



DATE OF MEETING: October 12, 2023
TO: Salt Spring Island Local Trust Committee
FROM: Anthony Fotino, Island Planner, Salt Spring Island Team
COPY: Chris Hutton, Regional Planning Manager, Salt Spring Island Team
SUBJECT: Rezoning (Bylaw Amendment) from Forestry (F1) to Forestry (F1) Variant
Applicant: PILOT YELLOW ADVENTURES INC
Location: Section 50 Musgrave Road (PID: 009-743-472)

RECOMMENDATION

1. That Salt Spring Island Local Trust Committee Bylaw No. 536 cited as “Salt Spring Island Land Use Bylaw No. 355, 1999, Amendment No. 1, 2023”, be read a first time (SS-RZ-2022.1, Section 50 Musgrave Road).
2. That Salt Spring Island Local Trust Committee Bylaw No. 536 cited as “Salt Spring Island Land Use Bylaw No. 355, 1999, Amendment No. 1, 2023”, be read a second time (SS-RZ-2022.1, Section 50 Musgrave Road).
3. That Salt Spring Island Local Trust Committee waive the requirement for a public hearing for Salt Spring Island Local Trust Committee Bylaw No. 536 cited as “Salt Spring Island Land Use Bylaw No. 355, 1999, Amendment No. 1, 2023” and request staff to proceed with public notification as per Section 464 of the Local Government Act as the Bylaw is consistent with the Salt Spring Island Official Community Plan No. 434, 2008 with the requirement that a covenant subject to Section 219 of the *Land Title Act* will be registered on Title that satisfies policy H.2.1.3 of the Salt Spring Island Local Trust Committee Official Community Plan Bylaw No. 434, 2008 prior to adoption of Salt Spring Island Local Trust Committee Bylaw No. 536 cited as “Salt Spring Island Land Use Bylaw No. 355, 1999, Amendment No. 1, 2023”.

REPORT SUMMARY

This staff report proposes amendments to the [Salt Spring Island Land Use Bylaw No. 355](#) to vary the zoning to allow for four dwellings and one seasonal cottage on the subject property, whereas currently one dwelling and a seasonal cottage is permitted. Staff recommend the Salt Spring Island Local Trust Committee (SS LTC) consider first and second reading of the draft bylaw (Appendix No. 1), and request staff to refer the bylaw to agencies and First Nations.

BACKGROUND

The subject property is a large 63.56-hectare section on Musgrave road. Currently, there are no dwellings on the property. It is designated as **Forestry (F)** in the *Salt Spring Island Official Community Plan Bylaw No. 434, 2008* and zoned **Forestry 1 (F1)** in the *Salt Spring Island Land Use Bylaw No. 355, 1999*. The applicant had submitted their rezoning application in October 2022 to rezone the property to allow four single family dwellings and one seasonal cottage. The applicant recently obtained a development permit to allow construction of the seasonal cottage proposed to be sited in Development Permit Area 6 - Unstable Slopes and Soil Erosion Hazards (SS-DP-2023.2).

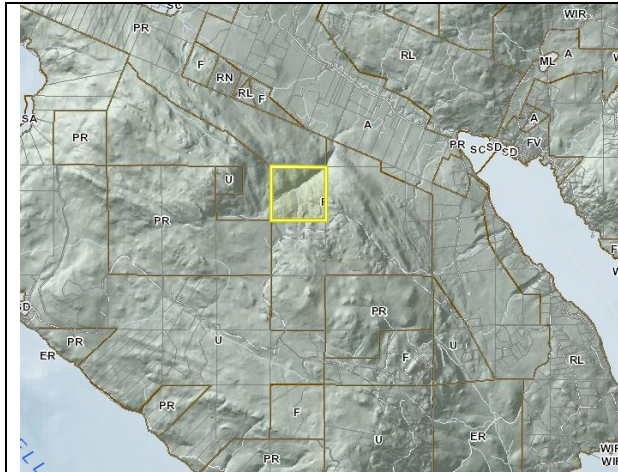


Figure 1: Location Map

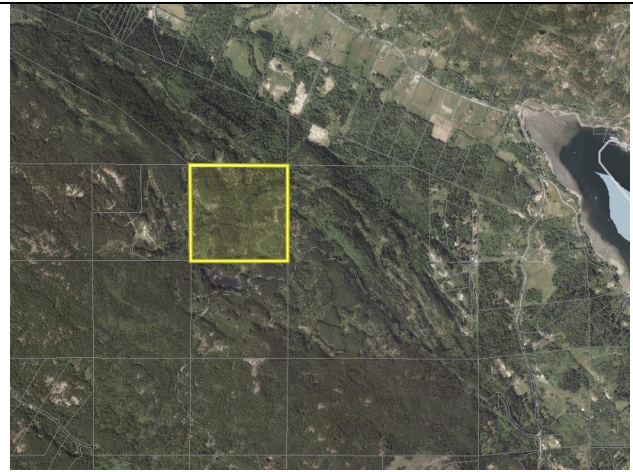


Figure 2: Aerial Photo

The applicant has submitted a site survey plan (**Attachment 4**), building plans (**Attachment 5**), a geotechnical report (**Attachment 6**), a RAPR report (**Attachment 7**), and a well construction report (**Attachment 8**) to support the application.

ANALYSIS

Policy/Regulatory

The LTC is unfettered in its consideration of a rezoning and may choose to request more information, proceed more incrementally, or defer the application.

Islands Trust Policy Statement:

An assessment of the proposed application relative to the Islands Trust Policy Statement was undertaken and it was determined that it is consistent with the Policy Statement. The Policy Statement Directives Only Checklist, in accordance with Section 1.9 of the “Policy Statement Implementation” portion of the Islands Trust Policy and Procedures Manual, can be found in **Attachment 9**.

Official Community Plan:

The Salt Spring Island Official Community Plan Bylaw No. 434, 2008 (OCP) designates the area as **Forestry (F)**. Policy B.6.3.2.2 directs that *zones within the Forestry and Watershed-Forestry Designation will continue to allow the residences, forestry and public service uses permitted by existing zoning. Zoning changes for large new commercial, general employment or institutional developments should not be made in this Designation.* A review of relevant policies can be found in **Attachment 3**.

The applicant’s proposal is supported by existing zoning through sub-division. However, the applicant would like to use the Shared Residential provision in the OCP. Policy H.2 states that *Local Trust Committee should consider rezoning applications that would allow the property owner to build (without subdividing) the same number of single family dwellings on the lot as would result from subdivision of the lot.* Guidelines for Shared Residential Zoning applications can be found below:

	Guideline	Complies	Notes
H.2.1.1	The total number of dwelling units that would be allowed following the zoning change must not exceed the number that could be constructed after subdivision of the land under the zoning in place at the time of application.	Yes	

H.2.1.2	Applications should be consistent with the other policies in this Plan regarding rezoning.	Yes	
H.2.1.3	<p>Applications should be accompanied by a site development plan, that will be registered by covenant on the property prior to rezoning, that identifies all proposed building sites, and which addresses the following points:</p> <ul style="list-style-type: none"> a. Building sites should not to be subject to geological hazards. b. Building sites should be clustered in about 20-30% of the parcel, with the remainder of the land left as open space. Open space should be designed to include Environmentally Sensitive Areas or good agricultural soils on the property. c. Building sites should be screened by natural vegetation from public roads, neighbouring properties and farmland. d. Driveway access to building sites should be minimized with shared driveways, although each site must be accessible to emergency vehicles. e. Buildings sites and driveways should be positioned and constructed to fit local topography and to minimize impacts on the environment. f. Where subdivision of the property could have resulted in the dedication of public parkland and public access to a water body, they should also be dedicated as part of a Shared Residential Zoning application. g. Buildings should incorporate sustainable building criteria, including, but not necessarily limited to energy efficiency and water conservation measures. 	Yes	<ul style="list-style-type: none"> - The applicant has indicated the intent to register a covenant on title. The covenant should be registered as a condition of zoning approval. - Applicant has provided geo-technical studies that indicate the proposed development is feasible. - The site is geographically constrained and the proposed dwelling sites have been placed in strategic locations as noted by the geotechnical engineer. - Driveway impact will be minimal as existing old logging roads should be used. - The applicant has indicated that they would be supportive of some parkland dedication if necessary. But parkland dedication is not required under 941.5(b) of LGA. - Applicant has indicated that they are planning on incorporating sustainable building practices and being energy efficient.

The subject property also includes three Development Permit Areas (DPA): **DPA4** - Lakes, Streams and Wetlands; **DPA6** - Unstable Slopes and Soil Erosion Hazards; and **DPA7** - Riparian Areas.

Issues and Opportunities

Subdivision Potential – Implications of Rezoning

As per the table in section 9.6.3(1) of the Salt Spring Island Land Use Bylaw No. 355, the minimum area of an individual lot that may be created through subdivision, provided each lot has an on-site sewage treatment system

and an adequate supply of potable water is 8 ha. This means that the subject property could potentially be subdivided into 7 separate lots. Moreover, each lot would be permitted one single family dwelling and a seasonal cottage (up to 56 sq m). Given that the applicant is asking requesting only four (4) single family dwellings and one (1) seasonal cottage, the request is considerably less than what the site can yield through subdividing the land. As such, the zone variant has been drafted to only allow for what has been requested by the applicant. The applicant has also indicated that they are willing to have a covenant prohibiting future subdivision on the subject property.

	Current Zoning	Proposed Zoning
Lot Potential	7	1
Total Number of Potential Dwellings	7	4
Total Number of Potential Seasonal Cottages	7	1
Total Combined Potential for Dwellings and Cottages	14	5

Water

The availability of water is one of the most important factors when considering a rezoning application. Policy 4.4.2 of the Islands Trust Policy Statement directs that:

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*

The applicant had four (4) wells drilled by Drillwell Enterprises Ltd. The following volumes were observed:

- Well 67890 – 10 g/m
- Well 67891 – 30 g/m
- Well 67894 – 40 g/m
- Well 67895 – 6 g/m

Given that the applicant is not seeking to subdivide the property, the applicant is not required to retain a professional hydrogeologist to undertake a flow test. Staff do not have any issues with the volumes observed, as the wells yielded an abundant amount of water. The well tests can be found in **Attachment 8**.

Geotechnical

A geotechnical assessment (**Attachment 6**), dated October 17 2022, was provided by Ryzuk Geotechnical who reviewed the proposal and undertook a site assessment. During the site assessment, native soils, bedrock, and terrain conditions of each proposed building location were reviewed and assessed. In general, the observed conditions aligned with the expected conditions. Particular conditions at each site were described in the report and both site specific and general recommendations were provided.

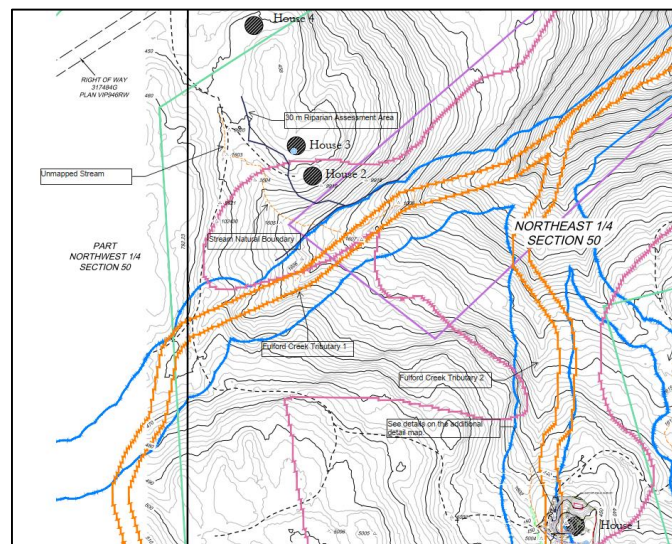
Through their assessment, Ryzuk concluded that given the site conditions, they expect that the proposed development would be feasible and no unique or adverse geotechnical conditions would likely be encountered. In general, there were no noted geotechnical hazards within the bounds of, or uphill of, any of the building sites such as rockfall source areas or globally unstable slopes during the visual site assessment. Furthermore, uphill

risks are largely mitigated by the local high points and natural benches present at most building sites, as well as the natural vegetation and topography of the property. While none were noted during our visual assessment, boulders located upslope of any building sites may have the potential to shift in a seismic event and could impact future buildings. Once building designs are finalized and building locations are surveyed, local rockfall mitigation may be required, which would consist of removing boulders from the slopes above or installing a rockfall catchment system.

It is recommended that a qualified geotechnical professional review the proposed building locations, once they are surveyed, oversee the initial site preparations, and make recommendations for local boulder removal/small-scale rockfall mitigation, as needed. Ryzuk concluded that provided geotechnical recommendations are followed, they do not consider that the development of the site, as proposed, would alter the risk of geohazard conditions or increase the risk of slope instability. Accordingly, the land may be used safely for the use intended.

Riparian Area

A Riparian Area Protection Regulation (RAPR) report, dated June 19, 2023, was provided by EDI Environmental Dynamics Inc. (**Attachment 7**). The report provides information on the stream boundaries, proposed development, and applicability of the RAPR. The Qualified Environmental Professional (QEP) assessed existing streams on the property as per the RAPR (BC Reg 178/2019) 2 methodology on April 5, 2023. However, given the size of the property and the scope of the assessment, flagging of stream boundaries was considered only in the area adjacent to the proposed development. It was found that there are three mapped streams intersecting the subject property before discharging into Fulford Creek. Additionally, a previously unmapped stream, which was found during the field assessment, discharges into Tributary #1. Tributary #1 and Tributary #2 may provide good fish habitat, however, Tributary #3 lacks sufficient water depth and appropriate channel characteristics to sustain fish, and it was deemed as a poor fish habitat.



It was concluded that based on the information provided by the owner, the survey plan, and the identified stream boundaries, the proposed five dwellings are located outside of the 30 m Riparian Assessment Area (RAA) – as measured from the stream boundary. It was concluded that based on the site plans, the five proposed dwellings are outside of the RAA and therefore not applicable under RAPR. Similarly, RAPR does not apply to improvements to access roads since this work will occur within the existing disturbed area. Since RAPR does not apply, an assessment report from a QEP would not be submitted to the Province as required by the Islands Trust DPA 7 for Riparian Areas. Additionally, in the opinion of the QEP, the proposed development is unlikely to cause degradation of riparian areas on the subject property given the proposed layout and activities.

Consultation

At time of this report, no referrals have been conducted. Referrals of rezoning bylaws to agencies, organizations and First Nations occur following first reading. However, Staff recommend that the proposed bylaw be read a first and second time. The SS LTC may choose if it wishes to undertake consultation and direct staff accordingly.

<i>Public Agencies</i>	<i>Local Trust Committees</i>	<i>First Nations*</i>
<ul style="list-style-type: none"> ▪ Fisheries & Oceans, Canada - Pacific Region ▪ Indian & Northern Affairs Canada ▪ Front Counter British Columbia ▪ Ministry of Environment and Climate Change Strategy (BC Parks and Conservation Officer Service Division) ▪ Ministry of Forests, Lands, Natural Resource Operations and Rural Development – Archaeology ▪ Ministry of Forests, Lands, Natural Resource Operations and Rural Development – Crown Land Authorizations ▪ Ministry of Municipal Affairs ▪ Ministry of Transportation and Infrastructure ▪ Vancouver Island Health Authority ▪ Salt Spring Island Fire Protection District ▪ BC Assessment Authority ▪ CRD - SSI Parks and Recreation ▪ CRD - SSI Building Inspection ▪ CRD - Environmental Eng. Division ▪ CRD - Parks & Community Services ▪ Islands Trust Conservancy 	<ul style="list-style-type: none"> ▪ North Pender Island Local Trust Committee ▪ Galiano Island Local Trust Committee ▪ Thetis Island Local Trust Committee ▪ Mayne Island Local Trust Committee ▪ Cowichan Valley Regional District 	<ul style="list-style-type: none"> ▪ Cowichan Tribes ▪ Halalt First Nation ▪ Lake Cowichan First Nation ▪ Lyackson First Nation ▪ Penelakut Tribe ▪ Stz'uminus First Nation ▪ Malahat First Nation ▪ Pauquachin First Nation ▪ Tsartlip First Nation ▪ Tsawout First Nation ▪ Tseycum First Nation ▪ Semiahmoo First Nation ▪ Tsawwassen First Nation ▪ Hul'qumi'num Treaty Group (for information only) ▪ Te'Mexw Treaty Association (for information only)
	<p>Community Agencies/Groups</p> <ul style="list-style-type: none"> ▪ Salt Spring Island Advisory Planning Commission 	

**And others as determined by SIPA & Ministry of Municipal Affairs*

[Section 464\(2\)](#) of the *Local Government Act* directs that a local government is not required to hold a public hearing on a proposed zoning bylaw if:

- (a) an official community plan is in effect for the area that is the subject of the zoning bylaw, and
- (b) the bylaw is consistent with the official community plan.

