DISTRICT OF METCHOSIN
AGENDA

ENVIRONMENTAL ADVISORY SELECT COMMITTEE MEETING

January 24, 2023 at 7:00 p.m.
Council Chambers
Metchosin Municipal Hall

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1. Agenda, Additions, Approval

2. Presentations
a) Alison LeDuc, Anchorage

3. Public Participation

4. Adoption of Minutes
a) Environmental Advisory Select Committee, November 22, 2022, Minutes 1

5. Review of the Minutes

Council & Standing Committee Minutes
https://www.metchosin.ca/council/council-meetings/agendas-minutes
a) Council Meeting: January 9, 2023 3
b) Finance Committee: January 9, 2023 7
c) Community Planning: November 21, 2022 11
d) Environment & Natural Areas Committee: November 21, 2022 13
e) Public Works & Protective Services Committee: November 21, 2022 17

Advisory Committee Minutes
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6. Business Arising from the Minutes
a) Trans Mountain Fate and Behaviour of Bitumen Research Report
- Response letter from Trans Mountain dated January 6, 2023 19
- District of Metchosin letter to Trans Mountain, dated December 6, 2022 21
- MEASC Report to Council re: Trans Mountain, November 30, 2022 23

7. New Business
a) Proposed 7-Lot Subdivision, Section 40, Neild Rd 37
b) Potential AVICC Convention Resolution "Anchorage" 41
c) District of Metchosin Declaration on the Climate Emergency and Biodiversity Crisis 45
d) Tree Preservation
- Tree Management Bylaw (with MEASC track changes) 47

e) Update on the green space buffer land (verbal)

8. Reports

9. Correspondence
a) Bev Bacon, Anchorage 63
b) Alison Le Duc, Anchorage 65

10. Adjournment and next meeting

DISTRICT OF METCHOSIN
Minutes

Environmental Advisory Select Committee Meeting

Tuesday, November 22, 2022 at 7:00 pm
Council Chamber, Municipal Hall

Present: Councilor Steve Gray, Andy MacKinnon, Bill Cave (Chair), Ric Perron, Jacqueline Clare, Merrilee Hoen (recorder), Anna Hall, Garry Fletcher

Regrets: Erin Van der Water

The meeting was called to order at 7:05 p.m.

1. **Agenda, Additions and Approval**
Moved and seconded by Jacqueline and Bill that the Committee approve the agenda with the addition of an update about the tree cutting bylaw.

Carried

2. **Presentations: None**

3. **Public Participation:** Joan Rosenberg and Dan O'Connell commented during the discussion of the United We Stand document. Joan Rosenberg provided background about the United We Stand document. Dan O'Connell commented that successive cuts of forested land results in depletion of soil nutrients.

4. **Adoption of Minutes**
Moved and Seconded by Bill and Ric that the minutes of the Environmental Advisory Select Committee meeting held on October 25, 2022, be approved.

Carried

5. **Receipt of Minutes**

Council & Standing Committee Minutes
Moved and Seconded by Andy and Jacqueline that the Committee receive the Council and Standing Committee Minutes for information.

Carried

Advisory Committee Minutes

Moved and Seconded by Andy and Jacqueline that the Committee receive the Advisory Committee Minutes for information.

Carried

6. **Business Arising from the Minutes**

Trans-Mountain Fate and Behavior of Bitumen Research
Please see the attachment for the Committee's comments about the report.

Action Item: MEASC requests that Metchosin Council arrange for another WCMRC Workshop to review the mapping of sensitive areas with regard to oil spill clean-up.

Action Item: Committee members that have comments on the report should email them to Garry for compilation.

Action Item: Garry will compile comments on the report along with his comments and email the finished compilation to Merrilee for attachment to the minutes.

b) United We Stand

Steve briefed us about what had taken place during the Metchosin Council meeting which led to their request for us advise them.

Moved and Seconded by Bill and Andy that the Committee Advises Council to sign the United We Stand Motion declaration.

Carried

c) Tree Cutting Bylaw

Action Item: MEASC requests that Metchosin Council provide an update on the progress of the revisions to the Tree Cutting Bylaw.

7. New Business: We would like to acknowledge that this was Jacqueline Clare's last meeting with MEASC and to thank her for the knowledge and expertise she has given to the group. Ric Perron will assume the position of Chair as of the end of the meeting.

8. Reports: None

9. Correspondence: None

10. Adjournment and Next Meeting Date

Moved and Seconded by Andy and Ric that the Committee adjourn the meeting at 8:15 p.m.

Carried

Next meeting date: Tuesday, January 24, 2023, at 7:00 p.m. Council Chambers

District of Metchosin

Minutes
Council Meeting
January 9, 2023 at 7:00 p.m.

Council Chamber
Metchosin Municipal Hall

PLEASE NOTE: The meeting has been recorded

Present: Mayor Little in the Chair, Councillors Donaldson, Epp, Gray and Shukin. Also present was Sue-Lin Tarnowski, Interim CAO/Corporate Officer, and Tina Hansen, Deputy Corporate Officer.

Moved and Seconded by Councillors Donaldson and Shukin that the public be excluded under section 90(1) of the *Community Charter* in order to consider:
(a) personal information about an identifiable individual who holds or is being considered for a position as an officer, employee or agent of the municipality or another position appointed by the municipality;
(f) law enforcement, if the council considers that disclosure could reasonably be expected to harm the conduct of an investigation under or enforcement of an enactment;
(g) litigation or potential litigation affecting the municipality.

Carried

The closed portion of the meeting was called to order at 3:30 p.m.
The open portion of the meeting was called to order at 7:00 p.m.

1. Agenda, Additions and Approval

Moved and Seconded by Councillors Donaldson and Epp that Council approve the agenda with the addition of supplemental information from Kathy Atherton under agenda item 10. Correspondence.

Carried

2. Public Participation

Pattie Whitehouse, resident commented that she liked the new seating arrangements at the Council table. Ms. Whitehouse also commented that she had concerns about holding the Finance Committee meeting during the day instead of the evening as it is difficult for some people to attend early meetings.

3. Adoption of the Minutes

Moved and Seconded by Councillors Donaldson and Shukin that Council adopt the minutes of the Council meeting December 12, 2022.

Carried

Moved and Seconded by Councillors Shukin and Donaldson that Council adopt the minutes of the Special Council meeting January 3, 2023.

Carried

4. Mayor's Report

Mayor Little reported on attending the following meetings and events:

- Cabinet Swearing-In ceremony at Government House
- Vancouver Island Regional Mayors and CAO's virtual meeting with Hon. Anne Kang, Minister of Municipal Affairs
- Royal Canadian Navy homecoming event/awards banquet
- Coldest Night of the Year 2023

Mayor Little took the opportunity to read out her Mayor's report regarding the recent B.C. Supreme Court decision on the two men who escaped from William Head Prison resulting in the 2019 homicide of Metchosin resident Mr. Martin Payne.

Moved and Seconded by Councillor Shukin and Gray that Council send a letter to Corrections Canada restating their concern that receiving institutions still do not have more of a say in who they accept as prisoners to their minimum-security prisons.

Carried

5. Reports for Action

a) Staff Report, Metchosin Volunteer Firefighter's Society Occupancy Agreement

Moved and Seconded by Councillors Epp and Shukin that Council approve the Occupancy Agreement with the Metchosin Volunteer Firefighter's Society and authorize the Mayor and CAO to execute the agreement.

Council discussed:

- Concerns the District assumes liability for a group of people
- District does not have an alcohol policy
- Costs associated with a legal review of the Occupancy Agreement

Moved and Seconded by Councillors Gray and Shukin to amend the motion by adding the words 'subject to legal review and advice' after 'agreement.'

Carried

The main motion as amended was adopted, with the final wording being as follows:

Moved and Seconded by Councillors Epp and Shukin that Council approve the Occupancy Agreement with the Metchosin Volunteer Firefighter's Society and authorize the Mayor and CAO to execute the agreement **subject to legal review and advice**.

Carried

b) Staff Report, UBCM Community Emergency Preparedness Fund (CEPF) and Island Health Resilience and Safety Grant Applications

Moved and Seconded by Councillors Gray and Shukin that Council endorse the Community Emergency Preparedness Fund (CEPF) Disaster Risk Reduction-Climate Adaptation grant application in the amount of $150,000.00;
And authorize the Mayor and CAO to execute any agreements related to a successful grant application.

Carried

Moved and Seconded by Councillors Gray and Donaldson that Council endorse the Community Emergency Preparedness Fund (CEPF) Emergency Support Services grant application in the amount of $30,000.00;
And authorize the Mayor and CAO to execute any agreements related to a successful grant application.

Carried

Moved and Seconded by Councillors Gray and Shukin that Council endorse the Community Emergency Preparedness Fund (CEPF) Emergency Operations Centre and Training grant application in the amount of $30,000.00
And authorize the Mayor and CAO to execute any agreements related to a successful grant application.

Carried

Moved and Seconded by Councillors Epp and Gray that Council endorse the Community Emergency Preparedness Fund (CEPF) FireSmart Community Funding & Supports grant application in the amount of $200,000.00;
And authorize the Mayor and CAO to execute any agreements related to a successful grant application.

Carried

Moved and Seconded by Councillors Epp and Shukin that Council endorse the Community Emergency Preparedness Fund (CEPF) Poverty Reduction Planning & Action grant application in the amount of $25,000.00;
And authorize the Mayor and CAO to execute any agreements related to a successful grant application.

Carried

Moved and Seconded by Councillors Epp and Donaldson that Council endorse the Island Health Resilience and Safety grant application in the amount of $50,000.00;
And authorize the Mayor and CAO to execute any agreements related to a successful grant application.

Carried

6. Correspondence for Action

a) District of Sooke, Funding for Pacific Centre Family Services Association's Mobile Youth Services Team and its Crime Reduction and Exploitation Diversion (CRED) Program

Mayor Little provided an overview of the request from Victoria Family Court and Youth Justice Committee for stable funding and additional human resources for the Pacific Centre Family Services Association's Mobile Youth Services Team (MYST) and its Crime Reduction and Exploitation Diversion (CRED) Program.

Moved and Seconded by Councillors Shukin and Donaldson that Council send a letter to Hon. Mike Farnsworth, Hon Mitzi Dean and Hon. Niki Sharma calling for stable funding and additional human resources for the Pacific Centre Family Services Association's Mobile Youth Services Team and its Crime Reduction and Exploitation Diversion (CRD) Program.

Carried

b) Access BC, Call on Provincial Government for Universal No-Cost Coverage of Prescription Contraception

Mayor Little reported that Access BC is asking the District to call on the province to make prescription contraception universally available at no cost in the province of B.C.

Moved and Seconded by Councillors Epp and Gray that Council send a letter urging the province to make all prescription contraception in British Columbia available at no cost under the B.C. Medical Services Plan.

Carried

7. Correspondence for Information

The following correspondence was received:

a) AVICC, 2023 AGM & Convention, Resolutions Notice, Request for Submissions
b) Our Place Society, The Coldest Night of the Year
c) Ellen Dewar, Metchosin Equestrian Society Leases Area
d) Eila Zylak, Metchosin Museum Society/Equestrian Society Leases
e) Kathy Atherton, Metchosin Museum Society Licence of Occupation

8. Adjournment

Moved and Seconded by Councillors Gray and Donaldson that Council adjourn the meeting at 7:47 p.m.

Carried

Certified Correct

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Chair **Corporate Officer**

District of Metchosin

Minutes
Finance Committee Meeting
January 9, 2023 at 4:30 p.m.

Metchosin Municipal Hall
Council Chambers

PLEASE NOTE: The meeting has been recorded.

Present: Councillor Donaldson in the Chair, Mayor Little, Councillors Epp, Gray and Shukin. Also present was Sue- Lin Tarnowski, Interim CAO/Corporate Officer, and Tina Hansen, Deputy Corporate Officer.

The meeting was called to order at 4:32 p.m.

Councillor Donaldson took the opportunity to acknowledge that the meeting is being held on the traditional territory of the Coast Salish Peoples including our neighbours the Sc'ianew First Nation and Tsartlip First Nation.

1. Agenda, Additions and Approval

Moved and Seconded by Councillor Shukin and Mayor Little that the Committee approve the agenda as presented.

Carried

2. Public Participation

Gary Smirfitt, resident commented on the draft 2023-2027 Five Year Financial Plan noting that the documentation was incomplete, and the public did not receive the separate budget package until just prior to the meeting. Mr. Smirfitt also expressed concerns as to items in the draft budget under One-Time Operating requests and Staffing Ongoing Options including review and update of the Building Fees Bylaw, Parking Plan at Metchosin School, Subdivision Servicing Bylaw update, Legislative Services Assistant and Planning Contract.

Avril Yoachim, resident stated her concerns as to confusion over the budget paperwork, and how it was presented. Ms. Yoachim suggested putting everything into reserves at this time and for Council to address the wish list as the year goes on.

3. Adoption of Minutes

Moved and Seconded by Councillors Gray and Shukin that the Committee adopt the minutes of the Finance Committee Meeting held on December 12, 2022.

Carried

4. Reports

a) Councillor's Update

Councillor Donaldson reported on the following meetings and events she attended:

- Pancake Breakfast at the Metchosin Fire Hall along with other members of Council

- Attended the Wardroom Officer's Mess for the Royal Canadian Navy home coming event for His Majesty's Canadian Ships *Vancouver* and *Winnipeg* where two Officers who are Metchosin residents were presented with prestigious awards
- Attended a West Shore Parks and Recreation Society tenant meeting
- Attended and served Christmas lunch with other Council members at Our Place Society and toured the facility
- Budget meetings are being held later in the day to take into consideration those Council members who work full time as well as consideration to members of the public who cannot attend morning meetings as done in previous years

a) Greater Victoria Public Library Budget and Five-Year Financial Plan

The Committee noted their support for the Greater Victoria Public Library's municipal contribution increase request of 5.95% for 2023.

Moved and Seconded by Councillor Shukin and Mayor Little that the Committee recommend Council approve the Greater Victoria Public Library 2023 Budget and Five-Year Financial Plan.

