANT AREA

Five park sub-areas have been identified within the park based on biophysical resources, visual character, and opportunities for park visitor experiences:

- Burke Creek
- Forest Core
- Inland Bluffs
- East Bluffs
- Huszar Creek / Coastal Bluffs



PARK SUB-AREAS

Draft Park Concept

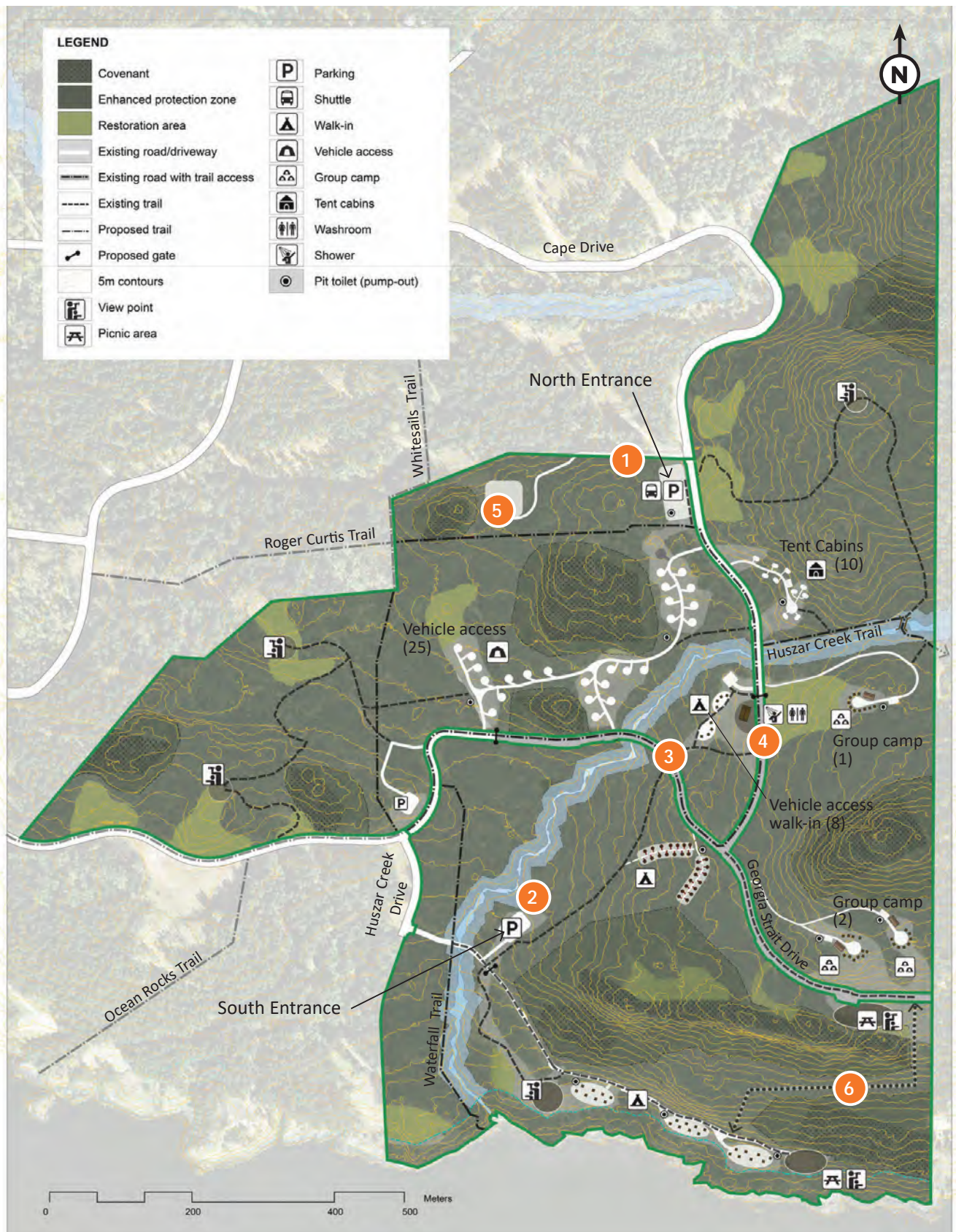
The site’s significant ecological values will be protected and enhanced, and disturbed areas will be restored to a natural condition where possible. The draft concept focuses on utilizing previously cleared areas to support day-use and overnight uses, such as picnic areas and tent camping. Activity areas include trails, viewpoints and areas for overnight use.

Sustainable access to the park, by shuttle or trail, will be prioritized, with some car access provided for accessibility. A quiet, pedestrian-focused experience will be created by limiting vehicles, converting sections of existing road to trails and public space, and establishing trail connectivity throughout the site.

Metro Vancouver is engaging First Nations to explore opportunities to work collaboratively over the long term and to incorporate traditional and current knowledge into park planning and management. The park will be implemented and opened in phases and adaptively managed. The draft concept plan shows the basic arrangement of the protected areas and park activities.



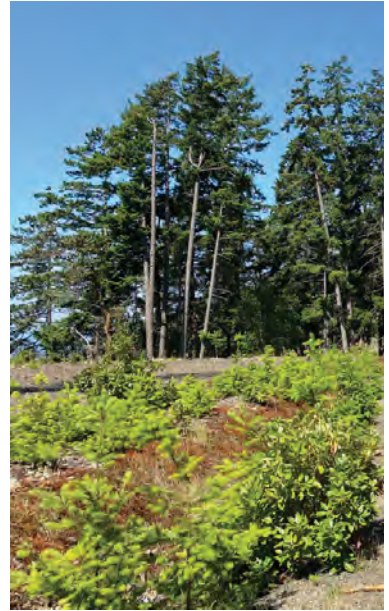
- 1 North Entrance**
Parking +/- 20 vehicles
Shuttle drop-off/pick up
- 2 South Entrance**
Parking +/- 20 vehicles
Shuttle drop-off/pick-up
- 3 Road closure**
section of road closed to private vehicles,
trail, operational and exceptional vehicle
access permitted
- 4 Central Amenity Area**
with washroom and shower
- 5 Service area**
Storage and park office
- 6 Bluff Staircase**
Subject to feasibility



Burke Creek



BENCH, FENCE AND BRIDGE



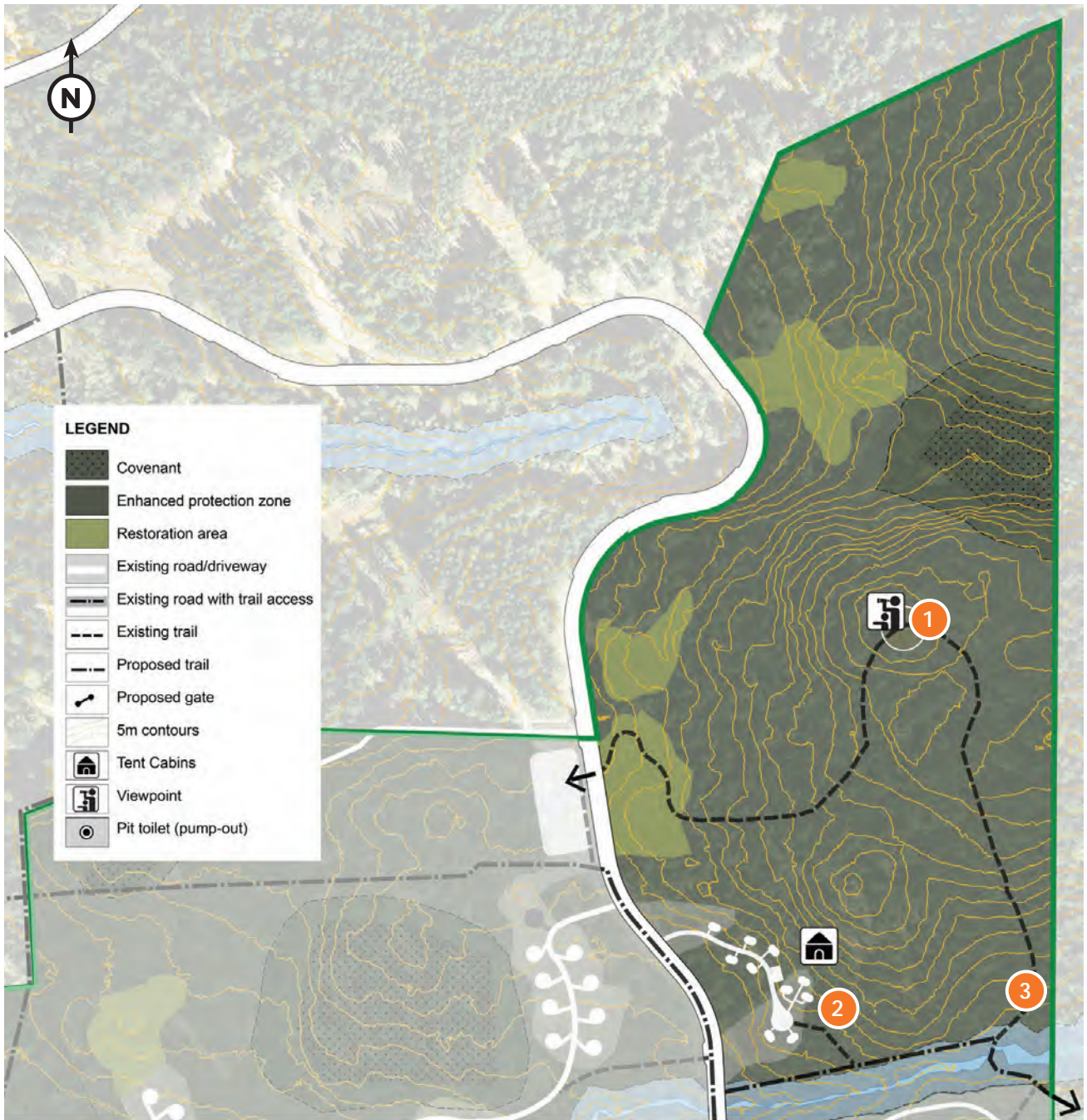
REGENERATING VEGETATION



TENT CABIN



TRAIL



0 100 250 Meters

- 1 Proposed viewpoint**
- 2 Tent cabins**
10 sites
- 3 Trail realignment/bridge**
Locate amenities outside of riparian setback



Forest Core



SMALL SCALE WASHROOM



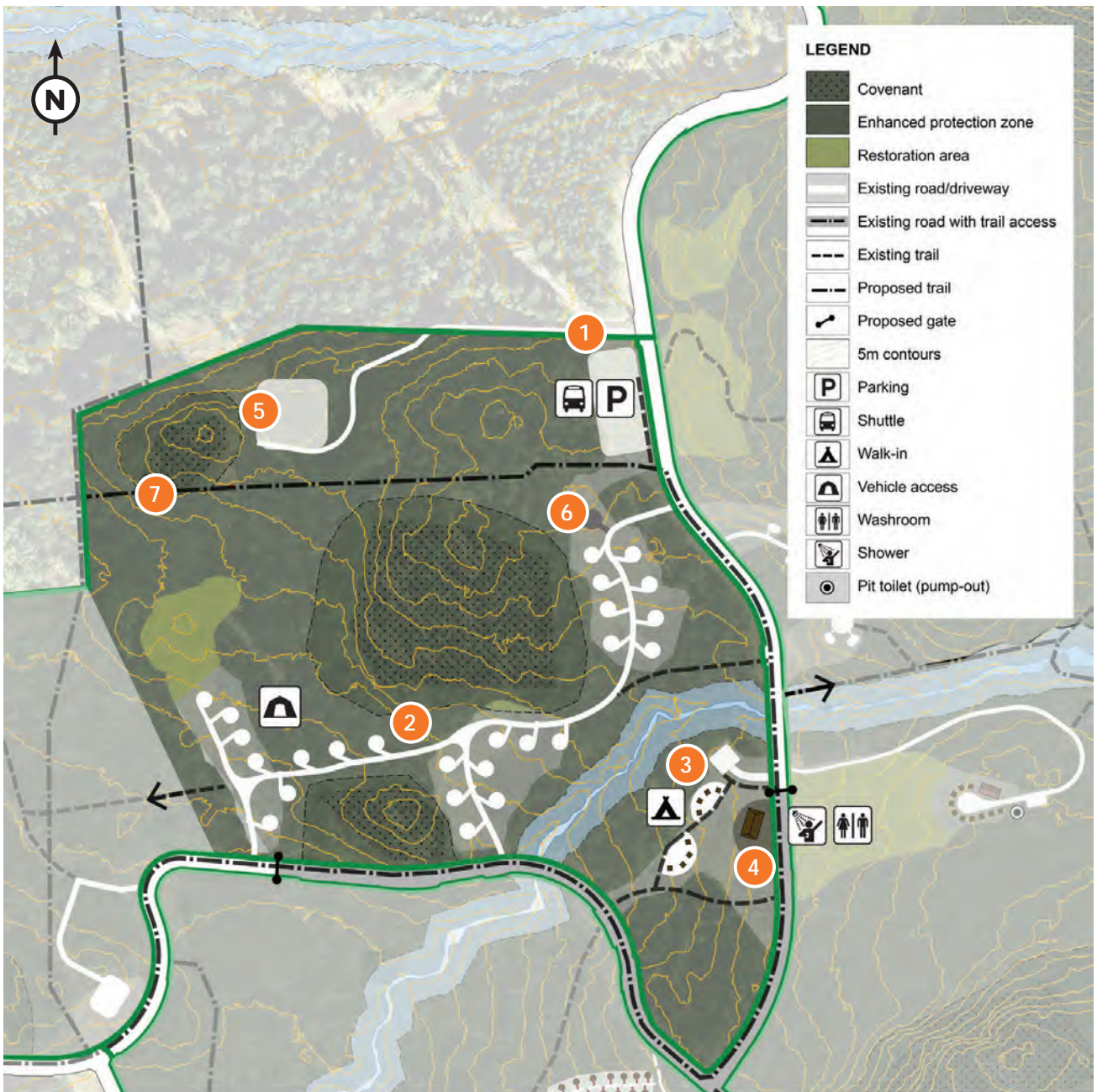
PARKING FOR VEHICLE ACCESS WALK IN SITES



VEHICLE CAMPING



BOARDWALK TRAIL



0 100 250 Meters

- 1** South entrance
Parking +/- 20 vehicles
Shuttle drop-off/pick-up
- 2** Vehicle camping
25 sites
- 3** Vehicle access walk-in
8 sites

- 4** Central amenity area
with washroom/shower
- 5** Service area
Storage and park office
- 6** Camp host
- 7** Trail realignment
realign out of covenant



Inland Bluffs



VIEW TOWARDS WORLCOMBE ISLAND



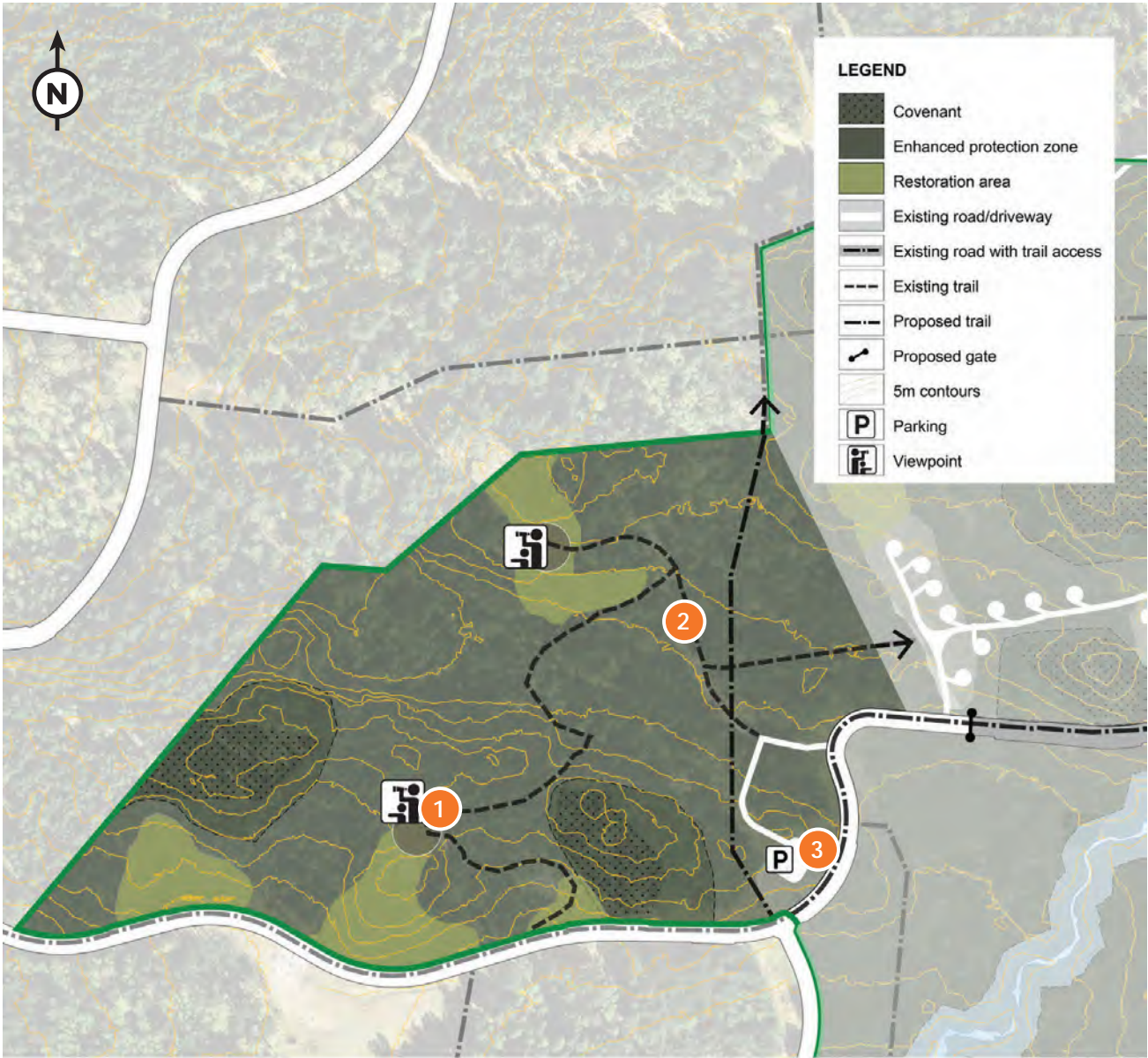
EXISTING DRIVEWAY



VIEWPOINT



INTERPRETIVE SIGNAGE



- 1 Viewpoint/s**
- 2 Interpretive trail** - developed on existing driveways and logging road
- 3 Staging area**
+/- 10 vehicles



East Bluffs



SHELTER



NATURE PLAY



GROUP CAMP SCENE



TENT PADS



- 1** Group camps
3-5 sites
- 2** Shelter



Huszar Creek / Coastal Bluffs

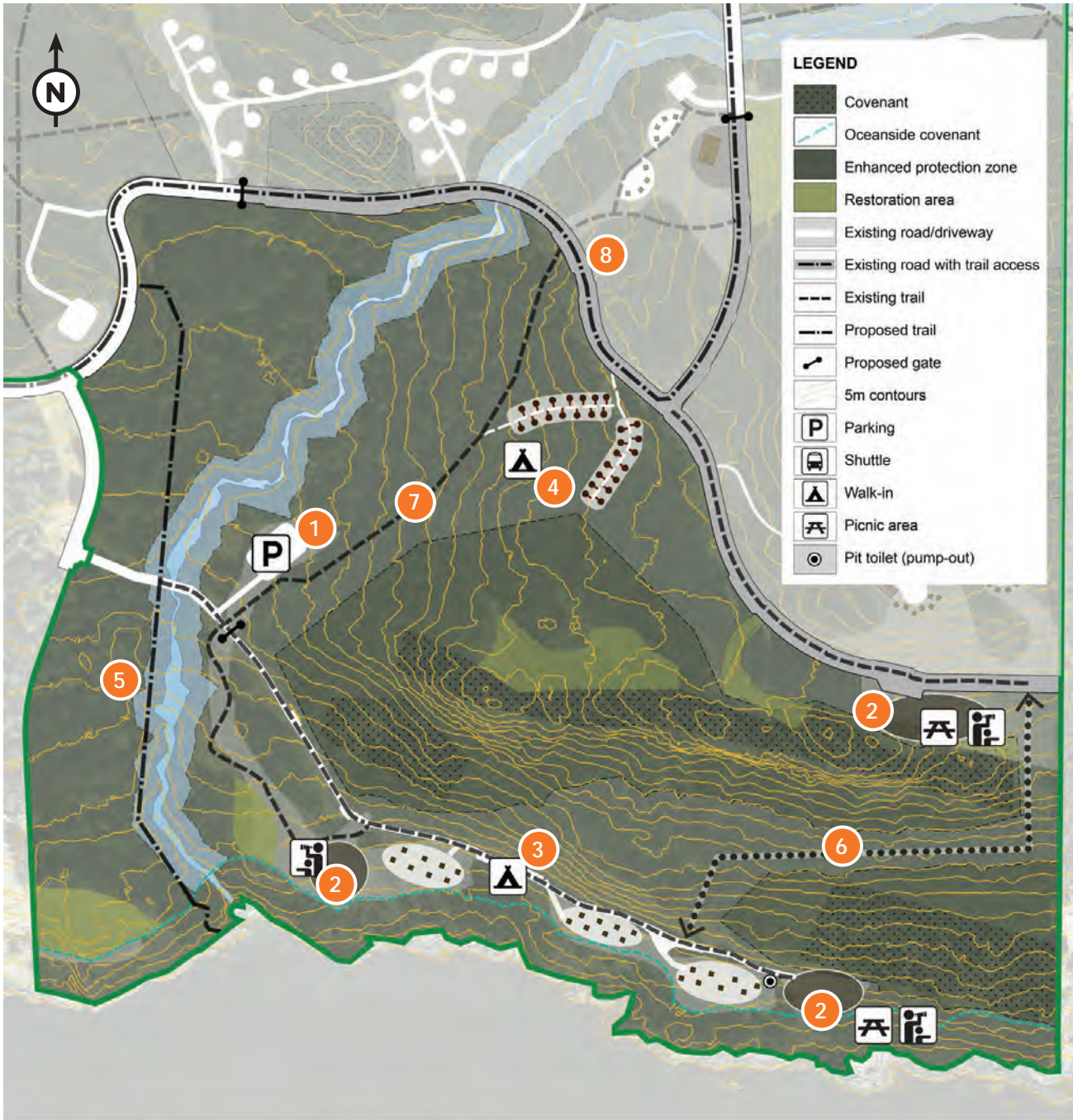


BLUFF STAIRCASE



OCEAN VIEWPOINT

- 1 **North entrance**
Parking +/- 20 vehicles
Shuttle drop-off/pick-up
- 2 **Ocean viewpoint / public space**
- 3 **Walk-in tent camping (Oceanfront)**
24 sites
- 4 **Walk-in tent camping (Forest)**
28 sites
- 5 **Potential trail realignment**
- 6 **Bluff staircase**
subject to feasibility
- 7 **Proposed trail**
utilises existing logging roads
- 8 **Cape Drive trailway**
section of road closed to private vehicles,
trail, operational and exceptional vehicle
access permitted



0 100 250 Meters



Huszar Creek / Coastal Bluffs (cont.)



FOREST TRAIL



FOREST PICNIC AREA



DAY USE AREA WITH PICNIC BENCHES AND NEW PLANTING



TENT PLATFORMS



WALK-IN FOREST CAMPING



WALK-IN CAMPING AT COASTAL BLUFFS

Site Objectives and Elements

Site objectives, planned facilities and elements have been listed by park subarea. Objectives and actions on ecological restoration will be applied comprehensively throughout the entire park, ensuring the conservation and restoration of the park's ecosystems.

Ecological Restoration

Locations

- Previously disturbed areas
- Ocean Fronting lands , Environmental and Riparian Protection Covenant Areas
- Invasive species infestations
- Ephemeral wetlands and streams

Objectives

- Assist in the re-establishment of natural vegetation already taking place
- Remove and manage invasive plant species
- Protect and restore vulnerable environmentally sensitive areas
- Enhance biodiversity values and protect species at risk
- Provide opportunities for habitat stewardship with the community.
- Monitoring and adaptive management

Actions

- Restore plant communities and enhance biodiversity on disturbed sites through active revegetation efforts, the use of deer exclusion areas, and the addition of habitat enhancement elements such as rock piles, bat boxes, etc.
- Create a long-term monitoring and maintenance plan for restoration areas to allow for adaptive management
- Regular monitoring and mapping of park ecosystems and species using visual surveys, long-term monitoring plots, photo points, and other methods as appropriate.
- Implementation of the Integrated Pest Management Plan including inventory, monitoring and the application of early detection and rapid response principles .
- Provide meaningful and effective opportunities for park staff, volunteers and the public to engage in park ecosystem restoration and monitoring together.

Burke Creek

AREA	ECOLOGICAL AND SITE FEATURES	SITE OBJECTIVES	FACILITIES & ELEMENTS
1. VIEWPOINT AND TRAIL	<ul style="list-style-type: none"> Environmental and Riparian Protection Covenant Areas Mature forest Veteran and Wildlife Trees Logging road/s 	<ul style="list-style-type: none"> Protect and enhance covenant areas and sensitive ecosystems Provide access to views Create opportunities for wildlife and nature viewing Educate visitors on sensitive ecosystems 	<ul style="list-style-type: none"> Hiking trail Viewing area/s Potential bridge crossing to Huszar Creek Ecological restoration Restored homesites Nature programming and interpretation
2. TENT CABINS	<ul style="list-style-type: none"> Mature forest Veteran and Wildlife Trees Cleared homesite 	<ul style="list-style-type: none"> Provide tent cabins facilities for people without access to camping equipment Provide limited parking (+/- 5 stalls) 	<ul style="list-style-type: none"> 10 tent cabins with small deck Amenities: Drinking water, pit toilet (pump-out), waste, receptacles Ecological restoration

Forest Core

AREA	ECOLOGICAL AND SITE FEATURES	SITE OBJECTIVES	FACILITIES & ELEMENTS
1. SOUTH ENTRANCE	<ul style="list-style-type: none"> Mature forest Veteran and Wildlife Trees Cleared homesite 	<ul style="list-style-type: none"> Create main park entrance and orientation node Provide park shuttle drop-off/pickup Orient visitors to park Educate visitors on sensitive ecosystems Protect and enhance covenant areas and sensitive ecosystems Separate adjacent landuses 	<ul style="list-style-type: none"> Entry sign, wayfinding signage Interpretive signage Trail connections +/- 20 parking stalls Shuttle pick up / drop off area Bicycle parking Amenities: Pit toilet (pump-out), waste, receptacles
2. VEHICLE CAMPING	<ul style="list-style-type: none"> Mature forest 	<ul style="list-style-type: none"> Protect and enhance covenant areas and 	<ul style="list-style-type: none"> 25 vehicle-accessible sites with one parking

Forest Core (cont.)

AREA	ECOLOGICAL AND SITE FEATURES	SITE OBJECTIVES	FACILITIES & ELEMENTS
	<ul style="list-style-type: none"> Environmental and Riparian Protection Covenant Areas Ephemeral watercourses and ponds Veteran and Wildlife Trees Network of logging roads Cleared homesite/s Huszar Creek and riparian buffer 	<p>sensitive ecosystems</p> <ul style="list-style-type: none"> Utilise cleared areas to locate camping Create visitor privacy Provide trail connections Maintain neighbour privacy Provide site supervision 	<p>stall per site</p> <ul style="list-style-type: none"> Hiking trails Camp host site Fencing One-way access driveway on former logging road Amenities: waste receptacles, picnic tables, pit toilets (pump out) drinking water
<p>3. WALK-IN VEHICLE CAMPING</p>	<ul style="list-style-type: none"> Mature forest Veteran and Wildlife Trees Logging roads Cleared homesite/s Huszar Creek and riparian buffer Ephemeral watercourses and ponds 	<ul style="list-style-type: none"> Protect and enhance covenant areas and sensitive ecosystems Provide vehicle-accessible walk-in camp sites with separate parking from camping 	<ul style="list-style-type: none"> 8 sites with central overnight use parking lot (8 stalls) Amenities: Waste receptacles, picnic tables, pit toilets (pump out) drinking water Fencing Planting/screening
<p>4. CENTRAL AMENITY AREA</p>	<ul style="list-style-type: none"> Cleared homesite/s 	<ul style="list-style-type: none"> Create an orientation and gathering area for park visitors Provide washroom and shower block (on-septic system) Connect to other park areas 	<ul style="list-style-type: none"> Central gathering area with seating and amenities Washroom/Shower building Hiking trails
<p>5. SERVICE YARD</p>	<ul style="list-style-type: none"> Environmental Protection Covenant Areas Veteran and Wildlife Trees Cleared homesite/s 	<ul style="list-style-type: none"> Protect and enhance covenant areas and sensitive ecosystems Provide service yard and small site office (not accessible to public) Maintain neighbour privacy Provide site supervision Reroute trail in covenant areas 	<ul style="list-style-type: none"> Building and yard Fencing/gates Buffer neighbouring properties Potential trail realignment

Forest Core (cont.)

AREA	ECOLOGICAL AND SITE FEATURES	SITE OBJECTIVES	FACILITIES & ELEMENTS
		<ul style="list-style-type: none"> Protect covenant areas and sensitive ecosystems 	
6. CAPE DRIVE TRAILWAY	<ul style="list-style-type: none"> 6m wide municipal road 	<ul style="list-style-type: none"> Collaborate with Bowen Island Municipality on the tenure Integrate road as part of trail system Permit limited vehicle access for facility and maintenance access Prioritise bikes and pedestrians 	<ul style="list-style-type: none"> Existing road repurposed as trailway Gates Pavement markings to delineate use/s

Inland Bluffs

AREA	ECOLOGICAL AND SITE FEATURES	SITE OBJECTIVES	FACILITIES & ELEMENTS
1. VIEWPOINT/S	<ul style="list-style-type: none"> Mature forest Environmental Protection Covenant Areas Veteran and Wildlife Trees Ephemeral watercourses and ponds Cleared homesite/s Views to Worlcombe Island Logging roads 	<ul style="list-style-type: none"> Provide viewpoint feature/s that prohibits access to private lands Provide trail connectivity Provide small scale staging for accessibility Provide interpretative hiking experience Protect and enhance covenant areas and sensitive ecosystems Maintain neighbour privacy 	<ul style="list-style-type: none"> +/- 10 parking stalls Viewpoint/s Hiking trails Interpretive signage/features Buffer neighbouring properties Restored homesites Fencing

East Bluffs

AREA	ECOLOGICAL AND SITE FEATURES	SITE OBJECTIVES	FACILITIES & ELEMENTS
1. GROUP CAMP/S	<ul style="list-style-type: none"> • Mature forest • Environmental and Riparian Protection Covenant Areas • Veteran and Wildlife Trees • Huszar Creek and riparian buffer 	<ul style="list-style-type: none"> • Protect and enhance covenant areas and sensitive ecosystems • Provide group camp facilities for youth/s and other groups • Provide cooking/weather shelter • Maintain neighbour privacy • Protect covenant areas and sensitive ecosystems 	<ul style="list-style-type: none"> • Tent pads • Limited parking (5 stalls per group campsite) • Amenities (waste, receptacles, pit toilet (pump-out) shelter with picnic tables, group gathering area) • Fencing • Nature play elements

Huszar Creek / Coastal Bluffs

AREA	ECOLOGICAL AND SITE FEATURES	SITE OBJECTIVES	FACILITIES & ELEMENTS
1. NORTH ENTRANCE	<ul style="list-style-type: none"> • Huszar Creek and riparian buffer • Fragments of at-risk mature forest • Logging roads 	<ul style="list-style-type: none"> • Protect covenant areas and sensitive ecosystems • Provide staging/access for day-use waterfront park • Provide staging/access for shuttle/walk-in/bike-in overnight uses • Maintain neighbour privacy 	<ul style="list-style-type: none"> • +/- 20 parking stalls in previously cleared areas • Bicycle parking • Shuttle drop off/pick up area • Camping carts • Amenities: (pit toilets (pump-out), drinking water, waste, receptacles)
2. OCEAN VIEWPOINTS	<ul style="list-style-type: none"> • Bald eagle nest (lot 23) • Ocean Fronting Lands restrictive covenant • Seaside Junipers • Intertidal zones and bedrock • Water seeps and associated rare plant assemblages 	<ul style="list-style-type: none"> • Protect and enhance covenant areas and sensitive ecosystems • Provide access to waterfront views • Create opportunities for wildlife and nature viewing • Provide shade and rest areas 	<ul style="list-style-type: none"> • Hiking trails • Fencing, interpretive signage • Boardwalks/viewpoints • Bluff staircase (subject to feasibility) • Amenities: Picnic tables, seating, sitting/viewing platforms, weather shelter/s)

Huszar Creek / Coastal Bluffs (cont.)

