



Monday 30th January, 2023

To:

The Honourable Steven Guilbeault
Minister of Environment and Climate Change
House of Commons
Ottawa, Ontario, K1A 0A6

Compliance Promotion & Follow-up Team
Impact Assessment Agency of Canada
160 Elgin Street, 22nd Floor
Ottawa, Ontario K1A 0H3

RE: Reject Woodfibre LNG's request to amend Conditions 3.8 and 6.4 of the revised Decision Statement (2018) issued under Section 54 of CEAA 2012

Dear Minister:

My Sea to Sky is a people-powered environmental organization that was founded in 2014 to defend, protect, and restore Átl'ka7tsem / Howe Sound.

We are writing on behalf of 21,345 people who have signed a [petition](#) in opposition to the proposed Woodfibre LNG project, and over 1,035 people who have sent a [letter](#) in opposition to this specific amendment application.

We urge you to reject Woodfibre LNG's request to amend Conditions 3.8 and 6.4 of the revised Decision Statement issued in 2018.

Section 68 (2) of the Impact Assessment Act states that: *"The Minister may add, remove or amend a condition only if he or she is of the opinion that doing so will not increase the extent to which the effects that are indicated in the report with respect to the impact assessment of the designated project are adverse."*¹

On Woodfibre LNG's own website, it states:

- that Woodfibre LNG is committed to: "...advanc[ing] the LNG industry via innovative programs and adopting best practices";² and
- "We aim to minimize impacts to local ecosystems."³

It is our assertion that the amendment submitted by Woodfibre LNG fails to meet the requirements laid out in Section 68 of the Impact Assessment Act (IAA), and fails to meet the company's own obligations to adopt best practices and minimize impacts to local ecosystems. We urge you to consider the following in your decision-making process:

¹ [Impact Assessment Act](#) (2019). S.C. 2019, c. 28, s. 1. Section 68.

² Woodfibre LNG website (retrieved 2023) [United Nations Sustainable Development Goals](#).

³ Woodfibre LNG website (retrieved 2023) [Sustainability](#).

1. Current interpretation of the Impact Assessment Act could set a dangerous precedent

The rationale for the current amendment to Conditions 3.8 and 6.4 by Woodfibre LNG is that these conditions are not “technically or economically feasible” as per Section 22(1) b of the Impact Assessment Act (IAA).⁴

22 (1) *The impact assessment of a designated project, whether it is conducted by the Agency or a review panel, must take into account the following factors:*

...

(b) *mitigation measures that are technically and economically feasible and that would mitigate any adverse effects of the designated project;*

The Impact Assessment Agency of Canada (IAAC)’s *Draft Analysis of Proposed Changes to the Woodfibre LNG Project Decision Statement Conditions* appears poised to approve these changes to Conditions 3.8 and 6.4 based on this interpretation of the Impact Assessment Act (IAA).

IAAC staff have also indicated via emails^{5,6} and in a meeting that conditions **must** be technically and economically feasible for the proponent.

However, this narrow interpretation fails to take into account the second part of Section 22 (1) b:

“...and that would mitigate any adverse effects of the designated project;”

It also fails to take into account Section 68(2) which states:

Minister’s power — decision statement

68 (1) *The Minister may amend a decision statement, including to add or remove a condition, to amend any condition or to modify the designated project’s description. However, the Minister is not permitted to amend the decision statement to change the decision included in it.*

Limitation — condition

(2) *The Minister may add, remove or amend a condition only if he or she is of the opinion that doing so will not increase the extent to which the effects that are indicated in the report with respect to the impact assessment of the designated project are adverse.*

Limitation and application

(3) *The Minister may add or amend a condition only if the new or amended condition could be established under subsection 64(1) or (2). Subsection 64(3) applies with respect to the new or amended condition if it could be established under subsection 64(2).*

⁴ [Impact Assessment Act](#) (2019). S.C. 2019, c. 28, s. 1. Section 22 (1) b.

⁵ Julie Mailloux, Manager, Decision Statements, Impact Assessment Agency of Canada / Government of Canada, email message to My Sea to Sky RE: Proposed changes to conditions for Woodfibre LNG, 2022-11-24.

⁶ Email from Decision Statement Team / National Programs Divisions, Impact Assessment Agency of Canada / Government of Canada to My Sea to Sky RE: Proposed changes to conditions for Woodfibre LNG. Sent 2023-01-30.



Woodfibre LNG has provided **no evidence** that the proposed amendments to Conditions 3.8 and 6.4 will not increase the extent to which the effects are adverse.

Neither has the proponent provided any evidence that the existing conditions are not “technically or economically feasible.” No economic feasibility study has been provided, and Woodfibre LNG’s own analyses demonstrate that, yes, the current conditions are technically feasible.

My Sea to Sky is extremely concerned that this interpretation of the Act could set a very dangerous precedent whereby any proponent that wishes to cut costs at the expense of the environment can claim that a condition is not “*technically or economically feasible.*”

The issue at stake is whether it is acceptable to weaken environmental regulations if they are not easy for a project to comply with. But if a project is not able to comply with the conditions listed in its Environmental Assessment Decision Statement, then the project should not have been approved in the first place and should not be permitted to continue. **The alleged inability to meet a standard is not a valid justification to lower the standard.**

We strongly urge both IAAC staff and Minister Guilbeault to carefully consider the big picture implications of allowing Woodfibre LNG to weaken the conditions of its Decision Statement.

