## From:

Gina Lemieux <
Sent:
Monday, August 17, 2020 2:04 PM
To:
Cc:
Subject:
Lani O'Dwyer
Dale Puskas
Re: Development Permit for Anson Road

Hi Lani...one other element to add to my bulleted list, is maintaining the shoreline trees as much as possible to conserve the important riparian overhang function for nearshore fish/fish habitat.

From: Gina Lemieux $¢$
Sent: August 17, 2020 2:00 PM
To: Lani O'Dwyer [lodwyer@crd.bc.ca](mailto:lodwyer@crd.bc.ca)
Cc: Dale Puskas [dpuskas@crd.bc.ca](mailto:dpuskas@crd.bc.ca)
Subject: Re: Development Permit for Anson Road
Hello Lani,

I have revlewed the Shoreline Stabillty Assessment report (Coastal and Ocean Resources, 24 February, 2020 (noting footers indicate 30 May, 2020)) and talked with John Harper today about the preferred, protective beach berm (beach nourishment) as a soft shore solution for the shoreline erosion concerns at Anson Road.

I agree with this being the preferred option out of all the options identified in the report based on:

- The application of a soft shore solution is generally always preferred from an environmental perspective as it is more natural and my understanding is these solutions don't "transfer" the erosion issue further along shore like hard shore solutions can;
- The recommended fill material size ( 19 mm or $0.75^{\prime \prime}$ ) is within the range of the native substrate size within the tidal elevation range where fill material is recommended (up to 10 m out from natural boundary);
- As result of the previous bullet, the fill material toward and at the mid-intertidal area is anticipated to be colonized by similar biota as is currently present (i.e., Fucus sp. (rock weed), Mastocarpus sp. (a red foliose algae), Littorina spp. (periwinkle snail), Balanus glandula (acorn barnacle), Tectura spp. (limpet), Hemigrapsus sp. (shore crab));
- The toe of the fill material is recommended to 10 m out from the natural boundary, which is approximately +2.0 m (above chart datum). This provides a sufficient buffer to ensure there is no direct overlap with the subtidal eelgrass that was observed in 2019 during the dive surveys as shallow as $\sim-0.75 \mathrm{~m}$ (below chart datum);
- The combination of the fill material being coarse and well sorted (i.e., not mixed with fines) will help keep the fill material in place and prevent migration downslope and sedimentation effects on eelgrass;
- The fill material may provide habitat for forage fish such as sand lance and/or surf smelt (our EIA report notes that the estuary/tidal flat present north west of the Project site where Horton Brook drains provides spawning habitat for these forage fish species (Islands Trust 2019; data collected by the Mayne Island Conservancy) and that Pacific sand lance eggs were observed during a January 2010 survey in Horton Bay indicating historical presence/habitat use in the Project vicinity.

I presume the Shoreline Stability Assessment report will be provided to DFO for their review and comment, as part of the overall Project review.

The construction mitigation measures/BMPs that we outlined in our EIA report would be applicable to these shoreline erosion works. For example, confirming boundaries of eelgrass and marking at surface to avoid impacts by barges (spudding, anchoring, grounding) and tending vessels, selecting ideal tide state for fill material delivery etc.

I trust the above meets your requirements for Islands Trust; however, if you require additional information please let me know.

If you could confirm receipt as well, that would be appreciated as I know you were requiring my response as soon as possible so would like to ensure you have received it.

## Regards

Gina

Gina Lemieux, R.P. Bio
Senior Marine Biologist/Project Manager
Direct: $\square$
Email:
www.archipelago.ca


From: Lani O'Dwyer [lodwyer@crd.bc.ca](mailto:lodwyer@crd.bc.ca)
Sent: August 12, 2020 2:04 PM
To: Gina Lemieux < >
Cc: Dale Puskas [dpuskas@crd.bc.ca](mailto:dpuskas@crd.bc.ca)
Subject: Development Permit for Anson Road
Hi Gina,
As per my phone message I hope that you could give a response to the following question from Islands Trust, as a qualified marine biologist:

- In reference to the 'Shoreline Stability Assessment'(Coastal and Ocean Resources, February, 2020): the report recommends a 'Green Shores Alternative (summarized on pp. 15-17) that has design considerations. The drawings received (above) incorporate that alternative for a protective berm using beach nourishment. Can you confirm whether or not that proposal has been assessed for impacts and conformity with the recommendations in the AIA/EIA report by the reporting biologist or another qualified biologist? With respect
to archeological concerns, as per the attached AIA, there are no concerns within the intertidal area. With respect to the EIA, we will have Archipelago provide comment shortly, we do not anticipate any issues.
The question asked by Islands Trust is in black and our comments back to them are in red.

We have monies still available in your contract, if you could please respond as soon as possible that would be great. I have attached the Shoreline Stability Assessment and I have attached a copy of your EIA for your reference and a drawing showing the berm that we are proposing. If you have any questions please feel free to call me any time.

Thanks

Lani O'Dwyer
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