AREA	ECOLOGICAL AND SITE FEATURES	SITE OBJECTIVES	FACILITIES & ELEMENTS
		<ul style="list-style-type: none"> Educate visitors on sensitive ecosystems Manage visitor safety 	
<p>3. WALK-IN TENT CAMPING (OCEANFRONT)</p>	<ul style="list-style-type: none"> Ocean Fronting Lands restrictive covenant Seaside Junipers Intertidal zones and bedrock Water seeps and associated rare plant assemblages Fragments of at-risk mature forest 	<ul style="list-style-type: none"> Protect and enhance covenant areas and sensitive ecosystems <ul style="list-style-type: none"> Educate visitors on sensitive ecosystems Provide low-impact overnight camping for hikers and bikers (May-Oct) Provide opportunities for day visitors (Nov-Apr) Utilize existing cleared homesites (cleared lots, access easement, site servicing) Provide shelter from sun/wind Manage visitor safety 	<ul style="list-style-type: none"> 24 walk-in campsites with raised tent pads Fencing Access road (asphalt) used for pedestrian/bike/maintenance access Amenities: (pit toilets (pump-out), drinking water, picnic tables, bike racks, lockers, weather shelter, waste, receptacles)
<p>4. WALK-IN TENT CAMPING (FOREST)</p>	<ul style="list-style-type: none"> Mature forest Nearby Huszar Creek riparian buffer Ephemeral watercourses Environmental and Riparian Protection Covenant Areas Existing logging grades and cleared areas 	<ul style="list-style-type: none"> Protect and enhance covenant areas and sensitive ecosystems Educate visitors on sensitive ecosystems Provide low-impact overnight camping for hikers and bikers (May-Oct) Provide trail connectivity 	<ul style="list-style-type: none"> 28 walk-in campsites with raised tent pads Amenities (picnic tables, lockers, bike racks) Fencing, interpretive signage



TECHNICAL MEMORANDUM

Subject	Water Study Analysis Results		
Project	Metro Vancouver Cape Roger Curtis Regional Park Water Study		
To	Lydia Mynott Metro Vancouver	From	Laura Christensen and Neal Whiteside
Date	23 June 2023	File ref	Water Street File # 361.300
Version	0	Status	Final

1. INTRODUCTION

1.1. PURPOSE

This technical memorandum assesses the water demand and available water supply for a proposed regional park with campground at Cape Roger Curtis in Bowen Island.

1.2. BACKGROUND

Metro Vancouver (MV) is exploring the conversion of 24 lots in the Cape Roger Curtis area of Bowen Island to a regional park offering overnight camping and day use. The land is currently zoned as RR1 – Rural Residential and has the OCP designation of Rural. The proposed park development concept evaluated includes 50 walk-in/bike-in camp sites, 3 group camp sites, 10 tent cabins, 35 vehicle access camp sites, and a day use area. The camp sites are divided generally into 3 areas; (1) Cape Drive (lots C-F), (2) Huszar Creek/Group Sites (lots 30-34), and (3) Waterfront (lots 23-29). The site plan for the campground is shown in Figure 1, attached.

There are several existing wells on the properties (also shown on Figure 1). A well water source certification was completed for all wells by Stantec in 2014. The results from the Stantec report and the well water source documentation were used to assess the potential available water supply for the campground.

1.3. LIMITATIONS

This technical memorandum is based on the information provided by Metro Vancouver. Additional well testing is recommended to confirm the well supply quantity and quality prior to proceeding with park development or well completion.

It must be read with the Statement of Limitations below.

2. WATER USE ESTIMATE

2.1. PROPOSED WATER USE

The campground is proposed to provide drinking water via taps distributed amongst the campground, mainly for drinking and domestic use for overnight campers, as well as day users. Other water use includes a flush washroom facility, shower block (coin operated/timed system), park office with shower, and operational uses. The operational uses were deemed to be negligible compared to the other uses and were not calculated.

Metro Vancouver provided an estimate of the number of different types of camp sites that will be provided, in addition to an estimated number of people per site (Table 1). It was assumed that the peak water use when all sites are occupied at the rates provided in Table 1. At peak, there are an estimated 250 overnight users and 285 day

users (see calculation and breakdown by zone in Table 2). Metro Vancouver research indicates a typically day use duration of 2.7 hours per visit.

The campground will offer flush toilets in addition to pit/vault style toilets. The campground is proposed to have only one block of toilets (8 flush toilets total) and one block of showers (6 to 8 coin operated/timed showers) located in the Cape Drive area. To provide a conservative estimate of water use, it has been assumed that all campers from all zones will use the flush toilets and showers in the Cape Drive area.

Table 1: Campground uses and assumed people per site

Site Type	Assumed People/Site*
Walk/Bike in Tent Sites	2
Group Tent Camp Sites	12
Car accessible tent sites	2.5
Tent Cabins	2.5
Park Office	1
*values provided by Metro Vancouver	

Table 2: Distribution of camp sites and calculated number of users

	North of Cape Drive*	Huszar Creek/Group Sites	Waterfront Zone	TOTAL
Walk-in/bike-in tent sites			50	50
Group tent sites		3		3
Car accessible tent sites	35			35
Tent Cabins		10		10
Park Office	1			1
Total Overnight Users	90	61	100	250
Day Users			285	285
*flush toilets and showers for the entire campground to be located in the North of Cape Drive area				

2.2. DESIGN DEMAND RATES

Sources for design water demand rates for campgrounds is limited. The best available source located is from the US Forest Service (US Forest Service, 2004). An excerpt, converted to L/user/day, is provided in Table 3. For comparison, a study of an RV resort & campground located in Manitoba found the water use to be 31-83 L/day/site (i.e. 12-33 L/user/day) (RJ Burnside & Associated Ltd, 2012).

Table 3: Design demand rates (US Forest Service, 2004)

Site Type	Water Use (L/user/day)	
	Low Estimate	High Estimate
Campground without flush toilet	18.9	37.9
Campground with flush toilet	75.7	113.6
Campground with flush toilet & shower	94.6	189.3

It is noted that the US Forest Service data dates from the period where wide-spread adoption of low volume flush toilets was not in place. A review of the 2016 Residential End Uses of Water (Water Research Foundation, 2016) shows that typical residential indoor water use (in houses) is 222 L/ca/day. This value was further broken by use type which indicated that 96 L/ca/day was for toilets and faucets. Also considered was an ultra-efficiency benchmark that indicates a total usage of 65 L/ca/day for faucets and toilets (with homes with efficient fixtures).

Therefore, it is recommended that the US Forest Service low estimate be used for planning (95 L/ca/day for campground with flush toilets and showers). Analysis of water use from existing regional campgrounds (either MV's or others in BC) would assist in further refining the water use estimate. However no suitable existing data was found for this study.

The water use for day users was based on the provided duration of 2.7 hours per visit and the conservative assumption that all day users will use the flush toilets. A literature value of 0.375 toilet uses/hour (Vickers, 2001) and a typical low flush toilet rate of 6 L/flush were used. It was assumed that other water use (i.e. drinking water) by day users was negligible.

2.3. WATER DEMAND SUMMARY

The peak camp user estimate (Table 2) and the design demand rates (Table 3) were combined to calculate the peak day water use, which is estimated at 25,400 L/day. See Table 4 for a breakdown by zone.

Table 4: Peak day water demand summary by zone

Zone	Estimated Peak Water Use (L/day)
North of Cape Drive (Lots C-F)	22,300
Huszar Creek/Group Sites (Lots 30-34)	1,200
Waterfront zone (Lots 23-29)	1,900
Grand Total	25,400

3. WATER SUPPLY AVAILABLE

3.1. WELL SUMMARY

Figure 2 shows the well locations near the proposed camp sites and their estimated yield. Based on the analysis results available to us, some of the wells appear to meet the Canadian Drinking Water Quality Guidelines, and have been indicated (Health Canada, 2022). However, the Stantec report indicated that all wells required treatment to meet CDWQ guidelines.

Generally, the wells in the waterfront zone have higher levels of contaminants (i.e., manganese, arsenic) that make them unsuitable for drinking without additional treatment. PW14-29, just outside of the Waterfront camping area, appears to meet the Canadian Drinking Water Quality Guidelines, but does exceed the aesthetic objective for turbidity (4.82 NTU vs ≤ 1.0 NTU), which may pose issues with disinfection, if required.

The key wells that could supply the area are summarized in Table 5, with the well drillers estimated yield. These are compared to the conservative estimate of zone peak day demands (as calculated in Section 2.3). Each zone could be supplied by a single well. We recommend further analysis of these wells to confirm the estimated maximum yield and water quality.

Table 5: Potential supply wells

Well ID	Zone	Estimated Yield (L/day)	Estimated Zone Peak Day Demand (L/day)
PW14-E	North of Cape Drive	27,000	22,300
PW14-F	North of Cape Drive	16,000	
PW14-32	Huszar Creek/Group Sites	55,000	1,200
PW14-33	Huszar Creek/Group Sites	109,000	
PW14-29	Waterfront Zone	2,700	1,900
Total		209,700	25,400

4. CONCLUSIONS AND RECOMMENDATIONS

The proposed campground at Cape Roger Curtis has an estimated peak occupancy of 250 overnight users and 285 day users. The estimated peak water use is 25,400 L/day.

An analysis of the well certification records shows there is a sufficient quantity of water available to meet the estimated peak demands of the proposed campground. It appears based on the analysis results provided that some wells meet the Canadian Drinking Water Quality Guidelines. The Waterfront zone may be challenging to provide water without additional treatment.

It is recommended that additional testing of wells PW14-E, PW14-F, PW14-29, PW14-32, PW14-33 be conducted to confirm the quantity and quality of water available. Disinfection or additional treatment for contaminant removal may be required.

5. CLOSURE

We trust this document meets your present requirements. Please contact the undersigned with any questions or comments.

WATER STREET ENGINEERING LTD.



Laura Christensen, PEng
 Project Engineer

Neal Whiteside, MASc, PEng
 Technical Reviewer

EGBC permit to practice number 1000830

ATTACHMENTS

Figure 1: Site Layout & Well Locations
 Figure 2: Estimated Well Yields

REFERENCES

Health Canada. (2022). *Guidelines for Canadian Drinking Water Quality: Summary Tables*.

RJ Burnside & Associated Ltd. (2012). *Rubber Ducky Resort & Campground Water and Sewer Expansion Design Brief*. Winnipeg.

Stantec. (2014). *Well Water Source Certification*.

US Forest Service. (2004). *Sanitary Engineering and Public Health Handbook*. Washington.

Vickers, A. (2001). *Water Use and Conservation*. Amherst, MA: WaterPlow Press.

Water Research Foundation. (2016). *Residential End Uses of Water*.

STATEMENT OF LIMITATIONS

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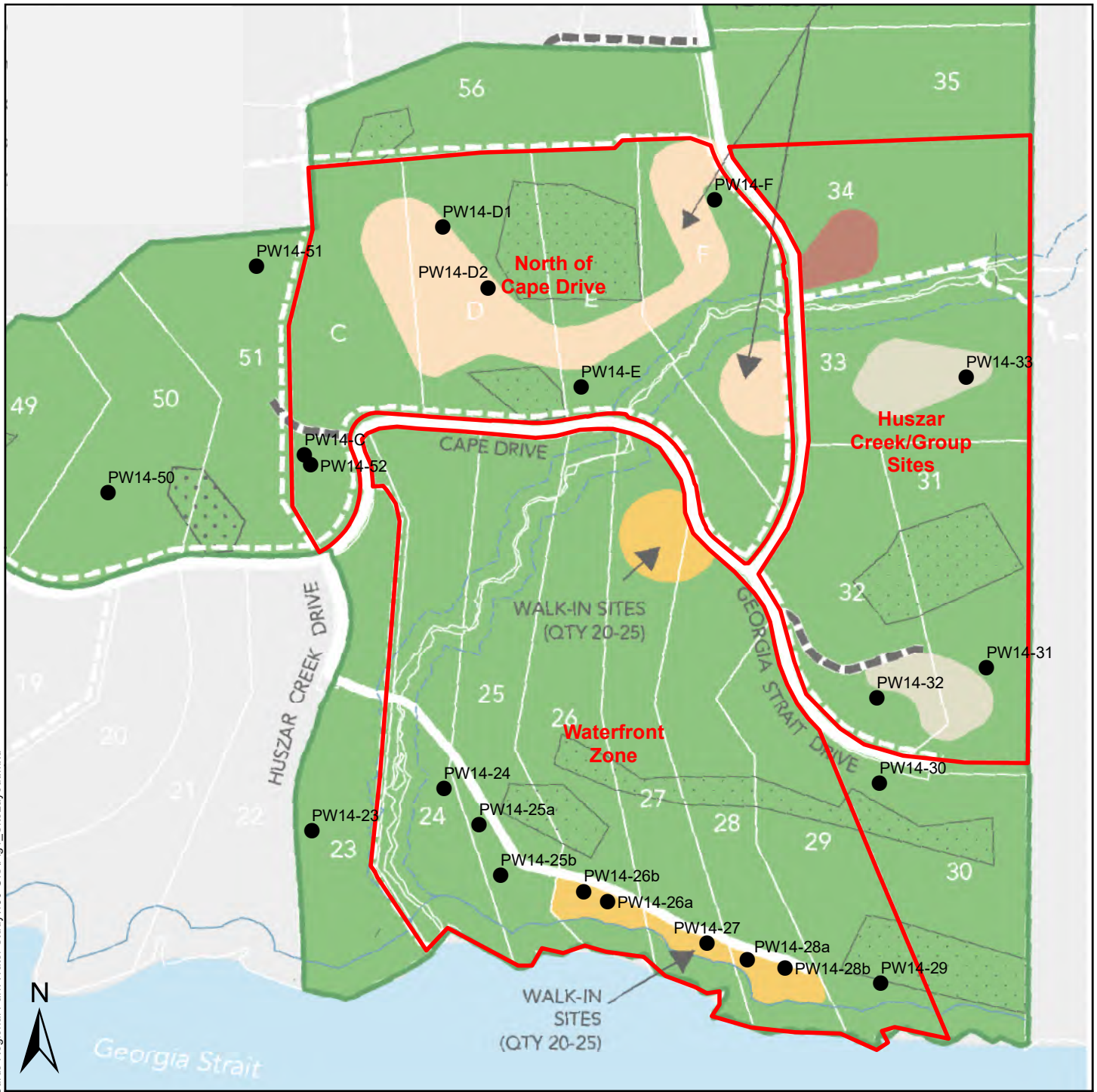
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REVISION HISTORY

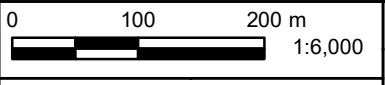
Version	Status	Date	Description of Revisions	Author
0	Final	23 June 2023	Updated day use water consumption from draft	LC

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Legend

● Existing Wells	Environmental	Regional Parkland
Camp Zone	Riparian Protection	Overnight use (no. of sites)
	Oceanside	Walk/Bike-in tent camping (40-50)
		Group tent camp (3-5)
		Car accessible tent camping (25-35)
		Tent cabin (10)



**Cape Roger Curtis
Regional Park Water Study**

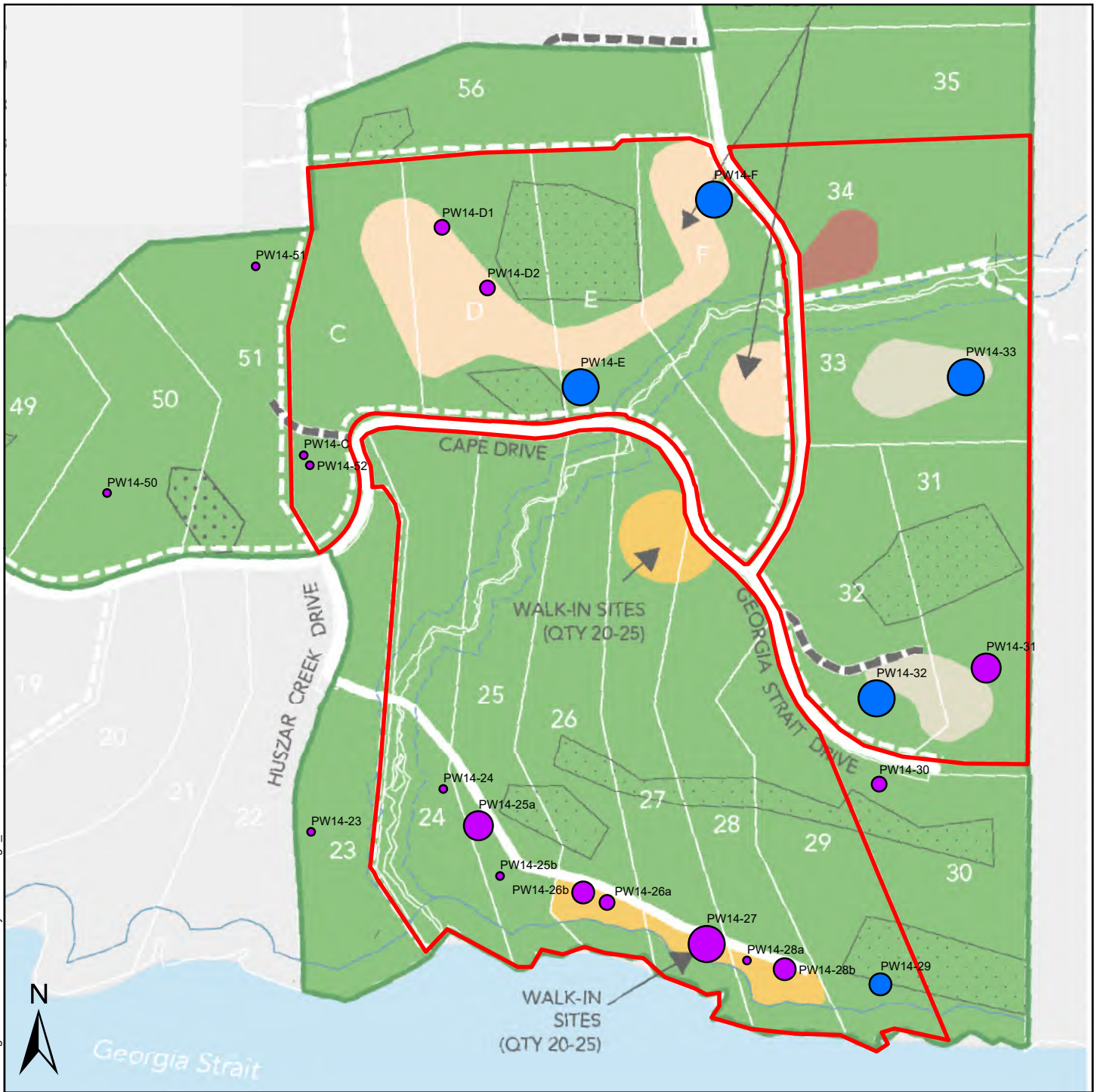
PREPARED FOR

metrovancouver
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

PROJ. NO. 361
DATE 09 Jun 2023
REVISION 0

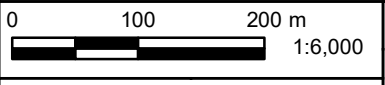
**Site Layout
and Well Locations**

Figure 1



Legend

Camp Zone	2,001 - 5,000	Does meet WQ guidelines	5,001 - 10,000	Regional Parkland
Does not meet WQ guidelines	5,001 - 10,000	Estimated yield (L/day)	10,001 - 109,020	Overnight use (no. of sites)
Estimated yield (L/day)	10,001 - 27,255	2,001 - 5,000		Walk/Bike-in tent camping (40-50)
0 - 1,000		10,001 - 109,020		Group tent camp (3-5)
1,001 - 2,000				Car accessible tent camping (25-35)
				Tent cabin (10)



**Cape Roger Curtis
Regional Park Water Study**

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DATE 09 Jun 2023
REVISION 0

Estimated Well Yields

Figure 2

Phasing Summary

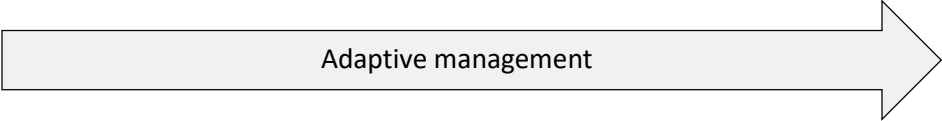
This document should be read as an addendum to Summary of Approaches to Implementation, Visitation, Operations and Access, Proposed Regional Park at Cape Roger Curtis (March, 2023). This update has been prepared as part of the park planning process and as a requirement of the Bowen Island Municipality rezoning and OCP amendment application process.

Park development will occur in three phases, each taking two years. full park development will happen over six years to allow for adaptive management and to ensure all systems are in place to support sustainable park management.

Overview of park operation/development phases

	Interim Operations 2023-24	Phase 1 2025	Phase 2 2027	Phase 3 2029
Day-use Program	<ul style="list-style-type: none"> - Municipal trails and roads open to public-use 	<ul style="list-style-type: none"> - Basic trails and access - Fencing/signage - Vault toilets - High Season Day use reservation system (if warranted by visitation/capacity) - Day-use reservation system for vehicle visits during peak periods (if warranted by visitation/capacity) 	<ul style="list-style-type: none"> - Trails - Boardwalks - Interpretive signage - Viewpoints - Washroom facility - 	<ul style="list-style-type: none"> - Public programming and nature interpretation
Land Management and Restoration	<ul style="list-style-type: none"> - Regulations and compliance – bylaw enforcement - Maintenance, Wildfire risk monitoring/plan development 	<ul style="list-style-type: none"> - Hazard tree management - Priority restoration projects - Research and monitoring - Community Stewardship 	<ul style="list-style-type: none"> - Restoration - Adaptive management - Research and monitoring - Community stewardship 	<ul style="list-style-type: none"> - Restoration - Adaptive management - Research and monitoring - Community stewardship
Overnight program	<ul style="list-style-type: none"> - No overnight program 	<ul style="list-style-type: none"> - 1 Group camp - 13 Vehicular - 17 Walk/bike-in - 5 tent cabins 	<ul style="list-style-type: none"> - 1-2 Group camp - 13 Vehicular - 18 walk/bike-in - 5 tent cabins 	<ul style="list-style-type: none"> - 1-2Group camp - 7 Vehicular - 17 walk/bike-in
Interpretation and programming		<ul style="list-style-type: none"> - Public programming and nature interpretation 	<ul style="list-style-type: none"> - Expanded public programming and nature interpretation 	<ul style="list-style-type: none"> - Expanded public programming and nature interpretation
Staffing and Operations	<ul style="list-style-type: none"> - Seasonal staff - Metro Vancouver Regulations and Compliance (Park Rangers) - System Resources (fire suppression, 	<ul style="list-style-type: none"> - Full-time park staff - Camp supervisor/host 	<ul style="list-style-type: none"> - Full-time park staff - Camp supervisor/host 	<ul style="list-style-type: none"> - Full-time park staff - Camp supervisor/host

	Interim Operations 2023-24	Phase 1 2025	Phase 2 2027	Phase 3 2029
	interpretation, resource management) - Emergency management plan			
Access		<ul style="list-style-type: none"> - Seasonal park shuttle - Investment in cross-island MUP within the park - Interim Crippen Regional Park (Snug Cove) park orientation facility /shuttle pickup location 	<ul style="list-style-type: none"> - Permanent Crippen Regional Park (Snug Cove) park orientation facility /shuttle pickup location - Park shuttle service expansion, if demand/capacity warrant 	Park shuttle service expansion, if demand/capacity warrant



Proposed Regional Park at Cape Roger Curtis

Ecological Background Information

Proposed Regional Park at Cape Roger Curtis Ecological Background Information

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Executive Summary

In 2022, Metro Vancouver announced a conditional purchase of 97 hectares of land for a proposed regional park at Cape Roger Curtis on Bowen Island. This report provides an Ecological overview of the site and park proposal. The report includes descriptions of climate, geology, topography and soils taken mainly from previous reports, as well as a section on hydrology based on past and recent survey information. The section on Forest Ecology is based on surveys conducted by Diamond Head Consulting for property owners in 2005 and for the Bowen Island Conservancy (BIC) in 2021, as well as updated forest inventory information undertaken by Regional Parks in 2022/23. This section was also informed by Terrestrial Ecosystem Mapping (TEM) for the site, which was updated by Regional Parks in 2022.

The Unique and Significant Site Features section draws information from a variety of sources as well as from background research and site visits conducted by Regional Parks staff forestry, biology and planning professionals. This section also draws on valuable information collected by the BIC and naturalists such as Terry Taylor, who surveyed the site over many decades. Information on intertidal site features was sourced from a Parks Canada report as well as more recent information provided in the BIC Marine Atlas and the Átl'ka7tsem/Howe Sound marine conservation map made by the David Suzuki Foundation and Ocean Wise Coastal Ocean Research Institute.

Recent TEM mapping and the author's own research informed the sections on Ecological Communities at Risk and Species at Risk. Background Information on biodiversity comes from reports created by consulting biologists for the property owners, the BIC Cape Roger Curtis Biophysical Summary, and supplemented with publicly available data from iNaturalist, eBird, and iMAP, and site visits.

The last three sections provide context for the current and potential management opportunities at the site, including a description of existing protected areas and research and environmental monitoring opportunities.



The view southeast from the proposed regional park at Cape Roger Curtis

Acknowledgments

Much of the information used to produce this report was collected over many years by volunteer and consulting biologists, non-profit and government agencies, and individuals who cared for the site. The work of the Bowen Island Conservancy and Islands Trust to document the important natural values in this area and outline management options for adjacent protected areas is invaluable.

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1.0 INTRODUCTION

1.1. General Information

The proposed park at Cape Roger Curtis is 97 hectares of land that had previously been prepped for development into 24 lots with roads and servicing. The park would be adjacent to Crown land, which includes the headwaters of Huszar Creek and Fairy Fen Nature Reserve; it would also neighbour the Wild Coast Nature Refuge. The area is part of the newly designated Átl'ka7tsem/Howe Sound UNESCO biosphere reserve which extends from Squamish to the Sunshine Coast. It would connect to nearby municipal nature trails and public beaches.

This area is part of the coastal dry forests of BC which constitutes less than 1% of the Province's land area but contains the highest number of endangered species in the Province. These areas are found along southern Vancouver Island, small parts of Metro Vancouver, and other areas in the rain shadow of the Salish Sea.

These extremely endangered ecosystems are one of the most underrepresented in BC's protected areas system.



The view west from the subject area

1.2. Site History

Skwxwu7mesh (Squamish) used Nexwlélexwem (Bowen Island) for deer and duck hunting, seasonal clam gathering and marine hunting of seals, sea lions and whales. During the 1930s, the owners logged much of the privately held 640 acres at Cape Roger Curtis to pay the property taxes every year. As early as 1921, the Vancouver Natural History Society recommended the preservation of Cape Roger Curtis due to its unique ecosystem and rare plants. From the 1970s on, the site had 'No Trespassing' signs and fences installed, but local residents continued to recreate on the lands and beaches in the area.

In the early 2000s, Cape Roger Curtis Trust Society was created to advocate for the protection of the land. Despite this, in 2004 the land was sold to the current owners - Cape Roger Curtis Joint Venture (renamed The Cape on Bowen Development Company). In 2008/09, the Bowen Island Municipal Council rejected proposed plans for a large housing development at the Cape that was well above the 224-unit designation in the Official Community Plan. The owners chose to proceed with obtaining approval from the Subdivision Approving Officer (a statutory position) for a subdivision under the existing Land Use Bylaw that allowed the creation of 59 10-acre lots. Roads and servicing were established to support development.

In 2019, the Bowen Island Conservancy acquired 3 of the waterfront lots and established a 13-hectare (32-acre) waterfront conservation area "Wildcoast Wild Coast Nature Refuge" (Bowen Island Conservancy, 2022).

In 2022, Metro Vancouver announced a conditional land purchase agreement with the owners that could establish a new 97-ha regional park.

2.0 ECOLOGICAL DESCRIPTION

Bowen Island lies within the Georgia Lowland Ecosection of the Georgia Depression Ecoprovince, but has many characteristics of the Pacific Coast Mountains. The Georgia Depression Ecoprovince is among the most impacted of all ecoprovinces in British Columbia with only 2.8% of its land remaining intact. Almost all of this intact land base (2.7%) is already in protected areas (Parks Canada, 2010)

Bowen Island is part of the Very Dry Maritime subzone of the Coastal Western Hemlock Zone (CWHxm1). The CWHxm1 has limited distribution along the coast of British Columbia. In the Metro Vancouver area, coastal CWHxm1 areas are limited to the southern shores of Bowen, the extreme southwest lowland of West Vancouver, including Lighthouse Park, and a belt running through Point Grey, including much of Pacific Spirit [Regional] Park (Parks Canada, 2010).

Metro Vancouver Regional District's Sensitive Ecosystem Inventory (SEI) Mapping for the site shows it as mainly mature forest, with areas of riparian, woodland, and herbaceous along the coast (Figure 1). The relative conservation value of these lands was designated as "Very High" by Parks Canada (2010) in relation to the lands of the Gulf Islands National Park Reserve.



Figure 1: Sensitive Ecosystem Inventory mapping for the proposed regional park at Cape Roger Curtis.

2.1. Climate

Like the southern gulf islands, the area around Cape Roger Curtis is in the rain shadow of the Vancouver Island mountains. Although the climate is less pronounced than in the Gulf Islands, the flora is similar (Taylor, 2005). The climate has warm, dry summers and moist, mild winters with relatively little snowfall. Growing seasons are long, with seasonal drought common, especially in recent years (Metro Vancouver, 2021)

Precipitation averages 1506 mm per year, of which approximately 3.3% falls as snow (Whitehead, 2011). The site is moderately exposed to the south-easterly and westerly winds from the Strait of Georgia, which tend to bring the strongest storms and precipitation (Whitehead, 2011).

2.2. Geology

The island emerged from the massive glacier that filled Howe Sound about 14,000 years ago (Parks Canada, 2010). The surficial deposits of glacial till and outwash that now cover the bedrock base of the valleys and side slopes are a direct result of the last ice age. The Strait of Georgia deglaciated relatively quickly and became ice-free about 11,500 years ago (Parks Canada, 2010). The bedrock on Bowen Island is known as the Bowen Island Formation, the oldest in the Georgia Basin. They are younger and less metamorphosed than those found in the groups between Indian Arm and Buntzen Lake and Horseshoe Bay and Caulfield Cove. Rock is Volcanic and Sedimentary (Bowen Island Conservancy, 2007).

Most of the area around Cape Roger Curtis is Bedrock, with some areas of Fluvial Deposits along watercourses (Bowen Island Conservancy, 2007). Exposed bedrock surfaces, where visible, tend to be smooth and rounded by glaciation (Whitehead, 2011). There is a small amount of Morainial Deposits in the northeast portion of the property (Bowen Island Conservancy, 2007).

2.3. Topography and Soils

Both slopes and aspects vary considerably throughout the subject 97-hectare site. Portions of the area are relatively level, while much ranges between 20-40% with some areas with slopes in excess of 90% (Lasuta and Assoc., 2023). The site ranges in elevation from sea level to 200 meters in the northwest corner of the property (see Figure 2). The shoreline is steep and rocky with bedrock bluffs with a generally

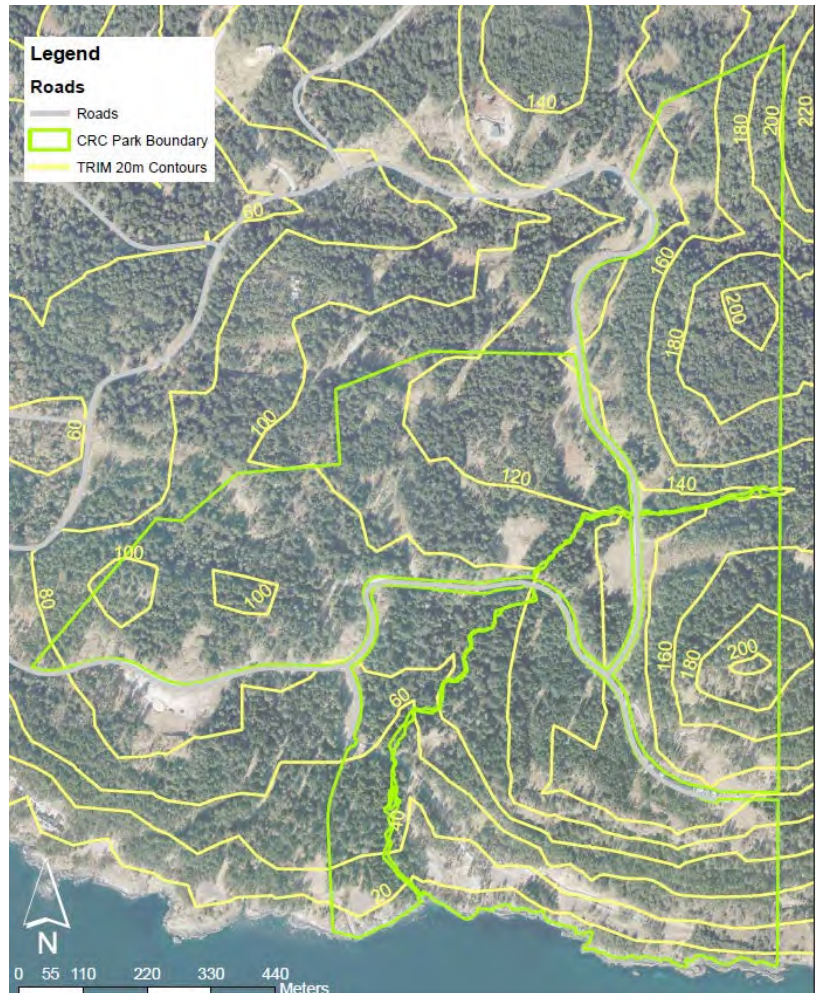


Figure 2: Contour map of proposed Regional Park at Cape Roger Curtis

gently sloping south slope, although defined ridges and knolls create a highly variable terrain (Metro Vancouver, 2021).

