Sunshine Coast Conservation Association

January 30, 2023

Julie Mailloux
Manager, Decision Statements
Impact Assessment Agency of Canada / Government of Canada
julie.mailloux@iaac-aeic.gc.ca / Tel: (613) 293-6881

Re: Comments on Woodfibre LNG Project Request to Amend the 2018 revised Decision Statement Issued Under Section 54 of CEAA 2012

Dear Julie:

The Sunshine Coast Conservation Association (SCCA) is opposed to the request by Woodfibre LNG (Applicant) to amend Condition 3.8 (Protection of Marine Mammals) and Condition 6.4 (Water Quality Monitoring and Mitigation) of the 2018 IAAC Decision Statement for the Woodfibre LNG Project (Project), pursuant to Section 68(1) of the Impact Assessment Act (Act). We don't believe the proposed amendments align with requirements under the Act[1] to

1. Protect the environment, health, social and economic conditions within the legislative authority of Parliament from adverse effects caused by the Project and **avoid significant adverse environmental effects.**
2. Exercise the **precautionary principle** and adhere to **scientific principles** of scientific integrity, honesty, objectivity, thoroughness, and accuracy.
3. **Foster sustainability**, consider cumulative effects of project activities, federal policies, plans and programs.

ADVERSE ENVIRONMENTAL IMPACTS

Current Status - The BC Environmental Assessment Office (EAO) conducted the substituted environmental assessment (EA) of the Woodfibre LNG Project (the Project) under section 34(1) of the Canadian Environmental Assessment Act, 2012. The Conditions of the federal Decision Statement issued in March 2016 (and reissued in March 2018) were developed based on mitigation measures and follow-up requirements identified by the EAO and reviews by federal authorities. The Applicant did not identify any feasibility issues with the Conditions at the time.

[1] https://laws.justice.gc.ca/eng/acts/I-2.75/index.html

Proponent Request - The Applicant has requested amendments to Condition 3.8 (Protection of Marine Mammals) and Condition 6.4 (Water Quality Monitoring and Mitigation) because, it claims, it cannot carry out the Project in the manner currently described in the Conditions due to technical and economic feasibility issues.

SCCA Comments and Additional Amendment Requests

The Agency has been clear that the Act compels the Minister not to approve an amendment that would increase adverse impacts. We agree with the Agency's interpretation in this regard.

However, we are confused by the Agency's comments and apparent interpretation that (under the Act) it "must ensure" Conditions are technically and economically feasible for the Applicant.

Factors which must be considered in an impact assessment are set out under section 22 (1) of the Impact Assessment Act. As we read it, section 22 of the Act compels the Agency to consider (not ensure) technical or economic feasibility of a project. Section 22 1(b) further clarifies that the Agency must consider whether mitigation that is technically and economically feasible also mitigates adverse effects. Further yet, section 22 (e) requires the Agency to consider alternative means of carrying out the designated project that are technically and economically feasible, including through the use of best available technologies, and the effects of those means.

Pursuant to section 63 of the Act, the Minister's determination in respect of a project must consider the extent to which the project contributes to sustainability; the adverse effects of the Project are significant; the implementation of mitigation measures are appropriate; and the extent to which the effects of the project affect the Government of Canada's ability to meet its environmental obligations and commitments in respect of climate change. The Minister has no obligation to ensure a Project is economically feasible for an Applicant.

Once a decision is made and Conditions imposed (pursuant to section 68 of the Act) the Minister must not change the decision, nor amend a Condition if doing so would increase adverse environmental effects.

The Applicant's statement that the "*...two conditions in the Decision Statement [that] are not technically and economically feasible to implement*" (page 2) is incorrect. The Applicant's own modelling demonstrates that eliminating impact is technically feasible by stopping pile driving when any marine mammals enter waters closer than 7,322m.

The Applicant suggests that simply changing the "language" of the conditions "*maintains the intended outcomes of each condition*" (page 2). This is not correct.

Condition 3.8 requires the Applicant to "*establish and maintain marine mammal underwater noise impact areas for all construction activities where underwater noise levels are predicted to exceed 160 decibels at a reference pressure of one micropascal to avoid adverse behavioural change in or injury to marine mammals.*" Including pinnipeds. (page 5-6).

