

Proposed Woodfibre LNG Project – Comments #801 – 900, Table 9 of 17

The following table includes Woodfibre LNG Limited's responses to comments #801 - 900 submitted to the BC Environmental Assessment Office (EAO) as part of the 60-day public comment period held between January 22 and March 23, 2015. The following table is sorted chronologically. Where multiple comments were received in one submission, they have been separated to allow for specific responses.

EAO has reviewed the public's comments and Woodfibre LNG Limited's responses and is satisfied that Woodfibre LNG Limited has addressed the public's comments for the purpose of the Application stage of the Environmental Assessment for the proposed Woodfibre LNG Project. The time and effort taken by those who submitted comments to EAO during the public comment period is appreciated and all of the comments received will be considered in the Environmental Assessment of the proposed Woodfibre LNG Project.

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
801	March 21, 2015	Personal Information Withheld - Canada	I am concerned about the LNG extraction processes on marine, mammal and human life.	Effect of the Project on Marine Life / Human Health	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p> <p>Woodfibre LNG Limited conducted a human health risk assessment that quantifies potential health risks associated with the Project, such as those associated with air emissions. The conclusion of the risk assessment as set forth in Section 9.2.2 was that the Project will have negligible or not significant residual effects to human health.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
802(i)	March 21, 2015	Personal Information Withheld - Burnaby, British Columbia	<p>I have just now learned about the proposed Woodfibre LNG facility, and am horrified at not only the risks inherent in such a facility -- especially in this location -- but also at the known detrimental effects.</p> <p>I am especially concerned regarding the extreme risks not only to the ecosystem (including the waterways and the land itself, but also, and especially, to the wildlife and human life in the area).</p>	<p>Safety</p> <p>Effects of the Project on Environment</p> <p>Human Health</p>	<p>At Woodfibre LNG, safety is the number one priority.</p> <p>Woodfibre LNG will be designed for the safe and efficient handling of liquefied natural gas, both on land and on water. This includes standards set out in the BC Oil and Gas Activities Act and the associated Liquefied Natural Gas Facility Regulation, national and BC building codes, as well as national and international standards, guidelines and codes of practice where there are no applicable codes for BC.</p> <p>The Accidents and Malfunctions section (Section 11.0) of the Application assessed the consequence and frequency of effects resulting from credible worst case scenarios for the Project. It showed that potential risks to the public were within the tolerable risk criteria regulated by the BC Oil and Gas Commission (OGC). The OGC will include a review of the quantitative risk assessment for this Project in the permit application review to confirm that the study and results meet the regulated requirements. Additional information on accidents and malfunctions was provided to the EAO on April 29, 2015. During operation, major accidents at LNG facilities are very rare. LNG is not explosive in an unconfined environment. Two fire / vapour cloud explosions at LNG facilities are known to have occurred in the past 60 years. A vapour cloud and fire in Ohio occurred in 1944 because of leaks from an LNG tank constructed from inappropriate material, and in 2004 an explosion occurred in Algeria because of a steam boiler problem (boilers are not part of the Project design). Standards for modern LNG facilities have benefited from the lessons learned from these accidents, and include design requirements that avoid these accidents.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p> <p>Section 5.2 Atmospheric Environment (Air Quality) of the Application includes an assessment of the potential Project-related effects to air quality. The Application concluded that the changes to air quality as a result of Project-related effects are below ambient air quality criteria for all indicator compounds and the residual effects are considered negligible or not significant.</p> <p>Section 9.2.2 Human Health Risk Assessment included an assessment of the potential effects on humans by Project-related emissions. The Application concluded that there were no Project-related significant adverse effects.</p> <p>Please also refer to Public Safety, Marine Mammals and Wildlife information sheet that have been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
802(ii)	March 21, 2015	Personal Information Withheld - Burnaby, British Columbia	Water is precious and critical for life. Tanker traffic -- even without any accidents (and, barring a miracle, there will be some) -- will disrupt migration paths of sea life such as orcas and salmon.	Marine Traffic Effect of the Project on Marine Life	<p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>For more information on the effects of the Project on marine life please refer to components of the marine environment that have been assessed including Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p> <p>An assessment of the potential effects of the Project on marine mammals is included in Section 5.19 Marine Mammals, and includes an assessment of the effects of noise. The Application concluded that there is the potential to marine mammals to experience short-term behavioural disturbances from construction activity (pile driving) and vessel traffic.</p> <p>Woodfibre LNG Limited will retain a contractor to perform underwater acoustic monitoring for pre, during and post Project construction. The underwater monitoring will collect underwater sound levels and marine mammal presence (e.g., of those species present, their frequency and seasonality). This will contribute further to baseline information for both underwater sound levels and mammal presence in the Project area and in the vicinity of the Project site to monitor potential changes of marine mammals over time.</p> <p>Please also refer to the Marine Mammals information sheet that have been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
802(iii)	March 21, 2015	Personal Information Withheld - Burnaby, British Columbia	<p>Water usage will also directly and negatively affect the sea life in the area, and will also reduce -- by a significant amount -- the water available for non-industrial purposes.</p> <p>There is no acceptable reason for approving this facility, in light of the risks. No financial gain justifies the destruction of this accessible, world-renowned, ecologically diverse, and liveable region of BC.</p>	Effect of the Project on Water	<p>Woodfibre LNG Limited has committed to maintaining minimum instream flow releases, which will be determined by a qualified professional. This means that the water licence could not be used to capacity during low flows, and flows that are protective of fish and fish habitat will remain in Mill Creek.</p> <p>More information is included in Section 5.9 Water Quantity and Section 5.15 Freshwater Fish and Fish Habitat of the Application.</p> <p>All discharges to the marine environment will comply with applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section 14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>Section 5.10 Marine Water Quality assesses the potential Project-related effects to marine water quality. The Application concluded that there, with mitigation measures, there are no Project-related adverse effects to marine water quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15) and Marine Benthic Habitat (Section 5.16). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p>	
803	March 21, 2015	Dianna Bigg - Squamish	<p>I am concerned for the environmental impact, and as with every profitable resource the environment becomes secondary to the profit margins. This does not benefit anyone except those involved in the profits. I VOTE NO! Howe sound is a delicate ecosystem that is on the rebound from the logging an mining industries of the regions past, and just as it begins to stabilize again, you bring this into the equation. I believe the environmental impact will exceed the value of the ecosystem services the natural habitat would provide the area if left unaltered by this project.</p>	Value of Howe Sound	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>The Woodfibre site has been used for industrial purposes for 100 years and is zoned for industrial use. As a condition of acquiring the site, Woodfibre LNG required the completion of remediation work on site. On December 22, 2014 the Ministry of Environment issued two Certificates of Compliance (uplands and water lot) evidencing completion of the remediation.</p> <p>Woodfibre LNG Limited intends to perform additional remediation and restoration in the Project area. Plans for additional remediation include the removal of approximately 3,000 existing creosote-coated piles from the waterfront in the Project area and the creation of a Green Zone around Mill Creek. This work will be carried out in partnership with the local groups, where suitable, so that local conservation and restoration targets can be met (please refer to Section 2.6.7 Ecological Benefits of the Application).</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
					environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.	
804	March 21, 2015	Joan McCullough - Lions Bay	Woodfibre LNG has bought the Water License to take water from Mill Creek. The Dept. of Fisheries and Oceans has objected to this, because the amount of water that WFLNG is proposing to remove will reduce water levels in Mill Creek to levels that will no longer support fish life, especially in the Summer months . Woodfibre LNG needs to source water for this project from somewhere else. Question.. Will WFLNG be sourcing water from elsewhere, or will they just go ahead and destroy the fish life in Mill Creek in order to go ahead with this insane project??	Mill Creek	In British Columbia, water licences must be appurtenant to land, a mine or an undertaking. The water licences for the Project are appurtenant to the fee simple land. As such, they were transferred to Woodfibre LNG Limited with the transfer of the Woodfibre property. Woodfibre LNG Limited has committed to maintaining minimum instream flow releases, which will be determined by a qualified professional. This means that the water licence could not be used to capacity during low flows, and flows that are protective of fish and fish habitat will remain in Mill Creek. More information is included in Section 5.9 Water Quantity and Section 5.15 Freshwater Fish and Fish Habitat of the Application.	