If these proposed changes to Conditions 3.8 and 6.4 are approved, it is our opinion that the *Draft Analysis of Proposed Changes to the Woodfibre LNG Project Decision Statement Conditions* by IAAC **fails to uphold the purpose of the Impact Assessment Act** as highlighted below in bold text:

6 (1) The purposes of this Act are

(a) to foster sustainability;

(b) to protect the components of the environment, and the health, social and economic conditions that are within the legislative authority of Parliament from adverse effects caused by a designated project;

(b.1) to establish a fair, predictable and efficient process for conducting impact assessments that enhances Canada’s competitiveness, encourages innovation in the carrying out of designated projects and creates opportunities for sustainable economic development;

(c) to ensure that impact assessments of designated projects take into account all effects — both positive and adverse — that may be caused by the carrying out of designated projects;

(d) to ensure that designated projects that require the exercise of a power or performance of a duty or function by a federal authority under any Act of Parliament other than this Act to be carried out, are considered in a careful and precautionary manner to avoid adverse effects within federal jurisdiction and adverse direct or incidental effects;

...

(j) to ensure that an impact assessment takes into account scientific information, Indigenous knowledge and community knowledge;

(k) to ensure that an impact assessment takes into account alternative means of carrying out a designated project, including through the use of best available technologies;

...

(m) to encourage the assessment of the cumulative effects of physical activities in a region and the assessment of federal policies, plans or programs and the consideration of those assessments in impact assessments;

...

2. A decision on the amendment must be deferred until publication of the Ocean Noise Strategy

The timing of this amendment request is concerning in light of the forthcoming release of the Fisheries and Oceans Canada (DFO) Ocean Noise Strategy for Canada report. This report will be a guiding document to address underwater noise in our oceans. While the document will not be regulatory in nature, it will help to inform understanding and management of ocean noise.⁷ Given the cumulative nature of underwater noise impacts, and a lack of coordinated action to manage cumulative noise,⁸ incorporating the findings of the Ocean Noise Strategy would help to ensure that the proposed project would not adversely affect marine mammals. The Ocean Noise Strategy will help to inform the coordination and planning of underwater noise and inform assessment and management plans.⁹ As such, **we request that a decision on the current amendment be postponed until publication of the Ocean Noise Strategy**, anticipated in early 2023, and that the Strategy inform the final recommendations made by IAAC staff to the Minister.

3. Proponent's rationale for requested changes to Condition 3.8 is faulty

In their June 2022 request for amendment, Woodfibre LNG proposes to delineate a pinniped-specific exclusion area of 125 meters, a >98% reduction from the 7,322 meter radius protection zone established in the original Decision Statement conditions. We urge you to **reject the Proponent's requested change to Condition 3.8** as it is likely to increase adverse effects on pinnipeds in Átl'ka7tsem / Howe Sound.

Almost all marine animals rely on sound to communicate, navigate, find food, reproduce, and evade predators. In the North Pacific, underwater noise has been doubling in intensity every ten years since the 1950s.¹⁰ This noise doubling is due to increased commercial shipping, nearshore and small vessel traffic, and marine construction.¹¹ The rationales provided for this request include that populations of pinnipeds are stable, that seals and sea lions are curious and "*undisturbed by in-water construction activities*," and that they can avoid underwater noise by emerging from the water.¹²

⁷ Fisheries and Oceans Canada (2022). [Mitigating the impacts of ocean noise](#).

⁸ Merchant et al (2017) [Marine noise budgets in practice](#), Conservation Letters, 11(3).

⁹ Breeze et al (2022) [Efforts to advance underwater noise management in Canada: introduction to the Marine Pollution Bulletin Special Issue](#). Marine Pollution Bulletin 178.

¹⁰ Heise, Kathy (2018) [Underwater noise interferes with marine animal communication](#), Ocean Watch, B.C. Coast Edition.

¹¹ Chapman and Price (2011) [Low frequency deep ocean ambient noise trend in the North Pacific](#). Journal of Acoustical Society of America 129, EL 161.

¹² Woodfibre LNG Project, Squamish, British Columbia, [Request to Amend the Decision Statement Issued Under Section 54 of CEAA 2012](#) (2022)

Let us examine these rationales individually.

a. Proponent's claim: "Populations of pinnipeds are stable"

The Proponents argue that populations of pinnipeds in Átl'ka7tsem / Howe Sound are stable. Harbour seals are a keystone species in the ecosystem because they are the primary prey species for Bigg's killer whales; thus, maintaining a healthy and stable population is vital. While harbour seal populations grew substantially beginning in the 1980s, following industrial cleanup of Átl'ka7tsem / Howe Sound, numbers have declined somewhat since 2001, and traditional haul-out sites have been abandoned in favour of more challenging haul-out sites.¹³ Thus, while populations may be stable for now, that is only due to the cleanup of industrial sites in the region, and they remain vulnerable to anthropogenic disturbance.