Carried

b) Staff Report, 2023-2027 Draft Budget

Sue-Lin Tarnowski, Interim CAO, Chief Financial Officer introduced the Draft 2023-2027 Five-Year Financial Plan and provided a PowerPoint Presentation and overview of the following:

- Governing legislation on Five Year-Financial Plan and Property Tax Rate Bylaws
- Budget Timeline
- 2022 Fiscal Year in Review
- Major Components of the Budget
- Departmental Budget Highlights
- Supplemental One-Time Requests
- Funding the Services
- Five-Year Projection
- Next Steps

Ms. Tarnowski noted that the next budget meeting will take place February 6, 2023.

Committee discussed:

- Use of Policing Reserve Funds; paying for Policing costs moving forward
- One-time operating request for review and update of permit fees in the building bylaw; this covers the Consultants fee for a full comprehensive review and cost analysis
- Staffing Options request for Legislative Services Assistant; concerns this will affect the budget annually moving forward, concerns of recession or slowing down of the economy, increased inflation and District facing uncertainties such as costs related to Policing and a new Fire Hall
- One-Time Operating request for an Agricultural Plan in the amount of $40,000.00; importance of having an Agricultural Plan for Metchosin in order to access grant funding
- Whether funding can be included in the Five-Year Financial Plan for a Transportation Study
- One-Time Operating request for a Shoreline Protection Plan; look to engage other communities, the CRD and the province to come up with a more regional approach to a Shoreline Protection Plan or extrapolate information that may already exist; look at engaging members of MEASC
- Consideration of costs related to Bilston Creek monitoring and Flesh Road Bridge repairs

- Clarification as to Neild Road Stormwater management
- Clarification as to the Road Resurfacing budget and timeline
- Whether budgeted amounts for "legal fees" is sufficient
- Previously used "one-time" requests were helpful in providing the "rationale" for the request
- Clarification as to the Staffing Ongoing Options Legislative Services Assistant; position is to provide support in order to free up time for policy and bylaw review
- Structure of budget meetings moving forward to allow for enhanced public engagement

5. Adjournment

Moved and Seconded by Councillors Gray and Shukin that the Committee adjourn the meeting at 5:34 p.m.

Carried

Certified Correct

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Chair **Corporate Officer**

District of Metchosin

Minutes
Community Planning Committee Meeting
November 21, 2022 at 7:00 p.m.

Council Chambers
Metchosin Municipal Hall

PLEASE NOTE: The meeting has been recorded

Present: Councillor Shukin in the Chair, Mayor Little, Councillors Donaldson, Gray and Epp. Also present was Sue-Lin Tarnowski, Interim Chief Administrative Officer, Tina Hansen, Deputy Corporate Officer and Sarah Davies, Recorder.

The meeting was called to order at 7:00 p.m.

1. Agenda, Additions and Approval

Moved and Seconded by Mayor Little and Councillor Donaldson that the Committee approve the agenda as amended, with the addition of 7. a) Councillor's Verbal Update.

Carried

2. Public Participation - Nil

3. Adoption of the Minutes

Moved and Seconded by Councillor Epp and Mayor Little that the Committee adopt the minutes of the Planning Committee meeting held on September 26, 2022.

Carried

4. Councillor's Update

Councillor Shukin gave a verbal Councillor's Update noting the new name and scope for the Community Planning Committee. The Community Planning Committee will continue to have the scope of the previous Planning Committee, including Land Use applications and bylaws related to Land Use. The Committee will also be looking at strategic planning for strengthening Metchosin as a rural community including long term fiscal planning, climate change, water, greenspace, housing, agriculture, as well as the Village Core.

Councillor Shukin provided further information as to the Parks and Trails Advisory Committee Blinkhorn Lake invasive species removal project, and the Metchosin Invasive Species Cooperative (MISC).

5. Adjournment

Moved and Seconded by Councillor Gray and Mayor Little that the Committee adjourn the meeting at 7:04 p.m.

Carried

Certified Correct

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Chair **Corporate Officer**

District of Metchosin

Minutes
Environment and Natural Areas Committee Meeting
November 21, 2022 at 7:00 p.m.

Council Chambers
Metchosin Municipal Hall

PLEASE NOTE: The meeting has been recorded

Present: Councillor Gray in the Chair, Mayor Little, Councillors Shukin, Donaldson and Epp. Also present was Sue-Lin Tarnowski, Interim Chief Administrative Officer, Tina Hansen, Deputy Corporate Officer and Sarah Davies, Recorder.

The meeting was called to order at 7:05 p.m.

Councillor Gray acknowledged that the meeting was being held on Scia'new First Nations Territory.

1. Agenda, Additions and Approval

The agenda was approved as presented.

2. Public Participation - Nil

3. Adoption of Minutes

Moved and Seconded by Councillors Shukin and Epp that the Committee adopt the minutes of the Parks Committee meeting held on September 26, 2022.

Carried

4. Receipt of Minutes

Moved and Seconded by Councillors Epp and Shukin that the Committee receive the minutes of the Environmental Advisory Select Committee held on October 25, 2022.

Carried

5. Reports

a) Councillors Update

Councillor Gray provided an overview of his Councillor's Update and noted the following:

- Welcome to the new and returning members of the Metchosin Environmental Advisory Select Committee (MEASC), Dr. Anna Hall, Dr. Andy MacKinnon, and Garry Fletcher.
- Upcoming meeting about the Metchosin Greenspace Survey with the Planner.
- The Trans Mountain Pipeline Project has been forwarded to MEASC for comment.
- The Declaration: United We Stand for Old Growth Forests has been forwarded to MEASC for comment.

- The Metchosin Climate Action Plan has been delayed while Council is finalizing questions regarding climate change to the survey. Councillor Gray and the Planner will continue to communicate with PINNA Sustainability regarding the Climate Action Plan.

The Home Energy Navigator Program

Councillor Gray advised that the Home Energy Navigator Program is available on the District of Metchosin website.
The Committee discussed options for the staff to explore, such as posting an ad in the MUSE newspaper, posting a notice on the front door and the bulletin board in the foyer of the Municipal Hall.

Moved and **Seconded** by Mayor Little and Councillor Shukin that the Committee request staff to investigate additional means to promote the Home Energy Navigator Program to residents.

Carried

The District of Metchosin Declaration on the Climate Emergency and Biodiversity Crisis

Councillor Gray introduced the proposed District of Metchosin Declaration on the Climate Emergency and Biodiversity Crisis.

Moved and **Seconded** by Councillors Shukin and Donaldson to the Committee recommend Council adopt the following Declaration on the Climate Emergency and Biodiversity Crisis.

WHEREAS, Climate change and the planetary biodiversity crisis are real, human caused, and global emergencies that requires immediate, rapid and large scale cuts in GHG emissions, and
WHEREAS, British Columbia has experienced flooding disasters with loss of livestock and wide-spread destruction of infrastructure, and
WHEREAS, British Columbians have died in landslides and catastrophic damage has been done to BC's highway infrastructure following climate-related atmospheric river rainfall events, and
WHEREAS, There are ninety-four bird species that are highly vulnerable due to climate change in British Columbia alone, and
WHEREAS, Six hundred British Columbians lost their lives in a climate-related heat dome and the Town of Lytton burned to the ground, and
WHEREAS, Rural communities worldwide often face immediate and severe consequences of climate change, and
WHEREAS, Municipal governments can and should make decisions and adopt policies (including budgets and bylaws) that will accelerate and significantly increase the scale of GHG reductions both of the District itself and of the broader community, and
WHEREAS, Municipal governments can and should make decisions and adopt policies that will prepare the community and mitigate climate change and negative climate related events

BE IT RESOLVED, on this fifth day of December in the year 2022, that the District of Metchosin:
1. Recognizes the global Climate Emergency and Biodiversity Crisis
2. Will promptly adopt a Climate Action Plan to inform future decision-making
3. Commits to make decisions and adopt policies accordingly

Carried

6. Adjourn

Moved and Seconded by Councillor Donaldson and Mayor Little that the meeting be adjourned at 7:21 p.m.

Carried

Certified Correct:

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Chair **Corporate Officer**

District of Metchosin

Minutes
Public Works and Protective Services Committee Meeting
November 21, 2022 at 7:00 p.m.

Council Chambers
Metchosin Municipal Hall

PLEASE NOTE: The meeting has been recorded

Present: Councillor Epp in the Chair, Mayor Little, Councillors Donaldson, Gray and Shukin. Also present was Sue-Lin Tarnowski, Interim Chief Administrative Officer, Tina Hansen, Deputy Corporate Officer and Sarah Davies, Recorder.

The meeting was called to order at 7:22 p.m.

1. Agenda, Additions and Approval

The agenda was approved as presented.

2. Public Participation

Ric Perron, resident, inquired as to whether the new Council will review the Tree Management Bylaw. Mr. Perron spoke to properties in Metchosin where many trees were recently cut down, where he was unsure if there was a permit for the tree cutting. He noted that the current bylaw allows many trees of a smaller size to be cut down without a permit.

Nicole Shukin, resident, inquired as to the possibility of any action to be taken regarding individuals cutting down trees in ditches along La Bonne Road for Christmas trees.

Shari Rourke, resident, highlighted the need for private snow removal on properties in Metchosin. Currently, private companies are no longer offering snow removal due to insurance changes. With no Commercial Liability Policy in place, the liability for slips and falls is with the property owner. Ms. Rourke wondered if there was any action that Council could take, such as reaching out to the Provincial Government, MLAs, and the insurance industries.

3. Adoption of Minutes

Moved and Seconded by Councillors Gray and Shukin that the Committee adopt the minutes of the Public Works Committee meeting held on September 26, 2022.

Carried

4. Reports

a) Councillor's Update

Councillor Epp provided an overview of her Councillor's Update, and it was received for information.

Councillor Epp noted the following:

- Public Works are doing more hand clearing of ditches and working on removing danger trees. Councillor Epp reminded the community that many danger trees that fall on power lines are from private properties.
- Councillor Epp met with CREST to gain more insight of their telecommunication operations. The manager of CREST has offered to speak to Council regarding CREST's operations.
- The School has had heat pumps installed in the newly renovated sections.
- Councillor Epp has been working with a traffic safety consultant regarding crosswalks at Hans Helgeson School. The consultant will study the site and recommend the best option for the District of Metchosin. The study should be done by the end of the year.
- Councillor Epp confirmed that School District 62 will not fund crossing guards. Mayor Little, CAO Tarnowski and Councillor Epp will be meeting School District 62 in the near future.
- The Maker's Market will be held on December 10th and 11th.
- The Fire Department Halloween drive through was "spooktacular"
- The vaccine clinic was a success, 680 vaccinations were administered.

5. Adjourn

Moved and Seconded by Councillors Shukin and Gray that the meeting be adjourned at 7:42 p.m.

Carried

Certified Correct:

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Chair **Corporate Officer**

TRANSMOUNTAIN

January 6, 2023

Marie-Térèse Little
Mayor
District of Metchosin
mtlittle@metchosin.ca

Sent Electronically Only

Re: Trans Mountain – BC EAO Condition 35 Fate and Behaviour of Bitumen Research

Thank you for providing comment on Trans Mountain's draft BC EAO Condition 35 F*ate and Behavior of Bitumen Research* report (Report). We appreciate you taking the time to review the Report and submitting the District of Metchosin's response, dated December 6, 2022.

We have noted the comments and concerns outlined in the Metchosin Environmental Advisory Select Committee's summary and are pleased to provide the following response.

Research Topics

The research into the topics described in the Report contributes to a better understanding of the fate and behaviour of the oils in the environment and their implications for spill response. All operational response is subject to safe working conditions and environmental conditions can affect response options and efficiencies. The effects of environmental conditions on response operations is not a subject of research required by Condition 35 and is out of scope for the Report.

Please note that the *Comparison of Conventional and Non-conventional Oils Final Data Report* details studies of 14 selected oils and their weathering characteristics, which informs how the oils would behave in fresh, brackish, or saltwater in terms of relative densities. The tests conducted with oils in the recirculating flume are the most conservative with respect to weathered oil densities and behaviours in receiving waters, given the higher densities of brackish and salt water relative to freshwater.

Not all research involves or result in peer-reviewed papers. The *Comparison of the Behaviour of Spilled Conventional and Non-Conventional Oils through Laboratory and Mesoscale Testing* study protocols and results were reviewed by a Scientific Advisory Committee, as noted in the preface. The individuals attached to SLRoss Environmental and the organizations that form the Scientific Advisory Committee are not pertinent to the report or its conclusions.

Regarding the statement in Section 3.1.1, "the results of the study concluded that both the conventional and oil sand-derived products remain floating in the marine environment for extended periods of time" reflects the results and observations from the specific experiments in the flume tank. The possibility of incorporating sediments into an oil matrix, and subsequent density increase, simply recognizes that there are possible scenarios where this could happen. As noted in the same report, the uptake of sediments depends on a number of factors, including the mixing energy, particle sizes, and the pour point and viscosity of the oils as they weather. The potential for entertainment in the water column through an uptake of sediments is not unique to oil-sands derived crudes and can occur for many crude and fuel oils. Notably, the addition of suspended sediment in flume tests in the study did not cause gross submergence or sinking for the conventional heavy crude or oil-sands derived crudes.

Western Canada Marine Response Corporation (WCMRC), a Transport Canada certified marine response organization, prepares and maintains Geographic Response Strategies (GRSs) that are applicable to the Burrard Inlet, in addition to maintaining equipment caches strategically located in the Lower Mainland. WCMRC has in place a Sunken and Submerged Plan which describes the

resources required for different response strategies for sunken and submerged oil and how WCMRC will implement those response strategies. Results from past and ongoing studies are intended to inform the response community on additional tools and strategies to address submerged and sunken oil.

In accordance with BC EAO Condition 38, the scope of the Human Health Risk Report is specific to a Project-related ship-source spill scenario of 16,500m^3 of cargo in English Bay. The Human Health Risk Report will be completed to meet the requirements of the condition as determined by BC EAO.

Regarding risk management, public interest standards, and response capacity, these topics are out of scope of BC EAO Condition 35 and Trans Mountain has limited its response to applicable topics.

Incorporating Results

The skimmers described in Section 4 are Trans Mountain owned and maintained as part of Trans Mountain's inventory of spill response equipment. This is separate from those skimmers maintained and operated by WCMRC. Skimming operations in response to an incident in the Strait of Juan de Fuca area would be managed by WCMRC using their equipment.

Engagement and Reporting

As described in Section 3.1 and Section 3.2 of the Report, several of the projects Trans Mountain has and is supporting are conducted in cooperation with other research partners. Many of the projects referenced are funded in part by Trans Mountain, with additional financial support from other parties.