Without providing scientific evidence to show that reducing the distance from 7,322m to 125m will not result in adverse behavioural change to pinnipeds, (nor identifying what the noise at 125m might be and the harm it could inflict), there is no assurance that a change in language would result in the described outcome.

PRECAUTIONARY AND SCIENTIFIC PRINCIPLES

Condition 3.8 Protection of Marine Mammals

Current Status - Modeling by the Applicant has shown that underwater noise generated by unmitigated construction activity such as pile driving would *"...generate noise levels that exceed the pinniped injury threshold of 190 decibels (dB) within 73 m of the noise source. The cetacean injury threshold of 180 dB was estimated at 340 m from the noise source. The 160 dB behavioural disturbance threshold for marine mammals was estimated to extend 7,322 m from impact pile installation activities"* (pages 2-3).

Proponent Request - Although willing to accept these distances for cetaceans, the proponent is requesting that the disturbance distance for pinnipeds (Harbour Seals, California, and Steller Sea Lions) be reduced to 125m. To accomplish this, the Applicant wishes to change the language from the inclusive term of 'marine mammals' to distinguish between cetaceans and pinnipeds and to create differing exclusion areas for each (pages 7-8).

SCCA Comments and Additional Amendment Requests

The Applicant states that Steller Sea Lions are the only Species-at-Risk Act (SARA) Schedule 1 listed pinniped species observed in Howe Sound and fails to explain that pinnipeds are not the only SARA listed marine mammal in the Sound. Nonetheless, the Applicant writes "*There are no known important migratory pathways or foraging / breeding grounds for any Schedule 1 SARA-listed marine mammal species in the CPA. There is also no marine mammal critical habitat in the CPA (EAO 2015)*." This statement is incorrect.

All the observed Killer Whales in Howe Sound are SARA listed. Bigg's, Off-Shore and Northern Resident Killer Whales are Threatened. The Southern Residents are Endangered. Clear evidence of the importance of Howe Sound to the Southern Resident Killer Whales (SRKW), who were evaluated under the Species-at-Risk Act as facing Imminent Threat in 2018, was the 2021 inclusion of Howe Sound in Transport Canada's Interim Order '400m Approach Zone'.

Transport Canada wrote: "*The area in which the 400-metre approach distance applies was expanded in 2021 to include Howe and Barkley Sounds. The addition of these two sounds ensures greater coverage of waters identified in the SARA Recovery Strategy as part of Southern Resident killer whale range, particularly as whales have become less predictable in recent years*"[2]

The Applicant determined in 2013 - 2015 that the *threshold specific noise level* of 160dB at a reference pressure of one micropascal causes injury and/or adverse behavioural changes in marine mammals. Since then, much international scientific underwater noise research on marine mammals has been conducted, putting this generalized number in doubt[3]. It is now known, for example, that anthropogenic noise at different frequencies can impact the Killer Whales' ability to communicate, avoid vessel strikes and foraging ability[4]. Noise has now been identified by the federal government as one of four **Key Threats to the endangered SRKW.**

As Fisheries & Oceans Canada, Transport Canada and Environment & Climate Change Canada are currently leading a multi-year, multi-million-dollar program to halt the decline of this small but distinct SRKW population, we request the IACC re-examine the current noise threshold to determine a safe reference for cetaceans, and Southern Resident Killer Whales specifically.

Recent data obtained by the Applicant from the BC Cetacean Sighting Network notes that since 2009 there has been an increasing trend of cetacean observations in Howe Sound and that the most frequent sightings of cetaceans are the Killer Whales[5]. If future scientific studies show that Howe Sound is a critical winter foraging area for the SRKW[6], then further noise restrictions, including results from vessels speeds and the location of the certified vessel route, must be identified, and incorporated as updated Environmental Conditions.

