Denman Island Local Trust Committee
Regular Meeting Agenda

Date: September 8, 2020
Time: 12:30 pm
Location: Electronic Meeting

Pages

1. CALL TO ORDER 12:30 PM - 12:35 PM

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

2. APPROVAL OF AGENDA 12:35 PM - 12:40 PM

2.1 Electronic Meetings Resolution

That in accordance with *Ministerial Order M192 - Local Government Meetings & Bylaw Process* and *Province of BC Bill 19 - 2020*, Denman Island Local Trust Committee cannot conduct public in-person meetings at this time because the meeting venues traditionally used have limited access or do not meet the legislated requirements for the protection of the community, trustees and staff; and

Therefore in order to meet the principles of openness, transparency and accessibility, meetings of the Denman Island Local Trust Committee will be held electronically over the period September 8 to October 31, 2020, will be live streamed and the public invited to participate in meetings by connecting to the link or the phone number provided in the meeting notice, in order to observe proceedings and speak when invited by the Chair.

3. REPORTS 12:40 PM - 12:50 PM

3.1 Trustee Reports

3.2 Chair's Report

3.3 Electoral Area Director's Report

4. TOWN HALL 12:50 PM - 1:00 PM

5. DELEGATIONS - None

6. MINUTES 1:00 PM - 1:05 PM

6.1 Local Trust Committee Minutes dated July 7, 2020 - for adoption 4 - 10

6.2 Local Trust Committee Community Information Meeting Minutes August 6, 2020 - for adoption 11 - 15

6.3 Section 26 Resolutions-Without-Meeting Report dated August 31, 2020 16 - 16

6.4 Advisory Planning Commission Minutes dated August 14, 2020 - for receipt 17 - 22

7. BUSINESS ARISING FROM MINUTES 1:05 PM - 2:05 PM

7.1 Follow-up Action List dated August 31, 2020 23 - 28

7.2 BC Farm Industry Review Board (BCFIRB) Presentation and Question & Answer

Presentation by BCFIRB staff about their independent administrative tribunal and its role in hearing complaints under the *Farm Practices Protection Act*, including those related to shellfish aquaculture.

7.3 Aquaculture Complaint Regarding DFO Licence Number 119203

7.3.1 Email response dated August 6, 2020 from Fisheries and Oceans Canada 29 - 31

8. APPLICATIONS AND REFERRALS 2:05 PM - 3:20 PM

8.1 DE-RZ-2018.1 (Denman Housing Association) - Staff Report - for decision 32 - 68

8.2 DE-RZ-2017.1 (Denman Community Land Trust Association) - Staff Report - for decision 69 - 89

8.3 DE-DP-2020.1 (Nielsen) - Staff Report - for decision 90 - 123

9. LOCAL TRUST COMMITTEE PROJECTS 3:20 PM - 3:40 PM

9.1 Project Management Presentation - for Information

10. CORRESPONDENCE 3:40 PM - 4:00 PM

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

10.1 Letter dated August 10, 2020 from Association for Denman Island Marine Stewards (ADMIS) 124 - 126

10.2 Notification for Information from the Comox Valley Regional District Electoral Area Services Committee, dated August 6, 2020 of Development Permits for Shoreline Protection at Coal Hills, Vancouver Island 127 - 157

10.3 Letter dated March 26, 2020 from John Davis Law Corporation (on behalf of T. Forrest) regarding request to modify registered floodplain covenant (CA7485177) 158 - 163

10.4 Letter dated August 26, 2020 from T. Forrest regarding request to build within Archaeological Covenanted area (CA7485176) 164 - 164

11.	**NEW BUSINESS**	4:00 PM - 4:30 PM	
11.1	Denman Island Groundwater Sustainability Strategy - verbal update		
12.	**REPORTS**	4:30 PM - 4:50 PM	
12.1	Trust Conservancy Report dated July 14, 2020		165 - 166
12.2	Applications Report dated August 31, 2020		167 - 170
12.3	Trustee and Local Expense Report dated June, 2020		171 - 171
12.4	Adopted Policies and Standing Resolutions		172 - 175
12.5	Local Trust Committee Webpage		
13.	**WORK PROGRAM**	4:50 PM - 5:00 PM	
13.1	Top Priorities Report dated August 31, 2020		176 - 176
13.2	Projects List Report dated August 31, 2020		177 - 179
14.	**CLOSED MEETING - None**		
15.	**UPCOMING MEETINGS**		
15.1	Next Regular Meeting Scheduled for Tuesday, November 3, 2020 at 12:30 pm at - Location to be determined		
16.	**ADJOURNMENT**	5:00 PM - 5:00 PM	

Denman Island Local Trust Committee
Minutes of Regular Meeting

Date: July 7, 2020
Location: Electronic Meeting

Members Present: Sue Ellen Fast, Chair
David Critchley, Local Trustee
Laura Busheikin, Local Trustee

Staff Present: Heather Kauer, Regional Planning Manager
Marnie Eggen, Island Planner
Vicky Bockman, Recorder

Public: Approximately twelve (12) members of the public

1. CALL TO ORDER

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

Chair Fast called the meeting to order at 12:31 pm. She welcomed the public, introduced Trustees and staff, and acknowledged that the meeting was being held in territory of the Coast Salish First Nations.

2. APPROVAL OF AGENDA

DE-2020-038
It was MOVED and SECONDED,
that Denman Island Local Trust Committee approve the agenda.

CARRIED

3. REPORTS

3.1 Trustee Reports

Trustee Critchley reported on the following:

- Baynes Sound Forum is moving forward with work including creation of Terms of Reference, has received commitment of continued funding from Trust Programs Committee, and has had productive collaboration with other stakeholders;
- Ferry Advisory Committee met to discuss BC Ferries' proposed cuts to the schedule;
- He brought forward a motion at Trust Council requesting advocacy to retain BC Ferries' schedule and was pleased that the cuts were not initiated;
- Responded to residents' concerns involving varying issues.

Trustee Busheikin reported on the following:

- She continues to co-chair the Denman Island COVID Response Network;
- Numerous calls were received from constituents regarding bylaw enforcement questions.

3.2 Chair's Report

Chair Fast reported on the following:

- Executive Committee - work to organize the first electronic Trust Council meeting was challenging and successful. The focus of an upcoming meeting will be to discuss outcomes from the June Trust Council meeting ;
- She attended meetings of the Hornby Island Local Trust Committee and the Bowen Island Municipality Council;
- The Islands Trust Recovery and Safety Plan COVID-19 Pandemic document has been posted to the Islands Trust website; staff will be able to resume island travel with masks when interacting with the public.

3.3 Electoral Area Director's Report - none

4. TOWN HALL

A community member expressed support for both of the affordable housing applications currently being considered and urged the Local Trust Committee (LTC) to make decisions as soon as possible on these projects that serve different populations on Denman Island.

5. DELEGATIONS - none

6. MINUTES

6.1 Local Trust Committee Minutes dated May 19, 2020 - for adoption

DE-2020-039
It was MOVED and SECONDED,
that Denman Island Local Trust Committee adopt the minutes dated May 19, 2020 as presented.

CARRIED

6.2 Section 26 Resolutions-Without-Meeting - none

6.3 Advisory Planning Commission Minutes – none

7. BUSINESS ARISING FROM MINUTES

7.1 Follow-up Action List dated June 30, 2020

Planner Eggen provided updates with the following noted:

- The activity from March 7, 2019 regarding DE-ALR-2018.1 was requested to be removed at a previous meeting; however that item has not been completed and direction was requested. Trustees confirmed that the item may be removed from the Follow-up Action List as it can be tracked on the Applications Log;
- The Farm Industry Review Practices Board has responded to the invitation to meet and tour, confirming that they can attend electronic Denman Island and Hornby

Island LTC meetings separately in September; however, a tour will not be possible until summer of 2021;

- Senior Intergovernmental Policy Advisor Wilcox has advised that she is working with K'omoks First Nation as much as possible regarding draft wording for Islands Trust signage at the Buckley Bay ferry terminal.

8. APPLICATIONS AND REFERRALS

8.1 DE-RZ-2017.1 (Denman Community Land Trust Association (DCLTA)) - verbal update

Planner Eggen provided updates with the following noted:

- Work is proceeding on the housing agreement that will need to be approved by the Agricultural Land Commission (ALC) as a part of the process;
- The Cost Recovery Agreement to draft a restrictive covenant has been sent to the applicant and staff are awaiting the return of a signed document to commence legal review; staff will work with legal counsel and the applicant in a cost effective manner to keep the covenant as simplified as possible;
- Staff are working to provide options for referral responses and zone regulations that were requested at the May 19, 2020 LTC meeting.

8.1.1 Submission from H. Holm for Denman Community Land Trust Association

The submission requests the LTC to reconsider the drafting of a covenant; to accept a setback of three metres; to involve DCLTA's legal advisor in discussions with Islands Trust lawyers; to copy the DCLTA agent in correspondence regarding DE-RZ-2017.1 with other agencies; and to separate DE-RZ-2017.1 from the proposed R4 zone with rationale for these requests provided.

Chair Fast invited the agent for the applicant to speak to the submission.

Harlene Holm elaborated on the points raised in the July 7, 2020 submission. She requested that the LTC contact DCLTA to clarify requirements so they can then determine if the project remains viable. She advised that DCLTA will not proceed with payment of the Cost Recovery Agreement fee until that time.

Trustees discussed the concerns and the following points were noted:

- They confirmed that their goal is to work with what the applicant is proposing for setbacks;
- The covenant condition regarding the screening and fencing is necessary to allow the project to move forward while satisfying the ALC exclusion condition; the plan that the ALC has approved can be attached to the covenant in a cost effective approach;
- The Cost Recovery Agreement fee is a standard estimate and if the actual cost incurred is less, a refund will be given to DCLTA;
- The proposed home occupation regulations were intended as a useful option to DCLTA that might be regulated through the rental agreement; no associated parking spaces would be required;
- Trustees expressed their understanding that the LTC requirements have been conveyed to the applicant and are reasonable. They commented that they would like to see the project move forward, and urged DCLTA to continue the process.

9. LOCAL TRUST COMMITTEE PROJECTS - none

10. CORRESPONDENCE - none

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

11. CLOSED MEETING

11.1 Motion to Close the Meeting

DE-2020-040
It was MOVED and SECONDED,
that the meeting be closed to the public in accordance with the *Community Charter*, Part 4, Division 3, s.90(1) (d) (f) for the purpose of considering adoption of In-Camera Meeting Minutes dated October 3, 2019 and Bylaw Enforcement and that the recorder and staff attend the meeting.

CARRIED

The LTC closed the meeting at 1:44 pm.

11.2 Recall to Order

By general consent the LTC reconvened in open meeting at 2:14 pm.

By General Consent the meeting recessed at 2:15 pm and reconvened at 2:37 pm.

11.3 Rise and Report

In the closed meeting the *In Camera* minutes of the LTC meeting of October 3, 2019 were adopted.

12. NEW BUSINESS

12.1 Resolution regarding Restaurant Expansion during COVID Emergency Response - Staff Report - for decision

DE-2020-041
It was MOVED and SECONDED,
that the Denman Island Local Trust Committee has no objection to Liquor and Cannabis Regulation Branch issuance of Temporary Expanded Service Area Authorizations for liquor primary and manufacturer licensees in the Denman Island Local Trust Area.

CARRIED

12.2 Denman Official Community Plan (OCP) and Land Use Bylaw (LUB) Review - for discussion

Trustee Busheikin noted that the Denman Island OCP and LUB have not had a full review in approximately 20 years. She expressed concern that although there have been targeted reviews many elements are out of date, newer residents do not have a sense of ownership with the bylaws, and the list of LTC projects has grown to a size that does not allow the LTC to address them in a timely manner. She suggested that the LTC might request being added to the priority list to expedite a full OCP and LUB review.

Trustees considered the proposal and discussed the reorganization of Local Planning Services, staffing levels, the preference to review both the OCP and LUB to keep them synchronized, a general timeline, and the process for addressing ongoing specific bylaw changes during the bylaw review process.

DE-2020-042
It was MOVED and SECONDED,
that the Denman Island Local Trust Committee request that a review of the Denman Island Official Community Plan and Land Use Bylaw be prioritized by Local Planning Services and that this request be forwarded to the Director of Local Planning Services, the Executive Committee, and the Local Planning Committee.

CARRIED

12.3 Bylaw Amendments Regulating Trailers - for discussion

Trustee Critchley reported that current bylaw regulations permit travel trailers on small lots and noted that concerns have been brought to his attention including noise, unsightly situations, and plant screening that can take years to attain an effective screening height. He solicited input from LTC members as to whether a bylaw amendment to restrict travel trailers to larger lots might be a matter to consider.

Trustees discussed the issue and observed that "LUB amendments regarding the use of travel trailers" is currently on the Projects Report for addressing in the future. Some Trustees expressed a preference to direct staff resources toward finishing current Top Priority items that affect many community members island-wide, to retain the travel trailer issue on the Projects Report, and to not prioritize bylaw amendments regarding travel trailers at this time.

13. REPORTS

13.1 Trust Conservancy Report dated May 26, 2020

Chair Fast summarized the Trust Conservancy Report.

13.2 Applications Report dated June 30, 2020

Trustees held a general discussion regarding Community Information Meeting (CIM) format during COVID-19 while regulations that restrict public in-person meetings to a maximum of 50 people are in place, with the following points noted:

- This protocol might be in place for an extended period of time;
- Staff advised that recent CIMs have been held electronically and have been successful with good public participation;
- Initially, an in-person approach for CIMs was preferred by Trustees to encourage the desired public interaction; however, support was expressed for a re-evaluation of this position to allow CIMs by electronic means in order to facilitate the advancement of projects.

A Trustee requested a discussion of DE-RZ-2018.1.

Trustee Busheikin declared a potential conflict of interest as she lives next to the site of the proposed Denman Green project and left the meeting at 3:32 pm.

DE-2020-043
It was MOVED and SECONDED,
that the Denman Island Local Trust Committee request staff to convene an electronic Community Information Meeting with respect to file DE-RZ-2018.1.

CARRIED

Discussion followed that included the importance of advertising and providing the necessary links to inform the public of an electronic CIM; and that the public might be encouraged to subscribe to Islands Trust email notification system.

DE-2020-044
It was MOVED and SECONDED,
that the Denman Island Local Trust Committee request staff to advertise the electronic Community Information Meeting regarding DE-RZ-2018.1 in two consecutive issues of the Grapevine and that the advertising, if possible, contain a link to the Zoom meeting and telephone number for people who wish to phone; and that the meeting be scheduled for an evening.

CARRIED

Trustee Busheikin returned to the meeting at 3:41 pm.

13.3 Trustee and Local Expense Report dated May, 2020

Received.

13.4 Adopted Policies and Standing Resolutions

Received.

13.5 Local Trust Committee Webpage

There were no changes or additions requested.

14. WORK PROGRAM

14.1 Top Priorities Report dated June 30, 2020

Received.

14.2 Projects List Report dated June 30, 2020

Received.

15. INFORMATION ITEMS

15.1 March 2020 Pinna Sustainability Report regarding Climate Projections for Islands Trust Area

http://www.islandstrustconservancy.ca/media/84991/itc_climateprojectionsreport_final.pdf

Chair Fast advised that this report contains information regarding climate change specific to Denman Island that community members might find useful.

15.2 Contiguous Forest Mapping in the Islands Trust Area

http://www.islandstrust.bc.ca/media/349568/524_tc_2020-06-16_contiguous-forest-mapping-project_rfd.pdf

Chair Fast reported that this mapping project includes information on various forests on Denman Island that individuals and conservancy groups might find helpful.

Staff was asked to mail Trustees a copy of the map for their reference.

15.3 What We Heard - Islands 2050 Policy Statement Project Update

http://www.islandstrust.bc.ca/media/349569/625_policy_statement_what-we-heard_brf.pdf

Chair Fast explained that this document presents the results of the public participation in the Islands Trust Policy Statement project and identifies several themes that emerged in this ongoing process.

15.4 Travelling to the Islands COVID-19 Press Release

Received.

15.5 News Release Regarding Court Ruling and Francis Dean Ellis

Received.

16. UPCOMING MEETINGS

16.1 Next Regular Meeting Scheduled for Tuesday, September 8, 2020 at 12:30 pm - Location to be determined

Trustees confirmed the next regular LTC meeting date and time with location to be determined.

17. ADJOURNMENT

By general consent the meeting was adjourned at 3:55 pm.

_____
Sue Ellen Fast, Chair

Certified Correct:

_____
Vicky Bockman, Recorder

Denman Island Local Trust Committee
Minutes of Special Meeting

Date: August 6, 2020
Location: Electronic Meeting via Zoom

Members Present: Sue Ellen Fast, Chair
David Critchley, Local Trustee

Regrets: Laura Busheikin, Local Trustee

Staff Present: David Marlor, Director Local Planning Services
Sonja Zupanec, Island Planner
Vicky Bockman, Recorder

Others Present: Approximately forty (40) members of the public
Simon Palmer, Denman Housing Association (DHA)

1. CALL TO ORDER

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

Chair Fast called the meeting to order at 2:00 pm, welcomed the public, and acknowledged that the meeting was being held in traditional Qualicum and K'ómoks First Nations territory. She introduced herself, Local Trustee Critchley, staff, recorder and the representative from Denman Housing Association (DHA). She explained that Trustee Busheikin was not in attendance due to a declared potential conflict of interest as she lives next to the proposed DHA development.

She advised that this Special Local Trust Committee (LTC) meeting was being held to conduct a Community Information Meeting (CIM) for application DE-RZ-2018.1 (Denman Housing Association) and that it will include a presentation and facilitated Q&A session where members of the public will hear information and can ask questions about the application and proposed bylaw amendments.

2. COMMUNITY INFORMATION MEETING

Presentation regarding DE-RZ-2018.1 (Denman Housing Association) – Bylaw Nos. 234, 235, 236, and 238

Trustee Critchley spoke to the holding of the CIM electronically, noting that the COVID health and safety guidelines preventing in-person meetings may continue for an extended period of time and that this approach provides an option to inform the public, consider the applicant's financing time constraints, and allows the LTC to continue due process and careful consideration of the proposal.

Planner Zupanec provided an overview of the proposal, changes to bylaws necessary to enable the proposal, and next steps. She advised that all relevant information is posted on the Islands Trust Denman Island Applications webpage.

Following are key points from the presentation:

- Proposed density transfer overview:
  - Decrease density from a current maximum of seven single family dwellings to a maximum of three on 63 hectares (approximately 156 acres) currently zoned Residential (donor parcel);
  - Increase density on 29 hectares (72 acres) currently zoned Forestry and permitting one single family dwelling to a maximum of 25 dwellings (receiving parcel), with 20 of the dwellings designated as affordable rental housing and with the remaining five allocated to the remainder parcel. The owner of that parcel is in negotiations with DHA to trade 8.09 hectares (20 acres) for an increase in density on the remaining 52 acres for private use.
- Rezonings required: from R2 to R2(7) on the donor parcel and from F(1) to R2(8) on the receiving parcel; the eight hectare portion for the affordable housing (Denman Green) is to be subdivided from the parent parcel and rezoned from F(1) to Multi-Family Housing R4(1);
- The eight hectare portion for the affordable housing would require the dwellings to be rental tenure with a housing agreement to maintain the affordable nature;
- The applicant has been asked to provide an updated report for sewage disposal and grey water management;
- Consultations regarding fire protection are occurring;
- A proposed Development Permit Area would guide any and all development of the receiving parcel to ensure adequate ecological protection;
- Rental affordability proposal: all prospective renters must be on the BC Housing registry and meet BC Housing criteria. Proposed conceptual breakdowns: 30% near market rentals, 50% rent geared to income, 20% classified as shelter units with rates based on income assistance rates set by the BC government;
- Water servicing adequacy and quality: applicant is proposing rainwater collection as the primary source with backup consisting of increased rainwater storage capacity. Preliminary estimates are to supply 69 litres per person, per day;
- Referral responses were summarized with concerns expressed regarding the rainwater collection as a primary source of potable water for a development of this size. The Advisory Planning Commission will be meeting again to consider the proposed primary source of potable water, daily use water budget, and sufficiency of stored water for the development;
- Possible next steps were identified that include opportunities for public input to the LTC after this CIM. More information is needed before a Public Hearing can be scheduled.

3. QUESTION AND ANSWER SESSION

Chair Fast explained the format for the Q&A session and advised that she will address the questions to the appropriate person to answer: planning staff, Trustees or applicant.

Members of the public had the following questions:

- Where is the proof of water for the five densities on the remainder parcel?

  - The LTC has not requested a hydrological report for the remainder parcel at this time; proof of water would be a necessary element if an application is made to subdivide that parcel in the future.
- Is there an estimated timeline to completion of all the requirements?
  - It is up to the applicant to provide information to the satisfaction of the LTC. This can vary by application and there is no precedent for a primary source of water being rainwater collection.
- What advantages could the Denman Green project bring to the wider Denman Island community, the close neighbours, and the natural environment?
  - The project would address the need for affordable, secure rental housing and a Development Permit Area is proposed for the protection of the environment on the Denman Green property. Any broader benefits might be provided by the community to the LTC for consideration.
- What are the criteria by which BC Housing will select tenants and will there be a Denman Island residency requirement?
  - Prospective tenants must first qualify for the BC Housing registry and subsequently would be considered by a DHA selection committee. The criteria to be considered by the selection committee have not yet been finalized, however it is anticipated that basic and fundamental criteria would include residency and length of residency on Denman Island, whether children are involved, and the current state of applicant housing.
- An Islands Trust survey identified a need of 80 units of affordable housing on Denman Island; why are only 20 units being proposed when there are more needed?
  - The application is requesting 20 units of housing; it is the responsibility of the applicant to decide on the threshold of density based on factors that would suggest a viable outcome.
- What advantages other than better housing construction could Denman Green offer potential occupants in comparison to their current accommodations?
  - The proposed bylaws would require the level of construction to be higher than the current requirements of the BC building code, BC Housing is interested in partnering with projects that demonstrate a high level of sustainability, and rental tenure housing has been identified as the biggest housing shortage on Denman Island.
- How can the LTC make decisions and not rush the community consultation process with the time constraints that government financing for the project may create?
  - The LTC recognizes the challenges of completing necessary due diligence in a timely manner while ensuring that all requirements are completed that are necessary for protection of the community and success of the project.
- Is the LTC considering a proposal from DHA that would create 12 affordable housing units plus eight market rate units?
  - DHA is applying for 20 units of affordable rental units with some being near market rate. The remainder parcel of 52 acres could have a provision for five dwellings at market housing rates.
- Given that the Executive Committee, Island Health, Provincial water authorities and the LTC all consider rainwater collection to be a backup water system, why is this application still being considered?
  - The applicant advises that rainwater catchment is the only option available to move forward. Provincial health authorities have been looking at developing guidelines for rainwater harvesting as an acceptable primary source of potable water and while

current regulations do not support this approach it is possible that changes will be made to these regulations that would allow the project to proceed. In the meantime the LTC is attempting to make as much progress as possible with information that is currently available to advance the proposal to public input.

- Who will be managing this project on an ongoing basis if it is approved?
  - The practice on other islands is to subcontract for professional management of day-to-day tenancy agreements and Denman Green would likely be following this example.
- Could you clarify funding sources, assuming there are non-BC Housing funding sources involved?
  - BC Housing is considered to be the primary source of funding, however there may be some federal organization funding available; and foundation grant support may be sought for other innovative, progressive aspects of the project.
- Does the LTC continue to support Official Community Plan Housing Advocacy Policy 1: "VIHA and landowners are encouraged to consider, as an alternative, innovative methods of waste water treatment that minimize water use; and to consider rainwater collection as a source of water" and how does the Executive Committee's response affect the LTC's decision?
  - While Trustee Critchley cannot speak for the LTC or Islands Trust, he confirmed that he does support innovation and looks at innovative proposals seriously. He noted that the Executive Committee's response to referrals on this matter suggests that they will generally defer to a LTC decision.
- Can you explain the term "rental tenure"?
  - It refers to residential tenancy with month-to-month rental but not ownership where the title is transferred to an individual and they own that unit.
- What would happen if the project is approved by the LTC but not supported by BC Housing or Island Health?
  - The reason that proof of adequate waste water and water servicing systems, for example, are being requested at this time is to conduct due diligence to offer the best possibility that these infrastructure factors can be approved by agencies in order to avoid the density transfers, subdivision, and zoning changes of properties with no benefit of affordable housing.
- Has the LTC received the requested financial statement detailing proposed rental revenue, site servicing costs, construction costs and 35 year maintenance costs for 20 rental housing units?
  - Yes, this information was received and posted on the application website as a part of a staff report. The budget *pro forma* estimate needs to be adjusted to reflect changes to the project that have occurred since the budget was created.
- As the Islands Trust is requiring more information about a rainwater harvesting system before rezoning, will the Islands Trust Freshwater Specialist help with this or will the Islands Trust help the Society with funding?
  - Unfortunately the Islands Trust or LTC cannot use public funds to supply to an applicant to do research to support their application. Islands Trust has sponsored the application fees for this file as it is for affordable housing and that is the extent of financial support that the Islands Trust can provide.

Chair Fast concluded the Q&A portion of the meeting. She commented that information on this application can be found on the Islands Trust Denman Island Applications webpage; and offered

options and contact information for providing input, asking questions regarding this proposal, or for follow-up on questions that time did not allow at this CIM.

She thanked everyone for their participation today and advised that the next LTC regular meeting is scheduled for September 8, 2020 and will be held electronically.

4. ADJOURNMENT

By general consent the meeting was adjourned at 3:32 pm.

_____
Sue Ellen Fast, Chair

Certified Correct:

_____
Vicky Bockman, Recorder

DRAFT

Print Date: August 31, 2020

Resolutions Without Meetings Log

Denman Island

Resolution Number	Action	Date
2020-009	**Carried**	**11-Aug-2020**
That the Denman Island Local Trust Committee call an electronic Special Meeting for Monday, August 17, 2020 and that the meeting be closed to the public subject to Community Charter Section 90 (1)(i) the receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose.		
2020-008	**Carried**	**30-Jun-2020**
"That the Denman Island Local Trust Committee approve the news release prepared by staff regarding the June 22, 2020 Honourable Mr. Justice Riley ruling on tort action with Francis Dean Ellis."		

Minutes of the Denman Island Advisory Planning Commission

Date of Meeting: **Friday, August 14, 2020**

Location: **Denman Community School Sports Field Bleacher Area**
1100 Northwest Road, Denman Island, BC

APC Members Present: **Jack Forsyth, Chair**
Jacki Hipwell, Deputy Chair
Edi Johnston, Secretary
Tom Zawilla
Howard Stewart
Anne de Cosson
George McRae

Staff Present: **Sonia Zupanec, Island Planner (by Speakerphone)**
Katherine Vogt, Recorder

Others Present: **David Critchley, Local Trustee**
Simon Palmer, Denman Housing Association
7 members from the local media/public

1. CALL TO ORDER

Chair Forsyth called the meeting to order at 10:11 am.

2. APPROVAL OF AGENDA

By general consent, the agenda was approved.

3. MINUTES

3.1 Denman Island Advisory Planning Commission Draft Minutes dated Tuesday, February 25, 2020

By general consent, the minutes were adopted.

4. BUSINESS ITEMS

4.1 Election of Chair

Chair Jack Forsyth was elected as official Chair.

DRAFT

4.2 Referral from Denman Island Local Trust Committee-Rezoning Application DE-RZ-2018.1 (Denman Housing Association)-Denman Green-PROPOSED WATER SYSTEM For 20 units of Affordable Housing

Chair Forsyth noted that the Denman Island Advisory Planning Commission (APC) was being asked to contribute recommendations to a ground-breaking decision regarding the approval of sole rainwater use for the primary potable water supply for an affordable housing project on Denman that would necessitate the creation of 4 new bylaws (Proposed Bylaw Nos. 235 and 237 of the Official Community Plan and Bylaw Nos. 236 and 238 of the Land Use Bylaws) and that this decision could have an influence on housing developments on all of the Gulf Islands. The APC members did not have water expertise, and the issues were very complicated.

Chair Forsyth offered that members of the public would be invited to speak towards the end of the meeting and that their comments would be recorded in the minutes.

Simon Palmer of the Denman Housing Association (DHA) noted that:

- the DHA was waiting on the Ministry of Health to finalize a guidance document that would be used by the Public Health Engineers of the Island Health (IH) to approve the design, treatment, sampling and testing of the DHA proposed water system. This guidance document was expected in early September, after which a 3-way meeting between the Public Health Engineer, the Public Health Officer and Simon Palmer regarding specific requirements for the water system construction and operating permits could take place.
- the DHA had relied on water reports from the University of British Columbia and a report commissioned for the City of Guelph's Water Conservation Program titled "Final Report: City of Guelph-Blue Built Home Monitoring and Demand Analysis" to compile their water consumption figures for the Denman Green project.
- present potable water requirements throughout British Columbia were much higher than what individuals and families could comfortably live with.
- ground water in the future could be a less reliable source of water than rainwater.
- the owner of the donor property, Daniel Terry, had denied access to lower levels of the donor property where groundwater would most likely have been found.
- DHA rainfall data was based on records from Comox Valley Airport and Chrome Island.
- DHA would be using only 2/3 of its entire roof collection capacity.
- the 69 litres allotted per person per day does not include laundry or toilet flushing. A greywater system would handle the toilet flushing. A common water reservoir would meter out daily water to individual storage units based on per household occupancy.

- the Chair of the Graham Lake Water System could not provide assurance of back up water supply to Denman Green pending upgrade of their treatment system
- four 90 meter-long and 8-foot high bladders with a 30 year life expectancy, designed for the US military, in a fenced containment area, would provide the water storage for Denman Green.
- there is an overriding moral argument to allow for increased density to provide much needed affordable housing.
- DHA has been incorporated since 2012 and the land offered by Daniel Terry was the only land they had been able to acquire.

Trustee Critchley noted that:

- the Ministry of Transportation and Infrastructure (MOTI) will allow local governments to determine lower water requirements for subdivisions than normal MOTI standards.
- it is important to determine a reasonable amount of potable water available per person per day, given that there is a huge gap between historical MOTI requirements of 1200 litres of water per household per day and the 69 litres per person per day proposed by DHA.
- the Denman Green project could fail due to lost funding related to time delays, but the Denman Island Local Trust Committee (DILTC) had done as much as it could to get the issues out to the public.
- any letters of comment from the APC members or members of the public would be welcome.
- APC sub-committees without quorum were not permissible under the *Local Government Act*.
- Planner Zupanec could offer greater clarification around APC sub-committee protocols.

Planner Zupanec noted that:

- Staff recommended there had been insufficient information regarding the DHA water system and IH approvals, to move forward with a Community Information meeting or any other advancement of the proposed bylaws. The LTC decided to proceed with the Community Information Meeting.
- there had been an APC referral response already in general support of the Denman Green Project, but now the DILTC was seeking more specific guidance on reasonable per person per day water requirements.
- present MOTI water requirements are an effective deterrent to excessive rural subdivision.

Chair Forsyth expressed that it would be helpful to have rainfall data specific for Denman Island rather than generalized Comox Valley Regional District (CVRD) data since Denman has been shown to receive 33% less rainfall than Courtenay. Also, CVRD data suggests a low end of 113 litres per person per day water use in the Gulf Islands to a high end of 136 litres per person per day.

APC members noted that:

- an Islands Trust Staff Report dated March 17, 2020 contained a statement from IH that claimed that rainwater collection was suitable as a supplementary water source but not a primary one, which would seem to suggest that Islands Trust would not be in support of the Denman Green project.
    - Trustee Critchley responded that the Denman Green proposal had altered over time. Originally, it had proposed using trucked water from Graham Lake as a backup; then there was a private source backup proposed; now the backup was to be more stored rainwater. Up to now there have been no IH regulations in existence to permit the DHA rainwater system, but DHA may be able to have the rainwater system approved by IH.
- pollen periods necessitating system shutdown
    - Simon Palmer responded that the system would be designed to flush away pollen.
- general maintenance of the entire water system.
    - Simon Palmer responded that there would be a maintenance system in place.
- there was a disconnect between the needs of people utilizing affordable housing, and the complexity of a rainwater system which could add another layer of burden to the renter's life.
- there could be a high turnover in rental units and a management problem caused by insufficient water, including for growing food.
- will some people get water trucked in for their own use?
    - Simon Palmer responded that people would not be permitted to supplement their water with purchased trucked water.
- the 69 litres of water per person per day only allows for a shower every second day.
- there does not seem to be water allowances for visitors and guests.
- rainwater collection as a sole source of primary potable water would set a precedent for all of British Columbia.
- there was too much confusion to move forward on the bylaw proposals.
- Denman Green should be a stand-alone project to deal with present affordable housing needs and, except for the Seniors Housing project, future high density projects are not popular and should be not allowed.
- affordable housing is a supportable concept, but Denman Green should be slowed down to take into account peripheral issues.
- Denman Green is the right project in the wrong place.
- the Denman Green project should be separated from the future subdividing of the donor parcel.
- numerous other BC Housing projects have a smaller number of units, yet Denman Green says there has to be 20 units to their project.
    - Simon Palmer responded that they could have sought 30 or 40 units but that 20 was chosen as a reasonable increase in density given that in 2013 their Housing Needs Assessment determined 120 people in need of affordable housing, while the Islands Trust most recent Housing

Needs Assessment determined that 80 units of affordable housing was needed.

Members of the public noted the following:

- the University of British Columbia Report utilized by DHA was unprofessional and should not be referenced.
- water that is heated over 25 degrees Celsius for longer than 24 hours is prone to algae growth, which is also a climate change issue.
- permission from Island Trust Staff to talk to APC members directly about the Denman Green issue was recently denied. The member of the public was directed to speak to Trustee Critchley instead.
    - an APC member responded that members of the public could speak directly to APC members.
    - Trustee Critchley responded that he would look into it.
    - Trustee Critchley noted that there might be policies around protecting APC members from harassment by the public.
- the donor, Daniel Terry, is getting too good of a subdivision deal out of the overall project.
- five additional densities being allowed on the donor parcel should not have been a part of the Denman Green proposal.
- the Chair of the Graham Lake Water District (GLWD) announced that GLWD was beholden to the 67 properties presently on their water system and that it was not in their best interest to take on a third-party contractual arrangement with Denman Green.
- outhouses and lack of running water have not been out of the norm for many newcomers to Denman Island. Many people living in such homes have privacy, which matters to people.
- it is unfortunate that the Denman Green project includes eight market value rental units.
    - Simon Palmer noted that these units would be near market value rather than full market value and were a compromise.

DE-APC-2020-004
It was MOVED and SECONDED
that the Denman Island Advisory Planning Commission would not comment on questions related to required amounts of water per person per day or to climate change issues affecting rainwater availability but would defer these questions to experts.

CARRIED

DE-APC-2020-005
It was MOVED and SECONDED
that the Denman Island Advisory Planning Commission recommend moving forward with Proposed Bylaw Nos. 235 and 237 of the Official Community Plan and Bylaw Nos. 236 and 238 of the Land Use Bylaws, pending approvability by the Vancouver Island Health Authority of the proposed Denman Green rainwater system.

CARRIED

***Two APC members abstained from voting on this motion.**

DE-APC-2020-006
It was MOVED and SECONDED
that the Denman Island Advisory Planning Commission hold another meeting after Simon Palmer's upcoming meeting with the Vancouver Island Health Authority.

CARRIED

5. ADJOURNMENT

By general consent, the meeting was adjourned at 12:13 pm.

_____
Jack Forsyth, Chair

Certified Correct:

_____
Katherine Vogt, Recorder

DRAFT

Islands Trust

Print Date: August 31, 2020

Follow Up Action Report

Denman Island

07-Feb-2019

Activity	Responsibility	Dates	Status
1 Amend Bylaw No. 228 (OCP) by replacing item 1.15 Policy 3 (as per Feb. 7, 2019 staff report).	Becky McErlean Marnie Eggen Sonja Zupanec		In Progress

Follow Up Action Report

Denman Island

07-Feb-2019

Activity	Responsibility	Dates	Status
2 Amend Bylaw No. 229 (LUB) for LTC consideration: a. Include TUP and rainwater harvesting collection system requirements for temporary secondary dwellings for immediate family; b. Amend the agri-tourism accommodation TUP guidelines to remove the option for seasonal cabins, and continue to permit seasonal campsites and a maximum of three sleeping units, which includes home-based guest accommodation rooms; c. Reduce the lot line setback for feedlots from 50 m to 30 m. d Remove the term feedlot e. Add a new defined term, confined livestock area. f. remove agriculture as an accessory use in the R1 zone, while retaining horticulture as an accessory use in this zone; g remove the term intensive agriculture; h. amend the definition of horticulture to continue to allow the sale of products produced on the lot, and to ensure that the use is accessory to a principal residential use and not tied specifically to a landowner; i. permit the keeping of animals for personal use as an accessory use in the R1, R2, R3 zones. j. Remove horticulture as a permitted use in the A, F, and RE zones, while retaining agriculture as a principal permitted use in these zones.	Becky McErlean Marnie Eggen Sonja Zupanec		In Progress

Follow Up Action Report

Denman Island

07-Feb-2019

Activity	Responsibility	Dates	Status
3 LTC endorsed revised Farm Plan Implementation Project Charter as amended (adding Cannabis Land Use Regulations as an Out of Scope activity).	Marnie Eggen Sonja Zupanec		In Progress

07-Mar-2019

Activity	Responsibility	Dates	Status
1 Request the communication specialist to prepare draft wording for Islands Trust signage at the Buckley Bay terminal, which would consist of a sign 3 feet wide and 4 feet tall and include reference to indigenous territorial acknowledgement, and design elements and graphics. Request referred to Andrew Templeton March 11, 2019. Location of sign has been confirmed. David Critchley will follow up with Andrew on wording - July 2019	Lisa Wilcox		In Progress

04-Jul-2019

Activity	Responsibility	Dates	Status
1 David Marlor to bring forward draft procedures for cell tower application consultation for LTC consideration.	David Marlor		In Progress

Follow Up Action Report

Denman Island

03-Oct-2019

Activity	Responsibility	Dates	Status
1 Staff to follow up with the Farm Industry Review Practices Board (FIRB) staff to arrange a meeting and a tour as per their letter dated September 25, 2019 and include an invitation to the Hornby LTC. *2020-06-25 update: FIRB confirmed attendance at Denman LTC zoom meeting 2020-09-08 and at Hornby LTC zoom meeting 2020-09-11. Tour availability - summer 2021.*	Becky McErlean Marnie Eggen Penny Hawley Wil Cottingham		In Progress

21-Jan-2020

Activity	Responsibility	Dates	Status
1 Trustee Critchley to contact K'omoks First Nation Guardian Watchmen to discuss coordinating a response to Spraying on Tree Island.			In Progress
2 Staff to prepare a draft Water Sustainability Project Charter.	William Shulba		In Progress

19-May-2020

Activity	Responsibility	Dates	Status
1 Staff to amend Bylaw No. 233 by adding the following to item 1.4 Policy 4: 'subject to ALC approval' and fix typo in item 1.3.	Marnie Eggen		In Progress

Follow Up Action Report

Denman Island

19-May-2020

Activity	Responsibility	Dates	Status
2 Re: DE-RZ-2017.1, staff to provide suggestions for regulating the following in the proposed R4(2) zone: mandatory rain water catchment, limiting impermeable surfaces, dark sky measures, replanting disturbed areas with mainly native vegetation, and combined floor area for accessory buildings and structures.	Marnie Eggen		In Progress
3 Staff to amend proposed Bylaw No. 234: R4 zone be renamed to "Affordable Rental Housing"; floor area of accessory buildings to be left blank; in R4 & R4(2) allow home occupations: general business offices, professional offices, excluding health services, artist or artisan studios, and prohibit the purchase of any products on the site, employee/clientele/customers attending the property and the creation of noise which disturbs persons.	Marnie Eggen		In Progress
4 Staff to prepare amendments to proposed Bylaw No. 234 such that no commercial agriculture or horticulture, or keeping of chickens or other livestock are permitted in the R4(2) zone.	Marnie Eggen		In Progress
5 Staff to refer DE-RZ-2018.1 to the Advisory Planning Commission (when able to meet electronically/in person) for review and recommendations as to the proposed water supply for the project, consideration to include proposed daily-use water budget, total amount of water storage, potential effects of climate change, proposed back up water supply.	Penny Hawley Sonja Zupanec		Completed

Follow Up Action Report

Denman Island

07-Jul-2020

Activity	Responsibility	Dates	Status
1 Staff to forward the LTC request for a Denman Island OCP and LUB review to be prioritized by LPS to the LPS Director, Executive Committee and Local Planning Services	Marnie Eggen		In Progress
2 Staff to print and send a copy of the Douglas Fir Contiguous Forest map to Trustee Busheikin.	Heather Kauer		Completed
3 Request staff to convene an evening electronic community information meeting re: DE-RZ-2018.1 and to advertise in two consecutive issues of the Grapevine and that the Zoom meeting link and phone number be included in the advertisement. *Scheduled for August 6, 2020 at 2pm.*	Becky McErlean Sonja Zupanec Wil Cottingham		Completed

From: AQSF / AQSF (DFO/MPO) <ShellfishAquaculture.XPAC@dfo-mpo.gc.ca>
Sent: Thursday, August 6, 2020 12:09 PM
To: Wil Cottingham; AQSF / AQSF (DFO/MPO)
Cc: Denman Island Local Trust Committee; ADIMS info; Lesley.Fettes@gov.bc.ca; john.mackie@tc.gc.ca; lawrence.kuan@tc.gc.ca; Roberta.dight@tc.gc.ca; Jordan.Wagner@gov.bc.ca; Kosmider, Gabrielle; Marrie, Christopher; Kaatz, Robert; Nichole.Prichard@gov.bc.ca
Subject: RE: Complaint from Denman Island LTC regarding DFO Aquaculture Licence Number 119203

Dear Sue and Wil,

Thank you for your email. The letter that you've submitted was carefully reviewed by DFO Conservation and Protection (C&P) and Transport Canada (TC) and they have both contributed to this response. We understand and appreciate your concern with Aquaculture Facility Number 1004, Landfile 1400036 located on Denman Island. Upon reviewing your concerns it appears that while you mention predator netting and debris, the main concern you are raising is pertaining to rafts drifting and being anchored off the tenure, which appears to be infrastructure located outside of the public viewable management plan, as well as potentially posing a navigational issue.