805	March 21, 2015	Glen Dennison - Lions Bay	Dear Ministers and Project leaders, I'm very concern about the transiting of the LNG tanker ships through Howe Sound and the resulting effects on the benthic life from the propeller thrust envelope behind the ship. Along the entire eastern side of Howe Sound starting at Defence Islands are located glass sponge bioherms. These sponge bioherms are unique in the world and are habitat for many species of rockfish. If the rockfish are to repopulate Howe Sound, these Hexactinellid sponge beds must be protected from damage. The very size of the thrust cone as per the figures given in the project document (5.10-4) of 1200 meters, places the fragile three dimensional silica scaffolding of the sponge at risk. Both Aphrocallistes vastus and Heterochone calyx sponge build their spicules, that form their scaffolding, from silica found in the ocean water and erect them into various morphologies. Noting that the sponge is placed in danger by not only the average thrust vector from the 8.6 meter prop, but by the maximum thrust vector; this maximum would occur when the LNG tanker is heading into the highest wind and wave forces not mentioned or outlined in the project document. Noting the northerly outflow winds can exceed 100 km/ hour (Pam Rocks weather station) with wave peaks near 4 meters directly in the path of the LNG tanker. These weather conditions force the ship to use much greater propeller thrusts than are indicated or studied in the submitted project documentation. Again noting, that it would only take one pass to completely destroy any of the sponge beds. Recovery is very slow with sponge grow rates of 2 - 7 cm per year if they can recover at all. Sponge beds located in the intended LNG tanker route: Defence Islands east pinnacle Porteau Sill bioherm (possible DFO trap fishing closure area) Clayton bioherm off the east side of Anvil Island	Glass Sponge Reefs	Thank you for your comment. Glass sponges are addressed in both the Application document (Section 5.16.2.4.1) and Marine Baseline Studies Report (Appendix 5.10). Woodfibre LNG expects that three to four LNG carriers will arrive at the site each month. The carriers will navigate through the established commercial shipping route in/out of Howe Sound (through Queen Charlotte Channel) to the Strait of Georgia and out to the Pacific Ocean. The carriers will be escorted by at least three tug boats, at least one of which will be tethered, and will be piloted by BC Coast Pilots who are experts with Howe Sound navigation. The depth at the Porteau Sill is approximately 73 metres. The LNG carriers draft will sit approximately 12 metres to 15 metres below the water surface providing a clearance of more than 50 metres. The sailing line (shipping route) is a minimum of 1300 metres (and typically more than 1500 metres) from the location of the sponge reefs located at Halkett Point and Lost Reef between Pam rocks and Christie Islets. At depths ranging between 20 m and 40 m (i.e., associated depths where glass sponge reefs have been observed at these locations), the velocity produced by a propeller wash is considered negligible due to dissipation of the prop-wash with distance from sailing line (i.e. depth and distance). All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section 14 of the <i>Environmental Management Act</i> . Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit. For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. The Application concluded that there were no Project-related	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>Christie Islet bioherm (Lost Reef)</p> <p>Lions Bay sea-mount bioherms (two)</p> <p>Halkett Point east pinnacle bioherm</p> <p>Bowyer Island south end bioherm</p> <p>Bowen Island Cates Bay bioherm</p> <p>Dorman Point bioherm</p> <p>Passage Island bioherms</p> <p>Howe Reef</p> <p>South West Passage Reef shallow bioherm</p> <p>South West Passage Reef deep bioherm</p> <p>If the people of Canada are serious about protecting our oceans and continuing to have a recovering Howe Sound we must protect these unique glass sponge bioherms from damage. The rockfish populations depend on their habitat and this unique habitat must be protected.</p> <p>See DFO publication cat no Fs49-3/2010 (Pacific Region Cold-Water Coral and Sponge Conservation Strategy) Sections 1.2 (Rational for Protecting Cold Water Corals and Sponge) Sections 1.4.2 (Precautionary approach)</p> <p>Also a concern is the stated transiting depth of the LNG tanker; from the project document; Water depth (transit) 125 m minimum depth seaward of berth and in Howe Sound</p> <p>The 125 meter required depth will not permit the safe passage over the Porteau Sill. The top of the sill sits at only 31 meters and the deepest passage on the sill is at 70 meters which places the LNG tanker within 500 meters of the sponge bioherm that the Department of Fishes and Oceans is currently studying for a complete closure of all type of contact trap fishing (prawn, crab). It makes no sense to drive an LNG tanker over this area that in one pass could complete remove the sponge bed from the ocean floor if the area is being closed to another type of commercial activity. Noting, that the sill could not safely be dredged without producing damaging levels of sedimentation that would smother the sponge. As the DFO document states (Sections 1.4.2); a lack of studies or scientific information will not be used as a reason for failing to protect fish habitat.</p> <p>I recommend that the minister carefully study the effects of such large LNG tankers on the benthic stationary life in Howe Sound, noting the study of Hexactinellid sponges is still in it infancy.</p> <p>Considering</p> <p>we have yet to locate all sponge beds in Howe Sound the resent research shows that sponge beds are part of the rockfish habitat many gravid rockfish and larvae have been observed and recorded in sponge bioherms there is precious little funding for the study of cold water sponge, hence Canadians should be very careful at this point in time in it's</p>		significant adverse residual effects to the environment.	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>protection no studies from professional marine engineers on the actual forces of the propeller thrust envelope underwater</p> <p>My recommendation is to provide much more funding for the study of sponge and it's synergy in the natural scheme. Noting there is no retroactive remediation, we as humans can do, to restore a damaged sponge bed. And a failure of the sponge beds may indicate a non recovery path for rockfish in Howe Sound.</p> <p>To summarize; I suggest that the LNG facility is poorly located with regards of the large vessel transport of LNG.</p>			
806	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	<p>SAFETY: Siting an LNG facility in Howe Sound violates international safety standards and practices, putting Howe Sound residents at risk As LNG tankers transit Howe Sound, there is a high-danger zone for 1,600 metres (1-mile) on either side of the LNG tanker. If an accident happens, people within this zone risk death by asphyxiation, or death/injury by fire or explosion. Every time a tanker travels through Howe Sound (approximately 6-8 transits a month according to Woodfibre LNG) several Howe Sound communities will be in that high-danger zone, including: Bowen Island, Bowyer Island, Anvil Island, Passage Island, Porteau Cove, West Vancouver, and parts of the Sea to Sky highway. The Society of International Gas Tanker and Terminal Operators (SIGTTO) LNG Terminal Siting Standards states that LNG terminals should not be located in narrow, inland waterways with dense local populations and significant commercial, recreational, and ferry traffic. Why would that guideline not apply to Howe Sound? The proposed siting of the Woodfibre LNG terminal and associated transit of LNG tankers through Howe Sound poses an unacceptable risk to safety of people in communities along the shores of Howe Sound</p> <p>Source: Sandia Report, 2004 and SIGTTO LNG Terminal Siting Standards</p> <p>ENVIRONMENT: The once-through seawater cooling system proposed by Woodfibre LNG is outdated Woodfibre LNG is proposing an outdated and damaging cooling method to help cool the LNG facility. They propose to extract 17,000 tonnes (= 3.7 million gallons, or 7 Olympic-sized 50-meter swimming pools) of seawater from Howe Sound, chlorinate it, heat it, and then spit it back out into the sound every hour of every day for the next 25 years. This method has been banned in California and several other places as it is very damaging to marine life such as juvenile salmon, herring, and plankton which are the building blocks for all other life in Howe Sound. If the herring are impacted, the dolphins, orcas, and humpbacks are also impacted as they no longer have a food supply. The impacts of increased water temperatures and the addition of chlorinated seawater will likely reverse the recent</p>	LNG Project	<p>Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 11-21.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>revival of marine life in Howe Sound, which is just now recovering from the toxic legacies of previous industries. This is unacceptable.</p> <p>HEALTH: Social costs and health impacts of air pollution Woodfibre LNG is estimating air pollution emissions of 295.7 tonnes of nitrous oxides (NOx) and 43.8 tonnes of sulfur dioxide (SO2) every year (See Table 5.2-14 of the Air Quality Section of Woodfibre LNG's environmental assessment application). Emissions of NOx and SO2 interact with other compounds to form fine particles, which can affect both the lungs and the heart. Exposure to these particles is linked to increased risk of respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; decreased lung function; aggravated asthma; onset of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. A new study published in the scientific journal, Climatic Change, estimates the true social costs of air pollution that aren't accounted for in the cost of fossil fuels and other pollutants. Social costs include the health impacts of air pollution as well as impacts from climate change. The study found that sulfur dioxide costs \$42,000 per tonne, and nitrous oxides cost \$67,000 per tonne.</p> <p>Sources: Mills et al (2009) Adverse cardiovascular effects of air pollution. Nature Clinical Practice Cardiovascular Medicine 6: 36-44 Shindell (2015) The social costs of atmospheric release. Climatic Change</p> <p>SITE SUITABILITY: The Woodfibre site is not a safe location for a hazardous LNG facility On February 15th, 2015, a 3.4 magnitude earthquake hit Vancouver's coast that was felt throughout Howe Sound. The Woodfibre LNG proposal is located within this zone of moderate to high earthquake risk, on two known thrust faults. The Woodfibre site also has a history of slope failure. In 1955 a wharf and three warehouses collapsed into Howe Sound at the Woodfibre site, causing \$500,000 – \$750,000 in damages (Bornhold, B.D., 1983, Fiords, GEOS, no. 1, p 1-4). A recent, but unreleased, geotechnical study by Knight Piesold identifies that approximately 46% of the study area was mapped as having rapid mass movement. This means landslides and slope slumpage... including existing natural landslide hazards as well as terrain where construction activity may increase landslide initiation. Why hasn't the geotechnical study by Knight Piesold been released?</p> <p>Source: B.C. Ministry of Energy and Mines</p> <p>ECONOMY: The requested socio-economic study has not been provided During construction, only 4.3% of jobs (=38.5 out of 895) will be for locals living in the Squamish/Whistler corridor (See Table 6.2-8 of the Labour Market section of Woodfibre LNG's environmental assessment application). Why</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>are there so few jobs predicted to be filled by workers in the Squamish/SLRD area? The EA application is also very unclear about how many of the 100 full-time jobs will be filled by residents of Howe Sound once the LNG terminal is operational. What are the benefits to Squamish? What are the costs? There is still no clarity around how much in municipal taxes will be paid to the District of Squamish. How will this project impact existing small businesses and existing industries in Howe Sound?</p> <p>CLIMATE CHANGE: 142 thousand tonnes of greenhouse gas emissions is unacceptable Woodfibre LNG is now estimating greenhouse gas emissions to be 142 thousand tonnes of CO2 equivalent every year. These annual emissions of CO2 equivalent from Woodfibre LNG is equal to adding over 18,000 cars to the highway, driving to Vancouver and back, every day. This is more than six times greater than current highway traffic. It is irresponsible to approve this kind of polluting industry at a time when we need to transition away from fossil fuels to mitigate the risks associated with climate change, and to reduce the economic and health impacts of air pollution in general.