Per the application for amendment by Woodfibre LNG, *"no formal collection of non-harbour seal pinniped population data has been captured,"*⁹ so the Proponent is operating with incomplete species data. Stellar sea lions have only recently returned to Átl'ka7tsem / Howe Sound after long absence, thanks to Átl'ka7tsem / Howe Sound's ongoing recovery from decades of industrialization. Traditionally, Bowen Island was an important sea lion hunting site for Squamish Nation hunters, and it appears that Steller sea lions may now be reoccupying traditional habitat. However, Steller sea lion numbers remain low, and they are listed as a Species of Special Concern by COSEWIC because there are only five breeding sites in BC and the species is sensitive to anthropogenic disturbance.¹⁴

The Federal government has a legal obligation to protect species at risk. The Species at Risk Act *"is a key federal government commitment to prevent wildlife species from becoming extinct and secure the necessary actions for their recovery. It provides for the legal protection of wildlife species and the conservation of their biological diversity."*

*"The purposes of the Act are to prevent Canadian indigenous species, subspecies, and distinct populations from becoming extirpated or extinct, to provide for the recovery of endangered or threatened species, and encourage the management of other species to prevent them from becoming at risk."*¹⁵

It is short-sighted to amend Condition 3.8 based on the absence of Steller sea lion haul out spots near the project area, as this species may well reestablish such sites if it remains undisturbed. While Steller sea lion populations appear to be growing in the area thanks to continuous efforts to revitalize the ecosystem, this is not the time to test the species' recovery by exposing them to increased anthropogenic stressors and risk the reversal of current positive trends.

b. Proponent's claim: "Pinnipeds are undisturbed by in-water construction activities"

The Proponent claims that seals and sea lions are curious and *"undisturbed by in-water construction activities,"* and as such, a *"125-meter pinniped-specific exclusion area boundary would fully mitigate*

¹³ Nordstrom et al (2020) [Pinnipeds: population stable since the 1990s](#), Ocean Watch, Howe Sound 2020

¹⁴ [Steller Sea Lion](#) (*Eumetopias jubatus*), Canada Species at risk public registry.

¹⁵ Government of Canada (2023) [Species at Risk Act: description](#). Website accessed 2023-01-29.

potential injury to pinnipeds considering the EAC Application's noise modeling assessment and conservative assumptions." We do not believe that the evidence supports this claim.

Human-caused underwater noise can reduce marine mammals' ability to communicate, find food, escape predators, and survive, and can cause injury or permanent hearing loss. Peak underwater **sound pressure levels from impact pile driving can be on the order of 200 dB** at a range of **300 m** from piles.¹⁶ Temporary (TTS) and permanent hearing loss (PTS) in harbour seals can occur at **181 dB and 199 dB**, respectively.¹⁷ Complete recovery from temporary hearing loss in pinnipeds can take up to 48 hours,¹⁸ during which time we can presume that individuals might be at elevated risk of predation and struggle to locate prey.

A study on sound exposure in harbour seals predicted that half of the seals received sound levels from pile-driving exceeding auditory damage thresholds, despite no individual coming closer than 4.7 km to active construction and only 20% of individuals approaching within 10 km. Of those seals approaching within 10 km, 60% were predicted to exceed PTS thresholds.¹⁹ A more recent analysis of that same data found that up to 50% of seals were predicted to experience TTS and up to 17% to experience PTS.²⁰ This study highlights the fact that the study of auditory damage in marine animals is rapidly evolving and still poorly understood, and demonstrates the need for additional research prior to the weakening of marine mammal protections. The precautionary principle must be applied.

c. **Proponent's claim: "Pinnipeds can avoid underwater noise by emerging from the water"**

While it is true that seals and sea lions can raise their heads above the surface of the water or emerge from the water fully, this does not mean they will not be adversely impacted by construction sounds. Harbour seals, which are classified as phocids, hear almost as well in air as they do underwater. Otariids including sea lions have in-air hearing abilities similar to those of their terrestrial counterparts; California sea lions have more acute hearing in air than in water.²¹ As social animals, all pinniped species rely on airborne vocalizations for communication and group dynamics.²²

A recent study shows that pile driving can result in significant displacement of marine mammal populations up to 25 km away from the pile driving activity; within a 25 km radius of the pile driving operation, harbour seal usage decreased by between 19 and 83% during periods when underwater noise levels reached between 166 and 178 dB. Within 5 km of construction, seal usage decreased by up

¹⁶ Dahl et al (2014) [The underwater sound from impact pile driving and its potential effects on marine life](#). Acoustics Today 11(2): 18-25.

¹⁷ Reichmuth et al (2019) [Long-term evidence of noise-induced permanent threshold shift in a harbor seal \(Phoca vitulina\)](#). The Journal of the Acoustical Society of America, 146(4), 2552-2561.

¹⁸ Kastak et al (2004) [Noise-induced temporary threshold shifts in pinnipeds: effects of noise energy](#). The Journal of the Acoustical Society of America 116(4).