---

[2] https://tc.canada.ca/en/frequently-asked-questions-2021-interim-order-respecting-protection-killer-whales-orcinus-orca-waters-southern-british-columbia

[3] Southall, B.L., Finneran, J.J., Reichmuth, C., Nachtigall, P.E., Ketten, D.R., Bowles, A.E., Ellison, W.T., Nowacek, D.P., Tyack, P.L., 2019. Marine Mammal Noise Exposure Criteria: Updated Scientific Recommendations for Residual Hearing Effects. Aquat. Mamm. 45, 125–232. https://doi.org/10.1578/AM.45.2.2019.125

[4] Vagle, S., Burnham, R., Thupaki, P., Konrad, C., Toews, S., Thornton, S.J. 2021. Vessel presence and acoustic environment within Southern Resident Killer Whale (Orcinus orca) critical habitat in the Salish Sea and Swiftsure Bank area. DFO Can. Sci. Advis. Sec. Res. Doc. 2021/058. x + 66 p.

[5]; B.C. Cetacean Sightings Network (BCCSN). 2022. Howe Sound Sightings Dataset Howe Sound Sightings Data 1973-2021 in Letter from Ocean Wise to Stantec Consulting Ltd., dated February 1, 2022. Data obtained from the B.C. Cetacean Sightings Network (2022) were collected opportunistically with limited knowledge of temporal or spatial distribution of observer effort. As a result, absence of sightings at any location does not demonstrate absence of cetaceans. From Woodfibre LNG Project, Squamish, British Columbia Request to Amend the Decision Statement Issued Under Section 54 of CEAA 2012, Attachment A Updated Marine Mammal Data for Howe Sound

[6] "J-pod makes an appearance in Howe Sound", K. Bartlett, Coast Reporter, Friday, December 23, 2022. An Ocean Wise Whale Initiative pilot project will begin studying the wintering habits of whales in the Salish Sea from the Sunshine Coast to Cowichan Bay this spring.

With regard to pinnipeds, pile driving activities would generate noise creating 160dB at 7,322m distance. The Applicant does not specify the actual noise level that pinnipeds would experience at 125m distance during these same pile driving activities. Instead, there are references provided to other Projects that have had their pinniped-specific exclusion areas reduced. This is not acceptable. Evidence needs to be presented showing that injury will not occur in the proposed 125m exclusion area. For example, in reviewing acoustic harassment/deterrent devices used in fish farm settings to scare away Sea Lions in both Canadian[7] and international settings there is concern that they may in fact be suffering temporary hearing loss. This damage (deafness) may account for their seeming adaptability to acoustic deterrents.

Steller Sea Lions are among the pinnipeds known to visit the proposed development area. They are currently listed on the Federal Species-at-Risk Registry as Special Concern. As such, the Minister prepared a Management Plan for the species and habitat which included Measures for their Conservation in 2005. These measures were re-assessed and confirmed in 2015. The "Report on the Progress of Management Plan Implementation for the Steller Sea Lion (2018)[8] states that although the likelihood may be low, "...*Noise stress may have long-term effects on Steller Sea Lion vital rates and body condition and may contribute to disruption of foraging and increased energetic costs*..."

Management Objective 5 in the aforementioned Plan reads: "*Minimize the exposure of Steller Sea Lions to acute sound levels known to cause behavioural or physical harm in pinnipeds*" (page 12). Until the Applicant can cite evidence that the requested 125m pinniped-specific exclusion area will not, during the 160dB/7322m noise producing activities, result in physical or behavioural harm, the Applicant must abide by the technically feasible 7,322m exclusion area.

Steller Sea Lions are also regulated under the Marine Mammal Regulation as part of the Fisheries Act. The ability to hunt them if a nuisance to a fish farm was removed once the species was SARA listed. Currently Section 7 appears to allow disturbance of these mammals if authorized, Part 5 Marine Mammal Disturbance describes under what conditions they may be disturbed Section 38 (1) (a)-(f); all note that the disturbance must result in a benefit to the animal. It is difficult to see how authorizing a severely reduced noise exclusion zone would provide a benefit to the sea lion or any other pinniped.[9]