Responsibility for the regulation and licensing of aquaculture in British Columbia (BC) is shared by several provincial and federal agencies. DFO licenses the activity of aquaculture as a fishery, and our jurisdiction is limited to topics related to fish and fish habitat (e.g., proposed species for cultivation, production rates, rearing methods, fish health and marine habitat concerns). The DFO Conditions of Licence and other regulatory requirements for aquaculture operations, which licence holders must abide by, are monitored and enforced by DFO C&P fishery officers. Here is a link to the DFO Shellfish Aquaculture Conditions of Licence: https://www.pac.dfo-mpo.gc.ca/aquaculture/licence-permis/index-eng.html#ov-conditions. Land use and concerns related to navigation fall outside of DFO jurisdiction; these issues are addressed by the Province of British Columbia, TC, and local governments.

For clarity, as part of the harmonized aquaculture approach, our partner agencies generally deal with the following:

Transport Canada

- Impacts to navigation and placement of navigational markers.

Province of BC

- Proximity to Provincial Parks and reserve areas.
- Riparian rights.
- On and off-tenure activities.

DFO C&P recognizes and acknowledges the potential environmental impacts and compliance issues associated with the debris generated by the shellfish aquaculture industry in BC. As such, C&P has been engaged with stakeholders, First Nations, NGOs and industry, as part of working groups, attending shared forums and participating in annual Beach Clean-up events, prior to COVID-19. C&P was also involved in the development of the Shellfish Aquaculture Debris Strategy and executed subsequent aquaculture debris focussed inspections in 2018, in concert with the DFO Aquaculture Environmental Operations team.

DFO has recently become aware of issues regarding the traceability of shellfish product in British Columbia. Traceability refers to the department's ability to track product from harvest to plate. Due to human health risks associated with the consumption of contaminated bivalves, combined with the potential for significant socio- economic regional and national impacts, bivalve traceability is a current priority for Aquaculture C&P. As such, all current aquaculture C&P resources have been allocated to executing a Bivalve Traceability Action Plan. Having said this, if a clear violation of the shellfish aquaculture conditions of licence is observed, you are still encouraged to contact the Observe, Record, Report (ORR) Line 1-800-465-4336; http://www.dfo-mpo.gc.ca/fm-gp/enf-loi/report-signaler-eng.htm.

DFO also currently chairs an Aquaculture Management Advisory Committee (AMAC) bringing together members of government, industry, First Nations and Environmental Non-Governmental Organizations (ENGO) to address issues in aquaculture management. The advisory committee meets twice per year, and you are always welcome to engage by reaching out to your local government representative on the committee, in order to have your concerns brought forward. The representative of local government in your area is Daniel Arbour, Director with the Comox Valley Regional District (reachme@danielarbour.ca).

TC's Navigation Protection Program (NPP) is responsible for administering the *Canadian Navigable Waters Act* (CNWA) and its associated regulations and orders. Aquaculture works placed in the waterways of Canada can pose a hazard to navigation. Therefore, to mitigate any potential impacts on navigation safety, all works must be marked in accordance with the requirements of the Private Buoy Regulations made under the *Canada Shipping Act* and the conditions of approval under the CNWA. Marking site boundaries ensures that all navigational requirements are being met and increases navigational safety for other marine resource users in the area. Because of the nature of the working environment and oceanographic conditions, from time to time shellfish aquaculture gear including work floats and other equipment moves beyond its original position within the tenure area (and sometimes out of it). While the current work associated with Facility 1004 isn't currently located within its own tenure boundary, it doesn't pose an immediate navigation safety concern. NPP is committed to working with industry partners, marine users, and other government agencies to build a compliance program. This program would look at Baynes Sound as a whole rather than target specific worksites and would focus on developing stronger relations between the aquaculture community and those impacted by it. Please contact Lawrence Kuan with TC to express future concerns related to navigation lawrence.kuan@tc.gc.ca .

To express concerns related to the infrastructure that is located outside of the public viewable management plan, you may contact Nichole Prichard with the Ministry of Forests, Lands, Natural Resource Operations and Rural Development at Nichole.Prichard@gov.bc.ca .

Sincerely,

Brittany Myhal
Aquaculture Management Coordinator, Fisheries Management Branch - Pacific Region
Fisheries and Oceans Canada | Government of Canada
Brittany.Myhal@dfo-mpo.gc.ca | Tel: 250-739-9217

Coordinatrice - Gestion de l'aquaculture, Direction de la gestion des pêches - Région Pacifique
Pêches et Océans Canada | Gouvernement du Canada
Brittany.Myhal@dfo-mpo.gc.ca | Tél: 250-739-9217

From: Wil Cottingham <wcottingham@islandstrust.bc.ca>
Sent: Tuesday, June 16, 2020 1:54 PM
To: AQSF / AQSF (DFO/MPO) <ShellfishAquaculture.XPAC@dfo-mpo.gc.ca>
Cc: Denman Island Local Trust Committee <DenmanIslandLocalTrustCommittee@islandstrust.bc.ca>; ADIMS info <diconcerns@gmail.com>; Lesley.Fettes@gov.bc.ca; john.mackie@tc.gc.ca; lawrence.kuan@tc.gc.ca; Roberta.dight@tc.gc.ca
Subject: Complaint from Denman Island LTC regarding DFO Aquaculture Licence Number 119203

On behalf of Sue Ellen Fast, Chair of the Denman Island Local Trust Committee, please find attached a letter of complaint regarding DFO Aquaculture Licence Number 119203, BC Landfile Number 1400036, Denman Point, Denman Island, Baynes Sound.

Thank you,

Wil Cottingham
Office Administrative Assistant
Islands Trust-Northern Office
700 North Road
Gabriola Island, BC V0R 1X3
Phone: 250-247-2063
Enquiry BC Toll-free call 1-800-663-7867
or from the lower mainland 604-660-2421

Websites: www.islandstrust.bc.ca | www.islandstrustconservancy.ca
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STAFF REPORT

File No.: DE-RZ-2018.1
(Denman Housing Association)

DATE OF MEETING:	September 8, 2020
TO:	Denman Island Local Trust Committee
FROM:	Sonja Zupanec, Island Planner Local Planning Services
SUBJECT:	Denman Green - OCP and LUB amendments to permit a transfer of density and affordable housing development Applicant: Simon Palmer on behalf of the Denman Housing Association Location: PID 006-657-290 and 009-704-523 Denman Island

RECOMMENDATION

1. **That the Denman Island Local Trust Committee defer further consideration of Proposed Bylaw Nos. 235 and 237(OCP) and 236 and238 (LUB) until the applicant has secured source water approval from Island Health for a primary and back up water supply, to support the application for subdivision and development of 20 units of proposed housing.**

REPORT SUMMARY

Staff maintain that Proposed Bylaw Nos. 235 and 237(OCP) and 236 and238 (LUB) for the subdivision, density transfer and development of land for affordable rental housing under application DE-RZ-2018.1 (DHA) are unable to advance for consideration of further readings due to insufficient evidence that the proposed provision of rainwater to support the subdivision and development of housing will be acceptable to Island Health. The rainwater system has not been approved by Island Health and remains inconsistent with the Local Trust Committee's (LTC) request for proof of potable water and the Islands Trust Policy Statement 4.4.2. Staff recommend the LTC defer consideration of second reading; further amendments to the proposed bylaws or drafting of a Housing Agreement until the applicant has secured source water approval from Island Health, to satisfy requirements for subdivision and future development for 20 units of affordable rental housing.

BACKGROUND

The LTC gave first reading to the four amending bylaws to enable the Denman Green proposal to proceed. Agency and First Nation referral responses were posted to the application webpage and summarized in the March 2020 report. A recorded electronic Community Information Meeting (CIM) was held on August 6, 2020 and is available via live stream on the application page. The primary purpose of the CIM was to present the most up to date information on the application and answer questions from members of the community. The Denman Advisory Planning Commission (APC) met on August 14, 2020 to respond to the LTC's request for comment on the proposed rainwater source water system for 20 units of housing. A copy of the APC minutes are included in the September 8, 2020 LTC agenda package and staff analysis provided later in this report.

ANALYSIS

Staff have identified the following issues for LTC consideration:

- Summary and analysis of APC referral response.
- Summary and analysis of professional reports addressing updated wastewater and geotechnical issues.
- Recommended source water approval from Island Health for bylaw amendment and subdivision applications to proceed.

Denman Advisory Planning Commission Response

The APC met on August 14, 2020 and passed the following resolutions, which are consistent with staff recommendations to the LTC:

> **DE-APC-2020-05 It was MOVED and SECONDED**
>
> That the Denman Island Advisory Planning Commission would not comment on questions related to required amounts of water per person per day or to climate change issues affecting rainwater availability but would defer these questions to experts. **CARRIED**
>
> **DE-APC-2020-06 It was MOVED and SECONDED**
>
> That the Denman Island Advisory Planning Commission recommend moving forward with Proposed Bylaw Nos. 235 and 237 of the Official Community Plan and Nos. 236 and 238 of the Land Use Bylaws, pending approvability by the Vancouver Island Health Authority of the proposed Denman Green rain-water system. **CARRIED**

The APC also passed the following resolution:

> **DE-APC-2020-07 It was MOVED and SECONDED**
>
> That the Denman Island Advisory Planning Commission hold another meeting after Simon Palmer's upcoming meeting with the Vancouver Island Health Authority. **CARRIED**

Staff strongly recommend that the LTC advise the APC to not hold a subsequent public meeting to consider any information related to the applicant's discussions with Island Health until the LTC has had an opportunity to review this information and determined a subsequent referral to the APC is warranted.

Receipt of Additional Professional Reports

Wastewater Assessment

An updated wastewater assessment report has been submitted for the proposed 20 units of affordable rental housing (Attachment 1). The report concludes that there is adequate area and soil conditions available for primary and reserve disposal fields. Preliminary designs are for a sewage disposal system capable of treating up to 18,200 litres per day. This information will be required to support the application for subdivision with the Ministry of Transportation and Infrastructure.

Geotechnical Analysis

A report on the existing geotechnical conditions has been submitted (Attachment 2). The report concludes that subdivision and development of the subject property is geotechnically feasible and safe from geohazards and flooding hazards. This information will be required to support the application for subdivision with the Ministry of

Transportation and Infrastructure as well as an application for a Development Permit. A portion of the proposed receiver lot falls within the boundaries of the Denman Island Steep Slopes Development Permit Area (No. 2).

Source Water Approval

The applicant has submitted a plan for a unique large scale rainwater supply system to support the bylaw amendment application and subsequent application for subdivision to develop 20 units of affordable housing. Unfortunately, despite the strength of many aspects of this proposal, staff cannot recommend the LTC advance the proposed bylaws until the applicant has demonstrated that the rainwater supply can be approved as a source water supply by Island Health. Source water approval from Island Health's Environmental Health Officer (EHO) would be ***instrumental*** in demonstrating to the Provincial Approving Officer, the Executive Committee of the Islands Trust and the LTC that the subdivision of land and development of 20 units of affordable rental housing is feasible and appropriate when supplied by an engineered rainwater system. Staff recommend the applicant work with Island Health's EHO to submit appropriate engineered drawings, rainwater data, preliminary building plans and any other information deemed necessary by the EHO to demonstrate the appropriateness of the water system. The applicant has advised planning staff that a meeting with Island Health is being scheduled to discuss potential next steps.

Rationale for Recommendation

The applicant suggests that the proposed rainwater system is more progressive, practical and sustainable than any groundwater alternative. Despite the strengths of many aspects of this proposal, staff cannot recommend the LTC advance the proposed bylaws until the applicant has demonstrated that the rainwater supply can be approved as a source water supply by Island Health. Proposed Bylaw Nos. 235, 236, 237 and 238 cannot be advanced to second reading without adequate understanding of the proposed water system and changes that may need to be contemplated to the amending bylaws to reflect the proposed water system. The staff recommendation is found on page 1 of this staff report.

NEXT STEPS

Should the LTC concur with the staff recommendation, staff will advise the applicant to secure source approval from Island Health to support the advancement of the four bylaws under consideration and provide planning staff will sufficient documentation for future LTC consideration.

Submitted By:	Sonja Zupanec, RPP, MCIP, Island Planner	August 21, 2020
Concurrence:	Heather Kauer, RPP, MCIP, AICP Regional Planning Manager	August 24, 2020

ATTACHMENTS

1. Denman Green Sewage Disposal Revised Report August 2020
2. Denman Green Geotechnical Report July 2020
3. Denman Green water system correspondence from applicant August 2020.

H2O ENVIRONMENTAL LTD

3060 Lake Road, Denman Island, BC V0R 1T0
Tel :(250) 335-1864 Fax: (250) 335-1846
Email: h2oenv@telus.net

August 5, 2020 H_2O File: 18-13

Denman Housing Association
3720 East Road
Denman Island, BC V0R 1T0

Re: Wastewater Assessment for Development Using Recycled Greywater
SW ¼ Sec. 17, Nanaimo LD, Denman Island

Introduction

H_2O Environmental Ltd. (H_2O) was retained by the Denman Housing Association (DHA) to aid in the characterization of the soils and groundwater conditions of a proposed subdivision at the above legal address.

Domestic water for this area is supplied by private wells or rainwater catchment. The size of the planned lot is approximately 8.3 ha.

Wastewater Considerations

The proposed development onsite is ten 1 bedroom units, six 2 bedroom units and four 3 bedroom units, The SPM[1] lists the daily design flow (DDF) as 700, 1,000 and 1,300 litres per day for the 1, 2 and 3 bedroom homes, respectively, for a total DDF of 18,200.

The DHA has chosen to design the waste streams with reuse of the very light greywater from the washroom showers and sinks in each dwelling unit. However, the reuse of greywater does not allow a reduction of the DDF[2].

The average daily flow is estimated to be ½ the DDF or approximately 9,100 litres/day. The DDF is used for design to allow for peak uses.

General Site Information

The proposed lot is rectangular, bordered on the north by Denman Road. To the west and north is undeveloped land. A multiple family co-housing development is located on the large property to the east.

Regional topography consists of a gentle grade to the northeast. The subject lot sloped gently between 2% to 6%. The area of the wastewater dispersal field has a slope of approximately 5%.

The well for the development to the east is located upgradient of the proposed area for wastewater dispersal on the subject lot.

[1] Ministry of Health, *Sewerage System Standard Practices Manual*, Version 3, September 2014
[2] Ministry of Health, *Manual of Composting Toilet and Greywater Practice,* July 2016

Methodology

Four testpits were advanced on the proposed lot. These were placed to the north of the disused logging road that runs diagonally across the site.

To measure the *in-situ* permeability of the soils, two permeameter tests were conducted by H_2O on the proposed lot. Auger holes were advanced within the proposed wastewater dispersal area to a maximum depth of 40 centimetres (cm). The permeameter test consists of a calibrated tube filled with water which is inserted into the auger hole allowing the water to escape at a flow rate determined by the ability of the soil to transmit it away from the tube. The water flow out of the tube is measured and a hydraulic conductivity of the soil is calculated from the results.

Figure 1 showing approximate locations of testpits is attached to this report.

Results

The general soil profile is a thin layer of forest debris, underlain by brown fine sandy loam with 25% to 30% coarse fragments to approximately 45 cm. This layer was followed by a fractured sandstone bedrock layer to approximately 60 cm, with competent sandstone below. It is assumed that surficial groundwater will travel across the bedrock surface.

The average measured field-saturated hydraulic conductivity (K_{fs}) of the two tests on the subject site was 680 mm/day. Although there is no direct conversion to traditional percolation test rates, this is a range roughly equivalent to an 8 to 10 minute/2.54 cm percolation speed. K_{fs} is generally considered to be approximately ½ of the soil hydraulic conductivity, K.

Based on the assumed highest soil hydraulic conductivity of approximately 1.3 m/day, an assumed average hydraulic gradient of 0.05 (from measured onsite slope), and a soil porosity of 25%, the effluent velocity in the soils was calculated using the following equation: V= Ki/n where: **K** = hydraulic conductivity, (2 x K_{fs}), **i** = hydraulic gradient and **n =** the estimated porosity of the sandy soils.

The average velocity of groundwater in the soils on the proposed lot is calculated to be approximately 0.26 metres/day.

Wastewater Treatment Levels

A Type 1 wastewater system is only septic tank treated effluent with total suspended solids (TSS) and five day biochemical demand (BOD_5) on the order of 150-300 milligrams per litre (mg/L) and 150-250 mg/L, respectively. BOD_5 is a measure of the oxygen use of the microbes within the effluent.

Type 2 effluent reduces the effluent concentrations of TSS and BOD_5 to less than 45 mg/L. In British Columbia, a Type 2 10/10 system is recognized that delivers consistent quality effluent with BOD_5 and TSS at 10 mg/l.

Typically, fecal coliform concentrations from a septic tank range from 10^3 to 10^4 colony forming units (CFU) per 100 millilitres. Type 3 effluent standards call for both TSS and BOD_5 to be <10 mg/L and reduction of the fecal coliforms to less than 400 CFU per 100 milliliters.

These bacterial standards are generally achieved with tertiary treatment, i.e. – a UV light or placement of a greater depth of engineered sand under the dispersal field (passive Type 3). Each higher level of treatment allows a significant reduction in the size of the dispersal field.

However, the key factor in determining the size of the dispersal field is the allowable Linear Loading Rate (LLR). This value takes into account the soil and site characteristics and ties in the DDF volumes to give a minimum length across the slope for the dispersal field.

The effluent will be treated to Type 2 10/10 levels and pathogenic reduction to Type 3 concentrations will be achieved through a placement of specified sand under the dispersal fields

Discussion and Preliminary System Design

The groundwater velocity on the subject site averages 0.26 m/day. The lowest elevation of the proposed area for the wastewater dispersal field is approximately 100 metres distant from Denman Road. The travel time to Denman Road in the subsoils would be in excess of 1 year. Fourteen days is the generally accepted time for full polishing and natural attenuation of Type 1 effluent in the native soils. This system will be providing higher quality effluent than Type 1.

H_2O has split the wastewater collection into two separate systems. The north collection system would consist of three septic tanks gravity flowing to a 7,728 litre concrete equalization tank. The south system, which services twice as much effluent flow, would have three septic tanks flowing into a 16,183 litre concrete equalization tank. The septic tanks sized would be sized for adequate retention for the dwelling configurations. The two equalization tanks would pump effluent on a timed basis to the treatment tanks containing a Bionest BN 5000 Bioreactor located centrally to both fields. Effluent would then be time dosed to the separate dispersal fields. Site plans are presented in Figures 2 and 3.

The dispersal fields would use a pressurized distribution arrangement to optimize treatment in the existing soil conditions and avoid soil saturation. Time dosing spreads the application of daily effluent over an entire 24 hour period instead of dosing the field only at peak time uses such as in the morning and evening.

Based on the hydraulic loading rate and the linear loading rate in the SPM, the dispersal field for the development would have to be 303 metres long. This can be reduced by creating four separate dispersal fields, approximately 76 metres long, with one lower on the slope and separated by 6 metres. The total length of each side would be 76 metres.

The fields would consist of two laterals on top of 15 cm of aggregate on top of 30 cm of specified sand. There would be duplex pumps in the dose tanks and an indexing valve to

separate the dispersal field into four zones. This reduces the required pump size and allows for better distribution of effluent. The basic configuration of each of the dispersal fields is presented in Figure 4.

There is adequate area available for both primary and reserve dispersal fields on the subject lot.

Conclusions

The daily design flow will be 18,200 litres/day with an average flow of approximately 9,100 litres/day. Available thickness of permeable soil is approximately 45 cm below grade. H_2O has preliminarily designed a wastewater system that will safely disperse Type 3 effluent passively to the environment. The wastewater system will be able to safely collect, treat and disperse the effluent from the 20 planned homes.

Due to the soil characteristics and the grades onsite, the effluent travel time is more than adequate to ensure there is minimum risk that the treated effluent will negatively impact the neighbouring properties.

Closure

H_2O is pleased to provide you with this letter regarding the soil conditions on the proposed subdivision of the SW1/4 of Section 17 on Denman Road on Denman Island. Please call with any questions you may have regarding this information.

H_2O Environmental Ltd.

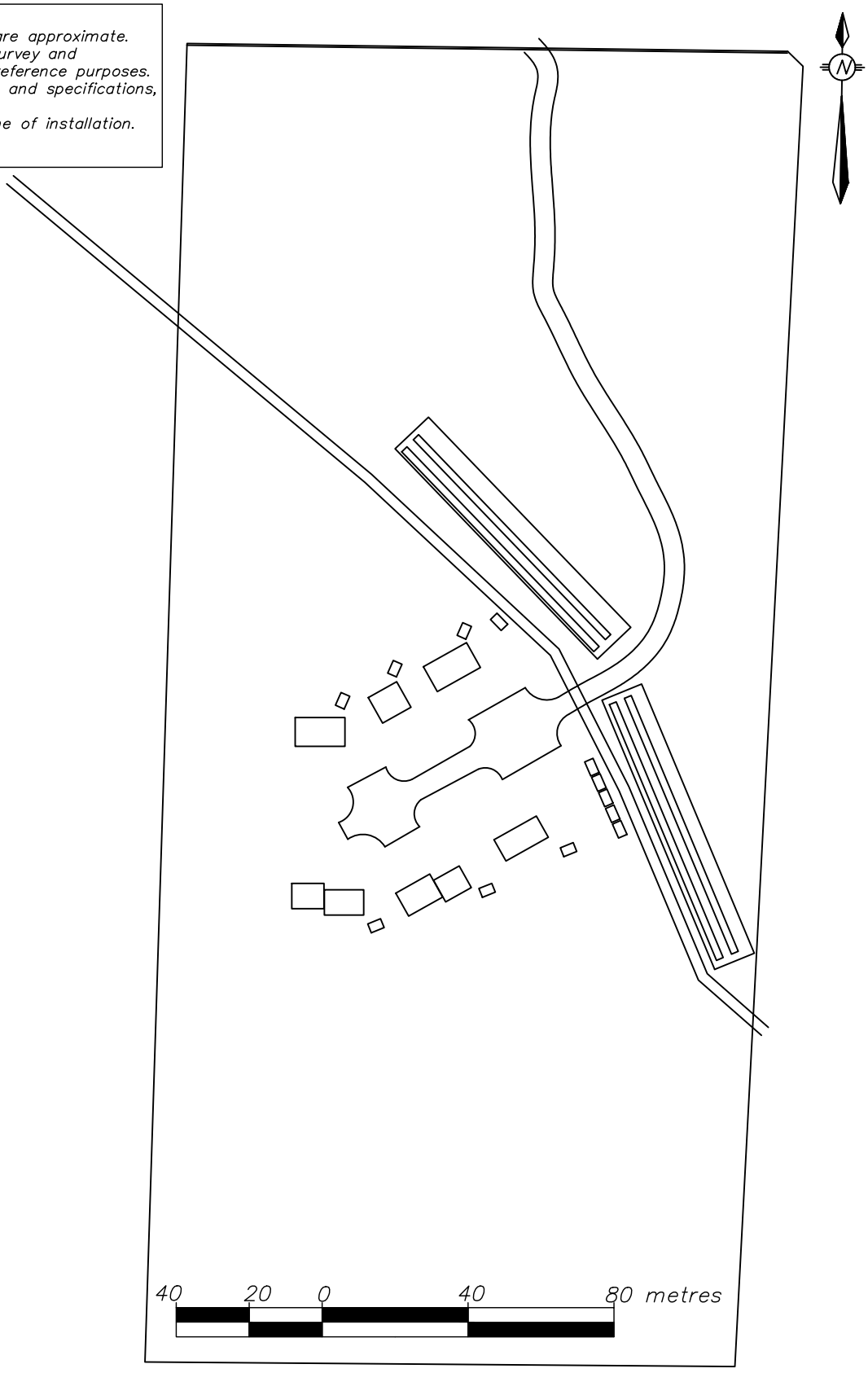
Per: _____ 2020-08-06
Steven M. Carballeira, P.Geo.

Attachments:
Figure 1 – Approximate Locations of Testpits
Figure 2 – Site Plan
Figure 3 – Site Plan Detail
Figure 4 – Dispersal Field Configuration



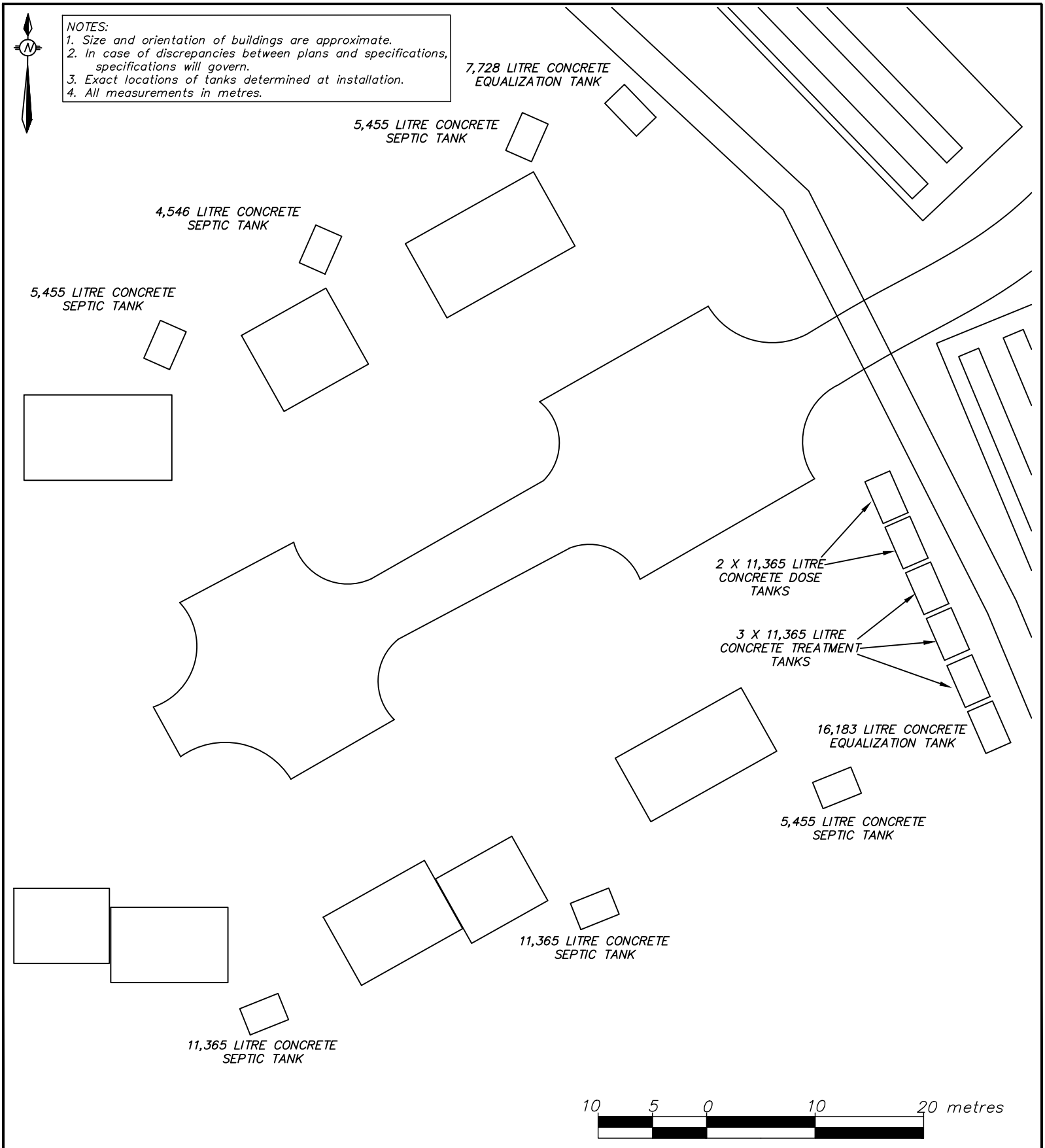
Figure 1 – Approximate Locations of Testpits

NOTES:
1. Size and location of lot and buildings are approximate.
2. This drawing is not a legal boundary survey and should be used only for wastewater reference purposes.
3. In case of discrepancies between plans and specifications, specifications will govern.
4. Exact tank locations determined at time of installation.
5. All measurements in metres.
6. Base drawing courtesy of DHA.



PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA S.M. CARBALLEIRA 27395 2020-08-06

TITLE: SITE PLAN		DATE: AUG. 6, 2020	H2O ENVIRONMENTAL LTD
		DRAWN BY: SMC	
PROJECT: WASTEWATER SYSTEM DESIGN DENMAN GREEN		CHECKED BY: SMC	
		SCALE: AS SHOWN	
CLIENT: DENMAN HOUSING ASSOCIATION		PROJECT NO. 18-13	FIGURE 2

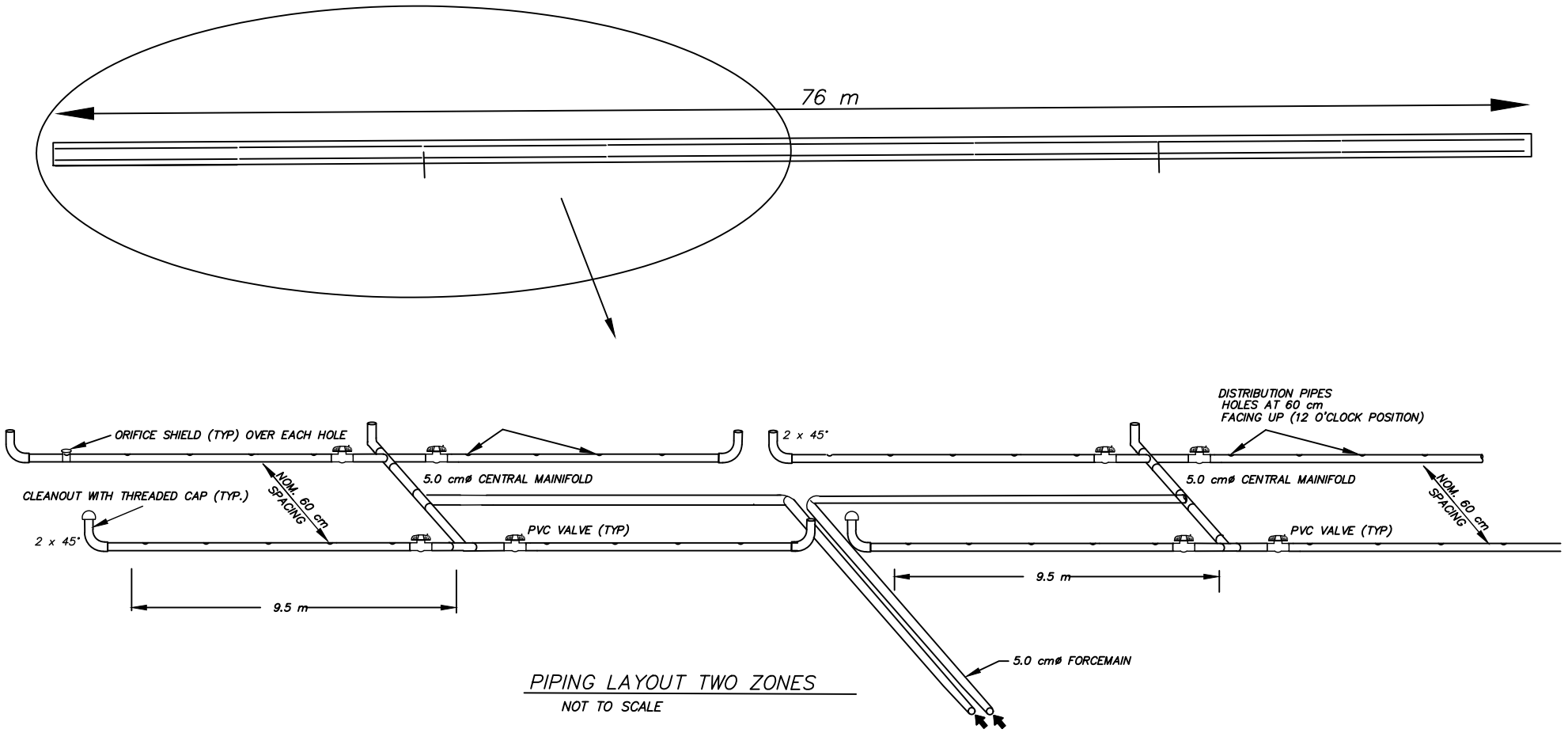


PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA S.M. CABALLERA 42095 2020-08-06

TITLE: PRELIMINARY SITE PLAN DETAIL 1	DATE: AUG. 6, 2020	H2O ENVIRONMENTAL LTD
	DRAWN BY: SMC	
PROJECT: WASTEWATER SYSTEM DESIGN DENMAN GREEN	CHECKED BY: SMC	
	SCALE: AS SHOWN	
CLIENT: DENMAN HOUSING ASSOCIATION	PROJECT NO. 18-13	FIGURE 3

H20 ENVIRONMENTAL LTD. 3060 LAKE ROAD, DENMAN ISLAND, BC V0R 1T0 250-335-1864

NOTES:
1. Size and location of lot and buildings are approximate.
2. This drawing is not a legal boundary survey and should be used only for wastewater reference purposes.
3. In case of discrepancies between plans and specifications, specifications will govern.
4. All measurements in metres, except as noted.



PIPING LAYOUT TWO ZONES
NOT TO SCALE

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA S.M. CARBALLEIRA 27395 2020-08-06

TITLE: PRELIMINARY DISPERSAL FIELD PLAN	DATE: AUG. 6, 2020
	DESIGN BY: SMC
PROJECT: WASTEWATER SYSTEM DESIGN DENMAN GREEN	DRAWN BY: SMC
	SCALE: NTS
CLIENT: DENMAN HOUSING ASSOCIATION	PROJECT NO.: 18-13

H2O ENVIRONMENTAL LTD

FIGURE 4

RYZUK GEOTECHNICAL
Engineering & Materials Testing

28 Crease Avenue, Victoria, BC, V8Z 1S3 Tel: 250-475-3131 Fax: 250-475-3611 www.ryzuk.com

July 16, 2020
File No: 1471-19

M'akola Development Services
102-550 Goldstream Avenue
Victoria, BC
V9B 2W7

Attn: Jordan Brietzke (By E-mail: jbrietzke@makoladev.com)

Re: Proposed Subdivision and Housing Development
The South West ¼ of Section 17, Denman Island, Nanaimo District, Except that Part in Plan 14174, VIP77481 and VIP87456
Denman Road – Denman Island, BC

Introduction

As requested, as per our accepted proposal of March 27, 2020, we have undertaken an assessment of the existing geotechnical conditions at the site as such relate to the proposed subdivision and housing development. A portion of the site is within Development Permit Area (DPA) No. 2 Steep Slopes of the Denman Island Official Community Plan (OCP) Bylaw 185, and Land Use Bylaw 186. We understand that the proposed development consists of a two lot subdivision and construction of a 20-unit development that will include a mix of 1, 2, and 3-bedroom standalone units. Our current scope of work includes geotechnical services to satisfy the Ministry of Transportation and Infrastructure (MOTI) requirements, as well as a general "Phase 1" geotechnical site investigation.

We have reviewed the MOTI "Proposed Subdivision Review Status" (PSRS) which requires an assessment of landslide hazards and flood hazards within the property, duly executed with Appendix D: Landslide Assessment Assurance Statement and Appendix I: Flood Hazard and Risk Assurance Statement, as a condition of the subdivision review process. Our work has consisted of an office-based study, a visual geohazard assessment, as well as preliminary geotechnical investigation for the purpose of providing preliminary comments on project feasibility and relevant DPA guidelines. Our associated observations, comments, and recommendations in this regard are summarized herein, along with the noted assurance statements. Our work has been carried out in accordance with, and is subject to, the attached Terms of Engagement.

Site Description

The site proposed for subdivision is irregular in shape with an area of approximately 29.5 hectares. It is bounded by Denman Road to the north, and surrounding rural, forested / lightly developed properties to the south, east, and west. The site is accessed from Denman Road by an existing unpaved logging road which transects the northeastern portion of the property in a northwest / southeast direction. The site is generally forested and currently lies otherwise undeveloped. Terrain within the site slopes up gently from Denman Road toward the southwest to the location of a regional ridge within the southwest of the property which slopes steeply down to the southwest. Slopes below the ridge transition to moderately sloping, and are gently sloping to near level within the far southwest corner of the lot. Overall relief in the gently sloping upland portion is estimated in the order of 30 m. Available contours indicate an average slope in this area of less than 5 degrees from horizontal, which is generally consistent with our observations. Overall relief from the ridge top to the southwestern limit is estimated to be in the order of 60 m. Available contours suggest the steep slope is inclined at an average of 30 to 40 degrees from horizontal, however our observations of the crest of slope indicate that such is likely comprised of stepped/benched steeper and flatter bedrock slopes. It is the area of the steeply sloping ridge which is designated within the steep slopes DPA.

The attached Site Plan shows the site location and proposed subdivision, including the portion of the site designated within the noted DPA. The attached contour map shows the terrain information available from the Comox Valley Regional District iMap.

Investigation & Surface/Subsurface Conditions

Our office-based review has included perusal of the Proposed Subdivision Plan, Denman Green Concept Site Plan, and bedrock geology mapping, as well as the DPA information and iMap contours noted above. Our field assessment consisted of a walkthrough of the northern approximately half of the property, including the proposed development site. The southern approximately half of the property was generally inaccessible due to thick understory vegetation or steeply sloping topography, although we were able to access the crest of the steep slope to visually verify its location.

Our review of geology mapping indicates that the site is underlain by sedimentary rock of the Upper Cretaceous Nanaimo Group. Mapping indicates massive, thick-bedded sandstone of the De Courcy Formation underlies the majority of the site and ridge, transitioning to massive mudstone of the Cedar District Formation in the southwest.