Staff believes that the proposed rezoning application is consistent with the Salt Spring Island OCP as it is a use that is supported, aligns with relevant policies (**Attachment 3**), and is consistent with policy H.2, which allows for this type of shared residential zoning that allows multiple dwellings without having to subdivide. The applicant has indicated the intent to register a covenant on title to restrict future development potential on the site. Additionally given the vast size of the property and the small scale of the proposed development, Staff recommend that the Salt Spring Island LTC waive the requirement for a public hearing on Bylaw No. 536. If the LTC agrees with Staff's recommendation, [Section 467\(1\)](#) *Local Government Act* directs that if a local government decides not to hold a public hearing referred to in section 464(2) on a proposed zoning bylaw, it must give notice in accordance with this section.

If the Salt Spring Island LTC does not support this recommendation, statutory notification of the proposed rezoning will be made in accordance with [Section 466](#) of the *Local Government Act* and the [Salt Spring Island Development Procedures Bylaw No. 304](#) at time of public hearing.

Agencies

No referrals have been conducted to date. Staff are recommending that the proposed bylaw be read a first and second time. The SS LTC may consider if it wishes to undertake consultation and direct staff accordingly in accordance with Section B.2 of the [Islands Trust Local Trust Committee Bylaws Checklist Policy 5.7.1](#), staff will forward the bylaw to referral agencies after the bylaw has received first reading.

First Nations

The subject property does not contain any mapped archaeological sites, however, there is a small area near the south-western corner of the site that has been identified as an area with archaeological potential (Figure 3). Because of the scale of the proposed development, the size of the site, and the location of the archaeological potential, staff are of the opinion that a referral is not needed in this case. The SS LTC may consider if it wishes to undertake consultation and direct staff accordingly in accordance with Section B.2 of the [Islands Trust Local Trust Committee Bylaws Checklist Policy 5.7.1](#), staff will forward the bylaw to referral agencies after the bylaw has received first reading.

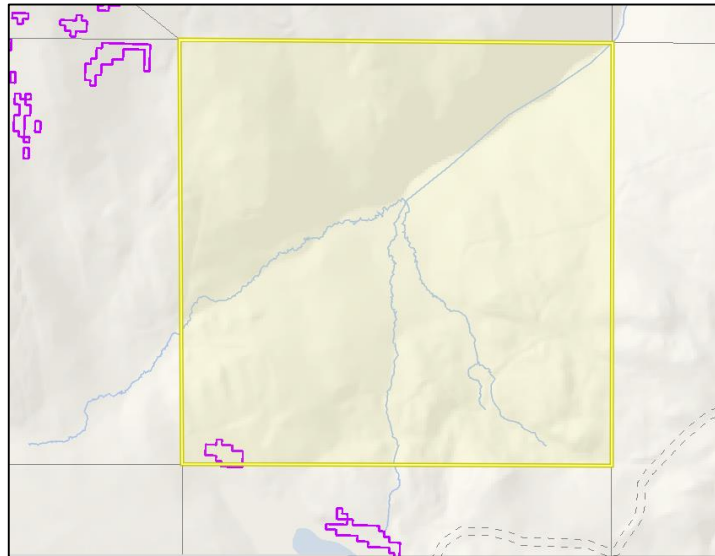


Figure 3: Site of Archaeological Potential

Rationale for Recommendation

In respect to the two recommendations noted above, staff note the following:

- 1. That Salt Spring Island Local Trust Committee Bylaw No. 536 cited as “Salt Spring Island Land Use Bylaw No. 355, 1999, Amendment No. 1, 2023”, be read a first time (SS-RZ-2022.1, Section 50 Musgrave Road).**
- 2. That Salt Spring Island Local Trust Committee Bylaw No. 536 cited as “Salt Spring Island Land Use Bylaw No. 355, 1999, Amendment No. 1, 2023”, be read a second time (SS-RZ-2022.1, Section 50 Musgrave Road).**

The applicant is seeking to use provisions in the (OCP), under policy H.2, to create a shared residential zoning on the subject property. In order to do this, a zoning variation is needed to allow for the proposed four (4) single family dwellings and one (1) total seasonal cottage on the subject property. Under the existing zoning, the site could yield seven lots, seven single family dwellings, and seven seasonal cottages. Given the potential for this site through existing zoning, the request is considerably lesser than what the site can yield through subdividing the land. Staff is of the opinion that the proposed development is suitable for the subject property and given the scale of the proposal, the size of the property, and the materials provided, it is recommended that the draft bylaw be read a first and second time.

- 3. That Salt Spring Island Local Trust Committee waive the requirement for a public hearing on Bylaw No. 536 cited as “Salt Spring Island Land Use Bylaw No. 355, 1999, Amendment No. 1, 2023” as the Bylaw is consistent with the Salt Spring Island Official Community Plan No. 434, 2008, and request staff to proceed with public notification as per Section 464 of the Local Government Act.**

The Province of British Columbia passed legislation that allowed local governments to waive the requirement for a public hearing on a zoning bylaw amendment application if the proposal was consistent with the (OCP). Given that the proposal is a supported use, it aligns with relevant policies (**Attachment 3**), and is consistent with policy H.2, which allows for this type of shared residential zoning that allows multiple dwellings without subdivision being necessary, Staff recommend the SS LTC waive the requirement for a public hearing on the proposed bylaw.

ALTERNATIVES

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

1. Amend the Draft Bylaw No. 536

The SS LTC may wish to amend the draft LUB. If selecting this alternative, the SS LTC should describe the specific amendment. Recommended wording for resolution:

- *That Salt Spring Island Local Trust Committee amend Bylaw No. 536, cited as ""Salt Spring Island Land Use Bylaw No. 355, 1999, Amendment No. 1, 2023", by [list amendments...] (SS-RZ-2022.1, Section 50 Musgrave Road).*
- *That Salt Spring Island Local Trust Committee Bylaw No. 536, cited as ""Salt Spring Island Land Use Bylaw No. 355, 1999, Amendment No. 1, 2023", be read a first time, as amended (SS-RZ-2022.1, Section 50 Musgrave Road).*
- *That Salt Spring Island Local Trust Committee Bylaw No. 536, cited as ""Salt Spring Island Land Use Bylaw No. 355, 1999, Amendment No. 1, 2023", be read a first time, as amended (SS-RZ-2022.1, Section 50 Musgrave Road).*

2. Refer the application prior to second reading

The SS LTC may request the application be referred to applicable First Nations, Agencies, Commissions, and Organizations. Recommended wording for resolution:

That the Salt Spring Island Local Trust Committee request staff refer Proposed Bylaw No. 536 to applicable First Nations, Agencies, and Organizations as identified in this staff report dated October 12, 2023 (SS-RZ-2022.1, Section 50 Musgrave Road).

3. Do Not Waive the Requirement for Public Hearing

The SS LTC may request the requirement for public hearing NOT be waived for the application. Recommended wording for resolution:

That Salt Spring Island Local Trust Committee not waive the requirement for a public hearing on Bylaw No. 536 cited as "Salt Spring Island Land Use Bylaw No. 355, 1999, Amendment No. 1, 2023" and request staff to undertake statutory notification of the proposed rezoning in accordance with Section 466 of the Local Government Act and the Salt Spring Island Development Procedures Bylaw No. 304.

4. Request further information

The SS LTC may request further information prior to making a decision. Staff advise that the implications of this alternative are increased processing time and potentially increased costs to the applicant. If selecting this alternative, the SS LTC should describe the specific information needed and the rationale for this request. Recommended wording for resolution:

That the Salt Spring Island Local Trust Committee request that the applicant submit to the Islands Trust a [specify type of report], completed by a Professional [specify professional] which identifies the specific [identify concerns] (SS-RZ-2022.1, Section 50 Musgrave Road).

5. Proceed no further

The SS LTC may decide to proceed no further with the application. Staff advise that the implication of this alternative is that the file would be closed and Bylaw Compliance and Enforcement will be informed of the outcome. If this alternative is selected, the SS LTC should state the reasons for denial. Recommended wording for resolution:

That the Salt Spring Island Local Trust Committee deny application SS-RZ-2022.1 (Section 50 Musgrave Road) for the following reasons: [list reasons...].

NEXT STEPS

If the recommended resolutions are accepted, the draft bylaws will be given first and second reading. The application will return to the SS LTC for their consideration for third and final reading.

Submitted By:	Anthony Fotino, Island Planner	October 5, 2023
Concurrence:	Chris Hutton, Regional Planning Manager	October 5, 2023

ATTACHMENTS


1. Site Context
2. Draft Bylaw No. 525
3. Relevant Policies
4. Site Survey Plan
5. Building Plans
6. Geotechnical Assessment from Ryzuk Geotechnical Engineering dated October 17, 2022
7. Riparian Area Protection Regulation (RAPR) Report from EDI Environmental dated June 19, 2023
8. Well Construction Report, Drillwell Enterprises, August 30, 2022
9. IT Policy Statement Directives Only Checklist

ATTACHMENT 1 – SITE CONTEXT

LOCATION

Legal Description	THE NORTH EAST 1/4 OF SECTION 50, SOUTH SALT SPRING ISLAND, COWICHAN DISTRICT
PID	009-743-472
Civic Address	Section 50 Musgrave Road, Salt Spring Island

LAND USE

Current Land Use	Forest
Surrounding Land Use	<p>Forested and Rural</p> <p><i>Islands Trust Zoning Map (subject property indicated in yellow)</i></p> 

HISTORICAL ACTIVITY

File No.	Purpose
SS-BE-2022.63	Development Permit Violation
SS-RZ-2022.1	Property Rezoning

POLICY/REGULATORY

Official Community Plan Designations	Forestry (F)
Land Use Bylaw	Forestry 1 (F1)
Other Regulations	None
Water Service Area	None
Title Charges	None
Bylaw Enforcement	SS-BE-2022.63 – Development Permit Violation

SITE INFLUENCES

Islands Trust Conservancy	The Islands Trust Conservancy may have an interest in any properties within 100 metres of the property subject of this application.
Regional Conservation Strategy	The subject property is primarily within the MEDIUM/LOW relative value area for important natural areas in the Salt Spring Island Local Trust Area.
Species at Risk	SAR (Public) Species: None Currently Mapped SAR (Public) Ecological Community: None Currently Mapped
Sensitive Ecosystems	SEI: Portion of the property has woodland. Heron Rookery/Raptor Nest/Sea Bird Colony: None Currently Mapped RAR Watercourse: Currently Mapped Islands Trust Protected Areas mapping indicates the subject property is not within 500-metres of a protected area.
Hazard Areas	Steep Slopes mapping does not indicate hazard on the property.
Archaeological Sites/Potential	Archeological Potential located on subject property.
Climate Change Adaptation and Mitigation	The subject property exceeds an elevation of 100+ metres above sea level.
Shoreline Classification	Not Applicable
Shoreline Data in TAPIS	N/A

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SALT SPRING ISLAND LOCAL TRUST COMMITTEE BYLAW NO. 536

A BYLAW TO AMEND SALT SPRING ISLAND LAND USE BYLAW, 1999

The Salt Spring Island Local Trust Committee, being the Trust Committee having jurisdiction in respect of the Salt Spring Island Local Trust Area under the *Islands Trust Act*, enacts as follows:

1. Citation

This bylaw may be cited for all purposes as “Salt Spring Island Land Use Bylaw, 1999, Amendment No. 1, 2023.”

2. Salt Spring Island Local Trust Committee Bylaw No. 355, cited as “Salt Spring Island Land Use Bylaw, 1999,” is amended as follows:

2.1 By inserting the following as Article 9.6.4(3), after Article 9.6.4(2):

“Zone Variation – F1(b)”:

(3) Notwithstanding other regulations of this bylaw:

- (a) The maximum number of dwellings on the lot may not exceed 4
- (b) Notwithstanding Section 9.6.4(3)(a) the maximum number of seasonal cottages on the lot may not exceed 1

2.2 By changing the zoning classification of THE NORTH EAST 1/4 OF SECTION 50, SOUTH SALT SPRING ISLAND, COWICHAN DISTRICT from Forestry 1 (F1) to Forestry 1 (F1(b)), as shown on Plan No. 1, attached to and forming part of this bylaw, and by making such alterations to Schedule “A” to Bylaw No. 355 as are required to effect this change.

2.3 This bylaw is further amended by making such consequential numbering alterations to effect all changes.

READ A FIRST TIME THIS _____ DAY OF _____ 20____

READ A SECOND TIME THIS _____ DAY OF _____ 20____

PUBLIC HEARING HELD THIS _____ DAY OF _____ 20____

READ A THIRD TIME THIS _____ DAY OF _____ 20____

APPROVED BY THE EXECUTIVE COMMITTEE OF THE ISLANDS TRUST THIS

_____ DAY OF _____ 20____

ADOPTED THIS

_____ DAY OF _____ 20____

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Chair

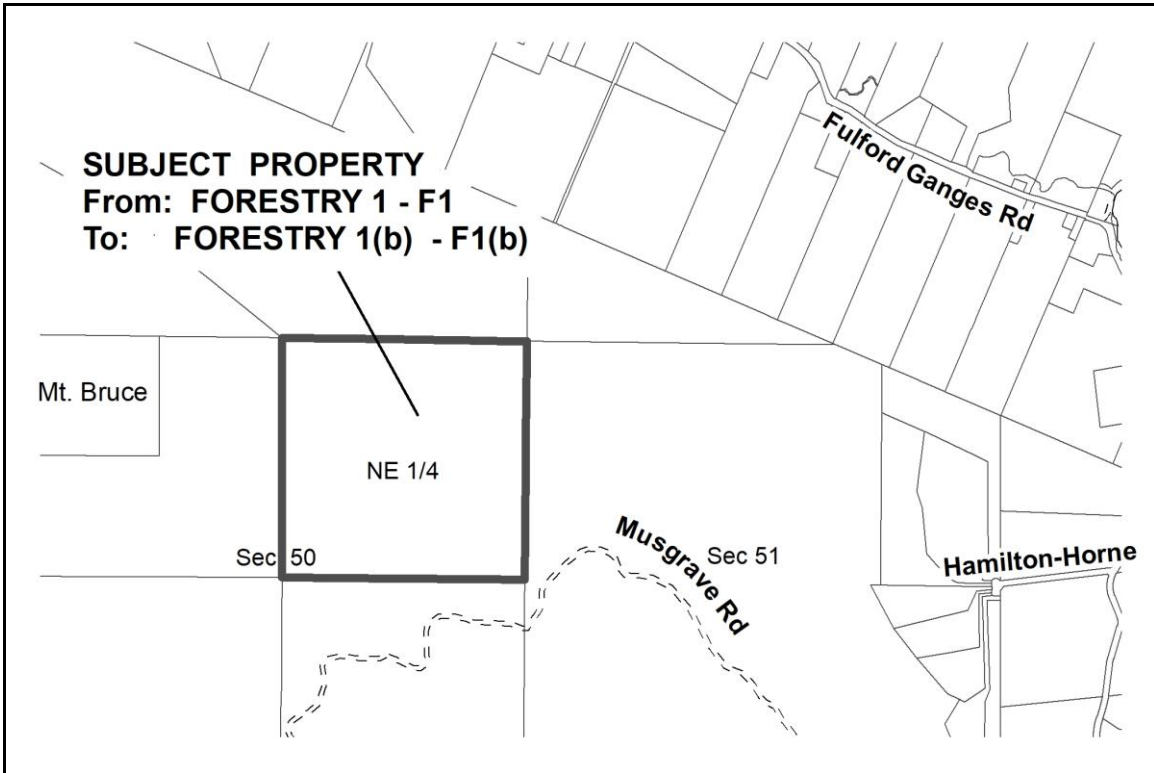
Secretary

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SALT SPRING ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 519

Plan No. 1



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ATTACHMENT 3 – OCP POLICIES

SALT SPRING ISLAND OFFICIAL COMMUNITY PLAN No. 434

Staff have reviewed the Salt Spring Island Official Community Plan in full and highlight the following policies as relevant to the application for consideration.