Soils consist of 5-10 cm of organic soil overlying sandy loams with a component of gravel or cobbles over the underlying glacial till. The surface humus layers range in depth from 3cm to 20cm and include mors where decomposition is slow to moders on richer sites (Metro Vancouver, 2021). Rock outcrops have minimal soil in depressions and a cover of moss, lichens and herbs on the exposed ridges and domes (Lasuta and Assoc., 2023).

2.4. Hydrology

Huszar Creek generally runs through the western edge of the property and discharges on the beach on the south side. It drains Fairy Fen, a nature reserve some 500 meters to the northeast of the eastern edge of the proposed park. A smaller watercourse, Burke Creek, flows seasonally from an ephemeral wetland located in the northeast corner of the property. Bennet Land Surveyors determined the High Water Mark for Burke and Huszar Creeks (PGL, 2009a) and this was the basis for the riparian covenant that exists for the site. The average channel width for Burke was 2.2m, and Huszar was 4.7m. No fish have been found in any watercourses (Bowen Island Conservancy, 2007). The large vernal wetland at the northeastern end of the property (in lot 36) is the headwaters of Burke Creek and has been found to be a red-legged frog breeding site (PGL, 2009b).

Figure 3 shows a comprehensive inventory of all hydrological features, including natural features such as streams, wetlands, ponds, pools, and seepage sites, as well as constructed features such as ditches. LiDAR was used to generate DEM/DSM layers for the park. These are highly accurate terrain maps that were used to locate potential hydrological features. Two professional biologists from DHC completed a field review to identify all water features in February 2023. ArcGIS Field Maps was used to map and collect characteristics for all water features. This includes instream and bank characteristics. Streams were separated into distinct reaches based on these characteristics. The stream inventory includes the following:

- 6 Class B reaches,
- 31 Class C reaches,
- 64 ditches and
- 11 wetlands/ponds.

Class B watercourses are those which do not provide fish habitat but are a source of food and nutrients to fish habitat downstream. Class C watercourses are not considered to provide food or nutrients to fish habitats downstream but can still be important sources of water (Diamond Head, 2023).

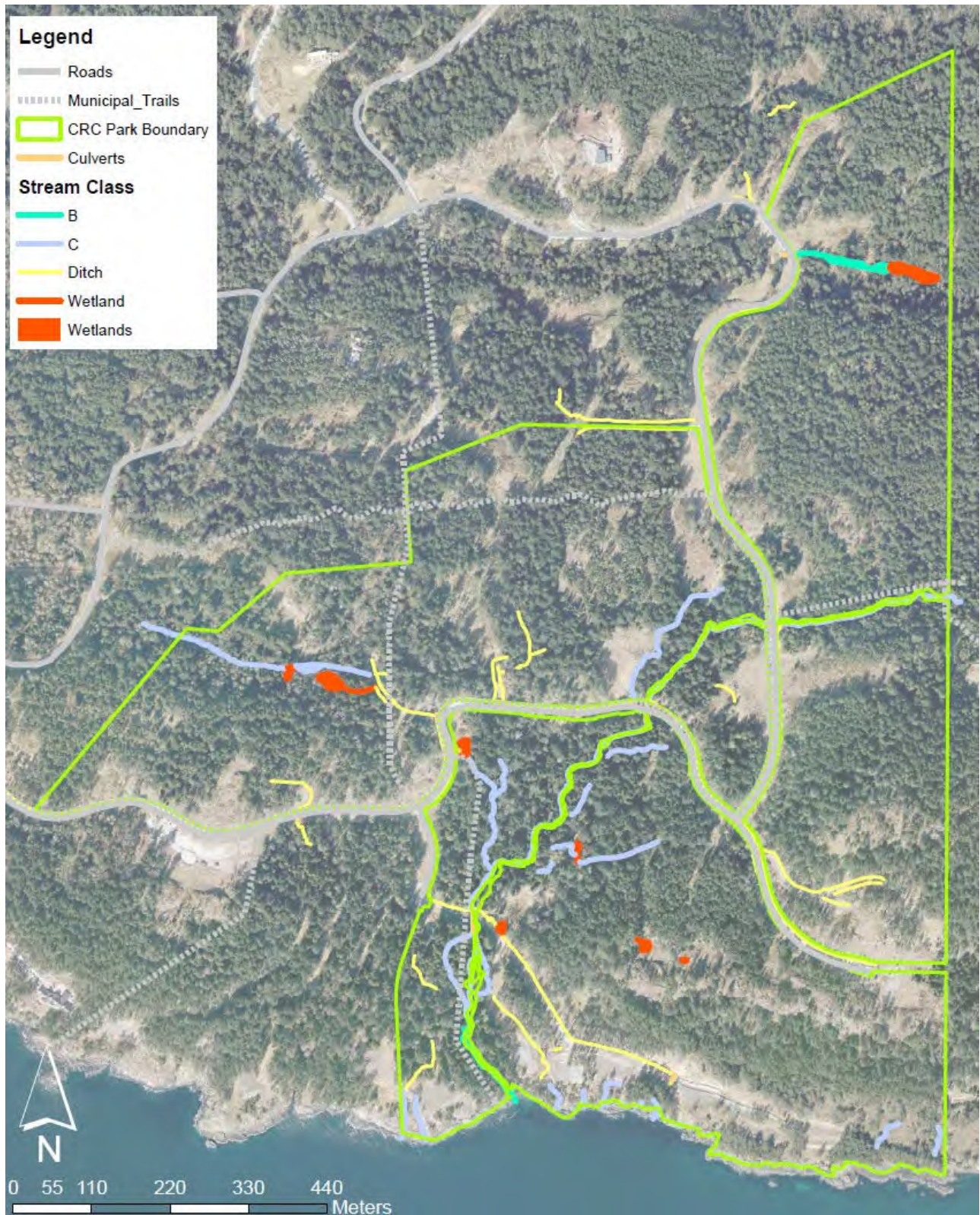


Figure 3: Hydrology information for the proposed regional park at Cape Roger Curtis.

3.0 FOREST ECOLOGY

3.1. Forest Characteristics

The forest stands at the proposed regional park area range from fairly uniform to the open and marginally treed areas along the coastline and on interior rock outcrops (Lasuta and Assoc., 2023). The project area contains plant communities associated with the drier site series of the CWHxm1, with riparian corridors and low-lying sites featuring higher moisture regimes and richer soils.

In general, the stocking density of mature trees ranges from 300-900 stems per hectare (Diamond Head, 2021) with the size of mature trees varying depending on the productivity of the site. On dry and poor sites, the average trees are 40 centimetres in diameter at breast height and 25 meters tall. On rich sites, they average 50 cm in diameter at breast height and 35 m in height (Diamond Head, 2021).



A healthy western redcedar with salal understory indicating a wetter soil regime

The tree ages range across the site, with the oldest trees being 120-140 years old. There are some remnant trees from the previous stand that are greater than 200 years old, including some smaller diameter trees that have been growing very slowly along the rocky marine foreshore (Diamond Head, 2005).

The most common species include Douglas-fir (*Pseudotsuga menziesii*) with intermixed western hemlock (*Tsuga heterophylla*), western redcedar (*Thuja plicata*), grand fir (*Abies grandis*), bigleaf maple (*Acer macrophyllum*) and red alder (*Alnus rubra*) (Metro Vancouver, 2021). Drier rocky sites include arbutus (*Arbutus menziesii*), Seaside Juniper (*Juniperus maritima*), and shore pine (*Pinus contorta*).

The understory is dominated by Salal (*Gaultheria shallon*) in most drier areas. Dull Oregon grape (*Mahonia nervosa*), sword fern (*Polystichum munitum*) and red huckleberry (*Vaccinium parvifolium*) are also common throughout. The driest sites with rock outcrops feature little shrub growth and instead support a diversity of mosses and lichens. Where lichens, mosses, and some herbs dominate many areas of exposed rock, there is also a diversity of grasses, ferns, and shrubs in upland forest openings where soils have accumulated. There is less understory diversity where

forest crown closure limits light (Metro Vancouver, 2021). A full plant list can be found in Appendix A.

3.2. Habitat Types

Recent Terrestrial Ecosystem Mapping (TEM) undertaken by Metro Vancouver in 2022 has provided an update on the habitat types found at the site. The CWHxm1 site associations and other habitat types are shown in Figure 4 below.

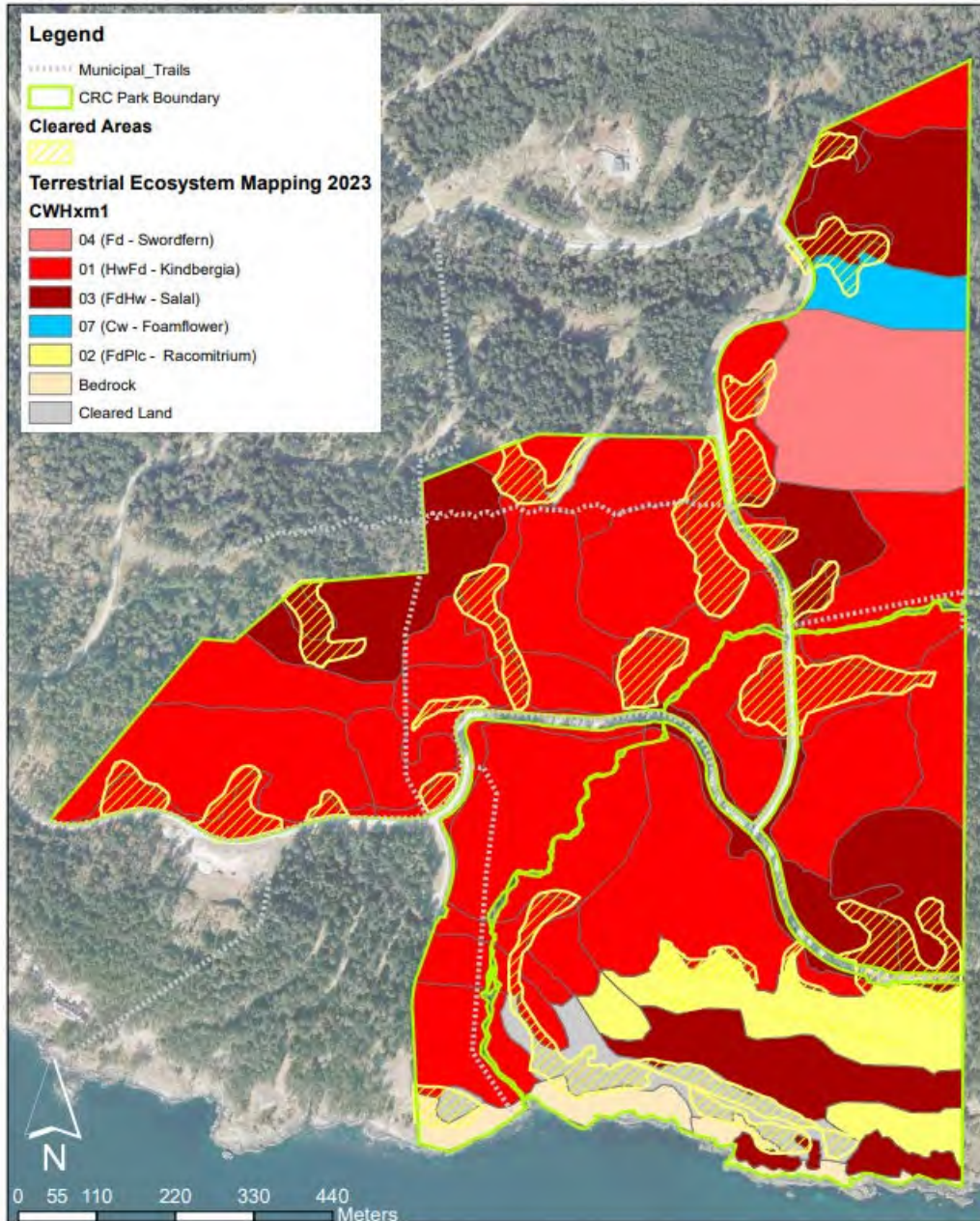


Figure 4: Terrestrial Ecosystem Mapping (TEM) undertaken by Metro Vancouver in 2022, showing CWHxm1 site associations and other habitat types.

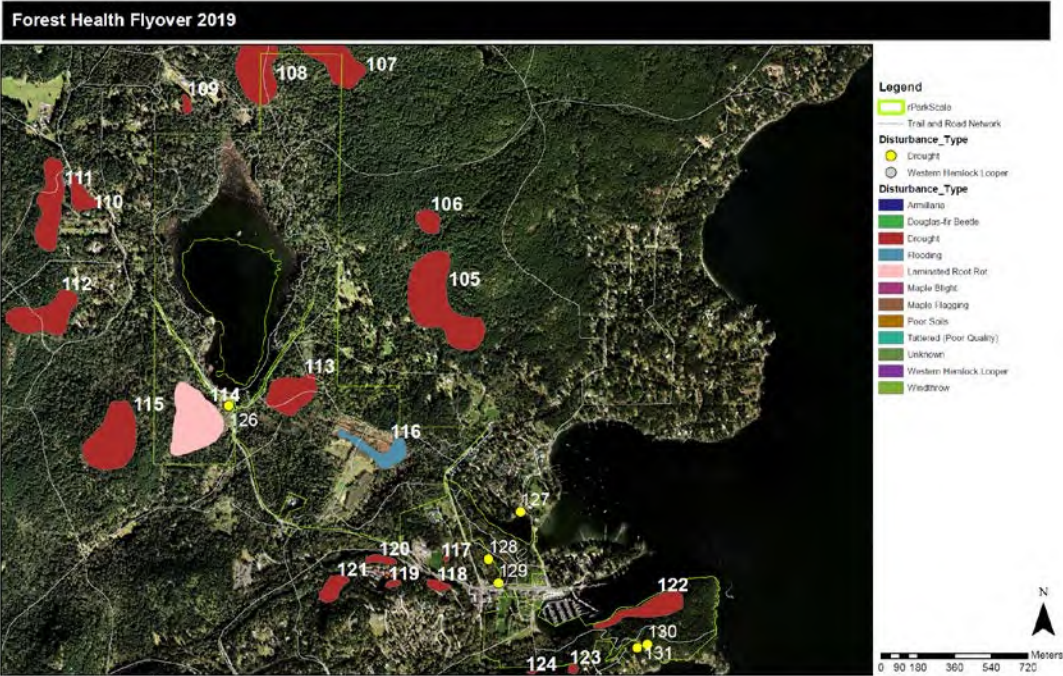
3.3. Forest Health

Recent site surveys found that the Douglas fir on site was generally of good form, and although evidence of seasonal drought in recent years could be seen and there were a few dead trees observed along roads or above the road easement blast cut where soil erosion and edge exposure were likely factors. No root rot pockets (*Phellinus weirii*) were observed in the stand (Lasuta and Assoc., 2023).

Western redcedar on the site exhibited stress and dieback seen commonly in the Pacific Northwest as more frequent and extended periods of drought have occurred in recent years due to climate change (Buhl, 2022). A forest health aerial survey conducted in regional parks in 2019 found that 49 ha of Crippen Regional Park’s forest, about 22% of the park area, was affected by drought stress (Figure 5) (Blackwell, 2019). This is a lower occurrence than some regional parks where more than 80% of the redcedar are dying (David Sheffield, pers. comm.).

Western hemlock is relatively rare on-site, with some relatively low levels of dwarf mistletoe (*arceuthobium* spp.) seen in the northwest corner of the property (Lasuta and Assoc., 2023). Lodgepole pine in the far western part of the property are in poor form with some die-off and breakage seen, likely a result of their age and exposed location on rock outcrops (Lasuta and Assoc., 2023). A significant number of large pine have recently succumbed to windfall at a rock bluff covenant area in the northwest corner of the property. Big leaf maple trees are suffering from the increased prevalence of brittle cinder fungus, which is being seen across the Pacific Northwest (Marin-Bruzos, 2018). It should be noted that big leaf maple are only a minor component of the forest stands here and shows the typical deterioration that comes with age and conifers encroaching on their living space (David Sheffield, pers. comm.).

Figure 5: Forest Health Flyover results for Crippen Regional Park in 2019. The park was mostly affected by drought stress (49 ha), 2 ha was affected by flooding, and 6 ha was impacted by Laminated Root Rot impacting Douglas fir trees (Blackwell, 2019).



3.4. Timber Evaluation

A forest evaluation of the proposed park lands completed in early 2023 determined there was 58.82 ha of non-protected merchantable timber on site of two types (Lasuta and Assoc., 2023):

- Type 1 – Coastal Douglas fir – Dry Site: This forest stand is best described as a coniferous dry Douglas fir forest type ranging in age from 80 to 125 years. The stand tends to be quite uniform in density and tree size with few significant natural openings other than rock outcrops, most of which have been excluded. The height of the second-growth forest is between 18 meters and 34 meters. Site index indicates that this site is low to medium in nutrient and moisture.
- Type 2 – Coastal Douglas fir, Western Red Cedar/Western Hemlock: The forest cover type primarily consists of a maturing Douglas fir with a component of western redcedar and western hemlock. The age of this Forest Stand type ranges from 81 to 102 years. The height range of this stand type is 22 meters to 32 meters. This forest stand is best described as uneven-aged. Differences in tree size and height are primarily due to the range of microsites found in this forest type.

Using standardized forestry techniques, it was determined that the harvestable forest stand volume of those 58.82ha is 34,460m³, which equates to a gross estimate value of \$5,617,690.00 (Lasuta and Assoc., 2023). Figure 6 shows the map of forest harvesting potential, showing excluded setbacks and covenants.

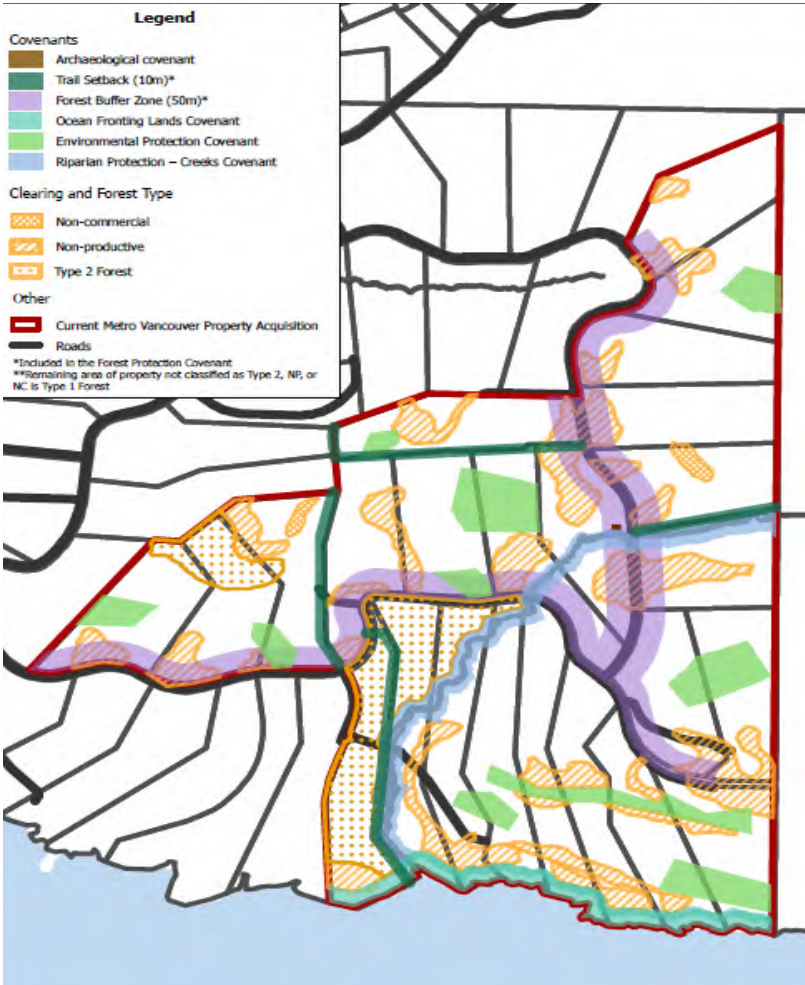


Figure 6: Map of forest harvesting potential showing excluded setbacks and covenants. Forest Stand Type 1, Forest Stand Type 2, Non-Productive (clearings), and Non-Commercial Cover (deciduous species).

4.0 UNIQUE AND SIGNIFICANT SITE FEATURES

4.1. Coastal Bluffs

The coastal bluff habitat at Cape Roger Curtis (CHWxm/02) is considered to be one of the richest on the east coast of the Strait of Georgia and certainly the “richest coastal site” in the Metro Vancouver region (Taylor, 2005). Its significance is further elevated due to the virtual low levels of exotic species (Taylor, 2005). The shoreline supports coastal bluff plant communities dominated by arbutus and ocean spray in association with a diverse array of flowers and mosses (Metro Vancouver, 2021).

The Wallace’s selaginella/reindeer lichens ecological community indicate the highest value sites, which are found along the southern shoreline (Diamond Head, 2005) as well as in upland areas. These areas were protected as special ‘covenant areas’ designated by Bowen Island Municipality during a previous development application process. A large number of regionally significant plant species have been identified in these areas including:

- One of the only known locations in the region for seaside juniper. Its range in the Georgia Basin-Puget Sound region is very restricted and is only known to occur in this region where some trees have been aged to in excess of 400 years (Parks Canada, 2010).
- Macoun's meadow-foam (*Limnanthes macounii*) is Provincially red-listed and covered under Schedule 1 of the federal Species at Risk Act and has been found along the southern rocky bluffs. It does not appear that any other "listed" plant species have been reported. (Taylor, 2005).
- Camas spp – a perennial with a large bulb to survive the rest of the year until spring blooms (Taylor, 2005). This species has a high cultural significance for coastal BC First Nations.



One of the inland coastal bluff covenant areas

- Other species that are locally rare on this side of the Georgia Strait include blue toadflax, hairy honeysuckle, yerba Buena, slender plantain, slender sandwort, Menzies larkspur, Indians-dream fern, dwarf owl clover.

At the nearby Wild Coast Nature Refuge, this plant community covers most of the open bluffs. That refuge protected the areas deemed the most floristically rich and of the highest ecological quality, with less trampling disturbance and non-native species cover than many other occurrences on the coast (Bowen Island Conservancy, 2022).

These dry rocky ecosystems are particularly sensitive to disturbance, and some areas have been impacted by both the site development for residential use with road construction and home site preparation and, to a lesser degree, recreational use. In these areas, there is evidence of non-native grasses being introduced and out-competing the less vigorous native grasses (Lasuta and Assoc., 2023).

4.2. Open Woodlands and Old Growth Trees

The open woodlands of the Cape Roger Curtis area (CHWxm/05 and 07) were formed over coarse and fine-textured, glacial marine deposits which support very productive tree growth (Kinka, 2005). These areas support very productive stands of red alder, bigleaf maple, Douglas fir, western redcedar and grand fir. Some red alders exceed 35m, and some grand fir are over 45m in height and represent significant site features (Metro Vancouver, 2021).

The shoreline edge of this forest may be among the most ecologically significant stands of old-growth Douglas fir and other species on Bowen Island (Diamond Head, 2005). These trees have a very large diameter and survived the logging and subsequent burning of the site, as is evident by the fire scars on their trunks. It is difficult to determine the age of these trees as their trunks are too large to take core samples from, but it is estimated that they are between 200 and 300 years old (Diamond Head, 2005). These are some of the only old-growth trees in the CWHxm1 subzone in the lower mainland (along with Lighthouse Park and Pacific Spirit Regional Park) (Parks Canada, 2010).

4.3. Rich Intertidal Zones

On this corner of Bowen Island, the seabed drops steeply into the waters of the Georgia Strait; it is deep, close to shore. Bowen's marine environment is relatively typical of Howe Sound and the Strait of Georgia, recognizing that these waters are influenced by both cold waters from the fjord environment inland from Bowen and the Fraser River plume seaward of the island (Parks Canada, 2010). Bowen's underwater ecosystem is considered to be in relatively good condition, although there is a well-known history of the overharvesting of rockfish, lingcod and abalone, among other species (Parks Canada, 2010).

This area is recognized as a Priority Conservation Area (PAC) through the Átl'ka7tsem/Howe Sound marine conservation map (Beaty, 2019). This area was determined to be a marine biodiversity hot spots using computer modelling analysis (Marxan) and was recommended for enhanced protection and management (Beaty, 2019). This is mainly due to its importance for marine birds and harbour seals (see Figure 7).

Parks Canada (2010): In October 2009, a small pod of transient killer whales passed by Cape Roger Curtis and the southwest coast of Bowen Island hunting for seals. The Vancouver skyline shapes the distant background.

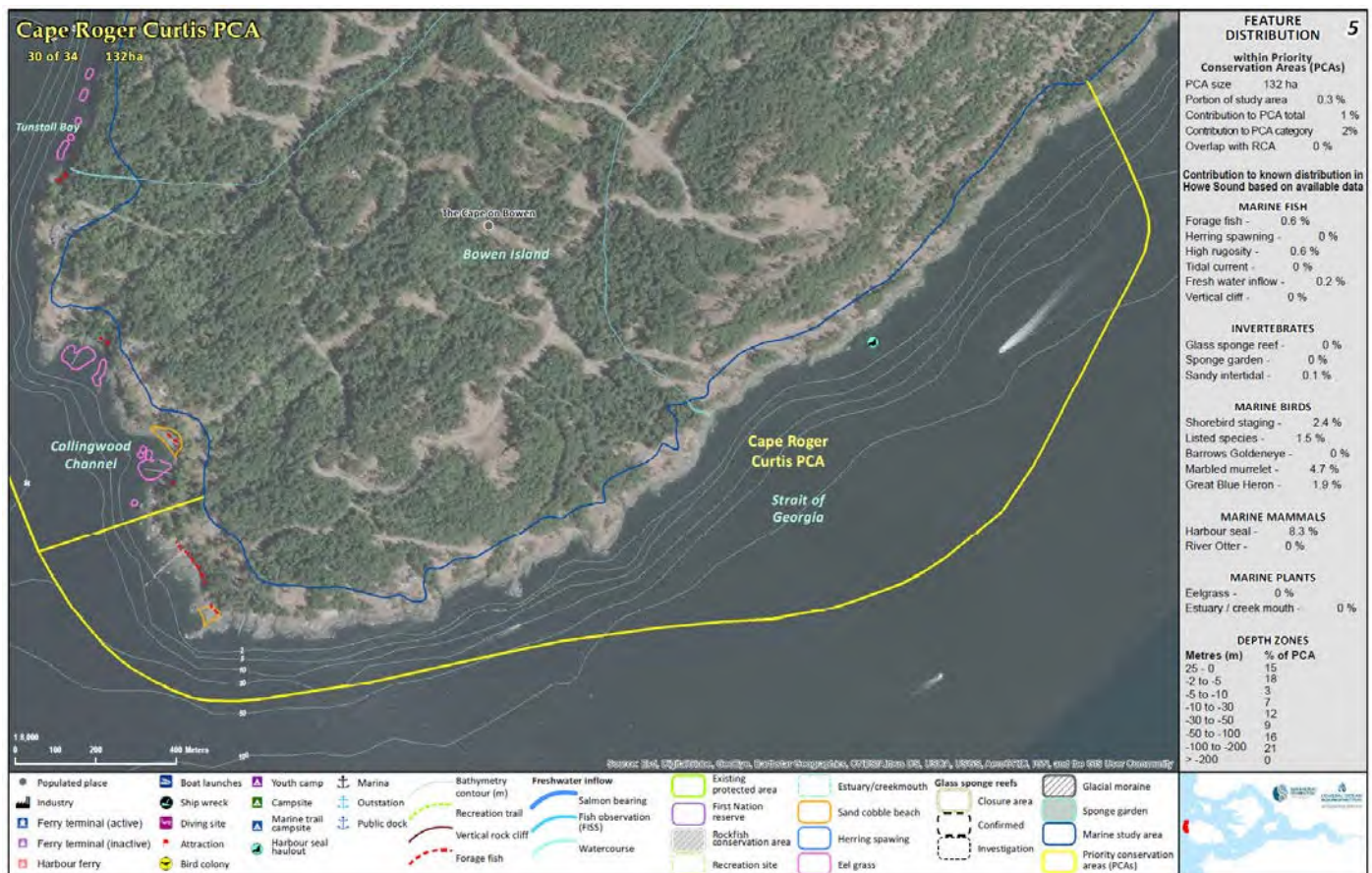


Figure 7: Cape Roger Curtis Priority Conservation Area shown on the Átl'ka7tsem/Howe Sound marine conservation map (Beaty, 2019)

5.0 ECOLOGICAL COMMUNITIES AT RISK

The BC Conservation Data Centre records rare ecological communities based on the TEM site associations. Ecosystems classified as site series 01 (western hemlock - Douglas-fir / Oregon beaked-moss) and 03 (Douglas-fir - western hemlock/salal Dry Maritime) are common at the site and are considered red-listed. There is one polygon classified as site series 04 (Douglas-fir / sword fern) which is red-listed, and one site classified as 07 (western redcedar / three-leaved foamflower Very Dry Maritime), which is blue-listed.

Sites classified as site series 02 (Douglas-fir – Shore pine / Racomitrium) are considered yellow listed, although they are still quite sensitive and locally rare. Figure 8 shows the red, blue and yellow listed ecosystems on the site as well as their structural stage. About 85% of the site is classified as either red or blue-listed ecosystems, but since areas of the site have been cleared for development, some are only at the herb or shrub layer (14%).

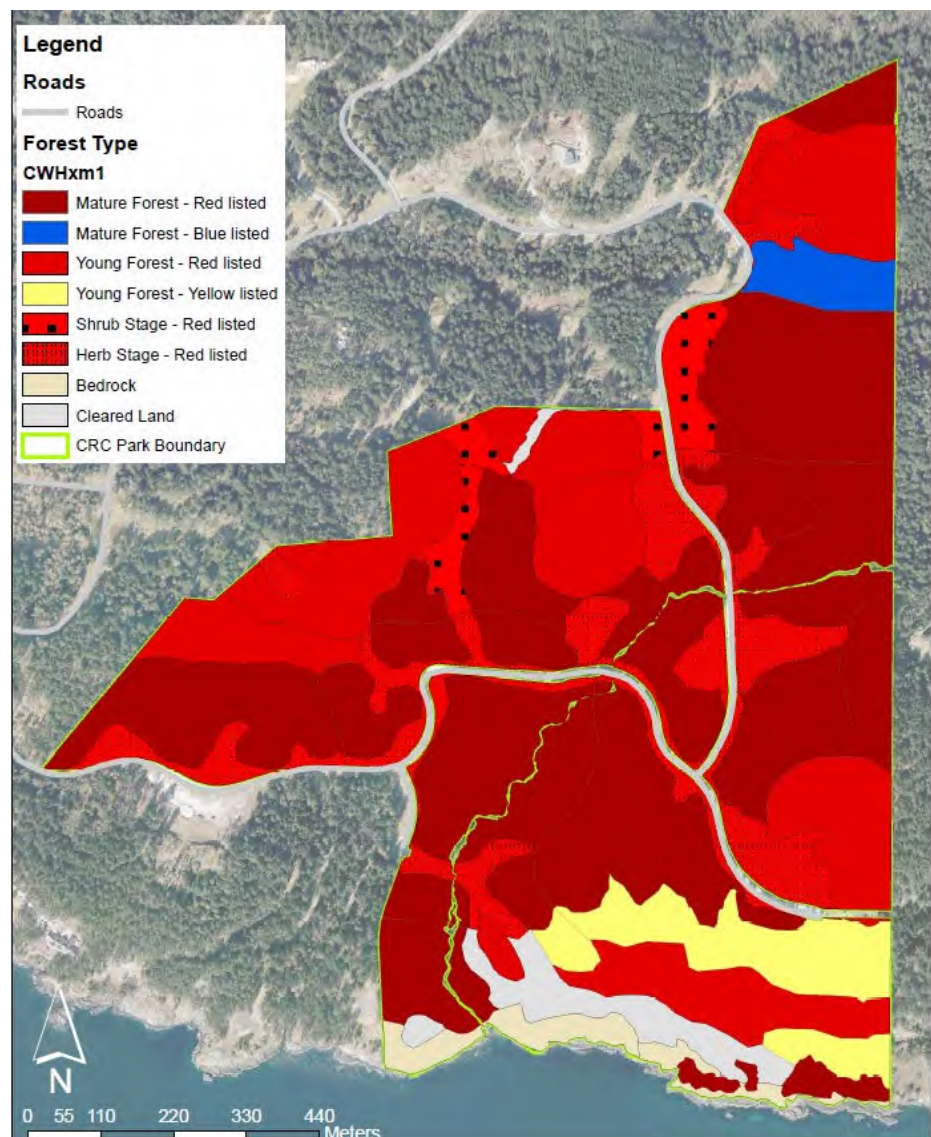


Figure 8: Map of ecological communities at risk on the site displayed with the colour listing (red, blue, yellow) and using their structural stage.