</p> <p>GOVERNMENT REGULATION: Inability of government to monitor, enforce, and respond to issues There are no regulations adopted to regulate this LNG industry from a technical standpoint. Any of the current standards are not applicable to the LNG industry. Do the regulators have the knowledge and the expertise and the capacity to oversee this industry or will they be relying on the proponent to monitor themselves and report to the regulator? Self-monitoring industries have created several examples of accidents with resulting environmental destruction in recent years, including the Lac Megantic rail disaster and the Mt Polley tailing pond spill.</p> <p>ENVIRONMENT: Removal of water from Mill Creek unsustainable for fish life Woodfibre LNG has bought the water license to take water from Mill Creek. The Department of Fisheries and Oceans has objected to this because the amount of water that WLNG is proposing to remove will reduce water levels in Mill Creek to levels that will no longer support fish life, especially in the summer months. Woodfibre LNG needs to source water for this project from somewhere else.</p> <p>ENVIRONMENT: Missing baseline studies The following baseline studies are either missing or are inadequate as they do not conform to any recognized scientific standards: fish, birds, marine mammals, air quality, shipping, water quality, marine sound, and atmospheric sound, marine life near the Woodfibre site, and the cumulative impact assessment. Proper studies need to be completed before any decisions can be made regarding this</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>project.</p> <p>VIEWSCAPES: BC Hydro clearcut of two 64 metre swaths of forest at the Woodfibre site will impact views from the Sea to Sky highway and the gondola BC Hydro is proposing to clearcut two 64 metre swaths of forest at the Woodfibre site which will create visible scars in the Howe Sound viewscape which will be very visible from the highway and the gondola. This information was only made available during the recent BC Hydro open house held on 19th March, near the end of the public comment period. This information is not included in the cumulative impact assessment of the Woodfibre application and it should be. This late release of information pertinent to this project and the timing of the BC Hydro open houses is unsatisfactory.</p> <p>ENVIRONMENT: Will there be smog? Will there be a smell? Will there be noise?</p>			
807	March 22, 2015	B Hillier - Roberts Creek, British Columbia	I do not believe that Howe Sound will be a safe place for people with a LNG plant and tanker traffic.	Safety	<p>At Woodfibre LNG, safety is the number one priority. Woodfibre LNG will be designed for the safe and efficient handling of liquefied natural gas, both on land and on water. This includes standards set out in the BC Oil and Gas Activities Act and the associated Liquefied Natural Gas Facility Regulation, national and BC building codes, as well as national and international standards, guidelines and codes of practice where there are no applicable codes for BC.</p> <p>The Accidents and Malfunctions section (Section 11.0) of the Application assessed the consequence and frequency of effects resulting from credible worst case scenarios for the Project. It showed that potential risks to the public were within the tolerable risk criteria regulated by the BC Oil and Gas Commission (OGC). The OGC will include a review of the quantitative risk assessment for this Project in the permit application review to confirm that the study and results meet the regulated requirements. Additional information on accidents and malfunctions was provided to the EAO on April 29, 2015.</p> <p>During operation, major accidents at LNG facilities are very rare. LNG is not explosive in an unconfined environment. Two fire / vapour cloud explosions at LNG facilities are known to have occurred in the past 60 years. A vapour cloud and fire in Ohio occurred in 1944 because of leaks from an LNG tank constructed from inappropriate material, and in 2004 an explosion occurred in Algeria because of a steam boiler problem (boilers are not part of the Project design). Standards for modern LNG facilities have benefited from the lessons learned from these accidents, and include design requirements that avoid these accidents.</p> <p>Subject to the recommendations of Transport Canada's Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) Review Committee, which includes Transport Canada, Pacific Pilotage Authority, BC Coast Pilots and Canadian Coast Guard, Woodfibre LNG Limited has always maintained that it would deploy at least three tugs, at least one of which will be tethered, to provide a dynamic safety awareness zone for recreational and pleasure craft around the LNG carrier during its transit within Howe Sound. This dynamic safety awareness zone would extend up to 50 metres on either side of the vessel and up to 500 metres in front and, being dynamic in nature, would be transient</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
					<p>with the movement of the LNG carrier. This arrangement of tugs also serves as an emergency provision to address contingencies that may require the vessel to stop or engage in manoeuvres at very short notice.</p> <p>Please also refer to Public Safety Information Sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
808	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	<p>I am 100% hands down completely uncomfortable and opposed to having the Woodfiber LNG plant in Howe Sound.</p> <p>I have spent months educating myself on the the potential risks and benefits of LNG in Squamish -I feel this poses too sort a risk to our environment, and the health and safety of the families who life in the surrounding areas.</p> <p>What good is a "thriving economy" when our environment is unwell? We are stewards of this beautiful planet - let's stop pillaging and contaminating her.</p> <p>If mankind cannot to have compassion, love and empathy for The Mother to us all, we are far lost.....</p>	Effect of the Project on Environment / Human Health	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p> <p>Woodfibre LNG Limited conducted a human health risk assessment that quantifies potential health risks associated with the Project, such as those associated with air emissions. The conclusion of the risk assessment as set forth in Section 9.2.2 was that the Project will have negligible or not significant residual effects to human health.</p>	
809(i)	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	<p>I am strongly opposed to this project for many reasons, here are some of the key health risks that concern me:</p> <p>HEALTH: Social costs and health impacts of air pollution Woodfibre LNG is estimating air pollution emissions of 295.7 tonnes of nitrous oxides (NOx) and 43.8 tonnes of sulfur dioxide (SO2) every year (See Table 5.2-14 of the Air Quality Section of Woodfibre LNG's environmental assessment application). Emissions of NOx and SO2 interact with other compounds to form fine particles, which can affect both the lungs and the heart. Exposure to these particles is linked to increased risk of respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; decreased lung function; aggravated asthma; onset of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease.A new study published in the scientific journal, Climatic Change, estimates the true social costs of air pollution that aren't accounted for in the cost of fossil fuels and other pollutants. Social costs include the he alth impacts of air pollution as well as impacts from climate change. The study found that sulfur dioxide costs \$42,000 per tonne, and nitrous oxides cost \$67,000 per tonne.</p> <p>Sources: Mills et al (2009) Adverse cardiovascular</p>	Human Health / Air Quality	<p>Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 13.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			effects of air pollution. Nature Clinical Practice Cardiovascular Medicine 6: 36-44 Shindell (2015) The social costs of atmospheric release. Climatic Change			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
809(ii)	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	<p>I am especially concerned about these particles in the air during times when the wind does not blow and this polluted air will just sit stagnant over Squamish. The air monitor system WLNG has adopted would usually be a good system, however there are not enough measure stations in Howe Sound which means the system cannot monitor the air quality accurately. There need to be several more air monitoring stations.</p> <p>Will Squamish hospital have nurses with special training to deal with pediatric lung issues as numbers might rise with poorer air quality due to WLNG.</p> <p>Many people have moved here because of the clean air, many people will move if this changes. It does rain quite a bit which means these particles & GHG that will be emitted by WLNG will come down as acid rain. How will this affect our drinking water and how will this be monitored and addressed? Acid rain will also affect any crops. Many people in the Howe Sound area grow some of their food in their backyard. Also acid rain will contribute to ocean acidification and we cannot afford to contribute to this.</p> <p>The Sea to Sky corridor has one of the highest birth rates in BC and in all of Canada. There are studies that connect air pollution to a multitude of brain diseases and disorders like Alzheimers, Parkinsons, strokes, ADHD, autism, impaired cognition and dementia.</p> <p>The following link provides a presentation by six physicians with expertise on air pollution and neurologic diseases: http://kcpw.org/blog/live-broadcasts/2015-01-30/uphe-seminar-air-pollution-harms-brain/ WLNG does not make sense from a health perspective. What could be more important than our health? We have clean air in Howe Sound, why would we risk it? There is too much at stake!</p>	Human Health / Air Quality	<p>Woodfibre LNG Limited is committed to building a project that is right for Squamish and right for BC – and this includes protecting the human health in the communities of Howe Sound.</p> <p>Woodfibre LNG Limited conducted a human health risk assessment that quantifies potential health risks associated with the Project, such as those associated with air emissions. The conclusion of the risk assessment as set forth in Section 9.2.2 was that the Project will have negligible or not significant residual effects to human health.</p> <p>Woodfibre LNG undertook air dispersion modelling based on planned activities and equipment use — including marine vessels — to predict air emissions from the Project operation phase. The results of the dispersion modelling were compared against federal and provincial standards and guidelines; and all predicted concentrations were below these standards and guidelines.</p> <p>Woodfibre LNG characterized current climate and climate trends using the Squamish Airport climate station. For more information, please see Section 5.2 Atmospheric Environment (Air Quality) of the Application includes an assessment of the potential Project-related effects to air quality. The Application concluded that the changes to air quality as a result of Project-related effects are below ambient air quality criteria for all indicator compounds and the residual effects are considered negligible or not significant.</p> <p>Section 5.3 Greenhouse Gas Management of the Application includes an assessment of the potential Project-related effects to greenhouse gases. The influence of Project-related greenhouse gas emissions on climate change was evaluated by assessing whether any measurable change in climate could result from the Project-generated greenhouse gas emissions. The relatively minor increase in global emissions associated with the Project would correspond to a change in climate that is unlikely to be measurable.</p> <p>Please also refer to Air Quality information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
810	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	<p>WLNG does not make sense in Howe Sound</p> <p>SITE SUITABILITY: The Woodfibre site is not a safe location for a hazardous LNG facility On February 15th, 2015, a 3.4 magnitude earthquake hit Vancouver's coast that was felt throughout Howe Sound. The Woodfibre LNG proposal is located within this zone of moderate to high earthquake risk, on two known thrust faults. The Woodfibre site also has a history of slope failure. In 1955 a wharf and three warehouses collapsed into Howe Sound at the Woodfibre site, causing \$500,000 – \$750,000 in damages (Bornhold, B.D., 1983, Fiords, GEOS, no. 1, p 1-4). A recent, but unreleased, geotechnical study by Knight Piesold identifies that approximately 46% of the study area was mapped as having rapid mass movement. This means landslides and slope slumpage... including existing natural landslide hazards as well as terrain where construction activity may increase landslide initiation. Why hasn't the geotechnical study by Knight Piesold been released?</p> <p>Source: B.C. Ministry of Energy and Mines</p>	LNG Project	Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 14.	