OCP Objective/Policy	Complies	Planner Comments
A.4.2.1 To recognize the importance of sustainability in all community decisions. To avoid land use decisions that threaten the integrity or sustainability of natural ecosystems.	Yes	Rezoning would authorize a less intensive use to the land than otherwise permitted through subdivision.
A.4.2.2 To maintain and restore the community's natural capital represented by such items as our agricultural and forest land base, our potable water supplies, and primary value of our natural and unspoiled rural character.	Yes	Rezoning would authorize a less intensive use to the land than otherwise permitted through subdivision. Less potable water would be used through this rezoning.
A.4.2.3 To recognize our local responsibility to contribute to global sustainability, particularly in relation to mitigation of and adaptation to climate change.	Yes	Applicant's proposal includes environmentally sustainable building.
A.4.4.6 To ensure the continued development of land use opportunities for non-traditional residential settlement. Opportunities that are based on the communal stewardship of land, conservation of resources and alternative forms of infrastructure are of special importance.	Yes	This is a type of shared residential zoning that isn't typically seen on the island. This proposal would mean less strain on natural resources given that the proposal is less intensive than what would be allowed under current zoning.
A.6.2.2 The Local Trust Committee will consider the energy efficiency attributes and climate change adaptation and mitigation impacts in all rezoning applications that propose an increase in density or significant change of use.	Yes	Applicant's proposal includes environmentally sustainable building.
A.6.2.3 Rezoning applications proposing a significant increase in density or significant change of use may be requested to include a calculation of the projected carbon budget, or demonstrate conformity with LEED Neighbourhood Design criteria, or the equivalent.	Yes	Rezoning would authorize a less intensive use to the land than otherwise permitted through subdivision. This would be a decrease in overall density.
A.6.2.4 The Local Trust Committee shall consider giving priority to rezoning and other applications that meet energy efficiency criteria adopted by the Local Trust Committee.	Yes	Applicant's proposal includes environmentally sustainable building

<p>A.7.2.4 The Local Trust Committee should not approve applications for rezoning that would increase development in areas with natural hazards.</p>	<p>Yes</p>	<p>Applicant has provided materials from qualified professionals that speak to the viability of the proposal.</p>
<p>B.6.3.2.2 Zones within the Forestry and Watershed-Forestry Designation will continue to allow the residences, forestry and public service uses permitted by existing zoning. Zoning changes for large new commercial, general employment or institutional developments should not be made in this Designation.</p>	<p>Yes</p>	<p>Proposal is for a land use that is permitted by existing zoning. No commercial, general employment, or institutional uses are being proposed.</p>
<p>C.3.1.1.1 To apply the precautionary principle in ensuring that the density and intensity of land use is not increased in areas which are known to have concerns with the supply of potable water.</p>	<p>Yes</p>	<p>Density and intensity of the land is not increasing more than what otherwise would be permitted under the current zoning. It is actually decreasing under the current proposal.</p>
<p>C.3.3.2.2 When considering rezoning applications, the Local Trust Committee should consider the impacts of the proposed new use on existing wells, springs, or other water supplies. If the proposed use is expected to need more water than the uses already allowed on the property, then the Committee should ask for evidence that wells or other water supplies in the neighbourhood would not be depleted. The Committee should also consider whether water use would affect agricultural activities or deplete any springs necessary to maintain fish habitat. Should a zoning change be proposed where groundwater supplies are not adequate, the applicant could be encouraged to find other means of supplying water. Rainwater catchment or a water conservation program could be considered.</p>	<p>Yes</p>	<p>The well documentation provided indicates that all of the drilled wells have a high volume of water.</p>

TOPOGRAPHIC SURVEY PLAN OF THE NORTH EAST 1/4 OF SECTION 50, SOUTH SALT SPRING ISLAND, COWICHAN DISTRICT.

BCGS MAP SHEET 92B.073

0 50 100 150
The intended plot size of this plan is 864mm in width by 558mm in height (D-Size) when plotted at a scale of 1:2000.

All distances and elevations are in metres and decimals thereof, unless otherwise noted.

LEGEND

- denotes Old Logging Road
- denotes DPA 4, Map 21, Lakes, Streams and Wetlands
- denotes DPA 6A, Map 23, High Soil Erosion Hazard
- denotes DPA 6B, Map 24, Unstable Slopes
- denotes DPA 7, Map 28, Riparian
- denotes Proposed Building Site

Contours are at 2.0 metre intervals.

The following non-financial charges are shown on the current Certificate of Title and may affect the property:

317434G - Right of Way

This document shows the relative location of the features with respect to the boundaries of the parcel described herein. This document shall not be used to define property lines or property corners.

Topographic data is from 2013 Province of BC LIDAR data. Polaris takes no responsibility for the accuracy or completeness of this data.

Polaris Land Surveying Inc. accepts no responsibility or liability for any damages that may be suffered by a third party as a result of any decisions made, or actions taken based on this document.

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Based on Land Title & Survey Authority Records and Field Survey. Unregistered interests have not been included or considered.

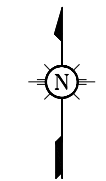
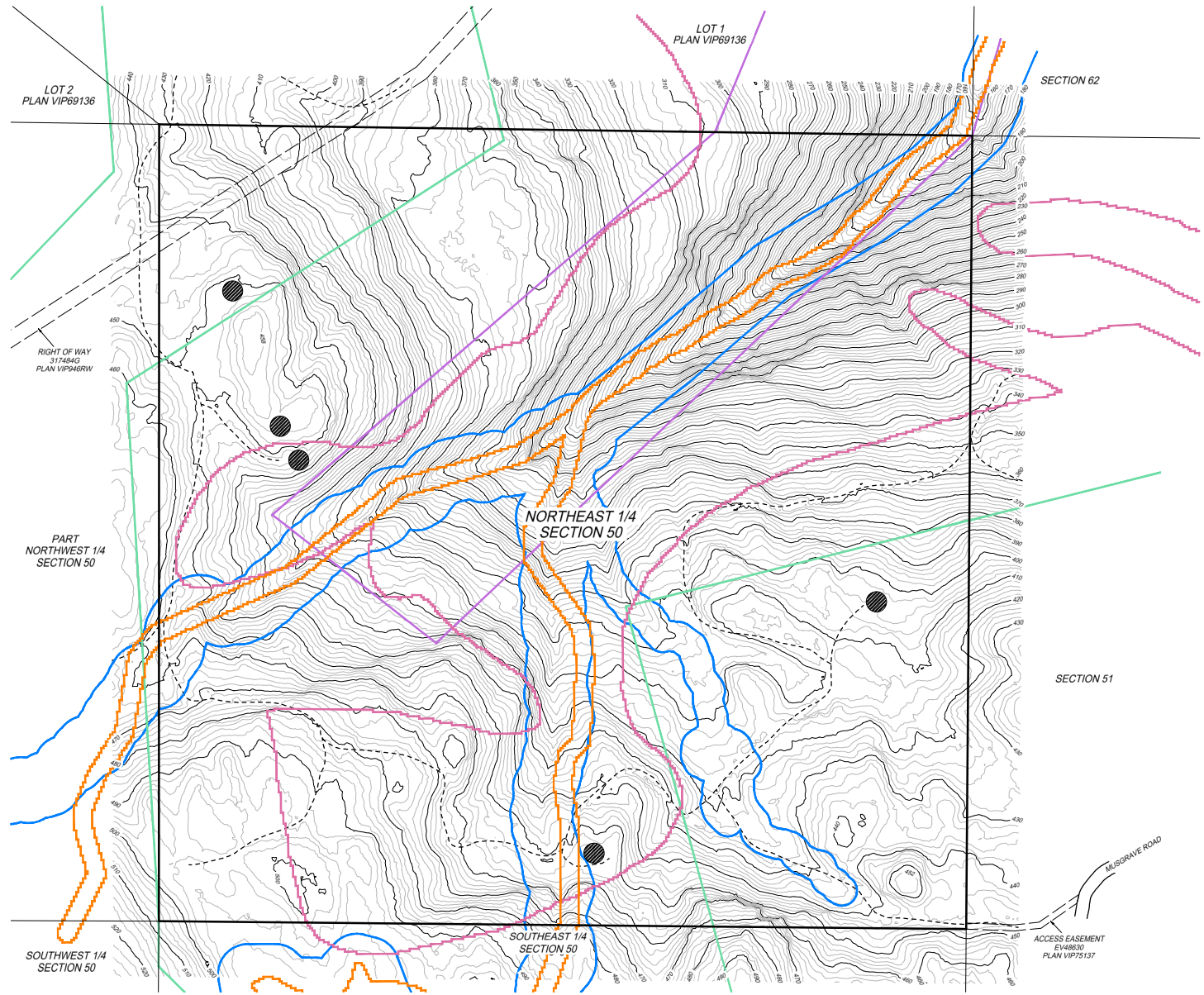
This site plan has been prepared in accordance with the Professional Reference Manual and is certified correct as of the 8th day of August, 2022.

Jordan Elliot Likke, BCLS 905
This document is not valid unless digitally signed.



Mailing & delivery address:
204 - 149 Tufford-Gangnef Road,
Salt Spring Island, BC, V8K 2K9

Toll Free: (877) 603 7388
Telephone: (250) 537 5502
SIS@plsi.ca
www.plsi.ca



LARAMIE - 2F w/FLAT FRONT

MAIN FLOOR: 1,615 SQ. FT.
 UPPER FLOOR: 405 SQ. FT.
 COVERED PORCHES: 45 SQ. FT.
 TOTAL BUILDING AREA: 2,065 SQ. FT.

Attachment 5



CUSTOMER:
BEREZOWSKI

tel: 604-946-5430
 toll free: 1-800-669-5693-ext. 140
 email: bgrindler@linwoodhomes.com
 www.linwoodhomes.com

Sales & Design Consultant
BRAD GRINDLER

LINWOOD
 CUSTOM HOMES
 LINWOOD HOMES LTD. 8250 River Road Delta, British Columbia Canada V4G 1B5

Date:
 2022-08-24

EVERY NOTATION FOLLOWED BY "N.I.C." INDICATES THAT THE ITEM IS "NOT INCLUDED IN CONTRACT"

PURCHASE AGREEMENT
 MB-103-1624

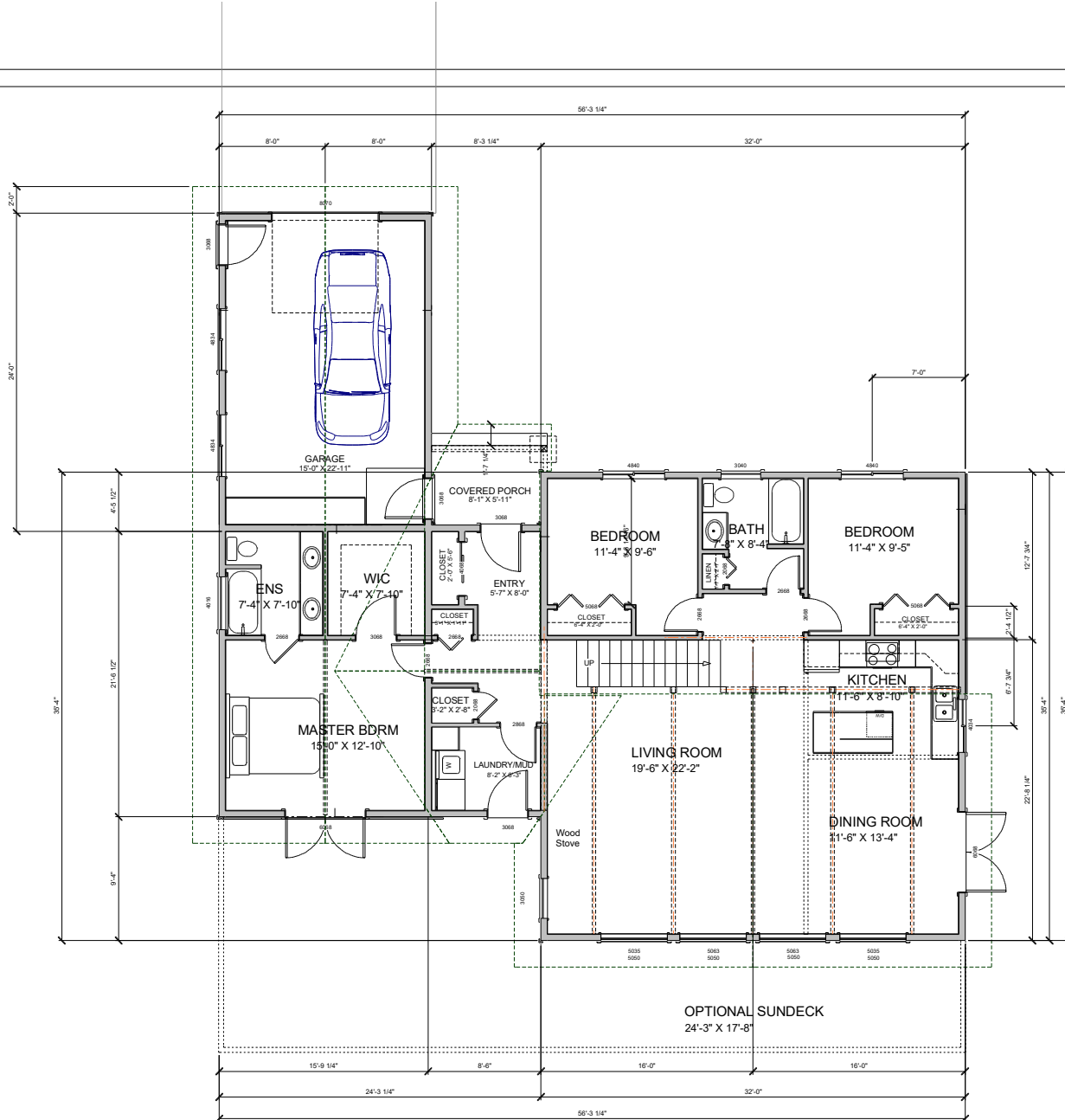
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HOUSE MODEL: LARAMIE VERSION 03B

MAIN FLOOR

1,615 SQ. FT.



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LINWOOD
CUSTOM HOMES

LINWOOD HOMES LTD. 8250 River Road Delta, British Columbia Canada V4G 1B5

Date:
2022-08-24

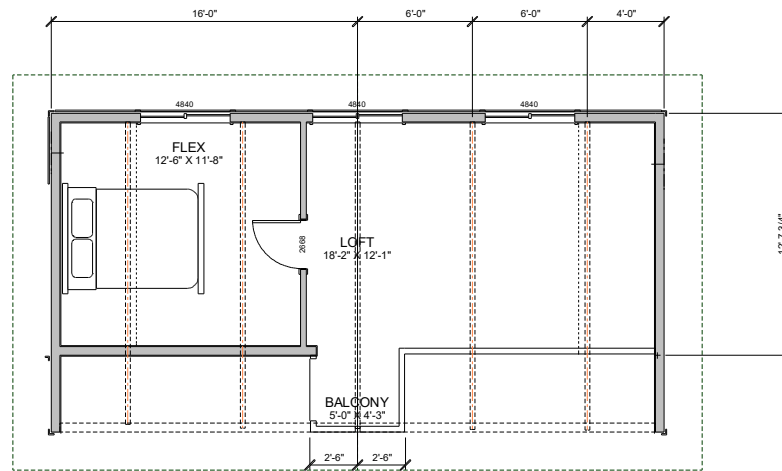
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MB-103-1624

Page # 2

UPPER FLOOR

405 SQ. FT.



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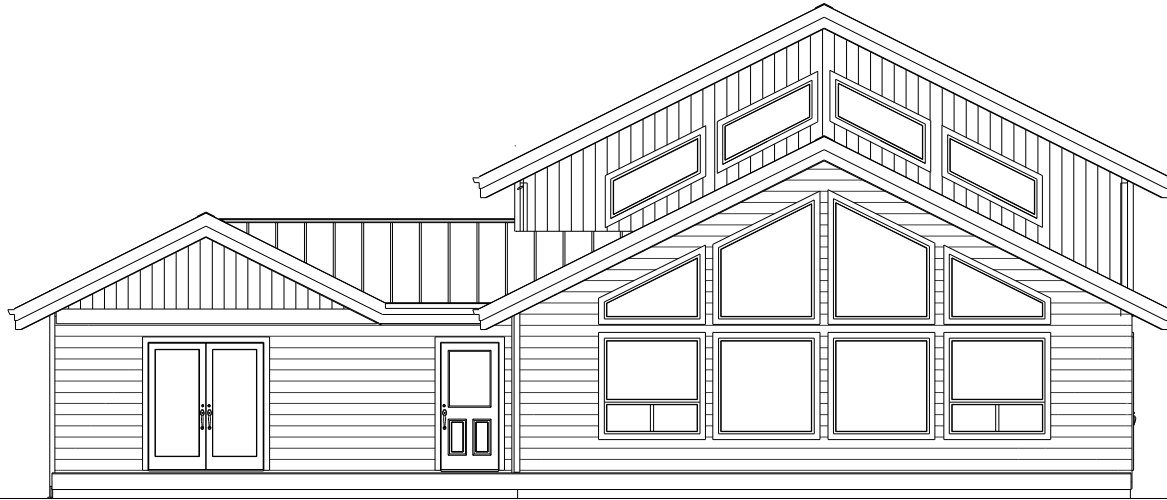
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Delta, British Columbia Canada V4G 1B5

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Page # 3



FRONT ELEVATION



REAR ELEVATION

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Date:
2022-08-24

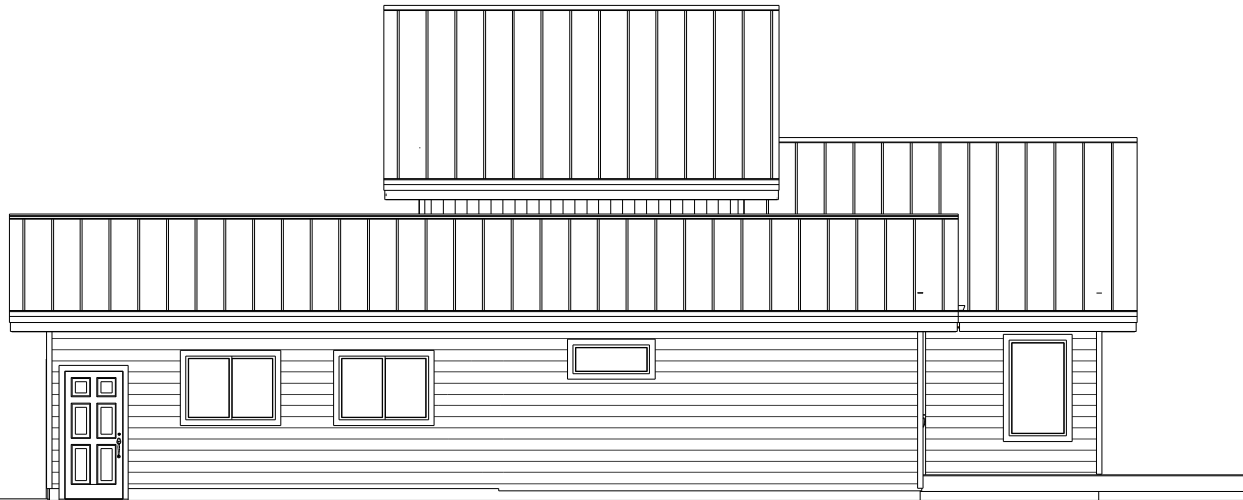
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Page # 4



RIGHT ELEVATION



LEFT ELEVATION

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CUSTOM HOMES

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Page # 5

**RYZUK GEOTECHNICAL**
Engineering & Materials Testing

6-40 Cadillac Ave, Victoria, BC, V8Z 1T2 Tel: 250-475-3131 E-mail: mail@ryzuk.com www.ryzuk.com

October 17, 2022
File No: 11317-1Mischa Gelb
721 Fraser Avenue
Hope, BC
V0X 1L0

Attn: Mischa Gelb (By email: mischagelb@gmail.com)

Re: Geotechnical Assessment – Proposed Single Family Residences
Section 50 Musgrave Road – Salt Spring Island, BC

As requested, we attended the referenced site on August 18, 2022, to assess the geotechnical conditions in the vicinity of several proposed residential building areas and associated infrastructure. Our assessment consisted of an office-based review and a visual site reconnaissance. Our associated observations, comments, and recommendations are contained herein. This letter is in support of and pursuant to Section 56 of the BC Community Charter. Our work has been carried out in accordance with, and is subject to, the attached Terms of Engagement.