6.0 BIODIVERSITY

6.1. Species at Risk

There are 42 known or possible species at risk (SAR) at the proposed park at Cape Roger Curtis (See Appendix B for a detailed list). This list was developed by searching the BC Species and Ecosystems explorer for all possible species in this area and then refining that list based on other available data sources and species records (eBird, CDC iMap, iNaturalist, and surveys of the area) as well as looking at general habitat suitability at the site. The breakdown of those species by taxonomic group and their place on the BC red or blue listed status is shown in Figure 9.

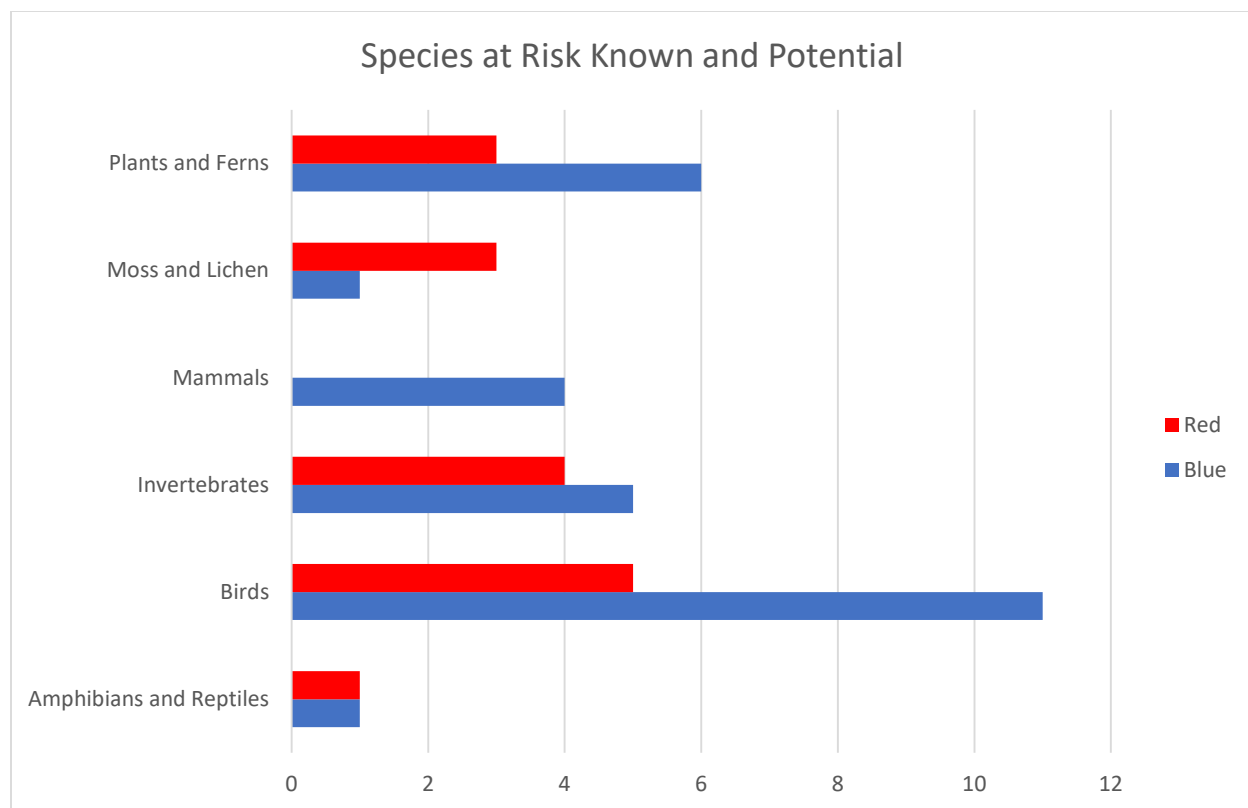


Figure 9: Known or possible species at risk at the proposed park at Cape Roger Curtis by taxonomic group and BC red or blue listed status.

6.2. Mammals

The forest and shrub communities provide habitat to support a diversity of small mammals, including voles, shrews, and mice. Medium and large-sized mammals confirmed to inhabit this area include raccoon (*Procyon lotor*), Douglas squirrel (*Tamiasciurus douglasii*), black-tailed deer (*Odocoileus hemionus*), mink, and short-tailed weasel (*Mustela ermine*). Skunks (*Mephitis mephitis*) are also present on the island. Black bears (*Ursus americanus*) and cougars (*Puma*

concolor) have not been known to reside long-term on the island but have been sighted occasionally.

Bat species using the site are not confirmed but likely include: Yuma Myotis (*Myotis yumanensis*), Californian Myotis (*Myotis californicus*), Long-legged Myotis (*Myotis volans*), Little Brown Myotis (*Myotis lucifugus*), Hoary Bat (*Lasiurus cinereus*), Silver-haired Bat (*Lasionycteris noctivagans*), Big Brown Bat (*Eptesicus fuscus*), and Long-eared Myotis (*Myotis evotis*). Townsend’s Big-eared Bat (*Corynorhinus townsendii*), Fringed Myotis (*Myotis thysanodes*), and Mexican Free-tailed Bat (*Tadarida brasiliensis*) may occur but are unlikely.

An acoustic bat monitor was deployed in Crippen Regional Park on Bowen Island in March 2022 after bats were observed by a park employee. Results of the acoustics analysis were conducted by a local bat expert, and the results are shown in Table 1.

Big brown bat	1
Big brown bat / silver-haired bat	3
California myotis	55
Myotis spp.	24
Silver-haired bat	1

Results of the acoustics analysis were conducted by a local bat expert, and the results are shown in Table 1.

Table 1: Results of acoustic bat monitoring at Crippen Regional Park in March 2022.



Long-eared myotis were recently confirmed on nearby Gambier Island.

6.3. Birds

The site provides a habitat for a wide variety of both resident and migratory birds. A diversity of habitat features is present to support nesting, foraging, and roosting. Earlier inventories of the area confirmed a total of 114 species (PGL, 2009b) and a recent eBird search turned up 141 (see Appendix C for current list).

Coastal Waterbirds: This area is now to be particularly rich in marine birds (See section “Rich Intertidal Zone” above for more info). These marine waters are also frequented by two red-listed fish-eating birds, the double-crested cormorant (*Nannopterum auritum*) and marbled murrelet

(*Brachyramphus marmoratus*), as well as the blue-listed great blue heron and occasional rhinoceros auklet (*Cerorhinca monocerata*) (Bowen Island Conservancy 2007).

Nesting Bald Eagles: There is one bald eagle (*Haliaeetus leucocephalus*) nest at the proposed site. Bald eagle nests are afforded year-round protection under the Wildlife Act (1996) and require 200m quiet buffers and 100m vegetated buffers to comply with the Guidelines for Raptor Conservation during Urban and Rural Land Development in British Columbia (2013). See Figure 10 for a map of the approximate nest location and buffer distances.

Great blue herons: Like bald eagles, the nests of these birds are also afforded year-round protection and buffer distances, and Bowen Island Municipality also has a special Heron Policy. No heron nests have been observed to date at the site, although they have been found elsewhere on the island. Intertidal areas provides an important feeding habitat for these birds. A heron nesting in the Stanley Park colony was observed travelling as far as Bowen Island to feed.

Nesting Owls: Western screech-owl (*Megascops kennicottii kennicottii*) surveys were conducted at the site in May 2007 and 2008 using standard call playback surveys (PGL, 2009a) (PGL, 2009b). None were detected. Barred owls (*Strix varia*) seem common and may have displaced Western screech-owl the in this area. One or two great grey owls (*Strix nebulosa*) overwintered at the Cape property in 2021/2022, but none were observed the following winter, 2022/2023.

Woodpeckers: This site has rich woodpecker habitat. Pileated woodpeckers (*Dryocopus pileatus*) and their nests have been observed nearby. These nests are afforded year-round protection under the Migratory Birds Convention Act (1994).

Migratory Breeding Birds: The occupied nests of these birds are protected by the Migratory Birds Convention Act (1994). Bird inventory point counts were conducted in 2008 with 41 species identified over two days in July (PGL, 2009b). A full species list of breeding birds at the site as well as their relative abundance can be found in Appendix D.

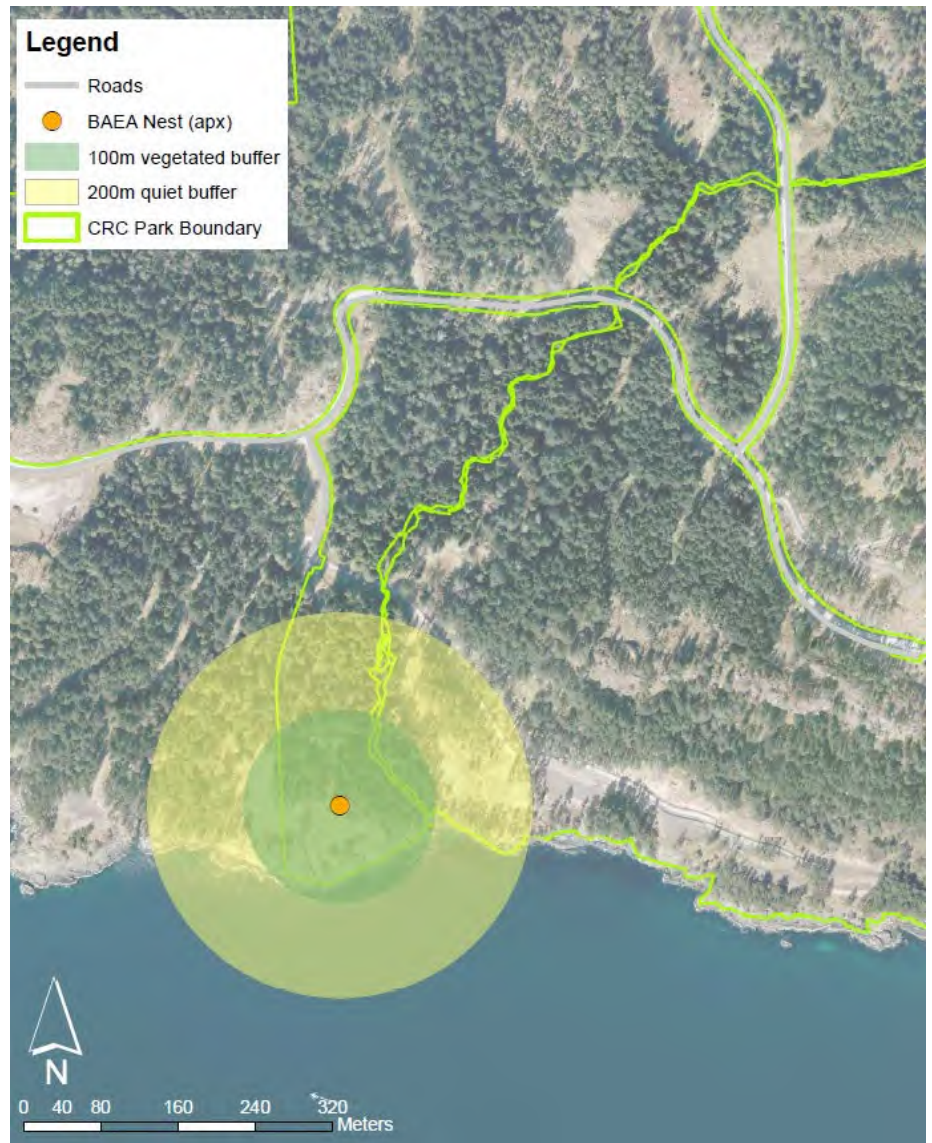


Figure 10: Approximate bald eagle nest location and buffer distances.

6.4. Amphibians

Amphibians that inhabit the study area may include salamanders, newts and frogs. These can be found anywhere on the site. Pond breeding species will be found adjacent to watercourses or in moister areas of the site during seasonal migration. These species rely on water for breeding and as larvae but spend most of their adult lives in terrestrial environments.

Numerous amphibian breeding surveys were conducted at the site in May/July 2007 and 2008 in the site's ephemeral ponds and streams (PGL, 2009a). Red-legged frogs (*Rana aurora aurora*) were found in Burke and Huszar Creeks (PGL, 2009b). Pacific Tree frogs (*Pseudacris regilla*) have been found throughout the site.

Pond-breeding northwestern salamanders (*Ambystoma gracile*) and terrestrial ensatina salamanders (*Ensatina eschscholtzii*) have been observed at the site as documented through research-grade iNaturalist sightings. Other salamanders and net are found on the island but have not yet been documented at the site (Loik, 2022).



Ensatina salamanders (*Ensatina eschscholtzii*) have been observed at the site and documented through iNaturalist.

6.5. Reptiles

There are many dry and rocky areas across the study area suitable for reptiles such as garter snakes or northwestern alligator lizard (*Elgaria coerulea principis*). These species are commonly associated with rocky outcrops and colluvial deposits, which are found across the study area.

The garter snake that has been observed on Bowen island and may be present at the site are the northwestern garter snake (*Thamnophis ordinoides*), Western Terrestrial Garter Snake (*T. elegans*), common garter (*T. sirtalis*), and its Puget garter snake (*T.s.pickeringii*) subspecies.

Reptile surveys conducted at the Cape in May/July 2007 resulted in Northwestern garter snake observations (PGL, 2009a). There is one research-grade northwestern garter snake observation from 2022 at the proposed park location on iNaturalist and one sighting of an alligator lizard just north of the lighthouse. All three species of garter snake were found by the author at nearby Dorman Point in 2021/2022.

6.6. Terrestrial and Aquatic Invertebrates

Although they make up the greatest part of biodiversity, we usually know the least about the invertebrates in our environment. This is true for most regional parks and other protected areas in BC. However, the prevalence of iNaturalist sightings in the last decades has made more data available on these and local naturalists, researchers and the public have all been contributing to these open data sources.

So far, approximately 46 species have been identified through iNaturalist at the site (see Appendix E). Two invertebrate species at risk that have been identified on Bowen Island in recent years are the autumn meadowhawk (*Sympetrum vicinum*) and blue dasher (*Pachydiplax longipennis*) which are associated with the island's permanent water bodies. There is a record of the red-listed Common Wood-nymph (*Cercyonis pegala incana*) from 1933 near Snug Cove.

Butterfly surveys were conducted in May/July 2007 (PGL, 2009a), but the resulting data have not yet been located (Appendix 8 of the PGL report that went to Bowen Island Municipality).

6.7. Marine Species

The water column in the outer waters around Bowen Island is much less stratified due to the lower influence of the Fraser River discharges, and salinity gradually increases toward the Strait of Georgia (Parks Canada, 2010). The shoreline types and biological features of the area around Cape Roger Curtis are captured in the map in Figure 11 found in Bowen Island marine atlas (Gilday et al., 2020).

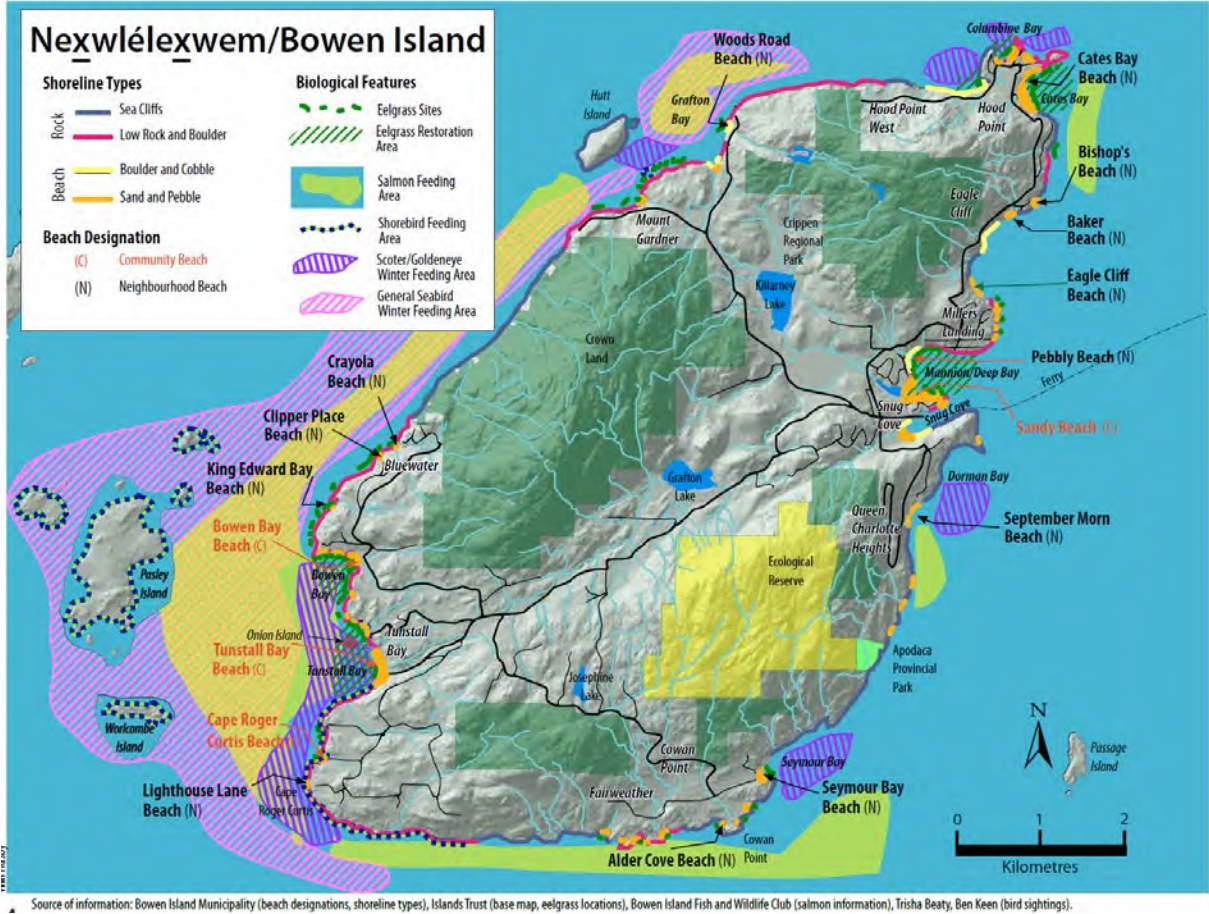


Figure 11: Shoreline types, beach designations and biological features of Bowen island.

Cape Roger Curtis is known for its beds of eelgrass and blue mussels, which, in turn, attract numerous seabirds, particularly surf scoters (*Melanitta perspicillata*) and Barrows goldeneye (*Bucephala islandica*). Coastal seabird surveys have observed up to 35 species of marine or shoreline birds using the area, including flocks of up to 3,000 surf scoters at one time.



Surf scoter flocks of up to 3,000 have been documented at Cape Roger Curtis.

Harbour seals (*Phoca vitulina*) are abundant here, and California sea lions (*Zalophus californianus*), and Steller sea lions (*Eumetopias jubatus*) can be seen feeding on schools of anchovy or travelling past. Mink (*Mustela vison*) and river otters (*Lontra canadensis*) use intertidal areas extensively. Both resident and transient killer whales (*Orcinus orca*) are observed in the waters around Bowen Island, particularly on the south and west shores, and humpback whales (*Megaptera novaeangliae*) sightings at the Cape have been increasing in recent years.



There are identified harbour seal haulouts in the Cape Roger Curtis area.

In addition to the birds and mammals already discussed in the sections above, a variety of other intertidal species have been recorded through iNaturalist for the site including Green and yellow shore crab, dungeness crab, green sea urchin, plumose anemone, and various kelp.

6.8. Invasive Species

Invasive species are non-native flora or fauna that can be highly destructive, competitive and difficult to control. At least 21 invasive plants have been documented on site (Appendix A) and those most potentially detrimental to the sensitive plant communities include Scotch broom (*Cytisus scoparius*), Butterfly bush (*Buddleja davidii*), and Cutleaf Blackberry (*Rubus laciniatus*).

7.0 EXISTING MANAGEMENT AREAS

Bowen Island Municipality has placed protective covenants over areas of Cape Roger Curtis during the earlier development application processes for the site. There are Archeological, Riparian, Ocean Fronting and Environmental covenant areas, as well as more recent “Forest Protection Areas” (see Figure 12).

Ocean Fronting Lands Covenants require a 30m setback from the ‘natural boundary’ of the sea, which generally refers to the visible highwater mark and protects the sensitive coastal bluff plant community (PGL, 2009b). The bylaw contains caveats to reduce this setback under specific circumstances (Diamond Head, 2020).

Environmental Protection Covenants were added to protect sensitive rock bluff habitats as well as the large ephemeral wetland on site. These areas were designed with protecting rare plant communities in mind and referenced the 2004-2007 plant surveys that were done to support the earlier development proposals (PGL, 2009a). The cleared building locations were all made outside of these areas.

Riparian Protection Creeks Covenants restrict any development within 30m from a watercourse and no closer than 15m from its top of bank except in accordance with the conditions of the development permit (Diamond Head, 2020). These areas encompass and expand on the traditional Streamside Protection and Environment Area (SPEA) (PGL, 2009a). The only permitted reason for the removal of trees within the Riparian FMZ is for risk mitigation and the stems should be wildlified if possible.

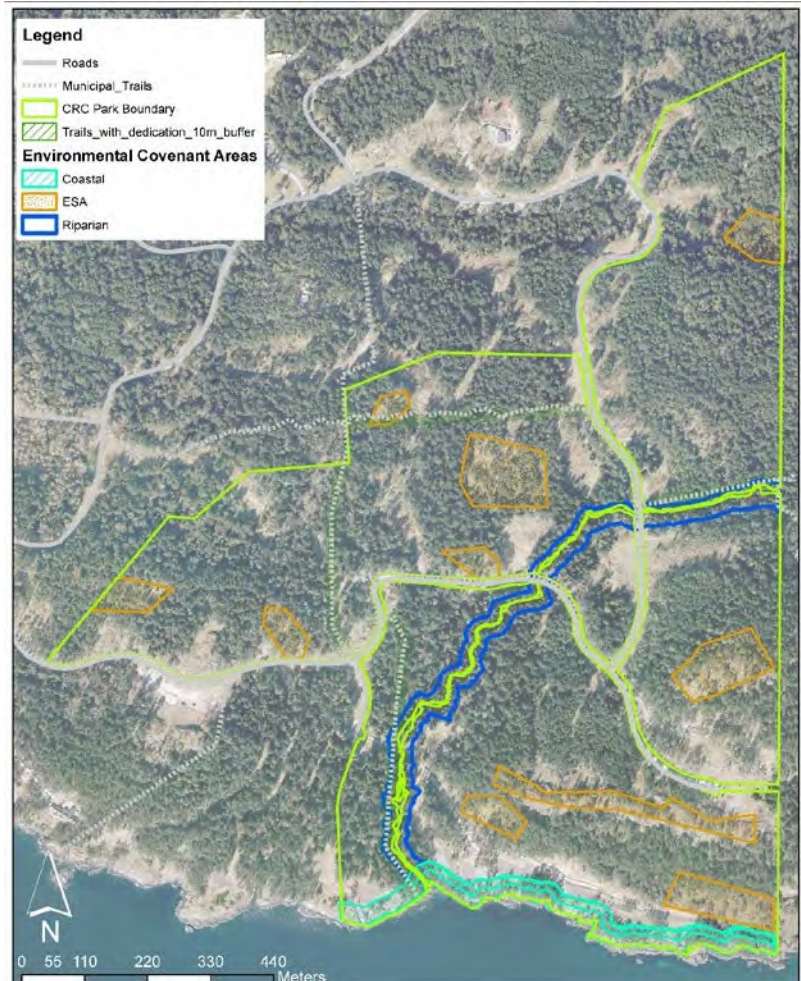


Figure 12: Map of Riparian, Ocean

Fronting and Environmental covenant areas.

Forest Protection Areas require a minimum density of 300 mature stems per/hectare and are located (Diamond Head, 2021) (Figure 13):

- within 10 metres of a stream or wetland,
- 50 meters of public roads, and
- within 10 metres of public trails.

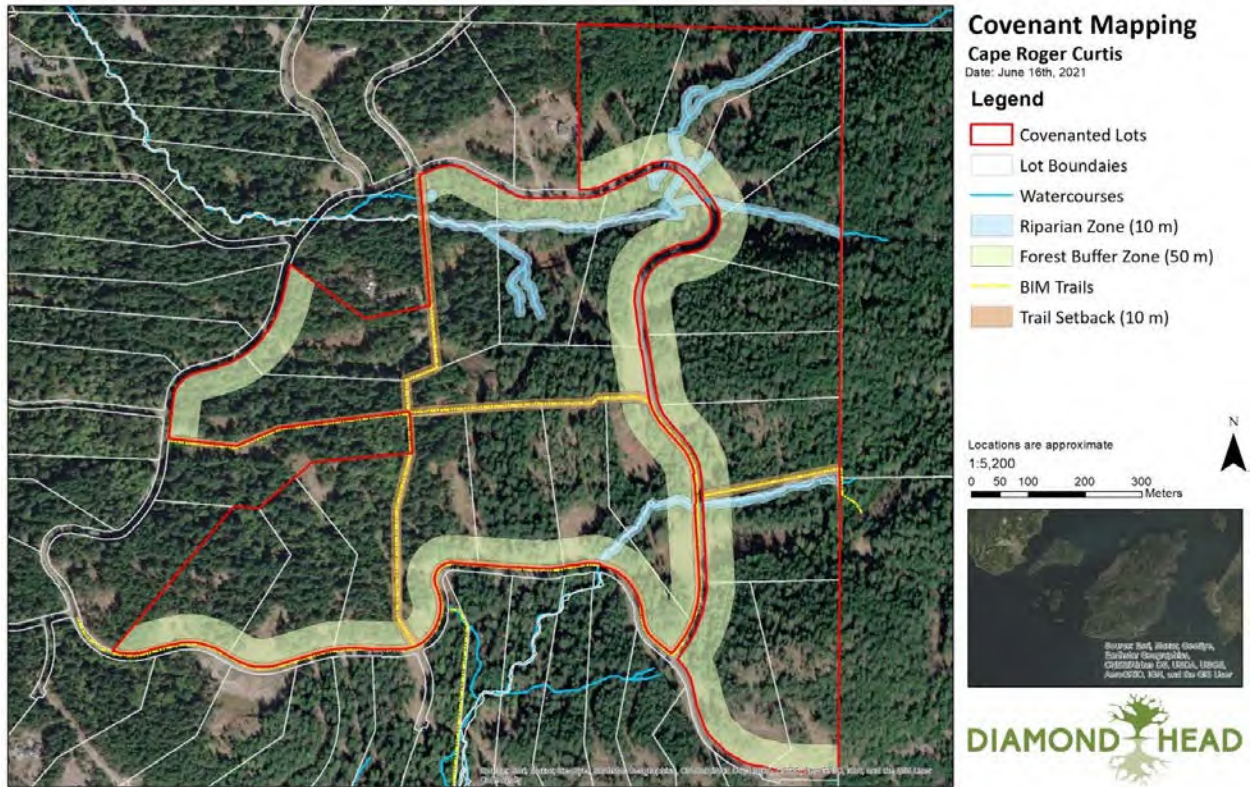


Figure 13: Forest Protection Areas at Cape Roger Curtis (Diamond Head, 2021).

8.0 NATURAL RESOURCE MANAGEMENT IN REGIONAL PARKS

The Regional Parks Plan (2022) (Metro Vancouver, 2022) is Metro Vancouver’s management plan for the regional parks system. It guides work to protect natural areas and connect people to nature, progressing towards the vision of a resilient network of regional parks and greenways that continues to provide important climate, health, and other benefits to park visitors and the wider region. The plan identifies how key challenges such as a growing population, climate change, and social inequity will be met and provides an action plan to address priorities over the next decade. The complete document can be found online.

The Natural Resource Management Framework (Metro Vancouver, 2020) provides strategic direction for managing the natural resources within regional parks. It outlines the principles, goals and strategies of the natural resource management program to ensure system-wide consistency in resource management efforts and resource allocations. The framework is a tool for transparent and consistent decision-making and is informed by other higher-level policy and planning documents such as the Board Strategic Plan, Climate 2050, and the Ecological Health Framework. The Natural Resource Management Framework contains three goals that guide the program:

1. Ensure ecosystem health and long-term resiliency to conserve diverse biological communities and their associated habitats.
2. Provide opportunities for the public to connect with natural areas while conserving the integrity and resilience of ecosystems.
3. Provide opportunities for public involvement in natural resource management through partnerships and stewardship activities.

The Natural Resource Management program is guided by four principles:

- **Ecosystem-based Management** - a conceptual and strategic basis for natural resource management by taking a holistic view of the natural environment. It ensures that land use decisions consider the complex interactions and dynamic nature of ecosystems and are not limited to park administrative boundaries.
- **Adaptive Management** - a systematic process for continually improving management policies and practices by learning from the outcomes of operational programs.
- **Precautionary Principle** - where a proposed action has a higher likelihood of creating a negative impact, a greater degree of research and scientific rigour will be applied before proceeding.
- **Collaboration** - diverse land uses and the presence of common resource management issues provide an opportunity to develop relationships and partnerships to achieve comprehensive solutions.

The framework can be found online. Operational guidelines have also been produced as an internal companion document to provide additional detail and guidance for staff to undertake strategies outlined in this framework.

9.0 ENVIRONMENTAL OVERVIEW OF THE PROPOSED REGIONAL PARK AT CAPE ROGER CURTIS

In early 2023, Metro Vancouver made a rezoning and Official Community Plan (OCP) amendment application to Bowen Island Municipality (BIM).

The land use is currently zoned as rural residential and has been prepared for residential development with minimum lot sizes of 4.0 hectares for one dwelling and one accessory dwelling use per lot (48 total over 24 lots). The current zoning will also accommodate accessory uses, including stables, kennels, agriculture, horticulture, mobile sawmill, mini-storage and secondary suites. This land use already permits overnight use, as it allows for overnight residential guest accommodation (120 days each year) and permits up to five bed and breakfast rooms per dwelling as part of the home occupation.

The rezoning and OCP amendment would change the primary use of the land to regional parkland allowing the 97 hectares of a regionally important ecosystem to be protected in perpetuity. This land use designation (Passive Park 1) will allow for the creation of a regional park complete with conservation areas, day-use amenities such as trails, picnic areas, and viewpoints, as well as supervised overnight use.

Protection for a Sensitive Ecosystem

A sensitive ecosystem is defined as ‘one that is at-risk or ecologically fragile in the provincial landscape.’ The Sensitive Ecosystem Inventory (SEI) mapping includes both sensitive ecosystems (e.g. wetlands, old forests) and important modified ecosystems (e.g. young forests, old field) which have been human-modified but still have significant ecological value (Meidinger, Clark, & Adamoski, 2014).

Nearly 66% of the proposed regional park (64 ha) is considered a sensitive or important modified ecosystem based on the SEI mapping undertaken by Metro Vancouver in 2014.

Metro Vancouver updated the Terrestrial Ecosystem Mapping (TEM) for the site (in 2022) and have found that a high proportion of the site (85% with 71% in a more natural, forested stage) is classified as a red or blue-listed ecological communities at risk by the BC Conservation Data center (BC CDC). Red-listed ecosystems are at risk of being lost (extirpated, endangered or threatened) and blue-listed ecosystems are of special concern. The subzones/variants in the Fraser River valley (CDFmm, CWHxm1, CWHdm) characterize the drier and warmer climates of the coast where most development has occurred. The proposed park site is entirely CWHxm1 Eastern Very Dry Maritime CWH, and only 14% of these ecosystems are currently in a natural/semi-natural state in Metro Vancouver (Meidinger, 2020).