811	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	<p>We all know that we have to majorly reduce greenhouse gas emissions!</p> <p>It is ABSOLUTELY UNACCEPTABLE that WLNG is planning to pump out 142 thousand tonnes of greenhouse gas emissions into our air-shed.</p> <p>Woodfibre LNG is now estimating greenhouse gas emissions to be 142 thousand tonnes of CO2 equivalent every year. These annual emissions of CO2 equivalent from Woodfibre LNG is equal to adding over 18,000 cars to the highway, driving to Vancouver and back, every day. This is more than six times greater than current highway traffic. It is irresponsible to approve this kind of polluting industry at a time when we need to transition away from fossil fuels to mitigate the risks associated with climate change, and to reduce the economic and health impacts of air pollution in general.</p>	LNG Project	Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 16.	
812(i)	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	<p>ECONOMY: The requested socio-economic study has not been provided During construction, only 4.3% of jobs (=38.5 out of 895) will be for locals living in the Squamish/Whistler corridor (See Table 6.2-8 of the Labour Market section of Woodfibre LNG's environmental assessment application). Why are there so few jobs predicted to be filled by workers in the Squamish/SLRD area? The EA application is also very unclear about how many of the 100 full-time jobs will be filled by residents of Howe Sound once the LNG terminal is operational. What are the benefits to Squamish? What are the costs? There is still no clarity around how much in municipal taxes will be paid to the District of Squamish. How will this project impact existing small businesses and existing industries in Howe Sound?</p>	LNG Project	Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 15.	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
812(ii)	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	There has not been any study done on how many families and businesses that would leave Howe Sound if WLNG gets approved. We will be moving away from Squamish if WLNG is approved. I know of at least 10 other families that will definitely move if WLNG comes to Howe Sound. I also already know of families who have just sold their house and will be moving because they fear WLNG is a done deal and that the EAO will just approve the project regardless because of pressure from our government.	Local Economy EA Process	Woodfibre LNG Limited is of the view that the Woodfibre site is the right fit for an LNG facility. It features: zoned industrial, more than 100 years of industrial use, deepwater port, access to established shipping routes, access to FortisBC pipeline, access to BC Hydro transmission grid, and access to labour force. Woodfibre LNG Limited is also of the view that tourism and industry can work together to create responsible economic development in Squamish. BC Ferries and Squamish Terminals have shown how industry can successfully coexist with local tourism and recreation, and Woodfibre LNG Limited is working hard to follow that example.	
813	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	<p>I am strongly opposed to the WLNG project</p> <p>I am concerned about deep sea industrial anti-fouling paint which has been recognized as a really significant environmental toxin.</p> <p>All big ships and tankers have these coatings. That being said, these large vessels are usually only present in our harbour for a very short time period. The storage vessel used by Woodfibre LNG will be moored there for 365 days a year for at least 25 years. It will be releasing some amounts of toxins into Howe Sound on a daily basis. What are the cumulative effects of this and how will this be monitored.</p> <p>Howe Sound is only just starting to recover from industrial abuse. We need to give it time to recover. Tax payers have paid tons to get Howe Sound healthy again. Why would we risk any pollution in Howe Sound again. We have to learn from the past, we owe it future generations!</p>	Floating Storage and Offloading Unit	<p>Thank you for the comment.</p> <p>Woodfibre LNG Limited will use two existing LNG carriers as the floating storage and offloading unit (FSO). The FSO will store and offload the LNG to sea-going LNG carriers for export. The advantage of using LNG carriers for storage is that they are designed to withstand the harshest oceanic environments, including some of the most demanding like the North Atlantic and North Sea. Additionally, the cargo tanks of LNG carriers are designed to very high load requirements because they need to withstand the stresses of internal LNG motion during sailing in any weather condition, not once but over and over again for the vessels lifetime. By placing these vessels in a standstill condition and in an environment such as Howe Sound, where LNG motion will also be minimal, they are more than capable of remaining there safely for long periods of time. In addition, floating storage is isolated to the effects of earthquakes, an important design aspect to consider when building in the west coast of Canada.</p> <p>All LNG ships are designed and built under the most stringent international requirements and under the watchful eye of Classification Societies (like the America Bureau of Shipping (ABS) or Lloyd's Register) that approve the designs and supervise the construction of any ship intended to sail in international waters. Classification societies also have stringent inspection regimes during the ships lifetime that all ships have to comply with in order to be allowed to sail.</p> <p>The ships intended for use as the FSO were built and maintained under the regimes of ABS, and they will also approve any new designs and supervise the conversion of these two ships to ensure that they are fit for the use intended. A maintenance program will also be put in place to ensure the safety of the cargo tanks and the integrity of the hull is maintained throughout the FSO's lifetime. The vessels will be converted in such a way that they are certified to remain on side permanently; therefore all inspections and maintenance will be carried out on site. This is not a new concept and has been applied in the offshore industry for a long time.</p> <p>Most antifouling paints rely on the movement of water along the hull in order to release the antifouling agent, and are intended to avoid the growth of fouling organisms that increase water drag along the hull and increase fuel consumption by the vessel. Antifouling agents additionally reduce the risk of transferring organisms between marine ecosystems. Because these considerations do not apply to the FSO, Woodfibre LNG Limited is currently investigating alternate solutions that are suited for its intended use and for the Howe Sound environment.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
					The two ships will be permanently joined together so they become a single hull, and the FSO will use a permanent mooring that will not allow the vessel to detach even in the most severe weather conditions. However, in the very unlikely scenario that the floating storage detaches (e.g., during a seismic event), it would be guided out of danger by tugboats to a safe location.	
814	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	GOVERNMENT REGULATION: Inability of government to monitor, enforce, and respond to issues There are no regulations adopted to regulate this LNG industry from a technical standpoint. Any of the current standards are not applicable to the LNG industry. Do the regulators have the knowledge and the expertise and the capacity to oversee this industry or will they be relying on the proponent to monitor themselves and report to the regulator? Self-monitoring industries have created several examples of accidents with resulting environmental destruction in recent years, including the Lac Megantic rail disaster and the Mt Polley tailing pond spill.	LNG Project	Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 17.	
815	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	ENVIRONMENT: Removal of water from Mill Creek unsustainable for fish life Woodfibre LNG has bought the water license to take water from Mill Creek. The Department of Fisheries and Oceans has objected to this because the amount of water that WLNG is proposing to remove will reduce water levels in Mill Creek to levels that will no longer support fish life, especially in the summer months. Woodfibre LNG needs to source water for this project from somewhere else.	LNG Project	Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 18.	
