



December 16, 2022

Impact Assessment Agency of Canada

Re: Draft analysis of proposed changes to Woodfibre LNG project decision statement conditions:

I am writing on behalf of the [Howe Sound Biosphere Region Initiative Society](#) responsible for the Átl'ka7tsem / Howe Sound UNESCO Biosphere Region designation. The project area known as Woodfibre is located within the centre of the Biosphere Region (see map).

Endorsed by the Department of Fisheries and Oceans, Skwxwúmesh Úxwumixw and other authorities responsible in Átl'ka7tsem / Howe Sound, the region was designated in 2021 as Canada's 19th UNESCO Biosphere Reserve. The designation was a recognition of the region's biodiversity, fragile environmental recovery, and a model region for best practices and sustainable development.

We are currently developing a holistic land and marine use plan, a framework for the entire region; for over 20 years local governments have recognized the need for a plan. There is acknowledgement across the region that what happens in one area has lasting impacts on others and that impacts at a local level that extend to the regional level are important for the overall health and sustainability of our region.¹

We are writing these comments during COP 15, as governments from around the world [come together](#) to agree on a new set of goals to guide global action through 2030 to halt and reverse nature loss. As is now globally recognized, climate change and biodiversity loss are the two most significant threats to the health of our planet and the people who live here. This is acutely felt in the Átl'ka7tsem / Howe Sound region as in recent decades we have witnessed biodiversity loss from industrialization and the subsequent slow but steady comeback of marine life as remediation of those industrial sites has allowed nature to return.

Vancouver is preparing to welcome thousands of international marine science participants attending the Marine Protected Areas (IMPAC5) conference on February 5-7, 2023. Átl'ka7tsem/Howe Sound is featured during IMPAC 5. To [quote Environment and Climate Change Canada](#): *"this region (Átl'ka7tsem/Howe Sound) is a cultural and ecological treasure in the marine backyard of IMPAC5." "IMPAC5 is where we will come together and take a stand to protect the ocean".*

The cumulative impacts of the combined projects needed to support the liquefaction and export of natural gas from Woodfibre location; remediation, the Fortis compressor station, Eagle Mountain Pipeline, and the BC Hydro infrastructure must be considered together. We continually see these projects being assessed in isolation, yet the Woodfibre LNG project cannot proceed without the other infrastructure. Impacts on all marine life from the combined long term construction activity for this project need to be considered. This includes shipping and potential anchoring of the cargo ships delivering the components.

We cannot determine from your analysis the noise impacts on all marine life, including but not limited to pinnipeds, have been properly evaluated. Disturbance to food sources that seals and threatened species feed on could have longer term impacts. Impacts of noise on all the marine life that supports each other within a biosphere. ²



Woodfibre LNG states on its website its commitments to the UN Sustainable Development Goals: “*advance the LNG industry via innovative programmes and adopting best practices*” and “*aim to minimize impacts to local ecosystems*”. UNESCO Biosphere Reserves are model regions for sustainable development. Best practices are maintaining the highest environmental standards. Therefore, the higher standard protection against underwater noise in condition 3.8 must be maintained in addition to the mitigation measures.

Howe Sound is recovering from decades of industrialization. Seal and Stellar Sea Lion populations in the sound are indicators of a healthy area and generate interest of visitors to the region (visitors that form the basis of the tourism economy, one of the strongest economies in the region) ³. Any disturbance to these populations in the region is contrary to the objectives of the biosphere. Recently this month, confirmed sightings of the endangered Southern Resident Killer Whales, J Pod have been recorded in Howe Sound. Sea Otters have returned to the upper reaches of Howe Sound this year. Information on which decisions are made must be continually updated as new information becomes available.

Woodfibre LNG states on its website “*We aim to minimize impacts to local ecosystems* ⁴.” If this is to be the case, then as the main proponent of the LNG export project they must be accountable for ensuring no pollutants enter the ocean resulting from any of the work required to support their commercial activity, including any toxic runoff from landfills following site remediation. We do not support amendment to condition 6.4. Again, the Woodfibre LNG project acquired a site that needed remediation, and cannot operate without the infrastructure of the Fortis pipeline, compressor station and Hydro. This is a remote location with marine access only.