EXISTING CONDITIONS

The undeveloped property is located within the southern portion of Salt Spring Island, to the north of Rosmurgie Pond, and partially down the eastern slope of Mt. Bruce. The 155-acre property is square in shape and bounded on all sides by similarly undeveloped and forested properties. We understand that several years ago, the land was partly logged for timber, and a few access roads were cut through the property. The topography varies between steeply inclined and flatter undulating areas, but generally slopes downwards from the southwest at a maximum elevation of approximately 500 m, towards the northeast at the lowest elevation of approximately 170 m.

We understand that the proposed development consists of constructing five single-family residences at different locations throughout the property, with associated driveways, surface parking, and septic fields. While no detailed site plans or concept drawings are available at this time, we anticipate that all building structures will be constructed atop conventional spread footings, each with light building loads, and shallow utilities are expected. The attached overall Site Plan provided to us, produced by Polaris Land Surveying Inc., dated August 9, 2022, shows the location of each building site, numbered in their proposed sequence of construction as discussed during our site visit.

As indicated on the Site Plan, the proposed locations for Buildings #1, #2, #5, and possibly #4 are located in areas designated as Development Permit Area (DPA) 6 – Unstable Slopes and Soil Erosion Hazards, in accordance with the Salt Spring Island Official Community Plan. However, a permit exemption may be granted if the proposed work is carried out in accordance with professional recommendations, pursuant to Section E.6.1.3 (e) of Islands Trust Bylaw No. 434.

GEOTECHNICAL ASSESSMENT AND RECOMMENDATIONS

A review of surficial and bedrock geology mapping indicates that the soil conditions within the general area typically comprise a veneer of colluvial soils overlying shallow bedrock. The observed bedrock consisted of coarse-grained igneous formation with rhomboidal joint sets evident, being Mount Hall gabbroic sills intrusive into Paleozoic strata. Intact bedrock outcrops were observed locally at all but one building site (#2), and we expect bedrock depth would vary but in general remain relatively shallow throughout the property.

During our site assessment, we reviewed the native soils, bedrock, and terrain conditions of each proposed building location. In general, the observed conditions aligned with the expected conditions and our past projects in the area. The particular conditions at each site are described herein, along with general and site-specific recommendations for building construction where applicable.

Building Site #1

The first building site is located in the west-central part of the property at an elevation of approximately 445 m, at the end of a small road and on the side of a steep slope. We understand this would be a small, one-storey tiny home, approximately measuring 60 m² in area. The site is heavily vegetated with young to mature trees and brush throughout, with a localized clearing at the building site. The topography surrounding the building site is bedrock controlled, moderately sloping from the northwest, down towards the southeast at an inclination of approximately 20 to 30 degrees, becoming steeper and nearing 45 degrees in some areas beyond and downslope of the building site. The proposed building site is situated on a previously constructed bench, looking over a valley to the southeast. Based on our observations and onsite conversations, we understand that this bench was constructed during past rock quarry activity, where rock was excavated on the uphill side to the north and subsequently placed on the downhill side to the south, seemingly to build out a small staging area. During our visual assessment, we were unable to confirm the depth of the rock fill, however, based on observations of the excavated rock cut approximately 2.0 m high to the north, subsurface soil conditions comprise a veneer up to 0.2 m thick of organics/topsoil, overlying a thin layer of dense native silty sand and gravel, atop the bedrock. The slope appears to be globally stable, and there is no indication of deep-seated slope instability apparent in the assessed areas at the time of our visit. The abundance of vegetation and tree growth patterns along the steep slopes above and below the proposed building area suggests that the surface of the slope is relatively stable, aside from episodic events.

We recommend that any previously placed rock fill be removed from the proposed building area, and that compact native soils or bedrock are exposed and reviewed by a qualified geotechnical professional. Following such, placement of engineered fill or construction of footings can take place.

Building Site #2

The second building site is located in the southern part of the property at an elevation of approximately 455 m. The area is heavily vegetated with young to mature trees and brush. The topography is moderately sloping from the south, down towards the north, with the proposed building situated on a natural bench that is almost level. The surrounding grade is generally gently to moderately sloped, ranging in inclination from about 10 to 20 degrees. Portions of DPA 4 – Lakes, Streams and Wetlands as well as DPA 7 – Riparian Areas, are both located adjacent to the proposed building area to the south where a small seasonal stream is present. Based on our observations and discussions on site, we understand that the general area of the proposed building was recently cleared of trees, and the native soils were exposed in some parts where up to 1.0 m of recent excavation had occurred. The observed soils consisted of a veneer of organics up to 0.3 m thick, atop silty sandy gravel and cobbles (inferred glacial till). No bedrock was observed or noted within the assessed area.

Building Site #3

The third building site is located in the east-central part of the property at an elevation of approximately 405 m, near a localized bench/flatter area, overlooking a moderately steep bluff to the northeast. The area is varied in ground cover, with bare, grassy areas near the proposed location of the building and to the north/south, with more heavily vegetated areas to the northeast. The topography surrounding the building site is bedrock controlled and gently undulating, with localized knolls and areas of bedrock protruding through the surface of the ground in some areas. The site is generally gently sloping, from the southwest, down towards the northeast, at an inclination of approximately 10 degrees or less, then transitions to a more moderate slope of about 20 to 30 degrees. The proposed building site is situated approximately 5 to 10 m back from the crest of the steeper slope. Based on our observations and test probing/small test excavations, we observed the surface and subsurface conditions to comprise a variable layer of organics/topsoil up to 0.5 m thick, overlying dense native silty sand and gravel (inferred glacial till), atop shallow bedrock.

Building Site #4

The fourth building site is located in the northeast part of the property at an elevation of approximately 450 m, near a localized flat area, overlooking a moderately steep cliff and steep slope to the northwest. The site is moderately vegetated with young to mature trees, sparse low-lying vegetation, and covered in a thick layer of moss/grass. The topography surrounding the building site is bedrock controlled and gently undulating, with localized knolls and areas of bedrock protruding through the surface in several areas. The site is generally flat, with a few bedrock benches/faces up to 1.5 m in height. The proposed building site is situated some 5 to 10 m back to the southwest from the crest of a near vertical cliff/bluff, extending down approximately 7 to 8 m, before encountering a lower slope inclined at approximately 25 to 45 degrees. Based on our observations and test probing, the surface conditions at the building site comprise a variable layer of organics/topsoil, overlying dense native silty sand and gravel and/or shallow bedrock. The steep slope beyond the building site is bedrock controlled with little to no

overlying vegetation and appears to be globally stable. No indication of deep-seated slope instability was apparent in the assessed areas at the time of our visit.

Building Site #5

The fifth and final building site is located in the west-central part of the property at an elevation of approximately 455 m, approximately 40 to 50 m uphill and to the north of the first building site. The site is moderately vegetated with young to mature trees, sparse low-lying vegetation, and covered in a thick layer of moss/grass. The topography surrounding the building site is generally bedrock controlled and gently undulating, with localized knolls and areas of bedrock protruding through the surface of the ground in some areas. The site is generally flat/level, being on the top of a localized plateau/high point, with a small bedrock cliff approximately 2.0 m tall dropping down to the east. The terrain steepens beyond the building site to the east. The proposed building site is situated approximately 20 to 30 m back from this steeper slope, inclined at approximately 15 to 25 degrees. Based on our observations and test probing, we observed the surface conditions to comprise a variable layer of organics/topsoil, overlying dense native sand and gravel and/or shallow bedrock.

All Building Sites

Given the site conditions, we expect that the proposed development would be feasible, and no unique or adverse geotechnical conditions would likely be encountered. Per our observations during our site visit, we can confirm that bedrock is present at relatively shallow depths, often protruding through the surface of the existing grade. In areas where bedrock was not observed, we expect that such would be present below a discontinuous and thin/variable layer of organic and mineral soils.

Given the geological conditions and the terrain at the proposed building sites, we consider the reviewed building sites to be globally stable. We do not consider any of the building sites to be subject to slope instability, given the competent soil conditions and shallow intact bedrock expected below. In general, we did not note any geotechnical hazards within the bounds of, or uphill of, any of the building sites such as rockfall source areas or globally unstable slopes during our visual site assessment. Furthermore, uphill risks are largely mitigated by the local high points and natural benches present at most building sites, as well as the natural vegetation and topography of the property.

While none were noted during our visual assessment, boulders located upslope of any building sites may have the potential to shift in a seismic event and could impact future buildings. Once building designs are finalized and building locations are surveyed, local rockfall mitigation may be required, which would consist of removing boulders from the slopes above or installing a rockfall catchment system. We recommend that a qualified geotechnical professional review the proposed building locations once such are surveyed and oversee the initial site preparations, and make recommendations for local boulder removal/small-scale rockfall mitigation, as needed.

Foundation Design

Based on the conditions observed during our site investigation, we anticipate glacial till and/or bedrock will be encountered at or above the design footing grade in most or all areas. We expect typical pad and strip footings would be the preferred foundation choice for dwelling construction. At a minimum, all organic soils, non-engineered fills, or disturbed soils should be removed from within the proposed building areas prior to placing footings or before recovering design footing grade by placement of engineered fill. If, after removal of undesirable soils, it is desired to raise the grade back to design grade, backfill should consist of approved, well graded, free draining granular material and should be placed in maximum 300 mm lifts and compacted to at least 95% of the Standard Proctor Maximum Dry Density (SPMDD) value. The foundation subgrade should be reviewed by a qualified individual at the time of construction prior to placement of concrete or assembly of formwork. Engineered fill material may only be placed upon subgrade approved by a qualified professional, and the fill must have a footprint that extends horizontally beyond the footings a distance equal to the thickness of the fill, in order to provide adequate splay for foundation loads. Placement of engineered fill should also be reviewed and approved at regular intervals by a qualified geotechnical professional. During construction, care should be taken to ensure that any sensitive vegetation outside the construction area is marked off and protected from damage.

For preliminary design purposes, we recommend minimum footing widths of 400 mm and 600 mm for strip and pad footings, respectively, and all foundations should be placed at least 450 mm below the finished grade to provide adequate frost protection. Based on the observed and expected spoil conditions at foundation depths, footings can be dimensioned based on Serviceability Limit State (SLS) and Ultimate Limit State (ULS) bearing resistances of 250 kPa and 375 kPa for strip footings, respectively, and 300 kPa and 450 kPa for SLS and ULS bearing resistances for pad footings, respectively.

For any proposed buildings near steep slopes, such as for Buildings #1, #3, and #4, we recommend that any foundations or placed engineered fill be suitably setback from the crest of the steep slope.

Seismic Considerations

Greater Victoria and the Southern Gulf Islands are situated in a region of very high seismicity. Considerable earthquake risk exists, stemming from our proximity to the Cascadia subduction zone and numerous more local faults in southwestern BC and northwestern Washington State.

For preliminary foundation design, a Seismic Site Classification of 'B', in accordance with the National Building Code of Canada (NBCC) 2015, the current BC Building Code, and the Canadian Foundation Engineering Manual (CFEM), can be used, subject to geotechnical review at the time of excavation. Pursuant to NBCC 2015, Site Class 'B' can only be used if there is less than 3.0 m of softer materials (i.e., mineral or organic soils) between the rock and the underside of the footings. Otherwise, Site Class 'C' can be assumed for preliminary foundation design. A copy of the 2015 NBC Seismic Hazard Calculation for the subject site (calculated for Site Class C) is also attached, considering an event with a 2% probability of exceedance in 50 years.

Rainwater Management

We expect that surface runoff volumes from landscaped areas would generally be maintained, being similar to the existing conditions. Given the size of the property and proposed development, we do not consider the overall site drainage conditions, post-development, to be significantly altered from that of the existing site and do not expect that the developed or hardscaped areas will affect the hydrology of the property.

Conventional perimeter foundation drainage for dwelling construction consisting of perforated drain pipe surrounded by free draining granular material is recommended. To prevent the migration of fine-grained soil particles into the drainage system, a layer of medium weight, non-woven geotextile should be placed between the clean drain rock around the perforated pipe and the granular backfill material. The geotextile should encompass the entire drain rock/drain pipe system, and tied into the approved free-draining backfill.

The final grade at the site should be sloped to direct surface water away from the building and foundation areas. Finished unsupported soil slopes around the buildings should be shaped at 2H:1V or flatter. Small, landscaped retaining walls (less than 1.2 m in height) could be utilized, however, any retaining structure greater than 1.2 m high would require geotechnical and/or structural review. Furthermore, we consider that all surface vegetation, including all trees, shrubs, and grass, can be removed from building areas without causing undue erosion, provided that any permanent sloping areas are revegetated following building construction.

During our visual assessment, we did not note any significant ponding or watercourses, except for the small seasonal stream near Building #2. We expect flow along this stream and other nearby streams within the property to be minimal, thus flood potential is low, and we do not consider flooding to be a risk for this development. Furthermore, given the elevation of the property, we do not expect flooding or inundation due to storm surge or sea level rise to be a concern for any of the proposed buildings.

We consider septic fields to be feasible from a geotechnical perspective and recommend that any septic fields be constructed suitably setback from the crest of any moderate or steep slope. Septic field construction and associated subsurface connections should be designed and inspected by others.

Driveways

Gravel driveways are expected to be the preferred option to provide access to and between the proposed buildings. For general light traffic areas within the property, a driving structure consisting of at least 100 mm of 19 mm minus crushed base course overlying at least 150 mm of 75 mm minus crushed rock subbase is recommended, properly placed and compacted. Prior to road construction, any deleterious or unsuitable soils should be removed from the road structure area.

CLOSURE

In summary, provided our recommendations are followed, we consider that development of the property as proposed to be feasible from a geotechnical perspective as qualified above, and may be exempted from the requirement of obtaining a Development Permit for DPA 6, pursuant to Section E.6.1.3 (e) of the Salt Spring Island OCP (Islands Trust Bylaw 434). Furthermore, we do not consider that development of the site, as proposed, would alter the risk of geohazard conditions or increase the risk of slope instability. Accordingly, we consider that the land may be used safely for the use intended, pursuant to Section 56 of the BC Community Charter with consideration of a design seismic occurrence with a 2% probability of exceedance in 50 years. As this is a preliminary report, we have not yet completed the “Appendix D Landslide Assessment Assurance Statement”. Once building envelopes are finalized, we can include this along with any updates to the report.