¹⁹ Hastie et al (2015) [Sound exposure in harbour seals during the installation of an offshore wind farm: predictions of auditory damage](#). Journal of Applied Ecology 52: 631-640.

²⁰ Whyte et al (2020) [Estimating the effects of pile driving sounds on seals: pitfalls and possibilities](#). The Journal of the Acoustical Society of America 147: 3948-3958.

²¹ Kastak & Schusterman (1998) [Low-frequency amphibious hearing in pinnipeds: methods, measurements, noise, and ecology](#). Journal of the Acoustical Society of America, 103(4): 2216-2228.

²² Schusterman and Van Parijs (2003) [Pinniped vocal communication: an introduction](#). Aquatic Mammals, 29(2): 177-180.

to 93% during pile driving.²³ Another study found up to 60% reductions in seals hauled out on a sandbank 10 km away from pile-driving activity.²⁴

In the United States, the Marine Mammal Protection Act defines Level B harassment as acts that have the potential to “*disturb a marine mammal or marine mammal stock in the wild by disrupting behavioural patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.*”²⁵ NOAA has provided acoustic thresholds for noise levels that constitute Level B harassment. For all marine mammals, these thresholds are set at 120 dB re 1 µPa for continuous underwater noise, including vibratory pile driving, and 160 dB re 1 µPa for impulsive underwater noise sources, including impact pile driving. For in-air sounds, NOAA predicts that harbour seals would experience Level B harassment at levels of 90 dB, while all other pinnipeds would be behaviourally harassed at 100 dB.²⁶

Woodfibre LNG’s application states that “*The 160 dB behavioural impact area is estimated to extend 7,322 m from the (impact) pile installation sound source.*”

Given these far-reaching behavioural modifications in response to pile-driving, we believe that the Proponent should be required to maintain the original exclusion area boundary. Failing that, the Proponent must commit to continuous underwater and in-air noise monitoring; and avoid pile-driving during harbour seal and Steller sea lion breeding seasons (late July through August).⁷

The science on underwater noise impacts is rapidly evolving, and a recent 2019 evaluation of noise exposure criteria for marine mammals recommends updating the scientific recommendations for residual hearing effects in marine mammals.²⁷ We are concerned that the guidance provided by staff at the Department of Fisheries and Oceans may not be aligned with the latest scientific understanding.

The article states that: “*Scientific findings in the last decade provide substantial new insight but also underscore remaining challenges in deriving simple, broadly applicable quantitative exposure criteria for such diverse taxa. These criteria should be considered with regard to relevant caveats, recommended research, and with the expectation of subsequent revision.*”²⁷

We need to use the precautionary principle when changing these conditions to ensure that wildlife are not harmed, and Woodfibre LNG must be held to the highest standards.

In conclusion, Woodfibre LNG’s claims are inaccurate, and we believe that the proposed amendments to Condition 3.8 could result in increased adverse effects on pinnipeds and, in particular, species at risk. We urge

²³ Russell et al. (2016) [Avoidance of wind farms by harbour seals is limited to pile driving activities](#). Journal of Applied Ecology 53(6): 1642-1652

²⁴ Edren et al. (2004) [Effect from the construction of Nysted Offshore Wind Farm on seals in Rodsand seal sanctuary based on remote video monitoring](#). Ministry of the Environment, Denmark.

²⁵ [Marine Mammal Protection Act](#) (amendments of 1994), NOAA Fisheries.

²⁶ [National Marine Fisheries Services: Summary of Marine Mammal Protection Act Acoustic Threshold](#) (2022). NOAA Fisheries.

²⁷ Southall, B.L. et. al (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>

you to reject the proposed amendment and hold Woodfibre LNG to Condition 3.8 as written in the Decision Statement reissued in 2018.

4. Kitimat is not a fair comparison to justify similar mitigation measures in Howe Sound

In addition to the rationales discussed above, the IAAC Draft Analysis recommendation to approve changes to Condition 3.8 includes as a factor that *“similar mitigation measures for frequent pinniped presence were approved for Fisheries Act authorizations in the LNG Canada Export Terminal Project and the Rio Tinto Terminal Expansion Project.”*²⁸

We do not believe this justifies the approval of similar measures here, for several reasons.

First, existing conditions for pinnipeds in the two locations are not equivalent. While Átl'ka7tsem / Howe Sound has a history of intense industrial impacts - namely the Woodfibre pulp mill and the Britannia Mine - these institutions have been inactive for some time now. The pulp mill closed in 2006, and the Britannia Mine closed in 1974. Harbour seal populations in Átl'ka7tsem / Howe Sound began to recover in the 1980s following closure of the Britannia Mine, and Steller sea lions only returned to the ecosystem quite recently.

In contrast, pinnipeds in the Douglas Channel, where the Kitimat site lies, have been exposed to constant anthropogenic disturbance since the opening of the Alcan / Rio Tinto mine in the early 1950s. In fact, this was used as justification for the easing of pinniped mitigation measures at the Kitimat LNG site. IAAC in that case stated that, *“due to the evidence provided by the Proponent, the populations of both Steller sea lion and harbour seals seems to be thriving in an environment where industrial activity is already present.”*²⁹. This justification is not valid for Átl'ka7tsem / Howe Sound, where seals and sea lions will be naive to construction sounds and are thus more vulnerable to behavioural impacts due to marked increases in noise levels.