Assessments continue to be reviewed in isolation. Howe Sound is a deep fjord and sea life is impacted by more than just this project. The EAO concluded that no significant adverse effects or cumulative effects to marine mammals (including seal and sea lions) resulting from underwater noise during construction would be likely after mitigation measures ⁵. Cumulative and residual effects to marine mammals need to be considered in view of all activities in the marine area during construction and operation. Pile driving is one of many activities that adds further disturbance to the mammals in addition to other activities in the marine environment in this northern area of the Sound.

For clarification, there is a statement ⁶ in the draft analysis of proposed changes that Woodfibre has begun construction. We are not aware that construction permits have been issued. Current activity at the site, from our understanding, continues to be remediation activities.

Woodfibre LNG has a pending decision (amendment #441), regarding worker accommodation and a worker transportation safety management plan. Underwater noise from passenger ferries and other

cargo ships delivering materials need to be considered. It is the total decibels that cannot be exceeded, not just those emanating from pile driving.

This is not the time to be relaxing conditions on underwater noise as Canada has yet to deliver on promises from the Oceans Protection Plan. Quoting from the Department of Fisheries and Oceans website ⁷:

“Human-produced ocean noise and its impacts: Sound is a critical element of life in the ocean. Many marine animals use sound to navigate, communicate, and find food, sometimes following or responding to sounds over great distances. They also use sound to monitor their environment, find mating partners, and avoid predators.

Increased human activity in Canada’s oceans has led to more underwater noise. Impacts from this noise may affect individual animals or entire populations differently, but underwater noise has been linked to a wide range of impacts on marine species, including:

- *Disrupting their normal behaviour,*
- *change or loss of their habitat,*
- *masking sounds, which affects marine animals’ ability to communicate,*
- *changes in their physiology, behaviour and/or stress levels, and*
- *permanent injury or even death.*

Ocean leaders and partners across Canada have recognized the need for better planning, science, tools and management measures to address ocean noise. That’s why the Government of Canada is taking action to better understand and manage ocean noise and its impacts on our marine environment.”

A draft strategy with initial recommendations was due in 2022 with the final strategy is expected to be launched in 2023. The Woodfibre LNG Project may begin actual construction and pile driving in 2023, however these timelines are not certain. Decisions on future impacts should be applying the best science available.

Now is the time to apply the highest standards. The draft analysis ⁸ states:

*The National Oceanic and Atmospheric Administration (NOAA) **pre-2016 injury thresholds** for pinnipeds (190 decibels) and disturbance thresholds (160 decibels) **were applied for modelling because there are currently no Canadian regulatory requirements or guidance regarding underwater sound thresholds for injury or behavioral disturbance to marine mammals.***

According to professional consultants in this field, there are 2018 revisions to the NOAA injury thresholds that are based on SEL and peak pressure (piling will be the pulsed noise thresholds). We would expect the more current information to be applied ⁹.

Threatened Northern resident killer whales are present in Howe Sound and in proximity to the Woodfire project area. Regularly visiting transient whales’ prey on pinnipeds. The project area has known populations of herring spawn, a food seals rely on.

In conclusion, to balance the economic benefits with the environmental impacts the proponent would need to employ the highest environmental standards and apply the precautionary principle to its total project impacts on the marine ecosystem. Therefore, we do not agree with amendments that reduce

the responsibility of the proponent for the entire impacts of its project, nor compromise the highest standards of protection from underwater noise and ensuring water quality.

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Sea lions feeding on herring at Woodfibre, 2021

1. Referencing Page 5, paragraph 3 “The residual effects were characterized as low to moderate in magnitude, local to regional in extent.
2. Referencing Page 5 paragraph 3 “The proponent states that due to the curious and gregarious nature of pinnipeds (for example, harbour seals and Steller sea lions) and their ubiquitous presence in Howe Sound”.
3. [View of Woodfibre LNG along the Whale Trail as seen from the Sea to Sky Gondola](#)
4. <https://woodfibrelng.ca/about-woodfibre/sustainability/>
5. Page 5 second paragraph.
6. Page 1 – Introduction “The Project has begun construction”.
7. <https://www.dfo-mpo.gc.ca/oceans/noise-bruit/index-eng.html>
8. Bottom of page 5.
9. NMFS (National Marine Fisheries Service). 2018. 2018 Revisions to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0): Underwater Thresholds for Onset of Permanent and Temporary Threshold Shifts. U.S. Dept. of Commer., NOAA. NOAA Technical Memorandum NMFS-OPR-59, 167 p.