To assess the existing shallow subsurface conditions within the proposed development site, we completed a brief test pit investigation involving three hand dug test holes. We also logged the conditions within an existing test hole which was likely excavated for investigation and design of

the proposed septic system. See the attached Test Hole Location Plan. Soils within the test holes consisted of an upper 0.05 to 0.2 m thick layer of vegetation and topsoil, atop native soils consisting of sandy silt and/or silty fine sand with sandstone fragments. Native soils were generally weathered/disturbed and contained live roots in the upper zone, becoming harder/denser with depth. The hand dug holes were excavated to depths between 0.15 and 0.4 m and the existing test hole extended a depth of 0.6 m. Hard digging was encountered in all hand dug holes and in Test Hole 20-03 it was difficult to tell whether refusal was due to a large rock fragment or intact bedrock.

No groundwater seepage or streams were noted in the areas assessed. Localized ponded water may be present within a small surface depression south of the logging road in the midportion of the proposed Lot 1.

Geotechnical Assessment

Based on our assessment, we consider subdivision and residential development of the property to be geotechnically feasible. We consider the proposed development site on Lot 1, including the existing access road, to be safe from geohazard and flooding hazard. We also consider there to be areas within the proposed Lot 2 which are safe from geohazard and flooding hazard.

Geohazard Assessment

Within the property, the existing potential for geohazards is associated with the steeply sloping ridge in the southwestern portion, and smaller, locally moderate to steep slopes within the northeastern portion. Given the size of the site, rather than carrying out a detailed assessment of steep slope areas, we have identified building areas on each proposed lot that do not contain steep slopes and are considered safe from geohazard. Both safe building areas are located outside DPA 2, therefore no specific recommendations with respect to the DPA guidelines have been provided. We propose that a covenant be registered on the lots such that remaining areas of the properties would require further geotechnical assessment if desired to determine whether such are considered safe for development. We expect that there are safe building locations present within these remaining areas, however, we have not confirmed the location(s) of such at this time.

Lot 1

Based on our visual assessment, we consider that portion of the proposed Lot 1 including the logging road and the land to its south to be a safe building location. This is shown on the attached Site Plan.

Lot 2

Based on our visual assessment, we consider that portion of the proposed Lot 2 extending from the northern boundary between the western boundary and the proposed Lot 1 boundary, approximately halfway to the southern property boundary, to be safe for building locations. This is shown on the attached Site Plan. The safe building area on Lot 2 has considered a conservative setback from the steep slope of approximately 20 m from the crest as based on our acquisition of GPS data on site. This could be confirmed when the safe building area is surveyed on the site, at which time the safe building area boundary could be located more accurately 20 m back of the steep slope crest.

Due to the lack of watercourses, the site elevation, and the gentle slopes, we consider the risk of flood and avalanche to be negligible within both of the identified safe areas.

The Approving Authority (MOTI) has indicated that for the purposes of the Appendix D statement, the Province of British Columbia does not have an adopted level of landslide safety. However, they have indicated that when considering risk from an event based on its probability of occurrence, the qualified professional must distinguish between damaging events and life-threatening events. For damaging events, a probability of occurrence of 1 in 475 years (10% probability in 50 years) should be considered for landslide hazards, a probability of occurrence of 1 in 200 years should be considered for flooding hazards, and a probability of occurrence of 1 in 300 years should be considered for snow avalanche hazard. For life threatening catastrophic events, a probability of occurrence of 1 in 10,000 years should be considered. In addition, the BC Building Code requires new construction to be designed to remain safe for egress due to a seismic event with a probability of occurrence of 1 in 2475 years (2% probability of exceedance in 50 years).

Foundations

We anticipate conventional reinforced concrete spread footings will be the desired foundation choice. All topsoil and loose/disturbed soil should be removed from building areas to expose native, undisturbed mineral soil (or intact bedrock, if encountered). For design, bearing resistance values of 150 kPa (SLS) and 225 kPa (ULS) can be assumed for foundations bearing on native soils/bedrock or approved engineered fill atop such. Higher bearing capacity values could likely be provided if required by the structural design. The above values are provided for design and should be confirmed in the field by qualified personnel at the time of construction.

Seismic Considerations

The site is located in an area of high seismicity. Considerable earthquake risk exists, stemming from its proximity to the Cascadia subduction zone and numerous more local faults in southwestern BC and northwestern Washington State.

Based on the anticipated and observed soils, we expect a Seismic Site Classification of 'C' to be appropriate for the site, in accordance with the current BC Building Code. A Site Class of 'B' may be available where there is no more than 3 m of soil between the bedrock and underside of footings, which could be investigated further at the time of building design if desired. Information from Natural Resources Canada's 2015 National Building Code Seismic Hazard Calculator indicates response spectral accelerations for 'firm' ground (Site Class 'C') as follows, for an event with a 2% in 50 year probability of exceedance.

Period (sec)	**PGA**	**PGV**	**0.2**	**0.5**	**1.0**	**2.0**	**5.0**
Response (g) Site Class 'C'	0.35	0.58	0.76	0.74	0.49	0.31	0.11

Drainage

We consider conventional perimeter foundation drainage, consisting of perforated pipe surrounded with drain rock, all wrapped in non-woven geotextile filter fabric, to be suitable to maintain a locally low groundwater table and prevent the buildup of hydrostatic pressure against foundations. Final grades should be shaped to direct surface water away from buildings and infrastructure.

Collected stormwater should be disposed of away from/downslope of the buildings in a manner that adequately disperses water to prevent erosion. Given the size of the property, we expect that on site disposal will be geotechnically feasible and that a number of options are available including surface disposal in a swale or dedicated dispersal area, or in-ground disposal. Design of stormwater systems should be completed by others, however, we would be available to provide further information regarding sizing of in-ground disposal pits upon request.

Driveways/Civil Infrastructure

Construction of access driveway, parking areas, solar array, water treatment facility, septic fields and other services as shown on the concept plan are considered geotechnically feasible. At this time, no details have been provided as to the proposed traffic loading or road surfacing (ie. paved or unpaved). However, we anticipate the roads would be subject to relatively light loading associated with residential vehicle traffic, and occasional heavier vehicles such as

garbage and fire trucks. Typically, the proposed road alignment would be developed at the onset of construction for use as a haul road and the heaviest traffic would be experienced during the construction period.

Proposed access roads should be constructed of well graded, thoroughly compacted granular material, placed upon approved subgrade. For new roads, subgrade preparation should consist of removal of all topsoil to expose native, undisturbed mineral soil or bedrock. For the existing logging road, the thickness and consistency of the existing fills could be evaluated at the early stage of construction by advancing a series of test pits. Alternatively, the performance of the road and its suitability for continued use could be evaluated by its response to repeated truck traffic during construction. If any soft spots develop, a qualified professional should review and provide recommendations for remediation. Given that the construction details of the existing road are unknown, reuse of the road carries residual risk that non-select fills or organics may be present within the fill, in which case future consolidation and associated settlement could be experienced. Road structure recommendations can be provided as necessary once further details are provided.

Conclusion

Our assessment has considered a safe building site to be that which is free from hazard or has a low hazard of landslide and is considered safe from a damaging event with a 10% probability of exceedance in 50 years, as well as from seismically induced slope instability associated with a design event having a 2% probability of exceedance in 50 years. The safe building sites are considered safe from a flood event having a 1 in 200 year probability of occurrence and avalanche having a 1 in 300 year probability of occurrence. In addition, we do not consider the site to be subject to risk of naturally occurring catastrophic life threatening hazardous events having a probability of occurrence with a 1 in 10,000 year return period.

Based on the above, we consider the land may be used safely for the use intended, that being residential construction undertaken in accordance with the current BC Building Code and pursuant to our recommendations contained herein. Our assessment is provided in consideration with Section 86(d) and 219 of the Land Title Act, pursuant to the Guidelines for Legislated Landslide Assessments for Proposed Residential Developments in BC and the Guidelines for Legislated Flood Assessments in a Changing Climate in BC (Appendices D: Landslide Assessment Assurance Statement and I: Flood Hazard Assurance Statement are attached).

Closing

This report has been prepared for the exclusive use of our client and authorized representatives. The Ministry of Transportation and Infrastructure, Courtenay Area Office and the Comox Valley Regional District may also rely on this report for the sole purpose of the current subdivision

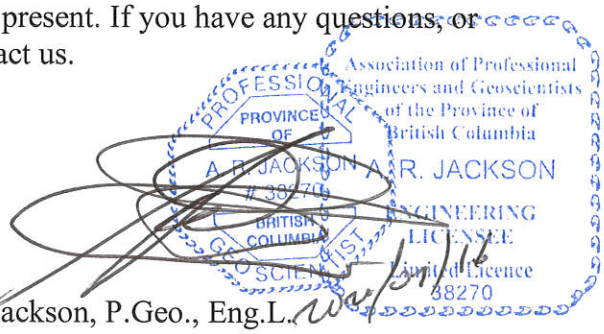
application. The report may be included as a notation on title if required. Any use of this report by a third party, or any reliance on or decisions to be made based on it are the responsibility of such third parties.

The methods used herein are in accordance with generally accepted geological and geotechnical principles and practice. Anticipated conditions are based on available mapping in conjunction with visual observations of surface and subsurface exposures.

We trust the preceding is suitable for your purposes at present. If you have any questions, or require anything further, please do not hesitate to contact us.

Yours very truly,
Ryzuk Geotechnical

Laura Lessingham, GIT
Project Geoscientist



Andrew Jackson, P.Geo., Eng.L.
Professional Geoscientist, Engineering Licensee



Lane Campbell, M.Eng., P.Eng.
Senior Review Engineer

Attachments – Terms of Engagement
Site Plan
CVRD Contour Map
Test Hole Location Plan
Appendix D: Legislated Landslide Assurance Statement
Appendix I: Flood Assurance Statement

RYZUK GEOTECHNICAL
ENGINEERING & MATERIALS TESTING

TERMS OF ENGAGEMENT

1 GENERAL

1.1 Ryzuk Geotechnical (the Consultant) shall render the Services, as specified in the agreed Scope of Services, to the Client for this Project in accordance with the following terms of engagement. The Services, and any other associated documents, records or data, shall be carried out and/or prepared in accordance with generally accepted engineering practices in the location where the Services were performed. No other warranty, expressed or implied, is made. The Consultant may, at its discretion and at any stage, engage sub-consultants to perform all or any part of the Services.

1.2 Ryzuk Geotechnical is a wholly owned subsidiary of C. N. Ryzuk & Associates Ltd.

2 COMPENSATION

2.1 All charges will be payable in Canadian Dollars. Invoices are issued on a monthly basis. Payment is due within 30 days of invoice without hold back. Interest on overdue accounts is 24% per annum. Collection action will commence if invoices are not settled within 90 days.

2.2 Our Services may be engaged on a Fixed Fee basis or hourly rate as per our Fee Schedule. When Services are provided in accordance with our Fee Schedule, the rates for our Services will be marginally adjusted annually in January and the Client agrees to the adjusted rate.

3 REPRESENTATIVES

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

4 TERMINATION

4.1 Either party may terminate this engagement without cause upon thirty (30) days' notice in writing. On termination by either party under this paragraph, the Client shall forthwith pay to the Consultant its Charges for the Services performed, including all expenses and other charges incurred by the Consultant for this Project.

4.2 If either party breaches this engagement, the non-defaulting party may terminate this engagement after giving seven (7) days' notice to remedy the breach. On termination by the Consultant under this paragraph, the Client shall forthwith pay to the Consultant its Charges for the Services performed to the date of termination, including all fees and charges for this Project.

5 ENVIRONMENTAL

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

6 PROFESSIONAL RESPONSIBILITY

6.1 In performing the Services, the Consultant will provide and exercise the standard of care, skill and diligence required by customarily accepted professional practices and procedures normally provided in the performance of the Services contemplated in this engagement at the time when and the location in which the Services were performed.

RYZUK GEOTECHNICAL
ENGINEERING & MATERIALS TESTING

7 INSURANCE

7.1 Ryzuk Geotechnical is covered by Professional Indemnity Insurance as follows:

1. $ 3,000,000 each and every claim
2. $ 5,000,000 aggregate
3. $ 5,000,000 commercial/general liability coverage

7.2 Notwithstanding the provision of insurance coverage by the Client, the Engineer hereby agrees to indemnify and save harmless the Client, its successor(s), assign(s) and authorizes representative(s) and each of them from and against losses, claims, damages, actions, and causes of action, (collectively referred to as "Claims") that the Client may sustain, incur, suffer or be put to at any time either before or after the expiration or termination of this Agreement, that arise out of errors, omissions or negligent acts of the Engineer or their Subconsultant(s), servant(s), agent(s) or employee(s) under this Agreement, excepting always that this indemnity does not apply to the extent, if any, to which the Claims are caused by errors, omissions or the negligent acts of the Client, its other consultant(s), assign(s) and authorized representative(s) or any other persons.

8 LIMITATION OF LIABILITY

8.1 The Consultant shall not be responsible for:

1. the failure of a contractor, retained by the Client, to perform the work required for the Project in accordance with the applicable contract documents;
2. the design of or defects in equipment supplied or provided by the Client for incorporation into the Project;
3. any cross-contamination resulting from subsurface investigations;
4. any Project decisions made by the Client if the decisions were made without the advice of the Consultant or contrary to or inconsistent with the Consultant's advice;
5. any consequential loss, injury or damages suffered by the Client, including but not limited to loss of use, earnings and business interruption;
6. the unauthorized distribution of any confidential document or report prepared by or on behalf of the consultant for the exclusive use of the Client
7. Subsurface structures and utilities

8.2 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 were unmarked and/or undetected, the Consultant will not be held responsible for damages to the site or surrounding areas, utilities/mains or drilling equipment or the cost of any repairs.

8.3 The total amount of all claims the Client may have against the Consultant or any present or former partner, executive officer, director, stockholder or employee thereof under this engagement, including but not limited to claims for negligence, negligent misrepresentation and breach of contract, shall be strictly limited to the amount of any professional liability insurance the Consultant may have available for such claims. Where the Engineer is a corporation or partnership, the Client and Consultants of the Client will limit any claim they may have to the corporation or partnership, without liability on the part of any officer, director, member, employee, or agent of such corporation or partnership.

8.4 No claim may be brought against the Consultant in contract or tort more than two (2) years after the date of discovery of such defect.

9 INDEMNIFICATION FOR KNOWN RISKS

9.1 In the course of our work, we will advise Client of Project risks including vibration, settlement, dewatering, damages associated with construction activity involving earthworks, heavy equipment, excavation, drilling, blasting, trucking and those actions associated with construction of the Project.

9.2 To the fullest extent permitted by law, and notwithstanding any other provision in the Agreement , the Consultant and Consultant's officers, directors, partners, employees, agents, or any of them, shall not be liable to the Client or

anyone claiming by, through, or under the Client for any special, incidental, indirect, or consequential damages whatsoever arising out of, resulting from, or in any way related to the Project or the Agreement from any cause or causes, including but not limited to any such damages caused by the negligence, professional errors or omissions, strict liability, breach of contract, or warranties, express or implied, of the Consultant or Consultant's officers, directors, partners, employees, agents, or any of them, provided that such described risks are within the tolerances that we advise.

10 DOCUMENTS AND REPORTING

10.1 All of the documents prepared by the Consultant or on behalf of the Consultant in connection with the Project are instruments of service for the execution of the Project. 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.

10.2 The documents have been prepared specifically for the Project, and are applicable only in the case where there has been no physical alteration to, or deviation from any of the information provided to the Consultant by the Client or agents of the Client. The Client may, in light of such alterations or deviations, request that the Consultant review and revise these documents.

10.3 The identification and classification as to the extent, properties or type of soils or other materials at the Project site has been based upon investigation and interpretation consistent with the accepted standard of care in the engineering consulting practice in the location where the Services were performed. Due to the nature of geotechnical engineering, there is an inherent risk that some conditions will not be detected at the Project site, and that actual subsurface conditions may vary considerably from investigation points. The Client must be aware of, and accept this risk, as must any other party making use of any documents prepared by the Consultant regarding the Project.

10.4 Any conclusions and recommendations provided within any document prepared by the Consultant for the Client has been based on the investigative information undertaken by the Consultant, and any additional information provided to the Consultant by the Client or agents of the Client. The Consultant accepts no responsibility for any associated deficiency or inaccuracy as the result of a miss-statement or receipt of fraudulent information.

11 JOBSITE SAFETY AND CONTROL

11.1 The Client acknowledges that control of the jobsite lies solely with the Client, his agents or contractors. The presence of the Consultant's personnel on the site does not relieve the Client, his agents or contractors from their responsibilities for site safety. Accordingly, the Client must endeavor to inform the Consultant of all hazardous or otherwise dangerous conditions at the Project site of which the Client is aware.

11.2 The client must acknowledge that during the course of a geotechnical investigation, it is possible that a previously unknown hazard may be discovered. In this event, the Client recognizes that such a hazard may result in the necessity to undertake procedures which ensure the safety and protection of personnel and/or the environment. The Client shall be responsible for payment of any additional expenses incurred as a result of such discoveries, and recognizes that under certain circumstances, discovery of hazardous conditions or elements requires that regulatory agencies must be informed. The Client shall not bring about any action or dispute against the Consultant as a result of such notification.

12 FIELD SERVICES

12.1 Where applicable, field services recommended for the Project are the minimum necessary, in the sole discretion of the Consultant, to observe whether the work or a contractor retained by the Client is being carried out in general conformity with the intent of the Services. Any reduction from the level of services recommended will result in the Consultant providing qualified certifications for the work.

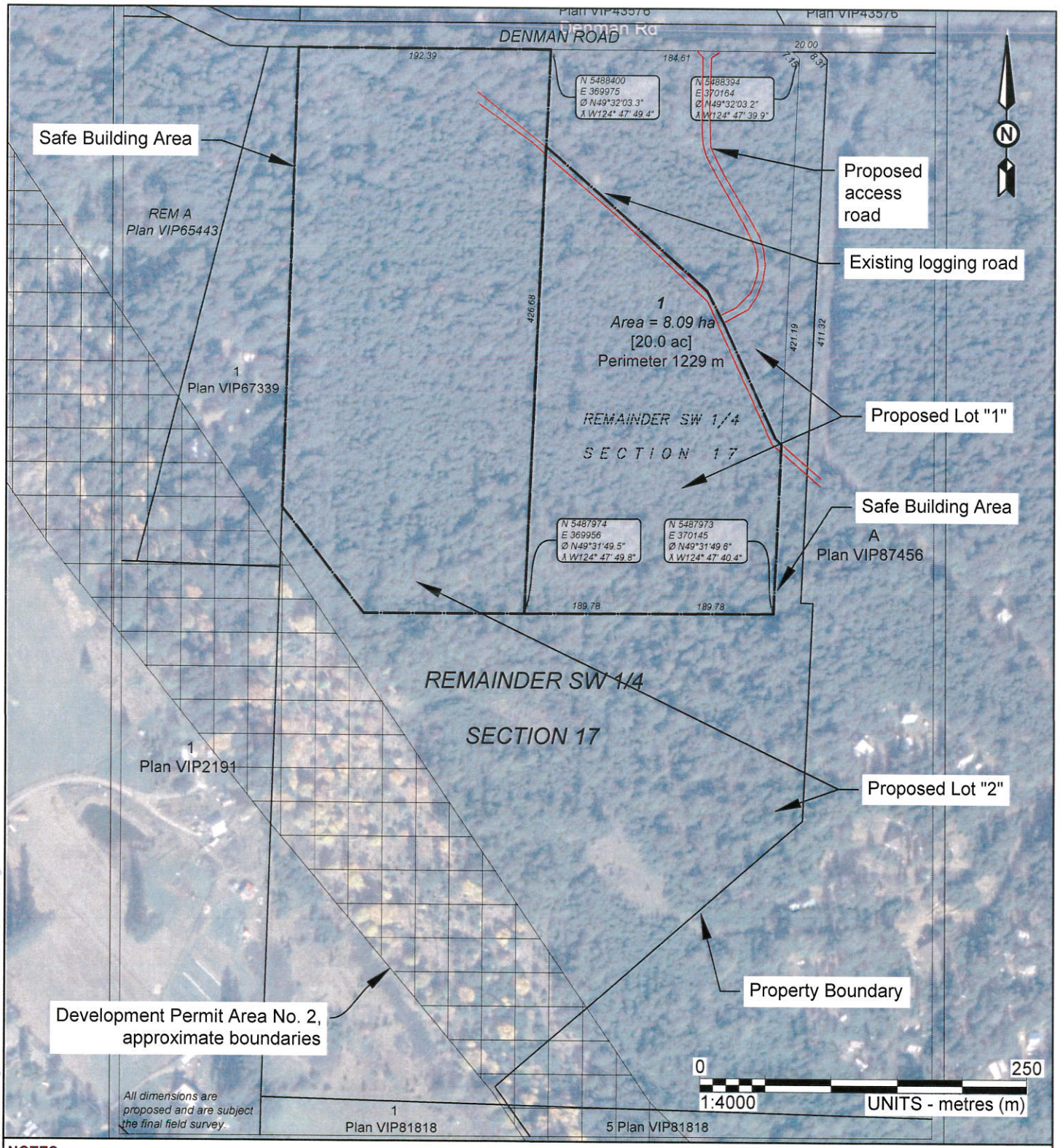
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ENGINEERING & MATERIALS TESTING

13 DISPUTE RESOLUTION

13.1 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 Agreement 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 the mediator, the dispute shall be referred to and finally resolved by arbitration under the rules of the arbitrator appointed by agreement of the parties or by reference to a Judge of the British Columbia Court.

14 CONFIDENTIALITY

14.1 During the period of this Agreement, the Consultant shall not use or disclose any Confidential Information to any third parties. The Consultant will only use Confidential Information for the sole purpose of carrying out the service(s) agreed upon unless withholding such information would present a risk to the safety, health and welfare of the public, the protection of the environment, or health and safety within the workplace. Access to the Client's Confidential Information will be restricted to employees who need the information to perform work duties. The Consultant may share photos of the project without disclosing any information not already made public unless the Client refuses consent of photos shared on social media. Unless already made public, the Consultant will not share owner or site address information on social media or with outside parties.



NOTES

1. This drawing is scaled for 8.5x11 sheet and does not require further scaling to fit. Scales will differ if printed on different sheet size.
2. Lot/parcel boundaries provided by Grant Land Surveying Inc. dated February 2, 2018 and Google Earth Imagery dated October 12, 2018. Development Permit Area No. 2 boundary sourced from Denman Island Official Community Plan Bylaw 185.

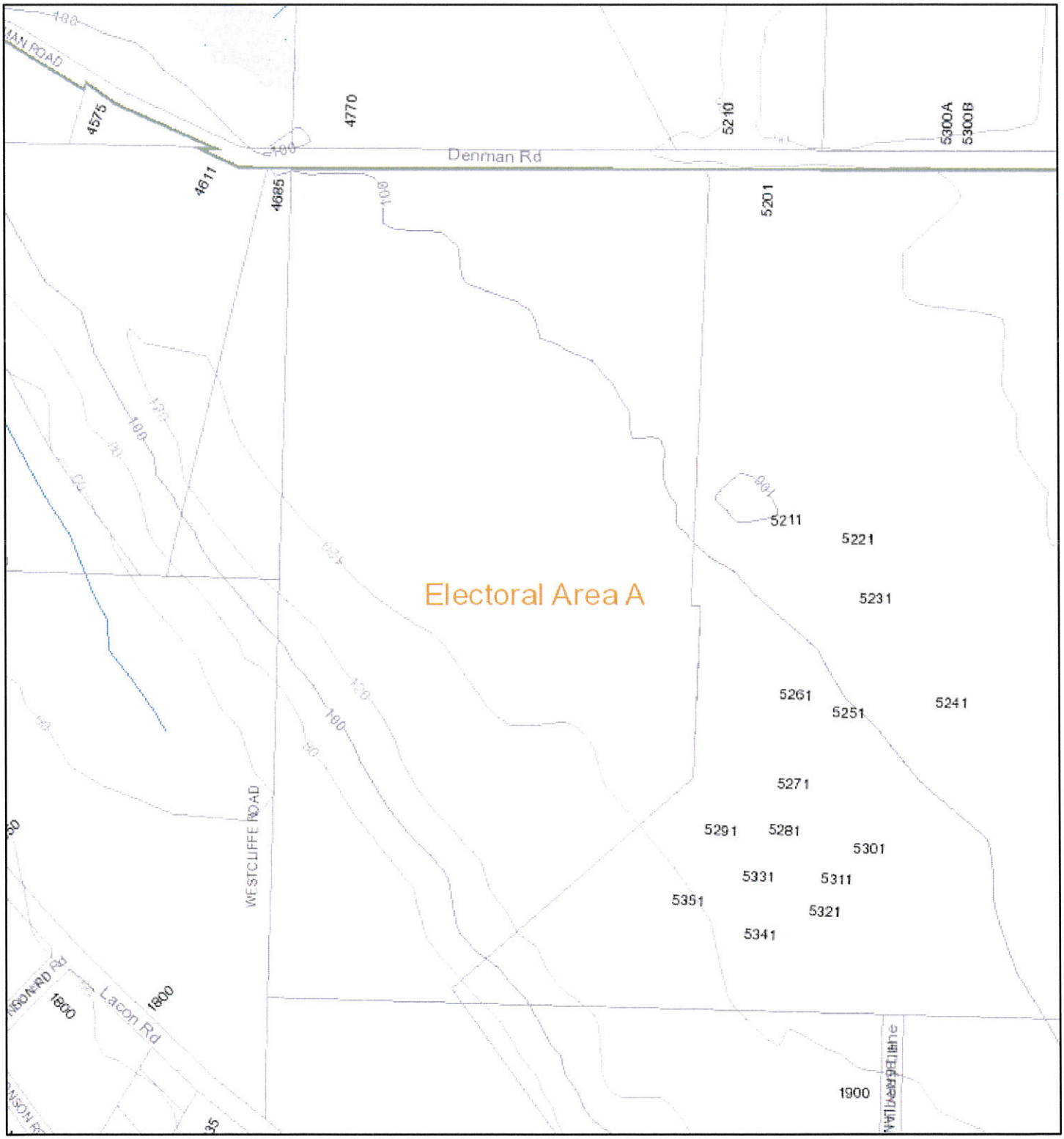
RYZUK GEOTECHNICAL
ENGINEERING & MATERIALS TESTING
28 CREASE AVENUE - VICTORIA, BC V8Z 1S3
TEL: 250-475-3131 FAX: 250-475-3611
mail@ryzuk.com

SEAL: PROFESSIONAL ENGINEER, PROVINCE OF BRITISH COLUMBIA, A. R. JACKSON, 38270, GEOSCIENTIST

DRAWN BY: DEH	CLIENT: M'akola Housing Society
PROJECT MANAGER: LBL	PROJECT TITLE: Proposed Subdivision and Housing Development
REVIEW:	PROJECT ADDRESS: Denman Rd - Denman Island, BC
SCALE: 1:4000	DRAWING NAME: **Site Plan**
DATE: 2020/07/10	PROJECT No.: 1471-19
	SHEET No.: 1 of 1
	REVISION: 00

R:\Ryzuk Data\1-1000 to 8-1949\1471-19 Denman Rd\4 Ryzuk Drawings\1471-19 2020 07 08 Site Plan deh.dwg

CVRD Contour Map



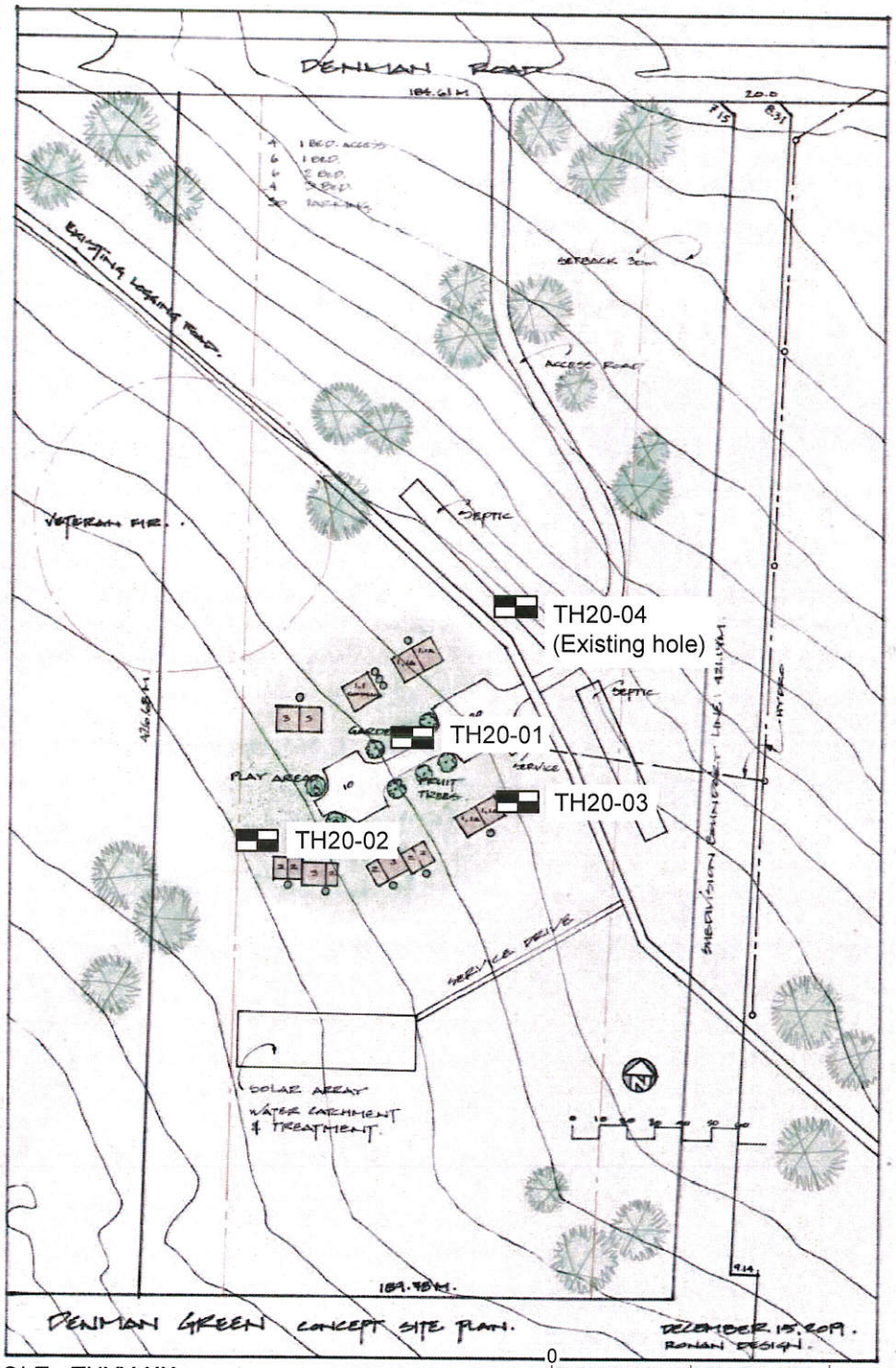
7/10/2020, 10:29:05 AM

1:5,333

0 250 500 1,000 ft

0 75 150 300 m

CVRD iMap 3.1
Copyright CVRD



LEGEND:

TEST HOLE - THYY-XX

0 200

1:2500 UNITS - metres (m)

NOTES

1. Test holes TH20-01 through -03 were hand dug by Ryzuk Geotechnical on June 10, 2020. Locations are approximate, accurate to +/- 5 m.
2. Denman Green Concept Site Plan (December 15, 2019) provided by Ronan Design.

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28 CREASE AVENUE - VICTORIA, BC V8Z 1S3
TEL: 250-475-3131 FAX: 250-475-3611
mail@ryzuk.com

SEAL

DRAWN BY: DEH	CLIENT: M'akola Housing Society
PROJECT MANAGER: LBL	PROJECT TITLE: Proposed Subdivision and Housing Development
REVIEW	PROJECT ADDRESS: Denman Rd - Denman Island, BC
SCALE: 1:2500	DRAWING NAME: **Test Hole Location Plan**
DATE: 2020/07/15	PROJECT No.: 1471-19
	SHEET No.: 1 of 1
	REVISION: 00

APPENDIX D: *LANDSLIDE ASSESSMENT ASSURANCE STATEMENT*

Note: This Statement is to be read and completed in conjunction with the "*APEGBC Guidelines for Legislated Landslide Assessments for Proposed Residential Development in British Columbia*", March 2006/Revised September 2008 ("*APEGBC* Guidelines") and the "2006 BC Building Code (BCBC 2006)" and is to be provided for *landslide assessments* (not floods or flood controls) for the purposes of the Land Title Act, Community Charter or the Local Government Act. Italicized words are defined in the *APEGBC* Guidelines.

To: The *Approving Authority* Date: July 16, 2020

Ministry of Transportation and Infrastructure, Courtenay Area Office

550 Comox Road, Courtenay, BC V9N 3P6

Jurisdiction and address

With reference to (check one):

- ☑ Land Title Act (Section 86) – Subdivision Approval
- ☐ Local Government Act (Sections 919.1 and 920) – Development Permit
- ☐ Community Charter (Section 56) – Building Permit
- ☐ Local Government Act (Section 910) – Flood Plain Bylaw Variance
- ☐ Local Government Act (Section 910) – Flood Plain Bylaw Exemption
- ☐ British Columbia Building Code 2006 sentences 4.1.8.16 (8) and 9.4 4.4.(2) (Refer to BC Building and Safety Policy Branch Information Bulletin B10-01 issued January 18, 2010)

For the Property: he South West 1/4 of Section 17, Denman Island, Nanaimo District, except that part in Plan 14174, VIP77481 AND VIP 87456

Denman Road - Denman Island, BC

Legal description and civic address of the Property

The undersigned hereby gives assurance that he/she is a *Qualified Professional* and is a *Professional Engineer* or *Professional Geoscientist.*

I have signed, sealed and dated, and thereby certified, the attached *landslide assessment* report on the Property in accordance with the *APEGBC Guidelines*. That report must be read in conjunction with this Statement. In preparing that report I have:

Check to the left of applicable items

☑ 1. Collected and reviewed appropriate background information
☐ 2. Reviewed the proposed *residential development* on the Property
☑ 3. Conducted field work on and, if required, beyond the Property
☑ 4. Reported on the results of the field work on and, if required, beyond the Property
☑ 5. Considered any changed conditions on and, if required, beyond the Property
6. For a *landslide hazard analysis* or *landslide risk analysis* I have:
   ☑ 6.1 reviewed and characterized, if appropriate, any *landslide* that may affect the Property
   ☑ 6.2 estimated the *landslide hazard*
   ☐ 6.3 identified existing and anticipated future *elements at risk* on and, if required, beyond the Property
   ☐ 6.4 estimated the potential *consequences* to those *elements at risk*
7. Where the *Approving Authority* has adopted a *level of landslide safety* I have:
   ___ 7.1 compared the *level of landslide safety* adopted by the *Approving Authority* with the findings of my investigation
   ___ 7.2 made a finding on the *level of landslide safety* on the Property based on the comparison
   ___ 7.3 made recommendations to reduce *landslide hazards* and/or *landslide risks*
8. Where the *Approving Authority* has **not** adopted a *level of landslide safety* I have:

☑ 8.1 described the method of *landslide hazard analysis* or *landslide risk analysis* used

☑ 8.2 referred to an appropriate and identified provincial, national or international guideline for *level of landslide safety*

☑ 8.3 compared this guideline with the findings of my investigation

☑ 8.4 made a finding on the *level of landslide safety* on the Property based on the comparison

☐ 8.5 made recommendations to reduce *landslide hazards* and/or *landslide risks*

☑ 9. Reported on the requirements for future inspections of the Property and recommended who should conduct those inspections.

Based on my comparison between

Check one

☐ the findings from the investigation and the adopted *level of landslide safety* (item 7.2 above)

☑ the appropriate and identified provincial, national or international guideline for *level of landslide safety* (item 8.4 above)

I hereby give my assurance that, based on the conditions[1] contained in the attached *landslide assessment* report,

Check one

☑ for subdivision approval, as required by the Land Title Act (Section 86), "that the land may be used safely for the use intended"

Check one

☑ with one or more recommended registered covenants.

☐ without any registered covenant.

☐ for a development permit, as required by the Local Government Act (Sections 919.1 and 920), my report will "assist the local government in determining what conditions or requirements under [Section 920] subsection (7.1) it will impose in the permit".

☐ for a building permit, as required by the Community Charter (Section 56), "the land may be used safely for the use intended"

Check one

☐ with one or more recommended registered covenants.

☐ without any registered covenant.

☐ for flood plain bylaw variance, as required by the "Flood Hazard Area Land Use Management Guidelines" associated with the Local Government Act (Section 910), "the development may occur safely".

☐ for flood plain bylaw exemption, as required by the Local Government Act (Section 910), "the land may be used safely for the use intended".

Andrew Jackson, P.Geo., Eng.L.

Name (print)

Signature

July 16, 2020

Date

[1] When seismic slope stability assessments are involved, *level of landslide safety* is considered to be a "life safety" criteria as described in the National Building Code of Canada (NBCC 2005), Commentary on Design for Seismic Effects in the User's Guide, Structural Commentaries, Part 4 of Division B. This states:

"The primary objective of seismic design is to provide an acceptable level of safety for building occupants and the general public as the building responds to strong ground motion; in other words, to minimize loss of life. This implies that, although there will likely be extensive structural and non-structural damage, during the DGM (design ground motion), there is a reasonable degree of confidence that the building will not collapse nor will its attachments break off and fall on people near the building. This performance level is termed 'extensive damage' because, although the structure may be heavily damaged and may have lost a substantial amount of its initial strength and stiffness, it retains some margin of resistance against collapse".

28 Crease Avenue - Victoria, BC
Address

V8Z 1S3

250-475-3131
Telephone



(Affix Professional seal here)

If the *Qualified Professional* is a member of a firm, complete the following.

I am a member of the firm Ryzuk Geotechnical
and I sign this letter on behalf of the firm. (Print name of firm)

FLOOD ASSURANCE STATEMENT

Note: This statement is to be read and completed in conjunction with the current Engineers and Geoscientists BC *Professional Practice Guidelines – Legislated Flood Assessments in a Changing Climate in BC* ("the guidelines") and is to be provided for flood assessments for the purposes of the *Land Title Act*, Community Charter, or the *Local Government Act*. Defined terms are capitalized; see the Defined Terms section of the guidelines for definitions.

To: The Approving Authority

Date: July 16, 2020

Ministry of Transportation and Infrastructure, Courtenay Area Office

550 Comox Road, Courtenay, BC V9N 3P6

Jurisdiction and address

With reference to (CHECK ONE):

- ☑ *Land Title Act* (Section 86) – Subdivision Approval
- ☐ *Local Government Act* (Part 14, Division 7) – Development Permit
- ☐ Community Charter (Section 56) – Building Permit
- ☐ *Local Government Act* (Section 524) – Flood Plain Bylaw Variance
- ☐ *Local Government Act* (Section 524) – Flood Plain Bylaw Exemption

For the following property ("the Property"):

The South West 1/4 of Section 17, Denman Island, Nanaimo District, except that part in Plan 14174, VIP77481 AND VIP 87456 / Denman Road - Denman Island, BC

Legal description and civic address of the Property

The undersigned hereby gives assurance that he/she is a Qualified Professional and is a Professional Engineer or Professional Geoscientist who fulfils the education, training, and experience requirements as outlined in the guidelines.