The levels and distance to which underwater noise propagates also vary widely depending on substrate, water quality, depth, and channel width. The rationale to use the same mitigation measures here as elsewhere can only be used if the Proponent shows that site conditions are equivalent. This portion of Howe Sound is a narrow fjord with dense rock walls and an underwater seamount, and the Proponent has not provided modeling of sound transmission in this type of system.

Furthermore, approval of similar mitigation measures elsewhere cannot, by itself, provide justification for similar measures at this site. Before replicating their relaxed mitigation efforts here, monitoring of the impacts must take place to determine whether those mitigation efforts were adequate to prevent detrimental or adverse effects on pinnipeds in the Douglas Channel. Construction of LNG Canada's Phase I terminal began in 2018, and although the project is now more than 70% complete,³⁰ no assessment of construction impacts on pinnipeds has been released to the public. In the absence of such an assessment, measures undertaken at those sites should not be used as justification for similar measures here.

²⁸ IAAC (2022) [Draft analysis of proposed changes to the Woodfibre LNG project decision statement conditions](#). Impact Assessment Agency of Canada.

²⁹ IAAC (2020) [Draft Analysis of LNG Canada Development Inc.'s Proposed Changes to the LNG Canada Export Terminal Project](#). Section 3.1.3.

³⁰ Jang, B (2022) [In Kitimat, B.C., Canada's first LNG export terminal rises](#). The Globe and Mail, September 28, 2022.

Finally, Woodfibre LNG is located in the Átl'ka7tsem / Howe Sound UNESCO Biosphere Region, which is recognized internationally as a cultural and ecological treasure. Biosphere Regions are “*areas of global ecological significance that make an ongoing commitment to the United Nations to strive for sustainability...where people are inspired to find ways to live and work in harmony with nature.*”³¹ Through this designation, the Government of Canada demonstrated a commitment to support sustainable development and uphold environmental Best Management Practice (BMP) in Átl'ka7tsem / Howe Sound.³² Standards that may be acceptable for other locations are not acceptable for a UNESCO Biosphere Region. The project must be held to the highest standards.

5. Indirect and cumulative impacts must be considered

As per **Section 6 (1) m** of the Impact Assessment Act,¹ the purpose of the Act is to “*to encourage the assessment of the cumulative effects of physical activities in a region.*” We believe it is a mistake to view noise from in-water construction in isolation, and that Woodfibre LNG has failed to assess cumulative effects of its proposed changes to Condition 3.8.

While pile-driving and other construction activities will be temporary in nature, they are just one contributing factor to the increasing challenges of auditory overload affecting marine mammals in our waters. Between 1950 and 2000, ship traffic has doubled, and shipping noise has increased by 3dB, equivalent to a doubling in noise intensity, every ten years.³³

Despite broad agreement within the scientific community that cumulative noise levels in the ocean risk ecosystem health, a framework for coordinated action and management is lacking³. Woodfibre LNG has also failed to consider the cumulative impacts of construction, operation of a liquefaction plant, and increased ship traffic on noise levels in its amendment application. This oversight must be rectified, as cumulative anthropogenic noise is a critically important component of water quality, and one that we have a responsibility to manage.

Additionally, this proposal fails to address indirect impacts to pinnipeds that may incur from impacts to their food sources. A recent study on Pacific herring and salmon showed increased vigilance behaviours in response to increased noise levels, and that such behavioural changes can result in high ecological costs, both to the fish and their predators, due to increased energy consumption and loss of foraging time.³⁴ Herring have been shown to be highly vulnerable to underwater noise, in part because they use sound to direct their activities and respond to their environments,³⁵ and studies have shown decreased abundance up to 37 km from seismic surveys.³⁶ The area surrounding the Woodfibre project site includes key herring spawning habitat, which has

³¹ Howe Sound Biosphere Region Initiative (retrieved 2023) [What is a Biosphere Region?](#)

³² UNESCO website (retrieved 2023) [Biosphere Reserves: What are Biosphere Reserves?](#)

³³ Jones, N (2019) [Ocean uproar: saving marine life from a barrage of noise](#). Nature 568: 158-161.

³⁴ van der Knaap et al (2022) [Behavioural responses of wild Pacific salmon and herring to boat noise](#). Marine Pollution Bulletin 174.

³⁵ California Department of Transportation (2020) [Technical guidance for the assessment of hydroacoustic effects of pile-driving on fish](#).

³⁶ Slotte et al. (2004) [Acoustic mapping of pelagic fish distribution and abundance in relation to a seismic shooting area off the Norwegian west coast](#). Fisheries Research 67(2): 143-150

major ecological and cultural significance in the region.³⁷ Herring are a major food source for pinnipeds in Átl'ka7tsem / Howe Sound, and behavioural impacts on them and on other prey species could have cascading effects throughout the marine food chain.