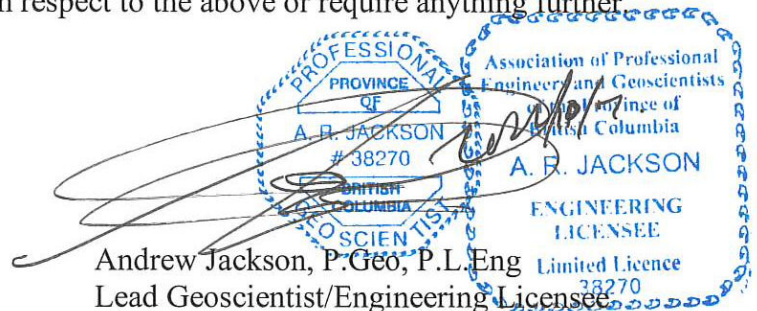
Ryzuk Geotechnical acknowledges that this report may be requested by the building official of the Capital Regional District as a precondition to the issuance of a building permit and that this report and any conditions contained within may be included in a restrictive covenant and filed against the title to this subject property. We understand that an application for rezoning of the property is being considered, and as such, we expect that the Islands Trust may require further commentary and/or recommendations for the development of the property during their preliminary review, prior to approval. We can provide a revised report or supplementary letter at such time, if requested.

We trust the preceding is suitable for your purposes at present. Please do not hesitate to contact our office should you have any questions with respect to the above or require anything further.

Sincerely,
Ryzuk Geotechnical



Remy Kennedy-Kuiper, M.A.Sc., EIT
Advanced Junior Engineer



Andrew Jackson, P. Geo., P.L. Eng
Lead Geoscientist/Engineering Licensee

- Attachments:
- Terms of Engagement
 - Polaris Land Surveying Inc. Site Plan
 - 2015 NBC Seismic Hazard Calculation

TERMS OF ENGAGEMENT

1. GENERAL

- 1.1. Ryzuk Geotechnical Ltd., its principals and employees (collectively the "Consultant") shall render the Services to the Client for the Project in accordance with the following terms of engagement (the "Engagement").
- 1.2. The Consultant will provide the Services, and any other associated documents, records or data, in accordance with the standard of care, skill and diligence required of a geotechnical consulting firm providing similar services at the same time in the same geographic location and circumstances in British Columbia. The Services will be provided in accordance with procedures customarily provided in similar circumstances by similar professionals. No other representations or warranties, expressed or implied, are made by the Consultant.
- 1.3. The Consultant may, at its discretion and at any stage, engage sub-consultants to perform all or any part of the Services.

2. COMPENSATION

- 2.1. All fees billed to the Client by the Consultant are payable in Canadian dollars. Invoices are due and payable by the Client on receipt of the invoice, without holdback. Interest on overdue accounts is 24% per annum.

3. REPRESENTATIVES

- 3.1. Each party must designate a representative who is authorized to act on behalf of that party and receive notices under this Engagement.

4. TERMINATION

- 4.1. Either party may terminate this Engagement without cause upon providing 30 days' written notice to the other party. On termination by either party under this section, the Client shall forthwith pay to the Consultant all fees invoiced by the Consultant for the Services performed to the date of termination, including all expenses and other charges incurred by the Consultant in respect of the Consultant's Engagement by the Client.
- 4.2. If either party is in breach of any term of this Engagement, the non-defaulting party may give written notice of the breach to the other party and thereafter terminate this Engagement forthwith if the defaulting party does not remedy said breach within 7 days' of being provided written notice of the breach. On termination by the Consultant under this section, the Client shall forthwith pay to the Consultant all fees invoiced for the Services performed to the date of termination, including all expenses and other charges incurred by the Consultant in respect of the Consultant's Engagement by the Client.

5. ENVIRONMENTAL

- 5.1. The Consultant's field investigation, laboratory testing and engineering recommendations will not address or evaluate contamination or pollution of soil or groundwater. The Consultant will cooperate with any environmental consultant retained by the Client during the field work phase of the investigation.

6. INSURANCE

- 6.1 Ryzuk Geotechnical maintains Professional Indemnity Insurance as follows:

- 6.1.1 \$2,000,000 each and every claim
- 6.1.2 \$2,000,000 in the aggregate
- 6.1.3 \$5,000,000 commercial/general liability coverage.

7. LIMITATION OF LIABILITY

7.1. The Consultant shall not be responsible for:

- 7.1.1. the negligence or failure of any contractor or other professional retained by the Client to perform work or provide services in respect of the Project in accordance with the applicable contract documents and/or advice provided by the Consultant;
- 7.1.2. the design of or defects in equipment or materials supplied or provided by the Client or its contractors for incorporation into the Project;
- 7.1.3. any cross-contamination resulting from subsurface investigations;
- 7.1.4. any Project decisions made by the Client if such decisions are made without the Client first seeking advice from the Consultant and/or decisions contrary to or inconsistent with advice provided by the Consultant;
- 7.1.5. any consequential loss, injury or damages suffered by the Client or its agents and contractors, including but not limited to loss of use, earnings and business interruption;
- 7.1.6. the unauthorized distribution of any confidential document or reports prepared by or on behalf of the Consultant for the exclusive use of the Client;

7.2. The Consultant will make all reasonable efforts prior to and during subsurface site investigations to minimize the risk of damaging any subsurface utilities/mains. If, in the unlikely event that damage is incurred where utilities are unmarked and/or undetected, the Consultant will not be held responsible for damages to the Project site or surrounding areas, utilities/mains or drilling equipment or the cost of any repairs thereto.

7.3. The Consultant's total liability to the Client for any errors, omissions, breaches of contract and/or negligence arising in connection with the Services is limited to the amount of the Consultant's fees for the Services and shall not exceed that amount under any circumstances. For greater clarity, this means that if the Client makes any claim, including any claim for contribution or indemnity, or brings any claims against the Consultant, then any damages for which the Consultant may be liable cannot exceed the total amount of fees paid to the Consultant by the Client.

7.4. The Client agrees to indemnify and to save and hold harmless the Consultant from any claim, demand, litigation, expense, legal fees, liability, damage, award or cost, of any form or type whatsoever, in respect of any claim for property damage, loss, or personal injury brought by any party including the Client's contractors, other professionals, or any third party, resulting from the Consultant's provision of the Services, except for such property damage, loss or personal injury that results directly from the gross negligence of the Consultant.

7.5. No claim may be brought against the Consultant in respect of the Consultant's provision of the Services, in contract, negligence or other civil wrong more than 2 years after any claim is discoverable.

8. DOCUMENTS AND REPORTING

- 8.1. All of the documents prepared by or on behalf of the Consultant in connection with the Project are instruments of service for execution of the Project and the Services. The Consultant retains the property and copyright in these documents, whether the Project is executed or not. These documents may not be used on any other project without the prior written agreement of the Consultant.
 - 8.2. Documents that have been prepared specifically for the Project are applicable and may be relied upon only in the case where there has been no physical alteration to, or deviation from any of the information or plans provided to the Consultant by the Client or the Client's agents. If the Client makes any changes or deviations from original plans for the Project, the Client may request that the Consultant review and revise Project documents accordingly.
 - 8.3. Identification and classification in respect of the extent, properties, or type of soils or other materials at the Project site will be based upon investigation and interpretation of results in a manner consistent with customarily accepted standard geotechnical consulting practices in the location where the Services were performed. Due to the nature of geotechnical consulting, there is an inherent risk that all potential conditions will not be detected at the Project site and that actual subsurface conditions may vary considerably from investigation points. The Client and any other party making use of any documents prepared by the Consultant in respect of the Project acknowledges and accepts this risk.
 - 8.4. Any conclusions and recommendations provided within any document prepared by the Consultant for the Client will be based on the scope of investigation by the Consultant and any additional information provided to the Consultant by the Client or the Client's agents. The Consultant disclaims responsibility for any deficiency or inaccuracy resulting from the Consultant being provided with inaccurate or fraudulent information by the Client or the Client's agents.
9. JOBSITE SAFETY AND CONTROL
- 9.1. The Client acknowledges that control of the Project site remains solely with the Client, and/or the Client's agents and/or contractors. The presence of the Consultant's personnel on the Project site does not relieve the Client, the Client's agents and/or contractors from their responsibilities for Project site safety. The Client must inform the Consultant of all hazardous or otherwise dangerous conditions at the Project site of which the Client, its agents, and/or contractors are aware.
 - 9.2. The Client acknowledges that during the course of a geotechnical investigation a previously unknown hazard or contaminant may be discovered. Discovery and/or identification of a hazard/contaminant may necessitate procedures to ensure the safety and protection of persons and/or the environment being undertaken. The Client shall be responsible for payment of any additional expenses incurred as a result of discovery of a hazard/contaminant. The Client acknowledges that certain circumstances require government and/or regulatory authorities to be notified of hazardous conditions and/or contaminants. The Client shall not make any claim or bring any action against the Consultant in the event the Consultant provides any required notification of a hazard and/or contaminant to a government and/or regulatory authority.
10. FIELD SERVICES
- 10.1. If the Consultant is requested or required to provide field reviews as part of the Services for the Project and the Client declines to authorize or otherwise limits the scope of same in a manner inconsistent with the Consultant's advice or recommendations, the Consultant may provide qualified certifications in respect of any work completed by the Client and/or its contractors that was not overseen by the Consultant.
11. DISPUTE RESOLUTION
- 11.1. If requested in writing by either the Client or the Consultant, the Client and the Consultant shall attempt to resolve any dispute between them arising out of or in connection with this Engagement by entering into

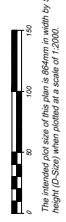
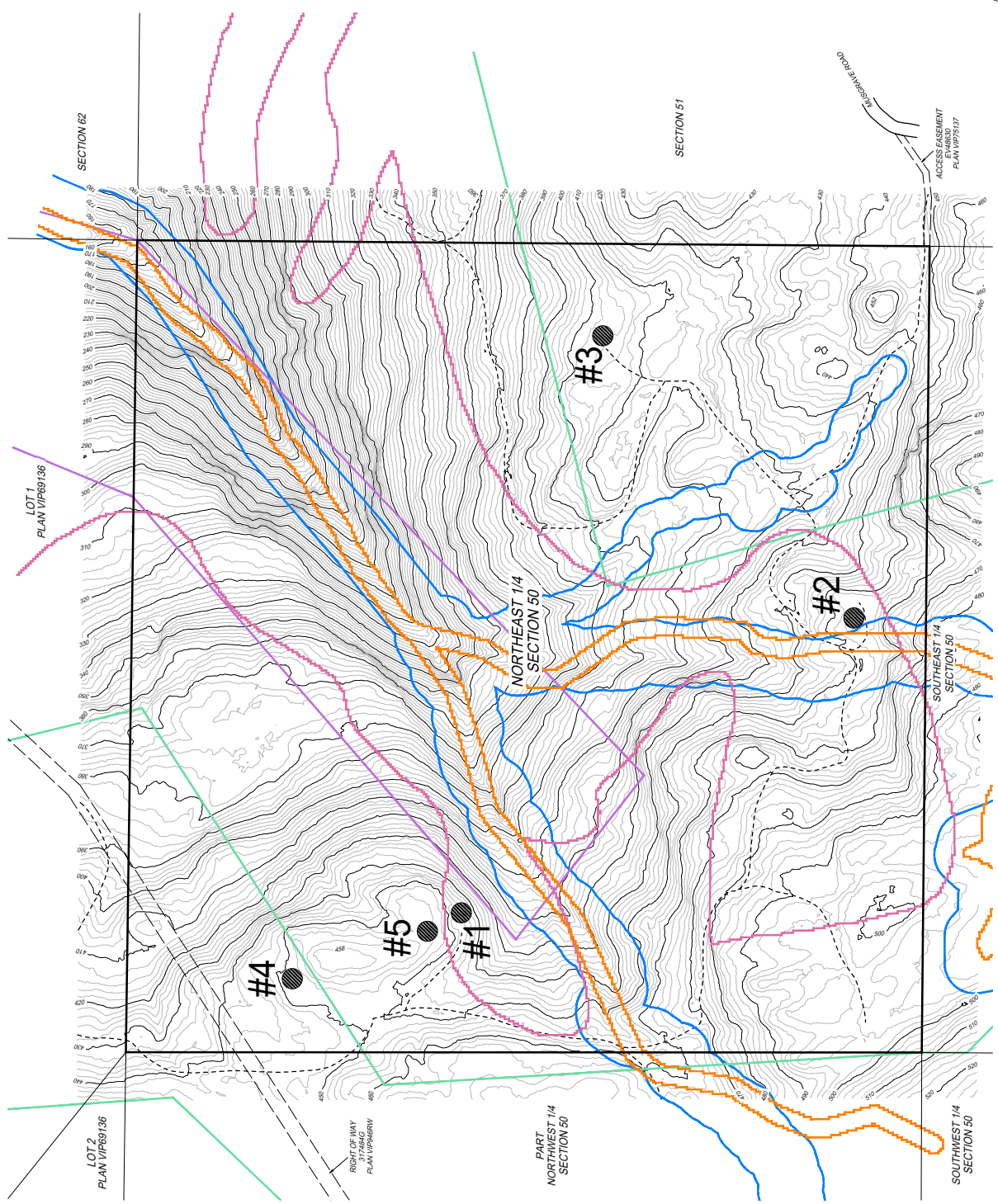
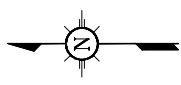
structured non-binding negotiations with the assistance of a mediator on a without prejudice basis. The mediator shall be appointed by agreement of the parties. If a dispute cannot be settled within a period of thirty (30) calendar days with assistance of a mediator, the dispute shall be referred to and finally resolved by a British Columbia Court.

12. CONFIDENTIALITY

- 12.1. During the term of the Engagement, the Consultant shall not use or disclose any of the Client's confidential information to any third party other than the Consultants legal and/or financial advisors without authorization from the Client. The Consultant will use any confidential information for the sole purpose of carrying out the Services. The Consultant may share photos of the Project so long as such photos do not disclose any information not otherwise available or readily visible by the public. Unless already made public, the Consultant will not share Client or Project site address information on social media or with third parties.

**TOPOGRAPHIC SURVEY PLAN OF THE NORTH EAST 1/4 OF SECTION 50, SOUTH SALT
SPRING ISLAND, COWICHAN DISTRICT.**

BCGS MAP SHEET 92B 073



All elevations and contours are in meters and derived from a vertical datum of 1985.

- LEGEND**
- denotes Old Logging Road
 - denotes DPA 4, Map 21, Lakes, Streams and Wetlands
 - denotes DPA 6A, Map 23, High Soil Erosion Hazard
 - denotes DPA 6B, Map 24, Unstable Slopes
 - denotes DPA 7, Map 26, Aquifer
 - denotes Proposed Building Site

Contours are at 2.0 metre intervals.
The following non-financial charges are shown on the current Certificate of Title and may affect the property:
31743AG - Right of Way

This document shows the relative location of the features with respect to the boundaries of the lots shown. It does not constitute a title document and is not intended to create or affect any property interest or property claim. The document shall not be used for any purpose other than that for which it was prepared. The surveyor accepts no responsibility for the accuracy or completeness of the data. Plans and Surveying Inc. accepts no responsibility or liability for any errors, omissions, or inaccuracies in this document. Plans and Surveying Inc. is not responsible for any errors, omissions, or inaccuracies in this document. Unregistered interests have not been included or considered. This site plan has been prepared in accordance with the Professional Reference Manual and is certified correct as of the 8th day of August, 2022.

Jason Eric Leik, B.C.S. 9265
This document is not valid unless digitally signed.

Having a survey address:
204 - 449 - 9th Street
Salt Spring Island, BC, V8K 2K9
Toll Free: (877) 603 7388
Telephone: (250) 525-8222
www.psls.ca

PLANETS
Land Surveying Inc.

2015 National Building Code Seismic Hazard Calculation

INFORMATION: Eastern Canada English (613) 995-5548 français (613) 995-0600 Facsimile (613) 992-8836
Western Canada English (250) 363-6500 Facsimile (250) 363-6565

Site: 48.764N 123.494W

User File Reference: Section 50 Musgrave Road

2022-10-13 22:08 UT

Requested by: Remy Kennedy-Kuiper, Ryzuk Geotechnical

Probability of exceedance per annum	0.000404	0.001	0.0021	0.01
Probability of exceedance in 50 years	2 %	5 %	10 %	40 %
Sa (0.05)	0.603	0.438	0.324	0.148
Sa (0.1)	0.922	0.673	0.496	0.226
Sa (0.2)	1.148	0.837	0.622	0.280
Sa (0.3)	1.172	0.854	0.633	0.280
Sa (0.5)	1.054	0.757	0.548	0.231
Sa (1.0)	0.603	0.413	0.287	0.110
Sa (2.0)	0.357	0.238	0.159	0.057
Sa (5.0)	0.111	0.064	0.036	0.011
Sa (10.0)	0.039	0.022	0.012	0.004
PGA (g)	0.499	0.364	0.270	0.120
PGV (m/s)	0.765	0.524	0.366	0.139

Notes: Spectral ($S_a(T)$, where T is the period in seconds) and peak ground acceleration (PGA) values are given in units of g (9.81 m/s^2). Peak ground velocity is given in m/s . Values are for "firm ground" (NBCC2015 Site Class C, average shear wave velocity 450 m/s). NBCC2015 and CSAS6-14 values are highlighted in yellow. Three additional periods are provided - their use is discussed in the NBCC2015 Commentary. Only 2 significant figures are to be used. **These values have been interpolated from a 10-km-spaced grid of points. Depending on the gradient of the nearby points, values at this location calculated directly from the hazard program may vary. More than 95 percent of interpolated values are within 2 percent of the directly calculated values.**

References

National Building Code of Canada 2015 NRCC no. 56190; Appendix C: Table C-3, Seismic Design Data for Selected Locations in Canada

Structural Commentaries (User's Guide - NBC 2015: Part 4 of Division B)
Commentary J: Design for Seismic Effects

Geological Survey of Canada Open File 7893 Fifth Generation Seismic Hazard Model for Canada: Grid values of mean hazard to be used with the 2015 National Building Code of Canada

See the websites www.EarthquakesCanada.ca and www.nationalcodes.ca for more information



Natural Resources
Canada

Ressources naturelles
Canada

Canada



To: Mischa Gelb
From: Leontin Chira, RPBio
Date: June 19, 2023
Project No: 23N0087
Re: RAPR applicability to proposed development on property (PID 009-743-472)

Mischa Gelb contracted EDI Environmental Dynamics Inc (EDI) to assist in permitting the proposed construction on the property identified as Section Northeast 1/4 50 Cowichan Portion South Salt Spring (PID 009-743-472). This document provides information on the stream boundaries, proposed development, and applicability of the Riparian Area Protection Regulation (RAPR). Additionally, its findings may be used by the Island Trust in the permitting process as indicated by Anthony Fotino – Islands Trust, Island Planner (pers. comm.).