A recent forest inventory of the site (Lasuta and Assoc., 2023) found that 58.85 ha of merchantable timber outside of the forest buffer zones and covenant areas is still unprotected. The conversion of these lands to a regional park would protect nearly 70 ha of valuable forest habitat that is being used by birds, including owls, eagles, songbirds, reptiles, amphibians, bats, and other mammals.

As a park, these lands would be protected and stewarded over time. Regional park staff inventory forest stands for invasive species and conducts regular forest health surveys. Forest management plans are developed. Invasive species removal and other restoration efforts, along with wildfire mitigation and protection, are an important part of land management. Staff also undertake hazard tree assessments for public safety and mitigate risks through careful planning.

Through previous development proposal processes, protective covenants were established throughout the site for the most sensitive dry rocky outcrops, oceanfront, wetland, streams and riparian areas. However, this only amounts to 15.41ha or 16% of the site. Should the site be used for residential development as currently zoned, areas outside the covenants would be subject to clearing, disturbance and development. As part of a park, these areas would instead be kept free of invasive plants and animals, fenced, signed, or otherwise protected from access by people and pets, monitored for ecosystem health, and managed accordingly.

Ultimately rare and fragile ecosystems would be protected as ‘Environmentally Sensitive Areas (ESA)’ within the proposed regional park. ESAs are a common designation in regional parks and are protected through design to restrict use by people/pets. They are monitored and managed by staff biologists and enhanced or restored if needed. Invasive plants are actively managed by regional park staff working closely with local experts and volunteers. These areas would also be signed and interpreted by park environmental educators to raise awareness about why they are off-limits. Compliance and environmental protection are enforced by park operations and ranger staff.

Proposed Land use

Metro Vancouver is proposing the inclusion of supervised, overnight tent camping facilities at the proposed park. Campsites would be located in areas previously cleared for development, with an overall small footprint within the broader park. Overnight options would be phased in over time to allow for adaptive management to ensure any impacts were mitigated.

Metro Vancouver has over 50 years of experience connecting people with sensitive natural areas (Metro Vancouver, 2022). Metro Vancouver has a variety of tools to use in planning, design, management, and enforcement to protect sensitive ecosystems while providing access to nature. Through good park management, park visitors can access nature with minimal impacts. The opportunity to learn, and be active in nature, can ultimately inspire a connection with the land and participation in stewardship.

The proposed overnight camping program is intended to be low-impact and located on previously disturbed sites. Any other facilities, such as pit toilets, parking, trails, and day-use areas will be planned with community input, ecological and technical studies and will be located on existing cleared areas and skid roads.

Significant areas that are serviced and were previously cleared for development will be restored in the proposed park. Since existing cleared areas, driveways, and skid roads would be used, there does not seem to be a need for any significant tree removal or ground disturbance to advance park development.

Natural resource management in regional parks is discussed in Section 8. A full list of the relevant goals, strategies and guidelines can be found in Appendix F.

To highlight some examples of these and show how they will be used to address environmental protection for the proposed park at Cape Roger Curtis are shown in Table 2 below:

Table 2: Some potential environmental concerns and the existing Metro Vancouver operational guideline(s) that would be implemented to address them.

Priority	Existing Metro Vancouver operational guideline(s) for regional parks that would be implemented to address these concerns
Avoiding environmental impact of campsites, trails, day use and parking areas	<ul style="list-style-type: none"> • Use analysis of the Sensitive Ecosystem Inventory, Conservation Value Mapping, and other relevant data to identify lands of high conservation value and environmentally sensitive areas to inform park management decisions. • Develop criteria to identify highly sensitive areas within parks that can be designated during planning processes as areas prioritized for protection and then managed exclusively for natural resource values with limited access. • Use barriers like dense shrub thickets or fences to protect designated habitat areas while retaining sightlines. • Plan and develop trails and facilities with strategies to minimize habitat fragmentation, avoid wildlife conflicts and protect sensitive areas and species at risk. • Avoid or mitigate negative impacts to park natural resources when developing park facilities. When impacts can't be avoided or mitigated, compensation should be considered in another area of the park. • Use environmentally friendly design, building practices, materials, and products whenever possible.

Priority	Existing Metro Vancouver operational guideline(s) for regional parks that would be implemented to address these concerns
	<ul style="list-style-type: none"> • Conduct environmental impact assessments and develop environmental management plans for new park development projects.
Avoiding impacts on wildlife associated with public access	<ul style="list-style-type: none"> • Carefully site park infrastructure to avoid or reduce habitat fragmentation. • Reduce the amount of trails in highly fragmented areas wherever possible. • Strive to protect or restore known wildlife travel corridors and consider these in park development or in collaboration with other jurisdictions. • Take special precautions to protect large veteran trees. • Protect natural soundscapes within parks wherever possible. • Protect the natural lightscapes in parks wherever possible and mitigate light pollution levels through the use of light abatement practices. • Use permanent or temporary closures of selected areas to reduce or eliminate undesirable human impacts to sensitive sites and wildlife.
Avoiding impacts to sensitive habitat areas such as rock bluffs, shorelines, and wetlands.	<ul style="list-style-type: none"> • Evaluate recreational impacts on parkland to ensure that the desired resource conservation and visitor experience objectives are being achieved. This may include developing desired condition objectives for popular trails or features within parks and monitoring for limits of acceptable change that, if reached, may require intervention. • Determine attributes to monitor as indicators of environmental change, such as trail width, number of unsanctioned trails, soil compaction, loss of vegetation, or prevalence of invasive plant species. • Minimize anthropogenic impacts on native species communities. • Manage invasive species that displace native species, impair ecosystem processes, reduce biodiversity and/or threaten human health and safety. • Conserve the soil resources of parks and manage erosion, physical removal, degradation or contamination of soil. • Promote soil health as a vital living component of the ecosystem.

Priority	Existing Metro Vancouver operational guideline(s) for regional parks that would be implemented to address these concerns
	<ul style="list-style-type: none"> • Identify and protect areas where ecological conditions are particularly sensitive to hydrological changes and encourage the retention or replacement of buffers around sensitive areas in order to protect flow regimes and water quality.
Protecting species at risk and their habitat	<ul style="list-style-type: none"> • Conserve natural habitat and ecological processes to support species at risk. • Prepare specific plant and animal management plans where necessary. • Share knowledge and work collaboratively to conserve important habitats, waterways and wildlife corridors to realize shared natural resource management goals inside as well as outside of the park. • Permit research in parks by partners, academic institutions and other agencies to broaden our understanding of park resources and inform management decisions.
working with nature to restore previously disturbed areas	<ul style="list-style-type: none"> • Consider habitat restoration projects that directly contribute to ecosystem health • Restore and enhance plant communities using native plants adapted to site conditions. • Assess forest health to understand how closely ecosystems match optimal conditions and what factors, if any, are pushing them off optimal pathways and determine whether intervention is warranted. • Increase naturalized areas within parks to provide additional habitat and reduce the level of service where appropriate. • Map and maintain a georeferenced inventory of restored areas in order to track and determine cumulative impacts. • Provide effective and meaningful opportunities for park staff, park partners, park associations, volunteers and the public to engage in park ecosystem restoration, enhancement, maintenance, inventory and research. • Help build the capacity of volunteers and partner organizations to assist in park natural resource management.

10.0 BIOPHYSICAL INVENTORY AND MONITORING PLAN FOR PROPOSED REGIONAL PARK AT CAPE ROGER CURTIS

To ensure that the goals of the natural resource management framework are being met, monitoring of outcomes is essential. Ecological indicators and other metrics will be used in this process. For instance, early detection of ecological change can uncover potential trends and provide time to implement adaptive management strategies that support conservation. Monitoring is also important to assess performance and progress with respect to Regional Parks' protect and connect mandate.

There is good quality information available for the proposed park site at Cape Roger Curtis. There are a few gaps that are needed to be filled for any immediate-term planning, but the following list outlines some priority information that will be helpful for entering into a detailed design phase:

1. Conservation Value Mapping using updated TEM data.

To determine the relative sensitivity of park ecosystems, a process is used that combines several data sources and quantifies conservation values for each ecosystem. This allows park managers and planners to easily see which areas of the park are the most sensitive to disturbance to avoid damaging sensitive ecosystems during park development. Conservation Value mapping is generated using TEM and SEI mapping along with information on ecosystems and species at risk. A Conservation Value map will be created for the proposed park site at Cape Roger Curtis using recently updated TEM and SEI mapping.

2. Species at Risk detailed assessments

Although there is good baseline work on this, including a recent desktop review and field reconnaissance as well as extensive survey information from 2009, more detailed and up-to-date species-at-risk assessments will help in planning. Figure 14 shows the distribution of knowledge about species at risk that are confirmed or possible on the site. While there is a good confirmation of species presence for mammals, birds, amphibians, and reptiles, there is less certainty about potential invertebrates, moss and lichen, and plants. In one site visit, Metro Vancouver staff already identified two new plant species at risk, not found in earlier studies. More surveys are planned to take place in spring/summer 2023. Invertebrate and bryophyte specialists would need to be hired to fill in these gaps in knowledge.

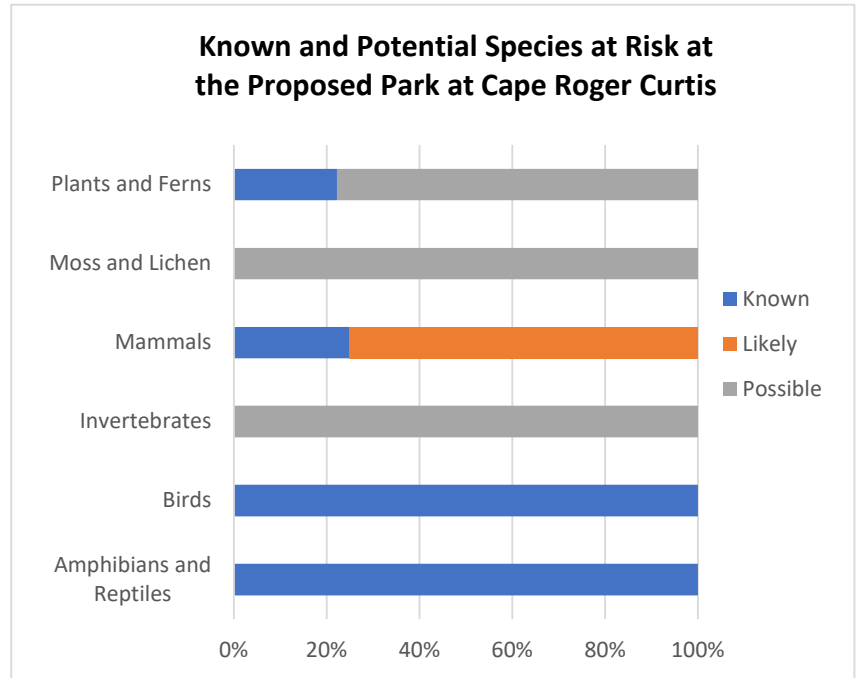


Figure 144: Current information available about different species at risk confirmed or possible on the site.

3. Forest Health Assessment.

This work is not urgent but would provide good baseline information for planning and forest management moving forwards. In 2019, regional parks staff initiated a forest health aerial survey of all regional parks (Blackwell, 2019). Consulting forestry professionals used BC standardized methodology while flying over parks by helicopter. The surveyors transfer what they see to high-resolution orthophotos and then digitize that information into a database. Some areas require follow-up ground surveys because the cause of some symptoms can't be identified from the air. They documented damaged trees by species and outlined the damage agents, whether biotic (pests, pathogens), abiotic (drought, flood, snow/ice, wind, fire) or other (poor soils, tattered). They also assigned each observation a damage agent severity rating (Trace to Very severe) and defoliation severity rating (Light – Severe). Regional Parks have been doing repeat flights over parks of concern and plan to conduct another full park flight in 2024.

4. More baseline studies for sensitive wildlife and habitat values

Although there is good baseline information on wildlife and habitat values at the site, more work is required to update these data and fill in gaps in knowledge, especially with regard to species that are not required to be surveyed for legislative requirements. Native species that are not 'at risk' in BC but are important to local ecosystem processes and functions are often under-studied.

These include terrestrial amphibians, common reptiles, invertebrates, bats, woodpeckers, and small mammals. Priority actions for the first phase of data gathering by parks Natural Resource Management staff will include the following:

- Nest surveys for raptors, herons, and woodpeckers – ongoing
- Wildlife camera studies for presence, relative abundance (when needed), habitat use, and trend monitoring for small to large mammals and birds.
- Wildflower / rare plant surveys
- Passive acoustic sampling for bats
- eDNA sampling of creeks and wetlands for aquatic species
- Encounter surveys for reptiles, otter latrines, potential hibernacula sites, wildlife trees, and any other potential special wildlife features
- Visual searches, trapping, and/or transects for pond-breeding amphibians
- Time-constrained searches, coverboard, and/or transect searches for plethodontid salamanders
- Point count surveys for nighthawks and breeding birds
- Wildlife Tree/Sign Surveys and/or call playback surveys for breeding woodpeckers

Some of the initial baseline data we have collected to date are shown in Figure 15.

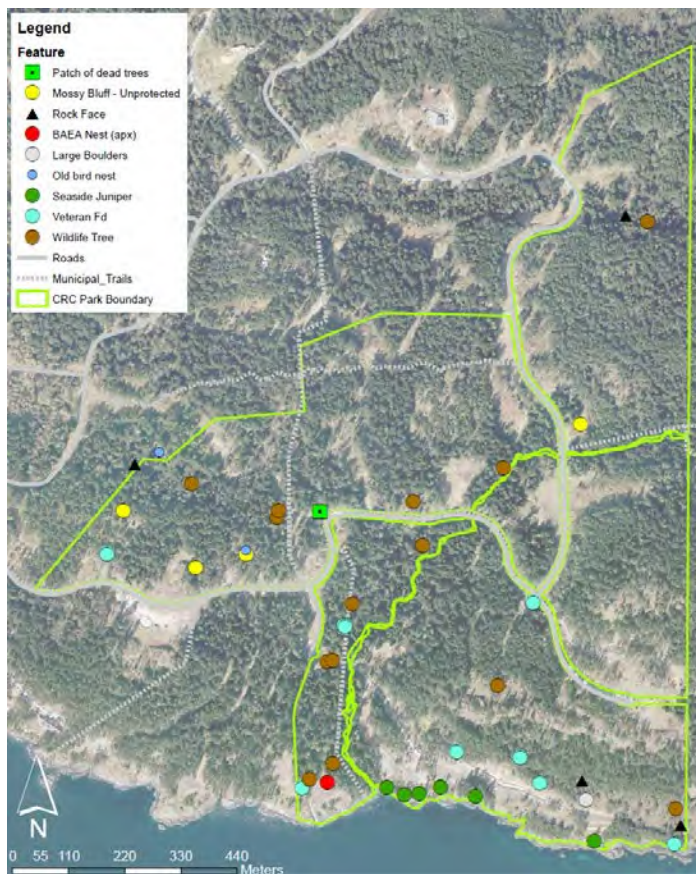


Figure 155: Map of special features mapped during initial site visits to the proposed regional park site in 2023.

5. Invasive Species Inventory

Metro Vancouver is committed to the management of invasive species as documented in the Ecological Health Framework (Metro Vancouver, 2018), the Natural Resource Management Framework (Metro Vancouver, 2020) and the Regional Parks Plan (Metro Vancouver, 2022). Regional Parks uses an integrated pest management approach and apply best management practices for their management. Invasive plant inventories of Regional Parks by staff or contractors follow standardized methods, and system-wide data are stored in a geodatabase.

Most of the invasive species' spatial data collected in parks come from biased surveys along trails. Specific areas where invasive plants are likely to occur are surveyed (e.g. trails, and boundaries with residential lots). Spatial data is recorded at invasive plant sites, and attribute data are added. For more comprehensive data, unbiased samples and/or inventories are undertaken off-trail in some circumstances. This data are used to assess the risk to sensitive ecosystems, manage treatments and monitor results. Priority areas for invasive plant inventory and treatments at the proposed park site would include sensitive and rare plant communities. Strategies for inventory and monitoring include:

- Identifying plant communities and ecosystems that are at the greatest risk of invasion
- Identifying potential pathways for the introduction and monitoring these areas regularly
- Identifying invasive species occurrences at the early stages of invasion for Early Detection and Rapid Response
- Maintaining a spatial geodatabase for all species targeted
- Monitoring changes in non-native plant populations to identify emerging invasions.
- Coordinating with other agencies to track population changes across the region
- Identifying risks to sensitive areas and establishing priorities for invasive plant management and habitat restoration



A larger patch of holly at the site. It seems deer are keeping some invasives species at a suppressed level.

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APPENDIX A — CAPE ROGER CURTIS AREA MASTER PLANT LIST (2022)

Trees

Abies grandis: Grand fir
Alnus rubra: Red alder
Arbutus menziesii: Arbutus
~~*Juniperus communis*: common juniper~~
Juniperus maritima seaside juniper * (was classified as *Juniperus scopulorum*: Rocky Mountain juniper in 2005)
Pinus contorta var. *contorta*: Shore pine
Pseudotsuga menziesii: Douglas-fir
Thuja plicata: Western red cedar

Shrubs

Amelanchier alnifolia: Saskatoon
Arctostaphylos ura-ursi: Linnikinnick
Cotoneaster horizontalis: Rock cotoneaster
Gaultheria shallon: Salal
Holodiscus discolor: Ocean spray
Lonicera ciliosa: Orange (western trumpet) honeysuckle
Lonicera hispidula: Hairy (purple) honeysuckle
Mahonia aquifolium: Tall Oregon-grape *
Mahonia nervosa: Dull Oregon-grape
Philadelphus lewisii: Mock-orange *
Physocarpus capitatus: Pacific ninebark
Ribes sanguineum Red-flowering Currant
Rosa nutkana: Nootka rose
Rubus ursinus ssp. *macropetalus*: Trailing blackberry
Spiraea douglasii: Hardhack
Symphoricarpos albus: Common snowberry

Herbs

Achillea millefolium: Yarrow
Anaphalis margaritacea pearly everlasting
Aphanes arvensis (*A. occidentalis*): Field (western) parsley-piert
Barbarea orthoceras: Winter cress

Brodiaea coronaria Harvest brodiaea
Callitriche sp.: Water starwort
Campanula alaskana Alaskan bellflower
Campanula rotundifolia: Common harebell
Cardamine hirsuta hairy bittercress
Cerastium arvense: Field chickweed
Clinopodium douglasii Yerba buena
Collinsia parviflora: Small-flowered blue-eyed Mary
Daucus pusillus American wild carrot
Delphinium menziesii: Menzies' larkspur *
Eriophyllum lanatum common woolly sunflower
Eryophyllum lanatum var. *lanatum* Woolly eryophyllum
Erythranthe alsinoides wingstem monkeyflower
Erythranthe guttata seep monkeyflower
Fragaria vesca var. *bracteata* Wood strawberry
Fragaria virginiana var. *platypetala* Wild strawberry
Galium aparine: Bedstraw (cleavers)
Gamochaeta ustulata featherweed
Geranium molle: Dovefoot geranium
Gnaphalium sp.: Cudweed
Gratiola ebracteata Bractless hedge-hyssop
Grindelia integrifolia: Puget Sound (entire-leaved) gumweed
Hieracium albiflorum: White-flowered hawkweed
Linaria canadensis var. *texana*: Blue toadflax *
Lotus micranthus: Small-flowered lotus (deervetch)
Madia sativa Chilean tarweed
Mimulus alsinoides: Chickweed (annual) monkey-flower
Mimulus guttatus: Yellow monkey-flower
Minuartia tenella (*Arenaria stricta*): Slender sandwort *
Montia parvifolia: Small-leaved montia (miner's lettuce)
Myosotis discolor: Common (yellow and blue) forget-me-not
Nemophila parviflora small-flowered nemophila

Orthocarpus pusillus (Triphysaria pusilla): Dwarf owl-clover
 Plantago elongata: Slender plantain *
 Plectritis congesta shortspur seablush
 Plectritis congesta: Sea blush
 Polygonum douglasii (P. spergulariiforme): Spurry knotweed
 Prunella vulgaris: Self-heal
 Sabulina macra Slender Stitchwort
 Sagina procumbens Procumbent Pearlwort
 Satureja douglasii: Yerba buena *
 Saxifraga ferruginea: Alaska (rusty) saxifrage
 Scirpus microcarpus Panicked Bulrush
 Sedum oreganum: Oregon stonecrop
 Sedum spathulifolium: Broad-leaved stonecrop
 Silene antirrhina Sleepy catchfly
 Spiranthes romanzoffiana Hooded ladies' tresses orchid
 Trientalis latifolia (T. borealis ssp. latifolia): Broad-leaved starflower
 Trifolium variegatum: White-tipped clover *
 Trifolium willdenowii (T. tridentatum): Tomcat clover
 Tritelia hyacinthina: white tritelia
 Urtica dioica stinging nettle
 Veronica arvensis: Wall speedwell
 Veronica peregrina var. xalapensis: Purslane Speedwell
 Veronica serpyllifolia thyme-leaved speedwell
 Vicia sp.: Vetch
 Viola sempervirens Redwood Violet
 Zigadenus venenosus var. venenosus Meadow death-camas

MONOCOTYLEDONS

Grasses and Sedges

Aira caryophylla: Silver hairgrass
 Aira praecox: Early hairgrass
 Bromus tectorum: Cheatgrass
 Bromus vulgaris Columbia brome
 Danthonia californica California oatgrass
 Danthonia spicata: Poverty oatgrass
 Deschampsia cespitosa tufted hair grass

Dichanthelium oligosanthos var. scribnerianum
 Scribner's witchgrass
 Festuca idahoensis ssp. roemerii Roemer's fescue
 Festuca (Vulpia) myuros: Rattail fescue
 Panicum occidentale (Dianthelium acuminatum):
 Western witchgrass (panic grass)

Other Monocots

Allium amplexans: slimleaf onion
 Allium cernuum: Nodding onion
 Camassia leichtlinii: Great camas *
 Carex lyngbyei: Lyngbye's sedge
 Carex obnupta: Slough (basket) sedge *
 Goodyera oblongifolia: Large-leaved rattlesnake (plantain) orchid
 Luzula parviflora: Small-lowered wood-rush
 Platanthera sp.: Rein orchid
 Zygadenus venenosus: Death camas

FERNS AND FERN ALLIES

Aspidotis densa: Indian's-dream fern *
 Asplenium trichomanes: Maidenhair spleenwort
 Cryptogramma achrostichoides: parsley fern
 Polypodium glycyrrhiza: Licorice fern
 Pteridium aquilinum: Bracken fern
 Selaginella wallacei: Wallace's spikemoss

MOSESSES AND LIVERWORTS

Aulacomnium palustre *
 Bryum miniatum
 Calypogeia sp. liverwort
 Dicranoweisia cirrata
 Dicranum scoparium: Birdbeak (broom) moss
 Hylocomium splendens: Step moss
 Imbricobryum miniatum Glossy Red Bryum Moss
 Isopterygium (Pseudotaxiphyllum) elegans
 Isothecium stoloniferum
 Kindbergia oregana Oregon Beaked Moss
 Lycopodium clavatum stag's-horn clubmoss
 Plagiomnium insigne Badge Moss
 Plagiothecium undulatum Waved Silk-moss
 Polytrichum commune: Common haircap moss
 Polytrichum juniperinum: Haircap moss

Polytrichum piliferum: Haircap moss
Racomitrium canescens Roadside rock moss
Racomitrium canescens
Racomitrium occidentale
Rhizomnium glabrescens
Trachybryum megaptilum

LICHENS

Cladina portentosa: Coastal reindeer lichen
Cladina rangiferina: Reindeer lichen
Cladonia chlorophaea
Cladonia gracilis
Cladonia macilenta
Coelocaulon aculeatum
Hypogymnia physodes
Parmelia saxatilis
Parmelia sulcata
Peltigera aphthosa
Peltigera membranacea: Dog lichen
Umbilicaria sp.
Verrucaria maura: Marine lichen
Xanthoparmelia cumberlandia Rock frog lichen
Xanthoria sp.

FUNGI

Amanita muscaria Fly Agaric
Auriscalpium vulgare Earpick Fungus
Clavulinopsis laeticolor Handsome Club
Dacrymyces chrysospermus Orange Jelly Spot
Entoloma sp.: Mushroom
Fomitopsis mounceae Northern Red Belt
Fomitopsis ochracea
Inocybe sp.: Mushroom
Laccaria laccata: Waxy laccaria mushroom
Lepista nuda Blewit
Lichenomphalia umbellifera Lichen Agaric
Omphalina ericetorum: Mushroom

INVASIVE SPECIES

Agrostis gigantea Redtop grass
Aira praecox Early hairgrass
Anthoxanthum odoratum Sweet vernalgrass
Bromus sterilis Barren brome grass

Buddleja davidii Butterfly bush
Cirsium arvense creeping thistle
Cirsium vulgare bull thistle
Cortaderia selloana Pampas Grass
Cytisus scoparius Scotch broom
Dactylis glomerata Orchard-grass
Digitalis purpurea Common foxglove
Galium aparine catchweed bedstraw
Holcus lanatus Common velvet-grass
Hypochaeris radicata Hairy cat's ear
Jacobaea vulgaris ragwort
Lythrum salicaria purple loosestrife
Mycelis muralis Wall Lettuce
Plantago lanceolata Ribwort plantain
Rubus laciniatus Cutleaf Blackberry
Rumex acetosella Sheep sorrel
Senecio vulgaris common groundsel
Stellaria media common chickweed
Vulpia myuros Rattail fescue grass

APPENDIX B - CAPE ROGER CURTIS AREA MASTER SPECIES AT RISK LIST

Confirmed Species at Risk				
English Name	Scientific Name	Confirmed at CRC	BC List	COSEWIC
Mammals				
Steller Sea Lion	<i>Eumetopias jubatus</i>	Yes (iNaturalist)	Blue	SC
Birds				
Great Blue Heron, <i>fannini</i> subspecies	<i>Ardea herodias fannini</i>	Yes	Blue	SC
Western Grebe	<i>Aechmophorus occidentalis</i>	Yes (eBird)	Red	SC
Marbled Murrelet	<i>Brachyramphus marmoratus</i>	Yes (eBird)	Blue	T
Common Nighthawk	<i>Chordeiles minor</i>	Yes (eBird)	Blue	SC
Black Swift	<i>Cypseloides niger</i>	Yes (eBird)	Blue	E
Peregrine Falcon, <i>anatum</i> subspecies	<i>Falco peregrinus anatum</i>	Yes (eBird)	Red	NAR
Peregrine Falcon, <i>pealei</i> subspecies	<i>Falco peregrinus pealei</i>	Yes (eBird)	Blue	SC
Caspian Tern	<i>Hydroprogne caspia</i>	Yes (eBird)	Blue	NAR
California Gull	<i>Larus californicus</i>	Yes (eBird)	Red	
Black Scoter	<i>Melanitta americana</i>	Yes (eBird)	Blue	
Surf Scoter	<i>Melanitta perspicillata</i>	Yes (eBird)	Blue	
Double-crested Cormorant	<i>Nannopterum auritum</i>	Yes (eBird)	Blue	NAR
Band-tailed Pigeon	<i>Patagioenas fasciata</i>	Yes (eBird)	Blue	SC
Ancient Murrelet	<i>Synthliboramphus antiquus</i>	Yes (eBird)	Blue	SC
Common Murre	<i>Uria aalge</i>	Yes (eBird)	Red	
Brandt's Cormorant	<i>Urile penicillatus</i>	Yes (eBird)	Red	
Amphibians and Reptiles				
Northern Red-legged Frog	<i>Rana aurora</i>	Yes (various surveys)	Blue	SC
Plants and Ferns				
slimleaf onion	<i>Allium amplexans</i>	Yes (Dawn Hanna 2022)	Blue	
Macoun's meadow-foam	<i>Limnanthes macounii</i>	Yes (Terry Taylor)	Red	T

Possible Species at Risk				
English Name	Scientific Name	Confirmed at CRC	BC List	COSEWIC
Mammals				
Little Brown Myotis	<i>Myotis lucifugus</i>	Likely	Blue	E
Yuma Myotis	<i>Myotis yumanensis</i>	Likely	Blue	
Hoary Bat	<i>Lasiurus cinereus</i>	Likely	Blue	
Plants and Ferns				
poverty clover	<i>Trifolium depauperatum</i> var. <i>depauperatum</i>	Possible	Blue	
Macrae's clover	<i>Trifolium dichotomum</i>	Possible	Red	
giant chain fern	<i>Woodwardia fimbriata</i>	Possible	Blue	
Washington springbeauty	<i>Claytonia washingtoniana</i>	Possible	Blue	
Texas toadflax	<i>Nuttallanthus texanus</i>	Possible	Blue	
leafless wintergreen	<i>Pyrola aphylla</i>	Possible	Blue	
purple sanicle	<i>Sanicula bipinnatifida</i>	Possible	Red	T
Moss and Lichen				
rigid apple moss	<i>Bartramia aprica</i>	Possible	Red	E
Roell's brotherella	<i>Brotherella roellii</i>	Possible	Red	E
vole felt	<i>Erioderma soledatum</i>	Possible	Blue	
seaside bone	<i>Hypogymnia heterophylla</i>	Possible	Red	NAR
Invertebrates				
Autumn Meadowhawk	<i>Sympetrum vicinum</i>	Possible (on Bowen)	Blue	
Western Pine Elfin, <i>sheltonensis</i> subspecies	<i>Callophrys eryphon sheltonensis</i>	Possible	Blue	
Johnson's Hairstreak	<i>Callophrys johnsoni</i>	Possible	Red	SC
Moss' Elfin, <i>mossii</i> subspecies	<i>Callophrys mossii mossii</i>	Possible	Red	
Common Wood-nymph, <i>incana</i> subspecies	<i>Cercyonis pegala incana</i>	Possible (on Bowen in 1933)	Red	
Evening Fieldslug	<i>Deroceras hesperium</i>	Possible	Red	DD
Threaded Vertigo	<i>Nearctula</i> sp. 1	Possible	Blue	SC
Blue Dasher	<i>Pachydiplax longipennis</i>	Possible (on Bowen)	Blue	

APPENDIX C – CAPE ROGER CURTIS AREA MASTER BIRD LIST

American Coot	Common Raven	Northern Pintail
American Crow	Common Yellowthroat	Olive-sided Flycatcher
American Goldfinch	Common/Barrow's Goldeneye	Orange-crowned Warbler
American Pipit	Cooper's Hawk	Pacific Loon
American Robin	Dark-eyed Junco	Pacific Wren
American Wigeon	Double-crested Cormorant	Pacific-slope Flycatcher
Ancient Murrelet	Downy Woodpecker	Parasitic Jaeger
Anna's Hummingbird	Dunlin	Pelagic Cormorant
Bald Eagle	Fox Sparrow	Peregrine Falcon
Band-tailed Pigeon	Glaucous-winged Gull	Pied-billed Grebe
Barn Swallow	Golden-crowned Kinglet	Pigeon Guillemot
Barred Owl	Golden-crowned Sparrow	Pileated Woodpecker
Barrow's Goldeneye	Great Blue Heron	Pine Siskin
Belted Kingfisher	Great Grey Owl	Purple Finch
Bewick's Wren	Greater Scaup	Red Crossbill
Black Oystercatcher	Greater Yellowlegs	Red-breasted Merganser
Black Scoter	Greater/Lesser Scaup	Red-breasted Nuthatch
Black Swift	Green-winged Teal	Red-breasted Sapsucker
Black Turnstone	Hairy Woodpecker	Red-necked Grebe
Black-capped Chickadee	Hammond's Flycatcher	Red-tailed Hawk
Black-headed Grosbeak	Harlequin Duck	Red-throated Loon
Black-throated Gray Warbler	Heermann's Gull	Rhinoceros Auklet
Bonaparte's Gull	Hermit Thrush	Ring-billed Gull
Brandt's Cormorant	Herring Gull	Ring-necked Duck
Brown Creeper	Olympic Gull (hybrid)	Rock Pigeon
Brown-headed Cowbird	Hooded Merganser	Ruby-crowned Kinglet
Bufflehead	Horned Grebe	Ruby-crowned/Golden-crowned Kinglet
Bushtit	House Finch	Rufous Hummingbird
Cackling Goose	House Wren	Savannah Sparrow
California Gull	Hutton's Vireo	Sharp-shinned Hawk
Canada Goose	Iceland Gull	Short-billed Gull
Caspian Tern	Lesser Scaup	Snow Goose
Cassin's Vireo	Lincoln's Sparrow	Song Sparrow
Cedar Waxwing	Long-tailed Duck	Spotted Sandpiper
Chestnut-backed Chickadee	MacGillivray's Warbler	Spotted Towhee
Cliff Swallow	Mallard	Steller's Jay
Common Goldeneye	Marbled Murrelet	Surf Scoter
Common Loon	Merlin	Surfbird
Common Merganser	new world warbler sp.	Swainson's Thrush
Common Murre	Northern Flicker	
Common Nighthawk	Northe	

Tree Swallow
Trumpeter Swan
Trumpeter/Tundra Swan
Turkey Vulture
Varied Thrush
Violet-green Swallow
Warbling Vireo
Yellow-rumped Warbler

Western Grebe
Western Gull
Western Sandpiper
Western Tanager
Western Wood-Pewee
Western/Glaucous-winged Gull
White-crowned Sparrow

White-throated Sparrow
White-winged Scoter
Willow Flycatcher
Wilson's Warbler
Yellow Warbler

APPENDIX D - BIRD SPECIES LIST FROM POINT COUNTS CONDUCTED IN 2009

Table 1: Bird species documented during a Variable Range Point Count in the Cape Roger Scott proposed development area on July 29 and 30, 2009.