I have signed, sealed, and dated, and thereby certified, the attached Flood Assessment Report on the Property in accordance with the guidelines. That report and this statement must be read in conjunction with each other. In preparing that Flood Assessment Report I have:

[CHECK TO THE LEFT OF APPLICABLE ITEMS]

☐ 1. Consulted with representatives of the following government organizations:

☑ 2. Collected and reviewed appropriate background information

☐ 3. Reviewed the Proposed Development on the Property

☐ 4. Investigated the presence of Covenants on the Property, and reported any relevant information

☑ 5. Conducted field work on and, if required, beyond the Property

☑ 6. Reported on the results of the field work on and, if required, beyond the Property

☑ 7. Considered any changed conditions on and, if required, beyond the Property

8. For a Flood Hazard analysis I have:
   - ☑ 8.1 Reviewed and characterized, if appropriate, Flood Hazard that may affect the Property
   - ☑ 8.2 Estimated the Flood Hazard on the Property
   - ☑ 8.3 Considered (if appropriate) the effects of climate change and land use change
   - ☐ 8.4 Relied on a previous Flood Hazard Assessment (FHA) by others
   - ☐ 8.5 Identified any potential hazards that are not addressed by the Flood Assessment Report

9. For a Flood Risk analysis I have:
   - ☑ 9.1 Estimated the Flood Risk on the Property
   - ☐ 9.2 Identified existing and anticipated future Elements at Risk on and, if required, beyond the Property
   - ☐ 9.3 Estimated the Consequences to those Elements at Risk

10. In order to mitigate the estimated Flood Hazard for the Property, the following approach is taken:
- ☐ 10.1 A standard-based approach
- ☑ 10.2 A Risk-based approach
- ☐ 10.3 The approach outlined in the guidelines, Appendix F: Flood Assessment Considerations for Development Approvals
- ☐ 10.4 No mitigation is required because the completed flood assessment determined that the site is not subject to a Flood Hazard

11. Where the Approving Authority has adopted a specific level of Flood Hazard or Flood Risk tolerance, I have:
- ☐ 11.1 Made a finding on the level of Flood Hazard or Flood Risk on the Property
- ☐ 11.2 Compared the level of Flood Hazard or Flood Risk tolerance adopted by the Approving Authority with my findings
- ☐ 11.3 Made recommendations to reduce the Flood Hazard or Flood Risk on the Property

12. Where the Approving Authority has not adopted a level of Flood Hazard or Flood Risk tolerance, I have:
- ☑ 12.1 Described the method of Flood Hazard analysis or Flood Risk analysis used
- ☑ 12.2 Referred to an appropriate and identified provincial or national guideline for level of Flood Hazard or Flood Risk
- ☑ 12.3 Made a finding on the level of Flood Hazard of Flood Risk tolerance on the Property
- ☑ 12.4 Compared the guidelines with the findings of my flood assessment
- ☐ 12.5 Made recommendations to reduce the Flood Hazard or Flood Risk

☑ 13. Considered the potential for transfer of Flood Risk and the potential impacts to adjacent properties

☑ 14. Reported on the requirements for implementation of the mitigation recommendations, including the need for subsequent professional certifications and future inspections.

Based on my comparison between:

[CHECK ONE]

- ☐ The findings from the flood assessment and the adopted level of Flood Hazard or Flood Risk tolerance (item 11.2 above)
- ☑ The findings from the flood assessment and the appropriate and identified provincial or national guideline for level of Flood Hazard or Flood Risk tolerance (item 12.4 above)

I hereby give my assurance that, based on the conditions contained in the attached Flood Assessment Report:

[CHECK ONE]

- ☑ For subdivision approval, as required by the *Land Title Act* (Section 86), "that the land may be used safely for the use intended":

  [CHECK ONE]

  - ☑ With one or more recommended registered Covenants.
  - ☐ Without any registered Covenant.
- ☐ For a development permit, as required by the *Local Government Act* (Part 14, Division 7), my Flood Assessment Report will "assist the local government in determining what conditions or requirements it will impose under subsection (2) of this section [Section 491 (4)]".
- ☐ For a building permit, as required by the Community Charter (Section 56), "the land may be used safely for the use intended":

  [CHECK ONE]

  - ☐ With one or more recommended registered Covenants.
  - ☐ Without any registered Covenant.
- ☐ For flood plain bylaw variance, as required by the *Flood Hazard Area Land Use Management Guidelines* and the *Amendment Section 3.5 and 3.6* associated with the *Local Government Act* (Section 524), "the development may occur safely".
- ☐ For flood plain bylaw exemption, as required by the *Local Government Act* (Section 524), "the land may be used safely for the use intended".

I certify that I am a Qualified Professional as defined below.

July 16, 2020

Date

Andrew Jackson, P.Geo., Eng.L.

Prepared by

Andrew Jackson, P.Geo., Eng.L.

Name (print)

Signature

28 Crease Avenue, Victoria BC

Address

V8Z 1S3

2504753131

Telephone

andrew@ryzuk.com

Email

Lane Campbell, M.Eng., P.Eng.

Reviewed by

Lane Campbell, M.Eng., P.Eng.

Name (print)

Signature

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
L. G. CAMPBELL
19305

PROFESSIONAL GEOSCIENTIST
PROVINCE OF BRITISH COLUMBIA
A. R. JACKSON
38270

(Affix PROFESSIONAL SEAL here)

If the Qualified Professional is a member of a firm, complete the following:

I am a member of the firm Ryzuk Geotechnical
and I sign this letter on behalf of the firm.

(Name of firm)

Denman Housing Association
3720 East Road, Denman Island, B.C. V0R 1T0
DenmanAffordableHousing@gmail.com 250 335 2559
Registered Charity #84680 0936 RR0001

Denman Green Water Plan

Contents:

Preamble

Pilot Treatment

Collection

Storage

Treatment

Consumption

Greywater

Laundry

Firefighting & Irrigation

Health Authority

Islands Trust

MoTI and Subdivision

Summary

Preamble:

Rainwater has been ‘harvested’ for potable use for 4,000 years

Thousands across B.C., Canada & the world practice rainwater harvesting, safely and securely today.

Rainwater harvesting is a sustainable, preferable practice. (See Attachments A)

The simple fact is that groundwater resources on Gulf Islands are vulnerable to sea water intrusion, mineral contamination and climate change effects; whereas rainwater is contaminant-free in rural areas in particular and predicted longer, drier Summers can be offset by adequate storage capacity

The case for rainwater harvesting on Denman Green being sustainable and practical has been made by independent experts

Collection and consumption figures are based on scientific data and third-party research. (See Attachments under relevant headings)

Pilot:

In order to prove that rainwater collected on Denman can be treated to meet or exceed Canadian Drinking Water Standards, a Pilot system is being constructed

The Pilot has been designed by the UBC Chapter of Engineers for a Sustainable World (ESW) an international organization (See Attachment B)

ESW also authored the Sampling Methodology to be followed once the Pilot is operational (See Attachment C) It follows the recommendations of the Public Health Engineer, Island Health, Courtenay who has jurisdiction over Denman

An initial raw water test (See Attachment D) of rainwater falling on Denman in February 2020 showed minor exceedance of allowable Total Coliform levels, easily treated at the proposed UV & chlorine stages of the Pilot

Collection:

The Water Table (See Attachment E) shows that an average of historical local rainfall, collected with conservative, industry-accepted efficiency, can supply the projected maximum population of Denman Green with an adequate volume of water to meet all indoor needs. These needs are described & explained later.

In addition, sufficient water can be collected to supply a common laundry and to maintain a reserve equivalent to 243 days consumption or sufficient to offset 8 months of no-rain days

Building designs show 1,950 m2 of roof (collection) area. This is a 60% larger area than required in the Water Table, potentially enabling the 'harvesting' of more rainwater than needed or currently planned

Climate predictions of longer, drier Summers & shorter, wetter Winters favour rainwater harvesting & storage v. groundwater, which will be drawn down further in Summer, inviting saltwater intrusion, and replenished less in Winter as shorter, more extreme rainfall results in increased runoff. (See Attachments F)

Storage:

Above ground storage is the most practical & cost-effective.
One option is for 2 steel tanks each 33' diameter & 23' in height. Another being considered is a series of bladders, which are less expensive & require minimal foundation/site preparation (See Attachments G)

Treatment:

The system will be a scaled-up replica of the Pilot, namely pre-treatment storage > filtration > UV > chlorination > post-treatment storage > delivery
With daily treated volumes of about 3,400 litres the system will be small
Because the system will be serving multiple dwellings it will be classified as a Small Water System by Island Health and an EOCP-certified Operator 1 will be required to oversee & maintain the system.

Consumption:

Gulf Islanders in general are inclined to conservative water use because they know that the flow from most wells declines in late Summer.
The tenants of Denman Green will be more careful because many have been living with no running water at all.
Our baseline water consumption figure is taken from an 18 month study by the City of Guelph of homes fitted with water saving devices (See Attachments H)
The Denman Green units will be similarly fitted
Net of toilet flushing (see Greywater below) and laundry (a separate, non-potable supply), 69 litres of potable water per person/day is therefore considered reasonable (See Attachment I)

Greywater:

The re-use of greywater is becoming increasingly common as the true value of water is realized, particularly in areas with vulnerable groundwater resources
Denman Green will generate some 52 litres/person/day of greywater from showering & handwashing
Greywater is minimally treated to remove soaps (See Attachment J)
'Proficiency' Toilets use 3 litres per flush. Estimate 36 litres/person/day

Laundry:

The common laundry will be supplied by non-potable water collected from the planned solar array with a capacity to collect 576,640 litres per year
Whirlpool WFW85HEFW uses 31.5 litres per load. At 1.5 loads person/week that is 47.25 litres person/week or 120,393 litres per year for Denman Green
Note – surplus water collected off the solar array will be diverted to the potable water pre-treatment storage

Firefighting:

The Denman Fire Chief has indicated a need for 12,000 IG permanent water storage for firefighting. This will likely be in a water bladder.

Irrigation:

A dug pond will be the simplest solution.

Health Authority:

July 2019 the Ministry of Health issued in draft - Guidance for Treatment of Rainwater Harvested for Potable Use in British Columbia (See Attachment K)
July 17 2020 MoH advised "expect the final guidance to be posted publicly early in the fall."
This Guidance will allow the Environmental Health Officer and Public Health Engineer responsible for Denman to specify their requirements for rainwater treatment & testing and system operations on Denman Green. Both have advised their intent to engage at that time
That will be the precursor to their issuing first a Construction Permit and eventually an Operating Permit for the rainwater system

Islands Trust:

Although numerous Trust documents call for groundwater conservation, and rainwater use (See Attachments L) and Islands Trust Fund has long operated a rainwater harvesting system at Ruby Alton House (See Attachment M), the concept of Denman Green potable water being supplied via a rainwater harvesting system is requiring the Trust to review policies & intent
Such was the Executive Committee's Resolution of January 15 2020 advising DILTC that it "could consider rainwater catchment system with a backup supply on Denman Island as satisfying Trust Policy 4.4.2 (See Attachment N)

Ministry of Transportation and Infrastructure:

MoTI has jurisdiction over the subdivision of land
Where water supply is concerned MoTI defers to the local government, which for the Gulf Islands means the Islands Trust (See Attachment O)

Summary:

An adequate, reliable supply of potable water, meeting year-round needs as climate changes occur is clearly key in the planning of any housing project

It is our opinion that any objective consideration of water supply alternatives must conclude that intercepting rainwater before it hits the ground, provided adequate volumes can be collected and stored, must be more reliable than drilling into fractured rock and hoping that water will be present in 30, 40 years' time. Because, as stated above, climate change will not be kind to groundwater. The combination of rising sea levels & longer Summers will invite saltwater intrusion, while shorter, heavier rain events will increase runoff and result in less replenishment of groundwater.
An 8 month reserve or backup is proposed for Denman Green. There is no history nor prediction of a no-rain period of near that length. For all the reasons outlined above, the most reliable reserve is one on-site and always in hand.

Rainwater harvesting is certainly new in B.C. for multi-family dwellings. It is therefore significant & timely for the Denman Green project that the Ministry of Health will soon be providing guidance to Island Health so that a system may be approved, designed and operated that will deliver potable water from collected rainwater to the 20 units of affordable housing being planned.

STAFF REPORT

File No.: DE-RZ-2017.1
(Denman Community Land Trust Association)

DATE OF MEETING:	September 8, 2020
TO:	Denman Island Local Trust Committee
FROM:	Marnie Eggen, Island Planner Northern Team
COPY:	Heather Kauer, Regional Planning Manager
SUBJECT:	OCP and LUB Bylaw Amendments for Seniors Affordable Housing Development Owner/Applicant: Bev Severn (Owner) and Denman Community Land Trust Association Location: 3730 Denman Road, Denman Island (PID 009-708-537)

RECOMMENDATION

1. **That the Denman Island Local Trust Committee request staff to prepare the following changes to proposed Bylaw No. 234:**

    a. **Require an 8 metre setback for buildings from the ALR boundary in the R4(2) zone.**

REPORT SUMMARY

This staff report provides analysis on follow up items requested by the Local Trust Committee (LTC) at the May 19, 2020 LTC meeting and in response to bylaw referrals from the Comox Valley Regional District, the Denman Island Fire Rescue, and Ministry of Agriculture. An update on the advancement of the housing agreement and covenant is also provided. Staff is requesting direction on the bylaw referral to the APC and recommending amendments to proposed Bylaw No. 234 in response to bylaw referrals.

BACKGROUND

The LTC passed several resolutions at their May 19, 2020 business meeting. The following resolutions are addressed in the Analysis section:

DE-2020-026
It was MOVED and SECONDED,
that Denman Island Local Trust Committee request staff to bring back suggestions for requiring the following in the proposed regulations for RZ-DE-2017.1 (DCLTA):

a) Dark Sky measures;
b) Mandatory rainwater catchment;
c) Limit impermeable surfaces;
d) Replanting disturbed areas with mostly native vegetation.

CARRIED

DE-2020-031
It was MOVED and SECONDED,

that Denman Island Local Trust Committee direct staff to bring forward a recommendation for a maximum combined gross floor area of all accessory buildings and structures in the R4(2) zone.

CARRIED

Following the resolution below, staff are awaiting the applicant's signature on the cost recovery agreement in order to advance the covenant.

DE-2020-025
It was MOVED and SECONDED,
that Denman Island Local Trust Committee enter into a cost recovery agreement with the applicant/agent for application RZ-DE-2017.1 (DCLTA) allowing Islands Trust legal counsel to draft and/or review a restrictive covenant which would be registered on the land title applicable to the lands intended for the Denman Seniors Affordable Housing project and impose the following:

a. Require BC Energy Step Code Level 2 compliance for all new dwellings;
b. Require conditions related to the Agricultural Land Commission exclusion with respect to the vegetative buffer and fencing plan;
c. Require mitigating measures regarding groundwater use as recommended by the Freshwater Specialist.

In discussing the motion the following Trustee comments were noted:

- Conducting community consultation on proposed DPA No. 8 was recommended prior to consideration of its advancement;
- The Agricultural Land Commission's stipulated setback was supported as a practical approach for this project.

CARRIED

Staff will bring forward the following requested changes to the proposed bylaws at the time that the LTC considers second reading and after a community information meeting.

DE-2020-027
It was MOVED and SECONDED,
that Denman Island Local Trust Committee amend proposed Bylaw No. 234 as follows:
On page 3 of 7 item 1.10 – that the name of the zone be changed to "Affordable Rental Housing R4".

In speaking to the motion, a Trustee suggested that adding the term "Rental" provides clarity, is more descriptive of the R4 zone, and recognizes that other types of affordable housing might also be considered in the future.

CARRIED

DE-2020-028
It was MOVED and SECONDED,
that Denman Island Local Trust Committee amend proposed Bylaw No. 234 to allow a limited number of home occupations in the R4 zone such as:

- General business offices;
- Professional offices, excluding health services;
- Artist or artisan studios.

And that the amendment include prohibiting:

- The purchase of any products on site;
- Employees/clientele/customers attending the property; and
- The creation of noise which disturbs persons.

CARRIED

DE-2020-029

It was MOVED and SECONDED,
that Denman Island Local Trust Committee direct staff to prepare amendments to proposed Bylaw No. 234 such that no commercial horticulture or agriculture or keeping of chickens and other livestock be permitted in the R4(2) zone.

A Trustee commented that further community input on these topics will be worthwhile.

CARRIED

DE-2020-030
It was MOVED and SECONDED,
that Denman Island Local Trust Committee amend proposed Bylaw No. 234 as follows:
In Table 8 – Floor Area, item 6: remove the number 100m^2 for the R4 zone and leave it blank.

A Trustee commented that consideration of this issue can be conducted on a case-by-case basis.

CARRIED

DE-2020-032
It was MOVED and SECONDED,
that Denman Island Local Trust Committee request staff to amend Bylaw No. 233, cited as "Denman Island Official Community Plan, 2008, Amendment No. 1, 2019" by adding the following to the end of item 1.4 Policy 4:

a. "subject to Agricultural Land Commission approval."

CARRIED

Staff reports and associated information for rezoning application DE-RZ-2017.1 (DCLTA) are available on the Islands Trust website under Denman Island, Current Applications.

ANALYSIS

Staff have identified the following issues and opportunities for LTC consideration:

- Addressing Referral Responses from the Comox Valley Regional District, Denman Fire Rescue, and Ministry of Agriculture
- Suggestions for Changes to Proposed Bylaw Requested by LTC
- Pending Covenant and Housing Agreement

Issues and Opportunities

Addressing Referral Responses from the Comox Valley Regional District, Denman Fire Rescue, and Ministry of Agriculture

Table 1: Summary of Bylaw Referral Responses and Staff Comments

Agency	Summary Response to Bylaw Referral	Staff Comments

Comox Valley Regional District	• Identify that there should be consideration for:
	  • FireSmart practice.
	  • addressing restricted access for first responders and/or egress for evacuation purposes.
		After follow up with the CVRD on the details of their request, staff offer the following recommended actions:
		• FireSmart measures include a firebreak separation between vegetation and buildings of 1.5 to 10 metres: to reduce the risk from wildfire, staff recommend a

	• Request applicant/agent be aware that the Denman Cross Island trail crosses the subject property driveway and that signage and/or sightline accommodation should be made to alert drivers exiting the property of pedestrian and cycling trail crossing ahead.	greater building setback than the proposed 3 metres from the ALR boundary to allow for a firebreak separation between buildings and required 3 metre wide vegetative buffer. • Addressing restricted access for first responders and/or egress for evacuation purposes: To be addressed at the time of subdivision by MOTI. • Denman Cross Island Trail signage request: staff recommend to advise the applicant/agent of the CVRD request.
Ministry of Agriculture (MoA)	• Bylaw No. 234: Recognising the ALC decision and physical limitations of the property, recommends a 15 metre setback between buildings and the ALR lands and a 3-8 metre vegetative buffer on the non-ALR lands. Verbally confirmed that they have no issue with 3 metre setback for sewerage system.	• Staff recommend a greater building setback than the proposed 3 metres from the ALR boundary (8 m). This would also address Firesmart concerns, allowing for a separation between buildings and vegetation.

Denman Island Fire Rescue (DIFR)	• Approval recommended subject to the Denman Community Land Trust Association (DCLTA) undertaking the following, in consultation with DIFR and at their cost:
	  • Ensure adequate dedicated road access to allow DIFR vehicles to safely turn around to egress the property.
	  • Develop a Fire Safety Plan to address Fire Prevention, Occupant Safety, and Fire Control and Extinguishment.
		• The DIFR confirmed that they would like to reaffirm with the applicant/agent the requested items ahead of land alteration or construction;
		• Adequate dedicated road access will be addressed at time of subdivision by MOTI;
		• Fire Safety Plan: Would be required by DIFR at the time of construction.

<u>Staff Recommendation for Increase Building Setback</u>

Following consideration of agency responses above, staff recommend amending proposed Bylaw No. 234 (LUB) to require a minimum setback of buildings from the ALR boundary of 8 metres to address the referral responses from the CVRD for Firesmart measures and from the Ministry of Agriculture for a robust buffer between ALR lands and residential buildings. This has a twofold benefit to the property: a larger setback between buildings and ALR lands would assist with future compatibility between the residents and their farming neighbours, and helps reduce the risk of wildfire spread.

As both types of measures intend to target buildings, staff are recommending this increased setback for buildings only. Staff also recommend that the currently proposed 3 metre setback for structures, such as septic fields, ground-level paving for driveways and vehicle parking and other non-roofed structures (e.g. cisterns) as per the Denman Land Use Bylaw definition of structures, continue to apply. Given the potential site constraints of the proposed project to be located on the proposed .8 ha lot, this may allow some development flexibility, while addressing agency concerns.

Suggestions for Changes to Proposed Bylaw Requested by LTC

Staff were requested to provide suggestions for changes to bylaw regulations as they apply to rezoning application DE-RZ-2017.1 (DCLTA). The following Table and supporting Chart provide a summary of the items requested by the LTC and staff's comments and suggestions. If the LTC chooses to seek amendments to proposed Bylaw No. 234 based on the information below, direction to staff to prepare amendments should be given.

Table 2: Summary of LTC Requested Changes to Require in Proposed Regulations for DE-RZ-2017.1

LTC Requested Changes to Require in Proposed Regulations	Staff Comments and Suggestions
• **Dark Sky Measures**	• Best land use planning tool suited to implement these measures is a Development Permit Area for form and character or a restrictive covenant (see Chart 1 below). • Although, implementing dark sky measures (e.g. downward facing 'Dark Sky approved' fixtures) could be required as a part of the proposed site specific R4(2) regulations as a condition of use, staff are not recommending this approach. Because it is not the appropriate tool for this purpose, a legal review of draft bylaw wording would be necessary to ensure it's within the scope of *Local Government Act* powers and enforceability.
• **Mandatory rainwater catchment**	• Best land use planning tool suited to implement rainwater catchment is a Development Permit Area to promote water conservation or restrictive covenant (see Chart 1 below). • Although, a rainwater harvesting and collection system could be required as a part of the proposed R4(2) regulations as a condition of use (should include a minimum storage capacity), staff do not recommend this approach. Because it is not the appropriate tool for this purpose, a legal review of bylaw wording would be necessary to ensure it's within the scope of *Local Government Act* powers and enforceability.
• **Limit impermeable surfaces**	• Best land use planning tool suited to implement this is by bylaw, through lot coverage. Proposed Bylaw No. 234 already includes a 25% maximum combined lot coverage of buildings and structures for proposed site specific R4(2) zoning. • Under the current definition in the Denman LUB, *structure* means *anything constructed or erected that is fixed to, supported by or sunk into land or water, whether underwater or otherwise, but excludes vehicles, floating vessels, ground-level paving for driveways and vehicle parking, ground-level sidewalks, detached ground-level patios and decks, detached access stairways and boardwalks, power-poles and telecommunication poles.* • If the LTC wishes to amend the proposed lot coverage provision to further limit impermeable surfaces, staff suggest that the 25% maximum could be reduced and/or that ground-level paving for driveways and vehicle parking, ground-level sidewalks, detached ground-level patios and decks, detached access stairways and boardwalks be counted as structures in the provision specific to proposed R4(2) zoning.

• **Replanting disturbed areas with mostly native vegetation**	• Best land use planning tool suited to implement this is a Development Permit Area for the protection of the natural environment or for form and character. This cannot be achieved by land use bylaw (see Chart 1 below).

Chart 1: Summary of Scope of Pertinent Land Use Planning Tools Available to Employ as Part of a Rezoning to Regulate Land Use

Land Use/Zoning Bylaws (*Local Government Act*)	**Development Permit Areas (*Local Government Act*)**	**Restrictive Covenant (*Land Title Act* s.219 Covenant)**
Regulate within a zone: • use of land, buildings/structures; • density of land, buildings/structures; • siting, size, dimensions of buildings/structures; • location of uses on the land & within buildings; Regulate subdivision: • by establishing dimensions, min and max sizes of all parcels of land that may be created by subdivision. Regulate: • off street parking; • runoff control; • signs; • screening and landscaping to mask/separate uses.	Established for the purposes of: • protection of the natural environment, ecosystems and biodiversity; • protection of development from hazardous conditions; • protection of farming; • revitalization of commercial use area; • for the form and character of intensive residential development, commercial, industrial, or multi-family residential development, a resort region; • promote energy conservation, water conservation, reduction of greenhouse gas emissions.	Registered against the title of the land, in favour of crown, local government or designated person. Can be of negative or positive nature, may include one or more of the following provisions: • in respect of use of land or building to be erected on land; • land is to be built in accordance with covenant; • land is not to be built on except in accordance with covenant; • land is not to be built on; • land is not to be subdivided except in accordance with covenant; • land is not to be subdivided; • land or amenity on the land (i.e. natural, historical, heritage, cultural, scientific, architectural, environmental, wildlife/plantlife) be protected, preserved, conserved, maintained, enhanced, restored or kept in its natural/existing state.

Pending Housing Agreement and Restrictive Covenant

A draft of the Housing Agreement is finalized and found in Attachment 1. Staff are awaiting its approval by the Agricultural Land Commission (ALC), which is a requirement of the Agricultural Land Reserve exclusion conditions.

Staff are awaiting the applicant's signature of the cost recovery agreement in order to advance the restrictive covenant.

Consultation

Agricultural Land Commission Referral Response

Staff have not yet received a formal bylaw referral response from the Agricultural Land Commission (ALC), despite repeated reminders. A response to proposed bylaw Nos. 233 and 234 would assist with confirming that the ALC does not have any concerns with the proposed regulations as they relate to the conditions set out in the ALC's ALR exclusion approval. Staff are not anticipating any concerns.

Rationale for Recommendation

Staff is recommending an amendment to proposed Bylaw No. 234 in response to bylaw referrals. The staff recommendation is found on Page 1 of this report.

ALTERNATIVES

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

1. **Request Staff to Prepare Additional/Alternative Amendments to Proposed Bylaws No. 233 and 234**

   The LTC may request changes to proposed Bylaws other than those recommended by staff. If this alternative is selected, the LTC should state the reasons for the requested changes. Recommended wording for the resolution is as follows:

   That the Denman Island Local Trust Committee request staff to prepare the following changes to Bylaw [insert Bylaw No. 233 (OCP) or 234 (LUB): [insert requested changes].

2. **Request more information**

   The LTC may request further information prior to making a decision. Staff advise that the implication of this alternative is a delay in processing this application. If selecting this alternative, the LTC should describe the specific information needed and the rationale for this request. Recommended wording for the resolution is as follows:

   That the Denman Island Local Trust Committee request that [the applicant] or [staff] submit…

NEXT STEPS

Should the LTC concur with the staff recommendation, staff will amend proposed Bylaw No. 234 with the recommended changes for future LTC consideration at the time of second reading of the proposed bylaws. Once the Cost Recovery Agreement for the restrictive covenant is received from the applicant/agent, staff will advance work on the covenant.

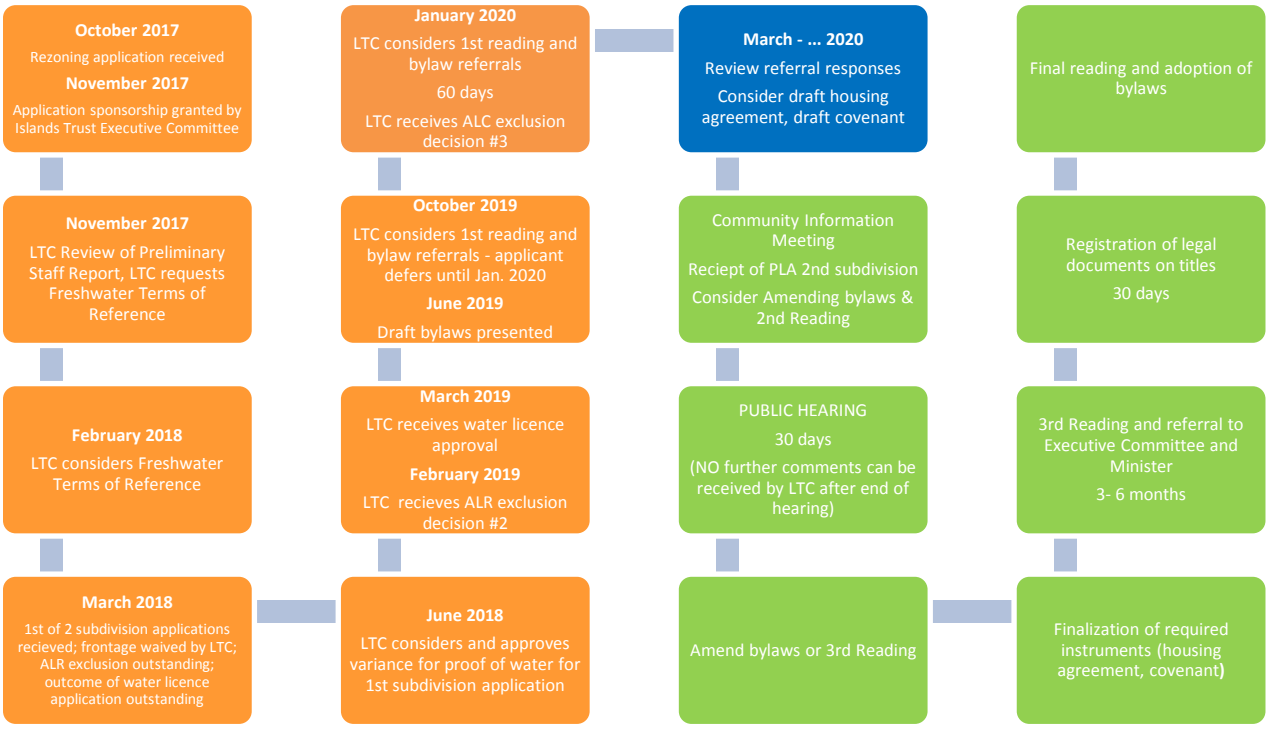
Staff maintain that the LTC should consider scheduling a Community Information Meeting after their consideration of drafts of the housing agreement and covenant so that the community is provided a full understanding of the all of the elements involved with the rezoning application – proposed bylaws and any proposed amendments following bylaw referrals, housing agreement and covenant.

Also, by the time of a Community Information Meeting, it is important that there is confidence that the proposed strata subdivision is acceptable by Ministry of Transportation and Infrastructure (MOTI). Ultimately, any changes to the layout and proposed lot boundaries must be accurately reflected in proposed Bylaw Nos. 233 and 234 and received in time to be presented at a Community Information Meeting, but must be finalized prior to the public hearing stage. The consequence of receiving changes to the proposed strata subdivision layout post public hearing is that it will require changes to the bylaws to

accurately reflect the lot to which the rezoning applies and would require a second public hearing. Below please find application process steps and timing.

Application Process Steps and Timing

The following timeline outlines the rezoning application process milestones to date along with next steps and approximate timing which may assist in managing applicant and community expectations in how an OCP and LUB amendment application such as this, is processed. Public input may be received by the LTC at any point during the OCP and LUB amendment process up until the end of the public hearing.



Submitted By:	Marnie Eggen, RPP, MCIP Islands Planner	August 27, 2020
Concurrence:	Heather Kauer, RPP, MCIP, AICP Regional Planning Manager	August 28, 2020

ATTACHMENTS

1. Finalized Draft Housing Agreement (post legal review, pending ALC approval)

LAND TITLE ACT

TERMS OF INSTRUMENT – PART 2

Housing Agreement and Section 219 Covenant

THIS AGREEMENT DATED FOR REFERENCE THE _[*day*]_OF _[*month*]_, _[*year*]_ is BETWEEN:

Denman Community Land Trust Association a society incorporated under the laws of the province of British Columbia and having its office at 3900 Lacon Road, Denman Island,
B.C. V0R 1T0

(the "Owner");

AND:

DENMAN ISLAND LOCAL TRUST COMMITTEE, a corporation under the *Islands Trust Act*, having an office at 2 Floor, 1627 Fort Street, Victoria, B.C., V8R 1H8

(the "Trust Committee")

WHEREAS:

A. The Owner is the registered owner of the lands situated at_____Denman Road on Denman Island British Columbia and legally described as:

[*Insert Legal Description of Lands*]

(the "Lands");

B. The Lands have been rezoned by the Denman Island Local Trust Committee by means of Denman Island Land Use Bylaw 2008 Amendment No. 1, 2019 and Denman Island Official Community Plan, 2008, Amendment No. 1, 2019 has been put in place to permit the development of a seniors' affordable housing project;

C. The Owner intends to rent the units in the housing project, by way of a Tenancy Agreement, at an affordable rate to Qualified Occupants;

D. The Trust Committee may, pursuant to Section 29 of the Islands Trust Act and Section 483 of the Local Government Act, enter into an agreement with an owner of land that includes terms and conditions regarding the occupancy, tenure and availability to specified classes of persons of Dwelling Units located on those lands;

E. Section 219 of the Land Title Act permits the registration of a covenant of a negative or positive nature in favour of the Trust Committee in respect of the use of land or construction on land;

F. The Owner and the Trust Committee wish to enter into this Agreement to provide affordable housing on the Lands on the terms and conditions of this Agreement; and

G. The Trust Committee has, by bylaw, authorized the execution of this Agreement and the Owner has duly authorized the execution of this Agreement.

THIS AGREEMENT is evidence that in consideration of $1.00 paid by the Trust Committee to the Owner (the receipt of which is acknowledged by the owner), and in consideration of the promises exchanged below, the Trust Committee and the Owner agree, as covenants granted by the Owner to the Trust Committee under Section 219 of the Land Title Act, and as a housing agreement between the Owner and the Trust Committee under Section 483 of the Local Government Act, as follows:

a. **Definitions** – In this Agreement:

"Affordable Dwelling Unit" means a deed restricted or rent controlled Dwelling Unit that is designated as an Affordable Dwelling Unit by this Agreement and is available to Seniors on an affordable basis as set out in this agreement;

"Annual Household Income" means the gross income, as shown on line 150 of their preceding year's T1 General Income Tax and Benefit returns or an equivalent document produced by the Canada Revenue Agency, of all Qualified Occupants of an Affordable Dwelling Unit combined;

"Dwelling Unit" means one or more rooms in a building, containing a single set of cooking facilities, and used or intended to be used, as a residence by an individual or a group of individuals living together in common occupancy;

"Family Member" means a person under the age of 65 years old who lives with and is related to the Tenant through blood or marriage including a person with whom the Tenant is living in a marriage-like relationship;

"Qualified Occupant" means a Senior or Family Member who meets the eligibility criteria for occupancy as set out in Schedule B;

"Residential Tenancy Act" means the most recent version of the British Columbia Residential Tenancy Act;

"Senior" means a person 65 years of age or older;

"Schedule B" means that Schedule B annexed hereto or any variation thereof made by the Owner that does not contradict any of the terms in the balance of this Agreement;

"Tenant" means a Senior who has entered into a Tenancy Agreement;

"Tenancy Agreement" means an agreement between a landlord and a tenant respecting possession of an Affordable Dwelling Unit, use of common areas and services and facilities, and includes a licence to occupy an Affordable Dwelling Unit.

b. **Agreement over the Lands** – Pursuant to section 219 of the Land Title Act and section 483 of the Local Government Act, the Owner covenants and agrees that:

i. the Lands must not be used and no building or structure may be constructed on the Lands except in accordance with any permit issued for the Lands by the Local Trust Committee and this Agreement;

ii. it will design and construct not less than eight Dwelling Units on the Lands provided that construction may, at the sole discretion of the Owner, proceed in stages;

iii. all Dwelling Units located on the Lands will be used only as Affordable Dwelling Units pursuant to the terms of this Agreement;

iv. it will maintain the Affordable Dwelling Units in a satisfactory state of repair and fit for habitation and will comply with all laws, including health and safety standards applicable to the Lands; and

v. the Affordable Dwelling Units will only be used and occupied by Qualified Occupants as a permanent, principal, and sole residence pursuant to a Tenancy Agreement.

c. **Affordable rental housing eligibility** – The Owner covenants and agrees that Affordable Dwelling Units will only be occupied in accordance with the following criteria:

i. the Owner will only select Tenants in accordance with the Tenant Selection Procedure set out in Schedule B;

ii. prior to entering into a Tenancy Agreement, the Owner will ensure that each Qualified Occupant who will reside in an Affordable Dwelling Unit meets the applicable criteria set out in Schedule B;

iii. the Affordable Dwelling Units will only be occupied by Qualified Occupants whose Annual Household Income has not, in any of the previous three years, exceeded 120% of the most recently published before tax Low Income Cut-offs, for rural areas and with a family size that corresponds with the number of Qualified Occupants residing in an Affordable Dwelling Unit, as determined and published from time to time by Statistics Canada or its successor in function. If Statistics Canada discontinues the publication of the Low Income Cutoff, the

Owner may substitute a similar monetary amount based upon available statistical information (adjusted to economic circumstances on Denman Island) which estimates the minimum income required to meet basic living needs and which, for example, may include reference to the CMHC Core Needs Income Threshold.;

iv. an Affordable Dwelling Unit will not have more than two total occupants, and if the Affordable Dwelling Unit has two occupants, the composition of the occupants shall be:

1) two Seniors related through blood or marriage or that have a marriage-like relationship; or

2) one Senior and one Family Member.

v. only Seniors shall be parties to an Affordable Dwelling Unit's Tenancy Agreement, that is, a Family Member shall not be a Tenant; and

vi. a Tenancy Agreement for an Affordable Dwelling Unit will identify each Qualified Occupant who will be residing in an Affordable Dwelling Unit.

d. **Tenancy** – The Owner covenants and agrees to:

i. include in every Tenancy Agreement for an Affordable Dwelling Unit a term:

1) requiring the Tenant and each permitted occupant of the Affordable Dwelling Unit to comply with this Agreement;

2) entitling the Owner to terminate the Tenancy Agreement if the Tenant or a permitted occupant of the Affordable Dwelling Unit fail to comply with this Agreement;

3) entitling the Owner to terminate the Tenancy Agreement if the Affordable Dwelling Unit is made available as a short-term vacation rental; and

4) entitling the Owner to terminate the Tenancy Agreement if the Affordable Dwelling Unit is occupied by a person or persons other than the Qualified Occupants identified in the Tenancy Agreement;

ii. not consent to the subletting of an Affordable Dwelling Unit or an assignment of a Tenancy Agreement governing an Affordable Dwelling Unit;

iii. deliver to the Trust Committee a true copy of every Tenancy Agreement entered into in respect of any Affordable Dwelling Unit within 10 days of any request to do so; and

iv. specify in every Tenancy Agreement the existence of this Agreement and the occupancy restrictions applicable to the Unit, and provide to each Tenant, upon their request, a copy of this Agreement.

e. **Rental rates -** The Owner covenants and agrees that it will:

i. not charge any Tenant a rent for an Affordable Dwelling Unit, exclusive of utilities, that on an annual basis is greater than 30% of the Annual Household Income of all Qualified Occupants of the Affordable Dwelling Unit; and

ii. not require a Tenant under a Tenancy Agreement to pay any extra charges or fees for use of septic services or property taxes. For clarity, this limitation does not apply to cablevision, telecommunications, laundry, or gas or electricity utility fees or charges. For metered water, each Affordable Dwelling Unit located on the Lands will be allocated a share of the usage permitted under a water licence issued by the Ministry of Forests, Lands, Natural Resource Operations, and Rural Development. A Tenant will be required to pay a penalty if their consumption exceeds their allocation.

f. **Order to Comply -** If the Owner is in default of the performance or observance of this Agreement, the Trust Committee may give the Owner a notice of default requiring the Owner to comply with this Agreement within the time stated in the notice. The Owner agrees that any breach or default in the performance of this Agreement on its part must be corrected, to the satisfaction of the Trust Committee, within the time stated on the notice of default provided to the owner by the Trust Committee.

g. **Statutory Declaration from Owner** – The Owner shall deliver to the Trust Committee by the end of June of each year, a completed statutory declaration, substantially in the form attached as Schedule A sworn by the Owner, in relation to the Units. The Owner irrevocably authorizes the Trust Committee to make inquiries it considers necessary and reasonable in order to confirm compliance with this Agreement.

h. **Management** – The Owner covenants and agrees to furnish good and efficient management of the Lands. If and when the Trust Committee has reasonable grounds to believe that a continuing breach of this Agreement exists, the Trust Committee may authorize its representatives to inspect the Lands at any reasonable time, subject to the notice provisions of the Residential Tenancy Act and subject to the concurrent delivery of such a notice to the Society.