6. Átl'ka7tsem / Howe Sound is a UNESCO Biosphere Reserve

The 2021 designation of Átl'ka7tsem / Howe Sound as a UNESCO Biosphere Reserve emphasizes its importance as critical refuge and habitat for species at risk in the Salish Sea. Despite persistent negative impacts of past and current industrial activity as demonstrated by the British Columbia Water Quality Guideline exceedances observed during Woodfibre LNG's baseline studies, Átl'ka7tsem / Howe Sound is experiencing an ongoing ecological revival, including the return of previously extirpated species such as Steller sea lion and sea otter.

The ecological and cultural value of Átl'ka7tsem / Howe Sound has been further confirmed by the recent investment of almost \$1 million over four years to increase biodiversity conservation efforts in the Átl'ka7tsem / Howe Sound Biosphere Region; efforts which would be undermined by the proposed amendments to conditions 3.8 and 6.4.

These designations have been made subsequent to the original decision statement on the Woodfibre LNG project. As a result, they were not taken into account during the initial process. We believe that the Proponent's amendment application provides an opportunity to rectify this, and to allow the UNESCO designation to inform better management of the ecosystem during project development.

7. Comments from Environment and Climate Change Canada on Condition 6.4 were misrepresented in IAAC's Draft Analysis

As highlighted in a public submission by Environment and Climate Change Canada (ECCC) dated December 19th 2022,³⁸ we are concerned that the IAAC draft analysis misrepresented comments provided by ECCC regarding Woodfibre LNG's proposed changes to Condition 6.4.

The IAAC draft analysis falsely stated that: "*Environment and Climate Change Canada (ECCC) advised the Agency that the proposed changes to condition 6.4 to clarify exceedances attributable to the Project are not expected to increase the extent to which the effects of the Project, as assessed during the environmental assessment, are adverse.*" ECCC requested that this sentence be removed.

ECCC flagged several errors and misrepresentations in IAAC's draft analysis, and it appears from their submission that the proposed changes to Condition 6.4 could increase the adverse effects of the project. We also note that IAAC has erroneously stated on page 3 of the draft analysis that Woodfibre LNG has begun construction. What other errors has the draft IAAC report included in its analysis and recommendations? We are particularly concerned about the implications of failing to properly incorporate and attribute commentary from another agency. An omission of this magnitude erodes trust in the agency and the environmental

³⁷ van Oostdam et al (2022) [Slhawt'/Herring Survey Report](#), Átl'ka7tsem/Howe Sound

³⁸ ECCC (December 2022) "[Re: Woodfibre LNG - Environment and Climate Change Canada's comments on the Draft Analysis of Proposed Changes to the Woodfibre LNG Project Decision Statement Conditions.](#)"

assessment process overall, and challenges our faith that comments and concerns from the general public will be heard and heeded.

We request that an updated Draft Analysis incorporating these comments from ECCC be released to the public, and that a second public comment period be posted to enable the public to provide comments on more complete and accurate information.

It is our view that if ECCC determines that the proposed amendments to Condition 6.4 will increase adverse effects of the project, then these changes should not be approved as per Section 68(2) of the Impact Assessment Act.

8. The proposed amendments to Condition 6.4 should be rejected

The Proponent requests amendment to Condition 6.4 on the basis of feasibility. Holding the Proponent to the condition as laid out in the original EA is not, in our opinion, onerous or infeasible but simply less convenient. This does not represent a sound argument for amending the condition. The Proponent seeks to modify Condition 6.4 as follows, with proposed text bolded and underlined:

*“The Proponent shall, **during construction and operation**, monitor water quality and sediment, using as a benchmark 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 **attributable to the Project** to relevant government authorities and Aboriginal groups, and implement additional mitigation measures to remedy those exceedances **or reduce the associated risk to human health.**”*

We object to each of these changes and urge you to reject them.

a. “...during construction and operation”

Limiting water quality monitoring to the construction and operation period leaves open the possibility of water contamination following eventual retirement of the site. Given Átl'ka7tsem / Howe Sound's history of industrial pollution and corporate abdication of responsibility for cleanup thereof, it is reasonable to require post-operation water quality monitoring to ensure that Woodfibre LNG performs adequate decontamination as needed. Long-term monitoring is of even greater importance in sites such as this one where residual contamination remains in the subsurface, due to the risk of remobilization of contaminants.³⁹

We concur with ECCC's recommendations that “*monitoring must occur during all Project phases, not only during construction and operation.*” The request that potential detrimental effects on water quality 25-45 years hence should be permanently out of scope should be summarily denied. To maintain best practices, the Project must continue monitoring water quality until the site is fully closed and decommissioned.

³⁹ Denham et al (2020) [Improving long-term monitoring of contaminated groundwater at sites where attenuation-based remedies are deployed](#). Environmental Management 66: 1142-1161.

b. **“...attributable to the Project”**

We object as well to the insertion of the words *“attributable to the Project.”* Due to the site’s history as a pulp mill, contamination of the sea-floor below and adjacent to proposed construction remains, despite site remediation work. Construction activities are likely to release and remobilize pollutants that have accumulated in seafloor sediments over time as a result of pulp mill activities.⁴⁰ We are concerned that by modifying the language to monitor only for effects attributable to the Project, Woodfibre LNG seeks to abdicate responsibility for contaminants introduced by previous industrial activities but remobilized by new construction work. Although the 2015 Environmental Assessment Report concluded that mobilization of legacy contaminants could be minimized with mitigation, granting this change to the condition could be interpreted to mean that mitigation for legacy contaminants is not the responsibility of the Proponent.