816	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	ENVIRONMENT: Missing baseline studies The following baseline studies are either missing or are inadequate as they do not conform to any recognized scientific standards: fish, birds, marine mammals, air quality, shipping, water quality, marine sound, and atmospheric sound, marine life near the Woodfibre site, and the cumulative impact assessment. Proper studies need to be completed before any decisions can be made regarding this project.	LNG Project	Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 19.	
817	March 22, 2015	Personal Information Withheld - Squamish	VIEWSCAPES: BC Hydro clearcut of two 64 metre swaths of forest at the Woodfibre site will impact views from the Sea to Sky highway and the gondola BC Hydro is proposing to clearcut two 64 metre swaths of forest at the Woodfibre site which will create visible scars in the Howe Sound viewscape which will be very visible from the highway and the gondola. This information was only made available during the recent BC Hydro open house held on 19th March, near the end of the public comment period. This information is not included in the cumulative impact assessment of the Woodfibre application and it should be. This late release of information pertinent to this project and the timing of the BC Hydro open houses is unsatisfactory.	LNG Project	Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 20.	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
818(i)	March 22, 2015	Personal Information Withheld - Squamish	ENVIRONMENT: Will there be smog? Will there be a smell? Will there be noise?	LNG Project	Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 21.	
818(ii)	March 22, 2015	Personal Information Withheld - Squamish	Will there be light pollution? Will there be higher crime rates in town due to work camps and TFW?	Effects of the Project on Light, Crime	<p>The Project's light effects are expected to be minor given their scale and the historical and current level of human-related disturbance within the regional assessment area.</p> <p>Woodfibre LNG is designing the facility to reduce the disturbance due to light emissions as much as possible.</p> <p>Mitigation measures have been developed to avoid and minimize the potential adverse effects of the Project. Mitigation measures that would be implemented to reduce light emissions of the facility would include the following:</p> <ul style="list-style-type: none">• Lighting fixtures will be fully shielded to minimize uplight to the atmosphere.• Lighting for the Project will be designed to achieve the required light levels to ensure worker health and safety onsite while minimizing luminous flux, within the guidelines outlined by the engineering team.• Where possible and subject to safety requirements, onsite structures will be dark in colour to absorb most of the incident light. <p>For more information, please see Section 5.5 Light of the Application, which includes an assessment of the potential effects of the Project.</p> <p>Woodfibre LNG anticipates sourcing the majority of its direct construction employment, approximately 60% (1,067 FTE jobs) from the local labour force (Metro Vancouver to Whistler). Squamish's labour force totaled 10,270 workers in 2011 (Statistics Canada), and the construction industry was the largest labour force sector in Squamish with 1,430 workers (14.0%). Given the large pool of workers in Metro Vancouver (1,363,300 workers in 2013), it is anticipated that Metro Vancouver would be the main source of construction workers, accounting for approximately 55% of direct construction employment.</p> <p>The potential effects of the Project on the public is assessed in Section 9.2 Public Health, and includes an assessment on community health and well-being (for example, population and demographics, education and training, alcohol and drug abuse and crime) and a human health risk assessment for Project-related emissions. The assessments concluded that there were no Project-related significant adverse effects to public health.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
819	March 22, 2015	Vel Anderson - Gibsons, British Columbia	<p>Should this FortisBC pipeline be built along with the new compressor in Squamish, has the Council been given any estimates with respect to the severity of damage as well as the maximum range where a public hazard might exist in the event of an ignited full-bore release of natural gas?</p> <p>The rupture of an underground high-pressure pipeline results in the ejection of overlying soil and the formation of a crater at the failure position. Any subsequent ignition of the gas can result in thermal radiation hazard effects or potentially, it can result in blast overpressure effects if the ignition of the gas cloud causes an Unconfined Vapor Cloud Explosion (UVCE).</p> <p>Safe piping is essential to protect against UVCEs. Forty percent of all major plant losses are due to piping failures, and corrosion is one of the largest single causes of plant and equipment breakdown. Moreover, mistakenly open valves that caused mammoth emissions of hydrocarbons have resulted in two major UVCEs with a total of 29 deaths in those two instances.</p> <p>Accordingly, there are three potential sources of public impact consequence resultant from the catastrophic failure of a high-pressure natural gas pipeline. These are:</p> <ul style="list-style-type: none">• Thermal radiation subsequent to the ignition of the gas cloud that is evolved from a pipeline rupture;• Blast over pressures generated by Unconfined Vapor Cloud Explosion of the evolved gas plume; and,• Debris throw caused by the sudden loss of containment of the pipe membrane and subsequent crater development. <p>It is often publicized, that the potential for the development of a Unconfined Vapor Cloud Explosion associated with a natural gas release is extremely limited. Well, judge for yourself. Check out what distress one company has caused, open the attached document.</p> <p>Here are a few other horrific natural gas explosions</p> <ol style="list-style-type: none">1. Feb 13, 2014 Gas pipeline explosion in Adair County, Kentucky reportedly left a 60-foot crater in the ground and completely destroyed two homes and multiple vehicles. Astonishingly, only two people suffered minor injuries in the 1 a.m. blast, which was visible from at least 20 miles away. that the explosion sent "huge rocks" into the air, some of which were found blocking roads 150 feet from the blast site. <p>http://news.yahoo.com/kentucky-gas-line-explosion-leaves-60-foot-crater-145054655.html</p>	Accidents and Malfunctions	<p>Thank you for the comments. Woodfibre LNG notes that the comment is directed to the Fortis BC Eagle Mountain Pipeline Expansion Project. FortisBC's Eagle Mountain – Woodfibre Gas Pipeline Project is undergoing a separate environmental assessment certificate application review process. Please see EAO website for more information:</p> <p>http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_document_406_38521.html</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>2. Jan 25, 2014 - A fire is out after burning for more than 12 hours at the site of a natural gas pipeline explosion near Otterburne, Man., about 50 kilometres south of Winnipeg. ".....massive 200 to 300 metre high flames just shooting out of the ground and it literally sounded like a jet plane...."</p> <p>http://www.cbc.ca/news/canada/manitoba/natural-gas-pipeline-explodes-near-otterburne-man-1.2510873</p> <p>3. Jan 05, 2009 - An explosion at a natural gas facility in northeastern British Columbia forced the site to shut down in what appeared to be the fourth attack in four months on one of Canada's largest energy companies. Investigators say the latest explosion resembles three blasts in October at Encana operations in the same northeastern British Columbia area, about 750 miles (1,200 kilometers) northeast of Vancouver.</p> <p>http://www.theoaklandpress.com/general-news/20090105/blast-hits-british-columbia-natural-gas-facility</p> <p>4. May 2009, Kinder Morgan Florida Gas Transmission Company 18" diameter natural gas pipeline ruptured in a sparsely populated rural area of Martin Co. and "displaced" about 106 feet of buried pipe onto the right-of-way between Interstate 95 and the Florida Turnpike (SR-91). About 106 feet of pipe weighing about 5,000 pounds was blown out of the ground. The rupture was near a high school that was within the 366-foot potential impact radius (PIR)</p> <p>5. November 16, 2011, (http://www.huffingtonpost.com/2011/11/16/ohio-gas-line-explodes-glouster_n_1097292.html) near Glouster, Ohio, a weld failed on a Kinder Morgan Tennessee Gas Pipeline 36" diameter pipe; the leak exploded, leaving a blast crater 30 feet across and 15 feet deep. Three homes were destroyed by the fire.[49] The leak was caused by "displacement produced by a landslide and an inadequate understanding by (TGP) of the influence of the geotechnical threats on the pipeline in this location." [50] A girth weld failed due to earth movement, inadequate design, materials or workmanship, exceeding operational limits & gaps in integrity management In 2011, PHMSA cited Kinder Morgan for these safety violations:</p> <ul style="list-style-type: none">• failing to maintain update maps showing pipeline locations, failing to test pipeline safety devices, failing to maintain proper firefighting equipment, failing to inspect its pipelines as required, and failing to adequately monitor pipes' corrosion levels.			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>The potential for the exposure of citizens to a hazardous level of thermal radiation in the event of an ignited full-bore release of natural gas is very probable, either from the old pipeline, or the proposed new larger (24-inch diameter) pipeline.</p> <p>Has the following been investigated, and answers provided?</p> <p>How old is the existing natural gas pipeline running through the community of Squamish? How often is it inspected? Is the pipeline corrosion level adequately monitored? Is there testing of the pipeline safety devices? What has FortisBC done to upgrade the old pipeline in case of earthquake?</p>			