Common Name	Latin Name	1	2	3	4	5	6	7	8	9	10	11	No. of veg polygons in which species was observed
Red-breasted Nuthatch	<i>Sitta canadensis</i>	■	■	■	■	■	■	■	■	■	■	■	11
Chestnut-backed Chickadee	<i>Parus rufescens</i>	■	■	■	■	■	■	■	■	■	■	■	11
Spotted Towhee	<i>Pipilo maculatus</i>	■	■	■	■	■	■	■	■	■	■	■	11
Winter Wren	<i>Troglodytes troglodytes</i>	■	■	■	■	■	■	■	■	■	■	■	10
Golden-crowned Kinglet	<i>Regulus satrapa</i>	■	■	■	■	■	■	■	■	■	■	■	9
Pacific Slope Flycatcher	<i>Empidonax difficilis</i>	■	■	■	■	■	■	■	■	■	■	■	8
American Robin	<i>Turdus americanus</i>	■	■	■	■	■	■	■	■	■	■	■	6
Pine Siskin	<i>Carduelis pinus</i>	■	■	■	■	■	■	■	■	■	■	■	6
Brown Creeper	<i>Certhia americana</i>	■	■	■	■	■	■	■	■	■	■	■	6
Cassin's Vireo	<i>Vireo cassinii</i>	■	■	■	■	■	■	■	■	■	■	■	5
Northwestern Crow	<i>Corvus caurinus</i>	■	■	■	■	■	■	■	■	■	■	■	5
Black-capped Chickadee	<i>Poecile atricapillus</i>	■	■	■	■	■	■	■	■	■	■	■	4
Hairy Woodpecker	<i>Picoides villosus</i>	■	■	■	■	■	■	■	■	■	■	■	4
Ruby-crowned Kinglet	<i>Regulus calendula</i>	■	■	■	■	■	■	■	■	■	■	■	4
Dark-eyed Junco	<i>Junco hyemalis</i>	■	■	■	■	■	■	■	■	■	■	■	4
Red-breasted Sapsucker	<i>Sphyrapicus ruber</i>	■	■	■	■	■	■	■	■	■	■	■	3
Pileated Woodpecker	<i>Dryocopus pileatus</i>	■	■	■	■	■	■	■	■	■	■	■	3
Swainson's Thrush	<i>Catharus ustulatus</i>	■	■	■	■	■	■	■	■	■	■	■	2
Western Tanager	<i>Piranga ludoviciana</i>	■	■	■	■	■	■	■	■	■	■	■	2
Yellow-rumped Warbler	<i>Dendroica coronata</i>	■	■	■	■	■	■	■	■	■	■	■	2
Wilson's Warbler	<i>Wilsonia pusilla</i>	■	■	■	■	■	■	■	■	■	■	■	2
Bewick's Wren	<i>Thryomanes bewickii</i>	■	■	■	■	■	■	■	■	■	■	■	2
Western Wood Peewee	<i>Contopus sordidulus</i>	■	■	■	■	■	■	■	■	■	■	■	2

Common Name	Latin Name	1	2	3	4	5	6	7	8	9	10	11	No. of veg polygons in which species was observed
Yellow Warbler	<i>Dendroica petechia</i>	■	■	■	■	■	■	■	■	■	■	■	2
Belted Kingfisher	<i>Ceryle alcyon</i>	■	■	■	■	■	■	■	■	■	■	■	2
Turkey Vulture	<i>Cathartes aura</i>	■	■	■	■	■	■	■	■	■	■	■	1
Canada Goose	<i>Branta canadensis</i>	■	■	■	■	■	■	■	■	■	■	■	1
Common Merganser	<i>Mergus merganser</i>	■	■	■	■	■	■	■	■	■	■	■	1
Red Crossbill	<i>Loxia curvirostra</i>	■	■	■	■	■	■	■	■	■	■	■	1
Empidonax Flycatcher	<i>Empidonax spp.</i>	■	■	■	■	■	■	■	■	■	■	■	1
Barred Owl	<i>Strix varia</i>	■	■	■	■	■	■	■	■	■	■	■	1
Downy Woodpecker	<i>Picoides pubescens</i>	■	■	■	■	■	■	■	■	■	■	■	1
Common Nighthawk	<i>Chordeiles minor</i>	■	■	■	■	■	■	■	■	■	■	■	1
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	■	■	■	■	■	■	■	■	■	■	■	1
Fox Sparrow	<i>Passerella iliaca</i>	■	■	■	■	■	■	■	■	■	■	■	1
Warbling Vireo	<i>Vireo gilvus</i>	■	■	■	■	■	■	■	■	■	■	■	1
Willow Flycatcher	<i>Empidonax traillii</i>	■	■	■	■	■	■	■	■	■	■	■	1
Mountain Chickadee	<i>Poecile gambeli</i>	■	■	■	■	■	■	■	■	■	■	■	1
Hutton's Vireo	<i>Vireo huttoni</i>	■	■	■	■	■	■	■	■	■	■	■	1
Hammond's Flycatcher	<i>Empidonax hammondii</i>	■	■	■	■	■	■	■	■	■	■	■	1
Glaucous-winged Gull	<i>Larus glaucescens</i> Naumann	■	■	■	■	■	■	■	■	■	■	■	1
Number of species for which polygon is habitat		20	9	11	9	14	8	21	5	17	15	12	

*Northwestern garter snake, *Thamnophis ordinoides*, observed in vegetation Polygon 1

APPENDIX E - TERRESTRIAL INVERTEBRATE SPECIES LIST FROM INATURALIST

<i>Acronicta insita</i>	Large Gray Dagger
<i>Agrotis vancouverensis</i>	Vancouver Dart
<i>Aquarius remigis</i>	Common Water Strider
<i>Ariolimax columbianus</i>	Pacific Banana Slug
<i>Caenurgina erechtea</i>	Forage Looper Moth
<i>Caripeta aequaliaria</i>	Western Conifer Looper
<i>Catoptria oregonicus</i>	Catoptria oregonicus
<i>Cisseps fulvicollis</i>	Yellow-collared Scape Moth
<i>Coccinella novemnotata</i>	Nine-spotted Lady Beetle
<i>Coccinella septempunctata</i>	Seven-spotted Lady Beetle
<i>Drepana arcuata</i>	Arched Hooktip Moth
<i>Elasmostethus cruciatus</i>	Red-cross Shield Bug
<i>Elathous nebulosus</i>	Elathous nebulosus
<i>Epirrhoe alternata</i>	Common Carpet Moth
<i>Eulia ministrana</i>	Ferruginous Eulia Moth
<i>Habronattus oregonensis</i>	Oregon Paradise Spider
<i>Haplotrema vancouverense</i>	Robust Lancetooth Snail
<i>Harmonia axyridis</i>	Asian Lady Beetle
<i>Harpaphe haydeniana</i>	Yellow-spotted Millipede
<i>Homorthodes hanhami</i>	Homorthodes hanhami
<i>Ianassa pallida</i>	Pale Prominent
<i>Idaea dimidiata</i>	Single-dotted Wave
<i>Lambdina fiscellaria</i>	Hemlock Looper Moth
<i>Leptarctia californiae</i>	California Tiger Moth
<i>Leptoglossus occidentalis</i>	Western Conifer Seed Bug

<i>Lethocerus americanus</i>	Lethocerus americanus
<i>Lophocampa argentata</i>	Silver-spotted Tiger Moth
<i>Mesogona olivata</i>	Mesogona olivata
<i>Monadenia fidelis</i>	Pacific Sideband
<i>Noctua pronuba</i>	Large Yellow Underwing
<i>Ochlodes sylvanoides</i>	Woodland Skipper
<i>Oligia divesta</i>	Oligia divesta
<i>Orthosia transparens</i>	Orthosia transparens
<i>Paonias excaecata</i>	Blinded Sphinx
<i>Parabagrotis sulinaris</i>	Parabagrotis sulinaris
<i>Platyptilia carduidactylus</i>	Artichoke Plume Moth
<i>Protodeltote albidula</i>	Pale Glyph
<i>Pseudothyatira cymatophoroides</i>	Tufted Thyatirine Moth
<i>Pyrrharctia isabella</i>	Isabella Tiger Moth
<i>Rheumaptera undulata</i>	scallop shell moth
<i>Scoliopteryx libatrix</i>	Herald Moth
<i>Spiramater lutra</i>	Otter Spiramater Moth
<i>Vespericola columbiana</i>	Northwest Hesperian
<i>Zale minerea</i>	Colorful Zale Moth
<i>Zelus tetracanthus</i>	Four-spurred Assassin Bug
<i>Zootermopsis angusticollis</i>	Pacific Dampwood Termite

APPENDIX F - OPERATIONAL GUIDELINES THAT WOULD BE USED IN THE DEVELOPMENT OF A NEW REGIONAL PARK AT CAPE ROGER CURTIS

Natural Resource Management

Goal 1: Ensure ecosystem health and long-term resiliency to conserve diverse biological communities and their associated habitats

Strategy 1.2: Enhance ecosystem connectivity

Guidelines:

- Carefully site park infrastructure to avoid or reduce habitat fragmentation.
- Reduce the amount of trails in highly fragmented areas wherever possible.
- Strive to protect or restore known wildlife travel corridors and consider these in park development or in collaboration with other jurisdictions.

Strategy 1.3: Conserve biological communities

Guidelines:

- Conserve natural habitat and ecological processes to support species at risk.
- Prepare specific plant and animal management plans where necessary.
- Recognize the value of novel ecosystems (e.g. old fields, barns or other human-created landscapes) that provide surrogate habitat for a wide range of native species and manage them accordingly.
- Recognize, understand, and educate that perfect data will never exist to manage plant and animal populations.
- Understand that a shifting baseline syndrome (a gradual change in the accepted norm for ecological conditions) can affect how people perceive the natural world.
- Manage succession in areas where natural processes and/or human-induced changes will result in the loss of critical habitat or ecosystem type.
- River, floodplain, ocean, mountain viewsapes and scenic corridors identified in park management plans may be maintained through vegetation management, provided that vegetation removal does not result in the loss of critical habitat or significant impacts to natural resources.
- Participate in working groups/committees to coordinate management activities with respect to specific populations (for example: bears, bats, snow geese).
- Minimize anthropogenic impacts on native species communities.

Strategy 1.4: Conserve and protect natural processes and features

Guidelines:

- Manage ecosystems with minimal interference to maintain ecological processes in as natural a state as possible.
- Discourage development and infrastructure in dynamic areas (e.g. rock-fall areas) to allow natural processes to occur and protect visitor safety.
- Take special precautions to protect large veteran trees in parks. This may include inventory, monitoring and management actions when their health may be threatened.
- Protect natural soundscapes within parks wherever possible.
- Protect the natural lightscapes in parks wherever possible and mitigate light pollution levels through the use of light abatement practices.
- Provide ecological information and recommendations for the incorporation of natural assets into the park natural asset management program and financial planning.

Strategy 1.5: Maintain, enhance and restore natural communities, structures or conditions

Guidelines:

- Consider habitat restoration projects that directly contribute to ecosystem health, without jeopardizing the park's existing habitat values, special features or identity. Projects will be evaluated based on fit with park management plan or park purpose as well as the expected contribution to regional biodiversity.
- Restore and enhance plant communities using native plants adapted to site conditions. Where site disturbance is severe, non-invasive, non-native species may be used to stabilize disturbed areas.
- Assess forest health to understand how closely ecosystems match optimal conditions and what factors, if any, are pushing them off optimal pathways and determine whether intervention is warranted.
- Increase naturalized areas within parks to provide additional habitat and reduce the level of service where appropriate.
- Map and maintain a georeferenced inventory of restored areas in order to track and determine cumulative impacts.

Strategy 1.6: Manage invasive species

Guidelines:

- Manage invasive species that displace native species, impair ecosystem processes, reduce biodiversity and/or threaten human health and safety.
- Invasive species and pest control strategies will be based on well-researched integrated pest management plans. Herbicides may be used to control invasive plants when other methods have proven ineffective, cost prohibitive or deleterious, and the impacts of inaction exceed the impacts of herbicide use. Use of anticoagulant rodenticides should

not occur in Regional Parks due to the high risk of injury to non-target species and secondary poisoning of predator species.

- Map and maintain a georeferenced inventory of targeted invasive plants in order to track and determine efficacy of treatments.
- Work with other regional park staff to identify illegal green waste dumping locations. Where appropriate, install signage to educate neighbours regarding invasive plants and the need to dispose of them properly.
- Participate in regional committees or workshops in order to share information and best management practices regarding invasive species.

Strategy 1.7: Mitigate for and adapt to effects of climate change

Guidelines:

- Protect, restore and maintain forests that can mitigate the effects of climate change through flood and temperature attenuation, carbon sequestration and improved air quality and can contribute to regional greenhouse gas reduction targets.
- Consider the potential impacts of climate change in all restoration and enhancement plans.
- Ensure climate stressors and changes are considered during park management planning processes.
- Consider managed retreat or floodable infrastructure as an alternative to structural protection or accommodation measures to manage emerging natural hazard risks due to climate change.

Strategy 1.8: Conserve soil resources

Guidelines:

- Conserve the soil resources of parks and manage erosion, physical removal, degradation or contamination of soil.
- Promote soil health as a vital living component of the ecosystem.
- Use native soils for restoration projects wherever possible. If imported soils are used, they should be free of weeds and contaminants.

Strategy 1.9: Conserve water resources

Guidelines:

- Manage rain and storm water on parkland in order to promote aquifer recharge, protect water quality, reduce the risk of flooding and erosion, and prevent contaminated water from entering sensitive ecosystems.
- Identify and protect areas where ecological conditions are particularly sensitive to hydrological changes and encourage the retention or replacement of buffers around sensitive areas in order to protect flow regimes and water quality.

- Protect, enhance, create, and restore water features and riparian areas wherever possible.

Goal 2. Provide opportunities for public to connect with natural areas while conserving the integrity and resilience of ecosystems

Strategy 2.1: Site park infrastructure and visitor use in less sensitive areas

Guidelines:

- Use analysis of the Sensitive Ecosystem Inventory, Conservation Value Mapping, and other relevant data to identify lands of high conservation value and environmentally sensitive areas to inform park management decisions.
- Develop criteria to identify highly sensitive areas within parks that can be designated during planning processes as areas prioritized for protection and then managed exclusively for natural resource values with limited access.
- Use barriers like dense shrub thickets or fences to protect designated habitat areas while retaining sightlines.
- Plan and develop trails and facilities with strategies to minimize habitat fragmentation, avoid wildlife conflicts and protect sensitive areas and species at risk.
- Avoid or mitigate negative impacts to park natural resources when developing park facilities. When impacts can't be avoided or mitigated, compensation should be considered in another area of the park.
- Use environmentally friendly design, building practices, materials, and products whenever possible.
- Consider incorporating green infrastructure (green roofs, green walls, bioswales, etc.) around built facilities.
- Accept that some beneficial wildlife species may occupy regional park structures and coexistence should be promoted wherever possible and appropriate.
- Manage unauthorized trails at an acceptable level.

Strategy 2.2: Use best management practices to protect natural resources

Guidelines:

- Develop or adopt best management practices where required in order to comply with environmental regulations and meet required standards.
- Conduct environmental impact assessments for new development projects.
- Work with construction coordinators, operations and planning staff to use develop environmental management plans for park development projects.

Strategy 2.3 Manage and monitor impacts of visitor use

Guidelines:

- Evaluate recreational impacts to parkland to ensure that the desired resource conservation and visitor experience objectives are being achieved. This may include developing desired condition objectives for popular trails or features within parks and monitoring for limits of acceptable change that if reached, may require intervention.
- Determine attributes to monitor as indicators of environmental change such as trail width, number of unsanctioned trails, soil compaction, loss of vegetation, or prevalence of invasive plant species.
- Use permanent or temporary closures of selected areas to reduce or eliminate undesirable human impacts to sensitive sites and wildlife.
- Discourage active and passive feeding of wildlife within Regional Parks through signage, public education and enforcement.

Goal 3: Provide opportunities for public involvement in natural resource management through partnerships and stewardship activities

Strategy 3.1: Form collaborative partnerships

Guidelines:

- Build relationships and maintain strong connections with other levels of government, First Nations, academic institutions, community organizations and the private sector
- Share knowledge and work collaboratively to conserve important habitats, waterways and wildlife corridors to realize shared natural resource management goals inside as well as outside of the park.

Strategy 3.2: Provide opportunities for stewardship and education

Guidelines:

- Provide effective and meaningful opportunities for park staff, park partners, park associations, volunteers and the public to engage in park ecosystem restoration, enhancement, maintenance, inventory and research.
- Help build the capacity of volunteers and partner organizations to assist in park natural resource management.

Strategy 3.3: Enhance understanding of parks through research

Guidelines:

- Permit research in parks by partners, academic institutions and other agencies to broaden our understanding of park resources and inform management decisions.
- Regulate independent and academic research in Regional Parks by stipulating terms and conditions in a formal research permit.

Strategy 3.4: Promote the sharing of expertise

Guidelines:

- Provide information about the Regional Parks' natural resources and encourage information sharing through participation in forums, working groups, task forces, advisory panels, committees, workshops, and through communication with other Metro Vancouver departments.
- Use and contribute to open data sources wherever feasible to disseminate information on Regional Parks natural resources.
- Highlight and profile the regional park natural resources and programs through a variety of formats, such as newsletters, websites, webinars, social media, and videos, to share results and garner interest in regional park natural resources.



Coastal bluffs looking east - Regional Park at Cape Roger Curtis

Visitor Use Management Plan

Regional Park at Cape Roger Curtis

May 2023

Regional Park at Cape Roger Curtis
VISITOR USE MANAGEMENT PLAN

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1.0 EXECUTIVE SUMMARY

In May 2023, Metro Vancouver acquired 24 parcels of land (97 hectares) at Cape Roger Curtis on Bowen Island to establish a new regional park.

The regional park protects sensitive ecosystems, including regionally rare coastal bluffs, rocky headlands, and dry Douglas fir forests. It also provides opportunities for park visitors to connect with nature through day and overnight uses.

Through engagement with the public and agencies, a number of priorities for visitor use management have emerged, including protecting ecological values and avoiding impacts on transportation infrastructure.

A visitor use management plan has been developed to guide visitor management and ensure park and community resources are protected and resilient over the long term. The plan establishes desired conditions to guide land management as the park is planned, developed and ultimately opened to public access:

- I. Park access is sustainable. Car access to the park is limited to avoid impacts on the community, local roads, and the ferry system.
- II. Park visitors respect neighbouring properties, natural areas, and local amenities.
- III. The park's sensitive natural areas are protected and managed to avoid negative impacts from park visitors. Park visitors respect the regional park bylaw and regulations to protect park ecology.
- IV. Park visitors are prohibited from accessing habitats or ecosystems highly vulnerable to human impact.

The plan includes actions for each desired condition. Metro Vancouver will continue to work closely with Bowen Island Municipality, First Nations, and agencies to sustainably manage the park.

2.0 INTRODUCTION

Cape Roger Curtis is eight kilometres from Bowen Island's Snug Cove. It is within the territories of the Skwxwú7mesh Úxwumixw (Squamish Nation), xʷməθkʷəy̓əm (Musqueam Indian Band) and zsalílwataɣt (Tsleil-Waututh Nation). Metro Vancouver respectfully acknowledges the significance of Bowen Island and the Howe Sound for all three Nations, particularly the Skwxwú7mesh Úxwumixw (Squamish Nation).

This visitor use management plan is provided as part of the Bowen Island Municipal rezoning and official community plan (OCP) amendment process for the regional park at Cape Roger Curtis. Effective visitor management involves ongoing engagement, collaboration, and adaptive management. This is a living document to be reviewed periodically to manage potential impacts of the regional park and surrounding community through adaptive management.

Adaptive management is a systematic process for continually improving management policies and practices by learning from the outcomes of operational programs and actions. It guides the fine-tuning of

management actions in response to monitoring and assessment, advances in science and technology, changing regulatory regimes, public values and evaluations of effectiveness with an aim to reduce uncertainty over time.

The development of this plan was informed by regional park policy, best practices, research, and the *Visitor Use Management Framework*, which was developed by a council of land management agencies in the United States.

2.1 Background



Looking Southwest from lot 23, regional park at Cape Roger Curtis

The regional park is located on the southwest tip of Bowen Island at Cape Roger Curtis. The property includes an ecologically diverse dry coastal bluff waterfront.

The site was previously subdivided and prepared for residential development with a municipal road network, cleared development sites, trails and servicing.

The preliminary park program includes conservation and stewardship, trails, day-use amenities and low impact camping.

Through the public engagement process, some participants expressed concern with the potential impacts of park visitors to sensitive ecosystems, traffic, infrastructure, and municipal services. To address these concerns, this plan sets out

proactive and adaptive measures to manage park visitors, and to minimize impact on the regional park and the island as a whole. These measures will be implemented both prior to and during the phased opening of the regional park.

2.2 Visitor Use Management Plan Purpose

The purpose of this plan is to establish a framework for visitor management at the regional park at Cape Roger Curtis. Effective visitor management will support the following goals:

- Protect ecosystems and wildlife, especially regionally rare ecosystems: coastal bluffs, rocky headlands, and dry Douglas fir forests.
- Protect cultural resources and values in collaboration with Skwxwú7mesh Úxwumixw (Squamish Nation).
- Provide opportunities for people to connect with nature, including overnight opportunities, and to enjoy the unique views and landscapes of Cape Roger Curtis.
- Mitigate potential impacts of park visitation on the transportation network (local roads and BC Ferries Route).

- Mitigate potential impacts of increased visitation to Bowen Island's parks, beaches, and natural areas.
- To achieve the above goals with provisions for equity, diversity and inclusion. This includes identifying and mitigating visible and invisible barriers to access, which may include financial, transportation, physical accessibility, communication, or feelings of exclusion.

2.3 Relevant policies and legislation, planning documents

In spring 2023 Metro Vancouver provided an Implementation, Visitation, Operations and Access study, ecological overview and trip generation report to BIM as part of the rezoning / OCP amendment application. In addition to the Visitor Use Management Plan, Metro Vancouver is also completing a transportation impact assessment, transportation demand management study, emergency management overview, hydrological assessment, phasing strategy and park concept plan.

Transportation Plan 2018 - 2038 (2018): Bowen Island's transportation plan seeks, to have better transportation connections, choices, and health, through a number of actions, including a cross-Island multi-use path as a priority action. Other actions relevant to visitor management include: increased and improved sustainable transportation infrastructure (active and transit), exploring opportunities for alternative ferries and enhanced regional connections, incentives to promote the use of park & rides, exploring opportunities for alternatives to single-occupancy private vehicle use, managing parking, and multi-modal transportation integration.

Creating a Resilient Bowen Island: A Community Economic Development Plan for Our Sustainable Future (2021): an economic development plan for Bowen Island with the aspiration to create “a vibrant, resilient local economy that enhances social well-being while respecting local, regional and global ecological limits.” The section on responsible tourism provides guidance and strategies for balancing tourism with ecological integrity, island culture, and resident lifestyles. Relevant approaches include:

- Promoting tourism only for visits outside the peak tourist season.
- Encouraging longer, more immersive stays rather than day-trip visits. This approach includes focusing on learning and wellness.
- Encouraging low-impact tourism visits focused on hiking, cycling, health retreats, and so on, including promoting non-car visits to the island.

Bowen Island's *Official Community Plan (OCP, 2014)*: a document that provides a long-range vision for development and change on Bowen Island. The Natural Environment Section of this plan highlights the importance of preserving and protecting Bowen Island's natural environment, ecosystems and biodiversity. The section includes Objective 40 regarding the lands at Cape Roger Curtis:

- To encourage the retention of portions of Cape Roger Curtis in a natural state accessible to the public, including ecologically sensitive coastal bluffs, other sensitive ecosystems such as Arbutus and Douglas Fir Woodland, portions of the shoreline, archaeological features, viewpoints, and significant marine shorelines.

The Land Use Management section of the plan contains Objective 69, to continue to promote the public interest in the development of the Cape Roger Curtis lands. Under this objective, Policy 152 is that the Municipality continues to promote the public interest at Cape Roger Curtis by encouraging the development of the site to:

- conserve the majority of the coastline for ecosystem protection, but especially the south-facing ecologically sensitive and unique coastal bluff;
- where there are no adverse ecological impacts, develop public waterfront walking trails along the majority of the coastline, connecting to the cross-island greenway;
- protect environmentally sensitive areas and rare species;
- cluster homes and any other structures in any new development to reduce land disturbance, maximize green space and the opportunity for trails, and facilitate transportation alternatives; and
- minimize and mitigate any negative impacts from Cape Roger Curtis development on the adjacent neighbourhoods and on the island community as a whole.

Tourism Bowen's Responsible Tourism Plan (2023 in progress): a plan to balance tourism with community well-being on Bowen Island, including strategies for managing and improving Bowen Island's tourism ecosystem. Metro Vancouver will look for opportunities to collaborate with Tourism Bowen on visitor management.

Regional Parks Plan (2022): Metro Vancouver's management plan for the regional parks system. The plan guides work to protect natural areas and connect people to nature, progressing towards the vision of a resilient network of regional parks and greenways that continues to provide important climate, health and other benefits to park visitors and the wider region.

Regional Parks Natural Resource Management Framework (2020): a framework with strategic direction for managing natural resources in regional parks. It is guided by the principles of ecosystem-based management, adaptive management, the precautionary principle, and collaboration. The plan sets out strategies for long-term ecosystem integrity, resiliency, and overall health, including the conservation of diverse biological communities, while providing opportunities for people to connect with nature.



Public Open House at Bowen Island Community School

3.0 PUBLIC ENGAGEMENT PROCESS

The public engagement process has gathered insights, concerns, ideas, and values from the public, stakeholders, and agencies about the regional park at Cape Roger Curtis. Engagement opportunities have included public open houses, webinars, virtual technical focus groups, public feedback forms, letter and email submissions, and agency meetings.

Future engagement, through 2023, will inform the development of a park concept plan to guide land management, conservation and development over the long term. This engagement will involve the community, stakeholders, and agencies to shape the project's direction and design.



Forest trail, regional park at Cape Roger Curtis

4.0 PARK PROGRAM AND KEY CONCERNS

4.1 Preliminary Park Program

The regional park at Cape Roger Curtis encompasses about 700 metres of waterfront. Huszar Creek flows through the site. Along the shore, the coastal bluff plant communities are dominated by arbutus, shore pine, Douglas fir, and some 400-year-old maritime juniper. In recent years, there have been frequent sightings of orcas and humpback whales from this site.

A preliminary program for the regional park consists of conservation, habitat creation and restoration, and opportunities for tent camping, picnic areas, trails, waterfront views, interpretation and learning. Primary access for day-use and camping would be by shuttle or active transportation, with some car access provided for accessibility.

Park development will occur in three distinct phases, each taking two to three years, allowing for monitoring and review between construction phases. Full park development would happen over approximately seven years.

4.2 Key Concerns

Some participants identified concerns with potential impacts on the site's sensitive ecosystems, neighbouring areas, and the Island's transportation infrastructure through public and agency engagement. A summary of these concerns is listed below:

Within the regional park

- Potential impact of visitors to ecosystems and wildlife
- Potential for wildfires.
- Public safety in the coastal bluff environment.
- Potential crowding on trails and viewpoints

To the Island

- Concerns that the regional park will attract more visitors to the area, leading to more volume and safety concerns on local roads, especially White Sails Drive.
- Concerns that the parking lots would overflow outside the regional park, impacting use of roads and safety.
- Concerns that full parking lots might restrict access to the regional park.
- Potential impact of park visitors to the community and neighbourhood beaches.
- Potential expansion of use by visitors to nearby natural areas, specifically Fairy Fen and the Wild Coast Nature Refuge
- Potential impact of park visitor water use on groundwater resources.
- Added strain on ferry capacity, increasing wait times to get on and off Bowen Island.
- Potential added strain on emergency services (e.g. ambulances, police, fire).

- Potential worsening of existing crowding congestion at Snug Cove, including as people wait for ferries.

5.0 DESIRED CONDITIONS AND MANAGEMENT ACTIONS

The following desired conditions statements guide management actions and adaptive management measures.

- I. **Park access is sustainable. Car access to the park is limited, to reduce impacts to the community, local roads, and the ferry system.**
- II. **Park visitors respect neighbouring properties, natural areas, and local amenities.**
- III. **The park's sensitive natural areas are protected and managed to avoid negative impacts from park visitors. Park visitors respect regional park bylaws and regulations to protect park ecology.**
- IV. **Park visitors are prohibited from accessing habitats or ecosystems highly vulnerable to human impact.**

5.1 Management Actions

The tables below outline actions that will be implemented when the regional park at Cape Roger Curtis is opened to the public. Section 6 describes the monitoring and adaptive management measures that will be implemented in conjunction with the visitor management actions below. These actions will be reviewed and adjusted as needed.



Electric Bus, Iona Beach Regional Park

I. Park access is sustainable. Car access to the park is limited, to reduce impacts to the community, local roads, and the ferry system.

AREA	ACTIONS
Communications	<ul style="list-style-type: none"> • Metro Vancouver will develop a communications strategy focused on encouraging alternative transportation to the regional park. • Metro Vancouver to collaborate with Bowen Island Municipality and other service providers on public communications.
Design	<ul style="list-style-type: none"> • Park facility design will include infrastructure to support people arriving by shuttle, especially those camping on-site. • Park facility design will include end-of-trip facilities for visitors arriving by bike. • Day-use parking lot capacity of 30-50 cars will limit the number of park visitors arriving by car at one time.
Shuttle	<ul style="list-style-type: none"> • Metro Vancouver will establish a park shuttle that will run daily, from Snug Cove (Crippen Regional Park) to the regional park at Cape Roger Curtis, from May to October. Park shuttle service will expand to weekends in shoulder seasons and beyond as visitation and capacity management warrants. • Metro Vancouver will provide a park orientation and shuttle pick-up location in Snug Cove within Crippen Regional Park. The facility will include washrooms and park information. • Information on park access, amenities, and etiquette will be shared with park visitors as part of the shuttle trip.

<hr/>	<ul style="list-style-type: none"> • Metro Vancouver will determine the frequency, drop off and pick up locations as part of the transportation study that is currently underway. • Opportunities for additional regional pick-up locations, including transit hubs or other regional park sites, will be explored. • A detailed traffic study is underway, which will provide specific recommendations for implementation of the park shuttle service, and demand management tools.
<hr/> Reservations	<ul style="list-style-type: none"> • Metro Vancouver will implement a reservation system for all types of overnight use. • Metro Vancouver will explore options for a day-use reservation system for vehicle visits during peak periods. • Metro Vancouver to ensure that the reservation system is compatible with principles of equity, inclusion, and universal access.
<hr/> Collaboration	<ul style="list-style-type: none"> • Metro Vancouver will work with Bowen Island Municipality to seek out grant funding from other levels of government in order to advance the cross-island multi-use path (MUP) to connect the regional park at Cape Roger Curtis to Crippen Regional Park and Snug Cove. The MUP is identified in <ul style="list-style-type: none"> - Metro Vancouver’s Regional Greenway Network - Transport 2050: Regional cycling network - BIMs Transportation Plan 2018-2038 - Metro 2050, the Regional Growth Strategy • Metro Vancouver will work with Bowen Island Municipality to fund key phases of the cross-island multi-use path (MUP) within the park. • Metro Vancouver will engage with BC Ferries, TransLink, and other transportation service providers to explore opportunities for improved transit access to the park. • Metro Vancouver will collaborate with Bowen Island Municipality to determine if road infrastructure, accessibility, and safety enhancements, such as intersection improvements or traffic calming measures, are needed and explore options to support realizing those improvements.
<hr/> Compliance	<ul style="list-style-type: none"> • Enforcement of day-use and camping reservations.