Trans Mountain uses a variety of means for sharing research findings, as described in Section 5.2 and 5.3 of the Report. Additionally, information regarding diluted bitumen is and will continue to be updated and made available on the Trans Mountain website.

While the Director of Emergency Management has overall responsibility for Trans Mountain's EM Program and ultimately determines whether results of each project are incorporated into the EM Program, findings are reviewed and assessed for applicability by EM Program Personnel and the Manager, Emergency Management, as well as other subject matter experts, as appropriate.

Communications

The scope of consultation for Condition 35 was amended by the BC EAO in February 2022 by broadening the list of stakeholders to include potentially affected coastal local governments. The District of Metchosin is considered a potentially affected coastal local government within the Capital Regional District and attended the Marine Workshop on May 31, 2022.

Emergency Management would be pleased to meet virtually or in person to discuss the fate and behaviour of bitumen research should the District of Metchosin have additional questions or comments. Please confirm your interest via email and we will be in touch to confirm a date and time at the District of Metchosin's convenience.

Sincerely,

Christine Trefanenko
Manager, Project Emergency Management

DISTRICT OF METCHOSIN

File No. 0110-02

December 6, 2022

Christine Trefanenko
Manager, Project Emergency Management

VIA EMAIL: Christine_Trefanenko@transmountain.com

Dear Ms. Trefanenko:

RE: Coastal Local Government Comments on the Fate and Behaviour of Bitumen Research Report

Further to our letter of November 8, 2022, I would like to take the opportunity to thank you for the invitation to provide comments on the Trans Mountain Expansion Project Fate and Behaviour of Bitumen Research Report. We acknowledge that you have extended the deadline for the District to submit feedback to Trans Mountain to December 7, 2022, at noon.

At its November 7, 2022, Inaugural meeting, Council considered the Trans Mountain Report and referred the report to its Metchosin Environmental Advisory Select Committee (MEASC) for review and comment. Council is now prepared to provide you with the District of Metchosin's response on the Trans Mountain Report.

The Metchosin Environmental Advisory Select Committee spent considerable time reviewing the Trans Mountain October 2022 Report and has provided the attached summary of comments and concerns regarding the Report. As a community that is directly affected by emergency spill response, Council shares the concerns raised by MEASC.

Metchosin Council wishes to emphasize that:

- Since 2012, the District of Metchosin has opposed and continues to oppose projects furthering the expansion of oil tanker traffic through coastal waters and without substantive increases of safeguards in place
- A critical part of research on the fate and behaviour of bitumen BC Environmental Assessment Office (EAO) Condition 35 that has not been addressed adequately, relates to environmental conditions
- While Trans Mountain continues its research, the corporation should acknowledge to the EAO at this stage that any oil clean up near our shoreline will be impossible to achieve for much of the year due to winds, waves and current along tanker routes in the Strait of Juan de Fuca along our coast and shoreline estuaries.

Metchosin's 45 km shoreline is a vital link between our terrestrial world and the marine ecosystem of the Strait of Juan de Fuca, providing essential food and habitat for many forms of land-dwelling and sea life.

4450 Happy Valley Road, Victoria, B.C. V9C 3Z3
Administration Office (250) 474-3167 Fax 474-6298
Building Inspection Department (250) 474-3196 Fax 474-6298

Our choices and stewardship actions will ensure the survival of the species with which we share our community, while enriching our outdoor experiences. From hiking the coastline or spending a day on the beach, to fishing for salmon or watching our endangered resident orca whales, our shoreline is a resource we treasure. (Sharing our Shorelines Brochure, 2013)

On behalf of Council, thank you for providing the opportunity to comment on this important issue and for Trans Mountain's commitment in working with coastal local governments on enhancements to its Emergency Management Program.

Should you have any questions or concerns, please feel free to contact me direct at 250-474-3167 or mtlittle@metchosin.ca

Sincerely,

M-T Little, PhD

Marie-Térèse Little, Ph. D.
Mayor

Attachments

cc: Honourable Omar Alghabra, Minister of Transport Canada
Honourable George Heyman, Minister of Environment and Climate Change Strategy
Chief and Council, Sc'ianew First Nation
Mayor and Council, CRD Municipalities

30 November 2022

To: Mayor and Council, District of Metchosin

From: Metchosin Environmental Advisory Select Committee

Subject: The Trans Mountain Expansion Project Draft Report dated October 2022 intended to address the BC Environmental Assessment Office (EAO) Condition 35 - Fate and Behavior of Bitumen Research

MEASC COMMENTS ON THE DRAFT REPORT

PART 1: INTRODUCTION

This introduction demonstrates how Trans Mountain intends to fulfill the requirements of the BC. EAO Certificate Condition 35 so it is fairly straightforward.

The comments from MEASC members compiled here are made because the report must be developed in consultation with a number of agencies including Potentially Affected Local Coastal Governments.

The following paragraph generates many of our comments:

> **"The report must include the current and future research programs that Trans Mountain is leading, jointly leading, supporting or otherwise involved in regarding the behaviour and recovery of heavy oils spilled in freshwater and marine aquatic environments including research programs having the objective of providing spill responders with improved information on how to effectively respond to oil spills."**

PART 2: EMERGENCY MANAGEMENT RESEARCH STANDARD

It is good to know that the Research Standard provides directions in emergency situations that may affect the safety of workers, the public and the environment.

PART 3: RESEARCH TOPICS

Part 3 of the EAO Condition 35 Report "focuses on studies on the behaviour and recovery of heavy oils spilled in freshwater and marine aquatic environments, and/or on those with the objective of providing spill responders with improved information on how to effectively respond to oil spills."

Six topics are mentioned but missing in all responses to the topics is the recognition that all research into those topics assumes that environmental conditions would allow cleanup of an oil spill.

Environmental conditions

There is a large body of published research that recognizes the unpredictability of the behaviour of oil spills in fresh, brackish, and saltwater environments and the inability of any response for clean up under a variety of environmental conditions.

We include a few links below.

We are concerned that the report by TMX should include this important factor.

(1) From: A Technical Evaluation Related to Reconsideration of Marine Transportation Aspects of the Trans Mountain Pipeline Expansion Project Submitted to the National Energy Board on Behalf of Cowichan Tribes, Nov. 2018

https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90552/548311/956726/2392873/3614457/3615225/3635038/3718829/A96437-2_Cowichan_Tribes_-_2018_Introduction%2C_Preamble_and_Report_of_Stafford_Reid_-_A6L5Z2.pdf?nodeid=3718735&vernum=-2

"A response gap analysis is the only reality check on what can be accomplished, when, where, and how frequently.

A response gap analysis is a detailed, structured method to determine when, where, and why spill response would not be practicable or safe to undertake with a region – such as the Salish Sea. **Factors taken into account include: winds, waves, fogs, and currents, as well as response equipment's operational specifications.** Response Gap analysis is well established in Alaska. It is not a requirement for Canada's Response Organization to do under law, regulation, or standards.

"In bench-top and wave tank testing carried out by a number of research organizations (see below) indicates dilbit is not likely to sink due to weathering alone within a short to medium timeframe. The evidence notes that multiple factors, such as the interaction between density, viscosity, potential emulsion formation, **and environmental conditions** must collectively be examined together in considering the fate of spilled oil, including the possibility of sinking."

This technical evaluation pointed out that - the chance of responding to an oil spill of any kind is dictated by the environmental conditions at the time, and recovery is only possible overall 47% of the time in the Strait of Juan de Fuca.

(2) From NUKA RESEARCH AND PLANNING GROUP LLC, 2015 Technical Analysis of Oil Spill Response Capabilities and Limitations for Trans Mountain Expansion Project prepared for Tsleil-Waututh Nations, City of Vancouver and Tsawout First Nation. (5/11/2015)

https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90552/548311/956726/2392873/2449925/2452082/2784474/C358-13-18_-_Vol_8_Tab_4D_Appendix_4_Technical_Analysis_of_Oil_Spill_Response_Capabilities_Report_Part_1_of_5_-_A4L6A9.pdf?nodeid=2784920&v

"It is just as important for oil spill contingency plans to acknowledge oil spill response gaps and limitations as it is for them to demonstrate response capability. All three of the analyses indicate that there are times and places where effective spill response will be difficult or impossible. Anticipating these occurrences allows planners and response managers to make informed decisions about spill prevention or mitigation. For example, if a spill impacts or threatens to impact two areas and the conditions in one are marginal for spill response while at the other, they are favourable, it is important for decision-makers to be mindful of these response limits when allocating equipment. Another approach would be to take additional risk reduction measures during times when spill response may be precluded. This could include limiting tanker movement or loading during adverse conditions."

TABLE 1. RESPONSE GAP ESTIMATES FOR FIVE SITES ALONG TRANS MOUNTAIN TANKER ROUTE

Location	Open Water Mechanical Recovery + Aerial Reconnaissance			Protected Water Mechanical Recovery + Aerial Reconnaissance		
	Summer	Winter	Overall	Summer	Winter	Overall
Central Harbour	n/a	n/a	**n/a**	34%	57%	**45%**
Outer Harbour	n/a	n/a	**n/a**	34%	56%	**46%**
Georgia Strait	35%	59%	**47%**	38%	63%	**51%**
Juan de Fuca	40%	60%	**49%**	46%	63%	**54%**
Neah Bay	49%	78%	**65%**	n/a	n/a	**n/a**

KEY FINDINGS FROM RESPONSE GAP ANALYSIS:

1. **There is no location along the Trans Mountain tanker route where on-water oil spill response will always be possible.**
2. **There may be times when on-water vessel operations are possible but poor visibility – including darkness – precludes aerial reconnaissance, making it very difficult to track and target oil for recovery.**
3. **During the winter, response is not possible between 56% and 78% of the time at sites along the Trans Mountain tanker route.**
4. **If a spill occurs during a time when response gap conditions exist, the unmitigated oil slick will remain in the environment until conditions improve. If the response gap conditions extend for several days, there may not be any opportunity for on-water recovery.**
5. **Lack of a response gap does not ensure that a response *will* occur, nor does it guarantee that the response will be effective.**

The Nuka Report of 2018 also includes a marine oil spill response capacity analysis for the Project and concludes as follows:

a. On-water oil spill recovery capacity is reduced during winter months by as much as 50% compared to summer

b. If spill response is delayed for any reason – lags in detection, poor weather, equipment malfunction – the total volume of oil recovered would decrease significantly

c. Spill response forces currently available in Southern BC have the capacity to recover only 10-20% of a worst-case oil spill under favourable conditions.

d. Changes to diluted bitumen density and viscosity within the first few days of the spill may render oil spill response systems ineffective.

Wind speed

Likewise, the Board of FER in their final report to the NEB in 2018, went to great lengths to show that the ability to manage oil spills in the Strait of Juan de Fuca was based on inadequate data that was obtained from their consultant for wind speed.

The industry-selected consultant obtained its data from measurements made at the Western Entrance of the Strait of Juan de Fuca. The Board of FER looked at the information from Environment Canada's website and found that wind speeds at the Eastern Entrance, at Race Rocks were considerably higher than that in the industry consultant's report.

The Board of FER recently looked at hourly data for every day in 2020 and found that 40% of the time in the year wind speeds were 28 kilometres per hour or higher.

Input to the BC Environmental Assessment Office and additional conditions proposed for the TMX project related to protecting the marine environment.

February 28, 2021--Prepared by Friends of Ecological Reserves. Former intervenors with the KM-NEB processes.

> https://ecoreserves.bc.ca/2021/02/28/input-to-the-bc-environmental-assessment-office-and-additional-conditions-proposed-for-the-tmx-project-related-to-protecting-the-marine-environment/ I

The standards set by Transport Canada for oil spill response agencies such as WCMRC is that they do not need to deploy or respond when wind speeds are greater than 28 km/hour as current technology renders booms ineffective.

Table 3 shows the number of hours per month that no clean-up operations with existing technology would be possible. **This is a very serious situation** and not been explicitly made known by either WCMRC or TC.

Table 3: Hours when wind speed were greater than 28 km/hour during 2020.

Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
341* hrs	239 hrs	255 hrs	223 hrs	333 hrs	392 hrs	464 hrs	400 hrs	195 hrs	259 hrs	190 hrs	263 hrs

* since 10 days of data were not recorded in January due to equipment problems, an estimation was made of the speed based on adding the 5 previous and the 5 following days for a total of 88 hours when the wind was 28 km/hr or greater.

It can be concluded that for 3,554 hours out of 8,784 hours in the leap year of 2020, just over 40% of the time, containment and clean up vessels could not have been deployed into the Eastern Entrance of the Strait of Juan de Fuca.

It should also be of note that on 58 of the days in 2020 the wind was over 28 km/per hour for 20 hours or more of the day.

Tidal current speed

Another very important variable that has not been included in any of the analysis, as far as we can determine is the variable of tidal current speed.

Tidal current speed is a major variable that has to be accounted for in the implementation of any clean-up of an oil spill. This is noted in the reference following from the Georgia Strait Alliance,

> "Most of the booms used to respond to spills along the tanker route are meant for protected water areas, such as harbours. They aren't built to withstand the currents we find along the route, with 87 per cent of them failing at about 1.5 knots (2.8 km/h). Even the most effective high-current booms on our coast fail at four knots. Meanwhile, in some locations, such as Race Rocks on the southern tip of Vancouver Island, currents can exceed seven knots."

Risk management

If the protection of the waterfront cannot be safeguarded when there are winds over 28 kilometres per hour, should shipping be scheduled into low wind periods only?

If the precautionary principle stated as guidance to Transport Canada who administers the *Oceans Act was* really an overarching direction, that may be what is necessary.

What is perhaps most disconcerting is that this level of disclosure and the acceptance by the Federal government that it is fine to not respond more than 40% of the time and also to not disclose the limits and risks to those along shipping routes is of great concern.

Even worse is that the Federal government does not openly disclose the limits and risks of current standards and response limits.

Meeting public interest standards

> "The 23-year old TC Response Organization (RO) standards that govern the WCMRC certificate, also means that a RO does not need to respond to a marine oil spill if wind speeds are greater than 28 km/hour or Beaufort scale Force 4- 28 Km/hour winds."

In our oil spill response gap assessment, this occurs at least 40% of the time. It is questionable to state that Canada has a "world-class" system when this means no deployment of spill response 40% of the time.