i. **No Transfer** – The Owner must not transfer the Lands, other than to another non-profit organization or society incorporated under the Society Act, having as its objective the management of affordable housing. The Local Trust Committee must approve any transfer prior to its finalization.

j. **Society Standing** – The Owner must maintain its standing as a society under the Society Act, and must not amend its Constitution in any manner that would prevent, or adversely affect, the ability of the Owner to perform its obligations under this Agreement.

k. **Specific Performance of Agreement** – The Owner agrees that the Trust Committee is entitled to obtain an order for specific performance of this Agreement and a prohibitory or mandatory injunction in respect of any breach by the owner of this Agreement, in view of the public interest in restricting the occupancy of the Unit. The Owner further acknowledges that a breach of this Agreement may constitute a breach of the Trust Committee's Land Use Bylaw, as amended from time to time.

l. **Assignment** – The Owner acknowledges that the Trust Committee may delegate or assign the administration and management of this Agreement to a third party, and, in that event, any reference in this Agreement to the Trust Committee shall be interpreted as a reference to that party provided that the Trust Committee has so advised the Owner.

m. **Indemnity** – The Owner shall indemnify and save harmless the Trust Committee and each of its elected officials, officers, directors, employees, and agents from and against all claims, demands, actions, loss, damage, costs, and liabilities for which any of them may be liable by reason of any act or omission of the Owner or its officers, directors, employees, agents or contractors or any other person for whom the Owner is at law responsible, including breaches of this Agreement.

n. **Release** – The Owner releases and forever discharges the Trust Committee and each of its elected officials, officers, directors, employees, and agents and each of their heirs, executors, administrators, personal representatives, successors and assigns from all claims, demands, damages, actions, or causes of action arising out of the performance by the Owner of its obligations under this Agreement, or the enforcement of this Agreement.

o. **Trust Committee Powers Unaffected** – This Agreement does not limit the discretion, rights, duties or powers of the Trust Committee under any enactment or the common law, impose on the Trust Committee any duty or obligation, affect or limit any enactment relating to the use or subdivision of the Lands, or relieve the Owner from complying with any enactment.

p. **No Public Law Duty** – Wherever in this Agreement an act, determination, consent, approval or agreement of the Trust Committee is provided for, such act, determination, consent, approval or agreement may be done or made in accordance with the terms of this Agreement and no public law duty, whether arising from the principles of procedural fairness or the rules of natural justice shall have any application.

q. **No Waiver** – No condoning, excusing or overlooking by the Trust Committee of any default under this Agreement, nor any consent, approval, or agreement whether written or otherwise shall be taken to operate as a waiver by the Trust Committee of any subsequent default or of the necessity for further consent, approval or agreement in respect of a subsequent matter requiring it under this Agreement, or in any way to defeat or affect the rights or remedies of the Trust Committee.

r. **Arbitration** – Any matter in dispute between the parties under this Agreement, including any disputes as to whether a particular individual is eligible to occupy a Unit, must be referred to a

single arbitrator if the parties can agree on one, and otherwise to three arbitrators, one to be appointed by each of the parties and the third by those two so appointed, and the matter must be resolved in accordance with the provisions of the Commercial Arbitration Act of British Columbia.

s. **Notice on Title** – The Owner acknowledges and agrees that this Agreement constitutes both a covenant under Section 219 of the Land Title Act and a housing agreement under Section 483 of the Local Government Act, and agrees that the Owner will register a notice of this housing agreement against title to the Lands.

t. **Covenant Runs with the Land** – Every obligation and covenant of the Owner in this Agreement constitutes both a contractual obligation and a covenant granted by the Owner to the Trust Committee in accordance with section 219 of the Land Title Act in respect of the Lands and this Agreement burdens the Lands and runs with it and binds the Owner's successors in title and binds every parcel into which it is consolidated or subdivided by any means, including, by subdivision or by strata plan.

u. **Limitation on Owner's Obligations** – The Owner is only liable for breaches of this Agreement that occur while the Owner is the registered owner of the Lands.

v. **Amendment and Termination** – This Agreement may not be modified or amended except by bylaw of the Trust Committee, upon an agreement in writing between the Trust Committee and the Owner.

w. **Notices** – Any notice required to be given pursuant to this Agreement shall be in writing and shall be given to the Owner or the Trust Committee, as the case may be, at the address first above written, or to any other address of which either the Owner or the Trust Committee may advise the others in writing in accordance with this paragraph. Notice to the Trust Committee must be addressed to the Secretary of the Islands Trust. If given in person or by facsimile transmission, such notice will be deemed to be received when delivered and, if mailed, such notice will be deemed to be received only when actually received by the party to whom it is addressed.

x. **Enurement** – This Agreement is binding upon and enures to the benefit of the parties and their respective successors and permitted assigns.

y. **Remedies Cumulative** – The remedies of the Trust Committee specified in this Agreement are cumulative and are in addition to any remedies of the Trust Committee at law or in equity. No remedy shall be deemed to be exclusive, and the Trust Committee may from time to time have recourse to one or more or all of the available remedies specified herein or at law or in equity.

z. **Severability** – Each covenant and agreement contained in this Agreement is, and shall be construed to be, a separate and independent covenant or agreement and the breach of any such covenant or agreement by the Owner shall not discharge or relieve the Owner from its

obligations to perform. If any term or provision of this Agreement, or its application to any person or circumstance shall to any extent be found to be invalid and unenforceable, the remainder of this Agreement, or the application of such term or provision to persons or circumstances other than those as to which it is invalid or unenforceable, shall not be affected, and each term and provision of this Agreement shall be valid and shall be enforced to the extent permitted by law.

aa. **Joint and Several** – In the case of more than one owner, the grants, covenants, conditions, provisions, agreements, rights, powers, privileges and liabilities of the Owner shall be construed and held to be several as well as joint.

bb. **Included Words** – Wherever the singular or the masculine is used in this Agreement, it shall be deemed to include the plural or the feminine, or the body politic or corporate, where the context or the parties so require.

cc. **Governing Law** – This Agreement shall be governed by and construed in accordance with the laws of the province of British Columbia.

dd. **Joint Venture** – Nothing in this Agreement shall constitute the Owner as an agent, joint venture or partner of the Trust Committee or give the Owner any authority or power to bind the Trust Committee in any way.

ee. **Time of Essence** – Time is of the essence in this Agreement.

ff. **Further Assurances** – The parties shall execute and do all such further deeds, acts, things and assurances as they reasonably require to carry out the intent of this Agreement.

gg. **Priority** – The Owner agrees to do everything necessary at the Owner's expense to ensure that this Agreement is registered against title to the Lands with priority over all financial charges, liens and encumbrances registered or pending at the time of application for registration of this Agreement.

hh. **Deed and Contract** – By executing and delivering this Agreement each of the parties intends to create both a contract and a deed executed and delivered under seal.

ii. **Interpretation** – In this Agreement:

i. the word "enactment" has the meaning given in the Interpretation Act on the reference date of this Agreement;

ii. reference to any enactment includes any regulations, orders or directives made under the authority of that enactment;

iii. reference to any enactment is a reference to that enactment as consolidated, revised,

amended, re-enacted or replaced, unless otherwise expressly provided.

As evidence of their agreement to be bound by the above terms, the parties each have executed and delivered this Agreement under seal by executing Part 1 of the Land Title Act Form C to which this Agreement is attached and which forms part of this Agreement.

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SCHEDULE "A"

OWNER'S STATUTORY DECLARATION

CANADA, PROVINCE OF BRITISH COLUMBIA

IN THE MATTER OF A HOUSING AGREEMENT WITH THE DENMAN ISLAND LOCAL TRUST COMMITTEE ("Housing Agreement")

I,_____,_____, Denman Island, BC, declare that:

1. I am the_____[director, officer, employee] of the Denman Community Land Trust Association, the Owner of the land known as Pepper Lane, Denman Road, Denman Island, legally described as: [*Insert Legal Description of Lands*] (the "Lands").

2. The terms in this declaration have the same meaning as those defined in the Housing Agreement.

3. I make this declaration to the best of my personal knowledge.

4. This declaration is made pursuant to the Housing Agreement registered against the Lands.

5. For the period from_____to_____, the Affordable Dwelling Units were used only by Qualified Occupants meeting all eligibility requirements of the Housing Agreement, including, without limitation, the restrictions on Annual Household Income.

6. At no time during the last year were any of the Affordable Dwelling Units used as a short-term vacation rental or sublet.

7. The rental amounts charged for the Affordable Dwelling Units were in compliance with the Housing Agreement.

8. I acknowledge and agree to comply with all of the Owner's obligations under the Housing Agreement, and other charges registered against the Lands and confirm that the Owner has complied with all of its obligations under these Agreements.

9. I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and pursuant to the Canada Evidence Act.

DECLARED BEFORE ME at_____, British Columbia, this _____day of_____, 20___.

_____ _____

A Commissioner for taking Affidavits in British Columbia

Signature of person making declaration

SCHEDULE B

DENMAN COMMUNITY LAND TRUST ASSOCIATION TENANT SELECTION PROCEDURE FOR PEPPER LANE

1. A vacancy for an Affordable Dwelling Unit at Pepper Lane shall be advertised by Denman Community Land Trust Association ("the Owner") in at least two editions of one or more publications circulated on Denman Island.

2. Only Seniors, that is, persons 65 years of age and over (to a maximum of 2 such persons) may apply for an Affordable Dwelling Unit and become "Tenants" by entering into a tenancy agreement.

3. Where the applicant consists of only 1 Senior, 1 additional person who is under 65 years of age and related to the Senior (a "Family Member") may occupy an Affordable Dwelling Unit, but a Family Member may not enter into a tenancy agreement for, or become a tenant of, an Affordable Dwelling Unit.
However, where a tenancy agreement comes to an end due to the Tenant's death or voluntary surrender of that agreement, any Family Member who then meets all the age, income, asset and other requirements herein will be offered the opportunity to enter into a new lease for that Affordable Dwelling unit on similar terms

4. Quiet, friendly pets weighing less than 30 pounds may be allowed at Pepper Lane if specifically approved in writing by a tenant selection committee which in exercising its discretion shall take into account, among other things, the number and kind of pets already in residence.

5. Smoking is prohibited inside all Affordable Housing Units. Tenants may smoke outside at Pepper Lane provided the smell cannot be detected in or nearby any of the other Affordable Housing Units.

6. Applicants must meet the following financial requirements:

i) the combined gross annual income of the applicant(s) and any Family Member for the previous three years must not exceed 120% of the Before Tax Low Income Cutoff for Rural Areas for 1 or 2 persons, as applicable, as determined by Statistics Canada* or its successor agency;

ii) the aggregate household assets of the applicant(s) must not exceed $60,000. Similarly, the aggregate household assets of the Family Member must not exceed $60,000 (These limits shall be adjusted annually beginning in 2021 based on the Consumer Price Index rate of inflation for Victoria as calculated by Statistics Canada). Assets included for valuation are: cash, funds on deposit, stocks, bonds, term deposits, annuities, mutual funds, equity in a business or real estate, RRSPs and RRIFs. Assets excluded for valuation are: personal jewelry, furniture, a vehicle for personal use, bursaries and scholarships, and trade tools for employment.

7. Applicants shall obtain from the Owner such application form as it may prescribe from time to time and in returning the completed form to the Owner shall include verification of the financial information above required, including:

i) copies of the 3 most recent years' Notice of Assessment from Canada Revenue Agency;

ii) a statement of assets included for valuation as detailed in section 6 ii) above.

8. Applicants who meet these financial qualifications shall be referred to a tenant selection committee which shall be composed of not less than five people appointed by the directors of the society. The committee members need not be affiliated with the Owner but must be residents of Denman Island who have been such for not less than three years. Where possible, the committee will include two members nominated by two other charitable societies on Denman Island (one nominee per society) and a retired or practicing physician. Committee members must not be related to, or close friends with, any of the people who are then applying for a tenancy.

9. The committee shall screen applicant(s) and any Family Member to determine those who meet the following mandatory requirements:

i) the applicant(s) and any Family Member must be capable of independent living with little or no assistance with the activities of daily living and must not require provision of on-site medical or nursing care;

ii) the applicant(s) must have been primarily resident on Denman Island for at least the two years preceding the consideration of the application;

iii) the applicant(s) must have provided satisfactory references to establish that they would be responsible Tenant(s), i.e. would pay rent promptly, cause no damage, and create no nuisance; and

iv) any Family Member must provide satisfactory references to establish that they would be a responsible occupant i.e. would cause no damage and create no nuisance.

10. From the qualified applicants, the committee will select the Tenant(s) after due consideration of the following criteria:

i) the length of the applicant's and any Family Member's connection to Denman Island;

ii) the contribution of the applicant and any Family Member to Denman Island through paid or volunteer work;

iii) the degree of unsuitability of the applicant's present housing;

iv) the degree of suitability of the personal characteristics of the applicant and any Family

Member to the type of accommodation and living arrangement offered at Pepper Lane; and

v) all things being equal between competing applicants, to meet the needs of as many as possible, preference shall be given to a couple over a single applicant.

11. Upon selecting Tenant(s), the committee shall:

i) promptly advise all qualified applicants of their decision;

ii) maintain a waiting list of those qualified applicants still seeking residence at Pepper Lane.

* If Statistics Canada discontinues the publication of the Low Income Cutoff, the Owner may substitute a similar monetary amount based upon available statistical information (adjusted to economic circumstances on Denman Island) which estimates the minimum income required to meet basic living needs and which, for example, may include reference to the CMHC Core Needs Income Threshold.

STAFF REPORT

File No.: DE-DP-2020.1 (Nielsen)
(Cross Ref. No. DE-SUB-2019.2)

DATE OF MEETING: September 8, 2020

TO: Denman Island Local Trust Committee

FROM: Jaime Dubyna, Planner 2
Northern Team

SUBJECT: **Development Permit Application DE-DP-2020.1 – DPA 4 (Streams, Lakes and Wetlands)**
Applicant: Henning Nielsen (Pandesign Inc.)
Location: THE EAST 1/2 OF SECTION 28, DENMAN ISLAND, NANAIMO DISTRICT, EXCEPT PARTS IN PLANS VIP87737 AND VIP88293; PID 006-660-495

RECOMMENDATION

1. **That the Denman Island Local Trust Committee approve issuance of Development Permit DE-DP-2020.1 (Nielsen).**

REPORT SUMMARY

The Denman Island Local Trust Committee (LTC) is asked to consider a Development Permit (DP) application within Development Permit Area No. 4 (DPA 4) – Streams, Lakes and Wetlands (RAR and non-RAR Applicable), arising from a subdivision referral received from the Ministry of Transportation and Infrastructure (MoTI). Pursuant to Section 4.4.1 of the Denman Island Land Use Bylaw No. 186 (LUB), a DP is required to be issued by the LTC prior to the subdivision of land within DPA 4.

The applicant has submitted a *Riparian Areas Protection Regulation* (RAPR) Assessment Report by Current Environment Ltd., dated May 14, 2020 (revised July 25, 2020). The RAPR Assessment Report has been assessed and approved for methodological compliance by the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) staff.

Staff recommend issuance of the DP, as relevant DPA 4 guidelines have been met.

BACKGROUND

The 37.87 ha (93.57 acres) subject property, as shown in Figure 1, is a lot that is split down the middle by Danes Road, located in the northern half of Denman Island. The lot is currently undeveloped, and had previously been subject to logging activities. There is a Conservation Covenant held by the Denman Conservancy Association that is registered on title of the subject property that restricts use of the "Covenant Area", which is a part of Danes Marsh on the northeast portion of the lot.

A subdivision referral was received from the Ministry of Transportation and Infrastructure (MoTI) for a proposed 6-lot subdivision of the subject property, Islands Trust file DE-SUB-2019.2 (see Figure 2). Under Section 4.4.1 of the LUB, subdivision of land is considered an applicable development activity requiring a DP within DPA 4.

Per conditions recommended by staff in the subdivision referral response to the MoTI, dated October 3, 2019, Preliminary Layout Approval (PLA) includes the requirement for a DP and confirmation from the Islands Trust all applicable bylaws and regulations have been complied with. Approval of the proposed subdivision plan is partially contingent upon the applicant obtaining a DP.

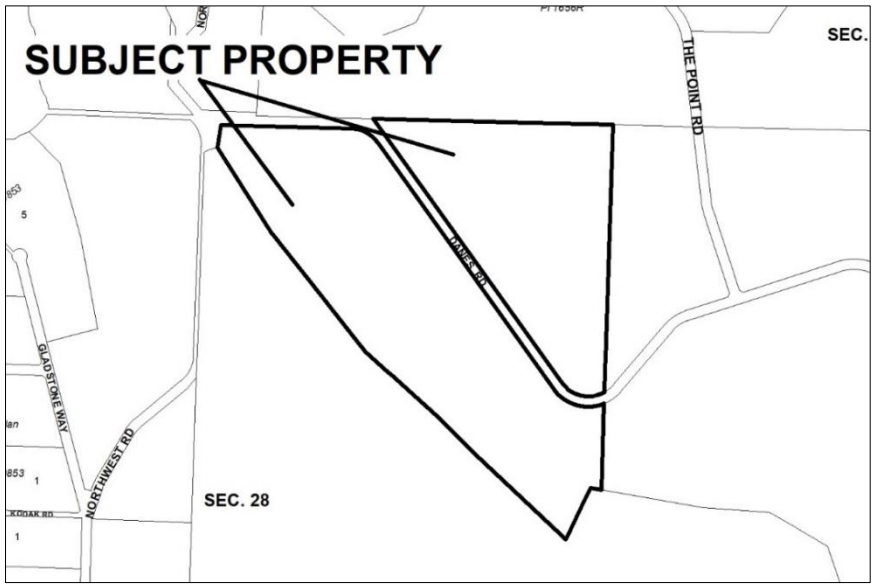


Figure 1. Subject property map.

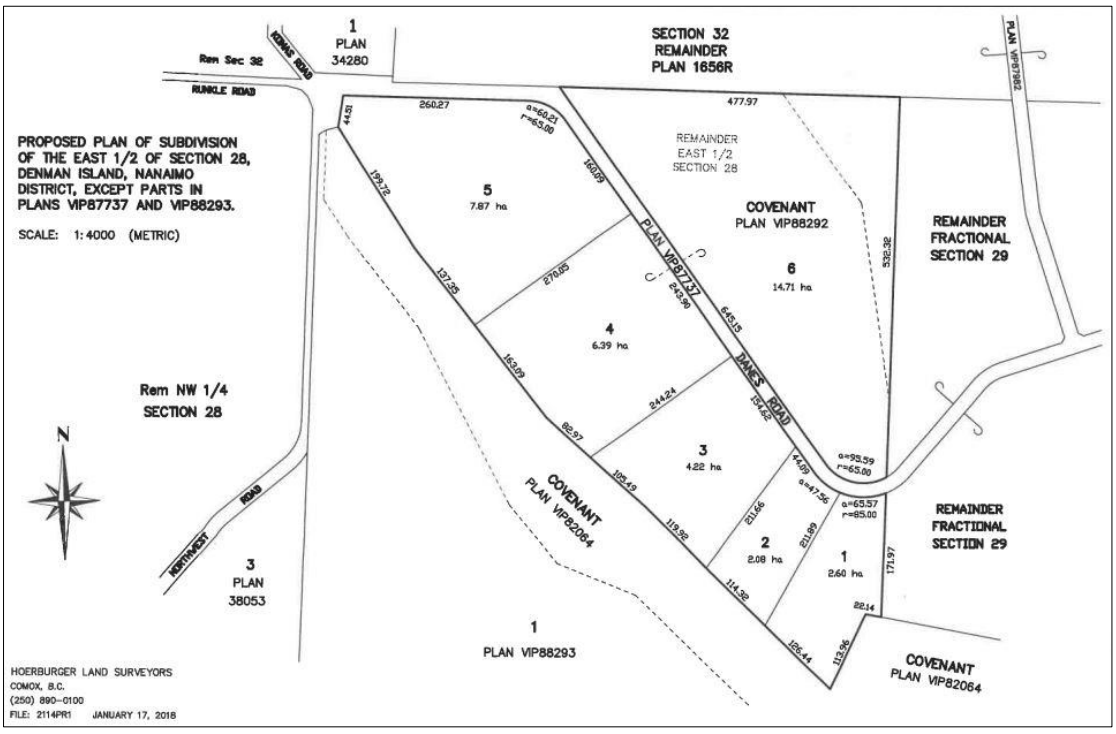


Figure 2. Proposed 6-lot subdivision (IT file DE-SUB-2019.2).

Information about the subject property is contained within Attachment 1 – Site Context. Applicable DP guidelines are included in Attachment 2. The proposed development is shown on the site plan, and the RAPR Assessment Report, attached to the draft DP in Attachment 3.

ANALYSIS

Policy/Regulatory

Islands Trust Policy Statement:

The following Islands Trust Policy Statement (ITPS) directive policies are relevant to this application and are addressed through DPA 4 (Streams, Lakes and Wetlands):

3.1.3 Local trust committees and island municipalities shall, in their official community plans and regulatory bylaws, address the identification and protection of the environmentally sensitive areas and significant natural sites, features and landforms in their planning area.

3.3.2 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 to protect aquatic wildlife.

Official Community Plan:

The subject property is currently designated Rural (R), Conservation/Recreation (CR) and Sustainable Resources (SR) in Schedule C of the Denman Island Official Community Plan (OCP) Bylaw No. 185, and is located within DPA 4 – Streams, Lakes and Wetlands.

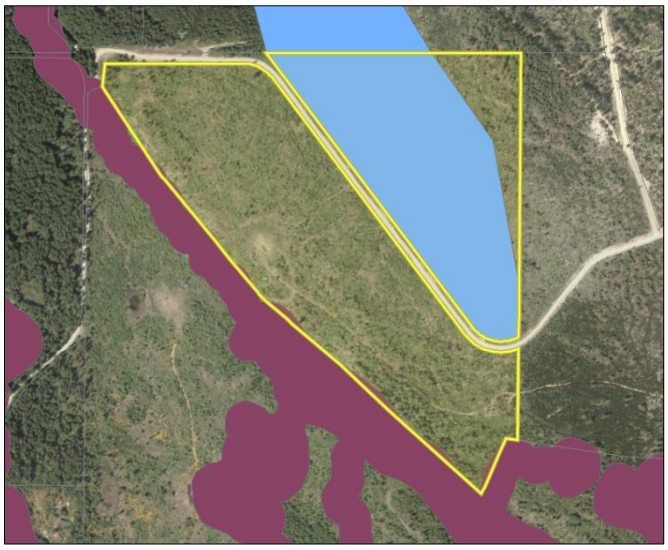


Figure 3. Location of DPA 4 covering portions of subject property (RAR-applicable shown in purple, non-RAR-applicable shown in blue).

The objectives of DPA 4 are:

1. To honour provincial designations of certain lands as for agricultural purposes
2. To protect the biological diversity and habitat values of riparian and aquatic ecosystems
3. To protect the natural environment necessary to conserve productive fish habitat, including both streams and the adjacent land and vegetation
4. To prevent the degradation of existing and future water supplies on Denman Island
5. To minimize adverse impacts of land use practices on wildlife habitats and plant habitats in riparian areas
6. To prevent water pollution.

Land Use Bylaw:

The subject property is currently split-zoned Rural Residential (R2), Conservation (CN) and Agriculture (A) under Schedule B of the LUB.

Prior to undertaking any development, subdivision or land alteration, an owner of a property within DPA 4 must apply to the LTC for a development pursuant to Section 4.4.1 of the LUB:

> ***4.4.1 Applicability***
> *The following activities shall require a development permit whenever they occur within the DPA, unless specifically exempted below:*
> *a) Subdivision of land;*

The guidelines for DPA 4 are contained within Section 4.4.3 of the LUB. Staff's assessment of how the DPA 4 guidelines have been addressed and met by the application are provided in Attachment 2.

Issues and Opportunities

Staff note that the LTC may only refuse to issue a DP if it determines that an application does not comply with the applicable DPA guidelines. Staff consider all applicable guidelines to be met.

The RAPR Assessment Report notes that the application is limited to the proposed 6-lot subdivision at this time, and no additional development activities are proposed. The RAPR report provides recommendations for future development activities on the proposed lots, which include:

- Conducting a danger tree assessment at the time of future development;
- Consulting with a geotechnical expert prior to planning any future development near the escarpment area, if required;
- Consideration be given to geotechnical building setbacks (if relevant) associated with the escarpment (steep slope), which will provide additional assurances that future Streamside Protection and Enhancement Area (SPEA) encroachments will be avoided;
- Directing runoff from future development to infiltrate into the soil, and not discharge directly towards aquatic habitats;
- Conducting various measures to control sediment and erosion during future development activities, such as marking the SPEA on proposed Lot 5, installing silt fencing, halting excavation activities during intense rainfall and seeding exposed soil areas.

Any future development activities would require a new DP application if they were to occur within the DPA 4, unless specifically exempted under Section 4.4.2 of the LUB.

Conservation Covenant

Staff note that a conservation covenant (FB371166) is charged to the title of the subject property held by Denman Conservancy Association. The covenant restricts the use of the "Covenant Area", except with the written approval of the Denman Conservancy Association. It is noted that the Covenant Area appears to correspond with the non-RAR-applicable area shown in blue in Figure 3.

While the covenant restricts the use of the Covenant Area, section 8.2(d) states, "*the Owner shall have the right to subdivide the Land in accordance with applicable statutes, regulations, plans and by-laws*"; subject to Section 4 of the Covenant.

Consultation

A community information meeting and/or public consultation and notification are not required for development permit applications.

Rationale for Recommendation

Staff advises that the guidelines for DPA 4 appear to be satisfied and as such, the LTC must issue the permit unless it differs in opinion from staff's analysis and considers the DPA 4 guidelines have not been met. It is noted that any future development within DPA 4 would require a new DP application, unless the activity is exempted from that requirement in Section 4.4.2 of the LUB.

See the staff recommendation on Page 1 of this report.

ALTERNATIVES

1. **Deny the application**

   The LTC may deny the application. If this alternative is selected, the LTC decision must be accompanied by reasons. Recommended wording for the resolution is as follows:

   That the Denman Island Local Trust Committee deny application DE-DP-2020.1 for the follows reasons [insert reasons provided by LTC].

2. **Approve Permit with condition(s)**

   The LTC may wish to approve issuance of the permit with further conditions to the presented Draft Permit. Recommended wording for the resolution is as follows:

   That the Denman Island Local Trust Committee approve issuance of Development Permit DE-DP-2020.1 conditional upon [insert conditions…].

NEXT STEPS

If the LTC resolves to issue the DP, the permit will be issued, staff will advise the MoTI staff that this condition has been met and will continue to work with the applicant until the other conditions of PLA as imposed by the MoTI, are met.

Submitted By:	Jaime Dubyna Planner 2	August 20, 2020
Concurrence:	Heather Kauer, RPP, MCIP, AICP Regional Planning Manager	August 26, 2020

ATTACHMENTS

1. Site Context
2. DPA Guidelines
3. Draft Development Permit

LOCATION

Legal Description	THE EAST 1/2 OF SECTION 28, DENMAN ISLAND, NANAIMO DISTRICT, EXCEPT PARTS IN PLANS VIP87737 AND VIP88293
PID	006-660-495
Civic Address	Danes Road
Lot Area	37.87 ha (93.57 acres)

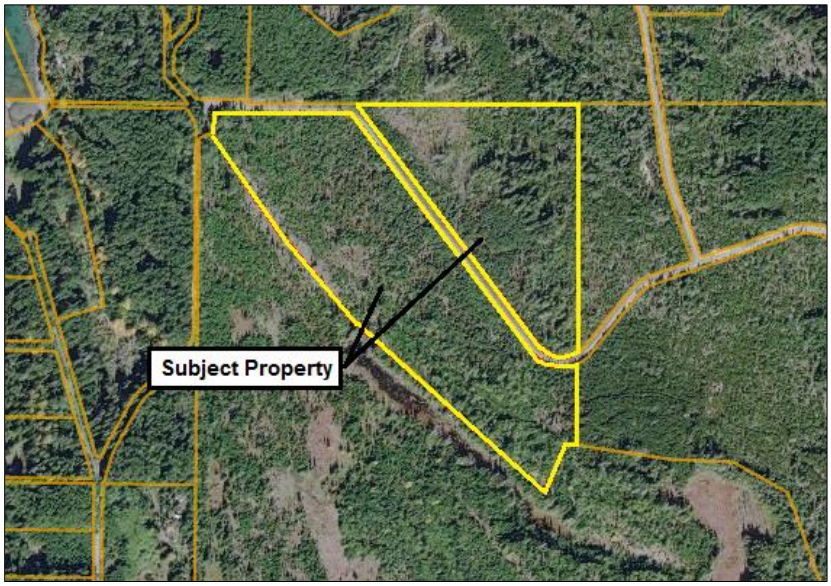


Figure 1. Orthophoto of subject property

LAND USE

Current Land Use	Bare land; Conservation
Surrounding Land Use	Residential; Agriculture; Bare land

HISTORICAL ACTIVITY

File No.	**Purpose**
DE-ALR-2009.3	Inclusion of 88.7 ha/exclusion of 88.7 ha
DE-ALR-2011.1	To create 13 agricultural lots
DE-RZ-2007.3	*Proceed no further*
DE-RZ-2009.2	Transfer of 31 densities from 7 Crown parcels for the creation of a provincial park, incl. conservation covenant on Danes Creek Headwaters
DE-SUB-2019.2 *(open)*	Proposed 6 lot subdivision

POLICY/REGULATORY

Official Community Plan	Land Use Designation: **Rural – R**; **Conservation/Recreation – CR**; **Sustainable Resources – SR**

	Development Permit Area: **DPA 4 – Non-RAR Streams, Lakes and Wetlands** **DPA 4 – RAR-Applicable Streams, Lakes and Wetlands**
Land Use Bylaw	Zone: **Rural Residential (R2)**; **Conservation (CN)**; **Agriculture (A)** **DPA 4 – Streams, Lakes and Wetlands** **4.4.1 Applicability** The following activities require a development permit whenever they occur within the DPA, unless specifically exempted below: a) **Subdivision of land**; See Attachment 2 of this report for DPA Guidelines.
Other Regulations	The provincial *Riparian Areas Protection Regulation* (RAPR) requires local governments to protect riparian areas during residential, commercial and industrial development by ensuring that a Qualified Environmental Professional (QEP) conducts a science-based assessment of proposed activities.
Covenants	Covenant **FA132364** (Denman Conservancy Association) – covenant to restrict use of covenant area. Covenant **FB371166** (Denman Conservancy Association) – covenant to restrict use of Covenant Area. Section 8.2 of covenant notes that, "*the Owner shall have the right to subdivide the Land in accordance with applicable statutes, regulations, plans and by-laws;*", subject to Section 4 of the Covenant.
Bylaw Enforcement	None

SITE INFLUENCES

Islands Trust Conservancy	The proposal does not directly affect an Islands Trust Conservancy Board (ITC)-owned property or conservation covenant; however, there are two conservation covenants affected by the proposal. The conservation covenants are not held by the ITC, therefore referral is not required according to Policy 3.3.ii.
Regional Conservation Strategy	Map 6 of the Regional Conservation Plan 2018-2027 identifies the subject property as MEDIUM and HIGH priority lands for conservation. Denman Island as a whole has been identified as a MEDIUM priority.
Species at Risk	None mapped
Sensitive Ecosystems	Islands Trust mapping indicates areas on the subject property within a Wetland (WN) and Older Forest (OF) sensitive ecosystems.
Hazard Areas	None mapped.
Archaeological Sites	Remote Access to Archaeological Data (RAAD) does not indicate any archaeological sites within the property or within 100 metres of the property. Notwithstanding the foregoing, and by copy of this report, the owners and applicant should be aware that there is still a chance that the lot may contain previously unrecorded archaeological material that is protected under the *Heritage Conservation Act*. If such material is encountered during development, all work should cease and Archaeology Branch should be contacted immediately as a *Heritage Conservation Act* permit may be needed before further development is undertaken. This may involve the need to hire a qualified archaeologist to monitor the work.

Climate Change Adaptation and Mitigation	n/a
Shoreline Classification	n/a
Shoreline Data in TAPIS	n/a
Groundwater Vulnerability	Provincial mapping indicates high vulnerability.

DEVELOPMENT PERMIT AREA NO. 4 (DPA 4): STREAMS, LAKES AND WETLANDS

Guideline	Complies	Planner Comments
1 In general, all development in this DPA should be undertaken in a manner that minimizes impact on and that restores or maintains the proper functioning condition of the riparian area, water bodies and ecosystems. Where a Qualified Environmental Professional (QEP) or other professional has made recommendations for mitigation measures, enhancement or restoration in order to lessen impacts on the riparian area and ecosystems, the Local Trust Committee may impose permit conditions, including a requirement for security in the form of an irrevocable letter of credit, to ensure the protection of riparian areas and ecosystems is consistent with the measures and recommendations described in the report	Yes	Provincially accepted RAPR Assessment Report completed by Current Environment, dated May 14, 2020 (revised July 25, 2020). The RAPR Report details protection measures for future development activities. No security required as the RAPR Report does not require works, revegetation or enhancement measures for the proposed subdivision. No additional development is proposed at this time.
2 The development permit should not allow any development activities, including the storage or application of pesticides and other chemicals for non-essential cosmetic purposes, to take place within any Streamside Protection and Enhancement Area (SPEA) identified by the QEP or riparian buffer recommended by another professional adjacent to a non-RAR applicable watercourse, lake or wetland, and the owner should be required to implement a plan for protecting the SPEA or riparian buffer over the long term through measures that may be implemented as conditions of the development permit.	Yes	The application is for a proposed subdivision, and no further development is proposed at this time. The RAPR Report notes that, "The majority of the SPEA is located outside of the limits of the subject property, with the exception of a small portion in the northwest corner." To avoid future SPEA encroachments, the QEP recommends consideration be made for setbacks from steep slopes during any future development. Future development within DPA 4 may require a new development permit application.
3 Where the QEP or other professional's report describes an area as suitable for development with special mitigating measures, the development permit should only allow the development to occur in compliance with the measures described in the report. Monitoring and regular reporting by a QEP or other professional at the	Yes	In the RAPR Report, the QEP notes that environmental monitoring is not a requirement at this time, as the application is limited to subdivision. A new development permit application may be required for future development within DPA 4.

applicant's expense may be required during construction and development phases, as specified in a development permit.		
4 The following guidelines are applicable to floats and associated structures within the development permit area: i) floats should not be placed in areas identified as important to fish life processes where installation of a float would compromise the functioning of the processes; ii) a ramp or float should not rest on the bed of the water body; iii) the use of treated wood in the water body should be avoided; iv) floatation material should be contained within a durable shell to prevent disintegration; v) pervious surfacing should be used on ramps and floats (e.g. grating or separated boards); vi) any areas disturbed during installation should be restored; vii) where a float is being replaced, all old materials should be removed from the riparian area.	n/a	Not proposed.
5 If the nature of the proposed project within the DPA changes after the professional report has been prepared such that it is reasonable to assume that the professional's assessment of the impact of the development may be affected, the Local Trust Committee may require the applicant to have the professional update the assessment at the applicant's expense and DP conditions may be amended accordingly.	Yes	There has been no change to the proposed subdivision at the time of writing this report.
6 The Local Trust Committee may consider variances to subdivision or siting or size regulations where the variance may result in enhanced protection of a SPEA, riparian buffer or riparian ecosystem in compliance with recommendations of a professional's report."	n/a	No variances are requested as part of the application that would enhance SPEA protection.

DRAFT

DENMAN ISLAND LOCAL TRUST COMMITTEE
DEVELOPMENT PERMIT
DE-DP-2020.1

TO: **TOMAS PILGAARD NIELSEN & PANDESIGN INC. NO. BC 0533170**

1. This Development Permit (the "Permit") applies to the land described as:

   PID: 006-660-495
   THE EAST 1/2 OF SECTION 28, DENMAN ISLAND, NANAIMO DISTRICT, EXCEPT PARTS IN PLANS VIP87737 AND VIP88293

   as shown on Schedule "A" Proposed Plan of Subdivision, attached to and forming part of this Permit.

2. Whereas the subject area as described above lies within "Development Permit Area No. 4: Streams, Lakes and Wetlands" designated under the Denman Island Official Community Plan Bylaw No. 185, 2008 and whereas this Permit issued under the Denman Island Land Use Bylaw No. 186, 2008 authorizes the subdivision "development" as identified on Schedule "A" Proposed Plan of Subdivision, and is subject to the following conditions:

   a. There shall be no development or land alteration except as in accordance with Schedule "B" *Riparian Areas Protection Regulation* Assessment Report by Current Environmental, dated May 14, 2020 (revised July 25, 2020), attached to and forming part of this permit.

This is not a Siting and Use Permit, nor does it provide permission to construct any works or commence any development without other lawfully required approvals and permits. It further does not relieve the applicant from complying with the regulations and provisions set out in the *Denman Island Official Community Plan Bylaw No. 185, 2008* and the *Denman Island Land Use Bylaw No. 186, 2008.*

AUTHORIZING RESOLUTION PASSED BY THE DENMAN ISLAND LOCAL TRUST COMMITTEE THIS __ DAY OF ____, 20__.

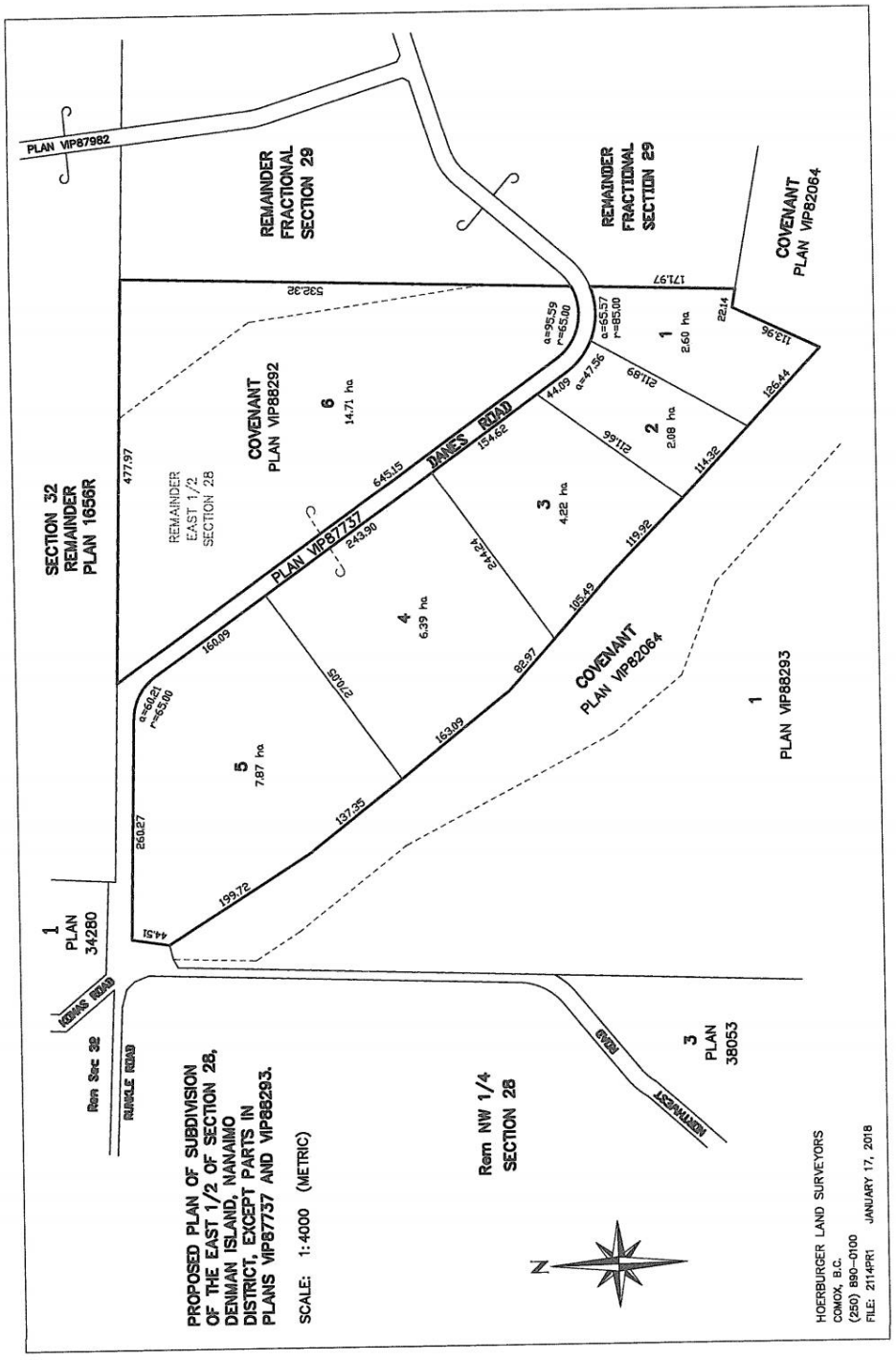
_____ _____

Deputy Secretary, Islands Trust **Date Issued**

IF THE DEVELOPMENT HEREIN IS NOT COMMENCED BY THE __ DAY OF ____, 20__, THIS PERMIT AUTOMATICALLY LAPSES.