When Woodfibre LNG purchased the Woodfibre site from Western Forest Products in February 2015, site clean-up and remediation was a condition of purchasing the site.^{41,42,43,44} Woodfibre LNG was well-aware of the contaminants located on the site prior to purchasing the site in 2015 as per the Keystone Environmental report titled “Uplands Human Health and Ecological Risk Assessment” dated 31st October 2014.⁴⁵ We are concerned that, by introducing this proposed amendment to Condition 6.4, Woodfibre LNG is attempting to abdicate its responsibility to monitor water quality and sediment on the site and remediate accordingly to avoid exceedances. Woodfibre LNG has a history of failing to report spills at the site to the appropriate authorities.⁴⁶

c. **“...or reduce the associated risk to human health”**

The focus of Condition 6.4 should be the protection of aquatic life, not solely the protection of human health. Limiting risks only to human health is inappropriate given both the context of Átl’ka7tsem / Howe Sound as a UNESCO Biosphere Region, as well as the likelihood of indirect impacts to human health by failing to adequately protect overall water quality. We concur with the recommendations by ECCC that the phrase *“or reduce the associated risk to human health”* should be omitted because it could allow the Proponent to avoid mitigation of contamination by instead limiting human exposure to contaminants. Without additional details, this amendment effectively clears Woodfibre LNG of responsibility for any amount of contamination up to and including exceedances harmful to human health, but not marine, avian, or terrestrial species. This is an alarmingly broad concession and we do not believe this fulfills the intention of the original condition.

⁴⁰ Hieb et al (2021) [In-water bridge construction effects on manatees with implications for marine megafauna species](#). Journal of Wildlife Management 85(4): 1-12.

⁴¹ Thuncher, J (2015) [Woodfibre LNG finalizing \\$25m land purchase in Squamish](#). Business in Vancouver, published 2015-01-22.

⁴² Offshore Energy (2015) [Western Forest Products completes sale of pulp mill site to Woodfibre LNG](#). Offshore Energy, published 2015-02-09.

⁴³ Aldous, R (2013) [Former Woodfibre site tentatively sold](#). Squamish Chief, published 2013-01-13.

⁴⁴ Aldous, R (2014) [Woodfibre environmental cleanup ongoing: official](#). Squamish Chief, published 2014-07-11.

⁴⁵ Keystone Environmental (2014) [Uplands Human Health and Ecological Risk Assessment, Former Squamish Pulp Mill, Woodfibre, BC](#).

⁴⁶ Thuncher and Garstin (2014) [Not properly notified of spill: Squamish Mayor](#). Published 2016-9-14.

9. Issues with the Professional Reliance approach

In this draft analysis, IAAC staff appear to rely on Woodfibre LNG's application and statements and treat them as both accurate and factual. This is extremely problematic from a professional reliance standpoint.

The professional reliance approach has repeatedly failed to protect the communities around Átl'ka7tsem / Howe Sound through the broken environmental assessment processes (both Provincial and Federal) we have experienced for Woodfibre LNG, FortisBC's pipeline and compressor station, and the proposed Burnco gravel mine. To briefly summarize some of the key issues that we have identified:

- 1) Lack of baseline data and peer-reviewed science;
- 2) Conflict of interest and inherent bias of studies that are commissioned and managed by the proponent;
- 3) Selective suppression of reports commissioned by the proponents;

This has resulted in a loss of public trust in the Environmental Assessment process, which is further exacerbated by the failure of the BC Environmental Assessment Office (BC EAO) and the Impact Assessment Agency of Canada (IAAC) to meaningfully engage the public or to incorporate public feedback into policy decisions.

We encourage IAAC to critically evaluate the claims in Woodfibre LNG's application to amend Conditions 3.8 and 6.4, and to recognize that the proponent has a clear conflict of interest given the benefits the proponent stands to gain if they are successful in weakening these two conditions.

10. Lack of notification and other issues with the IAAC amendment process

While we appreciate that, in response to a request from our organization, the public comment period was extended until January 30, 2023, the original comment period was to be between November 17 and December 19, 2022, during a time of year when people are busy with travel, family engagements, and end-of-year work commitments. This is an issue that we have flagged repeatedly over the last nine years, as *"a process that limits the time for government and stakeholders to scrutinize applications is unfair given that Proponents are typically far less restricted in how long they have to assemble their applications."*⁴⁷

IAAC states that it values public participation as *"an essential part of an open, informed and meaningful impact assessment process,"*⁴⁸ but short timelines such as these place an unrealistic burden on the general public to have a clear understanding of the environmental assessment process; review highly technical written materials; engage directly with IAAC and Woodfibre LNG for clarification; ensure that any and all comments are within the scope of the amendment review; and complete all of this within a short time window. Because of these unrealistic expectations, an unfair burden is laid on citizen-led organizations like My Sea to Sky to distill the information and share it with the general public.