We find the TC and the WCMRC are communicating overly optimistic claims on how well they have the public interest covered, and they are too confident to state they have the situation in hand in the event of a spill and know what to do, when there is evidence to the contrary.

Response capacity

The RO standards need to be revised WCMRC's spill response capacity needs to be increased in light of the TMX project.

As part of the National Energy Board's re-review of the Trans Mountain pipeline expansion, Georgia Strait Alliance examined the physical limits of booms, which are foundational pieces of equipment to contain and deflect spilled oil.

> Christianne Wilhelmson, Georgia Strait Alliance , Times Colonist, May 26, 2019 Island Voices: Oil cleanup near Island impossible much of the year
> https://www.timescolonist.com/opinion/island-voices-oil-cleanup-near-island-impossible-much-of-the-year-4673066
>
> "They compared their limits to wind, wave, and currents along the tanker route, and found that responding to a spill on our coast is likely to result in a significant amount of oil being left in our marine environment.
>
> Most of the booms used to respond to spills along the tanker route are meant for protected water areas, such as harbours. They aren't built to withstand the currents we find along the route, with 87 per cent of them failing at about 1.5 knots (2.8 km/h).
>
> Even the most effective high-current booms on our coast fail at four knots.

Meanwhile, in some locations, such as Race Rocks on the southern tip of Vancouver Island, currents can exceed seven knots.

Strong wind and waves carry oil over or under booms, sometimes even breaking them. In the heaviest weather, booms can't be deployed.

Wind and waves surpass boom capabilities for days, sometimes weeks, at a time during the fall and winter at the mouth of the Juan de Fuca Strait.

If an oil spill were to happen during one of these periods, our coast would likely be awash in oil."

Part 3.1.1: COMPARISON OF BEHAVIOUR OF OIL SPILLS in "different environmental conditions to determine how the fresh and weathered oils" behave in various marine, estuarine, and freshwater settings.

The study is in fresh water with no mention of ocean/salt waters.

Saltwater research

How does bitumen react with salt? This is not part of the study.
3.2.3 the program is with The "Experimental Lakes Area Program" conducted testing in freshwater

3.1.2 Underwater Seabed Cleanup does refer to the "sea" which makes us think the research must be inconclusive with saltwater conditions.

Under section 3.1 "Past Projects", in Section 3.1.1 the study entitled, "Comparison of the Behaviour of Spilled Conventional and Non-Conventional Oils through Laboratory and Mesoscale Testing" was published in 2020 but it does not appear to be published in a peer reviewed scientific journal.

Peer review research standards

It says that an advisory committee reviewed the findings of this study, but the committee members are not listed by name.

The full study, not just the "findings", should be subjected to the peer review process. This is a necessary part of the scientific process and should occur before the results of the study are integrated into spill response. Also the authors of this study should be named.

Sinking oil

In section 3.1.1, it states that "the results of the study
concluded that both the conventional and oil sand-derived products remain floating in the marine environment for extended periods of time".

This is very misleading and in fact is not fully accurate.

In the report, "Comparison of the Behaviour of Spilled Conventional and Non-Conventional Oils through Laboratory and Mesoscale Testing" the summary statements for the long-term flume weathering tests (page 38) state that "test oils are expected to remain floating in marine (saltwater) environments in any of the weather states tested in the flume tanks. However, scenarios involving highly turbulent water with suspended sediments or stranded oil being refloated after picking up beach material could increase the risk of submergence for any oil."

Essentially, the oils remained floating in the tests, but won't necessarily remain floating in the natural environment because it is impossible to replicate nature conditions in a lab.

Furthermore, "heavy oils (conventional and non-conventional) weathered to have specific gravities very close to or equal to neutral buoyancy in freshwater (e.g., 0.98 to 1.02) within a few hours to days.

This characteristic makes them more susceptible to temporary submergence/over washing and entrainment in the natural environment."

This uncertainty about whether spilled dilbit will sink is further supported by section 3.1.2 "Underwater Seabed Cleanup and Assessment Technique Guide (uSCAT)."

> Harper, J.R., G. Sergy and L.A.S. Britton 2018. uSCAT Technical Reference Manual: Underwater Seabed Cleanup Assessment Technique for Sunken Oil. Technical Report prepared by Coastal & Ocean Resources, Victoria, BC, 99p + appendices. www.uscat.ca (Funding for this project was provided by: Kinder Morgan Canada (KMC), the Western Canada Marine Response Corporation (WCMRC), Natural Resources Canada (NRCan), the Canadian Coast Guard (CCG) and Fisheries and Oceans Canada (DFO).

The first paragraph of the uSCAT report states:

> "The assumption that oil floats at the surface of the water has shaped both oil spill response plans and initial oil spill response actions. Whereas this assumption has been the case for most spills, there are spill events where oil sinks. As more is learned about oil behavior and creation of sinking oil, it seems probable that there have been many spills where sunken oil has occurred but has not been identified. While spills of heavier-than-water oil draw urgent attention to the issue, there are scenarios where floating oil can become sunken oil under certain conditions such as oil weathering and/or the

entrainment of sediments in the oil to the point where the resulting density is greater than that of the receiving water.

In other words, there is a potential for creation of sinking oil. In recent years, the awareness and understanding of sunken oil has grown, and this can be seen in many recent international efforts to improve prediction, detection, recovery technologies and guidance for sunken oil."

Many of the same organizations on the Technical Advisory Committee of the uSCAT report were on the Scientific Advisory Committee of the SL Ross Environmental Research Ltd. who reported on "Comparison of the Behaviour of spilled Conventional and Non-Conventional Oils through Laboratory and Mesoscale Testing.

"The likelihood of oil sinking after a spill is a concern in any response. Response plans are prepared using emergency response strategies and equipment that consider the potential for some oil to submerge, be over washed by wave action, entrained in the water, or possibly sink."

Recovery of submerged oil

This uncertainty about the likelihood that spilled dilbit or any oil will sink in the natural environment speaks for the need to for spill response in Metchosin to include procedures for recovery of submerged oil. However, the Geographic Response Strategies (GRS) developed by WCRMC for Metchosin do not include strategies to recover submerged dilbit or any form of oil.

The Trans Mountain report lists two projects related to sunken or submerged oil in section 3.2, "Ongoing and Future Projects."

MEASC thinks that these studies should first be completed and proven strategies for recovering submerged or sunken oil incorporated in Metchosin's GRSs before the EAO signs off on Condition 35.

From information on Trans Mountains own website on Diluted Bitumen Information, they recognize the importance of environmental considerations:

Diluted Bitumen Information from the Trans Mountain website:

https://www.transmountain.com/diluted-bitumen-information#:~:text=This%20means%20dilbit%20spilled%20into,the%20case%20for%20any%20oil.

In section 3.2, "Ongoing and Future Projects", **all research should be subjected to peer review** - on page 13, see further comments: Part 5 Engagement And Reporting for further comment.

PART 3.2.1: HUMAN HEALTH AND RISK REPORT

It is noted that the Human Health Risk report is yet to be developed. It is probably a stretch of the imagination to consider the shorelines of the southern part of Vancouver Island including Metchosin and Victoria are comparable with those of English Bay.

Surely if modelling is to be done, there should be more consideration to be given to other areas with potential impact along the route of tanker traffic.

Geography and wind and current exposure at different times of the year should be considered.

It is surprising that in 2018 Public Health was pointed out in the TMX Hearings as a significant concern and no research results can be given yet.

This excerpt from the Friends of Ecological Reserves Direct Evidence report of 2018 indicated the urgency of this consideration.

> "Human and ecosystem health must, in all cases, be a major consideration in the transport of a highly toxic substance through the waterways of Canada's Pacific Coast. Whether the work force involved in the transport of dilbit or the populations of coastal areas where impact will be felt, are aware of the dangers of a spill of such a toxic substance is a major concern for us living here. We are concerned, not only for the consequences of the immediate effects, but the implications for long- term damage to health. We examined the implications of a lack of information on the levels of toxicity, and ask for clarification from the agencies, on policies related to this problem. We are also concerned about the toxicity of dispersants, as it is unclear if used for an oil spill, they will not produce greater harm since adding two toxic substances may not be better for humans and other species."

In section 3.2.3 Experimental Lakes Area Program, no mention is made of the research that must be done on those brackish water environments along tidal inundated river mouths, in estuaries, and along adjacent shorelines where there is seawater dilution. Several concerns were raised like this by reports in the past.

PART 4: INCORPORATING RESULTS

Although maintaining that oil will generally not sink in the aquatic environments, this section provides a lot of information on Non-floating oil assessment and response.

In paragraph 8 of Part 4, it is stated that in 2020/21, Trans Mountain replaced its existing drum skimmers in British Columbia and Alberta with the high capacity RBS TRITON™ 35 model. RBS TRITON™ 35 Skimmer.

This is quite concerning given that Aquaguard who manufacturer the RBS TRITON 35 Skimmer say that:

> "The RBS TRITON™ 35 oil skimming systems are versatile, ideal for use in calm water and industrial environments and are able to recover 38 m^3/h. The system offers extremely high oil recovery rates with up to 98% efficiency and is able to respond to most oil spill needs."
>
> https://aquaguard.com/products/skimmers/rbs-triton-35-skimmer

This is quite concerning. Conditions like this are rarely available in the Strait of Juan de Fuca.

Does this mean that WCMRC now has no skimmers which could be effective for cleaning up oil spills in our waters?

PART 5: ENGAGEMENT AND REPORTING:

In this part of the report, there is no mention of arms-length research community i.e. academic institutions (university-based researchers).

Research work all seems to be done by Trans Mountain with only some interagency cooperation.

No mention is made of sharing research findings widely to improve scientific understandings - the research information is owned solely by Transmountain.

This suggests a proprietary approach rather than contributing information for the wider good (and/or low-quality work, mixed scientific rigour).

Disappointing for research that is publicly funded and conducted by a publically owned entity.

Research work appears to be incorporated or not depending on the view of one person - no review panel is described.

PARTS 5.1 and 5.2: COMMUNICATIONS

Of concern in this part are the statements:

> "In the May and June 2022, Trans Mountain hosted a series of Marine Engagement Workshops for Indigenous Groups and coastal local governments, respectively. The 2022 Research Newsletter (See Section 5.2) was provided to participants in advance of the workshop and the fate and behaviour of bitumen research was included as an agenda item."

"Meetings with Indigenous Groups and stakeholders were another important forum where attendees were encouraged to provide input for consideration into the enhancement of the EM Program. The scope of consultation covered all components of the EM Program and Trans Mountain's goal was to gather unique and varying input from Indigenous Groups and Stakeholders on respective topics of interest, including feedback on Trans Mountain's research program and potential research initiatives."

We are not aware of whether or not the Metchosin Council has been included as a coastal local government.

OTHER USEFUL REFERENCES:

1.Sophia C.Johannessen, Charles W. Greer, Charles G. Hannah, Thomas L. King, Kenneth Lee, Rich Pawlowicz, Cynthia A. Wright, 2021, Marine Pollution bulletin, vol 150 : Fate of diluted bitumen spilled in the coastal waters of British Columbia, Canada ..
https://www.sciencedirect.com/science/article/pii/S0025326X19308471?via%3Dihub

2. The Opening Statement and Direct Evidence of the City of Vancouver for the Trans Mountain Expansion Project Reconsideration Hearing Order MH-052-2018 Board File OF-Fac-Oil-T260-2013-03-59
https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90552/548311/956726/2392873/3614457/3615225/3635582/3718926/A96435-1_Opening_Statement_and_Direct_Written_Evidence_-_A6L5Y4.pdf?nodeid=3718927&vernum=-2

Three sources were quoted as part of their direct evidence:

a. Dr. Thomas Gunton and Dr. Chris Joseph report dated December 5, 2018, Trans Mountain Expansion Project Reconsideration Hearing: Assessment of Oil Spill Risks ("Spill Risk Report, 2018");

b. Nuka Research and Planning Group, LLC report dated December 5, 2018, Further Technical Analysis of Oil Spill Response Capabilities and Limitations of the Trans Mountain Expansion Project ("Nuka Report, 2018"); and

c. JWS Consulting LLC report dated December 5, 2018, Further Report on the Fate and Effect of Oil Spills from the Trans Mountain Expansion Project in Burrard Inlet and the Fraser River Estuary ("JWS Report, 2018").