DENMAN ISLAND LOCAL TRUST COMMITTEE
DE-DP-2020.1

Schedule "A" - Proposed Plan of Subdivision



DENMAN ISLAND LOCAL TRUST COMMITTEE

DE-DP-2020.1

Schedule "B" – Riparian Areas Protection Regulation Assessment Report

Riparian Areas Protection Regulation Assessment Report
(the "RAPR Assessment Report")

Submitted by Dusty Silvester, Registered Professional Biologist (RPBio) for Current Environmental on May 14, 2020 (revised July 25, 2020) and Reviewed and accepted by the Province of British Columbia (FLNRORD), July 28, 2020

Riparian Areas Protection Regulation: Assessment Report

Please refer to submission instructions and assessment report guidelines when completing this report.

Date	May 14, 2020 Revised June 17 & July 25, 2020

I. Primary QEP Information

First Name	Dustin	Middle Name		
Last Name	Silvester			
Designation	RPBio	Company	Current Environmental Ltd.	
Registration #	3165	Email	dusty@currentenv.ca	
Address	558 England Ave			
City	Courtenay	Postal/Zip	V9N 2N3	Phone # 250.871.1944
Prov/state	BC	Country	Canada	

II. Secondary QEP Information (use **Form 2** for other QEPs)

First Name		Middle Name	
Last Name			
Designation		Company	
Registration #		Email	
Address			
City		Postal/Zip	Phone #
Prov/state		Country	

III. Developer Information

First Name	Henning	Middle Name	
Last Name	Neilsen		
Company	Pan Design		
Phone #	250-792-0553	Email	henning@pandesign.ca
Address	3223 Lacon Road		
City	Denman Island	Postal/Zip	V0R 1T0
Prov/state	BC	Country	Canada

IV. Development Information

Development Type	Subdivision		
Area of Development (ha)	37.9	Riparian Length (m)	1265
Lot Area (ha)	37.9	Nature of Development	new
Proposed Start Date	June 30, 2020	Proposed End Date	June 29, 2021

V. Location of Proposed Development

Street Address (or nearest town)	Danes Road, Denman Island						
Local Government	Islands Trust			City	Denman Island		
Stream Name	Birkenhead Creek, Unnamed Stream, Railway Marsh						
Legal Description (PID)	006-660-495			Region	Vancouver Island		
Stream/River Type	2 streams, 1 wetland			DFO Area	South Coast		
Watershed Code	905-124500-45800						
Latitude	49	34	58	Longitude	124	49	32

Completion of Database Information includes the Form 2 for the Additional QEPs, if needed.
Insert that form immediately after this page.

Table of Contents

I. Primary QEP Information 1

II. Secondary QEP Information (use Form 2 for other QEPs) 1

III. Developer Information 1

IV. Development Information 1

V. Location of Proposed Development 1

Section 1. Description of Fisheries Resources Values and a Description of the Development proposal 3

Section 2. Results of Riparian Assessment (SPEA width) 5

Channel width and slope and Channel Type (use only if water body is a stream or a ditch, and only provide widths if a ditch) 5

Site Potential Vegetation Type (SPVT) 5

Zone of Sensitivity (ZOS) and resultant SPEA 6

Site Potential Vegetation Type (SPVT) 7

Zone of Sensitivity (ZOS) and resultant SPEA 7

Channel width and slope and Channel Type (use only if water body is a stream or a ditch, and only provide widths if a ditch) 9

Site Potential Vegetation Type (SPVT) 9

Zone of Sensitivity (ZOS) and resultant SPEA 9

Comments 10

Section 3. Site Plan 11

Section 4. Measures to Protect and Maintain the SPEA 13

Section 5. Environmental Monitoring 16

Section 6. Photos 17

Section 7. Professional Opinion 21

Section 1. Description of Fisheries Resources Values and a Description of the Development proposal

Description of Fisheries Resource Values

Aquatic habitat in proximity to the subject property includes two streams (Birkenhead Creek and Tributary 2) and two wetlands (Railway & Danes Marshes) which are all part of the larger Chickadee Lake watershed (Figure 1). Tributary 2 flows southwest into Railway Marsh, which outlets into Birkenhead Creek at the northwest end. Birkenhead Creek then flows northwest for approximately 1 km, ultimately flowing into Baynes Sound. Danes Marsh flows north towards Danes Creek and empties into Lambert Channel. Another unnamed stream is located on the northeast side of Danes Road, flowing north through the subject property. This stream was identified by Islands Trust as being a "non-RAPR applicable" stream. Given this designation, and the fact that the portion of the property that the stream runs through is to be protected under a conservation covenant, the stream was not subject to a detailed assessment in this report.

Fish presence sampling was not conducted as part of this assessment, however there are documented occurrences of coho salmon and cutthroat trout upstream of the subject property in Chickadee Lake[1], therefore it is assumed that these species are present in Birkenhead Creek and Railway Marsh. Fish habitat in this reach of Birkenhead Creek reach is marginal; habitat diversity is limited and there is little riparian vegetation remaining due to recent logging. Riparian vegetation includes regenerating Western hemlock, Western redcedar, white pine, and Douglas-fir, with an understory of slough sedge, cattail, and reed canary grass. The channel is poorly defined throughout this reach, flowing through extensive slough sedge and reed canary grass (Photo 6). It appears that water levels fluctuate significantly, likely as a result of beaver activity (Photo 2). Beaver dams are present at the outlet of Railway Marsh into Birkenhead Creek, which likely present a partial barrier to fish passage.

Railway Marsh (Photo 1) is a linear wetland with an outflow northwest into Birkenhead Creek controlled by beaver dams. The center of the wetland is open water, with marsh habitat around the perimeter. The high-water mark is poorly defined, likely as a result of fluctuating water levels associated with beaver activity. Riparian vegetation is intact and functional, with a canopy of Western hemlock, Douglas-fir and Western redcedar, a shrub layer of Pacific ninebark, blackcap, dull Oregon-grape, salal, and sword fern. Emergent marsh vegetation includes slough sedge, cattail, bulrush, and reed canary grass. The wetland could provide excellent habitat for juvenile salmon or resident trout, as it likely contains adequate water throughout the summer months.

Danes Marsh is located in a "covenant area" in the northeast property corner and drains in a northwesterly direction towards Lambert Channel (Figure 1). Islands Trust mapping shows a stream channel in the covenant area that was not found to exist. Instead, the approximate 4 ha wetland that is present is characterized by sphagnum mosses, salal, small-flowered bulrush, and skunk cabbage (Photo 7) surrounded by an approximate 20-60 year-old recovering forest stand containing Sitka spruce, western white pine, western redcedar, western hemlock, red alder and lodgepole pine. IT mapping also designates this drainage as "non-RAR" which may be related to how the IT contracted out an island wide overview RAR assessment/mapping, or the presence of beaver dams and wetlands downstream of the subject property. There were, however, no features identified during this site assessment to warrant a non-RAR designation.

Tributary 2 flows into the southeast side of Railway Marsh, near the south eastern property boundary of Lot 1 (Figure 2). It is poorly defined at the mouth adjacent to Railway Marsh, as it flows through dense reed canary grass, but becomes well-defined upstream. A definitive barrier to fish passage occurs approximately 50 m upstream from the confluence with Railway Marsh; a series of two cascades over bedrock (Photo 4). The lower cascade is a 1.25 m

[1] Government of BC (2020). *Habitat Wizard.* Accessed from: <http://maps.gov.bc.ca/ess/hm/habwiz/>.

vertical drop, and immediately upstream is a 2 m vertical drop. Below the cascades, fish habitat is minimal; the channel lacks complexity and is relatively steep (8% gradient). Riparian vegetation in this section is functioning well, with a canopy of Western redcedar, Western hemlock and Douglas-fir, and an understory of salal, sword fern, and dull Oregon-grape. Above the cascades the channel becomes low gradient (1%), and poorly defined, flowing through slough sedge, cattail, and common rush (Photo 5). In-stream cover is limited, with minimal pool habitat and large woody debris. Substrates are predominantly organics, with patches of conglomerate bedrock and gravels. Riparian vegetation above the cascades is functioning poorly, having been recently logged. Vegetation includes regenerating Western hemlock, white pine, Douglas-fir and Western redcedar, with an understory of dull Oregon-grape, salal, sword fern and bracken.

Description of the Subject Property and Development Proposal

Proposed development on the subject property is currently limited to subdivision. No clearing or development works are proposed at this time. The development proposal involves subdividing the portion of the property on the southwest side of Danes Road into five lots (Figures 1 & 2). The portion of the property on the northeast side of Danes Road will be placed under a covenant and retained as an ecological conservation area.

The entirety of the lot has been previously logged and is a young regenerating forest. Historic imagery suggests that the property was logged in the late 1990's-early 2000's. The majority of the SPEAs of all aquatic habitats do not intersect with the subject property, with the exception of a small portion of the SPEA for Birkenhead Creek in the northwest corner of the lot (Figures 1-2).

A steep (between 20-40% slope) escarpment runs along the southwest property boundary immediately inside of the property line, but outside of all SPEAs and the majority of the RAA. Some features were observed during the course of the assessment which indicate slope instability (Photo 3). This is addressed in Section 4 below.

Section 2. Results of Riparian Assessment (SPEA width)

Refer to Section 3 of Technical Manual

Date: Apr. 6, 2020

Description of Water bodies involved (number, type): 1 wetland, 2 streams

Stream	X - Birkenhead Creek
Wetland	
Lake	
Ditch	
Number of reaches	1
Reach #	1

Channel width and slope and Channel Type (use only if water body is a stream or a ditch, and only provide widths if a ditch)

	Channel Width(m)	Gradient (%)
starting point	5.4	
upstream	5.6	
	~~3.5~~	
	6.0	
	8.1	
	8.0	
downstream	5.0	1.5%
	3.9	
	9.7	
	~~11.3~~	
	6.0	
Total: minus high /low	57.6	
mean	6.4	

	R/P	C/P	S/P
Channel Type	X		

I, Dustin Silvester , hereby certify that:

a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen;
c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
d. In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.

Site Potential Vegetation Type (SPVT)

	Yes	No	
SPVT Polygons		X	Tick yes only if multiple polygons, if No then fill in one set of SPVT data boxes

I, Dustin Silvester , hereby certify that:

a) I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
b) I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen ;
c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
d) In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.

Polygon No: 1

	LC	SH	TR
SPVT Type			X

Method employed if other than TR

N/A

Zone of Sensitivity (ZOS) and resultant SPEA

Segment No:	1, Right bank	If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons					
LWD, Bank and Channel Stability ZOS (m)	19.2						
Litter fall and insect drop ZOS (m)	15						
Shade ZOS (m) max	N/A	South bank	Yes		No	X	
SPEA maximum	**19.2**						

I, Dustin Silvester , hereby certify that:

a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen;
c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
d. In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.

FORM 1

Riparian Areas Protection Regulation - Qualified Environmental Professional - Assessment Report

Refer to Section 3 of Technical Manual

Date: Apr. 6, 2020

Description of Water bodies involved (number, type): 2 wetland, 2 streams

Stream	
Wetland	1 - Railway Marsh
Lake	
Ditch	
Number of reaches	n/a
Reach #	n/a

Site Potential Vegetation Type (SPVT)

	Yes	No	
SPVT Polygons		X	Tick yes only if multiple polygons, if No then fill in one set of SPVT data boxes

I, Dustin Silvester , hereby certify that:

e) I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;

f) I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen ;

g) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and

h) In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.

Polygon No: 1

Method employed if other than TR: N/A

	LC	SH	TR
SPVT Type			X

Zone of Sensitivity (ZOS) and resultant SPEA

Segment No:	1, Right bank	If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons				
LWD, Bank and Channel Stability ZOS (m)	15					
Litter fall and insect drop ZOS (m)	15					
Shade ZOS (m) max	n/a	South bank	Yes		No	X
SPEA maximum	**15**					

I, Dustin Silvester , hereby certify that:

e. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;

f. I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen;

g. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and

h. In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.

FORM 1

Riparian Areas Protection Regulation - Qualified Environmental Professional - Assessment Report

Refer to Section 3 of Technical Manual

Date: Apr. 6, 2020

Description of Water bodies involved (number, type): 2 wetland, 2 streams

Stream	
Wetland	2 - Danes Marsh
Lake	
Ditch	
Number of reaches	n/a
Reach #	n/a

Site Potential Vegetation Type (SPVT)

	Yes	No	
SPVT Polygons		X	Tick yes only if multiple polygons, if No then fill in one set of SPVT data boxes

I, Dustin Silvester , hereby certify that:

i) I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;

j) I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen ;

k) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and

l) In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.

Polygon No: 1

	LC	SH	TR
SPVT Type			X

Method employed if other than TR

N/A

Zone of Sensitivity (ZOS) and resultant SPEA

Segment No:	1, Right bank	If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons					
LWD, Bank and Channel Stability ZOS (m)	15						
Litter fall and insect drop ZOS (m)	15						
Shade ZOS (m) max	n/a	South bank	Yes	X	No		
SPEA maximum	**15 -30**						

I, Dustin Silvester , hereby certify that:

i. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;

j. I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen;

k. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and

l. In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.

FORM 1

Riparian Areas Protection Regulation - Qualified Environmental Professional - Assessment Report

Refer to Section 3 of Technical Manual

Date: Apr. 6, 2020

Description of Water bodies involved (number, type)	1 wetland, 2 streams
Stream	X – Tributary 2
Wetland	
Lake	
Ditch	
Number of reaches	1
Reach #	1 – Tributary 2

Channel width and slope and Channel Type (use only if water body is a stream or a ditch, and only provide widths if a ditch)

	Channel Width(m)	Gradient (%)
starting point	2.7	
upstream	1.7	
	2.6	1%
	2.8	
	2.4	
	~~1.4~~	
downstream	2.3	8%
	3.5	
	~~6.3~~	
	1.9	
	3.8	
Total: minus high /low	23.7	
mean	2.6	

I, Dustin Silvester , hereby certify that:

a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen;
c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
d. In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.

	R/P	C/P	S/P
Channel Type	X		

Site Potential Vegetation Type (SPVT)

	Yes	No	
SPVT Polygons		X	Tick yes only if multiple polygons, if No then fill in one set of SPVT data boxes

I, Dustin Silvester , hereby certify that:

m) I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
n) I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen ;
o) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
p) In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.

Polygon No:	1		
	LC	SH	TR
SPVT Type			X

Method employed if other than TR
N/A

Zone of Sensitivity (ZOS) and resultant SPEA

Segment No:	1, Right bank	If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons
LWD, Bank and Channel Stability ZOS (m)	10	

Litter fall and insect drop ZOS (m)	10					
Shade ZOS (m) max	N/A	South bank	Yes		No	X
SPEA maximum	**10**					

I, Dustin Silvester , hereby certify that:

m. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
n. I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen;
o. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
p. In carrying out my assessment of the development proposal, I have followed the technical manual to the Riparian Areas Protection Regulation.

Comments

As mentioned in Section 1 above, a series of two cascades occurs approximately 50 m upstream of the confluence of Tributary 2 with Railway Marsh. The channel characteristics below the cascades are significantly different than those above; below the cascades the channel has a relatively steep gradient (8%) and well-defined banks. Above, the channel is low gradient (1%) and poorly defined. Given that the 50 m length of the lower channel portion does not meet the minimum 100 m length required for a reach, the entire assessed length of Tributary 2 was treated as one reach. Channel type was defaulted to riffle pool to reflect the characteristics of the upper portion of the channel.

Section 3. Site Plan

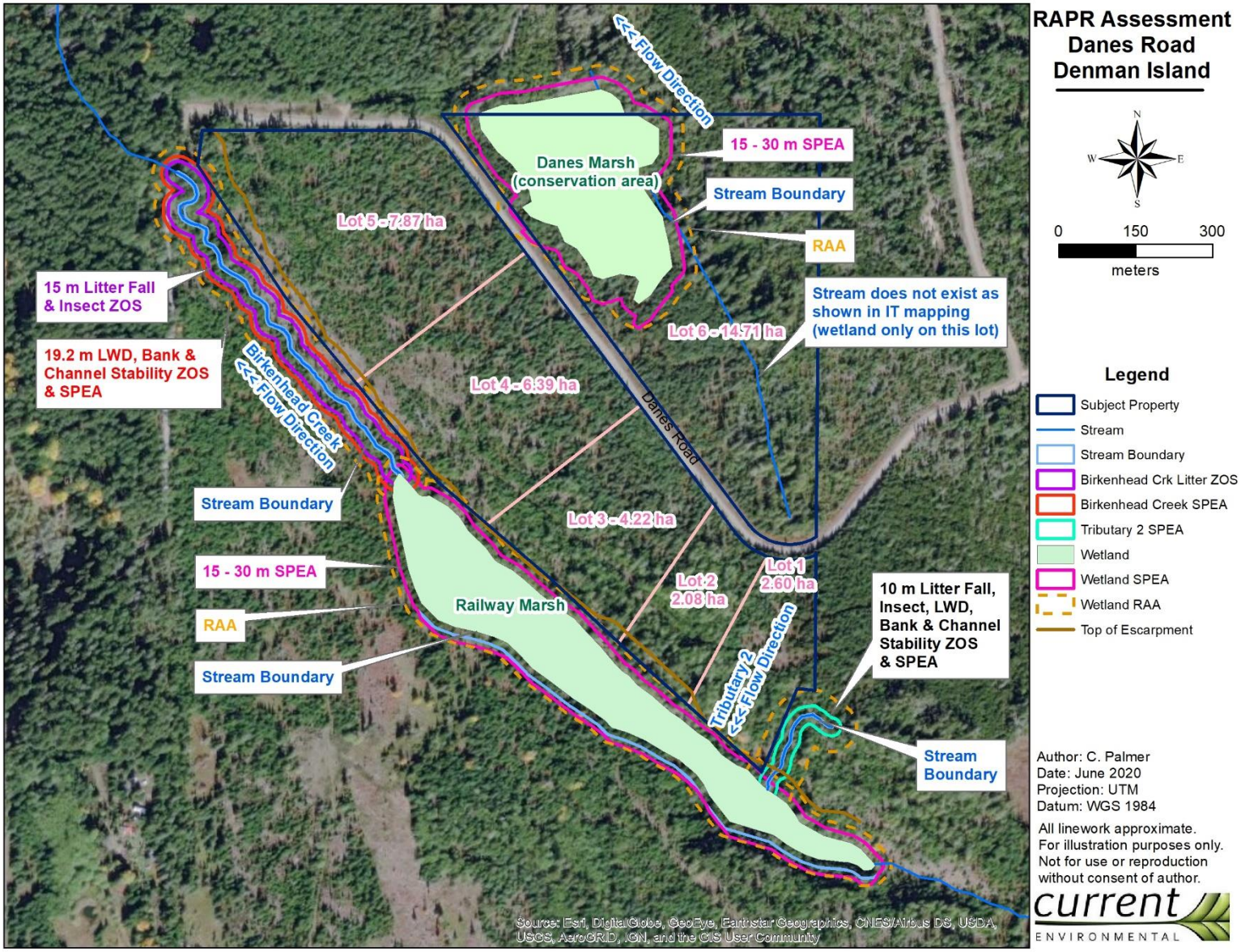


Figure 1. Danes Road RAPR Assessment Map.

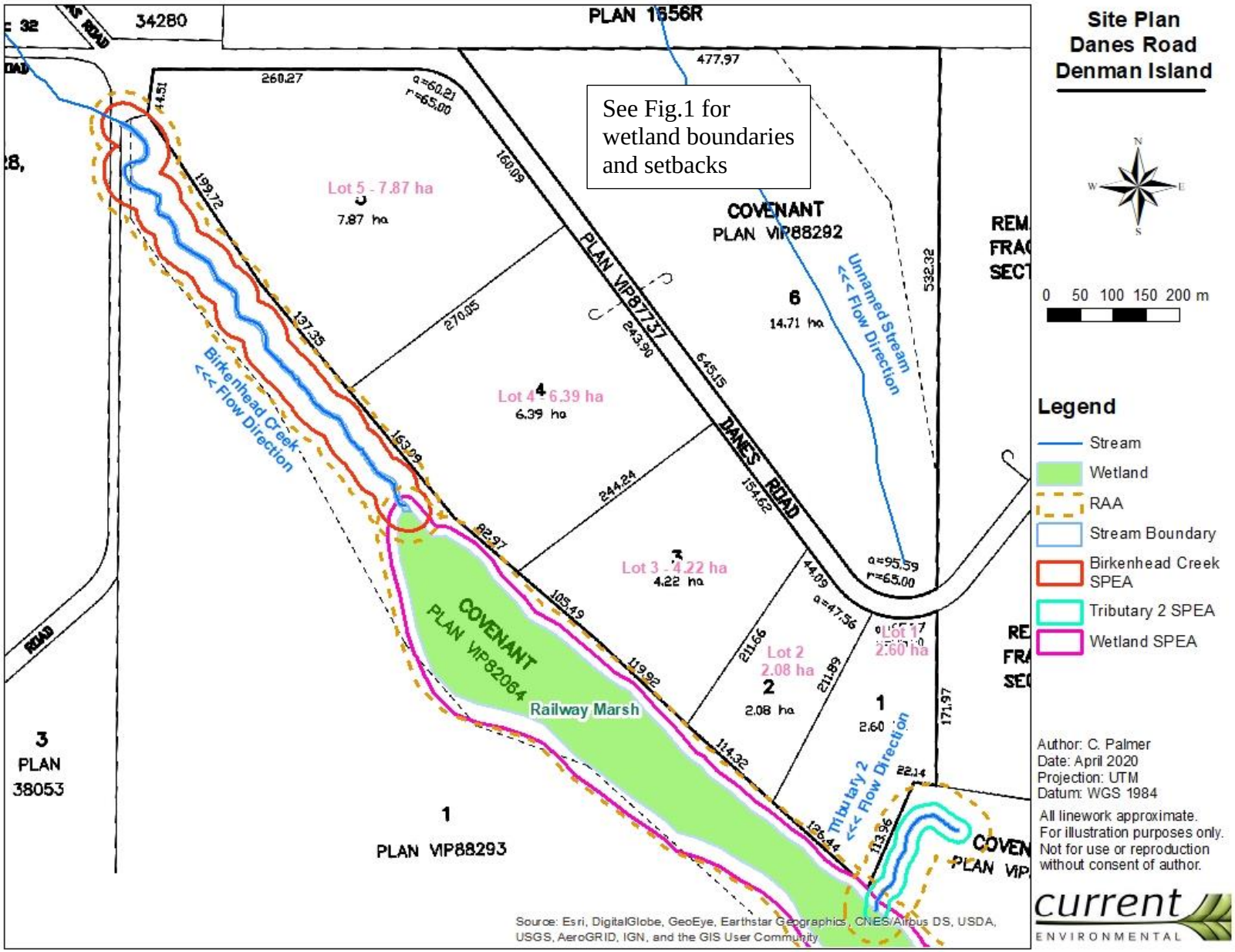


Figure 2. Danes Road lot layout. Note layout in northeast covenant area does not include base map showing Danes Marsh. Refer to Fig. 1.

Section 4. Measures to Protect and Maintain the SPEA

1. Danger Trees
Proposed development at this time is limited to subdivision of the existing lot with no proposed development that would be the target of or otherwise influence danger trees. Should development occur in future, the proponent must conduct a danger tree assessment at that time.
I, Dusty Silvester, hereby certify that: a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.
2. Windthrow
Proposed development at this time is limited to subdivision of the existing lot with no proposed tree clearing, and therefore windthrow was not considered during assessment.
I, Dusty Silvester, hereby certify that: a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.
3. Slope Stability
There were a number of indicators of slope instability observed along the escarpment that runs along the southwest property boundary, including curved trees, stepped benches and small scarps, and scattered rock at the toe of the slope. It is recommended that a geotechnical expert be consulted prior to planning any future development near the escarpment if required by the Islands Trust building permit process.
I, Dusty Silvester , hereby certify that: a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.
4. Protection of Trees
Proposed development at this time is limited to subdivision of the existing lot, and therefore no trees will be impacted at this time.
I, Dusty Silvester , hereby certify that: a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen;
c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.

5. Encroachment

The majority of the SPEA is located outside of the limits of the subject property, with the exception of a small portion in the northwest corner (Figure 1-2). Consideration should be given to any future development and building conditions related to geotechnical setbacks associated with the steep slopes of the escarpment. Based on the length of the subject property boundaries it is not feasible to require establishing a permanent fence line along the nearly 1.5 km length of the properties adjacent to aquatic areas described in this report. A geotechnical building setback (if relevant) from the top of bank will provide additional assurances that future SPEA encroachments will be avoided.

I, Dusty Silvester , hereby certify that:

a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen ;
c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.

6. Sediment and Erosion Control

Sediment and erosion control is not of concern for this project as there is no proposed development. However, in the case of any future development, specific measures to control sediment during any future construction will include:

a) A QEP is to be notified 3 days prior to beginning construction. The QEP will ensure appropriate mitigation measures are in place as needed;

b) The SPEA area intersecting Lot 5 is to be clearly delineated using stakes, flagging, or temporary fencing, etc. prior to construction;

c) Maintain/do not disturb all vegetation within the setback areas;

d) No machinery is to enter riparian setback areas at any time;

e) Where there is a potential for silt runoff in the proximity of existing watercourses, control devices will be installed prior to construction activities commencing;

f) Filter fabric dams, rock check dams, and silt fencing will be used as needed on a site-specific basis to control erosion. Filtration should be accomplished using filter fabric keyed into substrates and banks and elevated using stakes. Silt fencing is not an acceptable mitigation technique to control erosion in flowing ditches; however, it is useful for containing slumping areas and for use as baffles to slow water velocities.

g) Excavation will be stopped during intense rainfall events or whenever surface erosion occurs affecting the watercourse.

h) Watercourses are not to be traversed by machinery at any time.

i) Soil stockpiles will be placed a minimum of 30 m from any watercourse and in a location where erosion back into the watercourse cannot occur and will not impede any drainage.

j) Soil stockpiles with the potential to erode into watercourses are to be covered with poly sheeting or mulch. Other techniques, such as terracing or surface roughening can greatly reduce surface erosion on steeper slopes.

k) Permanent exposed soil areas and erosion-prone slopes that may potentially erode into the watercourse are to be seeded immediately or covered with geotextile.

I, Dusty Silvester, hereby certify that:

a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen ;
c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.

7. Stormwater Management

Runoff from future developments must be directed to infiltrate back into the soil and not discharged directly towards aquatic habitats. This is to minimize cumulative hydrological impacts of increased residential density on aquatic environments. Rock pits, raingardens, and vegetated swales are all excellent ways of encouraging rainwater infiltration and minimizing runoff.

I, Dusty Silvester, hereby certify that:

a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen;
c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.

8. Floodplain Concerns (highly mobile channel)

There were no flooding concerns noted for any of the aquatic habitats adjacent to the property during the course of the assessment.

I, Dusty Silvester, hereby certify that:

a. I am a qualified environmental professional, as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Henning Nielsen;
c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Minister's technical manual to the Riparian Areas Protection Regulation.

Section 5. Environmental Monitoring

Given that the proposed development is limited to subdivision, environmental monitoring is not a requirement at this time.

Section 6. Photos

Label	**Photo 1. Looking northwest at Railway Marsh from the top of the escarpment.**



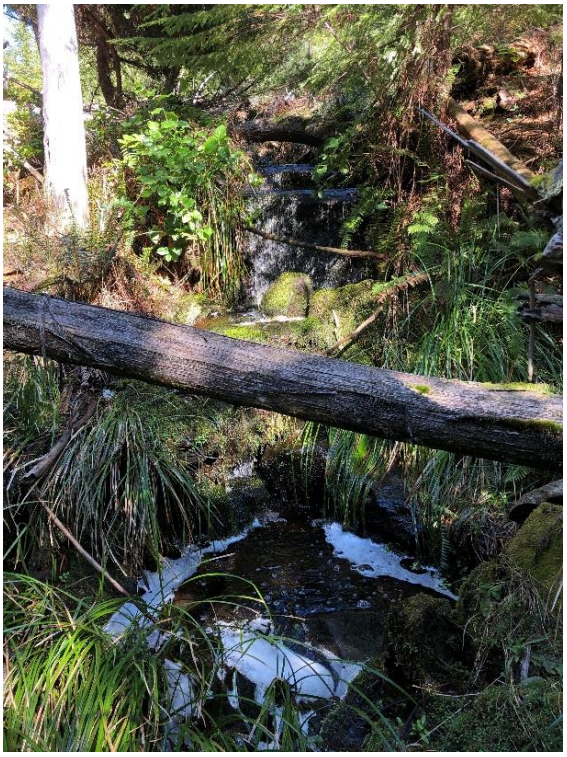
Label	**Photo 2. Fresh beaver sign observed adjacent to Railway Marsh.**



Label	**Photo 3. Curved trees observed along escarpment.**



Label	**Photo 4. Lower cascades on Tributary 2.**



Label	**Photo 5. Typical conditions observed along Tributary 2 upstream of the cascades.**



Label	**Photo 6. Extensive slough sedge observed alongside Birkenhead Creek.**



Label	**Photo 7. Danes Marsh located in the "covenant area" of the northeast property corner.**



Section 7. Professional Opinion

Qualified Environmental Professional opinion on the development proposal's riparian assessment.

Date	May 14, 2020 (Revised June 17 & July 25, 2020)

1. I/We Dustin Silvester, RP Bio

hereby certify that:

a) I am/We are qualified environmental professional(s), as defined in the Riparian Areas Protection Regulation made under the *Riparian Areas Protection Act*;
b) I am/We are qualified to carry out the assessment of the proposal made by the developer Henning Nielsen, which proposal is described in section 3 of this Assessment Report (the "development proposal"),
c) I have/We have carried out an assessment of the development proposal and my/our assessment is set out in this Assessment Report; and
d) In carrying out my/our assessment of the development proposal, I have/We have followed the specifications of the Riparian Areas Protection Regulation and assessment methodology set out in the minister's manual; AND

2. As qualified environmental professional(s), I/we hereby provide my/our professional opinion that:

a) [n/a] the site of the proposed development is subject to undue hardship, (**if applicable, indicate N/A otherwise**) and
b) [XXX] the proposed development will meet the **riparian protection standard** if the development proceeds as proposed in the report and complies with the measures, if any, recommended in the report.

To
The Honorable Bernadette Jordan
Minister of Fisheries and Oceans and the Canadian Coast Guard
cc Allison Webb, Director, Aquaculture Management Division, Pacific Region
MP Gord Johns, NDP Fisheries Critic
BC MLA Sheila Malcolmson, Parliamentary Sec'y for Environment
Cory Frank, Manager, K'omoks First Nation Guardian Watchmen
Jim Russel, Exec.Director, BC Shellfish Growers Assn
Chris Marrie Aquaculture Environmental Operations
Daniel Arbour Electoral Area A Rep. Comox Valley Regional District
David Critchley Denman Island Trustee, Islands Trustees
Laura Busheikin Denman Island Trustee, Islands Trustees

From
Dorrance Woodward
Chair, Association for Denman Island Marine Stewards

August 10, 2020

DFO and the Shellfish Industry need a long-term plan for cleaning up their own plastic pollution if they are to actually be sustainable and recover their social license.

The Association for Denman Island Marine Stewards,(ADIMS) was deeply concerned to read that the BC Shellfish Growers Association(BCSGA) had recently received $350,000 from the Fisheries and Oceans Canada (DFO) to pay them to clean up this industry's own plastic debris over a two year period. Shockingly, it will only cover the deep water areas below their own rafts, but not the industry debris which litters our shores!

Our home, Denman Island, forms the eastern shore of Baynes Sound, which is the epicentre of shellfish growing in BC. This decision concerns us because tonnes of plastic debris from the industry continually wash up on our shores, compelling us to organize volunteer beach cleanups and do what we can to prevent additional microplastic contamination.

Why would DFO fund BCSGA to clean up its own lost gear, instead of taking action, as the regulator, to ensure that growers take care of this problem without cost to the taxpayers?

It's always been ADIMS' position that the industry should clean up its own lost gear. Similarly, it's always been our position that DFO should enforce its own regulations, and pursue a relationship of respect and compliance between itself and the shellfish growers. We expect that DFO and the Province would also require that growers respect the needs of both the marine ecosystem and local residents by removing their toxic debris from our waters.

When we met with Jim Russell, executive director of BCSGA, we found we were all in agreement regarding who is responsible for cleaning up lost gear - the growers - and what DFO should be doing as regulator – monitoring and enforcement.

We discussed the two year grant itself, which is exclusively for submerged ghost gear, meaning gear coming from the rafts, or netting swept off inshore tenures. The $350,000 matches growers' costs, who will have to cover the expense of divers. Growers will pay 50% of cleanup costs.

We believe this grant will only account for a small part of the industry's plastic debris problem as we witness it from Denman's shores.

More importantly: this grant will not fund the development of a model for growers to take responsibility for their lost gear in the future. Will DFO just keep on paying growers to clean up their own mess?

For the last 10 years, DFO has not routinely monitored or enforced this clear violation of the Fisheries Act. This industry's lost gear constitutes a well-recognized threat to fish and fish habitat by depositing toxic plastic debris into critical salmon and herring spawning and nursery habitat. This decade of under staffing and under budgeting for basic regulatory functions can only be viewed as a policy decision, for which the Minister is responsible.

By allowing the shellfish growing industry to continue as a publicly visible plastics polluter of our oceans and shores, DFO has become an enabler of the current shellfish aquaculture practices and complicit in the industry's loss of social license. Shellfish aquaculture used to call itself sustainable, and highlighted the pristine waters of Baynes Sound. There is an army of witnesses, who can attest that neither of those industry claims can be made at this time.

DFO must step up as the regulator, and work with this industry to comprehensively address its plastic debris failings and adoption of a model for real and continued

sustainability. We all need Baynes Sound waters to be pristine-- for the sake of the shellfish aquaculture industry, the environmentally sensitive and diverse marine and fore-shore ecosystems, and the present and future generations of islanders who live and work along its waters.

Sincerely,

Dorrance Woodward
Chair, ADIMS

Comox Valley REGIONAL DISTRICT

Staff Report

DATE: August 6, 2020

FILE: 3060-20/DP 3A 20
3060-20/DP 4A 20

TO: Chair and Directors
Electoral Areas Services Committee

FROM: Russell Dyson
Chief Administrative Officer

Supported by Russell Dyson
Chief Administrative Officer

R. Dyson

RE: **Development Permit (Shoreline Protection) – Coal Hills, Island Highway (West Fraser Mills Ltd. and Province of British Columbia);**
That part of Lot 1 District Lot 154, Nanaimo District, Sections 31 and 32, Township 1 and District Lot 28, Nelson District, Plan EPP15507 as shown on Plan EPP56910, PID 030-110-254;
Block B, District Lot 155, Nanaimo District, No PID

Purpose
To consider Development Permits (DPs) under the Shoreline Protection Devices Guidelines related to the proposed land alterations to the shoreline at the Union Bay Coal Hills site (Appendices A, B and C).

Recommendations from the Chief Administrative Officer:

1. THAT the Board approve Development Permit DP 3A 20 (Union Bay Coal Hills) on property described as That part of Lot 1 District Lot 154, Nanaimo District, Sections 31 and 32, Township 1 and District Lot 28, Nelson District, Plan EPP15507 as shown on Plan EPP56910, PID 030-110-254, for the development of shoreline protection devices;

   AND FINALLY THAT the Corporate Legislative Officer be authorized to execute the permit.

2. THAT the Board approve Development Permit DP 4A 20 (Union Bay Coal Hills) on property described as Block B, District Lot 155, Nanaimo District for the development of shoreline protection devices;

   AND FINALLY THAT the Corporate Legislative Officer be authorized to execute the permit.

Executive Summary

- The applicants are seeking to conduct remediation work on the Union Bay Coal Hills to address acid rock drainage and metal leaching. The project involves covering the site with a liner that prevents drainage through the stockpile. Shoreline protection devices would help anchor the liner, prevent escape of waste rock, and provide the edge of the liner with protection from erosive forces.
- Alterations to the shoreline require a Development Permit under the shoreline protection devices guidelines. When land alteration involves hardening of the shoreline, the Development Permit can only be approved by the Comox Valley Regional District (CVRD) Board (Board).

- Following the recommendations of Qualified Professionals who evaluated alternative hard and soft shore approaches, the proposed shoreline protection devices involve replacing the existing shoreline with rip rap on the eastern side (due to its orientation against the prevailing wind and wave direction) and western side (due to steep slopes on the site and the immediacy of the neighbour across the watercourse). The alterations to the northern side would use soft shore approaches to create a more natural beach.
- The Area A Advisory Planning Commission (APC) recommended approval of the DP as proposed.
- Staff recommends issuance of the DP on the basis that the scope of work will protect the natural environment and its ecosystems and protect the liner from hazardous conditions.

Prepared by:	Concurrence:	Concurrence:
J. MacLean		***S. Smith***
Jodi MacLean, RPP, MCIP Rural Planner	Ton Trieu, RPP, MCIP Manager of Planning Services	Scott Smith, RPP, MCIP General Manager of Planning and Development Services Branch

Government Partners and Stakeholder Distribution (Upon Agenda Publication)

Applicant	✔

Background/Current Situation

The subject properties (Figures 1 and 2) are the site of the Union Bay Coal Hills: an abandoned stockpile of carbonaceous waste rock, along the shores of Baynes Sound and Washer Creek (Hart Creek) left over from a former coal washing and port facility. It is a Contaminated Site as defined by the *Contaminated Sites Regulation* and has been prioritized for remediation under the Ministry of Forests, Lands, Natural Resource Operations and Rural Development's Crown Contaminated Sites Program. The applicants are seeking to conduct remediation work to address acid rock drainage and metal leaching from the site by capping the stockpile with a bituminous geomembrane liner, shoreline protection devices and a rainwater management system that would prevent drainage through the stockpile.

The scope of project work involves the following:

- Clearing and grubbing the surface of the stockpile;
- Grading and compacting to lower slopes and create level pathways and trenches;
- Install the bituminous geomembrane liner, anchored in the trenches;
- Install shoreline protection devices;
- Cover liner with geotextile filter, drainage rock, and soil; and
- Vegetate with native grasses (Figure 3).

The shoreline protection devices are proposed to be composed of (1) rip rap along the eastern and western sides and (2) a re-graded sand/cobble beach with anchored logs on the north side. Because this will involve land alterations along the shoreline for the purposes of preventing the erosion of both the land and the geomembrane liner, a development permit is required.

Development Permit

In accordance with Section 83 of the Official Community Plan (OCP), Bylaw No. 337 being the "Rural Comox Valley Official Community Plan Bylaw No. 337, 2014", a proposal to harden a

shoreline, including replacement and/or maintenance of an existing hard shoreline requires board approval of the DP. The guidelines require such an application to include a professional report addressing the necessity of the proposed alterations, an evaluation of potential negative impacts to the natural environment and adjacent properties, a biophysical assessment and a landscape plan.