We request that IAAC address these issues by taking the following actions:

⁴⁷ Joseph et al (2015) Good practices for environmental assessment. Impact Assessment & Project Appraisal, Volume 33 Issue 4, Pages 238-254. <https://doi.org/10.1080/14615517.2015.1063811>

⁴⁸ Impact Assessment Agency of Canada (2019) [Interim Guidance: Public Participation under the Impact Assessment Act](#): Introduction, page 3.

- ensure that stakeholder groups are notified of amendment applications well in advance, with clear timelines for public comment to facilitate planning and engagement, and to give organizations enough time to secure support from relevant experts;
- extend the public comment period to allow a minimum of two months to ensure organizations can seek expert support and meaningfully engage in the process;
- provide funding to enable organizations to hire experts and/or fund staff time, given that public comment periods can require a major reallocation of resources for small organizations like ours.

11. Suggested changes to the amendment

In summary, although it is our hope that the requested amendments will be rejected outright and the Proponent be held to the original conditions of the Decision Statement, at a minimum we request that the following changes be made:

- Postpone a decision on the amendment application until the Ocean Noise Strategy has been released and the findings therein have been incorporated into Woodfibre LNG's plans, and used to inform the Minister's decision on the proposed amendment to Condition 3.8;
- Insert language in Condition 3.8 to require monitoring of noise levels in air **and** water to reflect pinniped hearing sensitivity in both media;
- In order to reduce potential conflict of interest, require that a trained marine mammal observer be brought in from an external agency, not as an employee of Woodfibre LNG;
- Maintain the original exclusion zones for all marine mammals, and require detailed plans for monitoring of pinnipeds and cetaceans within 7.3 km to ensure that the exclusion zones are adhered to. Given the difficulty of locating marine mammals at distance—the maximum reported detection range for harbour porpoises using a hydrophone is 400 m, for instance⁴⁹—assurance that adequate monitoring will be performed is vital.
- As per **Section 72 (1)** of the Impact Assessment Act, the Minister can require a proponent to provide more information before considering an amendment to the decision statement. We strongly recommend that Woodfibre LNG must be able to provide evidence that Conditions 3.8 and 6.4 are not “technically or economically feasible” and prove that the proposed amendments will not increase the extent of adverse effects.

While recognizing that this public comment period is narrowly focused on these two conditions, we must remind your agency that developing new fossil fuel infrastructure at a time when a global climate crisis has been universally acknowledged by the scientific community, and building a facility that will lock in substantial greenhouse gas emissions, both in BC and at the point of fuel usage, is inexcusable.

⁴⁹ Williamson et al. (2017) [Diurnal variation in harbour porpoise detection - potential implications for management](#). Marine Ecology Progress Series 570: 223-232.



IN CONCLUSION

My Sea to Sky is strongly opposed to Woodfibre LNG's proposed amendments to Conditions 3.8 and 6.4 and we call on Minister Guilbeault to reject these changes.

Woodfibre LNG has failed to provide evidence that these conditions are not "*technically and economically feasible*" or that these proposed changes will not increase the extent of adverse effects as required by Sections 22 and 68 of the Impact Assessment Act.

We call on IAAC to heed the recommendations we have made in this submission, and to ensure that in future more weight is given to the views of scientists, local communities, and those most at risk from the environmental impacts of a given project than to the financial interests of private industry.

We support the submissions made by the District of Squamish, Howe Sound Biosphere Region Initiative, the Sunshine Coast Conservation Association, Concerned Citizens Bowen, Fiona Beaty, Graham Parkinson, and many other concerned citizens, and we reiterate the concerns that they have highlighted with this proposed amendment to Conditions 3.8 and 6.4.

Please feel free to contact us for further information or clarification.

Sincerely,

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**Copied to:**

Squamish Nation Band Council

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The Honourable Jonathan Wilkinson, Minister of Natural Resources and MP for North Vancouver

Patrick Weiler, MP for West Vancouver—Sunshine Coast—Sea to Sky Country

Premier David Eby

MLA Hon. Josie Osborne, Minister of Energy, Mines, and Low Carbon Innovation

MLA Hon. George Heyman, Minister of Environment and Climate Change Strategy

MLA Hon. Bowinn Ma, Minister of Emergency Management and Climate Readiness

MLA Jordan Sturdy, West Vancouver-Sea to Sky

MLA Nicolas Simons, Powell River-Sunshine Coast

District of Squamish

District of West Vancouver

Bowen Island Municipality

Village of Lions Bay

Town of Gibsons

Resort Municipality of Whistler

Gambier Island Local Trust Area

Squamish Lillooet Regional District

Sunshine Coast Regional District

Ruth Simons, Átl'ka7tsem / Howe Sound Biosphere Region

Acronyms

BC EAO = BC Environmental Assessment Office

COSEWIC = Committee on the Status of Endangered Wildlife in Canada

ECCC = Environment and Climate Change Canada

IAA = Impact Assessment Act

IAAC = Impact Assessment Agency of Canada

SARA = Species at Risk Act