3. Alice C Ortmann; Susan E Cobanli; Thomas L King, Charles W. Greer; Gary Wohlgeschaffen; Brian Robinson

International Oil Spill Conference Proceedings (2021) 2021 (1): 1141488.
https://doi.org/10.7901/2169-3358-2021.1.1141488

4. Metchosin Environmental Advisory Select Committee (MEASC) feedback regarding Western Canada Marine Response Corporations (WCMRC) Oil Spill Response and Coastal Mapping Program for Metchosin, November 2021

https://ecoreserves.bc.ca/2021/11/15/oil-spill-response-and-coastal-mapping-program-for-metchosin/

5. Friends of Ecological Reserves

https://ecoreserves.bc.ca/2018/12/06/neb-trans-mountain-reconsideration/

DISTRICT OF METCHOSIN

MEMORANDUM

TO: Mark Atherton, Chair PTASC
Bill Cave, Chair MEASC

FROM: Melissa Kirk, Building/Planning Clerk

DATE: November 21, 2022

Our File: 3320-22-05

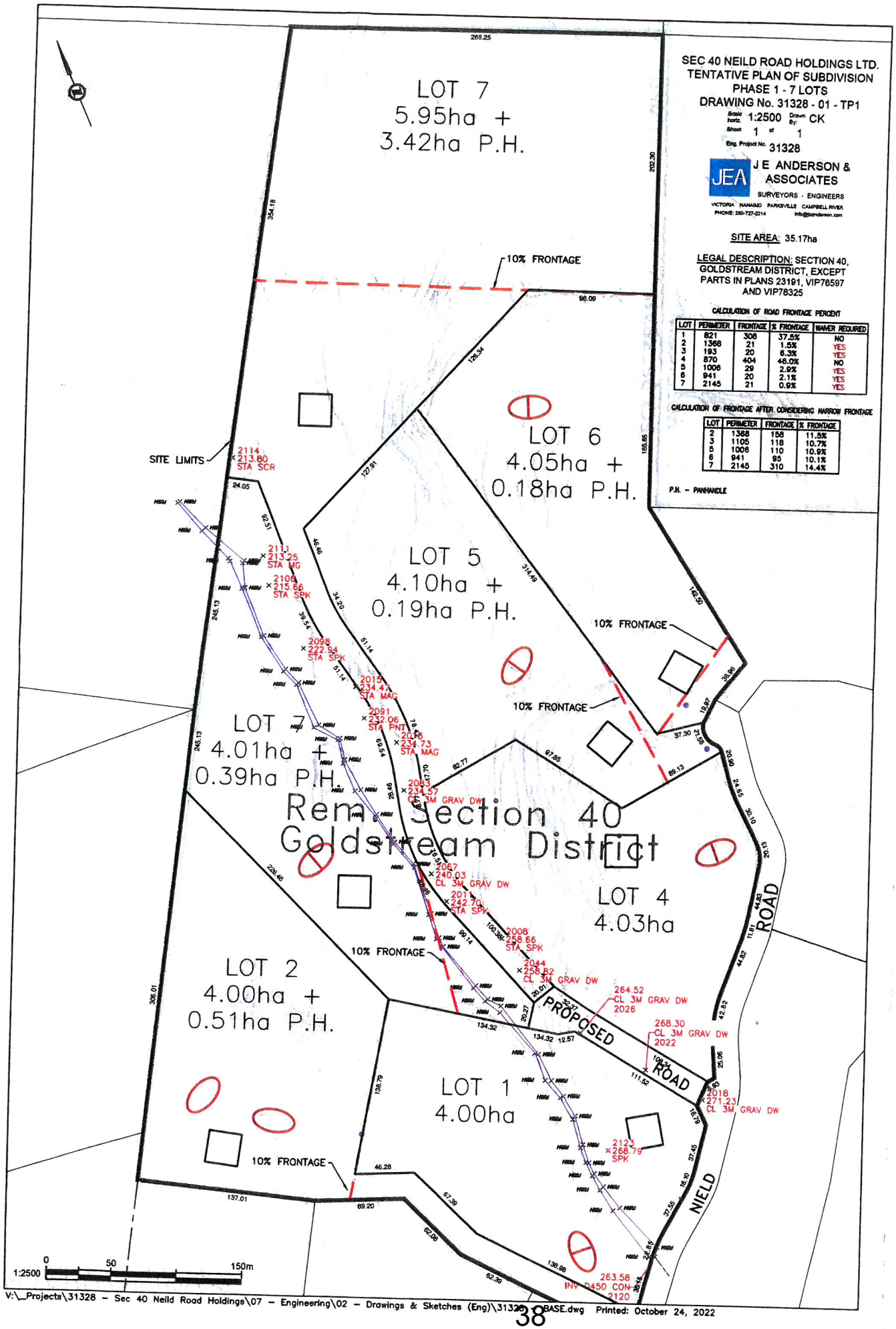
Re: Proposed 7-Lot Subdivision of:
Section 40, Goldstream Land District, Except Parts in Plans 23191, VIP76597 and VIP78325
(Section 40, Neild Road)

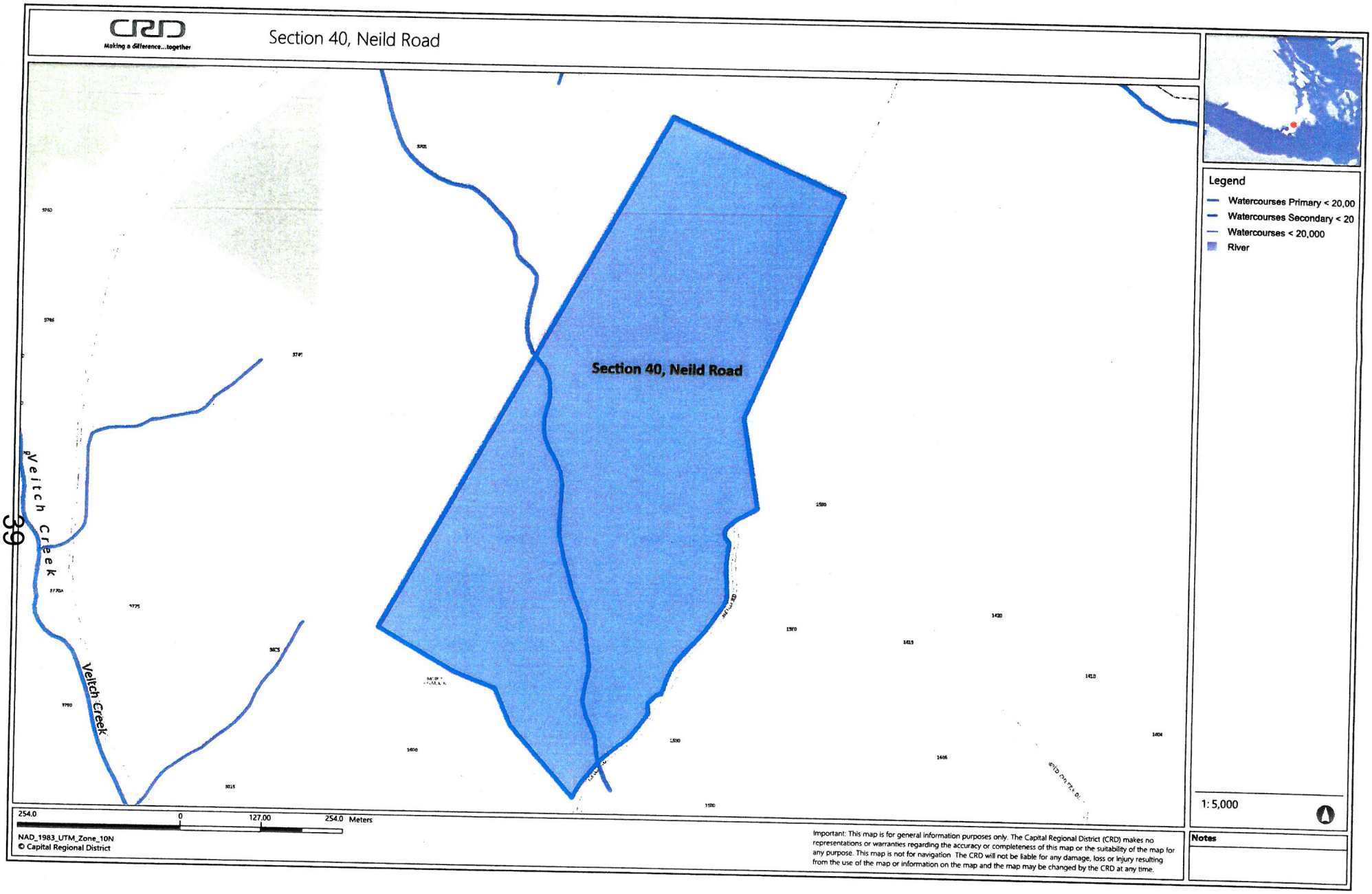
Please find enclosed a proposed 7-lot subdivision plan for the above noted properties.

The applicant(s) are:

J.E. Anderson & Associates
Phil Buchanan
4212 Glanford Avenue
Victoria BC V8Z 4B7
Tel: 250-727-2214

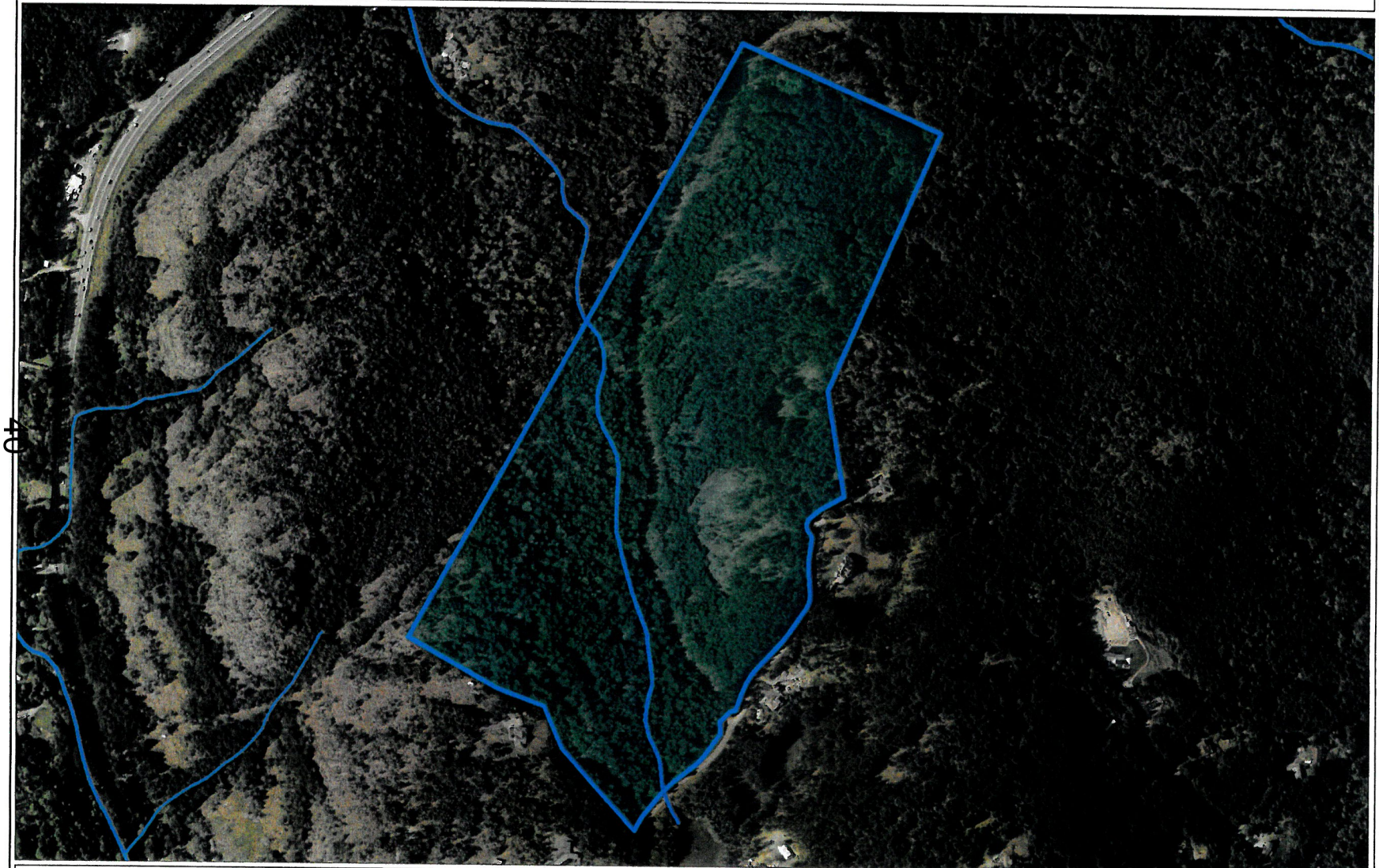
Please advise me as soon as possible of any concerns, comments and recommendations regarding the proposal. If you should require further information or documentation, please contact me.

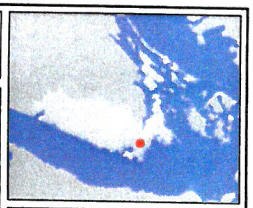

SEC 40 NEILD ROAD HOLDINGS LTD.
TENTATIVE PLAN OF SUBDIVISION
PHASE 1 - 7 LOTS
DRAWING No. 31328 - 01 - TP1
Scale horiz. 1:2500 Drawn By: CK
Sheet 1 of 1
Eng. Project No. 31328
J E ANDERSON & ASSOCIATES
SURVEYORS - ENGINEERS
VICTORIA NANAIMO PARKSVILLE CAMPBELL RIVER
PHONE: 250-727-2214
SITE AREA: 35.17ha
LEGAL DESCRIPTION: SECTION 40, GOLDSTREAM DISTRICT, EXCEPT PARTS IN PLANS 23191, VIP76597 AND VIP78325
CALCULATION OF ROAD FRONTAGE PERCENT
LOT | PERIMETER | FRONTAGE | % FRONTAGE | WAIVER REQUIRED
1 | 821 | 308 | 37.5% | NO
2 | 1368 | 21 | 1.5% | YES
3 | 193 | 20 | 6.3% | YES
4 | 870 | 404 | 46.0% | NO
5 | 1006 | 29 | 2.9% | YES
6 | 941 | 20 | 2.1% | YES
7 | 2145 | 21 | 0.9% | YES
CALCULATION OF FRONTAGE AFTER CONSIDERING NARROW FRONTAGE
LOT | PERIMETER | FRONTAGE | % FRONTAGE
2 | 1368 | 158 | 11.5%
3 | 1105 | 118 | 10.7%
5 | 1006 | 110 | 10.9%
6 | 941 | 95 | 10.1%
7 | 2145 | 310 | 14.4%
P.H. - PANHANDLE
LOT 7
5.95ha +
3.42ha P.H.
LOT 6
4.05ha +
0.18ha P.H.
LOT 5
4.10ha +
0.19ha P.H.
LOT 7
4.01ha +
0.39ha P.H.
Rem. Section 40
Goldstream District
LOT 4
4.03ha
LOT 2
4.00ha +
0.51ha P.H.
LOT 1
4.00ha
10% FRONTAGE
SITE LIMITS
PROPOSED ROAD
NIELD ROAD
2114 213.80 STA SCR
2111 213.25 STA MG
2106 215.66 STA SPK
2098 222.94 STA SPK
2015 234.47 STA MAG
2091 232.06 STA PNT
2083 234.73 STA MAG
2083 234.57 CL 3M GRAV DW
2067 240.03 CL 3M GRAV DW
2071 242.70 STA SPK
2008 258.66 STA SPK
2044 258.82 CL 3M GRAV DW
264.52 CL 3M GRAV DW 2026
268.30 CL 3M GRAV DW 2022
2018 271.23 CL 3M GRAV DW
2123 268.79 SPK
263.58 INV 0450 CON 2120
0 50 150m
1:2500
V:_Projects\31328 - Sec 40 Neild Road Holdings\07 - Engineering\02 - Drawings & Sketches (Eng)\31328-BASE.dwg Printed: October 24, 2022


CRD
Making a difference...together
Section 40, Neild Road
Section 40, Neild Road
Veitch Creek
Veitch Creek
Legend
Watercourses Primary < 20,00
Watercourses Secondary < 20
Watercourses < 20,000
River
1: 5,000
254.0
0
127.00
254.0 Meters
NAD_1983_UTM_Zone_10N
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Notes

CRD
Making a difference...together

Section 40, Neild Road





Legend

- Watercourses Primary < 20,00
- Watercourses Secondary < 20
- Watercourses < 20,000
- River

1: 5,000

254.0 0 127.00 254.0 Meters

NAD_1983_UTM_Zone_10N

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Notes

Draft AVICC Resolution: Anchorages outside the Port of Vancouver

Whereas the Salish Sea is a sensitive marine ecosystem and critical habitat for many species including endangered Southern Resident Killer Whales, and the use of freighter anchorages outside the Port of Vancouver for ships waiting to be loaded in the Port of Vancouver is extremely detrimental to the marine ecosystem;

Whereas ports in other parts of the world have reduced or eliminated the need for freighter anchorages by upgrading infrastructure, increasing efficiencies and implementing port call optimisation systems;

Be it resolved that the AVICC request that the federal government and the Vancouver Fraser Port Authority take any and all available actions to immediately reduce the use of freighter anchorages along southern Vancouver Island and the Southern Gulf Islands, and that Transport Canada expand monitoring and inspection of freighters anchored outside the limits of the Port of Vancouver.