[7] Jamieson, G. S., and P. F. Olesiuk, 2001, "Salmon Farm-Pinniped Interactions in British Columbia: An Analysis of Predator Control, Its Jurisdiction and Alternate Approaches", CSAS Research Document 2001/142. Permission received to cite January 23, 23. No updated research has been conducted by Fisheries & Oceans Canada.
[8] https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/Pr-OtarieStellarSealion-v00-2018Dec-Eng.pdf p. 8
[9] https://laws-lois.justice.gc.ca/eng/regulations/sor-93-56/fulltext.html

Finally, the 2020 Canadian Science Advisory Secretariat released an update on the status of Stellar Sea Lions and noted the important ecological role that pinnipeds, including Stellar Seal Lions have in the food webs and hence ecosystem models of the Pacific Northwest.[10] It is likely that their recently increased numbers are helping to feed and recover the population of their chief predator, the SARA listed Bigg's Killer Whales. It is therefore not appropriate that the Steller Sea Lions visiting Howe Sound be exposed to underwater noise that can injure them.

Condition 6.4 Water Quality Monitoring

Current Status - "*The Proponent shall monitor water quality and sediment, using as a benchmarks the Canadian Council of Ministers of the Environment's Water Quality Guidelines for the Protection of Aquatic Life and Interim Sediment Quality Guidelines for the Protection of Aquatic Life, and shall communicate any exceedance(s) of the Guidelines to relevant government authorities and Aboriginal groups, and implement additional mitigation measures to remedy those exceedances".* The applicant monitored both surface (freshwater) and marine waters between May 2020 and December 2021 and found that there were chemical exceedances both in fresh and marine waters according to the above Guidelines.

Proponent Request – The Applicant believes that the current Condition unfairly assigns responsibility to the Project to meet the above Guidelines as there is no distinction between what will be produced by the Project and what is generated from other anthropogenic or natural processes. Further, they argue that Section 6 of the Decision Statement relates primarily to human health, e.g., concern for bioaccumulation of contaminants in animals (and plants) that are then eaten by people (page 11). They request that the Conditions be changed to include monitoring water quality and sediment during construction and operation so that they are responsible only for exceedances of the Guidelines attributable to the Project and that those exceedances are dealt with by remedial mitigation measures or reduction of the associated risk to human health.

SCCA Comments & Additional Amendment Requests

In its comments on the Draft Analysis of Proposed Changes to the Woodfibre LNG Project Decision Statement Conditions of December 2022,[11] Environment and Climate Change Canada clarified that it did not advise the Agency that the proposed changes would not increase the extent of the effects, nor did it ask how the Proponent would determine if exceedances are attributable to the Project. ECCC did not state that monitoring for effects that are attributable to the Project during construction and operation would not result in additional adverse effects.

[10] DFO. 2020. Status of Steller Sea Lions (Eumetopias jubatus) in Canada. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2020/046, p.11.

[11] https://registrydocumentsprd.blob.core.windows.net/commentsblob/project-80060/comment-59127/20221219_Woodfibre%20LNG_DS%20amendment_condition%206.4_ECCC%20comments.pdf

ECCC notes that monitoring alone does not prevent effects from occurring. ECCC also noted the guidelines referenced in condition 6.4 as a benchmark for monitoring, are for the protection of aquatic life, and are not appropriate for the protection of human health.

We agree with ECCC that the Condition should be amended to specify that water quality and sediment will be monitored using the Canadian Council of Ministers of the Environment's Water Quality Guidelines for the Protection Of Aquatic Life and Interim Sediment Quality Guidelines for the Protection of Aquatic Life "during construction and operation". We echo ECCC's comment that monitoring must continue for the life of the Project and the Condition should be amended to add "decommissioning and closure of the Project".

We do not accept the request to change the Condition for the applicant to only be responsible for mitigating water quality parameters attributable to the project as they relate to human use. We do not agree that human health is the sole focus of this Condition. We strongly object to the request to add the phrase '*or reduce the associated risk to human health*" to this condition. We concur with ECCC that the Project should not result in bioaccumulation of deleterious substances in the food web that could impact people who might consume that flora and fauna. However, meeting the Guidelines for Aquatic Life is not solely for the benefit of human life. The Project should result in water quality that improves on the current condition of both fresh and marine water overall. Not just for humans.