The Islands Trust – Salt Spring Island Office has established a Development Permit Area (DPA) 7 – Riparian Areas to protect the natural environmental and specifically the riparian areas of RAPR applicable streams. The land subject to DPA-7 was identified as per Map 28 of the Official Community Plan (OCP) for Salt Spring Island¹, and includes most of the streams on the subject property.

The undersigned assessed existing streams on the property as per the Riparian Area Protection Regulation - RAPR (BC Reg 178/2019)² methodology on April 5, 2023. However, given the size of the property and the scope of the assessment, flagging of stream boundaries was considered only in the area adjacent to the proposed development – i.e., houses as per the attached figures. A survey plan showing the stream boundaries and locations of proposed development was produced by Polaris Land Surveying Inc and can be found attached. There are three mapped streams intersecting the subject property before discharging into Fulford Creek. Additionally, a previously unmapped stream, which was found during the field assessment, discharges into Tributary #1 – see attached figure. Tributary #1 and Tributary #2 may provide good fish habitat, however, Tributary #3 lacks sufficient water depth and appropriate channel characteristics to sustain fish, and it was deemed as a poor fish habitat. Details on stream characteristics and photographs can be provided upon request.

Existing development on the property includes several access roads that were likely built to support past forestry operations. The owner intends to improve these roads within their existing footprint and maintain them as needed to continue providing access to the proposed dwellings. Based on the information provided by the owner, the survey plan, and the identified stream boundaries, the proposed five dwellings are located

¹ Salt Spring Island Official Community Plan – Bylaw #434. Accessed online at <https://islandstrust.bc.ca/document/salt-spring-island-ocp-bylaw-no-434-2/> on June 7, 2023.

² https://www.canlii.org/en/bc/laws/regu/bc-reg-178-2019/latest/bc-reg-178-2019.html#sec8_smooth



outside of the 30 m Riparian Assessment Area (RAA) – as measured from the stream boundary (see attached figure).

Section 7.4.2 of the OCP requires that an owner of a property subject to DPA 7 provides an assessment report prepared by a QEP as per the RAPR. However, the regulation itself is noted as not applying given the proposed site plans and maintenance activities. RAPR identifies the following:

- Section 3(3) – ‘the regulation does not apply to the maintenance of an area of human disturbance, other than a building or other structure, if the area is not extended and the type of disturbance is not changed’. Further details on the development types excluded from a RAPR assessment are provided in Section 1.5.1 of the RAPR Technical Assessment Manual³. Development such as an ‘area of human disturbance’ includes existing permanent structures, roads, and land use within the SPEA.
- Section 3(1) - the regulation applies to a development if ‘the development is proposed to occur in a riparian assessment area of a stream that provides fish habitat to protected fish’.
- Section 8 – ‘the riparian assessment area for a stream consists of a 30 m strip on each side of the stream, measured from the stream boundary’, unless the watercourse is within a ravine.

Based on the site plans, the five proposed dwellings are outside of the RAA and therefore not applicable under RAPR. Similarly, RAPR does not apply to improvements of the old access roads on site as these will occur within their existing footprints. Since RAPR does not apply, an assessment report from a QEP would not be submitted to the Province as required by the Islands Trust DPA 7 for Riparian Areas. Additionally, it is in my opinion that the proposed development is unlikely to cause degradation of riparian areas on the subject property given the proposed layout and activities.

Yours truly,

EDI Environmental Dynamics Inc.

Leo Chira, MSc., R.P.Bio.

Biologist

This report was prepared exclusively for Mischa Gelb by EDI Environmental Dynamics Inc. The quality of information, conclusions and estimates contained therein are consistent with the level of effort expended and is based on: i) information available at the time of preparation; ii) data collected by EDI Environmental Dynamics Inc. and/or supplied by outside sources; and iii) the assumptions, conditions and qualifications set forth in the report. The report is intended to be used for the intended purpose as outlined by this report. Any other use or reliance on this report by any third party is at that party’s sole risk. Any material changes to either site conditions or the proposed activities as described in the report may invalidate the recommendations made. The undersigned should be contacted if the construction plans change to determine if the report needs to be revised or updated.

³ MFLNRORD – Fish and Aquatic Branch. 2019. Riparian Areas Protection Regulation Technical Assessment Manual. 63 pgs. Access online at https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/fish-fish-habitat/riparian-areas-regulations/rapr_assessment_methods_manual_for_web_11.pdf

TOPOGRAPHIC SURVEY PLAN OF THE NORTH EAST 1/4 OF SECTION 50, SOUTH SALT
 SPRING ISLAND, COWICHAN DISTRICT.

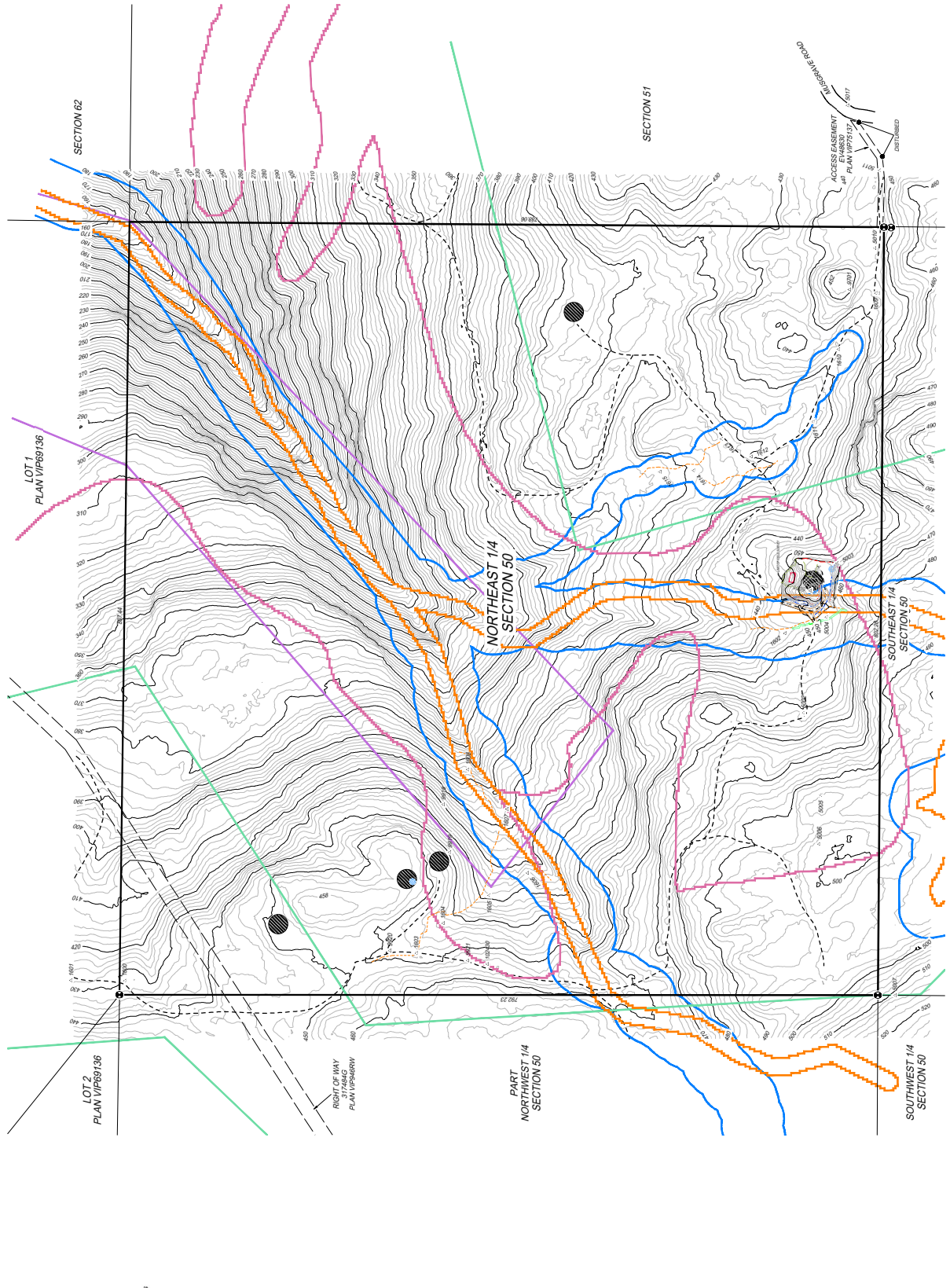
BCGS MAP SHEET 92B 073



- LEGEND**
- denotes Old Logging Road
 - denotes DPA 4, Map 21, Lakes, Streams and Wetlands
 - denotes DPA 6A, Map 23, High Soil Erosion Hazard
 - denotes DPA 6B, Map 24, Unstable Slopes
 - denotes DPA 7, Map 26, Riparian
 - denotes Proposed Building Site
 - denotes Top of Bank (indicated by 1000)
 - denotes Standard Capred Plot found
 - denotes Transverse Hill placed
 - denotes Well of Bank
 - denotes Bottom of Bank
 - denotes Top of Bank (indicated by 1000)
 - denotes Edge of Driveway
 - denotes Culvert
 - denotes Flow (energy)
 - denotes Edge of Stack Pile
 - denotes Drainage course

Contours are at 2.0 metre intervals outside the limit of field survey.
 Contours are at 0.5 metre intervals within the limit of survey.
 The following non-vertical changes are shown on the current
 Contours of this survey are shown on the property.

317424G - Right of Way



This document shows the relative location of the features with respect to the
 to define property lines or property corners. This document shall not be used
 Topographic data is from 2013 Province of BC LIDAR data. Points taken no
 responsibility for the accuracy or completeness of the data.
 Planes and Surveying Inc. accepts no responsibility or liability for any
 made, or actions taken based on this document. Plans of any structure
 © Planes and Surveying Inc. 2022. All rights reserved. No person may
 copy, reproduce, or use in any way, in whole or in part, without
 the express written consent of Planes and Surveying Inc.
 Based on Land Title & Survey Authority, British Columbia Field Survey
 Unregistered interests have not been included or considered.
 This site plan has been prepared in accordance with the Professional
 Reference Manual and is certified correct as of the 17th day of April, 2023.

Jason Eric Leiss, BCS 505
 This document is not valid unless digitally signed.

Having a delivery address:
 204 - 149 6th Street
 Salt Spring Island, BC, V8K 2G9
 Toll Free (877) 803 7388
 Telephone (250) 525-8832
 www.psis.ca



302



Ministry of Environment

DRILLWELL ENTERPRISES LTD.

4994 Polkey Road
Duncan, B.C. V9L 6W3
Phone: 250-746-5268

Attachment 8 r. 67890
ministry well tag number.

- Confirmation/alternative specs. attached
Original well construction report attached

Red lettering indicates minimum mandatory information.

See reverse for notes & definitions of abbreviations.

Owner name: Mischa Gelb
Mailing address: PO Box 674
Town: Hope Prov. BC Postal Code: V0X 1L0
Well Location: Address: Street no. Street name: Musgrave Road Town: Salt Spring Island
Legal description: Lot Plan D.L. Block Sec. Twp. Rg. Land District
PID: 009-743-472 and Description of well location (attach sketch, if nec.):

NAD 83: Zone: 10 UTM Easting: 046400 m Latitude (see note 3):
UTM Northing: 540281 m Longitude:

Method of drilling: air rotary cable tool mud rotary auger driving jetting excavating other (specify):
Orientation of well: vertical horizontal Ground elevation: 1335 ft (asl) Method (see note 4): GPS
Class of well (see note 5): Water Supply Sub-class of well: Domestic
Water supply wells: indicate intended water use: private domestic water supply system irrigation commercial or industrial other (specify):

Lithologic description (see notes 7-14) or closure description (see notes 15 and 16)

Table with columns: From ft (bgl), To ft (bgl), Relative Hardness, Colour, Material Description, Water-bearing Estimated Flow (USgpm), Observations. Includes handwritten entries for cobbles, bedrock, and fractures.

Casing details

Table with columns: From ft (bgl), To ft (bgl), Dia in, Casing Material / Open Hole, Wall Thickness in, Drive Shoe. Includes entries for steel removed, steel, and open hole.

Screen details

Table with columns: From ft (bgl), To ft (bgl), Dia in, Type (see note 18), Slot Size.

Surface seal: Type: Bentonite Depth: 18 ft
Method of installation: Poured Pumped Thickness: 2 in
Backfill: Type: Depth: ft
Liner: PVC Other (specify):
Diameter: 4 in Thickness: Sch 40 in
From: 5 ft (bgl) To: 300 ft (bgl) Perforated: From: 140 ft (bgl) To: 300 ft (bgl)

Intake: Screen Open bottom Uncased hole
Screen type: Telescope Pipe size
Screen material: Stainless steel Plastic Other (specify):
Screen opening: Continuous slot Slotted Perforated pipe
Screen bottom: Bail Plug Plate Other (specify):
Filter pack: From: ft To: ft Thickness: in
Type and size of material:

Developed by:

Air lifting Surging Jetting Pumping Bailing
Other (specify): Total duration: 1 hrs
Notes:

Well yield estimated by:

Pumping Air lifting Bailing Other (specify):
Rate: 10 USgpm Duration: 1 hrs
SWL before test: ft (btoc) Pumping water level: ft (btoc)

Obvious water quality characteristics:

Fresh Salty Clear Cloudy Sediment Gas
Colour/odour: Water sample collected:

Well driller (print clearly):

Name (first, last) (see note 19): Graham Frueh
Registration no. (see note 20): WD 15052001
Consultant (if applicable; name and company):

DECLARATION: Well construction, well alteration or well closure, as the case may be, has been done in accordance with the requirements in the Water Act and the Ground Water Protection Regulation.

Signature of Driller Responsible

PLEASE NOTE: The information recorded in this well report describes the works and hydrogeologic conditions at the time of construction, alteration or closure, as the case may be. Well yield, well performance and water quality are not guaranteed as they are influenced by a number of factors, including natural variability, human activities and condition of the works, which may change over time.

Final well completion data:

Total depth drilled: 300 ft Finished well depth: 300 ft (bgl)
Final stick up: 24 in Depth to bedrock: 5 ft (bgl)
SWL: 26 ft (btoc) Estimated well yield: 10+ USgpm
Artesian flow: USgpm, or Artesian pressure: ft

Type of well cap: Pitless Well disinfected: Yes No
Where well ID plate is attached: Clamped to steel

Well closure information:

Reason for closure:
Method of closure: Poured Pumped
Sealant material: Backfill material:
Details of closure (see note 17):

Date of work (YYYY/MMDD):

Started: 2022/08/30 Completed: 2022/09/01

Comments:

Drillwell Enterprises Ltd. - M
*A
4994 Polkey Rd.
Duncan, BC
V9L 6W3

07Sep22 4:04p
Well
water
1

W170141

TEL: (800) 746-7444
drill@drillwell.com

Arrival temp.: 9.6C

Sample: Musgrave Rd

<u>Site Code</u>	<u>Date</u>	<u>Time</u>	<u>CFU/100 ml Total Coliform</u>	<u>CFU/100 ml Fecal Coliform</u>	<u>CFU/100 mL E.coli</u>
ID 67890	07Sep22		0	0	ND

TC = total coliform bacteria
FC = fecal coliform bacteria (aka thermotolerant coliforms)
CFU/100 ml = colony forming units per 100 milli-litres

Results may be adversely affected if samples are submitted to the laboratory more than 24 to 30 hours after collection.

E. coli = Escherichia coli, FDA/BAM 9th ed, Oct 2020
Bergy's Manual of Systematic Bacteriology vol 1, AOAC 1984; J.Clin.Micro.,
J.Intern.Systm.Bact.