BACKGROUND

There are 28 Anchorages within the Port of Vancouver, 33 in the Southern Gulf Islands (SGI), 6 at Nanaimo Port, 5 at Royal Roads and 5 at Constance Bank. Transport Canada has authorized the Vancouver Fraser Port Authority (VFPA) to assign ships to the SGI Anchorages as well as the anchorages within the limits of the Port of Vancouver itself. The Harbour Master or Port Authority for Esquimalt Harbour (part of the Department of National Defence) manages the Royal Roads anchorages for commercial cargo vessels. The Pacific Pilotage Authority manages the Constance Bank anchorages.

Anchorages outside the Port of Vancouver are primarily used by bulk carriers (freighters), that are waiting empty until they can proceed to the Vancouver to load bulk commodities – primarily coal, grain, fertilizers and wood products. There is a much more efficient system in place for processing container ships and they are rarely sent to anchor outside of the Port of Vancouver.

Anchorage use associated with the Port of Vancouver has grown exponentially over the last decade although there has only been around 10% growth in the volume of bulk carrier arrivals at the Port of Vancouver.[i] The mismatch between the dramatic increase in demand for freighter anchorage and the relatively moderate growth of freighter traffic appears to be due to inefficiencies at the Port of Vancouver.[ii] No substantial progress has been made toward increasing the efficiency in matching vessel arrivals to loading capacity, which would reduce port congestion and vessel line-ups.[iii]

ENVIRONMENTAL EFFECTS

Seabed scouring: anchoring is a major global cause of seabed and benthic habitat degradation.[iv] According to the Clear Seas Centre, "Ship anchors can weigh up to 30 tonnes and are designed to hold vessels in place. The anchor chain can be hundreds of metres long, and the excess chain lies on the seafloor to stabilize the vessel in waves, wind, and currents. When the vessel swings around due to changes in wind or tides, the anchor chain can drag across the seabed and cause damage to the seafloor as well as to flora and fauna."[v] Displaced sediment creates plumes that smother life well outside the anchor radius, and seabed carbon storage is disrupted.

Greenhouse gasses: Freighters at anchor run huge diesel generators to provide electrical power needed to maintain lighting, instrumentation, and ships operations. A typical bulk carrier at anchor emits about 10 tonnes of CO2 and other greenhouse gases per day.[vi]

Underwater noise: Underwater noise from generators/auxiliary power while at anchor, which is known to have serious adverse impact on a wide range of marine life in the Salish Sea, can be 40% as loud as a ship in transit.[vii]

Discharge from exhaust gas scrubbers contains heavy metals and polycyclic aromatic hydrocarbons (PAHs) that accumulate in marine life; discharge of bilge water and sewage introduce further contaminants into our waters..

Risks: in the report of investigation into the March 2020 collision that occurred when a freighter dragged anchor in Plumper Sound, the Transportation Safety Board of Canada states that "Between January 2015 and March 2020, a total of 102 dragging anchor occurrences along the BC coastline were reported to MCTS. When a vessel drags anchor, it can result in a collision, a grounding, or other emergency situations."[viii] Any of these emergencies pose the risk of a catastrophic fuel spill.

ALTERNATIVES

Ports around the world have reduced or eliminated the need for freighter anchorages by implementing systems that synchronize arrival of ships with supply chains and real-time capacity for processing in port. Marine traffic management systems/port call optimisation platforms provide for more accurate vessel arrival times ("just-in-time arrivals") by coordinating and exchanging essential information with inbound vessels still at sea, allowing them to reduce speed when ports are experiencing congestion.

For example: the Port of Newcastle Australia requires that vessels report and enter the system 15 days before arrival. Vessels obtain their positions in a lineup without requiring an actual arrival at port. During periods of port congestion, vessels slow-steam at sea, conserving fuel and reducing emissions without increasing transit times, since time at anchor is reduced if not eliminated. This can be contrasted with Vancouver which operates on a first come-first served system. Vessels receive their position in the line-up upon arrival, so there is an incentive to arrive earlier than required, after which they are sent to an anchorage for what can be a lengthy stay.

Computer simulations indicate that increased efficiency and implementation of a port call optimisation platform at the Port of Vancouver could reduce ship congestion and anchorage demand to such an extent that the anchorages within the Port of Vancouver would be sufficient to meet average anchorage demand.[ix]

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[i] *Ship Congestion at the Port of Vancouver and Southern Gulf Islands: Green Solutions for Better Management of Vessel Arrivals and Anchorage Demand*. Rohner, Christoph, and Ted Fullerton, Centre for Marine Affairs, Southern Gulf Islands. 2020. marineaffairs.ca/reports/anchorage-ship-congestion-rohner-fullerton-2020.pdf

[ii] Ibid.

[iii] *Update March 2022: Ship Congestion at the Port of Vancouver and Southern Gulf Islands*. Rohner, Christoph, and Ted Fullerton, Centre for Marine Affairs, Southern Gulf Islands. 2022. https://marineaffairs.ca/reports/update-anchorage-ship-congestion-rohner-fullerton.pdf

[iv] *The footprint of ship anchoring on the seafloor.* Watson, S.J., Ribó, M., Seabrook, S. et al. Scientific Reports 12, 2022 https://www.nature.com/articles/s41598-022-11627-5#citeas

[v] *Anchors Away: Understanding the Issues about Ships at Anchor.* https://clearseas.org/en/blog/anchors-away-understanding-the-issues-about-ships-at-anchor/

[vi] *Daily Fuel Consumption and Greenhouse Gas Emissions by Bulk Carriers Anchoring in the Southern Gulf Islands*. Rohner, Christoph, Centre for Marine Affairs, Southern Gulf Islands. 2020. https://protect-the-islands-sea.org/daily-fuel-consumption-emissions-bulk-carriers.pdf

[vii] Anchored commercial vessels still have significant impact on marine soundscape: UVic study

[viii] Investigation report: March 2020 collision between two bulk carriers in the Plumper Sound, Southern Gulf Islands, British Columbia, Transportation Safety Board of Canada https://www.tsb.gc.ca/eng/medias-media/communiques/marine/2021/m20p0092-20210208.html

[ix] *Ship Congestion at the Port of Vancouver and Southern Gulf Islands: Green Solutions for Better Management of Vessel Arrivals and Anchorage Demand*. Rohner, Christoph, and Ted Fullerton, Centre for Marine Affairs, Southern Gulf Islands. 2020. marineaffairs.ca/reports/anchorage-ship-congestion-rohner-fullerton-2020.pdf

DISTRICT OF METCHOSIN

File No. 0400-10

December 8, 2022

Dear Mayor and Council,

RE: The District of Metchosin Declaration on the Climate Emergency and Biodiversity Crisis

At its December 5th, 2023, Regular Council meeting, the District of Metchosin Council adopted the following Declaration on the Climate Emergency and Biodiversity Crisis:

WHEREAS, Climate change and the planetary biodiversity crisis are real, human caused, and global emergencies that requires immediate, rapid and large-scale cuts in GHG emissions, and

WHEREAS, British Columbia has experienced flooding disasters with loss of livestock and wide-spread destruction of infrastructure, and

WHEREAS, British Columbians have died in landslides and catastrophic damage has been done to BC's highway infrastructure following climate-related atmospheric river rainfall events, and

WHEREAS, There are ninety four bird species that are highly vulnerable due to climate change in British Columbia alone, and

WHEREAS, Six hundred British Columbians lost their lives in a climate-related heat dome and the Town of Lytton burned to the ground, and

WHEREAS, Rural communities worldwide often face immediate and severe consequences of climate change, and

WHEREAS, Municipal governments can and should make decisions and adopt policies (including budgets and bylaws) that will accelerate and significantly increase the scale of GHG reductions both of the District itself and of the broader community, and

WHEREAS, Municipal governments can and should make decisions and adopt policies that will prepare the community and mitigate climate change and negative climate related events,

BE IT RESOLVED, on this 5th day of December in the year 2022, that the District of Metchosin:

1. Recognizes the global Climate Emergency and Biodiversity Crisis
2. Will promptly adopt a Climate Action Plan to inform future decision-making and adaptive measures
3. Commits to make decisions and adopt policies accordingly

4450 Happy Valley Road, Victoria, B.C. V9C 3Z3
Administration Office (250) 474-3167 Fax 474-6298
Building Inspection Department (250) 474-3196 Fax 474-6298

The District of Metchosin Council encourages neighbouring municipalities to continue to make critical decisions and implement policies and programs towards achieving a carbon neutral capital region and improving our regional resiliency to climate change.

Sincerely,

Marie-Térèse Little, Ph.D
Mayor

cc: CRD Municipalities
Larisa Hutcheson, General Manager
CRD Parks and Environmental Services

DISTRICT OF METCHOSIN
BYLAW NO. 287

A BYLAW

To Regulate the Cutting of Trees

(For convenience, this document is an unofficial consolidation of Bylaws 287, 517, 526 & 534

(Amendments to Bylaw 287 are indicated in bold italic)

WHEREAS Part 22, Division 2 of the Municipal Act authorizes a municipal council to enact provisions
to regulate the cutting and removal of trees in a Municipality;

AND WHEREAS it is Council's intention to regulate the cutting and removal of trees;

NOW THEREFORE the Council of the District of Metchosin, in open meeting assembled, enacts as
follows:

1. Citation

This Bylaw may be cited as the "District of Metchosin Tree Management Bylaw, No. 287".

1.1 Purpose

This Bylaw is enacted for the purposes of regulating the cutting and damaging of trees within the municipality in the general public interest. It is not contemplated nor intended, nor does the purpose of this Bylaw extend:

(a) to the protection of any person from injury or damage to property or economic loss as a result of the cutting or removal of trees;

(b) to the assumption by the Municipality or any employee of any responsibility or duty of care for insuring that the cutting of one or more trees will not result in injury to any person or danger to any property from erosion, flooding, landslip or other damage;

Commented [MH1]: How will we communicate to the public and the different tree companies that this bylaw has changed? (We can discuss this last.)

Commented [AM2]: Worth noting: Only 58 of 162 municipalities in BC have tree protection bylaws in place.

Commented [AM3]: The purpose of the Bylaw is "regulating the cutting and damaging of trees within the municipality in the general public interest." There could be more general goals set out here, perhaps defining "the general public interest" (values associated with trees) and perhaps even setting some targets (e.g., no net reduction in forest cover in Metchosin, acquisition of greenspaces for more secure tree protection.) Or perhaps this goes somewhere outside of the Bylaw.

Commented [WC4R3]: Let's discuss.

(c) to providing any person with a warranty with respect to tree cutting for which a permit is issued under this Bylaw that the tree cutting will not cause or increase the danger of erosion, flooding, landslip or other damage;

(d) to assuming liability of a property owner for any damage arising from nuisance or negligence arising from tree cutting carried out on the owner's property.

2. Repeal

This Bylaw repeals Metchosin Tree Cutting Bylaw No. 131, 1991, and its subsequent amendments.

3. Tree Protection Areas

Within the District of Metchosin, the prohibition and permitting provisions in:

(a) Section 9 apply within the Shoreland Slopes Development Permit Area;
(b) Section 10 apply in respect of significant trees;
(c) Section 11 apply to areas within any Riparian Assessment Areas; and
(d) Section 8 applies to all other lands in the District.

4. Metric Dimensions

Metric dimensions are used in this Bylaw. Imperial equivalents provided in brackets are approximate and for convenience only and do not form part of this Bylaw.

5. Definitions

In this Bylaw:

(1) "Building Envelope" means an area of a lot required for the location and construction of a building and includes an area surrounding the building the distance of which is equivalent to the height of any tree located on the lot which has the potential to strike the building if it were to fall.

(2) "Certified Arborist" means a person holding a current certification of "certified arborist" issued by the International Society of Arboriculture.

(3) "Clerk" means the Clerk of the District of Metchosin or his authorized designate.

Commented [AM5]: I'd suggest that this section be re-written to something like:

This Bylaw applies to all of Metchosin except:

-Shoreland Slopes Development Permit Area (ref. to regulations in OCP)
-Riparian Assessment Areas (ref. to provincial legislation)
-Private Managed Forest Land
-ALR land (I believe)

Then we could remove Sections 9, 10 and 11 in this Bylaw.

For example, "the City of Courtenay's bylaw, essentially only exempt what they are *required* to exempt by provincial legislation".

Commented [WC6R5]: Makes sense to me.

Commented [MH7]: 1.Certified Arborist should be updated to say Certified Arborist with a Tree Risk Assessment Qualification (TRAQ) certification because dangerous tree assessment is the only thing that the document refers to with regard to Arborists.

Commented [WC8R7]: I agree.

Commented [MH9]: •FYI the qualifications and certifications within the ISA are:
•ISA Board Certified Master Arborist
•ISA Certified Aerial Lift Specialist
•ISA Certified Arborist
•ISA Certified Arborist Municipal Specialist
•ISA Certified Arborist Utility Specialist
•ISA Certified Tree Worker Climber Specialist
•ISA Tree Risk Assessment Qualification

(4) "Council" means the Council of the District of Metchosin.

(5) "Cut Down" means to kill or remove a tree by any means and includes the topping of a tree and the removal of any branch or trunk of a tree having a diameter of more than 10 cm (3.9") but does not include the normal pruning of a tree.