For example, one of the four threats facing the endangered SRKW is the availability of prey – primarily Chinook salmon. Environment and Climate Change Canada (ECCC) has recently made public an on-line tool: Pollutants Affecting Whales and their Prey (PAWPIT) that identifies such pollutants and in addition to mapping point sources of such pollutants in the Salish Sea. Efforts will be undertaken to remediate certain marine sites showing elevated levels of listed pollutants in addition to introducing legislation to ban the use of other pollutants.

Knowing that SRKW are increasing their visits to Howe Sound, we believe that the parameters of water quality monitoring should be reviewed against PAWPIT. Given the legacy of the site, and the nature of the Project, monitoring should be extended to include PAWPIT- listed chemicals that may be found in both situations. Remediation plans should be developed in advance for each situation should monitoring confirm the presence of any of these pollutants; the plans should be specified in a revised Condition.

If it is determined that the primary focus of the Condition 6.4 is primarily human, then the final phrase must at least require the "elimination of risk to human health", not the much weaker position of "reduce the risk to human health".

FOSTERING SUSTAINABILITY

Current Status - Fresh and marine waters are critical components of the Átl'ka7tsem Howe Sound bioregion. As the area and its inhabitants recover from generations of heavy industrial use, pollution and overfishing, First Nations, all levels of government, scientific and academic institutions, NGOs, and communities are working to ensure that Átl'ka7tsem Howe Sound's marine and freshwater ecosystems are stewarded and managed sustainably. Not compromised and diminished through "death by a thousand cuts".

Átl'ka7tsem Howe Sound was recently recognized by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as an internationally significant Biosphere Region, "where nature and humanity thrive." Through its nomination and support of this prestigious designation, the Government of Canada committed to support sustainable development, uphold, and improve on environmental Best Management Practices (BMP) for development in this world-class region.

Sustainable development (by definition) should not exceed existing Guidelines to protect species and address chemical presence in water. Rather, truly sustainable industries should contribute to improving habitat and water quality for the benefit of all species. Indeed, Woodfibre espouses on its website that its *"commitment to sustainability is well-aligned with our goal of strong corporate citizenship at the local, provincial, national, and global levels. We aim to minimize impacts to local ecosystems."*[12] Meanwhile, it is asking the government to approve increased adverse impacts on the environment in Howe Sound.

Further, last fall, the Minister announced an investment of more than $926,000 to support biodiversity conservation in the Biosphere Region, from Canada's Enhanced Nature Legacy program. The program "responds to the global biodiversity crisis, threats to Canada's ecosystems and wildlife and pressures for sustainable recovery and well-being of Canadians". It aims to strengthen protection and recovery of species at risk and their habitats. Relaxing IAA Conditions to accommodate adverse effects from industry in a United Nations Biosphere Region, would be a deep contradiction of Canada's commitment to these values.

SCCA Comments & Additional Amendment Requests

The SCCA remains opposed to the Woodfibre LNG Project and the amendments to Condition 3.8 (Protection of Marine Mammals) and Condition 6.4 (Water Quality Monitoring and Mitigation). We request that the IAAC rejects its request to amend these Conditions.

[12] https://woodfibrelng.ca/about-woodfibre/sustainability/

The applicant has provided no evidence to support assertions that the proposed amendments will not result in increased adverse effects. The IAA and the Minister are not obligated to ensure the economic feasibility of this oil and gas Project for the Applicant. They are obligated to protect against increased environmental impacts.

Canada has a further international responsibility and commitment to ensure sustainable development in Átl'ka7tsem Howe Sound, while protecting and fostering the continued ecological recovery of the region and species at risk. Consequently, there should not be any reduction of existing Environmental Conditions protecting the commons in this area, regardless of perceived economic benefit of any development project. As scientific evidence mounts, Environmental Conditions should continue to be updated and strengthened on an ongoing basis to reflect up to date scientific understanding, regulation, and commitments made by the government.

Thank you for your time and attention to our concerns.

Regards,

Suzanne Senger

Executive Director

Sunshine Coast Conservation Association

604-741-8859

executive@thescca.ca

https://thescca.ca