Objectives and Guidelines
It is the objective of these DP guidelines to encourage shoreline resiliency by following soft shore (e.g. "Greenshore") principles:

- Conserve or restore natural coastal or riparian processes (e.g. sediment transfer);
- Maintain habitat function and diversity;
- Prevent pollutants from entering the aquatic or riparian environment; and
- Avoid or reduce cumulative impacts on the shoreline environment, including coastal or riparian processes.

Soft shore measures typically involve re-grading the foreshore/backshore areas to allow for a more gradual dissipation of wave energy and the use of large woody debris (such as anchored logs) and vegetative plantings to assist in energy absorption and to contribute nutrients and habitat for aquatic life. Hardened shorelines (e.g. vertical walls, sloped revetments, etc.) will often deflect wave energy to unprotected openings, reduce space for habitat, and interrupt natural coastal processes (e.g. sediment transport, spawning, etc.).

The DP guidelines state that proposals to harden a shoreline, including replacement and/or maintenance of an existing hard shoreline with similar hard design elements shall require board approval of the development permit.

Application
According to the application (Appendices A, B and C), the acid rock drainage and metal leaching is the result of rainwater draining through the stockpile. The shoreline protection measures along the edges of the Coal Hills are required for the purposes of protecting the edges from erosive forces and for containing the waste rock within the property. These shoreline measures were originally designed with rip rap revetment, but to address the DP guidelines the applicant commissioned a study to review potential soft shore alternatives. The report prepared by Paul Hoo, P.Eng., of Moffat & Nichol, found opportunity for soft shore measures on the northern facing shoreline. The report characterizes this north-facing shoreline as being subject to less wave action (relative to the eastern facing shoreline) due to its orientation relative to waves and currents and as a receiving environment for some sediment from Washer Creek (Hart Creek). Here, the report recommends creating a cobble beach with a layer of sand and pea-sized rock, which is suitable for forage fish habitat, supplemented with anchored logs and vegetated sand dunes (predominately American dune grass, *Leymus mollis*).

However, the report ruled out soft shore measures on the eastern facing shoreline due to its orientation relative to prevailing wind direction, waves and longshore current. Soft shore measures here would necessitate a significant amount of fill to create a long, low-grade beach. However, to maintain the recommended level of safety with that area's longshore sediment transport, the beach would require continual interventions to supplement additional fill that is not being sufficiently replenished.

On the western side, along the banks of Washer Creek (Hart Creek), the report identifies evidence of erosion due to high flows and meandering nature of the watercourse. In order to keep the capped stockpile in such proximity to the river/shore line where steep slopes exist, combined with the immediacy of the neighbouring lot across the river, the report concludes that soft shore measures

would not be possible and recommends maintaining the existing creek flow cross section supplemented with a rip rap revetment.

Information requirements
In accordance with the information requirements of the DP guidelines, the applicants have submitted several reports prepared by qualified professionals at Keystone Environmental, Moffat & Nichol, and Geopacific Consulting Engineers that address designs and impacts of the shoreline protection measures.

The rip rap structure (Figure 4) would consist of large boulders (~1.5 metre sized) laying overtop of smaller boulders (at least 0.7 metres) underground, itself laying on top of a geotextile fabric. This design allows the rip rap structure to be keyed into the beach to inhibit movement and scour. It would reach a maximum height of 4.8 metres above sea level (measured from the geodetic datum), in accordance with the calculated designated flood level (accounting for sea level rise to 2100 and a 1-in-200 year storm surge), at an approximately 1.75H:1V to 3H:1V slope. To ensure long term stability under static and seismic conditions, a report was submitted titled *Riprap Stability Assessment* prepared by Kevin Bodnar, P.Eng. of Geopacific Consulting Engineers.

The softshore measures being taken on the northern side would follow a Green Shores-style approach. It would re-grade a foreshore area to a more gradual slope with cobble underlying a thin layer of sand and pea gravel. Vegetated sand dunes would be placed between the higher high water large tide level and the designated flood level, on top of the cobble and against anchored logs (Figure 4). According to the qualified professionals, this design would both prevent pollutants from entering the aquatic environment and be suitable for forage fish spawning.

A Biophysical Assessment prepared by Dave Langill, R.Bio., and Warren Appleton, R.P. Bio., of Keystone Environmental was submitted. This report identifies the habitat values of the entire project area, potential impacts and recommended mitigation and offsetting measures. First, to add habitat values to the entire site, the report provides recommendations for planting of a native seed grass mixture (predominately fescue and oatgrass with some yarrow and camas) over top of the bituminous geomembrane liner – plantings here must be restricted to those with root depths less than 0.4 metres (Figure 3). Second, in the shoreline protection devices, dune grass would be planted on the sand dunes and in parts of the rip rap where gaps between rocks can be filled with sand. Third, due to the impact of the proposed work and as a restoration measure, the report recommends the construction of 660 square metres of intertidal marsh (predominately Pickleweed, Seashore saltgrass and Seaside plantain) near the outlet of the creek.

Rainwater Management is addressed in a report prepared by Thuy Wong, P.Eng., of Keystone Environmental. Surface water will be accommodated with swales along the level pathways. Water that infiltrates through the vegetation and soil will be accommodated by longitudinal French drains, a perimeter toe drain and outfalls in the rip rap, designed to accommodate a 1-in-100 year, 24-hour storm event (accounting for an expected 21% precipitation increase due to climate change).

Keystone Environmental also submitted a Post-Construction Monitoring Plan. The plan recommends reviewing the shoreline protection areas every year in early spring. The soft shore measures are dynamic (expected to shift) but should be reviewed for signs of scour and log displacement. The rip rap should be reviewed for signs of scour, stone displacement, settling, material accumulation and unwanted vegetation growth. Additional monitoring recommended to occur, periodically as prescribed by the Qualified Professionals, in relation to the project includes visual inspections of the soil cover for signs of erosion and stability and to eliminate undesirable vegetation; air quality monitoring at venting locations (in the rip rap areas); water quality samplings

to review acidity, dissolved metals and sulphate; and documenting the change in the intertidal iron-stained area.

Construction and phasing
The DP guidelines require consideration of how the project will be constructed. Shoreline protection devices that extend onto the foreshore requires authorizations from Fisheries and Oceans Canada (DFO) and Ministry of Forests, Lands and Natural Resource Operations and Rural Development (FLNR). Because the scope of the proposed work involves alterations of foreshore and leaves rip rap straddling both sides of the shoreline, the applicants are concurrently applying to DFO and FLNR for all relevant permits and approvals, including those under the *Fisheries Act*, *Water Sustainability Act*, and the *Wildlife Act*. Should anticipated approvals be received, the work is scheduled to commence March 2021 with re-grading of the stockpile and installation of the liner. The installation of the shoreline protection devices is expected to occur in fall 2021.

Policy Analysis
Sections 488(1) and 490 of the *Local Government Act* (RSBC, 2015, c. 1) (LGA) allow a local government to designate DPAs and establish guidelines within the OCP for numerous purposes, including for the protection of the natural environment, its ecosystems and biological diversity, and the protection of development from hazardous conditions. Section 491(1) and (2) specifies that this type of DP may specify areas of land that must remain free of development, except in accordance with any conditions contained in the permit; specified natural features or areas to be preserved, protected, restored or enhanced; require works to be constructed to preserve, protect, restore or enhance natural water courses or other specified natural features; and require protection measures, including that vegetation or trees be planted or retained in order to (i) preserve, protect, restore or enhance fish habitat or riparian areas, (ii)control drainage, or (iii)control erosion or protect banks. Pursuant to Bylaw No. 337, development on commercial and industrial lots requires the DP relating to form and character. Pursuant to Bylaw No. 337, land alterations or construction on shorelines requires the DP relating to shoreline protection devices.

Options
The Board could approve or modify the draft DPs (Appendices B and C). The Board may decline to issue the DP if it is found to not be consistent with the DP guidelines. Given the above discussion, planning staff recommends approval of the DP.

Financial Factors
Applicable fees have been collected for these two applications under the "Comox Valley Regional District Planning Procedures and Fees Bylaw No. 328, 2014."

Legal Factors
This report and the recommendations contained herein are in compliance with the LGA and CVRD bylaws.

Regional Growth Strategy Implications
The subject properties is designated as a Settlement Nodes in the Regional Growth Strategy (RGS), Bylaw No. 120, being the "Comox Valley Regional District Regional Growth Strategy Bylaw No. 120, 2010". The area beyond the shoreline (i.e. the foreshore) is outside of the boundaries of the RGS. It is among the objectives of the RGS to frame environmental protection and policies around the principles of precaution, connectivity and restoration.

Intergovernmental Factors
The subject properties are owned by FLNR and they have assigned Keystone Environmental Ltd. to act as agent for the purposes of this application. The agents are applying concurrently for requisite authorizations from FLNR and DFO

Interdepartmental Involvement
This DP has been circulated to internal departments for review and comments. No concerns were identified.

Citizen/Public Relations
Public notification is not required for a DP application. On July 14, 2020, the Area A APC reviewed this application; the APC recommended approval of proposal, as proposed, citing "The 'soft shore' option would have a more drastic negative effect on the sea floor as it would have to extend out a long way to be effective; and the proposed work (capping and armouring) will allow the area to be opened up for safe public use as parkland, while protecting aquatic life from future leaching."

Attachments: Appendix A – "Application summary prepared by Keystone Environmental"
Appendix B – "Development Permit 3A 20"
Appendix C – "Development Permit 4A 20"

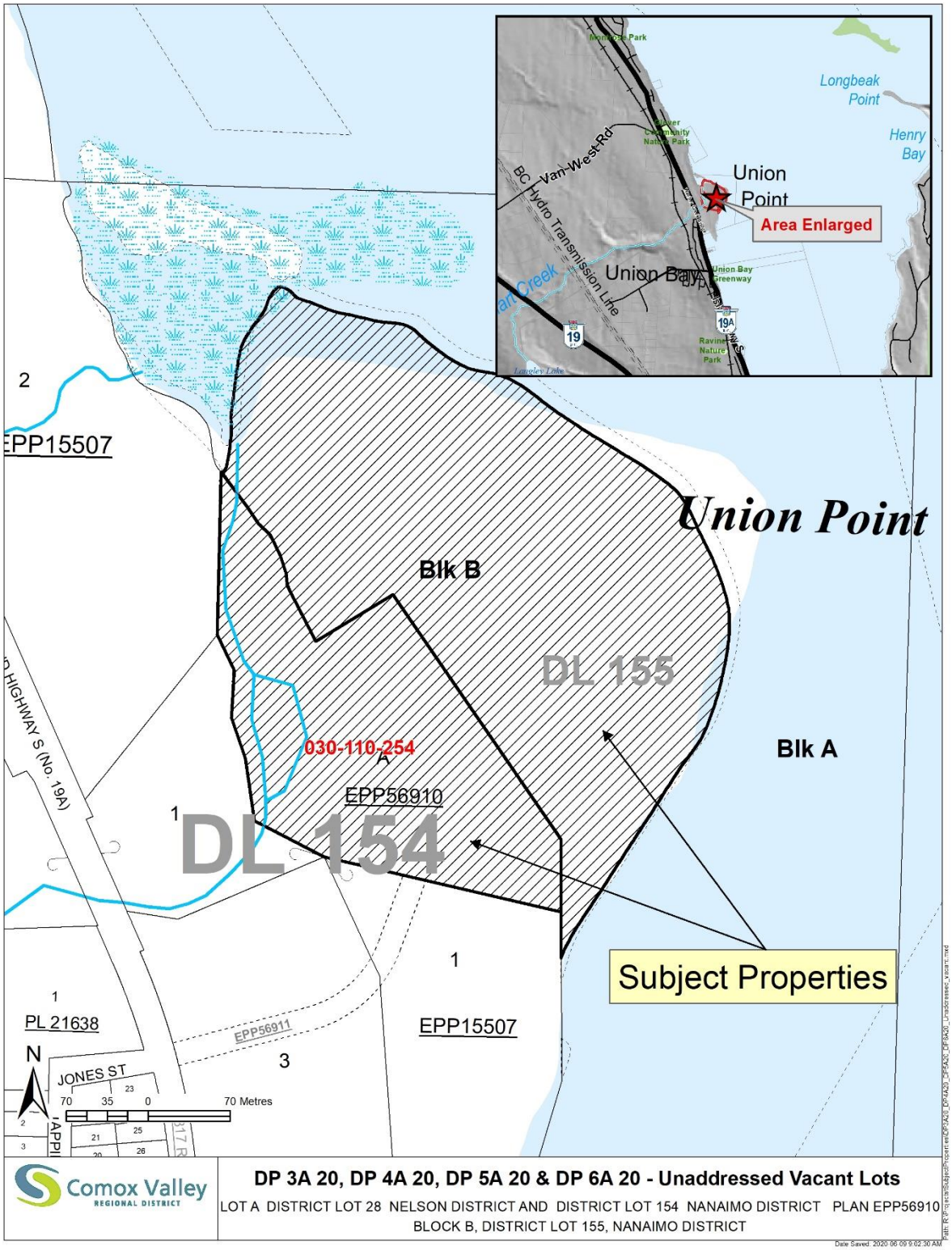


Figure 1: Subject Properties

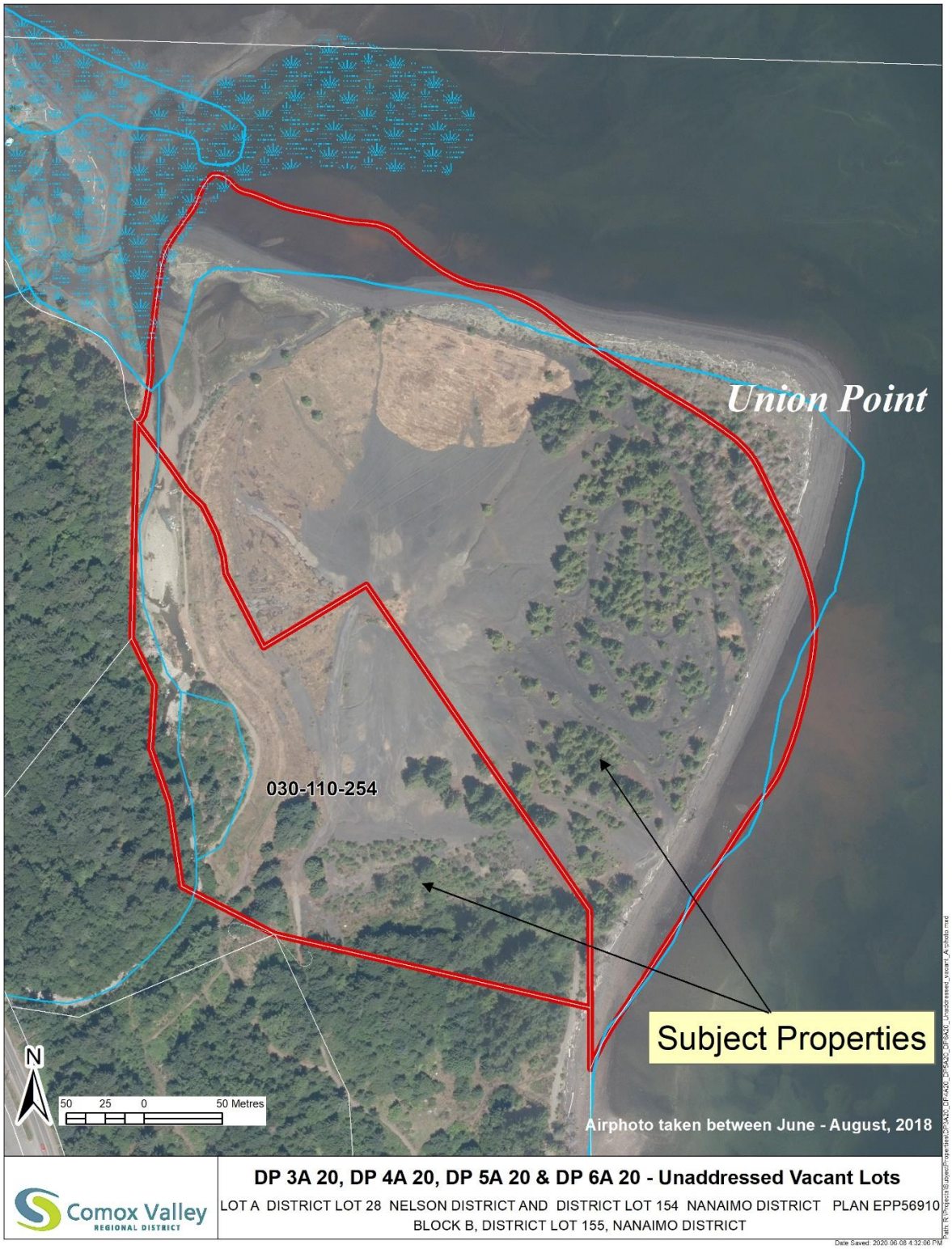


Figure 2: Air Photo

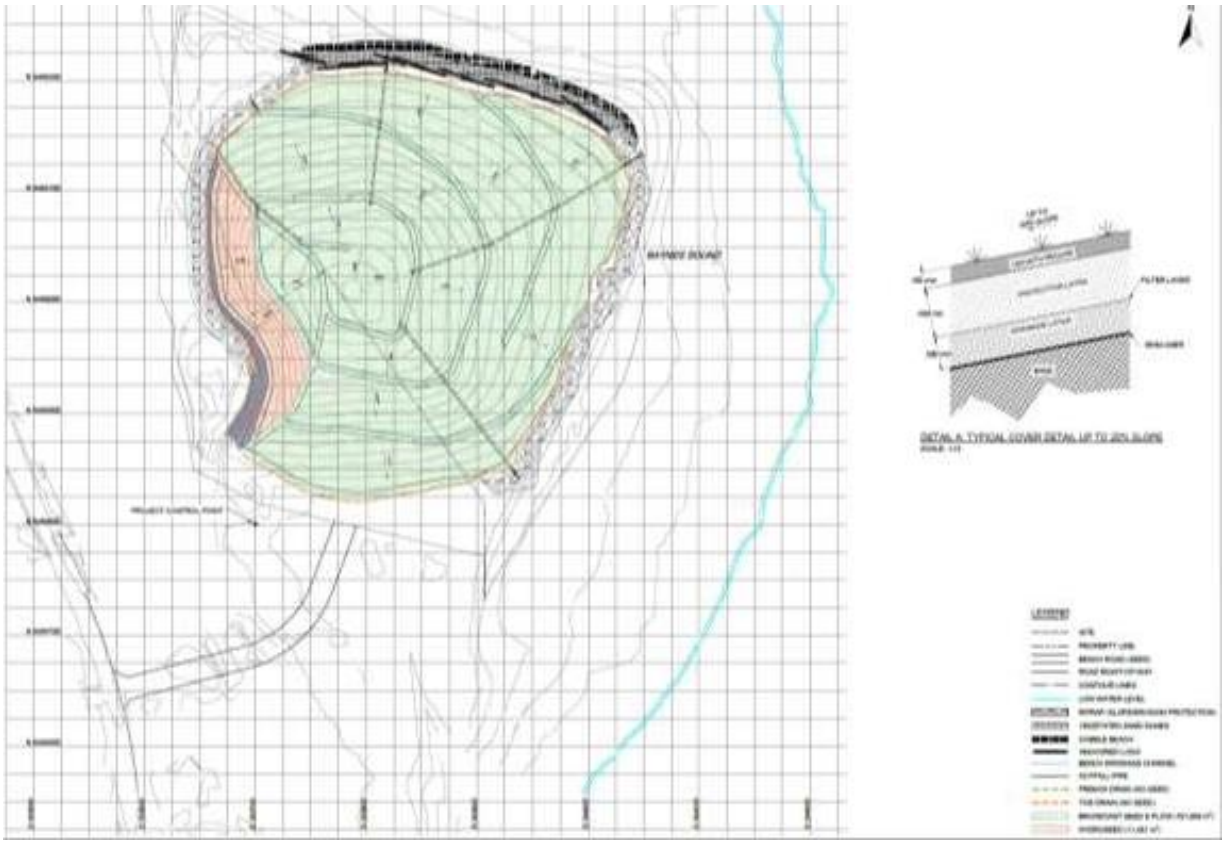


Figure 3: Proposed Final Site Plan

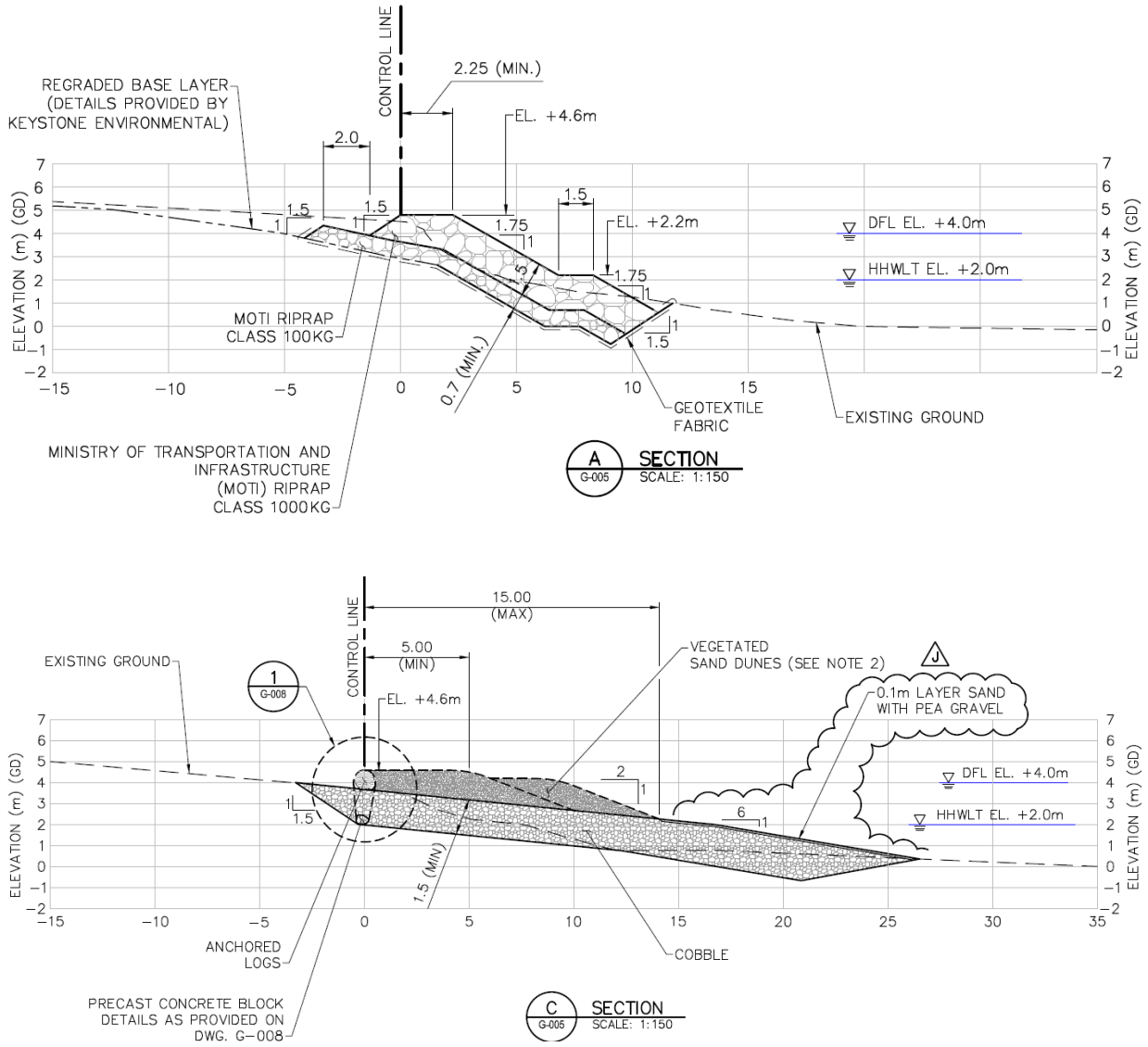


Figure 4: Example Cross-sections illustrating Rip Rap design (A) and Softshore design (C)

Keystone Environmental
Knowledge-Driven Results

May 13, 2020

Ms. Brianne Labute
Policy and Planning Analyst
Comox Valley Regional District
600 Comox Road
Courtenay, BC V9N 3P6

Dear Ms. Labute:

Re: Supporting Documents for Development Permit Application
Remediation Works for Union Bay Coal Pile
Union Bay, BC
Our Project No.: 13470

Please find attached the supporting documents for the Development Permit (DP) application for the Remediation Works of the Union Bay Coal Pile in Union Bay, BC (the Site), in accordance with the requirements of the Rural Comox Valley Official Community Plan (Bylaw No.337).

The legal plan for the Site is attached to this letter as Attachment H. The title certificates for the Site is attached to Attachment I. The letter of appointment from the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNR), the registered owner of the Site, is attached in Attachment K. A Site Profile already exists for the site (current Site ID No. 23289, formerly filed under Site ID No. 4291, Victoria/Regional File: 26250-20/4291). The attached Site Registry Report in Attachment J was obtained on January 16, 2020.

The Cumberland coal mine developed Union Bay as a port for processing mined coal. Cumberland transported the rock and low-grade coal as slurry down a metal lined flume, which settled out at the end of Union Point to form the existing Coal Pile. Cumberland deposited approximately one million cubic metres of low-grade coal and rock on the near shore and intertidal zone at Union Bay. The Coal Pile occupies approximately 13 hectares of Crown Lease land. Environmental investigations found the discharge from the Coal Pile to the marine environment contained acidity, sulphate, various dissolved metals and other elements, and toxicity testing of groundwater and seep water indicated high toxicity to marine organisms tested (i.e., fish, sand dollars, sea urchins and mussels) with iron being the primary toxicant.

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Engineering Solutions
Assessment & Protection

The purpose of the Remediation Works is to achieve improvement of the receiving environmental conditions surrounding the Coal Pile. Improvement of these conditions is anticipated to be achieved by reducing infiltration of precipitation through the Coal Pile with the installation of an engineered cover, consisting of low-permeability bituminous geomembrane (BGM) liner and vegetated soil cover and vegetated geocell in areas of steeper slopes.

The nature and development of the remediation works are complex. The overall design of the remediation works is presented in the attached report titled "*Detail Design Plan, Remediation Works, Union Bay Coal Pile, Union Bay, BC*" (Attachment A). Additional supporting documents are also attached as required under Bylaw No. 337.

As defined in Bylaw No. 337, the proposed Remediation Works at the Site fall under three DP areas:

- Aquatic and riparian habitat – the proposed remediation works is located within 30 m of Hart Creek and Baynes Sound.
- Shoreline protection devices – the proposed remediation works includes installation of shoreline protection devices to protect the engineered cover along Hart Creek and Baynes Sound.
- Steep slopes area (hazardous conditions) – a portion of the remediation works is located on an area with greater than 30% slope for a vertical distance of more than 3 m.

The following sections are presented to guide the CVRD in finding the relevant information for the development permit application process for these particular DP areas.

1. AQUATIC AND RIPARIAN HABITAT DEVELOPMENT PERMIT AREA REQUIREMENTS

Requirements	Document Reference	Notes
Biophysical Assessment		
Site Plan	Attachment B: Biophysical Assessment Appendix A Drawing 20-13470-CVRD-01	
Project Description	Attachment B: Biophysical Assessment Section 2, Section 8	Project refers to coal pile remediation works described in Section 2; additional habitat offsetting works described in Section 8.
Development Alternatives	Attachment B: Biophysical Assessment Section 2	Green Shores™ soft shoreline approaches used where possible.
Sensitive Feature Inventories	Attachment B: Biophysical Assessment Section 4.5 Section 9 and Appendix E	Sensitive features include the Hart Creek riparian zone and vegetated buffer. Critical habitat not identified at Site.
Assessment of Impacts	Attachment B: Biophysical Assessment Section 5	
Measures to Preserve / Protect / Enhance	Attachment B: Biophysical Assessment Section 6	
Erosion and Sediment Control Measures	Attachment B: Biophysical Assessment Section 6 and Appendix F Attachment A: Detail Design Plan Appendix A: CEMP Section 5.6 and Appendix A and Appendix F, Section 313800	
Planting Plan	Attachment B: Biophysical Assessment Section 9 and Appendix A	
Detailed riparian area assessment	Attachment B: Biophysical Assessment Appendix E	Applies to non-tidal portions of Hart Creek.
Post-Construction Recommendations	N/A	To be provided within 60 days of Project completion

Requirements	Document Reference	Notes
Site Design		
Site Design	Attachment B: Biophysical Assessment Section 2 and Appendix A	
Vegetation Buffer		
Landscape / Planting Plan	Attachment B: Biophysical Assessment Section 9 and Appendix A	
Buffer around sensitive features	Attachment B: Biophysical Assessment Section 9 and Appendix A	
Replanting to separate sensitive habitat from development	Attachment B: Biophysical Assessment Section 9 and Appendix A	
Removal of invasive from buffer	Attachment B: Biophysical Assessment Section 9 and Appendix A	
Retention of large woody debris	Attachment B: Biophysical Assessment Section 9	
Rainwater treatment pond and engineered wetlands	N/A	Remediation works do not include treatment pond or engineered wetlands.
Site Drainage Plan		
Site Drainage Plan	Attachment A of this letter – Detail Design Plan – Drawing 18-13470-14 to 20	Surface runoff will be collected and conveyed via lateral surface swales, longitudinal sub-surface piping (French drains), and perimeter sub-surface piping (toe drains) to the discharge points. The swales will incorporate detention features such as vegetation and check dams in order to decrease discharge flow rates to the receiving watercourse and environment. Infiltrated flows will be detained and conveyed through the Drainage Layer which will be connected to the longitudinal and perimeter sub-surface piping to the discharge points.

Requirements	Document Reference	Notes
Driveways, parking areas, and pathways	N/A	No proposed driveways, parking areas, and pathways are included in the remediation work. Access road to the Site was constructed in 2019 and will be completed in 2020.
Contour alterations	Attachment A of this letter – Detail Design Plan – Drawings 18-13470-04 through 18-13470-06.	The grading plan has been developed to limit coal pile disturbance and subsequently reduce the buried unspent coal exposure to the atmosphere. Therefore, the grading plan profile will be generally consistent with the existing coal pile profile, which is a parabolic dome, with an off-centred apex. The total area to be graded, as delineated by the black dashed outline in Dwg 18-13470-05, is approximately 111,200 square meters. Approximately 75% of this area will require minor grading (less than ± 1 m elevation adjustment).
Impervious surface area	Attachment A of this letter – Detail Design Plan – Appendix H Stormwater Management Detail Design (SWMDD) – Section 5 Pre and Post Remediation Condition Numerical Model	The Remediation Works does not incorporate hard, impervious surface, such as asphalt pavement or concrete. Although the BGM liner is placed to reduce the infiltration of precipitation through the Coal Pile, the remediation plan includes absorbent landscaping above the liner to provide flow quantity control. This absorbent landscaping includes 900mm of vegetated soil cover, which provides stormwater retention through the Cover System, such as evaporation-transpiration and interflow.

2. SHORELINE PROTECTION DEVICES

Requirements	Document Reference	Notes
BCLS Recent Survey		
BCLS recent survey	Attachment G of this letter – Drawing 20-13470-DP-01	
Detailed Design of the Shoreline Protection Devices		
Necessity of the proposed devices	Attachment F of this letter – Union Bay Coal Pile Green Shores Design	The east facing shoreline is exposed to significant wave action from Baynes Sound and is recommended to be a riprap structure. Significant wave heights along the east shoreline are estimated to range from 0.92 m to 1.57 m in a 200-year storm event. The largest waves during a storm will be between 1.8 and 3.1 metres in height. Wave action of this magnitude categorizes as a severe wave exposure. Only a manmade structure or shore protection, e.g., in the form of large rock would be able to withstand this level of wave exposure. The north shoreline is slightly more resilient to wave action than the eastern shoreline due largely to the direction of wave approach to shore. The shoreline profile is very wide and flat in this area and receives much of the coarser sediments from Hart Creek, which helps offset loss of sediments due to wave erosion. During storm conditions and high-water levels due to storm surge and/or high tides, the wave exposure along the northern shoreline can be nearly as severe as for the eastern shoreline. The recommended solution that can provide a stable protection of the shoreline is a cobble beach type protection. For the west side of the coal pile, Hart Creek meanders along the toe of the coal pile, at times located nearby the limits of the property to the west of the pile. Observed site conditions along Hart Creek indicate the impact of high creek flows have eroded the existing banks. For the Hart Creek shoreline, evaluation of soft shoreline design alternatives also considered the level of design and associated maintenance and repair. Due to the close proximity of the creek to the adjacent property to the west, it is recommended that shoreline improvement would be located such that the existing creek flow cross sectional area be maintained.

Requirements	Document Reference	Notes
Evaluation of potential negative impacts to environment and adjacent properties, mitigation recommendations	Attachment F of this letter – Union Bay Coal Pile Green Shores Design	
Description of construction details, materials, methods	Attachment A of this letter – Detail Design Plan – Section 5.3 Slope Protection Plan Attachment A of this letter – Detail Design Plan – Drawings G-001 through G-008 Attachment A of this letter – Detail Design Plan – Appendix F – Sections 310516, 313710, and 313800	The shore protection design incorporates soft shore (i.e., Green Shore) principles. The northern portion of the Coal Pile includes anchored logs, vegetated sand dunes, and a cobble beach area. The eastern and western sides of the Coal Pile require rip rap based on the environmental loads and effects; however, the voids of the rip rap will be planted.
Inspection details of the proposed works to be conducted by an engineer qualified to carry out shoreline protection device design (during construction)	Attachment A of this letter – Detail Design Plan – Drawings G-002 and G-003	
Inspection details of the proposed works to be conducted by an engineer qualified to carry out shoreline protection device design (post-construction)	Attachment E – Post-construction Monitoring Plan – Attachment 2 Moffatt & Nichol Post Construction Monitoring of Shoreline Protection	
Biophysical Assessment (see Section 1 Aquatic and Riparian Habitat Development Permit Area Requirements)		
Landscape Plan (see Section 1 Aquatic and Riparian Habitat Development Permit Area Requirements)		

Requirements	Document Reference	Notes
Archaeological Assessment		
Archaeological Assessment	Attachment C of this letter - Archaeological Impact Assessment Attachment C of this letter - Archaeological Investigations at DjSf-25 and DjSf-26	
Post Development Compliance Report		
Post Development Compliance Report	N/A	Post Development Compliance Report will be prepared at the completion of the works

3. STEEP SLOPES DEVELOPMENT PERMIT AREA (HAZARDOUS CONDITIONS)

Requirements	Document Reference	Notes
Site Survey		
Site Survey	Attachment A of this letter – Detail Design Plan – Drawings 18-13470-02	
Slope Analysis	Attachment G of this letter – Drawing 20-13470-DP-02	
Geotechnical Report		
Existing surface and subsurface conditions (soil depths, groundwater levels, depth to rock)	Attachment A of this letter – Detail Design Plan – Appendix G Geopacific Geotechnical Report (February 25, 2020) – Section 4 Subsurface Conditions	
Existing surface and subsurface conditions (slope stability)	Attachment A of this letter – Detail Design Plan – Appendix G Geopacific Geotechnical Report (February 25, 2020) – Section 5.2 Slope Stability Analysis Attachment A of this letter – Detail Design Plan – Appendix G Geopacific Revised Slope Stability (June 1, 2018) Attachment A of this letter – Detail Design Plan – Appendix G Geopacific Revised Slope Stability (November 22, 2018)	
Suitability for reuse of existing soils and rock including optimal moisture content, maximum angle of repose	Attachment D of this letter - Field Density Report Nuclear Densometer Attachment A of this letter – Detail Design Plan – Appendix G Geopacific Geotechnical Report (February 25, 2020) – Section 5.2 Slope Stability Analysis	

Requirements	Document Reference	Notes
Hazards (Liquefaction)	Attachment A of this letter – Detail Design Plan – Appendix G Geopacific Geotechnical Report (February 25, 2020) – Section 5.3 Liquefaction Analysis Attachment A of this letter – Detail Design Plan – Appendix C Densification	Gravel columns are proposed for ground densification at the north and east ends of the Coal Pile due to the presence of potentially liquefiable sands. A ground densification analysis was completed to determine the required width of the densification ("seismic berm") to mitigate lateral spread and to provide a densification specification, indicating densification methods and performance requirements. The Contractor will densify the soils beneath the specified areas to a minimum Electronic Piezo-Cone Penetration Tip Resistance (qc). The performance specification allows a Contractor to specify the gravel column spacing, diameter, and equipment requirements that they require to achieve the performance specification. The specification indicates that ground improvement is required from 1 metre below finished grade to a depth of -10 metre geodetic elevation. From 0 to 1 m below finished grade, beach sand will be placed.
Hazards (Storm surge, sea level rise, creek run-off, waves)	Attachment A of this letter – Detail Design Plan – Appendix E Moffatt & Nichol Shoreline Protection Design – Section 2.7	The proposed shoreline protection is designed to protect the toe of the engineered cover from erosion due to the creek run-off, tidal and wave actions.
Potential impacts of development	Remedial Options Feasibility Report, Union Bay Waste Coal Pile, Union Bay, BC – Sections 9.5 Cover Only	Document reference available upon request Based on a one-dimensional numerical modelling, the engineered cover will reduce infiltration through the coal pile to less than 1% of the mean annual precipitation (baseline condition 515 mm/year) and reduce iron concentration on the foreshore area (baseline average of 233 mg/L) to less than 5 mg/L in 2 years.
Erosion control and mitigation measures during construction	Attachment A of this letter – Detail Design Plan – Appendix A CEMP – Section 5.6 and Appendix A Erosion and Sediment Control Plan	

Requirements	Document Reference	Notes
Erosion control and mitigation measures after construction	Attachment E of this letter - Post-Construction Monitoring Plan – Sections 2.1 and 2.2	
Recommendations for safety, site protection, development and mitigation	Attachment A of this letter – Detail Design Plan – Appendix F – Sections 013523, 013526, and 015713	
Recommendations for vegetation protection, enhancement or retention	Attachment E of this letter - Post-Construction Monitoring Plan – Sections 2.1.3	
Siting plan for buildings and other structures, utilities, services and impervious surfaces	N/A	Remediation works do not include proposed buildings or other structures, utilities, services and impervious surfaces
Plans and analyses for watercourse channelling and drainage systems	Attachment A of this letter – Detail Design Plan – Drawing 18-13470-14 to 20 Attachment A of this letter – Detail Design Plan – Appendix H Stormwater Management Detail Design (SWMDD)	Remediation works do not include proposed watercourse channelling.
Measures to safeguard adjacent properties and structures	Attachment A of this letter – Detail Design Plan – Appendix F – Sections 013526 and 015713	
Grading Plan		
Existing topography	Attachment A of this letter – Detail Design Plan – Drawing 18-13470-02	
Proposed topography and limit of grading	Attachment A of this letter – Detail Design Plan – Drawing 18-13470-09	
Cross sections	Attachment A of this letter – Detail Design Plan – Drawing 18-13470-10	
Cut and fill areas	Attachment A of this letter – Detail Design Plan – Drawing 18-13470-05	

Requirements	Document Reference	Notes
Rainwater Management Plan		
Water quality characteristics of proposed flows and suggestions of appropriate methods to deal with any quality concerns	Attachment A of this letter – Detail Design Plan – Appendix H Stormwater Management Detail Design (SWMDD) – Section 2.2 Quality Control Attachment A of this letter – Detail Design Plan – Drawing 18-13470-14 to 20	Quality control will be provided through the implementation of a vegetated cover, check dams, sub-surface piping, and armouring (riprap protection) at inlet and discharge points. Swales will be vegetated, and check dams will be placed every 25 m to slow the runoff down prior to entering the longitudinal French drains. These swales provide water quality improvements through infiltration and filtering.
Catchment areas	Attachment A of this letter – Detail Design Plan – Drawing 18-13470-13	
Flow routes	Attachment A of this letter – Detail Design Plan – Drawing 18-13470-14	
Drainage capacities	Attachment A of this letter – Detail Design Plan – Appendix H Stormwater Management Detail Design (SWMDD) – Appendix A Summary of Stormwater Calculations	
Designated flood level	Attachment A of this letter – Detail Design Plan – Appendix E - Moffatt & Nichol Shoreline Protection Design – Section 2.7.7	
Quality Constraints	Attachment A of this letter – Detail Design Plan – Appendix H Stormwater Management Detail Design (SWMDD) – Section 2.2 Attachment A of this letter – Detail Design Plan – Appendix A CEMP – Section 5.6 and Appendix A Erosion and Sediment Control Plan Attachment A of this letter – Detail Design Plan – Appendix F – Section 313800	Minimal change to stormwater quality under the proposed conditions (total suspended solids source loading, pH, or additional contaminants) is anticipated compared to existing conditions. Quality control will be provided through the implementation of a vegetated cover, check dams, sub-surface piping, and armouring (riprap protection) at inlet and discharge points. Prior to the start of construction of the remediation and until the vegetation has fully established, erosion and sediment control measures should be implemented to provide quality control.