(6) "DBH" means "Diameter at breast height" which means and refers to the diameter of a tree, outside the bark, at a point of 1.2 metres (4.0 feet) above the highest point on the tree where the ground meets the stump.

(7) "Dangerous Tree" means a tree:

(a) which is dead, dying, severely damaged, unstable or severely leaning and in danger of falling;

(b) which is interfering with, or is in such close proximity to utility wires as to be a danger, or

(c) having a root system which is interfering with, blocking or damaging an existing drainage or sewer system or other major improvements.

(8) "Diameter" means a measurement which is determined by dividing the circumference of the trunk of the tree measured 1.4 m (4.5') above the ground by 3.142.

(9) "Lot" means the smallest unit as shown on the records of the Land Title Office in which land is held and includes a strata lot created pursuant to the Condominium Act.

(10) "Municipality" means the District of Metchosin.

(11) "Natural Boundary" means the visible high-water mark of any lake, river, stream or other body of water where the presence and action of the water are so common and usual, and so long continued in all ordinary years, as to mark upon the soil of the bed of the body of water a character distinct from that of the banks thereof, in respect to vegetation, as well as in respect to the nature of the soil itself.

(11.1) "Principal Building" means a building which contains the principal use on a lot as set out in the Metchosin land Use Bylaw No. 259, as amended, and any successor bylaws.

Commented [AM10]: Ha, ha! This should be "trunk".

Commented [AM11]: I prefer the definition from BC's Occupational Health and Safety Regulations (section 26.1): a tree that is a hazard to a person or structure due to:

(a) its location or lean,

(b) its physical damage,

(c) overhead conditions, or

(d) deterioration of its limbs, stem or root system.

One thing that the current definition is missing is the hazard component – if it's not going to damage anyone or any structure if it falls, then it's not a danger tree.

Commented [WC12R11]: I agree.

Commented [MH13]: There may be a potential for harm to animals grazing in the area so it isn't just buildings or people at risk. Could also be things like cultivated fields.

Commented [AM14]: I don't think we need this if we define DBH.

Commented [WC15R14]: Agree.

(11.2) "Principal Use" means the main use of land, buildings and structures on a lot as set out in the Metchosin land Use Bylaw No. 259, as amended, and any successor bylaws.

(12) "Professional Forester" means a registered member or holder of a special permit granted under Section 14(1) of the Foresters Act.

Commented [AM16]: I believe this is now "Registered Forest Professional".

(13) "Protected Tree" means

(a) a Garry Oak tree (*Quercus garryana*);
(b) an Arbutus tree (*Arbutus menziesii*);
(c) a Pacific Dogwood Tree (*Cornus nuttallii*);
(d) a Pacific Yew tree (*Taxus brevifolia*);
(e) a Cascara tree (*Rhamnus purshiana*);
(f) a Manzanita (*Arcotostaphylos columbiana*);
(g) Seaside Juniper (*Juniperus maritima*);
(h) Trembling Aspen (*Populus tremuloides*);
(i) Oregon Ash (*Fraxinus latifolia*);
(j) Any native tree over 1m dbh;

Commented [AM17]: Not a tree, really ...

Commented [AM18]: The intent here was to protect trees that weren't logged when Metchosin was first logged, in some areas a century ago. Probably 80 cm would be sufficient to differentiate from the larger 2nd-growth.

(14) "Qualified Environmental Professional" has the same meaning as set out in the Riparian Areas Regulation. (Bylaw 517, May 2006)

(15) "Real Property" means land, with or without improvements so affixed to the land as to make them in fact and law a part of it.

(16) "Riparian Areas Regulation" means the B.C. Riparian Areas Regulation, BC Reg. 837/2004, of the Fish Protection Act, S.B.C. 1997. (Bylaw 517, May 2006)

(17) "Riparian Assessment Area" has the same meaning as set out in the Riparian Areas Regulation.

(18) "Security" means either cash or an irrevocable letter of credit, in a form acceptable to the Municipality, which is provided to the Municipality to guarantee performance of requirements of this Bylaw.

(19) "Significant Tree" means any living, erect, woody plant, listed on Schedule "A" attached hereto, which has been identified because of its importance to the community including importance for heritage or landmark value or as wildlife habitat.

Commented [AM19]: I'm suggesting that we remove this definition, Schedule A, and Section 10 of this Bylaw. I'm suggesting this for a couple of reasons. The list of Significant Trees is a real mish-mash of native and introduced species (including English Holly!) that was not well thought-out in the first place. Perhaps there is some heritage value to some of them. They haven't been checked out for decades, and we're not sure how many have died naturally or been cut down. It's a good time to get rid of it.

Commented [WC20R19]: I agree. Let's try for a consensus.

(20) "Tree" means any living, erect, woody plant which is 10 cm (3.9") or more in diameter.

(21) "Watercourse" means a natural drainage course or source of water, whether usually containing water or not, including a lake, pond, river, stream, creek, spring, ravine, swamp and gulch; and also includes a man-made depression with well-defined banks and a bed 0.6 m (2') or more
below the surrounding land serving to give direction to a current of water at least 6 months of the year or having a drainage area of .32 km^2 (0.12 $miles^2$) or more, any of which may be enclosed or in a conduit, but excludes roadside ditches, drainage ditches and irrigation works.

6. Measurement

In this Bylaw:

(1) The diameter of a tree having multiple trunks at 1.4 m (4.5') above the ground shall be the sum of:
(a) 100% of the diameter of the largest trunk, and
(b) 60% of the diameter of each additional trunk.

(2) The location of a tree shall be measured at the point at which the trunk of the tree meets the ground.

(3) Where the trunk of a tree is growing on a building envelope line or other setback line prescribed by this Bylaw, the tree shall be deemed to be located on the same side of the line as the majority of the trunk is located.

7. Prohibition

No Permit shall be issued to cut down any tree required for provision of a building envelope on which to construct an accessory building having a gross floor area of less than 25 m^2 (269 ft^2). Such buildings will be required to be located within existing clearings or those which may be created under other provisions of this Bylaw.

8. General Tree Cutting

(1) No person shall cut down any tree except in accordance with a Permit.

(2) Despite subsection (1), a Permit is not required to cut down any tree where none of the trees to be cut down are within the Riparian Assessement Area, and where the following circumstances apply:

(a) the tree is a dangerous tree; or

(b) on a particular 4,000 m² (.98 ac) area of a lot, in any 12-month period, where the number and size of trees to be cut down do not exceed:

(i) 50 trees having a diameter of 18 cm (7") or less, and

(ii) 10 trees having a diameter of more than 18 cm (7"); and for the purposes of this section:

(iii) a lot of less than 4,000 m² (.98 ac) shall be considered to be 4,000 m² in area,

(3) The Clerk shall issue a Permit to cut down any tree where:

(a) the tree is not within a Riparian Assessment Area, and the tree is located within a buildingM envelope, or within an area to be used for the construction or installation of a driveway, required off-street parking area, sewage disposal system, or underground or above-ground utility corridor, where application for the Building Permit, Sewage Disposal Permit, or Road Access Permit has been submitted to the appropriate authority, the permit fee paid, and the cutting is directly related to the particular permit application; or

(b) the cutting is not within a Riparian Assessment Area and is reasonably required:

(i) for the determination of the location of or for the construction of highways, services, and utilities, and, in determining to what extent the cutting down of trees is reasonably required, the Clerk may refer to any approved or proposed subdivision plan for the lot, or

(ii) except for lands located within the Bilston Watershed Development Permit Area as indicated on Schedule "B" attached hereto, to permit a use of land authorized by the Metchosin Land Use Bylaw.

Commented [MH21]: typo

Commented [WC22R21]: ?

Commented [MH23]: 1.If no permit is required to remove a dangerous tree and the arborist says it is dangerous, what documentation is required, if any?

Commented [AM24]: I'd suggest deleting this. If people want to cut down trees, they should get a Permit, period. This allows too many exemptions and makes monitoring more difficult.

Commented [WC25R24]: I agree.

Commented [WC26]: Maybe this should be "qualified building envelope"

Commented [AM27]: I think this should be "approved by".

Commented [WC28R27]: I read it that way as well.

Commented [WC29]: Who decides this?

9. Shoreland Slopes Development Permit Area

(1) No person shall cut down a tree located within the Shoreland Slopes Development Permit Area as indicated on Schedule "C" attached hereto except in accordance with a Permit.

Commented [MH30]: I don't know where this is.

(2) The Clerk shall issue a Permit to cut down any tree in the Shoreland Slopes Development Permit Area:

(a) where the tree is a dangerous tree;

(b) where the tree has the potential to cause a failure of the shoreland slope or cause slippage of the shoreland slope if the tree were to fall;

(c) where the tree is located within a building envelope, or within an area to be used for the construction or installation of a driveway, required off-street parking area, septic tank or field or underground or above-ground utility corridor, where application for the Building Permit, Sewage Disposal Permit, Road Access Permit, or other applicable permit has been submitted to the appropriate authority, the permit fee paid, and the cutting is directly related to the particular permit application; or

(d) on a lot located within the Agricultural Land Reserve provided that the purpose of the tree removal is to enable the lot on which the trees are growing to be used for an agricultural use and the owner files with the Municipality a statutory declaration verifying the purpose.

Commented [MH31]: I'm confused about ALR lands. It is referred to under Shoreline but not outside of Shoreline. The bylaw doesn't apply if the tree is removed to allow agricultural activity but does if it is for some other purpose?

Commented [AM32]: Can this Section be removed and simply reference the Shoreland Slopes DPA section of the OCP? 1, 2a, 2c and 2d simply repeat information listed elsewhere in the Bylaw – i.e., simply do what you do everywhere else.

Section 12 might already cover this off.

Commented [WC33R32]: If we reference this to the OCP perhaps we should include a link (or a URL) to the appropriates sections of the OCP.

10. Significant Trees

(1) No person shall cut down a significant tree except in accordance with a Permit.

(2) The Clerk shall issue a Permit to cut down a significant tree where:

(a) the tree is a dangerous tree; or

(b) the tree is located within a building envelope of a principal building, or within an area to be used for the construction or installation of a driveway, required off-street parking area, septic tank or field or underground or above-ground utility corridor, where application for the Building Permit, Sewage Disposal Permit, Road Access Permit, or other applicable permit has been

submitted to the appropriate authority, the permit fee paid, the cutting is directly related to the particular permit application, and where the Clerk is satisfied that the tree cannot be preserved as no reasonable alternate site exists.

(3) The Clerk may place a plaque or marker on or near each significant tree upon receiving permission to do so from the owner of the lot on which the tree grows.

Commented [AM34]: See Notes above. I'd suggest deleting this section (and this program).

Commented [WC35R34]: Agree

10.1 Protected Trees

(1) No person shall cut down a protected tree except in accordance with a Permit.

(2) The Clerk shall issue a Permit to cut down a protected tree where:

(a) the tree is a dangerous tree; or

(b) the tree is located within a building envelope of a principal building, or within an area to be used for the construction or installation of a driveway, required off-street parking area, septic tank or field or underground or above-ground utility corridor, where application for the Building Permit, Sewage Disposal Permit, Road Access Permit, or other applicable permit has been submitted to the appropriate authority, the permit fee paid, the cutting is directly related to the particular permit application, and where the Clerk is satisfied that the tree cannot be preserved as no reasonable alternate site exists.

(3) Despite section 10.1(1), a permit is not required to cut down no more than ten arbutus trees less than .5m diameter at breast height (dbh) on a particular 4,000 m^2 area of a lot in any 12 month period.

Commented [AM36]: Delete.

Commented [WC37R36]: Agree

11. Watercourses

(1) In this section, "tree" means any living, erect, woody plant.

Commented [AM38]: Not a good definition. (Plus a different definition than under Section 5, "Definitions"!) This would apply to, e.g., all shrubs like salmonberries and willows.

Commented [WC39R38]: Agree - refer to section 5

(2) No person shall cut down a tree growing within a Riparian Assessment Area except in accordance with a Permit.

(3) The Clerk shall issue a Permit to cut down a tree where written confirmation has been provided by a Qualified Environmental Professional, at the applicant's expense, that the tree cutting will be

undertaken in compliance with Section 4(2) or Section 4(3) of the Riparian Areas Regulation and:

(a) the tree is a dangerous tree;

(b) the tree or the roots of the tree are blocking a watercourse or reducing its drainage capacity;

(c) it is necessary to cut down the tree to carry out works in or about the watercourse provided that the said works have been authorized by a permit or approval issued by the Ministry of Environment, Lands and Parks; or

Commented [AM40]: Update.

(d) any introduced invasive tree.

12. Development Permits

Within the Bilston Watershed Development Permit Area or the Shoreland Slopes Development Permit Area, where any person proposes to cut down trees and the cutting does not comply with this Bylaw, a Development Permit shall be required under the terms and conditions specified in the Metchosin Official Community Plan.

13. Emergency Removal

(1) Despite any other provision in this Bylaw, a person may cut down a tree the cutting down of which is prohibited by this Bylaw if:

(a) the tree is a dangerous tree; and

(b) the tree is in imminent danger of falling and injuring persons or property.

(2) If a tree which has been cut down pursuant to subsection (1) is a significant tree, or located within the Shoreland Slopes Development Permit Area, or, if a tree has been cut down within a Riparian Assessment Area, the person who cut it down must report that information to the Municipality within 3 days and the stumps and roots of the tree are not to be removed without the specific written permission of the Municipality.

Commented [AM41]: See previous Notes on this.

14. Permits

(1) Every application for a Permit shall be made to the Clerk and shall be accompanied by the following non-refundable application fee:

(a) $40.00 for the first 50 trees or portion thereof; and

(b) $2.00 for each additional tree.

(2) No application fee shall be charged for the removal of a dangerous tree.

(3) The form of the application for a Permit and the form of the Permit shall be as established by the Clerk.

(4) An applicant for a Permit shall:

(a) provide a plan of the lot identifying:

(i) the location, species and diameter of the trees which are proposed to be cut down; and

(ii) the location of any proposed activities, including areas required for buildings, building envelopes, driveways, off-street parking, sewage disposal systems, utility corridors and uses permitted by the Metchosin Land Use Bylaw, which relate to the trees proposed to be cut down;

(b) identify with flagging on the lot each tree that is proposed to be cut down, or, if clearcutting an area, mark on the ground with paint, stakes or flagging, the area that is to be cut; and,

(c) if applicable, mark on the ground with paint, stakes, or flagging the location of any proposed activities, including areas required for buildings, building envelopes, driveways, parking, sewage disposal systems, and utility corridors, which relate to the trees proposed to be cut down.