Comments:

For Interpretation of Results:

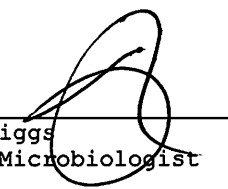
Total or Fecal Coliforms present greater than 0 CFU/100mL (0 CFU/mL):

IF Coliform numbers exceed safe limits for drinking water-
water is not suitable for drinking without treatment.

E.coli present indicates numbers that exceed safe drinking water limits.

Water is not suitable for drinking without treatment.

- see following page for chemistry results -



W. Riggs
Sr. Microbiologist

M.B. LABS LTD
T: 250 656-1334

E: info@mblabs.com

W: www.mblabs.com

EMAILED

SEP 09 2022

3100BL

Drillwell Enterprises Ltd. - M
 *A
 4994 Polkey Rd.
 Duncan, BC
 V9L 6W3

07Sep22 4:04p
 Well
 water
 1

W170141 pg2

TEL: (800) 746-7444
 drill@drillwell.com

Arrival temp.: 9.6C

Sample: Musgrave Rd - ID 67890 07Sep22

<u>ELEMENTS</u>		<u>SAMPLE</u>	<u>UNITS</u>	<u>Maximum Limits Permissible In Drinking Water*</u>
1) Aluminium	Al	1.39	mg/L	no limit listed
2) Antimony	Sb	<0.500	ug/L	6.00 ug/L
3) Arsenic	As	0.793	ug/L	10.0 ug/L
4) Barium	Ba	0.151	mg/L	2.00 mg/L
5) Beryllium	Be	<0.003	mg/L	no limit listed
6) Boron	B	0.624	mg/L	5.00 mg/L
7) Cadmium	Cd	1.19	ug/L	7.00 ug/L
8) Calcium	Ca	43.5	mg/L	200 mg/L
9) Chromium	Cr	0.005	mg/L	0.050 mg/L
10) Cobalt	Co	<0.005	mg/L	no limit listed
11) Copper	Cu	0.061	mg/L	1.00 mg/L
12) Gold	Au	<0.040	mg/L	no limit listed
13) Iron	Fe	1.72	mg/L	0.300 mg/L
14) Lanthanum	La	<0.020	mg/L	no limit listed
15) Lead	Pb	0.542	ug/L	5.00 ug/L
16) Magnesium	Mg	4.61	mg/L	50.0 mg/L
17) Manganese	Mn	0.331	mg/L	0.120 MAC 0.020 AO
18) Mercury	Hg	<0.010	ug/L	1.00 ug/L
19) Molybdenum	Mo	<0.005	mg/L	no limit listed
20) Nickel	Ni	0.013	mg/L	no limit listed
21) Phosphorus	P	0.028	mg/L	no limit listed
22) Potassium	K	0.480	mg/L	no limit listed
23) Scandium	Sc	<0.050	mg/L	no limit listed
24) Selenium	Se	<0.500	ug/L	5.0 ug/L
25) Silicon	Si	9.13	mg/L	no limit listed
26) Silver	Ag	<0.010	mg/L	no limit listed
27) Sodium	Na	6.42	mg/L	200 mg/L
28) Strontium	Sr	0.070	mg/L	no limit listed
29) Tin	Sn	<0.020	mg/L	no limit listed
30) Titanium	Ti	0.053	mg/L	no limit listed
31) Tungsten	W	<0.050	mg/L	no limit listed
32) Vanadium	V	0.012	mg/L	no limit listed
33) Zinc	Zn	0.015	mg/L	5.00 mg/L
Hardness (mg/L CaCO ₃)		128	mg/L	75-150 mg/L = mod.hard
pH		7.60	units	7.0 to 10.5

* As per Canadian or B.C. Health Act Safe Drinking Water Regulation BC Reg 230/92, & 390 Sch 120, 2001. Task Force of the Canadian Council of Resource and Environment Ministers - Guidelines for Canadian Drinking Water Quality, 2020.

Comments:

Iron: high amounts of Iron can cause staining of laundry, porcelain and plumbing fixtures; can produce an undesirable taste. Essential for health.

Manganese: not considered to be toxic; high amounts of Manganese can cause staining of laundry, porcelain and plumbing fixtures; may produce an undesirable taste.

 R. Bilodeau
 Analytical Chemist

 H. Hartmann
 Sr. Analytical Chemist

M.B. LABS LTD
 T: 250 656-1334

E: info@mblabs.com

W: www.mblabs.com



Ministry of Environment

- Well Construction Report
Well Closure Report
Well Alteration Report

DRILLWELL ENTERPRISES LTD.

4994 Polkey Road
Duncan, B.C. V9L 0W0
Phone: 250-746-5268

Ministry Well ID Plate Number: 67891
Ministry Well Tag Number:
Confirmation/alternative specs. attached
Original well construction report attached

Red lettering indicates minimum mandatory information. See reverse for notes & definitions of abbreviations.

Owner name: Mischa Gelb
Mailing address: PO Box 674
Town: Hope Prov. BC Postal Code V0X 1L0
Well Location (see note 2): Address: Street no. Street name Musgrave Road Town Salt Spring Island
Legal description: Lot Plan D.L. Block Sec. Twp. Rg. Land District
PID: 009-743-472 and Description of well location (attach sketch, if nec.):

NAD 83: Zone: 10 UTM Easting: 0463891 m Latitude (see note 4):
UTM Northing: 5401056 m Longitude:
Method of drilling: dual rotary
Orientation of well: vertical
Class of well (see note 6): Water Supply Sub-class of well: Domestic
Water supply wells: indicate intended water use: private domestic

Lithologic description (see notes 8-13) or closure description (see notes 14 and 15)

Table with columns for Surficial Material, Bedrock Material, Colour, Hardness, Water Content, and Observations. Includes handwritten data for depth intervals and lithology.

Casing details

Table with columns for From ft (bgl), To ft (bgl), Dia in, Casing Material/Open Hole, Wall Thickness in, Drive Shoe. Includes handwritten entries for steel casing and open hole.

Surface seal: Type: Bentonite Depth: 18 ft
Method of installation: Poured Thickness: 2 in
Backfill: Type: Depth: ft
Liner: PVC Other (specify):
Diameter: 4 in Thickness: Class 160 in
From: 0 ft (bgl) To: 200 ft (bgl) Perforated: From: 100 ft (bgl) To: 200 ft (bgl)

Screen details

Table with columns for From ft (bgl), To ft (bgl), Dia in, Type (see note 18), Slot Size. Includes handwritten entries for uncased hole.

Intake: Screen Open bottom Uncased hole
Screen type: Telescope Pipe size
Screen material: Stainless steel Plastic Other (specify):
Screen opening: Continuous slot Slotted Perforated pipe
Screen bottom: Bail Plug Plate Other (specify):
Filter pack: From: ft To: ft Thickness: in
Type and size of material:

Developed by:

Air lifting Surging Jetting Pumping Bailing
Other (specify): Total duration: 1 hrs
Notes:

Well yield estimated by:

Pumping Air lifting Bailing Other (specify):
Rate: 30 USgpm Duration: 1 hrs
SWL before test: ft (btoc) Pumping water level: ft (btoc)

Obvious water quality characteristics:

Fresh Salty Clear Cloudy Sediment Gas
Colour/odour: Water sample collected:

Well driller (print clearly):

Name (first, last) (see note 19): Graham Frueh
Registration no. (see note 20): WD 15052001
Consultant (if applicable; name and company):

DECLARATION: Well construction, well alteration or well closure, as the case may be, has been done in accordance with the requirements in the Water Act and the Ground Water Protection Regulation.

Signature of Driller Responsible

PLEASE NOTE: The information recorded in this well report describes the works and hydrogeologic conditions at the time of construction, alteration or closure, as the case may be. Well yield, well performance and water quality are not guaranteed as they are influenced by a number of factors, including natural variability, human activities and condition of the works, which may change over time.

Final well completion data:

Total depth drilled: 200 ft Finished well depth: 200 ft (bgl)
Final stick up: 12 in Depth to bedrock: 8 ft (bgl)
SWL: 63 ft (btoc) Estimated well yield: 30 USgpm
Artesian flow: USgpm, or Artesian pressure: ft
Type of well cap: Welded Well disinfected: Yes No
Where well ID plate is attached:

Well closure information:

Reason for closure:
Method of closure: Poured Pumped
Sealant material: Backfill material:
Details of closure (see note 16):

Date of work (YYYY/MM/DD):

Started: 2022/09/01 Completed: 2022/09/05
Comments:

white: Customer copy
canary: Driller copy
pink: Ministry copy

Sheet 3071

Drillwell Enterprises Ltd. - M
*A
4994 Polkey Rd.
Duncan, BC
V9L 6W3

07Sep22 4:00p
Well
water
1

W170140

TEL: (800) 746-7444
drill@drillwell.com

Arrival temp.: 9.6C

Sample: Musgrave Rd

<u>Site Code</u>	<u>Date</u>	<u>Time</u>	<u>CFU/100 ml Total Coliform</u>	<u>CFU/100 ml Fecal Coliform</u>	<u>CFU/100 mL E.coli</u>
ID 67891	07Sep22		0	0	ND

TC = total coliform bacteria

FC = fecal coliform bacteria (aka thermotolerant coliforms)

CFU/100 ml = colony forming units per 100 milli-litres

Results may be adversely affected if samples are submitted to the laboratory more than 24 to 30 hours after collection.

E. coli = Escherichia coli, FDA/BAM 9th ed, Oct 2020
Bergey's Manual of Systematic Bacteriology vol 1, AOAC 1984; J.Clin.Micro.,
J.Intern.Systm.Bact.

Comments:

For Interpretation of Results:

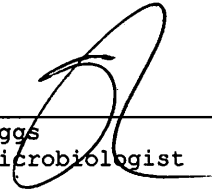
Total or Fecal Coliforms present greater than 0 CFU/100mL (0 CFU/mL):

IF Coliform numbers exceed safe limits for drinking water-
water is not suitable for drinking without treatment.

E.coli present indicates numbers that exceed safe drinking water limits.

Water is not suitable for drinking without treatment.

- see following page for chemistry results -



W. Riggs
Sr. Microbiologist

M.B. LABS LTD
T: 250 656-1334

E: info@mblabs.com

W: www.mblabs.com

EMAILED

SEP 09 2022

259 BL

Drillwell Enterprises Ltd. - M
 *A
 4994 Polkey Rd.
 Duncan, BC
 V9L 6W3

07Sep22 4:00p
 Well
 water
 1

W170140 pg2

TEL: (800) 746-7444
 drill@drillwell.com

Arrival temp.: 9.6C

Sample: Musgrave Rd - ID 67891 07Sep22

ELEMENTS		SAMPLE	UNITS	Maximum Limits Permissible In Drinking Water*
1) Aluminium	Al	1.76	mg/L	no limit listed
2) Antimony	Sb	<0.500	ug/L	6.00 ug/L
3) Arsenic	As	1.29	ug/L	10.0 ug/L
4) Barium	Ba	0.054	mg/L	2.00 mg/L
5) Beryllium	Be	<0.003	mg/L	no limit listed
6) Boron	B	0.662	mg/L	5.00 mg/L
7) Cadmium	Cd	<0.010	ug/L	7.00 ug/L
8) Calcium	Ca	24.9	mg/L	200 mg/L
9) Chromium	Cr	0.012	mg/L	0.050 mg/L
10) Cobalt	Co	<0.005	mg/L	no limit listed
11) Copper	Cu	<0.008	mg/L	1.00 mg/L
12) Gold	Au	<0.040	mg/L	no limit listed
13) Iron	Fe	3.09	mg/L	0.300 mg/L
14) Lanthanum	La	<0.020	mg/L	no limit listed
15) Lead	Pb	2.58	ug/L	5.00 ug/L
16) Magnesium	Mg	3.30	mg/L	50.0 mg/L
17) Manganese	Mn	0.425	mg/L	0.120 MAC 0.020 AO
18) Mercury	Hg	<0.010	ug/L	1.00 ug/L
19) Molybdenum	Mo	<0.005	mg/L	no limit listed
20) Nickel	Ni	0.008	mg/L	no limit listed
21) Phosphorus	P	0.042	mg/L	no limit listed
22) Potassium	K	0.290	mg/L	no limit listed
23) Scandium	Sc	<0.050	mg/L	no limit listed
24) Selenium	Se	<0.500	ug/L	5.0 ug/L
25) Silicon	Si	7.38	mg/L	no limit listed
26) Silver	Ag	<0.010	mg/L	no limit listed
27) Sodium	Na	11.6	mg/L	200 mg/L
28) Strontium	Sr	0.040	mg/L	no limit listed
29) Tin	Sn	<0.020	mg/L	no limit listed
30) Titanium	Ti	0.033	mg/L	no limit listed
31) Tungsten	W	<0.050	mg/L	no limit listed
32) Vanadium	V	0.017	mg/L	no limit listed
33) Zinc	Zn	0.022	mg/L	5.00 mg/L
Hardness (mg/L CaCO ₃)		75.8	mg/L	75-150 mg/L = mod.hard
pH		7.70	units	7.0 to 10.5

* As per Canadian or B.C. Health Act Safe Drinking Water Regulation BC Reg 230/92, & 390 Sch 120, 2001. Task Force of the Canadian Council of Resource and Environment Ministers - Guidelines for Canadian Drinking Water Quality, 2020.

Comments:

Iron: high amounts of Iron can cause staining of laundry, porcelain and plumbing fixtures; can produce an undesirable taste. Essential for health.
 Manganese: not considered to be toxic; high amounts of Manganese can cause staining of laundry, porcelain and plumbing fixtures; may produce an undesirable taste.

 R. Bilodeau
 Analytical Chemist

 H. Hartmann
 Sr. Analytical Chemist

M.B. LABS LTD
 T: 250 656-1334

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W: www.mblabs.com

309



Well Construction Report
Well Alteration Report

4994 Polkey Road
Duncan, B.C. V9L 6W2
Phone: 250-746-5268

Ministry Well ID Plate Number: 67894
Where ID Plate is attached: casing
Ministry Well Tag Number:

See reverse for notes & definitions of abbreviations.

Well Class: Class of well (see note 2): Water Supply
Sub-class of well: Domestic
Water supply wells: indicate intended water use: private domestic water supply system irrigation commercial or industrial other (specify):
Start date of work (YYYY/MM/DD): 2022/09/28
End date of work (YYYY/MM/DD): 2022/09/30

Person Responsible for Work (print clearly): Name (first, last) (see note 3): Scott Burrows
Person who completed the work: Scott Burrows
Registration no. (see note 4): WD 04121407

Consultant (if applicable; name and company):
DECLARATION: Well construction, well alteration or well decommission, as the case may be, has been done in accordance with the requirements in the Water Sustainability Act and the Ground Water Protection Regulation.
Signature of Person Responsible: [Signature]

Owner name: Mischa Gelb
Mailing address: PO Box 674 Town: Hope Prov: BC Postal Code: V0X 1L0
Well Location (see note 6): Address: Street no. Street name: Musgrave Road Town: Salt Spring Island
Legal description: Lot Plan D.L. Block Sec. Twp. Rg. Land District
PID 009-743-472 and Description of well location (attach sketch, if nec.):

Well Location:
NAD 83: Zone: 10 UTM Easting: 0463443 m UTM Northing: 5401449 m
Latitude Longitude:
Method of drilling: Air rotary Dual rotary cable tool mud rotary auger driving jetting other (specify):
Orientation of well: vertical horizontal Ground elevation: 1514' ft (asl) Method (see note 9): GPS

Lithologic description (see notes 10-15)

Table with columns: From ft (bgl), To ft (bgl), Material Description, Moisture (Dry, Damp, Moist, Wet), Colour (Black, Blue, Brown, Green, Grey, Vari-coloured, Red, Tan, White), Hardness (Dense, Hard, Loose, Medium, Soft, Stiff, Very Hard, Very Soft), Observations (e.g. other geological materials, est. water bearing flow (USgpm)).

Casing Details:

Table with columns: From ft (bgl), To ft (bgl), Dia in, Casing Material/Open Hole (see note 16), Wall Thickness in, Drive Shoe.

Screen details:

Table with columns: From ft (bgl), To ft (bgl), Dia in, Type (see note 17), Slot Size.