820	March 22, 2015	Jessica Enright - West Vancouver, British Columbia	<p>i am a 3rd generation west vancouverite who lives on HOWE SOUND LANE ! we have all been blessed to grow u in one of the most beautiful places in the world , i have major concerns with the way my government ,council,and community is expanding so rapidly and carelessly !!!we need to protect the unique ecosystem that we have all grown up in and been taught to respect love and learn from ! as a child i lived through numerous companies bidding and trying to clean up Howe sound from the pollution caused by mining and pulp pollution , as an adult i have seen the benifets of our waters renewed clenlieness and purity , increase of wildlife flourishing in the beautiful howe sound only to hear in disbelief that the gov wants to backtrack and lie to us all about how LNG is the right way to go WE MUST SAY NO TO LNG AND TANKERS IN HOWE SOUND THE IMPACT WILL BE IRREVERSIBLE SAY NO !!!</p>	Intrinsic Value of Howe Sound / Political System	<p>Thank you for the comment.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>The Woodfibre site has been used for industrial purposes for 100 years and is zoned for industrial use. As a condition of acquiring the site, Woodfibre LNG required the completion of remediation work on site. On December 22, 2014 the Ministry of Environment issued two Certificates of Compliance (uplands and water lot) evidencing completion of the remediation.</p> <p>Woodfibre LNG Limited intends to perform additional remediation and restoration in the Project area. Plans for additional remediation include the removal of approximately 3,000 existing creosote-coated piles from the waterfront in the Project area and the creation of a Green Zone around Mill Creek. This work will be carried out in partnership with the local groups, where suitable, so that local conservation and restoration targets can be met (please refer to Section 2.6.7 Ecological Benefits of the Application).</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
821	March 22, 2015	Personal Information Withheld - Roberts Creek, British Columbia	My concern is the protection of the Sponge Reefs as well.	Glass Sponge Reefs	<p>Thank you for your comment.</p> <p>Glass sponges are addressed in both the Application document (Section 5.16.2.4.1) and Marine Baseline Studies Report (Appendix 5.10).</p> <p>Woodfibre LNG expects that three to four LNG carriers will arrive at the site each month. The carriers will navigate through the established commercial shipping route in/out of Howe Sound (through Queen Charlotte Channel) to the Strait of Georgia and out to the Pacific Ocean. The carriers will be escorted by at least three tug boats, at least one of which will be tethered, and will be piloted by BC Coast Pilots who are experts with Howe Sound navigation.</p> <p>The minimum water depth along the shipping route is 60 metres, and the LNG carriers draft will sit approximately 12 metres to 15 metres below the water surface.</p> <p>The sailing line (shipping route) is a minimum of 1300 metres (and typically more than 1500 metres) from the location of the sponge reefs located at Halkett Point and Lost Reef between Pam rocks and Christie Islets. At depths ranging between 20 m and 40 m (i.e., associated depths where glass sponge reefs have been observed at these locations), the velocity produced by a propeller wash is considered negligible due to dissipation of the prop-wash with distance from sailing line.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section 14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
822	March 22, 2015	Rafe Mair - Lions Bay, British Columbia	<p>It is urgently required that glass sponges, a very rare and fragile sea organism in Halkett Bay, Howe Sound, be protected against damage especially from tankers. Their damage may well be accidental but no less fatal for that. Glass sponges are very rare in the world, no doubt because of their fragility, and we have an overwhelming social duty as a caring and decent society to protect them.</p> <p>Thank you,</p>	Glass Sponge Reefs	<p>Thank you for your comment.</p> <p>Glass sponges are addressed in both the Application document (Section 5.16.2.4.1) and Marine Baseline Studies Report (Appendix 5.10).</p> <p>Woodfibre LNG expects that three to four LNG carriers will arrive at the site each month. The carriers will navigate through the established commercial shipping route in/out of Howe Sound (through Queen Charlotte Channel) to the Strait of Georgia and out to the Pacific Ocean. The carriers will be escorted by at least three tug boats, at least one of which will be tethered, and will be piloted by BC Coast Pilots who are experts with Howe Sound navigation.</p> <p>The minimum water depth along the shipping route is 60 metres, and the LNG carriers draft will sit approximately 12 metres to 15 metres below the water surface.</p> <p>The sailing line (shipping route) is a minimum of 1300 metres (and typically more than 1500 metres) from the location of the sponge reefs located at Halkett Point and Lost Reef between Pam rocks and Christie Islets. At depths ranging between 20 m and 40 m (i.e., associated depths where glass sponge reefs have been observed at these locations), the velocity produced by a propeller wash is considered negligible due to dissipation of the prop-wash with distance from sailing line.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section 14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
823(i)	March 22, 2015	Personal Information Withheld - Toronto, British Columbia	An LNG facility in Howe Sound places Howe Sound residents and the environment at risk. LNG's proposed cooling system has already been banned elsewhere because of proven damage to marine life.	Seawater Cooling System	<p>Thank you for the comments.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>California did not ban seawater cooling. It introduced a new policy for implementing the US Clean Water Act that requires a reduction in the seawater cooling system flows and screen velocities, or a comparable reduction in entrainment and impingement mitigations</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section 14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p> <p>Additional information on the seawater cooling system intake and discharge was provided to the EAO on April 23, 2015. Please also refer to the Seawater Cooling System and Marine Mammal Information Sheets that have been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
823(ii)	March 22, 2015	Personal Information Withheld - Toronto, British Columbia	Moreover, to locate this facility in an area identified as a moderate to high-risk earthquake zone is ludicrous.	Seismic Hazard	<p>Woodfibre LNG Limited looked at several sites for its Project before finding one that was the right fit for an LNG facility. Home to industry and shipping for more than 100 years, the Woodfibre site features: industrial zoning, a deepwater port, access to a FortisBC pipeline network, and access to BC Hydro electricity.</p> <p>At Woodfibre LNG, safety is the number one priority. This includes designing and building a facility that prevents or minimizes the potential effects of geotechnical and natural hazards. Third party independent experts have conducted a detailed investigation and review of geotechnical and natural hazards of the Woodfibre site.</p> <p>The Project will be designed:</p> <ul style="list-style-type: none">• For a one in 2,475 year earthquake.• In accordance with CSAZ276, Liquefied Natural Gas Production, Storage and Handling, with respect to their specific requirements for seismic design of LNG plants.• To address the potential for liquefaction, ground improvements will be undertaken as part of Project construction and if deemed necessary, critical infrastructure will be moved to other locations within the project site• If a ship is at dock at the time of a seismic event, and the movement between the LNG carrier and the floating storage and offloading unit (FSO) is outside safe operating parameters, the LNG transfer will safely shutdown and release the LNG carrier from its mooring and allow it to naturally move away from the FSO with assistance from the tugs on standby.• Project components, including bridges, will be designed for the 200-year instantaneous peak flows on Mill Creek and Woodfibre Creek.• Buildings will be constructed at different elevations that correspond to their risk category in case of flooding.• Qualified professionals will be engaged to conduct a debris flow and debris hazard assessment prior to construction.• To address the potential effects associated with wildfire, a fuel hazard assessment will be conducted based on the Guide to Fuel Hazard Assessment and Abatement in British Columbia.• Seismic monitors will be installed on critical process equipment and linked to the facility's ESD (Emergency Shutdown System). Should a seismic event occur, and the vibration experienced is outside the designed parameters of the seismic monitors, the facility (via the ESD) will automatically trip and place itself in fail-safe mode.• Project components will be designed to accommodate a sea level rise of 0.5 metres.	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
823(iii)	March 22, 2015	Personal Information Withheld - Toronto, British Columbia	Tourism is a valuable industry and I, for one, will not want to visit an area damaged by an ill-conceived project such as this.	Tourism	<p>Woodfibre LNG Limited is of the view that the Woodfibre site is the right fit for an LNG facility. It features: zoned industrial, more than 100 years of industrial use, deepwater port, access to established shipping routes, access to FortisBC pipeline, access to BC Hydro transmission grid, and access to labour force.</p> <p>Woodfibre LNG Limited is also of the view that tourism and industry can work together to create responsible economic development in Squamish. BC Ferries and Squamish Terminals have shown how industry can successfully coexist with local tourism and recreation, and Woodfibre LNG Limited is working hard to follow that example.</p> <p>An assessment of the potential effects of the Project on tourism is included in Section 6.2 Labour Market and Section 6.3 Sustainable Economy. The Application concluded that there were no Project-related significant adverse residual effects to the economy.</p> <p>The Application assesses the potential effects of the Project to outdoor recreation in Section 7.4 Land and Resource Use. With the proposed mitigation, it is not likely that there will be significant residual effects to outdoor recreation.</p> <p>Please also refer to the Sustainable Economy information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
824	March 22, 2015	Personal Information Withheld - Port Moody (Ex Squamish Resident), British Columbia	Please leave our wildlife and water untouched. The moment industry comes in, accidents will eventually happen and all we have left is our land. Forget about \$\$ and leave Howe Sound.	LNG Project	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>The Woodfibre site has been used for industrial purposes for 100 years and is zoned for industrial use. As a condition of acquiring the site, Woodfibre LNG required the completion of remediation work on site. On December 22, 2014 the Ministry of Environment issued two Certificates of Compliance (uplands and water lot) evidencing completion of the remediation.</p> <p>Woodfibre LNG Limited intends to perform additional remediation and restoration in the Project area. Plans for additional remediation include the removal of approximately 3,000 existing creosote-coated piles from the waterfront in the Project area and the creation of a Green Zone around Mill Creek. This work will be carried out in partnership with the local groups, where suitable, so that local conservation and restoration targets can be met (please refer to Section 2.6.7 Ecological Benefits of the Application).</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p> <p>Woodfibre LNG will be designed for the safe and efficient handling of liquefied natural gas, both on land and on water. This includes standards set out in the BC Oil and Gas Activities Act and the</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