(5) The purpose for which any tree is to be cut down shall be stated on the application for the Permit.

(6) A Permit is valid for the period specified on the Permit which shall not exceed 1 year.

15. Permit Conditions

The Clerk may, as a condition of issuance of a Permit, require that:

(a) replacement trees be planted as specified in Section 19;

(b) stumps remain in place in order to assist in the prevention of erosion.

16. Engineering Reports

(1) The Clerk may require an applicant for a Permit:

(a) to submit, at the applicant's expense, a report prepared by a qualified geotechnical or hydrological engineer certifying that the proposed tree removal will not create a danger from erosion, flooding, or landslip; or

(b) for a lot within the Shoreland Slope Development Permit Area, to submit, at the applicant's expense, a report prepared by qualified geotechnical engineer certifying that if the tree were to fall, it has the potential to cause a failure of the shoreland slope or cause slippage of the shoreland slope.

(c) to submit, at the applicant's expense, written confirmation that cutting of a tree or trees within a Riparian Assessment Area will be undertaken in compliance with Section 4(2) or Section 4(3) of the Riparian Areas Regulation.

(2) If the report of the engineer recommends the construction of works necessary to prevent erosion, flooding or landslip, no Permit shall be issued unless the applicant provides to the Municipality security in the amount of 120% of the cost of the works as estimated by the engineer.

(3) The applicant shall be responsible for and, at his own expense, execute all work required by the engineer in his report in order to prevent erosion, flooding, or landslip or to ensure the stability of the slope.

(4) Upon completion of the required works and certification of the engineer that the works satisfy his requirements to prevent erosion, flooding, or landslip, or to maintain the stability of the slope, the security will be released.

(5) The works shall be completed within the period specified on the Permit. Should the works not be completed within the stated period or not be completed according to the engineer's recommendations, the Municipality may use the security to complete the works at the applicant's expense.

(6) Where the Municipality is required to complete the works and the amount of security provided is insufficient, the applicant shall pay the balance forthwith to the Municipality upon receipt of the invoice.

17. Removal of Hazardous Trees

(1) Every owner or occupier of real property shall cause all trees, hedges, bushes or shrubs on the property to be trimmed, removed or cut down if the Council considers that it is:

(a) a hazard to the safety of persons;

(b) likely to damage public property, or

(c) seriously inconveniencing the public.

(2) The Council may serve upon the owner or occupier of the real property notice that the Municipality will be entitled to take the required action at the expense of the person given the notice if the person does not take the required action within 5 days service of the notice upon him.

(3) If the person given the notice does not take the required action within 5 days of service, the Municipality, by its employees or other, may enter the real property, and take the action specified in the notice at the expense of the person given the notice.

(4) If the person referred to in the preceding sub-section does not pay the costs of the action taken on or before December 31 in the year in which the costs were incurred, the costs shall be added to and form part of the taxes payable on the real property as taxes in arrears.

18. Report of Certified Arborist or Professional Forester

The Clerk may require, at the applicant or property owner's expense, confirmation in writing by a certified arborist or a professional forester stating that:

Commented [MH42]: 1.In my experience over 17+ years, no arborist has ever mentioned the work "permit" not even in the context of "because I certify this tree as dangerous, you don't need a permit". I am not convinced that arborists are warning people about the need for a permit or turning down business if someone doesn't have one.

Commented [WC43R42]: I expect you are right

(a) a tree for which an application for a Permit has been made is a dangerous tree; or

(b) that a tree which has been the subject of emergency removal under Section 13 of this Bylaw met the criteria for removal.

19. Replacement Trees

Where required as a condition of issuance of a Permit or where any person cuts down a tree in contravention of this Bylaw or of a Permit issued pursuant to this Bylaw, he shall:

(1) within a time period prescribed by the Clerk, plant a replacement tree as prescribed below:

(a) in the case of the cutting down or damaging of a significant tree, plant a replacement tree of the same species as the tree that has been cut down or damaged and of the largest size that may be obtained from a commercial nursery on Vancouver Island; or

(b) in the case of the cutting down of a tree in the Shoreland Slopes Development Permit Area that is not a significant tree, plant a replacement tree of a species and size that is appropriate to stabilize and retain soil on the slope in accordance with sound soil engineering practice; or

(c) in the case of the cutting down of a tree in any other area that is not a significant tree, plant a replacement tree of a coniferous species if the tree that was cut down was a coniferous tree and of a deciduous species if the tree that was cut down was a deciduous tree, and in either case of the largest size that may be obtained from a commercial nursery on Vancouver Island;

Commented [MH44]: Hydro seems to be able to damage trees as they see fit when cutting them back from power lines. There is pruning back versus hacking back. I have had to remove 2 trees because they were made so unsightly and now there are 2 others in similar condition.

Commented [AM45]: See previous Notes about Significant Trees.

Commented [AM46]: Should specify native species, and should probably specify replanting the same species as was cut.

Commented [WC47R46]: Agree

(2) water, fertilize and maintain the replacement tree in accordance with sound horticultural practice; and

(3) provide to the Municipality security in the amount of 120% of the total cost of replacing and maintaining the tree for a period of 3 years.

20. Reconsideration of a Decision of the Clerk

(1) The applicant for a Permit that is subject to a decision of the Clerk may request that Council reconsider, pursuant to Section 715 of the Municipal Act, the decision or any conditions attached to the decision.

(2) A request for reconsideration under this section shall:

(a) be made in writing;

(b) include a return address; and

(c) be submitted to the Clerk within 30 days of the date of his decision.

(3) Following receipt of an application for reconsideration under this section, the Clerk shall notify the applicant of the time, date and place that the application will be placed before the Council.

(4) Notification from the Clerk in accordance with subsection (3) shall:

(a) state that the reconsideration by the Council at the time, date and place specified will include a reasonable opportunity to be heard or make written submission on the matter either in person, or through an agent, or both; and

(b) be mailed or otherwise delivered to the applicant at least 10 days before the date set for reconsideration by the Council.

21. Municipal Works

Nothing contained in this Bylaw shall apply to a tree growing on a highway, park, right of way or easement belonging to the Municipality nor to any public utility works where the works are carried out by or under the authority of the Municipality.

Commented [AM48]: ?remove

Commented [WC49R48]: Sure, it's their jurisdiction.

22. Entry on Property

The Clerk, Bylaw Enforcement Officer, or authorized designates may enter at all reasonable times on any property which is subject to the regulations in this Bylaw to make an assessment or inspection for any purpose pursuant to this Bylaw and to ascertain whether the regulations of this Bylaw are being observed.

23. Offence

(1) Any person who contravenes the Bylaw or who causes, suffers or permits actions contrary to this Bylaw is guilty of an offence against this Bylaw and is liable to penalties imposed under this Bylaw.

24. Penalty

(1) Any person who cuts a tree without a permit is subject to a minimum fine of $500.00 for each tree unlawfully cut down.

(2) Any person who commits an offence against this bylaw is liable to a fine and penalty of not more than $10,000.00 for each tree unlawfully cut or damaged as pursued through the Courts, with a maximum of $100,000.00 per offence.

(3) In addition to any penalty that may otherwise be imposed under the Bylaw, the Clerk may require specific equivalent replacement trees to be planted for the purpose of restoring a damaged site.

Commented [AM50]: Revisit amounts.

Commented [WC51R50]: If the municipality is not prepared to enforce bylaws then the fines have to be at a level that they will enforce.

Tina Hansen

From:
Sent: December 11, 2022 5:30 PM
To: Mayor and. Council
Subject: anchorages

Dear Mayor and Council,
Re: freighters anchoring off our coast (Esquimalt Lagoon)

I raised the issue of freighters languishing off our coast with the last council. The issue was referred to MEASC. From MEASC's response I got the impression that I had not sufficiently explained my concern.
I would like it if you would watch a short video on this topic https://www.youtube.com/watch?v=wK2vX34E7Wc
Would you please also read this article from South Coast Ship Watch Alliance:
https://nofreighteranchorages.ca/nightmare-in-plumper-sound/

The free parking for freighters in anchorages, not ports, is a significant threat to the marine environment and is reported as a detriment to the quality of life for residents of coastal communities. I would like Metchosin Council, perhaps together with Colwood Council, to take this issue forward with Transport Canada, the Port of Vancouver, MP Randall Garrison, and The Association of Vancouver Island and Coastal Communities (AVICC).

The root of the problem, as I understand it, is largely inefficiency in the shipment of grain. It has been suggested that Canada could more efficiently ship grain and other goods if we would stop shipping U.S. coal.
Here are just a few of the concerns:
- history of marine incidents involving freighters on our coast
- very slow response time for attending to freighter incidents (fire, running aground, cargo overboard)
- underwater noise disturbance for killer whales and other marine life
- dropping and dragging anchor destroys ocean floor
- pollution other than oil? Who is monitoring?
- light, noise?

Whatever happens in nearby water is a threat to Metchosin's 50 Kilometers of coast. Wind, waves, and current don't recognize municipal boundaries. I don't think we can bury our heads in the sand on this issue. That very sand is at risk of massive contamination. I care deeply about protecting Witty's Lagoon, Weir Beach, Race Rocks Ecological Reserve, and all our coastline. Let's be proactive on this issue and join with other coastal communities in correcting the problem before it gets worse. It must be possible to have greater efficiency with ships in and out of Port of Vancouver in a timely manner and not waiting around at temporary anchorages. Why are the ships not expected to adjust their speed and stay out at sea until it's their turn?

Thank you for considering this issue. I hope you will ask MEASC to have another look at the situation. When it comes to environmental issues, I urge council to be bold and assertive.
Sincerely,
Bev Bacon
Metchosin resident

Env. Comm.

Tina Hansen

From: arleduc@shaw.ca
Sent: December 16, 2022 9:25 AM
To: Mayor and. Council
Subject: ships anchorages

Dear Mayor and Council,
Re: ships anchorages off Metchosin coastline

I am writing in support of Bev Bacon's December 11, 2022 letter requesting that Council refer the matter of ships anchorages off Metchosin coastline to MEASC. Please add this correspondence to the agenda of the committee meeting for the Environment and Natural Areas on December 19, 2022.

I believe there are 5 anchorage spots near Esquimalt Lagoon (Royal Roads anchorages) and 5 at Constance Bank.

There is an ever-present threat of spilled fuel oil when a ship drags anchor, runs aground or experiences another accident. According to the Marine Incidents and Accidents dashboard maintained by the Clear Seas Centre for Responsible Marine Shipping, there have been numerous "close quarters situations" and equipment malfunctions that could have resulted in environmental disaster in the vicinity of Metchosin. For example: "On 29 December 2018, the auto carrier "NEW CENTURY 2" reported a close quarters situation with the tanker "GREEN ATTITUDE" in Juan De Fuca Straits, BC. The auto carrier came to a full stop to avoid a collision." The location of that incident is shown on the map as between Albert Head and Victoria Harbour.

Other problems that have been identified with ships anchorages include the following:

- Destruction of huge swathes of seabed. According to this article in the Scientific Reports journal, the physical footprint of anchoring is similar to that of bottom trawling, which can modify seafloor topography and destroy benthic habitats. Seafloor damage due to anchoring includes scouring of the seabed by anchor chains as large ships swing at anchor. According to this summary by the Clear Seas Centre, "Ship anchors can weigh up to 30 tonnes and are designed to hold vessels in place. The anchor chain can be hundreds of metres long, and the excess chain lies on the seafloor to stabilize the vessel in waves, wind, and currents. When the vessel swings around due to changes in wind or tides, the anchor chain can drag across the seabed and cause damage to the seafloor as well as to flora and fauna." In addition, the high volume of displaced sediment severely impacts our already stressed marine ecosystems and has detrimental implications for carbon cycling.
- Ships at anchor are required to run auxiliary engines to provide electrical power for the ship. Underwater noise from generators/auxiliary power while at anchor can be 40% as loud as a ship in transit and underwater noise is known to be harmful to marine mammals and other inhabitants of the Salish Sea.
- Emissions while running generators/auxiliary power at anchor. In addition to harmful greenhouse gas emissions such as CO2, CH4 and N2O, ships emissions such as black carbon, NOx and SO2 have immediate human health effects. According to recent shipping industry studies, ports that implement "Just-In-Time" ship arrival systems to reduce the amount of time ships spend waiting at anchor can significantly reduce ship emissions. This not only reduces the carbon footprint of shipping, it reduces emissions of sulfur dioxide (SO2), nitrogen oxide (NOx), and particulate matter (PM) from ship exhaust known to cause respiratory issues and contain carcinogenic chemicals. (UBC is conducting a study to assess how decarbonization of marine shipping can provide air quality co-benefits to coastal communities.)
- Potential discharge of sewage and bilge water (only the oil content of bilge water is regulated, so discharge may contain other pollutants)

All of our coastline is important and highly vulnerable. If we need to give specific examples, Witty's Lagoon is extremely valuable habitat, with the convergence of freshwater creek, large salt marsh, seashore & forest. Forage fish spawn at Taylor Road beach and likely at other Metchosin beaches. I understand Constance Bank is an important herring stopover point and herring are one of the forage fish on which much other life in the Salish Sea depends. Royal Roads and Constance Bank anchorages are uncomfortably close to Race Rocks, Trial Island and Oak Bay Islands Ecological Reserves. Esquimalt Lagoon is one of seven Migratory Bird Sanctuaries in BC, and an important stopover for birds journeying between North and South America.

Environmental impacts due to intensifying anchorage use require further consideration. I hope that Metchosin Council will express these concerns to Transport Canada and the Port of Vancouver (which assigns ships to berths in the Royal Roads and Constance Bank anchorages), and MP Randall Garrison. I ask that the District of Metchosin (perhaps in conjunction with Colwood, Sooke and View Royal) present a resolution regarding ships anchorages for consideration by the Association of Vancouver Island and Coastal Communities at the April 2023 AVICC convention. The deadline to submit resolutions to AVICC is February 9, 2023.

At minimum, I would like to see the District of Metchosin join nearby coastal communities to advocate with Transport Canada for "port call optimisation".

Best regards,
Alison LeDuc
Metchosin resident