Park wayfinding signage, Crippen Regional Park

II. Park visitors respect neighbouring properties, natural areas, and local amenities.

AREA	ACTIONS
Communications	<ul style="list-style-type: none"> • Metro Vancouver will coordinate with BIM, Bowen Island Conservancy, the Province and other agencies to determine how to represent (or omit) and communicate information on Fairy Fen Nature Reserve, Wild Coast Nature Refuge and local beaches on public Metro Vancouver maps or signage for the regional park.
Design	<ul style="list-style-type: none"> • Metro Vancouver will ensure that buffers, and barriers (if required) are established between the regional park and the surrounding land-uses, and that boundaries are clearly marked when needed. A buffer will be implemented between the regional park and the Wild Coast Nature Refuge. • Regional park boundaries will be clearly marked. Signage will clarify park bylaws, boundaries, areas suitable for public access and those that are off limits
Collaboration	<ul style="list-style-type: none"> • Collaboration and adaptive management with adjacent land managers (e.g. Island Trust Land Conservancy, Bowen Island Conservancy, and the Province of BC) and neighbours.



Park visitor on a boardwalk, Crippen Regional Park

III. The park’s sensitive natural areas are protected and managed to avoid negative impacts from park visitors. Park visitors respect regional park bylaws and regulations to protect park ecology.

AREA	ACTIONS
Communications	<ul style="list-style-type: none"> • Develop a communications strategy for educating visitors on park bylaws, etiquette and safety, including pre-journey messages, signage and education. • Coordinate and collaborate with Tourism Bowen, BC Ferries, and tourism operators to ensure messaging is clear and accessible to a wide audience. • Develop clear messaging, as part of the communication strategy, on what facilities and activities are available at the regional park to manage visitor expectations. • Monitor high-traffic search engines and websites to correct misinformation on regional park use regulations and park access.
Regulations and Compliance	<ul style="list-style-type: none"> • Metro Vancouver will enforce park bylaws to protect ecosystems and wildlife, and ensure a positive and safe visitor experience. • Bylaw education and enforcement will focus on visitors staying on trail, visitors only accessing the park during park open hours, no removal of vegetation or wildlife, and following all posted notices specific to the regional park. • Bylaws will be enforced by full-time uniformed staff and Metro Vancouver Regional Park Rangers. • Overnight camping will operate from May to October. Nightly quiet time hours will be enforced, in addition to no amplified music at any point. • No campfires will be permitted at campsites, or anywhere else, at the regional park.
Design	<ul style="list-style-type: none"> • Careful planning will ensure that people and facilities are directed away from fragile ecosystems. Designed and engineered

solutions, such as viewpoints, boardwalks, and barriers, will give visitors access to views while providing a safe visitor experience, and restricting access to sensitive ecological areas.

- Trails and roads will not be lit. Any lighting required for key park facilities will be kept minimal and designed following leading practices related to maintaining dark skies.
- Park facilities will be planned to minimize the impact on groundwater resources. This includes limiting hard surfaces and using low-flow/flush fixtures, water storage and pump-out facilities.

Park Operations

- The regional park will have dedicated year-round, full-time staff, and a camp host will monitor the campground overnight.
 - All park facilities will be maintained in a state of good repair
 - Develop a site-specific emergency response plan, including wildfire risk management, evacuation procedures, and other emergency procedures, wildfire management plan for the regional park. Dedicated wildfire response equipment will be located on-site.
 - Metro Vancouver's dedicated and highly trained emergency management, wildfire response, engineering, biologists, park rangers and other staff will support park management and emergency response.
-

IV. Park visitors are prohibited from accessing habitats or ecosystems highly vulnerable to human impact.



Coastal Covenant Area, regional park at Cape Roger Curtis

AREA	ACTIONS
Communications	<ul style="list-style-type: none"> • Develop a communications and signage strategy for educating visitors about the prohibited areas. • Support key messages with visitor education through interpretive public programming and signage.
Design	<ul style="list-style-type: none"> • Plan facilities to ensure people are directed away from habitats and ecosystems vulnerable to human impact. • Provide buffers and/or physical barriers (e.g. fences/guardrails) to prohibit access. • Ensure viewpoints or boardwalks give visitors high-quality experiences in appropriate areas.
Compliance	<ul style="list-style-type: none"> • Monitor areas to understand if human impacts are occurring. • Provide a visitor education, regulations, and compliance program • Enforce the regional park bylaw, which prohibits off-trail use, by full time dedicated uniformed staff and regional park rangers

6.0 IMPLEMENT, MONITOR AND ADAPTIVE MANAGEMENT



*Education and Compliance, Delta South Surrey
Regional Greenway*

6.1 Implement Management Actions

Creating a visitor use management plan before the regional park at Cape Roger Curtis is developed means that actions outlined in this plan will inform site design, phasing, and operational plans. Implementation of park facilities will take place over three phases to allow for piloting and adaptive management, as outlined in the phasing plan for the park. Actions will be evaluated and revised based on site monitoring and adaptive management.

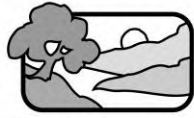
6.2 Monitoring Strategy and Adaptive Management

Metro Vancouver will monitor the park's ecological health, quality of park visitor experience, and work with BIM to ensure municipal infrastructure and services are not impacted.

Ongoing research and information gathering will include:

- **Ecological Data:** Metro Vancouver has ecological data for the park. Metro Vancouver will continue to collect information as the regional park is opened in phases to understand the impact of park visitors and adjust management actions as needed.
- **Number of Visits:** Metro Vancouver has a visitor counting program to measure daily park visitation at each regional park. Trail counters will be installed at the regional park to understand visit volume and patterns, and to see if adjustments are needed.
- **Visitor Survey:** Metro Vancouver conducts an in-park visitor survey program which gathers information about park visitors, the park visitor experience, and satisfaction with park facilities, typically on a 5-year basis. The regional park at Cape Roger Curtis will be included in the survey once it is opened to the public.
- **Visitor Education and Compliance:** Metro Vancouver will patrol the regional park to ensure park day-use and overnight facilities are being used as intended, recording instances of non-compliance. This may result in considering changes to the design or operations to better accommodate the intended public use of the regional park.
- **Collaboration:** Metro Vancouver will work with Bowen Island Municipality to monitor and address any impacts of the park on municipal infrastructure and services. Regional parks staff will coordinate regularly with local emergency services and explore opportunities for collaborative planning and training opportunities.

This work will identify key indicators for ecological data, number of visits, and visitor survey results to evaluate the effectiveness of visitor management actions as implemented. Following monitoring, staff will review the visitor use management plan and adjust as required.



Islands Trust

REQUEST FOR DECISION

ISLAND MUNICIPALITY BYLAW SUBMISSION

File No.: BIM Bylaw No. 608 & 609

DATE OF MEETING: August 2, 2023

TO: Islands Trust Executive Committee

FROM: Stefan Cermak
Director, Planning Services

SUBJECT: Bowen Island Municipality – OCP Amendment Bylaw No. 608 & LUB Amendment Bylaw No. 609

RECOMMENDATION

1. **THAT the Islands Trust Executive Committee advise Bowen Island Municipality that Bylaw No. 608, cited as “Bowen Island Municipality Bylaw No.608, 2023” is not contrary to or at variance with the Islands Trust Policy Statement.**
2. **THAT the Executive Committee advise Bowen Island Municipality that Bylaw No. 609 cited as “Bowen Island Municipality Bylaw No. 609, 2023” is not contrary to or at variance with the Islands Trust Policy Statement.**

IMPLICATIONS OF RECOMMENDATION

Organizational - None

Financial - None

Policy - None

Implementation/Communications - Communication to Bowen Island Municipality regarding the Executive Committee decision by August 3, 2023.

Other - None

PURPOSE

Bowen Island Municipality Bylaw No. 608 (Attachment 1) and Bowen Island Municipality Bylaw No. 609 (Attachment 2) are intended to amend the Bowen Island Official Community Plan and Land Use Bylaw to create a regional park over a series of properties at Cape Roger Curtis.

BACKGROUND

From the Bowen Staff report dated February 27, 2023:

In Summer 2022 Metro Vancouver announced the proposed purchase of 24 lots at Cape Roger Curtis to form a new Regional Park. The announcement proposed a preliminary program for the proposed 97- hectare park of day-use and overnight uses with opportunities for tent camping, picnic areas, trails, viewpoints, and waterfront access. In January 2023 Metro Vancouver formally submitted their application to amend Bowen’s Land Use Bylaw and Official Community Plan to enable the proposed park. The most recent Concept Site Plan is shown in Figure 1.

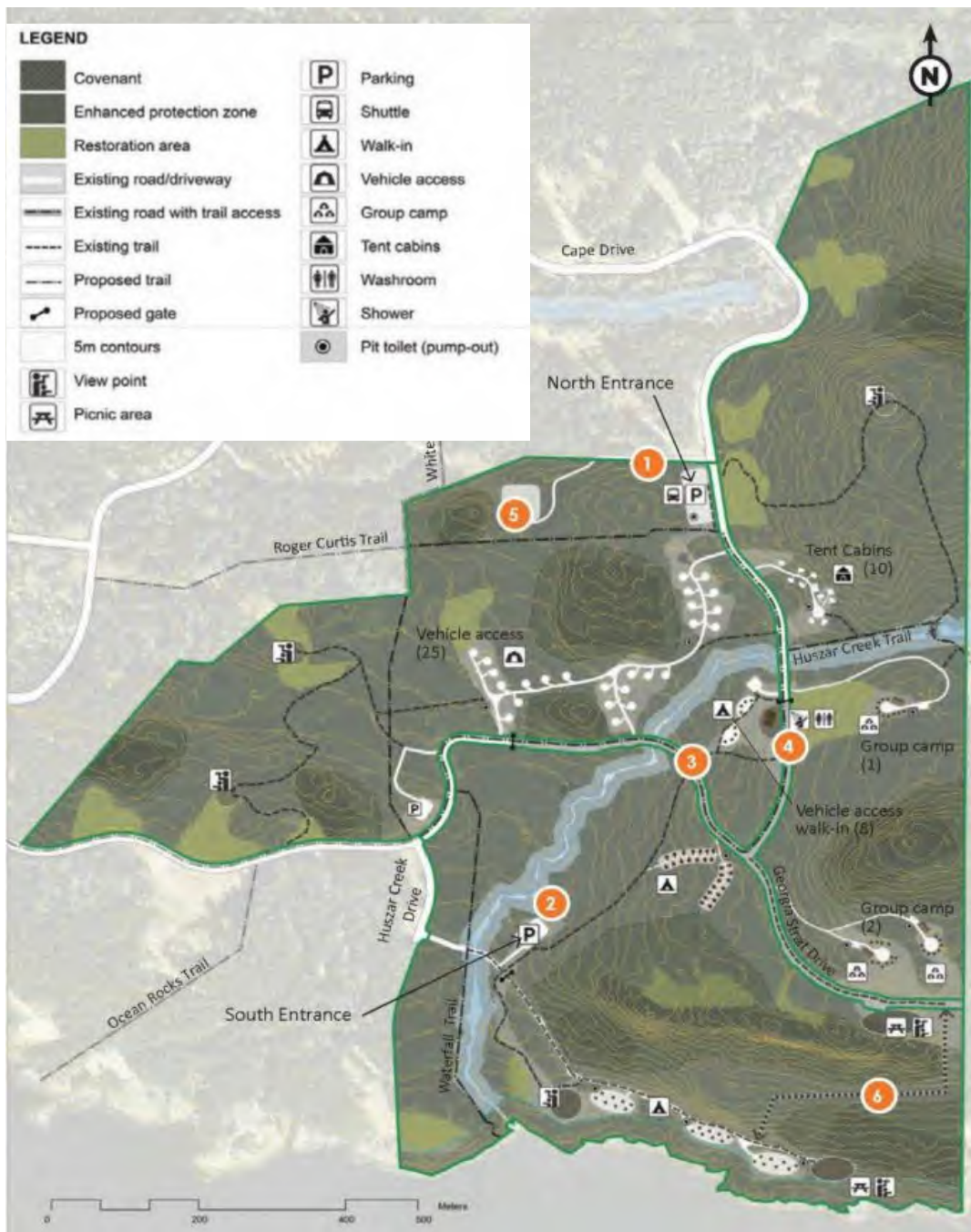


Figure 1 Draft Concept Site Plan from Bowen Staff report dated July 10, 2023

In January 2023, Bowen Island Municipal (BIM) Council initially referred the proposed regional park and campground rezoning application to several BIM Committees to hold preliminary discussions of the proposed project within their respective areas of expertise. Initial response from feedback resulted in BIM Council requesting further information from the applicant including:

- Transportation Demand Management Plan,
- Transportation Impact Assessment (TIA), and
- Visitor Management Plan.

Metro Vancouver and staff also identified the need for:

- Draft Park Concept Plan,
- Emergency Management Plan, and
- Water Study and Analysis Report.

These items were received by BIM Council, may be viewed in the Staff Report dated July 10, 2023, and **form part of the referral package**: <https://bowenisland.civicweb.net/document/290177/>. BIM has discussed with Metro Vancouver a proposed section 219 covenant that would be based on phasing development and include conditions identified in the various reports and plans listed above.

The application and draft bylaws have been subsequently referred to Squamish First Nations, various provincial agencies, various Bowen Island Municipal Commissions and Committees, the Bowen Island Conservancy, and the Islands Trust. BIM Council has received extensive written communications from the public (495 letters as of June 26th, 2023). Meanwhile, the applicant, Metro Vancouver, has been engaging the public via in-person open houses, online webinars, and receipt of comments through an online feedback form (over 2,300 respondents as of April 2023 (see [Metro Vancouver Staff Report](#) dated April 4, 2023).

Bowen Island Municipality Bylaw No. 608

In summary, Bylaw No. 608 would amend Schedule C of the Official Community Plan by amending the land use designation map by renaming “Crippen Regional Park” to “Regional Park” and redesignating 24 lots from “Rural” to “Regional Park”. Cape Roger Curtis Lands Objectives would be amended to support supervised overnight camping. Subsequent policies after the amended objective read that:

“A Regional Park at Cape Roger Curtis may include a mixture of supervised overnight campsites, including group camp sites, tent cabins, vehicular campsites (but not including recreational vehicles or trailers), walk or bike-in camp sites, trails, education programs, interpretative signage, and accessory buildings or structures.”

Further policy amendments reinforce that recreational vehicles and trailers would not be supported, vehicle use should be discouraged, and that Metro Vancouver Parks is encouraged to work closely with BIM on all planning and management decisions related to regional parks on Bowen Island.

Bowen Island Municipality Bylaw No. 609

In summary, Bylaw No. 609 would:

- Rezone the 24 subject properties zoned “Rural Residential 1” to “Passive Park 1”
- Create zone variant “Passive Park 1 (c) – P1(c)” which would allow the following additional permitted principal uses of land, buildings and structures:
 - *Group Tent Camp*
 - *Non-Vehicle Access Campsite*
 - *Tent Cabin*
 - *Vehicle Access Campsite*
 - *Staff accommodation.*
- Further regulations for P1(c) include:
 - limiting the combined total of all tents and campsites to 100
 - No more than one-third of the tents and campsites may be directly accessed or capable of being accessed by motor vehicles, Group Tent Camps and Tent Cabins excepted
 - The maximum number of Staff Accommodation will be 1.
- Further amendments include defining Group Tent Camp, Non-Vehicle Access Campsite, Ten Cabin, and Vehicle Access Campsite.

Issues Relating To First Nation Interest

Bowen Island Municipality staff indicate engaging with Squamish First Nation. The Islands Trust Policy Statement does not contain directive policies with regards to First Nations.

Public Comments

As of the date of this Request for Decision, one public comment has been received at the Islands Trust office (Attachment 3). The author of the correspondence was received as a delegation during the July 12, 2023 Executive Committee regular business meeting. The correspondent subsequently submitted written materials further appealing to the Executive Committee to reject the application to amend the OCP. The correspondent also submitted a list of over 1500 names whom the author stated signed a petition opposing the overnight camping at the proposed regional park at Cape Roger Curtis.

Staff Comments

The purpose of the staff report is to advise if the proposed bylaws are or are not, contrary to or at variance with the Islands Trust Policy Statement (ITPS). Bowen Island Municipality has considered the Islands Trust Policy Statement Directives Policies Checklist and has indicated how the Municipality has addressed relevant policies (see Attachment 4).

On the Islands Trust Policy Statement (ITPS) Directives Only Policy Checklist, Bowen Island Municipality Staff has indicated that the relevant policies, to which the proposed bylaws comply, are as follows:

3.1.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning, establishment, and maintenance of a network of protected areas that preserve the representative ecosystems of their planning area and maintain their ecological integrity.
4.5.10	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the location of buildings and structures so as to protect public access to, from and along the marine shoreline and minimize impacts on sensitive coastal environments.
5.2.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address policies related to the aesthetic, environmental and social impacts of development.
5.3.7	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the development of land use patterns that encourage establishment of bicycle paths and other local and inter-community transportation systems that reduce dependency on private automobile use.
5.5.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and designation of areas for low impact recreational activities and discourage facilities and opportunities for high impact recreational activities.
5.5.7	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning for bicycle, pedestrian and equestrian trail systems.
5.8.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address their community’s current and projected housing requirements and the long-term needs for educational, institutional, community and health-related facilities and services, as well as the cultural and recreational facilities and services.

Bowen Island Municipality Staff indicated “not applicable” for all other policies.

Based on a review of the proposed Bylaws No. 608 and No. 609 Bowen Island staff report, and the ITPS Checklist, Islands Trust Staff concludes that the Bylaws No. 608 & 609 are not contrary to or at variance with the Islands Trust Policy Statement.

KEY ISSUES/CONCEPTS

- Referral of OCP Bylaw No. 608 is under s.14.3 of the Bowen Island Municipality Letters Patent and Referral of LUB Bylaw No. 609 under s.15 of the Letters Patent
- OCP referral is after first reading and before public hearing and LUB referral is before third reading
- Written response to Bowen Island Municipality required by August 27, 2023 (45 days after date of receipt of the referral on July 13, 2023).
- Comments from Executive Committee limited to whether or not Bylaw No. 608 and Bylaw No. 609 are contrary to or at variance with the Islands Trust Policy Statement.
- Staff considers that Bylaw No. 608 and Bylaw No. 609 are not contrary to or at variance with the ITPS.

RELEVANT POLICY

- Islands Trust Policy Statement Directive Policies
- [Islands Trust Policy 1.3.i \[Policy Statement Implementation Policy\]](#)
- [Bowen Island Municipality Letters Patent](#)
- [Islands Trust Council/Bowen Island Municipality Protocol Agreement, Jan. 13, 2014](#)

ALTERNATIVE

1. Determine that the bylaw(s) is/are contrary to the Islands Trust Policy Statement:

THAT the Executive Committee request that staff advise Bowen Island Municipality in writing that the Executive Committee considers that Bylaw No. 608 cited as “Bowen Island Municipality Official Community Plan Amendment Bylaw No. 608, 2023” is contrary to or at variance with the Islands Trust Policy Statement for [INSERT REASONS], triggering meeting between Bowen Island Municipality and the Islands Trust Executive Committee.

THAT the Executive Committee request that staff advise Bowen Island Municipality in writing that the Executive Committee considers that Bylaw No. 609 cited as “Bowen Island Municipality Land Use Bylaw No. 57, 2002, Amendment Bylaw No. 609, 2023” is contrary to or at variance with the Islands Trust Policy Statement for [INSERT REASONS], triggering notification of the Minister.

Submitted By:	Stefan Cermak Director, Planning Services	July 26, 2023
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ATTACHMENTS

1. Bylaw No. 608 - OCP Amendment Draft
2. Bylaw No. 609 – LUB Amendment Draft
3. Correspondence – Julie Vik. July 12, 2023
4. BIM ITPS Directives Only Checklist



**Bowen Island Municipality
Bylaw No.608 2023**

A Bylaw to amend Official Community Plan Bylaw No. 282, 2010

WHEREAS, the Bowen Island Municipality Official Community Plan Bylaw No. 282, 2010 establishes present and proposed land use designations;

WHEREAS, the Bowen Island Municipality Official Community Plan Bylaw No. 282, 2010 establishes policies regarding the use of parks and the provision of campgrounds; and

WHEREAS, Council wishes to amend the Bowen Island Municipality Official Community Plan Bylaw No. 282, 2010 to amend existing land use designations and park policies.

THEREFORE, the Council of Bowen Island Municipality, in open meeting assembled, enacts as follows:

1. Citation

- 1.1 This bylaw may be cited for all purposes as *“Bowen Island Municipality Official Community Plan Amendment Bylaw No. 608, 2023”*.

2. Amendments

- 2.1 The Bowen Island Municipality Official Community Plan Bylaw No. 282, 2010 is amended as follows:

- (a) Schedule C – Present and Proposed Land Use Designations is amended by renaming the designation from “CP - Crippen Regional Park” to “RP - Regional Park.”
- (b) Schedule C – Present and Proposed Land Use Designations is amended further by amending the designation for the lands outlined in heavy black line on “Schedule “A” of this Bylaw from “R – Rural” to “RP - Regional Park.”
- (c) Section 3.4.6 Cape Roger Curtis Lands is amended by inserting the following objective, and renumbering subsequent objectives accordingly, to read as follows:

Objective 69

To support the creation of a Regional Park at Cape Roger Curtis that may include supervised overnight camping.

- (d) Section 3.4.6 Cape Roger Curtis Lands is further amended by inserting the following policy after Objective 69, and renumbering subsequent policies accordingly, to read as follows:

Policy 155

A Regional Park at Cape Roger Curtis may include a mixture of supervised overnight campsites, including group camp sites, tent cabins, vehicular campsites (but not including recreational vehicles or trailers), walk or bike-in camp sites, trails, education programs, interpretative signage, and accessory buildings or structures.

- (e) Section 3.5.2 Tourist and Retreat Commercial Land Use Management is amended by inserting the following policy, and renumbering subsequent policies accordingly, to read as follows:

Policy 190

Campgrounds may be permitted in a Regional Park at Cape Roger Curtis and may be accessed by backpackers, bicyclists, or by motor vehicle, but not including recreational vehicles or trailers. Campgrounds in Regional Parks should be connected to a trail network and designed to minimize impacts on the environment and should have on site supervision. Site design targeting active transportation and transit to the park will be encouraged, while vehicle use to the park should be disincentivized.

- (f) Section 6.3 Community Parks is amended by amending Objective 143 to read as follows:

Objective 143

To encourage Metro Vancouver Parks to work closely with the Municipality on all planning and management decisions related to Metro Vancouver Regional Parks on Bowen Island.

READ A FIRST TIME this 24th day of April, 2023;

READ A SECOND TIME this ____ day of _____, _____;

READ A THIRD TIME this ____ day of _____, _____;

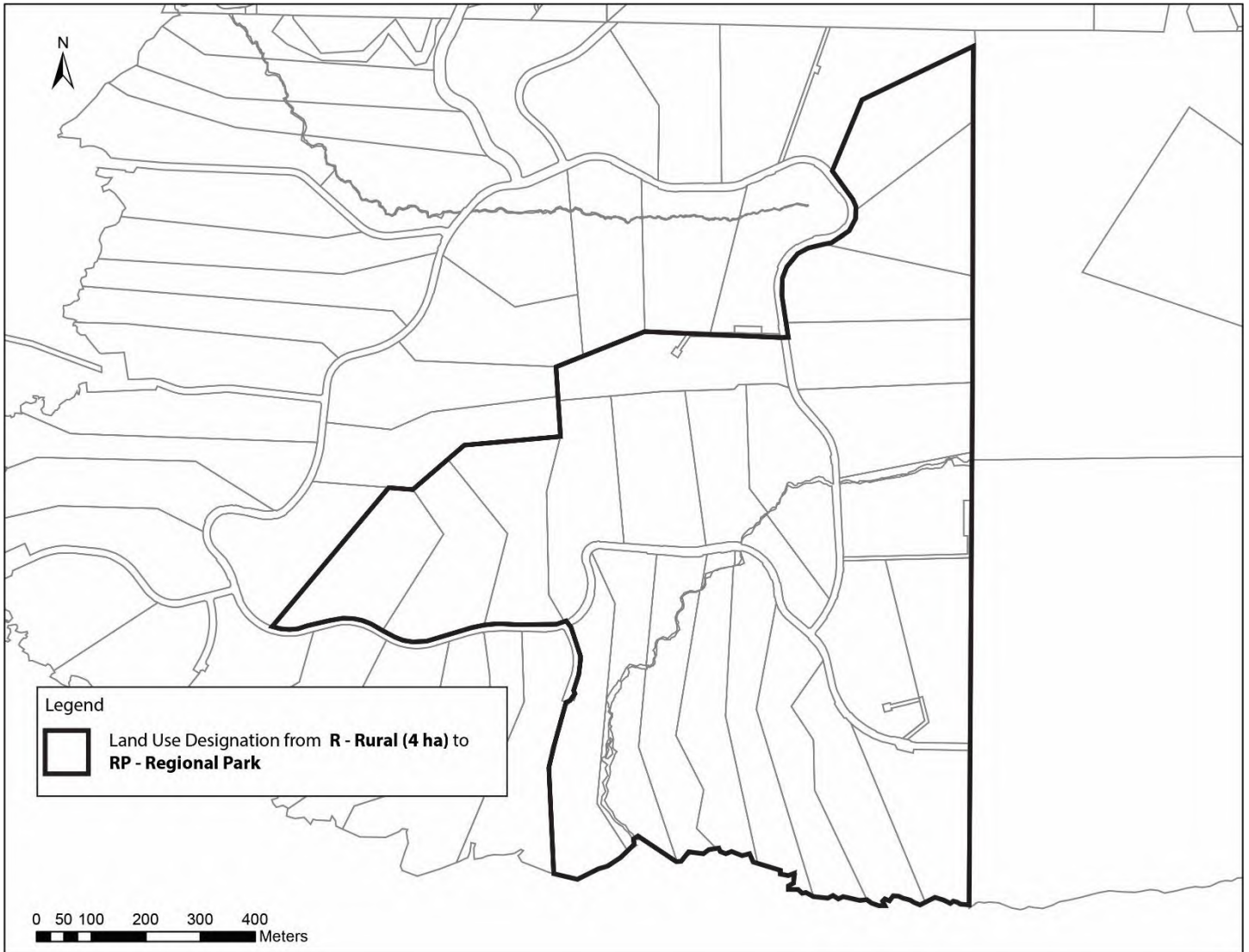
FINALLY ADOPTED this ____ day of _____, _____;

Andrew Leonard
Mayor

Sophie Idsinga
Interim Corporate Officer

Bowen Island Municipality Land Use Bylaw No. 57, 2002

Amendment Bylaw No. 608, 2023 – Schedule A



Bowen Island Municipality
Bylaw No.609 2023

A Bylaw to amend Land Use Bylaw No. 57, 2002

WHEREAS, the Bowen Island Land Use Bylaw No. 57, 2002 establishes zoning classifications and regulations for land within the municipality; and

AND WHEREAS, Council wishes to amend the Bowen Island Land Use Bylaw No. 57, 2002 to enable additional uses and amend existing regulations for the Passive Park (P1) Zone;

THEREFORE, the Council of Bowen Island Municipality, in open meeting assembled, enacts as follows:

1. Citation

1.2 This bylaw may be cited for all purposes as “*Bowen Island Municipality Bylaw No.609, 2023*”.

2. Amendments

2.1 The Bowen Island Municipality Bylaw No. 57, 2002 is amended by amending Section 4.11.3 Exceptions in Particular Locations by inserting section 4.11.3 (3):

4.11.3 (3) *Zone Variation - P 1 (c)*

(a) The following additional uses are permitted *principal uses* of land, buildings and structures:

- *Group Tent Camp*
- *Non-Vehicle Access Campsite*
- *Tent Cabin*
- *Vehicle Access Campsite*
- *Staff accommodation*

(b) The number of the additional *principal uses* for *Group Tent Camp; Non-Vehicle Access Campsite; Tent Cabin; and Vehicle Access Campsite* may not total more than a combined maximum of 100.

(c) No more than one-third of the additional *principal uses* in b) may be directly accessed or capable of being accessed by motor vehicles, *Group Tent Camps* and *Tent Cabins* excepted.

(d) The maximum number of the additional *principal use* for *Staff Accommodation* will be 1.

2.2 The Bowen Island Municipality Bylaw No. 57, 2002 is amended by amending Section 1.1. Definitions under Part 1 - INTERPRETATION by inserting the following:

“Group Tent Camp” means a site occupied, or intended to be occupied, and maintained for overnight guests sleeping accommodation in tents, and which can be accessed by motor vehicles.

“Non-Vehicle Access Campsite” means a site occupied, or intended to be occupied, and maintained for overnight guests sleeping accommodation in either a single tent or two tents, and which cannot be accessed by motor vehicles.

“Tent Cabin” means a building with a maximum lot coverage of 40 sq. m. constructed to provide temporary accommodation for a period of less than 30 consecutive days for overnight guest sleeping accommodation but does not include a *kitchen* or *limited kitchen facility* and is not a *dwelling*.

“Vehicle Access Campsite” means a site occupied, or intended to be occupied, and maintained for overnight guest sleeping accommodation in either a single tent or two tents, and which can be accessed by motor vehicles.

- 2.3 The Bowen Island Land Use Bylaw No. 57, 2002 is amended by changing the zoning for the lands shown outlined in a solid black line on Schedule “A” of this Bylaw from Rural Residential 1 (RR1) to Passive Park (P1), and by making such deletions, adjustments, and consequential annotations on Schedule “B” to Bylaw No. 57, 2002 as are required to give effect to this amendment.
- 2.4 The Bowen Island Land Use Bylaw No. 57, 2002 is amended by changing the zoning for the lands shown outlined in a dashed black line on Schedule “A” of this Bylaw from Rural Residential 1 (RR1) to Passive Park (P1), that is subject to a zone variation identified as (c), and by making such deletions, adjustments, and consequential annotations on Schedule “B” to Bylaw No. 57, 2002 as are required to give effect to this amendment.

READ A FIRST TIME this 24th day of April , 2023;

READ A SECOND TIME this ____ day of _____ , _____;

READ A THIRD TIME this ____ day of _____ , _____;

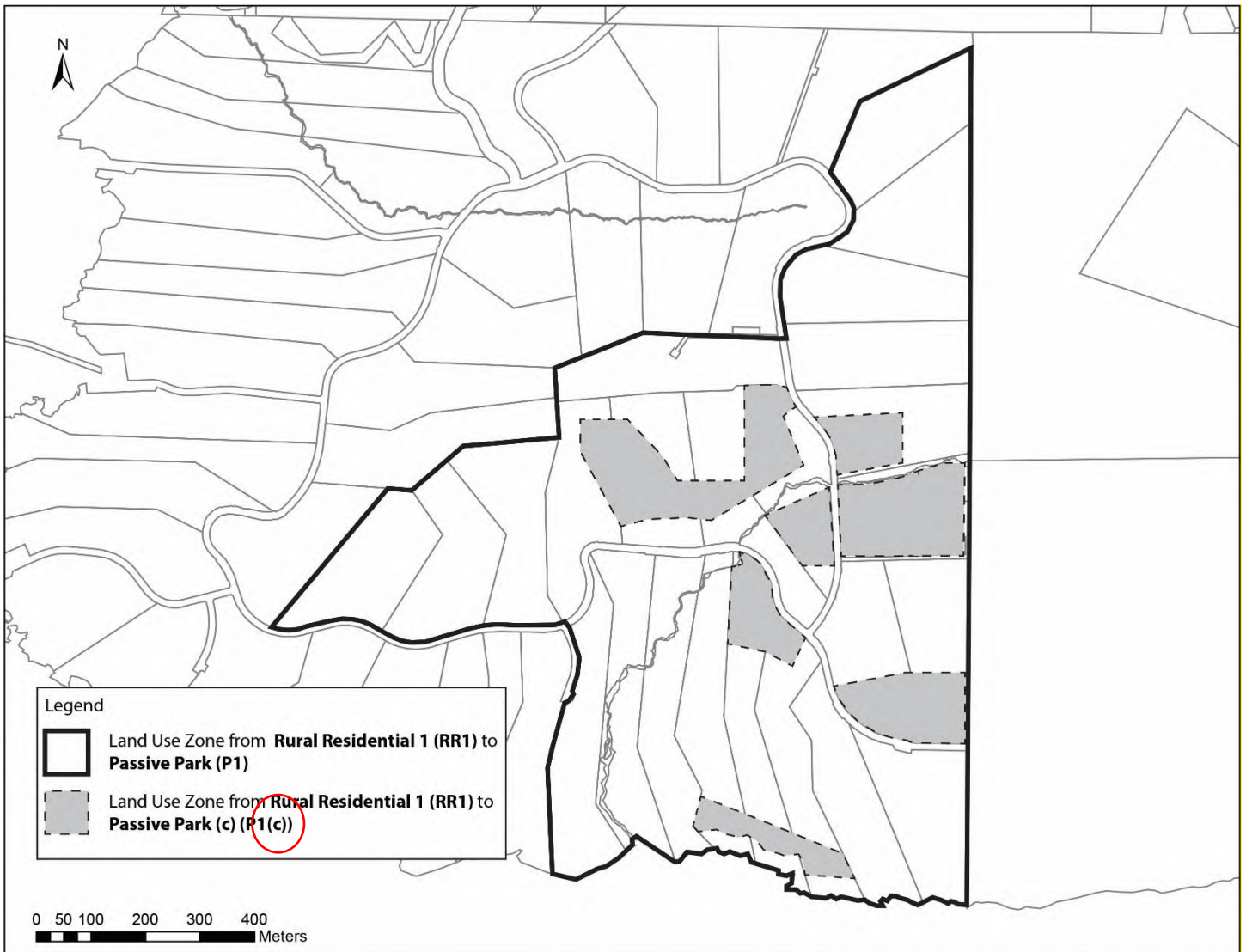
FINALLY ADOPTED this ____ day of _____ , _____;

Andrew Leonard
Mayor

Sophie Idsinga
Interim Corporate Officer

Bowen Island Municipality Land Use Bylaw No. 57, 2002

Amendment Bylaw No. 608, 2023 – Schedule A





Islands Trust

POLICY STATEMENT DIRECTIVES ONLY CHECK LIST

Bylaw No. 608, 2023 – File: Metro Vancouver CRC RZ/OCP File# 2023-0018

PURPOSE

To provide staff with the Directives Only Checklist to highlight issues addressed in staff reports and as a means to ensure Local Trust Committee address certain matters in their official community plans and regulatory bylaws and Island Municipalities address certain matters in their official community plans and to reference any relevant sections of the Policy Statement.