					<p>associated Liquefied Natural Gas Facility Regulation, national and BC building codes, as well as national and international standards, guidelines and codes of practice where there are no applicable codes for BC.</p> <p>The Accidents and Malfunctions section (Section 11.0) of the Application assessed the consequence and frequency of effects resulting from credible worst case scenarios for the Project. It showed that potential risks to the public were within the tolerable risk criteria regulated by the BC Oil and Gas Commission (OGC). The OGC will include a review of the quantitative risk assessment for this Project in the permit application review to confirm that the study and results meet the regulated requirements. Additional information on accidents and malfunctions was provided to the EAO on April 29, 2015.</p> <p>During operation, major accidents at LNG facilities are very rare. LNG is not explosive in an unconfined environment. Two fire / vapour cloud explosions at LNG facilities are known to have occurred in the past 60 years. A vapour cloud and fire in Ohio occurred in 1944 because of leaks from an LNG tank constructed from inappropriate material, and in 2004 an explosion occurred in Algeria because of a steam boiler problem (boilers are not part of the Project design). Standards for modern LNG facilities have benefited from the lessons learned from these accidents, and include design requirements that avoid these accidents.</p> <p>Please also refer to Public Safety Information Sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
825	March 22, 2015	Personal Information Withheld - North Vancouver, British Columbia	<p>SAFETY: Siting an LNG facility in Howe Sound violates international safety standards and practices, putting Howe Sound residents at risk As LNG tankers transit Howe Sound, there is a high-danger zone for 1,600 metres (1-mile) on either side of the LNG tanker. If an accident happens, people within this zone risk death by asphyxiation, or death/injury by fire or explosion. Every time a tanker travels through Howe Sound (approximately 6-8 transits a month according to Woodfibre LNG) several Howe Sound communities will be in that high-danger zone, including: Bowen Island, Bowyer Island, Anvil Island, Passage Island, Porteau Cove, West Vancouver, and parts of the Sea to Sky highway. The Society of International Gas Tanker and Terminal Operators (SIGTTO) LNG Terminal Siting Standards states that LNG terminals should not be located in narrow, inland waterways with dense local populations and significant commercial, recreational, and ferry traffic. Why would that guideline not apply to Howe Sound? The proposed siting of the Woodfibre LNG terminal and associated transit of LNG tankers through Howe Sound poses an unacceptable risk to safety of people in communities along the shores of Howe Sound</p> <p>Source: Sandia Report, 2004 and SIGTTO LNG Terminal Siting Standards</p> <p>ENVIRONMENT: The once-through seawater cooling system proposed by Woodfibre LNG is outdated Woodfibre LNG is proposing an outdated</p>	LNG Project	<p>Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 11-21.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>and damaging cooling method to help cool the LNG facility. They propose to extract 17,000 tonnes (= 3.7 million gallons, or 7 Olympic-sized 50-meter swimming pools) of seawater from Howe Sound, chlorinate it, heat it, and then spit it back out into the sound every hour of every day for the next 25 years. This method has been banned in California and several other places as it is very damaging to marine life such as juvenile salmon, herring, and plankton which are the building blocks for all other life in Howe Sound. If the herring are impacted, the dolphins, orcas, and humpbacks are also impacted as they no longer have a food supply. The impacts of increased water temperatures and the addition of chlorinated seawater will likely reverse the recent revival of marine life in Howe Sound, which is just now recovering from the toxic legacies of previous industries. This is unacceptable.</p> <p>HEALTH: Social costs and health impacts of air pollution Woodfibre LNG is estimating air pollution emissions of 295.7 tonnes of nitrous oxides (NOx) and 43.8 tonnes of sulfur dioxide (SO2) every year (See Table 5.2-14 of the Air Quality Section of Woodfibre LNG's environmental assessment application). Emissions of NOx and SO2 interact with other compounds to form fine particles, which can affect both the lungs and the heart. Exposure to these particles is linked to increased risk of respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; decreased lung function; aggravated asthma; onset of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. A new study published in the scientific journal, Climatic Change, estimates the true social costs of air pollution that aren't accounted for in the cost of fossil fuels and other pollutants. Social costs include the health impacts of air pollution as well as impacts from climate change. The study found that sulfur dioxide costs \$42,000 per tonne, and nitrous oxides cost \$67,000 per tonne.</p> <p>Sources: Mills et al (2009) Adverse cardiovascular effects of air pollution. Nature Clinical Practice Cardiovascular Medicine 6: 36-44 Shindell (2015) The social costs of atmospheric release. Climatic Change</p> <p>SITE SUITABILITY: The Woodfibre site is not a safe location for a hazardous LNG facility On February 15th, 2015, a 3.4 magnitude earthquake hit Vancouver's coast that was felt throughout Howe Sound. The Woodfibre LNG proposal is located within this zone of moderate to high earthquake risk, on two known thrust faults. The Woodfibre site also has a history of slope failure. In 1955 a wharf and three warehouses collapsed into Howe Sound at the Woodfibre site, causing \$500,000 – \$750,000 in damages (Bornhold, B.D., 1983, Fiords, GEOS, no. 1, p 1-4). A recent, but unreleased, geotechnical study by Knight Piesold identifies that approximately</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>46% of the study area was mapped as having rapid mass movement. This means landslides and slope slumpage... including existing natural landslide hazards as well as terrain where construction activity may increase landslide initiation. Why hasn't the geotechnical study by Knight Piesold been released?</p> <p>Source: B.C. Ministry of Energy and Mines</p> <p>ECONOMY: The requested socio-economic study has not been provided During construction, only 4.3% of jobs (=38.5 out of 895) will be for locals living in the Squamish/Whistler corridor (See Table 6.2-8 of the Labour Market section of Woodfibre LNG's environmental assessment application). Why are there so few jobs predicted to be filled by workers in the Squamish/SLRD area? The EA application is also very unclear about how many of the 100 full-time jobs will be filled by residents of Howe Sound once the LNG terminal is operational. What are the benefits to Squamish? What are the costs? There is still no clarity around how much in municipal taxes will be paid to the District of Squamish. How will this project impact existing small businesses and existing industries in Howe Sound?</p> <p>CLIMATE CHANGE: 142 thousand tonnes of greenhouse gas emissions is unacceptable Woodfibre LNG is now estimating greenhouse gas emissions to be 142 thousand tonnes of CO2 equivalent every year. These annual emissions of CO2 equivalent from Woodfibre LNG is equal to adding over 18,000 cars to the highway, driving to Vancouver and back, every day. This is more than six times greater than current highway traffic. It is irresponsible to approve this kind of polluting industry at a time when we need to transition away from fossil fuels to mitigate the risks associated with climate change, and to reduce the economic and health impacts of air pollution in general.</p> <p>GOVERNMENT REGULATION: Inability of government to monitor, enforce, and respond to issues There are no regulations adopted to regulate this LNG industry from a technical standpoint. Any of the current standards are not applicable to the LNG industry. Do the regulators have the knowledge and the expertise and the capacity to oversee this industry or will they be relying on the proponent to monitor themselves and report to the regulator? Self-monitoring industries have created several examples of accidents with resulting environmental destruction in recent years, including the Lac Megantic rail disaster and the Mt Polley tailing pond spill.</p> <p>ENVIRONMENT: Removal of water from Mill Creek unsustainable for fish life Woodfibre LNG has bought the water license to take water from Mill Creek. The Department of Fisheries and Oceans has objected to this because the amount of water</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>that WLNG is proposing to remove will reduce water levels in Mill Creek to levels that will no longer support fish life, especially in the summer months. Woodfibre LNG needs to source water for this project from somewhere else.</p> <p>ENVIRONMENT: Missing baseline studies</p> <p>The following baseline studies are either missing or are inadequate as they do not conform to any recognized scientific standards: fish, birds, marine mammals, air quality, shipping, water quality, marine sound, and atmospheric sound, marine life near the Woodfibre site, and the cumulative impact assessment. Proper studies need to be completed before any decisions can be made regarding this project.</p> <p>VIEWSCAPES: BC Hydro clearcut of two 64 metre swaths of forest at the Woodfibre site will impact views from the Sea to Sky highway and the gondola BC Hydro is proposing to clearcut two 64 metre swaths of forest at the Woodfibre site which will create visible scars in the Howe Sound viewscape which will be very visible from the highway and the gondola. This information was only made available during the recent BC Hydro open house held on 19th March, near the end of the public comment period. This information is not included in the cumulative impact assessment of the Woodfibre application and it should be. This late release of information pertinent to this project and the timing of the BC Hydro open houses is unsatisfactory.</p> <p>ENVIRONMENT: Will there be smog? Will there be a smell? Will there be noise?</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