Surface seal: Type: Bentonite Depth: 18" ft
Method of installation: Poured Pumped Thickness: 2" in
Backfill: Type: Depth: ft
Liner: PVC Other (specify):
Diameter: 4" in Thickness: Class 160 in
From: 0 ft (bgl) To: 300 ft (bgl)
Perforated: From: 100' ft (bgl) To: 300 ft (bgl)

Intake: Screen Open bottom Uncased hole
Screen type: Telescope Pipe size
Screen material: Stainless steel Plastic Other (specify):
Screen opening: Continuous slot Slotted Perforated pipe
Screen bottom: Bail Plug Plate Other (specify):
Filter pack: From: ft To: ft Thickness: in
Type and size of material:

Developed by: Air lifting Bailing Jetting Pumping Surging Other (specify):
Notes:

Well yield estimated by: Pumping Air lifting Bailing Other (specify):
Rate: 40 USgpm Duration: hrs SWL before test: ft (btoc) Drawdown: ft (btoc)

Hydro-fracturing: Yes No Increase in Well Yield due to Hydro-fracturing: USgpm

Water Quality: Water sample collected: Yes No
Date (YYYY/MM/DD): 2022/08/29 Water quality odour:
Characteristics: Clear Cloudy Fresh Gas Salty
Sediment Other (specify):
Colour: Black Black flecks Brown Clear/none grey
Slight colour/milky Orange Other (specify):

Final well completion data:
Total depth drilled: 300' ft Finished well depth: 300' ft (bgl)
Final casing stick up: 2' in Depth to bedrock: 5' ft (bgl)
SWL: 90' ft (btoc) Estimated well yield: 40 USgpm
Artesian flow: USgpm, or Artesian pressure: ft
Type of well cap: welded lid Well disinfected: Yes No

Comments: Confirmation/alternative specs. attached
Original well construction report attached

Drillwell Enterprises Ltd. - M
*A
4994 Polkey Rd.
Duncan, BC
V9L 6W3

03Oct22 1:50p
FWS
water
1

W170608

TEL: (800) 746-7444
drill@drillwell.com

Arrival temp.: 12.6C

Sample: Musgrave Mountain

<u>Site Code</u>	<u>Date</u>	<u>Time</u>	<u>CFU/100 ml Total Coliform</u>	<u>CFU/100 ml Fecal Coliform</u>	<u>CFU/100 mL E.coli</u>
ID67894	03Oct22		0	0	ND

TC = total coliform bacteria
FC = fecal coliform bacteria (aka thermotolerant coliforms)
CFU/100 ml = colony forming units per 100 milli-litres

Results may be adversely affected if samples are submitted to the laboratory more than 24 to 30 hours after collection.

E. coli = Escherichia coli, FDA/BAM 9th ed, Oct 2020
Bergey's Manual of Systematic Bacteriology vol 1, AOAC 1984; J.Clin.Micro.,
J.Intern.System.Bact.

Comments:

For Interpretation of Results:


Total or Fecal Coliforms present greater than 0 CFU/100mL (0 CFU/mL):

IF Coliform numbers exceed safe limits for drinking water-
water is not suitable for drinking without treatment.

E.coli present indicates numbers that exceed safe drinking water limits.

Water is not suitable for drinking without treatment.

- see following page for chemistry results -



W. Riggs
Sr Microbiologist

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E: info@mblabs.com

W: www.mblabs.com

EMAILED
OCT 04 2022

Drillwell Enterprises Ltd. - M
 *A
 4994 Polkey Rd.
 Duncan, BC
 V9L 6W3

03Oct22 1:50p
 FWS
 water
 1

W170608 pg2

TEL: (800) 746-7444
 drill@drillwell.com

Arrival temp.: 12.6C

Sample: Musgrave Mountain - ID67894 03Oct22

<u>ELEMENTS</u>		<u>SAMPLE</u>	<u>UNITS</u>	<u>Maximum Limits Permissible In Drinking Water*</u>
1) Aluminium	Al	1.01	mg/L	no limit listed
2) Antimony	Sb	<0.500	ug/L	6.00 ug/L
3) Arsenic	As	0.917	ug/L	10.0 ug/L
4) Barium	Ba	0.012	mg/L	2.00 mg/L
5) Beryllium	Be	<0.003	mg/L	no limit listed
6) Boron	B	0.565	mg/L	5.00 mg/L
7) Cadmium	Cd	<0.010	ug/L	7.00 ug/L
8) Calcium	Ca	37.6	mg/L	200 mg/L
9) Chromium	Cr	0.014	mg/L	0.050 mg/L
10) Cobalt	Co	<0.005	mg/L	no limit listed
11) Copper	Cu	0.029	mg/L	1.00 mg/L
12) Gold	Au	<0.040	mg/L	no limit listed
13) Iron	Fe	4.10	mg/L	0.300 mg/L
14) Lanthanum	La	<0.020	mg/L	no limit listed
15) Lead	Pb	<0.500	ug/L	5.00 ug/L
16) Magnesium	Mg	2.33	mg/L	50.0 mg/L
17) Manganese	Mn	0.113	mg/L	0.120 MAC 0.020 AO
18) Mercury	Hg	<0.010	ug/L	1.00 ug/L
19) Molybdenum	Mo	0.005	mg/L	no limit listed
20) Nickel	Ni	<0.004	mg/L	no limit listed
21) Phosphorus	P	0.049	mg/L	no limit listed
22) Potassium	K	0.420	mg/L	no limit listed
23) Scandium	Sc	<0.050	mg/L	no limit listed
24) Selenium	Se	<0.500	ug/L	5.0 ug/L
25) Silicon	Si	6.86	mg/L	no limit listed
26) Silver	Ag	<0.010	mg/L	no limit listed
27) Sodium	Na	4.96	mg/L	200 mg/L
28) Strontium	Sr	0.040	mg/L	no limit listed
29) Tin	Sn	<0.020	mg/L	no limit listed
30) Titanium	Ti	0.059	mg/L	no limit listed
31) Tungsten	W	<0.050	mg/L	no limit listed
32) Vanadium	V	<0.010	mg/L	no limit listed
33) Zinc	Zn	0.013	mg/L	5.00 mg/L
Hardness (mg/L CaCO ₃)		103	mg/L	75-150 mg/L = mod.hard
pH		7.94	units	6.5 to 8.5


* As per Canadian or B.C. Health Act Safe Drinking Water Regulation BC Reg 230/92, & 390 Sch 120, 2001. Task Force of the Canadian Council of Resource and Environment Ministers - Guidelines for Canadian Drinking Water Quality, 2020.

Comments:

Iron: high amounts of Iron can cause staining of laundry, porcelain and plumbing fixtures; can produce an undesirable taste. Essential for health.

Manganese: not considered to be toxic; high amounts of Manganese can cause staining of laundry, porcelain and plumbing fixtures; may produce an undesirable taste.

 R. Bilodeau
 Analytical Chemist



 H. Hartmann
 Sr. Analytical Chemist

M.B. LABS LTD
 T: 250 656-1334

E: info@mblabs.com

W: www.mblabs.com



DRILLWELL ENTERPRISES LTD.

Well Construction Report
Well Alteration Report

4994 Polkey Road
Duncan, B.C. V9L 6W3
Phone: 250-746-5268

Ministry Well ID Plate Number: 67895
Where ID Plate is attached: casing
Ministry Well Tag Number:

See reverse for notes & definitions of abbreviations.

Well Class: Class of well (see note 2): Water Supply
Sub-class of well: Domestic
Water supply wells: indicate intended water use: [x] private domestic [] water supply system [] irrigation [] commercial or industrial [] other (specify):
Start date of work (YYYY/MM/DD): 2022/10/03
End date of work (YYYY/MM/DD): 2022/10/06

Person Responsible for Work (print clearly): Name (first, last) (see note 3): Scott Burrows
Person who completed the work: Scott Burrows
Registration no. (see note 4): WDOY121407
Signature of Person Responsible: [Signature]

Owner name: Mischa Gelb
Mailing address: PO Box 674
Town: Hope
Prov: BC
Postal Code: V0X 1L0
Well Location (see note 6): Address: Street no.
Street name: Musgrave Road
Town: Salt Spring Island
Legal description: Lot
Plan
D.L.
Block
Sec.
Twp.
Rg.
Land District
PID: 009-143-472 (and) Description of well location (attach sketch, if nec.):

Well Location:
NAD 83: Zone: 10
UTM Easting: 046 3303 m
UTM Northing: 540 1586 m
Latitude (see note 8):
Longitude:
Method of drilling: [x] air rotary [x] dual rotary [] cable tool [] mud rotary [] auger [] driving [] jetting [] other (specify):
Orientation of well: [x] vertical [] horizontal
Ground elevation: 1530 ft (asl)
Method (see note 9): GPS

Lithologic description (see notes 10-15)

Table with columns: From ft (bgl), To ft (bgl), Material Description, Moisture (Dry, Damp, Moist, Wet), Colour (Black, Blue, Brown, Green, Grey, Vari-coloured, Red, Tan, White, Dense, Hard, Loose, Medium, Soft, Sluff, Very Hard, Very Soft), Observations (e.g. other geological materials, est. water bearing flow (USgpm)).

Casing Details:

Table with columns: From ft (bgl), To ft (bgl), Dia in, Casing Material/Open Hole (see note 16), Wall Thickness in, Drive Shoe. Includes entries for 19' 10" Steel/Reinforced and 19' 6" Steel.

Screen details:

Table with columns: From ft (bgl), To ft (bgl), Dia in, Type (see note 17), Slot Size.

Surface seal: Type: Butyl
Depth: 2" ft
Method of installation: [x] Poured [] Pumped
Thickness: 1.9" in
Backfill: Type:
Depth: ft
Liner: [x] PVC [] Other (specify):
Diameter: 4" in
Thickness: Class 160 in
From: 2' ft (bgl) To: 400' ft (bgl)
Perforated: From: 280' ft (bgl) To: 400' ft (bgl)

Intake: [] Screen [] Open bottom [x] Uncased hole
Screen type: [] Telescope [] Pipe size
Screen material: [] Stainless steel [] Plastic [] Other (specify):
Screen opening: [] Continuous slot [] Slotted [] Perforated pipe
Screen bottom: [] Bail [] Plug [] Plate [] Other (specify):
Filter pack: From: ft To: ft Thickness: in
Type and size of material:

Developed by: [x] Air lifting [] Bailing [] Jetting [] Pumping [] Surging [] Other (specify):
Total duration: hrs
Notes:

Well yield estimated by: [] Pumping [x] Air lifting [] Bailing [] Other (specify):
Rate: 6 USgpm
Duration: 2 hrs
SWL before test: ft (btoc)
Drawdown: ft (btoc)

Hydro-fracturing: [] Yes [] No
Increase in Well Yield due to Hydro-fracturing: USgpm

Water Quality: Water sample collected: [x] Yes [] No
Date (YYYY/MM/DD): 2022/10/05
Water quality odour:
Characteristics: [x] Clear [] Cloudy [x] Fresh [] Gas [] Salty [] Sediment [] Other (specify):
Colour: [] Black [] Black flecks [] Brown [] Clear/none [] grey
[] Slight colour/milky [] Orange [] Other (specify):

Final well completion data:
Total depth drilled: 400 ft
Finished well depth: 400 ft (bgl)
Final casing stick up: 13" in
Depth to bedrock: 2' ft (bgl)
SWL: 60' ft (btoc)
Estimated well yield: 6 USgpm
Artesian flow: USgpm, or Artesian pressure: ft
Type of well cap: welded
Well disinfected: [x] Yes [] No

Comments:
Confirmation/alternative specs. attached
Original well construction report attached

Drillwell Enterprises Ltd. - M
*A
4994 Polkey Rd.
Duncan, BC
V9L 6W3

12Oct22 3:56p
FWS
water
1

W170792

TEL: (800) 746-7444
drill@drillwell.com

Arrival temp.: 8.7C

Sample: Musgrave Rd, SSI

<u>Site Code</u>	<u>Date</u>	<u>Time</u>	<u>CFU/100 ml Total Coliform</u>	<u>CFU/100 ml Fecal Coliform</u>	<u>CFU/100 mL E.coli</u>
ID 67895	12Oct22		0	0	ND

TC = total coliform bacteria
FC = fecal coliform bacteria (aka thermotolerant coliforms)
CFU/100 ml = colony forming units per 100 milli-litres

Results may be adversely affected if samples are submitted to the laboratory more than 24 to 30 hours after collection.

E. coli = Escherichia coli, FDA/BAM 9th ed, Oct 2020
Bergy's Manual of Systematic Bacteriology vol 1, AOAC 1984; J.Clin.Micro.,
J.Intern.System.Bact.

Comments:

For Interpretation of Results:

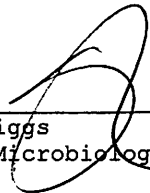
Total or Fecal Coliforms present greater than 0 CFU/100mL (0 CFU/mL):

IF Coliform numbers exceed safe limits for drinking water-
water is not suitable for drinking without treatment.

E.coli present indicates numbers that exceed safe drinking water limits.

Water is not suitable for drinking without treatment.

- see following page for chemistry results -


W. Riggs
Sr. Microbiologist

M.B. LABS LTD
T: 250 656-1334

E: info@mblabs.com

W: www.mblabs.com

EMAILED
OCT 14 2022

Drillwell Enterprises Ltd. - M
*A
4994 Polkey Rd.
Duncan, BC
V9L 6W3

12Oct22 3:56p

W170792

FWS

water
1

TEL: (800) 746-7444
drill@drillwell.com

Arrival temp.: 8.7C

Sample: Musgrave Rd, SSI - ID 67895 12Oct22

<u>ELEMENTS</u>		<u>SAMPLE</u>	<u>UNITS</u>	<u>Maximum Limits Permissible In Drinking Water*</u>
1) Aluminium	Al	0.321	mg/L	no limit listed
2) Antimony	Sb	<0.500	ug/L	6.00 ug/L
3) Arsenic	As	<0.500	ug/L	10.0 ug/L
4) Barium	Ba	<0.009	mg/L	2.00 mg/L
5) Beryllium	Be	<0.003	mg/L	no limit listed
6) Boron	B	0.587	mg/L	5.00 mg/L
7) Cadmium	Cd	<0.010	ug/L	7.00 ug/L
8) Calcium	Ca	33.1	mg/L	200 mg/L
9) Chromium	Cr	<0.003	mg/L	0.050 mg/L
10) Cobalt	Co	<0.005	mg/L	no limit listed
11) Copper	Cu	<0.008	mg/L	1.00 mg/L
12) Gold	Au	<0.040	mg/L	no limit listed
13) Iron	Fe	0.563	mg/L	0.300 mg/L
14) Lanthanum	La	<0.020	mg/L	no limit listed
15) Lead	Pb	<0.500	ug/L	5.00 ug/L
16) Magnesium	Mg	2.59	mg/L	50.0 mg/L
17) Manganese	Mn	0.071	mg/L	0.120 MAC 0.020 AO
18) Mercury	Hg	<0.010	ug/L	1.00 ug/L
19) Molybdenum	Mo	<0.005	mg/L	no limit listed
20) Nickel	Ni	<0.004	mg/L	no limit listed
21) Phosphorus	P	<0.010	mg/L	no limit listed
22) Potassium	K	0.630	mg/L	no limit listed
23) Scandium	Sc	<0.050	mg/L	no limit listed
24) Selenium	Se	<0.500	ug/L	5.0 ug/L
25) Silicon	Si	5.95	mg/L	no limit listed
26) Silver	Ag	<0.010	mg/L	no limit listed
27) Sodium	Na	5.62	mg/L	200 mg/L
28) Strontium	Sr	0.050	mg/L	no limit listed
29) Tin	Sn	<0.020	mg/L	no limit listed
30) Titanium	Ti	<0.010	mg/L	no limit listed
31) Tungsten	W	<0.050	mg/L	no limit listed
32) Vanadium	V	<0.010	mg/L	no limit listed
33) Zinc	Zn	0.017	mg/L	5.00 mg/L
Hardness (mg/L CaCO ₃)		93.3	mg/L	75-150 mg/L = mod.hard
pH		7.42	7.0ts	6.5 to 10.5

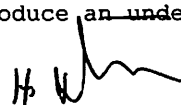
* As per Canadian or B.C. Health Act Safe Drinking Water Regulation BC Reg 230/92, & 390 Sch 120, 2001. Task Force of the Canadian Council of Resource and Environment Ministers - Guidelines for Canadian Drinking Water Quality, 2020.

Comments:

Iron: high amounts of Iron can cause staining of laundry, porcelain and plumbing fixtures; can produce an undesirable taste. Essential for health.

Manganese: not considered to be toxic; high amounts of Manganese can cause staining of laundry, porcelain and plumbing fixtures; may produce an undesirable taste.

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ISLANDS TRUST POLICY STATEMENT DIRECTIVES ONLY CHECKLIST

File No.: SS-RZ-2022.1 | Bylaw No: 536
Section 50 Musgrave Road (PID: 009-743-472)

PURPOSE

To provide staff with the Directives Only Checklist to highlight issues addressed in staff reports and as a means to ensure Local Trust Committees address certain matters in their official community plans and regulatory bylaws, 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 CHECKLIST

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
✓	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.
N/A	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
✓	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
✓	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
✓	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.
✓	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.
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.
CONSISTENT	No.	DIRECTIVE POLICY

	4.3	Wildlife and Vegetation
	4.4	Freshwater Resources
✓	4.4.2	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure neither the density nor intensity of land use is increased in areas which are known to have a problem with the quality or quantity of the supply of freshwater, water quality is maintained, and existing, anticipated and seasonal demands for water are considered and allowed for.
✓	4.4.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure water use is not to the detriment of in-stream uses
	4.5	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.
N/A	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.

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.
✓	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.
✓	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.
✓	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.
N/A	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.
N/A	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.
N/A	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
N/A	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	
✓	<i>In compliance with Trust Policy</i>
	<i>Not in compliance with Trust Policy for the following reasons:</i>