POLICY STATEMENT

The Policy Statement is comprised of several parts. Parts I and II outline the purpose, the Islands Trust object, and Council's guiding principles. Parts III, IV and V contain the goals and policies relevant to ecosystem preservation and protection, stewardship of resources and sustainable communities.

There are three different kinds of policies within the Policy Statement as follows:

- Commitments of Trust Council which are statements about Council's position or philosophy on various matters;
- Recommendations of Council to other government agencies, non-government organizations, property owners, residents and visitors; and
- Directive Policies which direct Local Trust Committees and Island Municipalities to address certain matters.

DIRECTIVES ONLY CHECK LIST

The Policy Statement Directives Only Checklist is based on the directive policies from the Policy Statement (Consolidated April 2003) which require Local Trust Committees to address certain matters in their official community plans and regulatory bylaws and Island Municipalities to address certain a matters in their official community plans in a way that implements the policy of Trust Council.

Staff will use the Policy Statement Checklist (Directives Only) to review Local Trust Committee and Island Municipality bylaw amendment applications and proposals to ensure consistency with the Policy Statement. Staff will add the appropriate symbol to the table as follows:

- ✓ if the bylaw is **consistent** with the policy from the Policy Statement, or
- ✘ if the bylaw is **inconsistent (contrary or at variance)** with a policy from the Policy Statement, or
- N/A** if the policy is not applicable.

Part III Policies for Ecosystem Preservation and Protection

CONSISTENT	NO.	DIRECTIVE POLICY
	3.1	Ecosystems
N/A	3.1.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and protection of the environmentally sensitive areas and significant natural sites, features and landforms in their planning area.
✓	3.1.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning, establishment, and maintenance of a network of protected areas that preserve the representative ecosystems of their planning area and maintain their ecological integrity.
N/A	3.1.5	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the regulation of land use and development to restrict emissions to land, air and water to levels not harmful to humans or other species.
	3.2	Forest Ecosystems
N/A	3.2.2	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of unfragmented forest ecosystems within their local planning areas from potentially adverse impacts of growth, development, and land-use.
	3.3	Freshwater and Wetland Ecosystems and Riparian Zones
N/A	3.3.2	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address means to prevent further loss or degradation of freshwater bodies or watercourses, wetlands and riparian zones and to protect aquatic wildlife.
	3.4	Coastal and Marine Ecosystems
N/A	3.4.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of sensitive coastal areas.
N/A	3.4.5	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning for and regulation of development in coastal regions to protect natural coastal processes.

PART IV: Policies for the Stewardship of Resources

CONSISTENT	NO.	DIRECTIVE POLICY
	4.1	Agricultural Land
N/A	4.1.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and preservation of agricultural land for current and future use.
N/A	4.1.5	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the preservation, protection, and encouragement of farming, the sustainability of farming, and the relationship of farming to other land uses.
N/A	4.1.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the use of adjacent properties to minimize any adverse affects on agricultural land.

CONSISTENT	NO.	DIRECTIVE POLICY
N/A	4.1.7	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the design of road systems and servicing corridors to avoid agricultural lands unless the need for roads outweighs agricultural considerations, in which case appropriate mitigation measures shall be required to derive a net benefit to agriculture
N/A	4.1.8	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address land uses and activities that support the economic viability of farms without compromising the agriculture capability of agricultural land.
N/A	4.1.9	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the use of Crown lands for agricultural leases.
	4.2	Forests
N/A	4.2.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the need to protect the ecological integrity on a scale of forest stands and landscapes.
N/A	4.2.7	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the retention of large land holdings and parcel sizes for sustainable forestry use, and the location and construction of roads, and utility and communication corridors to minimize the fragmentation of forests.
N/A	4.2.8	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the designation of forest ecosystem reserves where no extraction will take place to ensure the preservation of native biological diversity.
	4.3	Wildlife and Vegetation
	4.4	Freshwater Resources
N/A	4.4.2	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure neither the density nor intensity of land use is increased in areas which are known to have a problem with the quality or quantity of the supply of freshwater, water quality is maintained, and existing, anticipated and seasonal demands for water are considered and allowed for.
N/A	4.4.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure water use is not to the detriment of in-stream uses
	4.5	Coastal Areas and Marine Shorelands
N/A	4.5.8	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the needs and locations for marine dependent land uses.
N/A	4.5.9	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the compatibility of the location, size and nature of marinas with the ecosystems and character of their local planning areas.
✓	4.5.10	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the location of buildings and structures so as to protect public access to, from and along the marine shoreline and minimize impacts on sensitive coastal environments.
N/A	4.5.11	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address opportunities for the sharing of facilities such as docks, wharves, floats, jetties, boat houses, board walks and causeways.
	4.6	Soils and Other Resources
N/A	4.6.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the

	protection of productive soils.
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PART V: Policies for Sustainable Communities

CONSISTENT	NO.	DIRECTIVE POLICY
	5.1	Aesthetic Qualities
N/A	5.1.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of views, scenic areas and distinctive features contributing to the overall visual quality and scenic value of the Trust Area.
	5.2	Growth and Development
✓	5.2.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address policies related to the aesthetic, environmental and social impacts of development.
N/A	5.2.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address any potential growth rate and strategies for growth management that ensure that land use is compatible with preservation and protection of the environment, natural amenities, resources and community character.
N/A	5.2.5	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address means for achieving efficient use of the land base without exceeding any density limits defined in their official community plans.
N/A	5.2.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of areas hazardous to development, including areas subject to flooding, erosion or slope instability, and strategies to direct development away from such hazards.
	5.3	Transportation and Utilities
N/A	5.3.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the development of a classification system of rural roadways, including scenic or heritage road designations, in recognition of the object of the Islands Trust.
N/A	5.3.5	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the impacts of road location, design, construction and systems.
N/A	5.3.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the designation of areas for the landing of emergency helicopters.
✓	5.3.7	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the development of land use patterns that encourage establishment of bicycle paths and other local and inter-community transportation systems that reduce dependency on private automobile use.
	5.4	Disposal of Waste
N/A	5.4.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of acceptable locations for the disposal of solid waste.

CONSISTENT	NO.	DIRECTIVE POLICY
	5.5	Recreation

N/A	5.5.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the prohibition of destination gaming facilities such as casinos and commercial bingo halls.
N/A	5.5.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the location and type of recreational facilities so as not to degrade environmentally sensitive areas, and the designation of locations for marinas, boat launches, docks and anchorages so as not to degrade sensitive marine or coastal areas.
N/A	5.5.5	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of sites providing safe public access to beaches, the identification and designation of areas of recreational significance, and the designation of locations for community and public boat launches, docks and anchorages.
✓	5.5.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and designation of areas for low impact recreational activities and discourage facilities and opportunities for high impact recreational activities.
✓	5.5.7	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning for bicycle, pedestrian and equestrian trail systems.
	5.6	Cultural and Natural Heritage
N/A	5.6.2	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification, protection, preservation and enhancement of local heritage.
N/A	5.6.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the preservation and protection of the heritage value and character of historic coastal settlement patterns and remains.
	5.7	Economic Opportunities
N/A	5.7.2	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address economic opportunities that are compatible with conservation of resources and protection of community character.
	5.8	Health and Well-being
✓	5.8.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address their community's current and projected housing requirements and the long-term needs for educational, institutional, community and health-related facilities and services, as well as the cultural and recreational facilities and services.

POLICY STATEMENT COMPLIANCE	
✓	COMPLIANCE WITH TRUST POLICY
	NOT IN COMPLIANCE WITH TRUST POLICY for the following reasons:

From: Julie <[REDACTED]>
Date: August 1, 2023 at 1:58:50 PM PDT
To: Tobi Elliott <telliott@islandstrust.bc.ca>, Peter Luckham <pluckham@islandstrust.bc.ca>, David Maude <dmaude@islandstrust.bc.ca>, Timothy Peterson <tpeterson@islandstrust.bc.ca>
Subject: Executive Committee meeting for August 2, 2023

Dear representatives of the Islands Trust Executive Committee

I received a copy of the agenda for tomorrow's meeting yesterday evening and notice that Bowen Island's zoning 608-2023 and 609-2023 are up for consideration/approval.

I was a bit panicked as our council has indicated that this consideration by you would not be made until after 3rd reading, if we get that far.

Also I would like to know why so many of Section 5, the policies pertaining to sustainable communities, are Not Applicable (N/A).

Finally, our Mayor and relevant committees have been clear with us that the transportation report and environmental report among others are incomplete/insufficient.

I ask you to please hold off making any decisions at this point. I fear that by pre-emptively approving the OCP and LUB changes, the path towards overnight camping at Cape Roger Curtis becomes more inevitable, despite a majority of Bowenians being passionately against this planned development.

Thank you,
Julie Vik

From: Michelle Taylor <[REDACTED]>
Date: August 1, 2023 at 3:02:44 PM PDT
To: Tobi Elliott <telliott@islandstrust.bc.ca>, Peter Luckham <pluckham@islandstrust.bc.ca>, David Maude <dmaude@islandstrust.bc.ca>, Timothy Peterson <tpeterson@islandstrust.bc.ca>, Stefan Cermak <scermak@islandstrust.bc.ca>
Subject: **POLICY STATEMENT DIRECTIVES ONLY CHECK LIST**

Hello Executive Committee,

I am writing today after reading the agenda for your upcoming meeting. I want to ask for clarification with regard to the Policies for Sustainable Communities section of your Directives checklist, attached, with regard to the rezoning application presented by Metro Vancouver for the property at Cape Roger Curtis, on Bowen Island .

I am deeply concerned that section 5.2.4 has been deemed Not Applicable.

"Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address any potential growth rate and strategies for growth management that ensure that land use is compatible with preservation and protection of the environment, natural amenities, resources and community character"

How can this not be applicable? For most of the island's residents this is one of the most important considerations possible. Our entire community character is at stake. Lives and livelihoods are at stake. If this proposal goes through the community feels it will lose its identity, over 1580 eligible voters have signed a petition against this campground development, that is over 81% of the people that voted in our last election and nearly 50% of the entire voting population, this is a staggering level of engagement and indicates that the community as a whole do not want this development to happen. There are also hundreds more that are not eligible to vote on Bowen but would be affected by this proposal that have put their names forward in protest as well. Many people would be forced to leave the island as commuting to work would become too unpredictable to rely on. Property values will drop and years of community building will be lost.

Adding several hundred thousand more visitors annually to a community of 4000 is too much. We are already at breaking point trying to deal with the volumes of tourists coming over. Metro has no plans to mitigate even the specific new traffic their proposal will bring to Bowen, nothing, no plans for emergency services help, no plans for foot passenger ferry help, no plans for bike path help. Our community is too small to absorb this development as the application stands. Please do not support this rezoning application. It does not meet the necessary guidelines.

This is not like any typical rezoning/subdivision we have ever seen in the past. Typically, a rezoning/subdivision would maybe affect a few properties or a specific neighbourhood, but this is a massive development that will affect the entire Island. This is also not a typical rezoning application because if it gets approved there are no further checks and balances as we would normally see. Typically, after a rezoning/subdivision approval there would be a next level of oversight through the issue of development and or building permits, checks and balances built into the system. This step is

missing with this rezoning process, when it's done it's done and there is no further control or input from the community. We can leave no room for error or discretion on Metro's part as they have already shown little interest in the effects this development will have on our community character or infrastructure on Bowen Island.

Please stand up for us, as you have in the past, and do not add your support to the application at this time. Please consider how an under supported and heavily marketed 100 site campground might affect your own community.

Thank you for your time and consideration.

Michelle Taylor (and 1580 Bowen residents)

From: LIZ IAN <[REDACTED]>
Date: August 1, 2023 at 3:34:06 PM PDT
To: Tobi Elliott <telliott@islandstrust.bc.ca>, Peter Luckham <pluckham@islandstrust.bc.ca>, David Maude <dmaude@islandstrust.bc.ca>, Timothy Peterson <tpeterson@islandstrust.bc.ca>
Cc: julie <[REDACTED]>
Subject: Bowen Island Bylaw Changes: for your review prior to Aug.2 Executive Committee Mtg.

Good afternoon,

In advance of your meeting scheduled for Aug. 2, 2023, we have taken the liberty of providing you with material to review regarding the proposed bylaw changes for Bowen Island.

You'll find that we have summarized pertinent aspects of the Islands Trust Policy Statement and presented corresponding information, data and concerns regarding Camping on Bowen Island. We hope this information provides a helpful context for your discussion.

Islands Trust Policy Statement Excerpts and Concerns regarding proposed Bowen Island Zoning Changes

(underline added in some parts for the purposes of this document)

II: Guiding Principles excerpts:

- • Placing priority on preserving and protecting the integrity of the environment and amenities
- • Rate and scale of growth and development must be carefully managed and may require limitation

III: Ecosystem Preservation and Protection excerpts:

- • Promoting an understanding of sustainable use and stewardship by all landowners
- • Sustainability definition: capable of being maintained indefinitely; capable of meeting the environmental, economic and social needs to current generations without compromising the ability of future generations to meet their needs.

IV: Stewardship of Resources excerpts:

- • Development of natural resources can threaten the island lifestyle and environments that are valued by the people who live and visit the area.
- • The aesthetic value of forest land should be protected.

- • Development should be directed to sites away from areas of environmental sensitivity.

V: Sustainable Communities excerpts:

- • The health of a community is influenced by numerous factors such as economic security, education, social support systems, the cleanliness and safety of the environment, and the availability of such necessities as educational and social services, transportation, affordable food and housing.
- • Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address any potential growth rate and strategies for growth management in a way that ensures that land use is compatible with preservation and protection of the environment, natural amenities, resources and community character.

Concerns regarding proposed Bylaw and OCP changes to allow camping on Bowen Island:

- Camping on Bowen Island has never been approved and for good reason;
- Campsites, by their nature, are not amenities that preserve and protect the integrity of the environment; pristine forests of Douglas Fir, Western Hemlock and Arbutus would be logged, developed and human-made structures (platforms, parking lots, etc.) would be erected. The aesthetic value of forest land should be protected;
- We appeal to the Islands Trust to carefully consider the principles of sustainability. Human activities (camping, water usage, public toilets/showers, vehicle traffic) put the environment at risk. Surely the ecological integrity of this ecologically sensitive area of Cape Roger Curtis would be better preserved and protected without camping;
- Cape Roger Curtis is one of the driest, most at-risk areas on Bowen Island. The nearly constant on-shore wind is a particular worry for forest fire. Water resources at Metro Vancouver's holding at Cape Roger Curtis have been anecdotally reported to be very low. Metro Vancouver is relying on water data from April 2014 when the wells were first placed. April is the month when the most water would have been available. These wells need must be retested to gauge accurate and current ground water availability. High levels of arsenic were present in the 2014 tests;
- Cape Roger Curtis (CRC) is geographically removed from the commercial hub of Bowen Island, Snug Cove, by a 15 minute drive by car, a 40 minute bike-ride or a 1 ½ hr walk. Currently there is no walking or biking path across the island. A multi-use path is being considered but the costs of this are mainly prohibitive. Access to CRC for both day use and overnight use has NOT been adequately considered by Metro Vancouver. Currently all traffic flows through the adjacent high-density neighbourhood of Tunstall Bay (over 80 homes on a very narrow road). Metro Vancouver estimates 83,000 day and overnight visitors per year to this proposed park. This

places undue access stress on this neighbourhood and the planning to date also does not adequately allow for emergency egress in the event of fire or other emergency;

- The scale of growth and development proposed by Metro Vancouver for CRC would affect the whole island's transportation infrastructure – our aging roads and the already over-crowded ferry system would be further challenged, very possibly beyond capacity. Bowen Island's transportation system is a resource that is at risk. Camping requires equipment, equipment requires vehicles, vehicles burden our fragile transportation system. BC Ferries is not in a position to increase capacity at its Horseshoe Bay Terminal, on the Queen of Capilano ferry or in its holding area in Snug Cove at any time in the near future.
- The Islands Trust recognizes the importance of local knowledge in decision-making. Please note that camping on Bowen Island is not an amenity that most islanders want – 1,581 signatures (and growing) saying NO to camping represents a substantial portion of the voting public. It is not an island initiative. It is the mandate of Metro Vancouver to expand its camping opportunities for all Metro Vancouverites, and in doing so, undue stress and burden is placed on Bowen Island's ecological, social and natural ecosystems and infrastructure.

We urge you to consider that our island's character, infrastructure and natural systems would be forever negatively impacted if camping on Bowen Island is approved.

Sincerely,

Liz Watson and Julie Vik

W.

From: Chris Arnold-Forster

Date: August 2, 2023 at 7:58:30 AM PDT

To: Tobi Elliott <telliott@islandstrust.bc.ca>, Peter Luckham <pluckham@islandstrust.bc.ca>, David Maude <dmaude@islandstrust.bc.ca>, Timothy Peterson <tpeterson@islandstrust.bc.ca>

Cc: Judith Gedye <jgedye@bimbc.ca>, Sue Ellen Fast <sefast@bimbc.ca>

Subject: Bowen Island Agenda Item

Dear Islands Trust,

I hope you are able to read this before your meeting this morning. I am also copying my representative at Islands Trust

I have been made aware this morning that there is a motion on the table to indicate that Bowen Island Municipality bylaws 608,2023 and 609,2023 are not contrary to or at variance with the Islands Trust Policy Statement. While I am not fully in the know of administrative process in the Islands Trust I do have concerns. Perhaps this agenda item could be deferred

I believe that it is premature to jump to this conclusion since

- The accepted process is that approval of bylaw amendments would typically occur after 3rd reading. While advice is not approval, it may be construed as tacit approval at this stage, increasing pressure on Bowen Island Municipality to accept the current inadequacies and omissions of the proposal.
- The proposal is not complete, is partially based on inadequate studies, and likely has some omissions at this point since Metro Vancouver Parks is still consulting with the Public, and the Municipality has not even had the second reading.

Further, I believe that the current Metro Vancouver Park proposal is, when considered in detail, at variance with the Islands Trust Policy. So again I would submit that providing an indication that the proposed rezoning and variance amendments are provided prematurely as they will likely (I hope change).

While the bylaws may not be at variance on the surface, due to their generality, they do allow for proceeding with a proposed development that is.

Variations in the proposal:

“Protect and Connect” does not equate to “Protect and Preserve”

In particular I refer to the Islands Trust guiding principle that *“to achieve the Islands Trust object, the rate and scale of growth and development in the Trust Area must be carefully managed and may require limitation”*.

I would submit that the scale of the camping proposed would exceed the capacity of the land and community to sustainably absorb while maintaining the character of the Island community. While the object of Metro Vancouver Parks is laudable in that it wants to Protect and **Connect** natural areas for the 4 million residents of GVRD, connecting 4 million residents does not equate

to the Object of Islands Trust to Protect and **Preserve** . Connection does not preserve without appropriate scaling and considerable forethought. Neither of which has happened.

The public has not been fully consulted

Under section 5.8.1 *“Trust council holds that public participation should be part of the decision making processes of all levels of government”*

Metro Vancouver is currently holding public sessions and Bowen Island Municipality has not held public consultations. So the consultation process has not been completed. The community is mostly opposed to camping as evidenced by the petition that you have received previously.

To date I have not been provided confirmation that the indigenous community has participated in the consultation (an omission).

Water and sewerage

The subject area of the bylaw is a dry coastal bluff and yet the proposed bylaw and variances do not address this.

While the proponent for the project has performed a water assessment, the assessment did not consider the dry months of summer, but rather relied on dated well information and information obtained during heavier rainfall months. This assessment does not validate the seasonal availability so I am not convinced that the proposed use is not at variance with Island Trust Policy 4.4.2 where *“existing, anticipated and seasonal demands for water are considered and allowed for”*

Downstream from the provision of water, I recognize that under Islands Trust Policy 5.4.5 *“ Trust Council encourages government agencies, corporations, property owners and residents to use innovative and safe alternatives for the disposal of sewage effluent”*. The current underlying proposal contemplates only the use of vaults for effluents as I understand it. While this might be tried and tested it is at variance since it is neither innovative, nor safe should a vault break.

There is probably more that I could say with regards to variance but in the hopes of having this read and considered, I am sending it now. I realize

Kind regards,
Chris Arnold-Forster
Bowen Island

The duration of the meeting and the volume of content can drive a need for formality, adherence to rigid rules, and can restrict free discussion.

The agenda is organized very logically, by Committees, and then Trust organizational units. As a consequence, housekeeping and more trivial items are interspersed with the items that really matter. This can present a challenge to participants.

Some ideas for discussion (these ideas came from discussions between 9 trustees)

Face to face TC (when justified) could be a single full day and 2 nights stay. Travel the previous day, meet for a full day, travel home the following day. That would allow a long day and dinner together. (Ferry schedules and distances are very different and its stressful and disruptive to travel there or back as well as attending a meeting on that day.)

Supplement quarterly meetings with monthly Zoom meetings whose purpose is to enable greater and better deliberation.

Hold short monthly meetings to address particular topics to allow free ranging discussion.

Delegations could be in a single monthly meeting with dispositions delayed till the following meeting. Quarterly reports from CAO, Trust Area Services, Planning, Administrative, – a single meeting with time for discussion would enable better active participation.

Some monthly meetings could be limited in scope like this:

- 2-hour hard limit.
- No motions permitted or decisions made.
- The purpose of the meetings would be to debate important issues. Trustees would be provided in advance with the relevant background material on one or at most two issues. With no decision required people could focus on discussing the merits more freely and without feeling pressured.

Request for Decision (RFD): Any RFD could be presented and discussed at one meeting and the decision deferred to the next. Monthly meetings would allow this. Each RFD should have a “champion” – who makes a very short (PowerPoint) presentation to highlight the key aspects of the RFD. If an RFD is proposed by the Executive Committee (EC) a member of the EC should introduce it and explain the rationale for it.

Agenda items could be classed as being introduced, for discussion, or for decision. Moving from introduction to decision in one meeting should be unusual.

Meetings focused on decision making would be more efficient – discussions and briefings having taken place at earlier meetings.

Agendas could be organized so that:

- Similar items are bundled together.
- RFDs are all up front as the first items for consideration after the minutes have been adopted.
- Routine reports and historical background being provided for the record are in an appendix.
- Agenda items should have links to their supporting materials.
- Revised documents coming back for consideration should be blacklined.

Other suggestions:

Rotating the Council chair position through the Executive Committee members, for different shorter meetings or sections of the agenda, would share the load and allow the Chair to participate in discussions.

More frequent Council meetings could allow EC meetings to alternate with Council. (Current schedule of formal EC meetings is twice monthly. TC is quarterly)

This could allow a better connection between EC meeting content and Trust Council. This would encourage better, more knowledgeable and more timely support for EC by Trust Council.

Policy and other considerations:

Trust Council meetings: Policy allows a TC meeting schedule of any frequency with a minimum of a meeting in each quarter.

MEETING PROCEDURES BYLAW NO. 101 Trust Council: March 11, 2004, Page 3.

<https://islandstrust.bc.ca/document/trust-council-meeting-procedures-bylaw-no-101/>

“Council shall establish the schedule of the date, time and place of regular Council meetings for the following calendar year, one of which shall be in each of the months of March, June, September and December”

EC schedule -advice from David Marlor: EC requires a monthly meeting as Bylaws must be approved within 30 days – or they are deemed to have been approved.

ATTACHMENT(S):

MEETING PROCEDURES BYLAW NO. 101 Trust Council: March 11, 2004, Page 3.


<https://islandstrust.bc.ca/document/trust-council-meeting-procedures-bylaw-no-101/>

FOLLOW-UP:

Prepared By: Mairead Boland drafted this content based on conversations between 9 trustees.

Reviewed By/Date: Aug 19th 2023

**Trust Council Quarterly Meeting Schedule
September 26-28, 2023**

Tuesday, September 26	Wednesday, September 27	Thursday, September 28
10:00 Executive Committee Meeting	8:30 Strategic Planning - Visioning Exercise	8:30 Closed Meeting
12:00 Lunch		9:00 Rise and Report
1:00 Land Acknowledgement Call to Order and Approval of Agenda General Business Arising Consent Agenda Item(s) Adoption of Minutes RWMs TC FUAL	10:30 Break	9:05 Visioning Session - Recap
1:15 CLOSED SESSION Working Session	10:45 Visioning Exercise - continued	9:30 Break
3:00 Break	12:00 Lunch	9:45 Disposition of Delegations Correspondence
3:15 Executive Consent Agenda Item(s) EC Work Program Decision/Discussion Items CAO's Report Accessibility Committee	1:30 Delegations/Public Comment	Trustee Roundtable Emerging issues for Trust Council
4:30 Governance Committee Corporate Planning Process	2:30 Planning Services Consent Agenda Items RPC Work Program	Trustee/Summary Updates First Nations Relations Freighter Anchorages/Oceans Protection Plan Update Salt Spring Island Watershed Protection Alliance (SSIWPA) Southern Gulf Islands Forum Átl'ka7tsem/Howe Sound Biosphere Region Baynes Sound/Lambert Channel Ecosystem Forum BC Ferries Advisory Committees Freighter Anchorages Update Shellfish
	3:00 Break	Priorities Chart December Trust Council Draft Schedule Disposition of Delegations Correspondence
	3:15 Administrative Services Consent Agenda Items FPC Work Program Director's Report Decision/Discussion Items	12:00 Adjournment (approx.)
	4:15 Trust Area Services Consent Agenda Items TPC Work Program Director's Report Conservancy Report Legislative Monitoring - BRF Decision/Discussion Items	 Islands Trust
5:30 Adjourn for the Day (approx.)	5:30 Adjourn for the Day (approx.)	
	<p>* denotes decision items RFD = request for decision BRF = briefing</p> <p>times are provided for information and</p>	<p>Visit the meeting webpage: https://islandstrust.bc.ca/event/trust-council-sept-2022/ ~ to view the agenda package ~ to join the meeting electronically, view livestream or attend by phone-in</p>

3. **Do you communicate at all after, or does the mayor/chair thank the delegates just in the meeting?**

- All delegations are thanked in the meeting by the chair for addressing council or its committees.

ATTACHMENT(S):

1. Table showing anecdotal responses to questions as presented in the background of this briefing

FOLLOW-UP: As directed

Prepared By: Lori Foster

Reviewed By/Date: Clare Frater, Director, Trust Area Services/August 21, 2023

Attachment 1. Table showing anecdotal responses to questions

	Send out formal thank-you letters to ALL delegates	Send out formal thank-you letters ONLY to delegates whose “ask” has been acted on by your council, keeping the delegate informed	The mayor/chair simply thanks the delegates in the meeting
Colwood	No		Thank in the meeting
Sidney	No	If there are actions, reach out after	Thank in the meeting
North Saanich	No	It’s best practice here to respond to all third parties when council approve resolutions, so a lot of letters!	
Oak Bay	No		We do not have a practice of following up with delegates after a meeting.
Central Saanich	No		We don’t send any formal letters after a delegate has addressed Council. Our Mayor will thank them for attending during the meeting, and if there is any follow up required with them afterwards as a result of a requested action by Council we would be in contact.
Highlands	No		Option 3: We generally do not send out formal “thank you” letters to delegations; our Mayor will thank them in the meeting after they have spoken.
District of Sooke	No	We only follow up with Delegations if Council provides direction (verbal or via formal resolution). The person and their organization are listed in the meeting minutes, and if they have any follow up questions or inquiries they usually speak with the Corporate Officer.	
Esquimalt	No		Delegations are heard at Committee of the Whole. Typically we don’t communicate after the meeting (unless a request for a letter of support or similar was approved). The Mayor/Chair thanks the delegates at the conclusion of their presentation and any Q&A that may occur.
District of Saanich	No	Unless Council directs otherwise, there is no after meeting contact made with delegations.	

From: Oceans Protection Plan BC Registration / Plan de Protection des Océans CB Enregistrement (TC) <TC.OPPBCReg-PPOCBEnreg.TC@tc.gc.ca>

Sent: Thursday, August 17, 2023 11:06 AM

Subject: Save the Date: Fall 2023 Oceans Protection Plan Pacific Dialogue Forum

Hello,

We are excited to announce that the Fall 2023 Ocean Protection Plan (OPP) Pacific Dialogue Forum will be taking place from **November 1-3, 2023**. This year's Forum will be a **virtual** event with all sessions livestreamed. An email with instructions on how to register will be sent in the coming weeks.

The theme of the Fall 2023 Forum will be **"building our progress together"**, which highlights the collaborative efforts that have advanced the work under the OPP over the last 6 years. The Forum will provide an opportunity for OPP federal departments, First Nations partners, and stakeholder partners to share their unique insights and perspectives of OPP through co-presented sessions and panel discussions.

The Forum is being held in a virtual format this year to help reduce barriers to participation such as travel and associated costs and support wider access amongst First Nations, coastal communities, and stakeholders across the Pacific region. To further support the participation of Indigenous Peoples and local communities, capacity funding for the time and effort to be involved with the Forum is available through Transport Canada's Community Participation Funding Program (CPFP). For the Dialogue Forum, applications need be submitted by **Oct. 10th, 2023**; for further eligibility requirements and to submit an application, please visit <https://www.tc.gc.ca/en/services/marine/apply-cpfp-funding.html>. Please note that application approval is required before expenditures are incurred, and that participants who receive funding through Transport Canada's Indigenous and Local Communities Engagement and Partnership Program (ILCEPP) are asked to email tc.cpfpc-pfpc.tc@tc.gc.ca before applying.

The Fall 2023 OPP Pacific Dialogue Forum will be a great platform to learn more about OPP initiatives and opportunities to get involved; provide input and feedback on existing and future projects; and build relationships to support collaboration in the marine and ocean protection space. marine transportation and ocean protection.

If you have any questions, please contact us at tc.oppbcreg-ppocbenreg.tc@tc.gc.ca.

We look forward to seeing you at the Forum!

The OPP Dialogue Forum Team

Active Projects Report

Executive Committee

1. Update Islands Trust Policy Statement

With involvement from Trust Programs Committee as appropriate, co-ordinate a review of the Policy Statement including a First Nations and public engagement process. Updated Project charter approved March 2023. (Strategic Plan 3.1, 4.4 , 5.6, 5.7)

Responsible

Clare Frater
Russ Hotsenpiller

Dates

Rec'd: 26-Feb-2020
Target: 26-Sep-2023

2. First Nations Reconciliation

Develop Islands Trust First Nations Reconciliation and engagement planning (Strategic Plan Items 4.5 & 4.6)

Responsible

Russ Hotsenpiller

Dates

Rec'd: 02-Sep-2020

3. Provincial Funding Strategy

Develop a strategy to increase the provincial financial contribution to the Islands Trust.

Responsible

Russ Hotsenpiller

Dates

Rec'd: 07-Mar-2023

4. Strategic Planning

Guide the development and implementation of the Islands Trust Strategic Plan.

Responsible

Russ Hotsenpiller

Dates

Rec'd: 03-May-2023

Active Projects Report

Executive Committee

5. *Communications*

Responsible

Dates

Development of an Islands Trust Communications Strategy.

Clare Frater
Russ Hotsenpiller

Rec'd: 03-May-2023

Future Projects Report

Executive Committee

1. *Marine Ecosystems*

Responsible

Date Received

Advance the preservation and protection of marine ecosystems.

03-May-2023

2. *MOTI MOU's*

Responsible

Date Received

To engage with the Ministry of Transportation on a updated Memorandum of Understanding.

03-May-2023

3. *Climate Change Emergency*

Responsible

Date Received

Programming associated with the Climate Change declaration of the Islands Trust.

03-May-2023