Requirements	Document Reference	Notes
Hydraulic Constraints	Attachment A of this letter – Detail Design Plan – Appendix H Stormwater Management Detail Design (SWMDD) – Section 2.1	The quantity control measure will maintain existing drainage patterns where possible and will control the peak post-remediation stormwater flows for the 1-in-100-year design storm. The stormwater management strategy to provide quantity control is to use absorbent landscaping which provides stormwater retention through the Cover System, such as evaporation-transpiration and interflow. The proposed remediation works includes absorbent landscaping within a 900 mm Cover System. Surface runoff will be collected and conveyed via lateral surface swales, longitudinal sub-surface piping (French drains), and perimeter sub-surface piping (toe drains) to the discharge points. The swales will incorporate detention features such as vegetation and check dams in order to decrease discharge flow rates to the receiving watercourse and environment. Infiltrated flows will be detained and conveyed through the Drainage Layer which will be connected to the longitudinal and perimeter sub-surface piping to the discharge points. The stormwater management infrastructure has been designed to meet the 1-in-100-year, 24-hour storm event. Based on the effects of climate change the design of the stormwater management infrastructure, swales, French drain, toe drain, and outfalls can convey the increase in flow due to climate change. The proposed stormwater management infrastructure are located above the designated flood level plus 0.8 m of free board. When and if the wave action or flood level exceeds the outfall elevation, the water will inundate the outfall pipe. This will likely cause the backup of water in the toe drain system. This backup is temporary in nature and under severe storm events, most of the water will be draining off the surface onto the riprap.

Requirements	Document Reference	Notes
Rainwater routing using piped and open systems	Attachment A of this letter – Detail Design Plan – Drawing 18-13470-14	
Rainwater controls for infiltration or groundwater recharge	Attachment A of this letter – Detail Design Plan – Drawing 18-13470-14	On slopes less than 20%, infiltration of rainwater will be limited to 900 mm below final grade, above the BGM liner, and will not contribute to groundwater recharge. Rainwater that infiltrates through the soil cover above the BGM liner will be directed towards the French drains and discharged through one of the outfalls. On slopes greater than 20%, infiltration of rainwater will be limited within the geocell above the BGM liner and will not contribute to groundwater recharge. The surface runoff and infiltrated rainwater in this area will discharge to the riprap to Hart Creek.
Impacts of irrigation on short/long term stability of slopes	N/A	Occasional irrigation with water spray truck may be conducted within the first 60 days of seeding. Irrigation will be carried out to avoid dry periods of five days or greater and ensure sufficient watering to prevent grass and underlying growing medium from drying out (saturate to 100 mm soil depth). Water used for irrigation purposes will be controlled to prevent water ponding or runoff that may erode soils. This short-term irrigation is not expected to impact the stability of any slope. Long-term irrigation is not planned for the Site.
Protection of drainage swales and major event flow routes	Attachment A of this letter – Detail Design Plan – Drawing 18-13470-17 and 18	The following measures will be put in place to protect drainage swales from erosion: Swales will be vegetated The average swale slope is 2%, which resulted in a maximum stormwater flow velocity of 0.76 m/s in the swale Check dams will be placed every 25 m along the swales French drain and toe drain trench will be filled with drain rocks for protection.

Requirements	Document Reference	Notes
Proposed roof and footing drains for individual lots, on-site treatment or connections to storm sewers	Attachment A of this letter – Detail Design Plan – Section 5.2.2	The remediation works will not include any roof or footing drains, on-site treatment, nor connections to storm sewers. A 300 mm thick granular drainage layer will be placed immediately above the BGM liner. The drainage layer is continuous throughout the proposed cover and will follow the proposed contours of the cover material. A different configuration using geocells will be installed on areas with slopes exceeding 20%. Swales along the bench road are designed to break the flow along the slope of the coal pile, on and below the surface of the cover material. Precipitation that infiltrates through the absorbent landscaping and enters the drainage layer will encounter the bottom of the swale and bench road. Due to preferential pathways, the water in the drainage layer at the bench road, will likely follow the swale slope towards the French drain. The drainage layer is directly connected to the French drain. This design will minimize the inundation of the downhill portions of the drainage layers.
Proposed means of controlling short term erosion	Attachment A of this letter – Detail Design Plan – Appendix A CEMP – Section 5.6 and Appendix A Erosion and Sediment Control Plan Attachment A of this letter – Detail Design Plan – Appendix F – Section 313800	For short-term erosion protection, the site Contractor is required to develop a site-specific Erosion and Sediment Control (ESC) plan for the various stages of remediation works that meet the requirements of the construction environmental management plan (CEMP). The objective of the ESC is to minimize sediments from migrating from the Coal Pile. The ESC plan will be required to clearly outline the applicable regulations, construction timing, monitoring requirements, Contractor responsibilities with respect to sampling, maintenance, mitigation measures and decommissioning.
Proposed means of controlling long-term erosion (engineered cover system)	Attachment A of this letter – Detail Design Plan – Drawing 18-13470-23 Vegetation and Seeding Plan	Most of the surface of the cover system will be vegetated for long-term erosion protection. The areas that are not vegetated include the French drain and toe drain trenches that are filled with drain rocks and along the shoreline.

Requirements	Document Reference	Notes
Proposed means of controlling long-term erosion (shoreline)	Attachment A of this letter – Detail Design Plan – Drawing G-001 through G-008	For shoreline protection, the northern portion of the Coal Pile includes anchored logs, vegetated sand dunes, and a cobble beach area. The eastern and western sides of the Coal Pile require rip rap based on the environmental loads and effects; however, the voids of the rip rap will be planted.
Hydrogeological considerations (existing condition)	Remedial Options Feasibility Report, Union Bay Waste Coal Pile, Union Bay, BC – Section 3	Document reference is available upon request. Discussion on site climate, geology, hydrogeology, tidal influence, groundwater flow models, Hart Creek flows, groundwater chemistry, delineation, and groundwater geochemistry were presented in the document reference.
Monitoring of groundwater regimes	Attachment E of this letter – Post-construction Monitoring Plan – Section 2.3 Intertidal Stain Area Monitoring	Monitoring of the groundwater regime will initially be conducted by visual inspection of the spatial extent of the iron staining. If staining appears to be increasing in size, groundwater monitoring program will be implemented on a semi-annual basis. Contingency measures will be considered if condition continue to worsen after 5 to 10 years.
Energy dissipation into existing ravines at source and down slope where concentration or erosion may occur	Attachment A of this letter – Detail Design Plan – Drawing 18-13470-14 and 20 Attachment A of this letter – Detail Design Plan – Drawing G-001 through G-008	Surface runoff discharge over the cover system will be directed to five outfall locations. The down-gradient area of these outfalls is protected by riprap.

We trust that this is the information you require at this time. Should you have any questions, please contact the undersigned.

Sincerely,

Keystone Environmental Ltd.

Dave Langill, R.P.Bio.
Biologist

Richard Johns, P.Eng.
Department Head, Engineering

I:\13400-13499\13470\17E Permitting\4 CVRD DP\DP Application\Supporting Document\13470 200513 CVRD DP Cover Letter.docx

ATTACHMENTS:

- Attachment A: Detail Design Plan, Remediation Works, Union Bay Coal Pile, Union Bay, BC
- Attachment B: Biophysical Assessment, Union Bay Coal Pile Remediation Project, Union Bay, BC
- Attachment C: Archeological Works
- Attachment D: McElhanney Field Density Report Nuclear Densometer
- Attachment E: Post-Construction Monitoring Plan
- Attachment F: Union Bay Coal Pile Green Shores Design
- Attachment G: Drawings
- Attachment H: Legal Plan
- Attachment I: Land Title Certificates
- Attachment J: Site Registry
- Attachment K: FLNR Letter of Appointment

DP 3A 20

TO: Her Majesty the Queen in Right of the Province of British Columbia as Represented by the Ministry of Forests, Lands and Natural Resource Operations

1. This Development Permit (DP 3A 20) is issued subject to compliance with all of the bylaws of the Comox Valley Regional District applicable thereto, except as specifically varied or supplemented by this permit for the **purposes of installation of shoreline protection devices and related land alterations.**

2. This Development Permit applies to, and only to, those lands within the Comox Valley Regional District described below:

Legal Description:	**That part of Lot 1 District Lot 154, Nanaimo District, Sections 31 and 32, Township 1 and District Lot 28, Nelson District, Plan EPP15507 as shown on Plan EPP56910**		
Parcel Identifier (PID):	**030-110-254**	**Folio:**	**771.10821.030**
Civic Address:	**unaddressed lot along Island Highway**		

3. The land described herein shall be developed strictly in accordance with the following terms and conditions and provisions of this permit:

   i. THAT development shall take place in accordance with the Detail Design Plan prepared by Keystone Environmental, attached as Schedule B;

   ii. THAT development shall take place in accordance with the Biophysical Assessment and Riparian Area Report Assessment Report prepared by Warren Appleton, R.P.Bio., Dave Langill, R.P.Bio., and Richard Johns, P.Eng., of Keystone Environmental, attached as Schedule C;

   iii. AND THAT the Post-Construction Monitoring Plan, attached as Schedule D and prepared by Keystone Environmental, be implemented.

4. This Development Permit (DP 3A 20) shall lapse if construction is not substantially commenced within two (2) years of the Comox Valley Regional District Board's resolution regarding issuance of the development permit (see below). Lapsed permits cannot be renewed; however, a new application for a second development permit can be applied for in order to complete the remainder of the work.

5. This Development Permit is ***not*** a Building Permit.

CERTIFIED as the **DEVELOPMENT PERMIT** issued by resolution of the board of the Comox Valley Regional District on _____.

_____
Jake Martens
Deputy Corporate Legislative Officer

Draft

Certified on _____

Attachments: Schedule A – "Subject Property"
Schedule B – "Detail Design Plan"
Schedule C – "Biophysical Assessment and Riparian Area Report Assessment Report"
Schedule D – "Post-Construction Monitoring Plan"

To view the schedules, please visit the following FTP link.

Draft

Comox Valley REGIONAL DISTRICT

Appendix C
Development Permit

DP 4A 20

TO: Her Majesty the Queen in Right of the Province of British Columbia as Represented by the Ministry of Forests, Lands and Natural Resource Operations

1. This Development Permit (DP 4A 20) is issued subject to compliance with all of the bylaws of the Comox Valley Regional District applicable thereto, except as specifically varied or supplemented by this permit for the **purposes of installation of shoreline protection devices and related land alterations.**

2. This Development Permit applies to, and only to, those lands within the Comox Valley Regional District described below:

   Legal Description: **Block B, District Lot 155, Nanaimo District**

   Parcel Identifier (PID): **Folio:** **771.27069.000**

   Civic Address: **unaddressed lot along Island Highway**

3. The land described herein shall be developed strictly in accordance with the following terms and conditions and provisions of this permit:

   i. THAT development shall take place in accordance with the Detail Design Plan prepared by Keystone Environmental, attached as Schedule B;

   ii. THAT development shall take place in accordance with the Biophysical Assessment and Riparian Area Report Assessment Report prepared by Warren Appleton, R.P.Bio., Dave Langill, R.P.Bio., and Richard Johns, P.Eng., of Keystone Environmental, attached as Schedule C;

   iii. AND THAT the Post-Construction Monitoring Plan, attached as Schedule D and prepared by Keystone Environmental, be implemented.

4. This Development Permit (DP 4A 20) shall lapse if construction is not substantially commenced within two (2) years of the Comox Valley Regional District Board's resolution regarding issuance of the development permit (see below). Lapsed permits cannot be renewed; however, a new application for a second development permit can be applied for in order to complete the remainder of the work.

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CERTIFIED as the **DEVELOPMENT PERMIT** issued by resolution of the board of the Comox Valley Regional District on _____.

_____
Jake Martens
Deputy Corporate Legislative Officer

Draft

Certified on _____

Attachments: Schedule A – "Subject Property"
Schedule B – "Detail Design Plan"
Schedule C – "Biophysical Assessment and Riparian Area Report Assessment Report"
Schedule D – "Post-Construction Monitoring Plan"

To view the schedules, please visit the following FTP link.

Draft

JOHN A. DAVIS
LAW CORPORATION
BARRISTER & SOLICITOR

182 MEMORIAL AVENUE
PO BOX 306
PARKSVILLE BC V9P 2G5
FAX: (250) 248-5534
TELEPHONE: (250) 248-4148
E-MAIL: john@jadlawcorp.com

Our File No. 12,514/c4696

March 26, 2020

MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE **VIA EMAIL ONLY**
Courtenay Area Office
550 Comox Road
Courtenay, British Columbia
V9N 3P6

Attention: Brendan Kelly, Senior Development Services Officer

Dear Sirs:

Re: Subdivision of Lot 6 Lacon Road, Denman Island, B.C.
LOT 6, SECTION 5, DENMAN ISLAND, NANAIMO DISTRICT, PLAN 6404
Your File No. 2016-05267

I enclose herewith a modification agreement to modify paragraph 2(b) of the Terms of Instrument – Part 2 of Covenant CA7481577 to read as agreed between you and my client.

As you are aware, the PLA requested 1.5 metres but that was changed to 3.0 metres at your request based on the Core Geotechnical Inc. report dated June 12, 2017; however, we are requesting the change on the basis that the report recommends 2.0 metres, not 3.0 metres. If you require any further information, please advise, and I thank you very much for your assistance with respect to this matter.

I have copied Marnie Eggen in on this letter because both of you will have to sign the modification.

Yours faithfully,

JOHN A. DAVIS LAW CORPORATION

Per: 
JOHN A. DAVIS

JAD\aro
Enclosure

cc: Marnie Eggen, Island Planner, Islands Trust Northern Office

LAND TITLE ACT
FORM C (Section 233) CHARGE
GENERAL INSTRUMENT - PART 1 Province of British Columbia

Your electronic signature is a representation that you are a designate authorized to certify this document under section 168.4 of the *Land Title Act,* RSBC 1996 c.250, that you certify this document under section 168.41(4) of the act, and that an execution copy, or a true copy of that execution copy, is in your possession.

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

JOHN A. DAVIS LAW CORPORATION
Barrister and Solicitor
182 Memorial Avenue, Box 306
PARKSVILLE BC V9P 2G5

Telephone (250) 248-4148
File No. 12,514/c4696 (flood cov modif)
MoTI File No. 2016-05267

Deduct LTSA Fees? Yes ☑

2. PARCEL IDENTIFIER AND LEGAL DESCRIPTION OF LAND:
[PID] [LEGAL DESCRIPTION]

030-773-890 **LOT A SECTION 5 DENMAN ISLAND NANAIMO DISTRICT PLAN EPP82349**

STC? YES ☐

3. NATURE OF INTEREST CHARGE NO. ADDITIONAL INFORMATION

SEE SCHEDULE

4. TERMS: Part 2 of this instrument consists of (select one only)
(a) ☐ Filed Standard Charge Terms D.F. No. (b) ☑ Express Charge Terms Annexed as Part 2
A selection of (a) includes any additional or modified terms referred to in Item 7 or in a schedule annexed to this instrument.

5. TRANSFEROR(S):

THORNE PAUL FORREST
LUCILLE HELEN FORREST

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

SEE SCHEDULE

7. ADDITIONAL OR MODIFIED TERMS:
N/A

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

Officer Signature(s)	Execution Date Y	M	D	Transferor(s) Signature(s)
	20			THORNE PAUL FORREST
				LUCILLE HELEN FORREST

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

LAND TITLE ACT
FORM D

EXECUTIONS CONTINUED

Officer Signature(s)	Execution Date Y	M	D	Transferor / Borrower / Party Signature(s)
_____	20			HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA as represented by the MINISTER OF TRANSPORTATION AND INFRASTRUCTURE by its authorized signatory(ies): _____ Name:
_____	20			DENMAN LOCAL TRUST COMMITTEE by its authorized signatory(ies): _____ Name: _____ Name:
_____				_____

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

LAND TITLE ACT
FORM E

SCHEDULE

NATURE OF INTEREST	CHARGE NO.	ADDITIONAL INFORMATION
Modification	CA7485177	Modification of Covenant CA7485177 Document Reference: Entire Document Person Entitled to Interest: Transferee

NATURE OF INTEREST	CHARGE NO.	ADDITIONAL INFORMATION

NATURE OF INTEREST	CHARGE NO.	ADDITIONAL INFORMATION

NATURE OF INTEREST	CHARGE NO.	ADDITIONAL INFORMATION

NATURE OF INTEREST	CHARGE NO.	ADDITIONAL INFORMATION

NATURE OF INTEREST	CHARGE NO.	ADDITIONAL INFORMATION

LAND TITLE ACT
FORM E

SCHEDULE

ENTER THE REQUIRED INFORMATION IN THE SAME ORDER AS THE INFORMATION MUST APPEAR ON THE FREEHOLD TRANSFER FORM, MORTGAGE FORM, OR GENERAL INSTRUMENT FORM.

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

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA as represented by the MINISTER OF TRANSPORTATION AND INFRASTRUCTURE
Parliament Buildings
Victoria BC V8V 1X4

DENMAN LOCAL TRUST COMMITTEE
Suite 200 1627 Fort Street
Victoria BC V8R 1H8

TERMS OF INSTRUMENT – PART 2

WHEREAS:

A. A Section 219 Covenant was registered in the Victoria Land Title Office on May 6, 2019, under number CA7485177 (hereinafter called the "Covenant"), against title to the Lands referred to in Item 2 of Part 1 of the Form C to which this Agreement is attached;

B. The parties have agreed to modify the terms of the Covenant.

NOW THEREFORE THIS AGREEMENT WITNESSES that each of the parties hereto, in consideration of the sum of ONE DOLLAR ($1.00) of lawful money of Canada now paid by each of the parties to the other, and in consideration of the premises and of the execution of this Agreement by the other, DOES HEREBY COVENANT AND AGREE with the other as follows:

1. The Covenant is hereby modified by revoking paragraph 2(b) in the Terms of Instrument – Part 2 of the Covenant and replacing the following in its stead:

   "2. (b) No area used for habitation, business, or storage of goods damageable by floodwaters shall be located within any building, modular home or structure at an elevation such that the underside of the timber floor system, or the top of the concrete floor slab system, is less than 2.0 metres above the natural boundary of any nearby oceans, rivers, creeks, streams, ponds, swamps or marshes. In the case of a manufactured home or unit, the found level or top of concrete or asphalt pad on which it is located shall be no lower than the above described elevation."

2. The Covenant, as hereby amended, shall remain in full force and effect and nothing herein contained shall in any way constitute a waiver by the Transferee of any of its rights, remedies and priorities as against the Transferor, or any covenantor, subsequent encumbrancer or any other person, either under the Covenant or under the Covenant as hereby amended, all of which rights, remedies and priorities are hereby reserved.

3. This Agreement shall enure to the benefit of, and be binding upon the parties hereto and their respective heirs, executors, administrators, successors and assigns.

4. Words importing the singular, masculine and neuter shall be construed as meaning the plural, feminine and body corporate wherever the context or the parties require.

5. Where the Transferor comprises more than one person, this Agreement shall be binding upon such persons both jointly and severally.

The parties hereto acknowledge that this Agreement has been duly executed and delivered by the parties executing Forms C and D attached hereto.

2020 August 26

Thorne Forrest

[redacted]

Denman Island Local Trust Committee C/O
Jamie Dubyna, MSc. Pl.
Planner 2, Northern Office
Islands Trust
700 North Road
Gabriola Island, British Columbia V0R 1X3

Denman Island Trust Committee:

Subject: Proposed Development on Lot A, Section 5, Denman Island, Nanaimo District, Plan EPP82349. P.I.D: 030-773-890

I am requesting the Denman Island Local Trust Committee provide me with written consent for the proposed development, namely the construction of a three-bedroom home, a shop and boat house, to occur in the Covenant Area Identified on Covenant CA7485176. Thank you in advance for your consideration of this matter. Please feel free to contact me at [redacted] or [redacted] if you have concerns or require further clarification.

Sincerely,

[redacted]

Thorne P. Forrest

ISLANDS TRUST CONSERVANCY

Islands Trust Conservancy Report
to Local Trust Committees
and Bowen Island Municipality
July 14, 2020

Islands Trust Conservancy Board News

The Islands Trust Conservancy Board endorsed proposed adjustments to the 2020 annual monitoring program for nature reserves and conservation covenants due to the COVID-19 pandemic.

The Board and the Executive Committee shared a liaison meeting, July 14, 2020 and discussed:

- Working with the Province, including potential changes to Natural Area Protection Tax Exemption Program (NAPTEP) legislation and a Provincial funding request
- Working with Trust Council, including work associated with the Climate Change Emergency Declaration, ITC Budgets and ITC work towards a strategic charitable giving program
- Other items as per the agenda at http://www.islandstrustconservancy.ca/about-us/meetings/

The liaison meeting occurs annually as per Islands Trust policy.

Regional Conservation Plan Updates

The science-based and community-informed Regional Conservation Plan guides the work of ITC. The ITC continues to work towards 4 long-term goals and 25 objectives that further conservation in the entire Trust Area. For more information, visit www.islandstrustconservancy.ca/media/84821/itc_2018-11_rcp-2018-2027-web_final.pdf.

Goal 1 – Science-based Conservation Planning

Islands Trust Acting Senior Policy Advisor presented a brief overview of the Climate Action Plan (CAP) currently in development by the Climate Policy Working Group (CPWG). The CPWG supports joint collaboration and communication between Trust Area Services, Local Planning Services and ITC for incorporating climate change into policy guidance. Resources will be used from both Trust Area Services and Islands Trust Conservancy.

Goal 2 – Strong relationships with First Nations

The ITC Board considered ways to advance engagement with First Nations through considerations in all of its land management and acquisition decisions.

Goal 3 – Protection of core conservation areas

Property Management

Staff are conducting a reduced monitoring season to accommodate travel restrictions due to COVID-19.

The ITC Board approved conservation covenant management plans for Winter Wren Wood on Denman Island (see island updates below).

Land Acquisition and Covenants
The ITC Board approved the transfer of 3.4 ha of land on Keats Island which will become the Sandy Beach Nature Reserve. This will be the ITC's 30th Nature Reserve and was a requirement of rezoning as directed by the Gambier Island Local Trust Committee.

The ITC approved a small covenant on Salt Spring Island which will provide a buffer area for the Lower Mount Erskine Nature Reserve which is managed by the ITC.

Goal 4 – A strong voice for nature conservation
The Board directed staff to prepare a histogram showing the size distribution of Island Trust Conservancy nature reserves and covenants.

Activities by Local Trust Area/Island Municipality

Denman – The Board approved the Denman Conservancy Association's update of the Management Plan for Winter Wren Wood dated April 18, 2020 with the recommendation that the Denman Conservancy seek assistance from ITC staff or First Nations such that the property management becomes inclusive of climate change and reconciliation.

Gambier – The Board directed the Chair to sign the Transfer Agreement, between the Convention of Baptist Churches of British Columbia and the Islands Trust Conservancy, for the transfer of Sandy Beach. The Board directed staff to bring recommendations to the Board regarding the use of the required $12,000 contribution from the Convention of Baptist Churches.

Salt Spring – The Board authorized the Chair to sign a conservation covenant over a small area adjacent to the Lower Mount Erskine Nature Reserve which is managed by ITC.

Please feel free to contact the Islands Trust Conservancy for more details.
Kate-Louise Stamford, Chair kstamford@islandstrust.bc.ca
Islands Trust Conservancy itcmail@islandstrust.bc.ca

Applications

Agricultural Land Reserve

File Number	Applicant Name	Date Received	Purpose
DE-ALR-2018.1	Kirk, JARRAH	05-Nov-2018	PID: 027-381-447 Cider production from other sources. Civic address: 1100 Lacon Road, Denman Island, BC

Planner: Jaime Dubyna

Planning Status

Status Date: 30-Jun-2020

Planner completed review of Water License referral from FLNRORD.

Status Date: 28-Jan-2020

No change in status. Planner awaiting submission of requested information, pursuant to LTC resolution 2019-025.

Status Date: 30-Aug-2019

No change in status.

Development Permit

File Number	Applicant Name	Date Received	Purpose
DE-DP-2020.1	Pandesign Inc.	12-Mar-2020	PID: 006-660-495 DP required for Subdivision purposes

Planner: Jaime Dubyna

Planning Status

Status Date: 28-Jul-2020

Province assessment approved.

Status Date: 28-Jul-2020

Revised RAPR Assessment Report submitted, dated July 25, 2020.

Status Date: 04-Jul-2020

Revised RAPR Assessment Report submitted.

Applications

Rezoning

File Number	Applicant Name	Date Received	Purpose
DE-RZ-2017.1	Denman Community Land Trust Association	12-Sep-2017	PID: 009-708-537 Create two lots for affordable housing for seniors. Civic address: 3730 Denman Road, Denman Island, BC

Planner: Marnie Eggen

Planning Status

Status Date: 18-Aug-2020

Draft housing agreement finalized. Forwarded to ALC for approval.

Status Date: 17-Jun-2020

Awaiting Applicant signature on Cost Recovery Agreement for Restrictive Covenant

Status Date: 16-Jun-2020

Awaiting Applicant review of draft housing agreement.

File Number	Applicant Name	Date Received	Purpose
DE-RZ-2018.1	Denman Housing Association (Snyder & Terry)	01-Oct-2018	PIDs: 009-704-523 (Snyder) and 006-657-290 (Terry) Rezoning to change number of allowed dwellings

Planner: Sonja Zupanec

Planning Status

Status Date: 25-Aug-2020

CIM held (electronically). APC meeting held August 2020. Report to LTC for September 2020 LTC meeting.

Status Date: 05-Jun-2020

Executive Committee to meet July 2020 to review the applicant's proposed water supply for consistency withe EC resolution from Jan 2020.

Status Date: 21-Jan-2020

Draft bylaws to amend OCP and LUB to implement DPA8 given 1st reading and direction to send out bylaw referrals

Applications

Siting and use Permit

File Number	Applicant Name	Date Received	Purpose
DE-SUP-2020.10	Turner, Karen	23-Jul-2020	PID: 000-194-450 Building new SFD. Civic address: 4665 Trueman Place, Denman Island, BC.

Planner: Ian Cox

Planning Status

Status Date: 24-Aug-2020

Permit approved. File to PTA for issuance and closure.

Status Date: 18-Aug-2020

Under review.

Status Date: 13-Aug-2020

File reassigned

File Number	Applicant Name	Date Received	Purpose
DE-SUP-2020.3	Etienne Design - Jessica Booth	16-Mar-2020	PID: 030-773-890 New SFD, workshop with guest accommodation, garage & boat house. Civic address 5465 Lacon Road, Denman Island, BC

Planner: Jaime Dubyna

Planning Status

Status Date: 24-Aug-2020

Advised applicant to submit a letter to the Denman LTC regarding covenant CA7485176 requirements.

Status Date: 13-Aug-2020

File reassigned

Applications

Subdivision

File Number	Applicant Name	Date Received	Purpose
DE-SUB-2015.1	De Villiers & Fraser, Etienne & Louise	24-Dec-2014	2201 Tristone Road S.946 (2 lot subdivision)

Planner: Jaime Dubyna

Planning Status

Status Date: 25-Sep-2018

Returned original copy of covenant and proof of registration on title received. Planner working with Finance to close Cost Recovery file and SUB file.

Status Date: 05-Jun-2018

LTC accepted the covenant and signed. Planner returned covenant to applicant's lawyer for final signatures and registration. Awaiting confirmation of registration on title and returned original copy of signed covenant for IT records.

Status Date: 16-Apr-2018

Planner recommending LTC to accept and sign the Covenant at the May 1 LTC meeting.

File Number	Applicant Name	Date Received	Purpose
DE-SUB-2020.1	0736800 BC Ltd. - Grant Thornton Ltd.	29-Jul-2020	PIDs: 026-826-445 and 006-660-614 Three lot subdivision. Civic address: 4201 Park Road and 3980 Park Road, Denman Island, BC.

Planner: Jaime Dubyna

Planning Status

Status Date: 28-Aug-2020

File opened and assigned.

Islands Trust

LTC EXP SUMMARY REPORT F2021

Invoices posted to Month ending June 2020

615 Denman	Invoices posted to Month ending June 2020	Budget	Spent	Balance
65000-615	LTC "Trustee Expenses"	289.00	0.00	289.00
LTC Local				
65200-615	LTC - Local Exp - LTC Meeting Expenses	3,906.00	449.15	3,456.85
65210-615	LTC - Local Exp - APC Meeting Expenses	405.00	0.00	405.00
65220-615	LTC - Local Exp - Communications	250.00	205.00	45.00
65230-615	LTC - Local Exp - Special Projects	294.00	0.00	294.00
TOTAL LTC Local Expense		4,855.00	654.15	4,200.85
Projects				
73001-615-4112	Denman Ferry Signage	1,000.00	0.00	1,000.00
TOTAL Project Expenses		1,000.00	0.00	1,000.00

Denman Island Local Trust Committee Policies & Standing Resolutions

No	Meeting Date	Resolution No.	Issue	Policy/Standing Resolution
1.	June 26, 2018	DE-2018-056	Proactive enforcement of Short-term Vacation Rentals	**It was MOVED and SECONDED,** that the Denman Island Local Trust Committee adopt the following standing resolution: "That Bylaw Enforcement staff undertake proactive enforcement of Short-term Vacation Rentals on Denman Island".
2.	June 26, 2018	DE-2018-066	Processing of non-medical cannabis retail license applications	**It was MOVED and SECONDED,** that the Denman Island Local Trust Committee adopt the following standing resolution with respect to the processing of non-medical cannabis retail license applications: • Proposed or amended licenses for non-medical cannabis retail establishments require an application to the Local Trust Committee. • The application process shall comprise a public consultation component, which includes at least one notification to neighbours, one public meeting, posting of public notices and one advertisement in a local periodical. • The public consultation process shall be determined by the Local Trust Committee after initial review of the proposal. • However, as a minimum, the Local Trust Committee will mail or otherwise deliver a notice to all owners and residents of properties within a 500 metre radius of the subject property where the establishment is proposed at least 10 days before adoption of a resolution providing comment on the application. The required notice shall include the following information: o Name of the applicant and a description of the proposal in general terms; o The location of the proposed establishment and the subject site; o The place where, and date and time when, both a public meeting will be held and a resolution of the Local Trust Committee considered; o The name and contact information of the Islands Trust planning staff member who can provide copies of the proposed or amended license application; and o How public comments may be submitted to the Local Trust Committee.
3.	October 9, 2018	DE-2018-096	Application processing	**It was MOVED and SECONDED,** that the Denman Local Trust Committee direct staff to give priority to processing applications for affordable housing projects until further direction by the Denman Island Local Trust Committee.
4.	November 20, 2018	DE-2018-100	Bylaw enforcement on	**It was MOVED and SECONDED,**

			unlawful STVRs	that the Denman Island Local Trust Committee adopt the following standing resolution: that the Denman Island Local Trust Committee direct Bylaw Enforcement to use the following priority in dealing with unlawful short-term vacation rentals (STVRs): 1. Unlawful STVRs that have been the subject of substantiated complaints; 2. Unlawful STVRs that are operated by persons who normally do not reside on Denman Island; 3. Unlawful STVRs operated by persons who do not reside on the same property as the STVR; 4. Unlawful STVRs operated by persons who reside on the same property as the STVR.
5.	November 20, 2018	DE-2018-104	Cannabis License applications	**It was MOVED and SECONDED,** that the Denman Island Local Trust Committee adopt the following standing resolution: that the Denman Island Local Trust Committee requests that Notices of Intention to Apply for a Cannabis License be forwarded to the Local Trust Committee upon receipt by the Islands Trust, and included in the next Local Trust Committee regular meeting agenda package.
6.	February 7, 2019	DE-2019-012	First Nations Reconciliation	**It was MOVED and SECONDED,** that the Denman Island Local Trust Committee adopt the following standing resolution with respect to First Nations in the Local Trust Area: Whereas the Local Trust Committee seeks to engage in Reconciliation with local First Nations, governments and the island community by honouring the Truth and Reconciliation Commission Calls to Action, United Nations Declaration on the Rights of Indigenous Peoples, Draft Principles that Guide the Province of British Columbia's Relationship with Indigenous Peoples, and Islands Trust First Nations Engagement Principles, the Local Trust Committee endeavours to: a) Annually, write a letter to First Nations, (re)introducing Trustees and staff and provide a schedule of known Local Trust Committee meetings for the upcoming year, as well as, provide an update of current projects and advocacy activities; b) For various Local Trust Committee meetings, invite elders from local First Nations to attend and provide a traditional welcome to the territory; c) Work with First Nation governments on cooperative initiatives, including

				and not limited to, language, place names, territorial acknowledgements, and community education on Coast Salish and local First Nations' cultural heritage and history; d) Work with First Nations governments on engagement principles for inclusive land use, marine use and climate change planning; advocacy, protection and stewardship; and knowledge and information sharing protocols; e) Establish and maintain government to government dialogue with First Nations, now and into the future, based on respect and recognition of Aboriginal rights and title, treaty rights and First Nations' traditional territories within the Islands Trust Area.
7.	June 6, 2019	DE-2019-056	Bylaw enforcement against unlawful dwellings	**It was MOVED and SECONDED,** that the Denman Island Local Trust Committee adopt the following standing resolution: "The Denman Island Local Trust Committee directs Bylaw Compliance and Enforcement staff to pursue enforcement against unlawful dwellings upon receipt of a written complaint, if any of the following conditions apply: a) The complaint is received from at least two sources, one being the owner, occupant or title holder of a neighbouring property; b) It appears that there is more than one unlawful dwelling on a lot; c) An unlawful dwelling appears to be larger than 90 square meters; or d) An unlawful dwelling appears to be located within a Development Permit Area. and nothing in this enforcement policy should be interpreted as giving permission to violate the Denman Island Land Use Bylaw and the Local Trust Committee may change this policy or give direction to expand enforcement activities at any time."
8.	May 19, 2020	DE-2020-022	Residential densities See Staff Report dated May 19th for background	**It was MOVED and SECONDED,** that the Denman Island Local Trust Committee adopt the following standing resolution with respect to the available residential densities resulting from Section E.1, policy 11 and Appendix D, 'Residential Density Bank' of the Denman Island Official Community Plan:

Whereas the Local Trust Committee sets out the current available residential densities in this density register and that the register be updated from time to time to show additions and withdrawals as they occur:

a. The Denman Official Community Plan 'Residential Density Bank' in Appendix D has last added or transferred to the bank on January 31, 2017 and has a cumulative total of residential densities of 14;
b. The Denman Official Community Plan Housing Policy 11 in Section E.1 allows for a residential density increase of approximately 5 percent beyond that permitted by existing zoning at the time of adoption of the Official Community Plan on May 15, 2009 to accommodate zoning amendments for special needs and affordable housing, secondary dwelling units approved by the Denman Island Local Trust Committee under Temporary Use Permit and site specific zoning amendment applications under Policy 29 of Section E.1.

The baseline density that was permitted by zoning at the time of adoption of the Official Community Plan was 994 densities based on the Subdivision Potential Map 2010; 1026 total densities less 32 from Parks, Institutional and Conservation designations where residential use is not permitted. Five percent of 994 is 49 densities. Since adoption of the Official Community Plan on May 15, 2009 the following densities have been utilized:

Authorizing Bylaw/Temporary Use Permit	**Date Utilized**	**Number of Residential Densities Utilized**	**Cumulative Total of Residential Densities Remaining**
Baseline Density at time of adoption of the Denman OCP on May, 2009			**49**
BL 199 (Official Community Plan) BL 200 (Land Use Bylaw)	August 15, 2011	14	35
BL 204 (Land Use Bylaw)	September 24, 2013	1	34
DE-TUP-2016.2	March 31, 2017	1	**33**

Islands Trust

Print Date: August 31, 2020

Top Priorities Report

Denman Island

1. *Denman Island Farm Plan Implementation*	Responsible	Dates
Incorporate Bylaw 223 considerations (agriculture, intensive agriculture, feedlot definitions)	Marnie Eggen Sonja Zupanec	

2. *Signage at Ferry Terminal*	Responsible	Dates
	Lisa Wilcox Marnie Eggen	Rec'd: 21-Jan-2020

3. *Cannabis Land Use Regulation*	Responsible	Dates
Review of land use regulations with respect to cannabis production and retail sales.	Heather Kauer	Rec'd: 20-Nov-2018

Projects Report

Denman Island

1. *Protected Area Network*	Responsible	Date Received
Undertake planning for a Protected Area Network on Denman Island		15-Mar-2011

2. *Alternative Energy*	Responsible	Date Received
Consider regulations governing wind towers and Ocean Loop Geo-Exchange Systems. Monitor recommendation from Trust Council.		15-Aug-2011

3. *Dwelling Floor Area Regulation*	Responsible	Date Received
Consider regulations to limit the gross floor area of a dwelling		25-Oct-2011

4. *Climate Change*	Responsible	Date Received
Consider climate change adaptation and mitigation measures		25-Oct-2011

5. *Development Procedures Review*	Responsible	Date Received
Review and update Development Procedure Bylaw No. 71		11-Dec-2012

6. *Alternative Dispute Resolution*	Responsible	Date Received
To be considered as part of the enforcement tool kit, possibly in cooperation with the Hornby Island Local Trust Committee		26-May-2015

Projects Report

Denman Island

7. *Denman Village Plan*	Responsible	Date Received
Undertake a Denman Downtown Village Neighbourhood Plan; the plan might include reduction in greenhouse gas emissions; encouragement of a healthy, sustainable economy; addressing of water and septic concerns; and consideration of Denman Community Design Charrette Final Report Jan 2018 recommendations.		26-May-2015

8. *Travel trailers*	Responsible	Date Received
LUB amendments and enforcement policies regarding the use of travel trailers		07-Mar-2017

9. *Occasional use of accessory buildings*	Responsible	Date Received
Amend LUB definition of the term occasional in relation to the use of an accessory building to clarify that it refers to a cumulative use of not more than 45 days per year regardless of who is staying there		07-Mar-2017

10. *Greenshores Workshop*	Responsible	Date Received
		01-May-2018

11. *Incorporate the Regional Conservation Plan into land use planning.*	Responsible	Date Received
To foster preservation and protection of the Denman Island Ecosystems (based on the Islands Trust Conservancy Report, dated July 17, 2018)		07-Aug-2018

Projects Report

Denman Island

12. *Facilitating affordable, attainable and seniors housing.*	Responsible	Date Received
Secondary suites review and consideration of further opportunities to support housing options. Consideration of DCLTA and Northern Housing Needs Assessment report recommendations.		20-Nov-2018

13. *Coastal Douglas-fir protection*	Responsible	Date Received
Implementation of the report, Protection of the Coastal Douglas-fir and Associated Ecosystems: An Island Trust Tool Kit (2018).		07-Feb-2019

14. *naming and recognition/traditional place name for Denman Island on Local Trust Committee meeting agendas*	Responsible	Date Received
Reference Staff Report dated November 7, 2019		07-Nov-2019

15. *Temporary Use Permits*	Responsible	Date Received
To support the development of Temporary Use Permits for short-term vacation rentals and other uses.		09-Oct-2018