826	March 22, 2015	Personal Information Withheld - Valori Mckay, British Columbia	As a local resident I am strongly against any increase in large ocean vessels coming into Howe Sound by any route and especially by Gambier Island. This precious marine area needs to be protected, for the sake of the land and sea animals and as a place to be enjoyed and marvelled at for future generations. http://jordansturdymia.ca/bcltv_videos/mla-sturdy-halkett-bays-glass-sponges/	Marine Traffic	<p>Thank you for the comment.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>According to the Canadian Coast Guard, there were a total of 12,909 large vessel movements in Howe Sound in 2013, all enabled by existing navigational aids along the route. The Woodfibre LNG Project will bring three to four LNG carriers to the site each month.</p> <p>Each transit of an LNG carrier, between the entrance to Howe Sound and the Woodfibre LNG terminal, is anticipated to last 2.5 hours in duration. The loading of each LNG carrier is anticipated to be complete within 24 hours.</p> <p>The Accidents and Malfunctions section (Section 11.0) of the Application assessed the consequence and frequency of effects resulting from credible worst case scenarios for the Project. It showed that potential risks to the public were within the tolerable risk criteria regulated by the BC Oil and Gas Commission (OGC). The OGC will include a review of the quantitative risk assessment for this Project in the permit application review to confirm that the study and results meet the regulated requirements. Additional information on accidents and malfunctions was provided to the EAO on April 29, 2015. An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p> <p>Please also refer to the Marine Transport and Marine Mammals information sheets that have been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
827	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	I did not move my family to Squamish for the prospect of a industrial community. I moved to Squamish for the natural environment. I do not want LNG in Squamish.	LNG Project	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited is of the view that the Woodfibre site is the right fit for an LNG facility. It features: zoned industrial, more than 100 years of industrial use, deepwater port, access to established shipping routes, access to FortisBC pipeline, access to BC Hydro transmission grid, and access to labour force.</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
828	March 22, 2015	Michele March - Langdale, British Columbia	Only recently have the waters of Howe Sound recovered. Marine life are now making a comeback. The proposed saltwater cooling system is old technology. Marine life will be damaged by the warmer water, small marine life that may impact the entire marine food chain. What are the proposed chemicals to dechlorinate the water? The answers I heard from the Woodfibre representatives at the Gambier public meeting on March 21st were incomplete at best, PR spin at the worst. This is NOT a "state of the art" system. This is the cheapest solution, proposed in a very sensitive area.	Seawater Cooling System	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section 14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>A sodium hypochlorite solution will be used to discourage the growth of marine organisms on the heat exchangers and pipes. The dosage of hypochlorite solution will be optimized and adjusted so that the minimum necessary amount of chemical is added.</p> <p>Residual levels of chlorine at the discharge ports will be less than 0.02 mg/L. This is much less than the chlorine in drinking water, which is approximately 0.04 mg/L to 2.0 mg/L.</p> <p>The seawater cooling system will be designed to meet BC water quality guidelines. The release temperature of the seawater will be less than 21°C or 10°C above ambient water temperature of Howe Sound, whichever is less. Near-field simulation modeling shows that, with a release temperature of 10°C greater than the ambient temperature, the total volume of water that would have a temperature greater than 1°C above ambient is 125 m3 (for context, this volume is approximately 5% or 1/20th of an Olympic-size pool). This volume will not increase over time.</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p> <p>Additional information on the seawater cooling system intake and discharge was provided to the EAO on April 23, 2015. Please also refer to the Seawater Cooling System and Marine Mammal Information Sheets that have been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
829	March 22, 2015	Michele March - Langdale, British Columbia	Should this miserable project be allowed to proceed, I would think one reasonable criteria would be to install a monitoring system for the water quality and temperature reentering Howe Sound. This proposed system would be accessible to the public, on line, similar to the air quality monitoring station for Howe Sound Pulp & Paper.	Water Quality Monitoring Requirements	<p>Thank you for the suggestion. Woodfibre LNG Limited heard the request to publish data at the public open houses, and is looking into the idea further.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section 14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>Should an Environmental Assessment Certificate be granted for the Project, a Table of Conditions will be developed that outlines all of the requirements with which the Project will have to comply. Woodfibre LNG Limited will be legally responsible for ensuring all conditions are met.</p> <p>The Project will also require a Facility Permit, Leave to Commence Construction and Leave to Operate from the Oil and Gas Commission (OGC) as well as numerous other environmental permits.</p>	
830	March 22, 2015	Michele March - Langdale, British Columbia	The potential damage of this project to the air and water of Howe Sound should not be evaluated in isolation. There is a cumulative factor that must be considered. We already have an operating pulp mill at Port Melon. Woodfibre should not be considered in isolation.	Cumulative Effects	<p>Thank you for your comment.</p> <p>The Project has been assessed according to the methodology of both the BC <i>Environmental Assessment Act</i> and <i>Canadian Environmental Assessment Act (2012)</i>. Section 4.0 Environmental Assessment Methods of the Application describes the assessment process.</p> <p>The operating pulp mill at Port Melon has been considered as part of the existing conditions presented for each VC (see Table 4.6 - Inclusion List of Past and Present Projects and Activities, in Section 4.0 Environmental Assessment Methods).</p>	
831	March 22, 2015	Personal Information Withheld - Langdale, British Columbia	How can the Environmental Assessment Office operate as an independent and accountable body, when it is well known that our government wants this project to proceed? Massaging a bad idea is still a bad idea.	EA Process	<p>The EAO is an independent provincial agency responsible for conducting environmental assessments and administering the <i>BC Environmental Assessment Act</i>.</p> <p>Public participation in the Environmental Assessment (EA) process helps to ensure that community values and public goals for community development are considered in project planning and decision-making.</p>	For more information related to comments on the Environmental Assessment process please see "EAO Response to Public Comments – Application Review Public Comment Period for Woodfibre LNG, January 22 – March 23, 2015" under the Application Review EAO Generated Documents [Link] .

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
832	March 22, 2015	Robin Spano - Lions Bay, British Columbia	<p>This project is too dangerous to proceed. It puts too many lives at risk.</p> <p>As LNG tankers move through Howe Sound, there is a high-danger zone for 1,600 metres (1-mile) on either side of the LNG tanker. If an accident happens, people within this zone risk death by asphyxiation, or death/injury by fire or explosion. Every time a tanker travels through Howe Sound (approximately 6-8 transits a month according to Woodfibre LNG) several Howe Sound communities will be in that high-danger zone, including: Bowen Island, Bowyer Island, Anvil Island, Passage Island, Porteau Cove, West Vancouver, and Lions Bay, where I live. The Society of International Gas Tanker and Terminal Operators (SIGTTO) LNG Terminal Siting Standards states that LNG terminals should not be located in narrow, inland waterways with dense local populations and significant commercial, recreational, and ferry traffic. Why would that guideline not apply to Howe Sound? The proposed siting of the Woodfibre LNG terminal and associated transit of LNG tankers through Howe Sound poses an unacceptable risk to safety of people in communities along the shores of Howe Sound.</p> <p>This project clearly needs to be moved to a different, safer location, or cancelled altogether (for myriad other reasons).</p>	Accidents and Malfunctions	Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 11.	
833	March 22, 2015	Rob Cairns - Bowen Island, British Columbia	<p>I am opposed to this project for the following reasons:</p> <p>SAFETY: Siting an LNG facility in Howe Sound violates international safety standards and practices, putting Howe Sound residents at risk. As LNG tankers transit Howe Sound, there is a high-danger zone for 1,600 metres (1-mile) on either side of the LNG tanker. If an accident happens, people within this zone risk death by asphyxiation, or death/injury by fire or explosion. Every time a tanker travels through Howe Sound (approximately 6-8 transits a month according to Woodfibre LNG) several Howe Sound communities will be in that high-danger zone, including: Bowen Island, Bowyer Island, Anvil Island, Passage Island, Porteau Cove, West Vancouver, and parts of the Sea to Sky highway. The Society of International Gas Tanker and Terminal Operators (SIGTTO) LNG Terminal Siting Standards states that LNG terminals should not be located in narrow, inland waterways with dense local populations and significant commercial, recreational, and ferry traffic. Why would that guideline not apply to Howe Sound? The proposed siting of the Woodfibre LNG terminal and associated transit of LNG tankers through Howe Sound poses an unacceptable risk to safety of people in communities along the shores of Howe Sound.</p> <p>Source: Sandia Report, 2004 and SIGTTO LNG Terminal Siting Standards</p>	LNG Project	Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 11-21.	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>ENVIRONMENT: The once-through seawater cooling system proposed by Woodfibre LNG is outdated Woodfibre LNG is proposing an outdated and damaging cooling method to help cool the LNG facility. They propose to extract 17,000 tonnes (= 3.7 million gallons, or 7 Olympic-sized 50-meter swimming pools) of seawater from Howe Sound, chlorinate it, heat it, and then spit it back out into the sound every hour of every day for the next 25 years. This method has been banned in California and several other places as it is very damaging to marine life such as juvenile salmon, herring, and plankton which are the building blocks for all other life in Howe Sound. If the herring are impacted, the dolphins, orcas, and humpbacks are also impacted as they no longer have a food supply. The impacts of increased water temperatures and the addition of chlorinated seawater will likely reverse the recent revival of marine life in Howe Sound, which is just now recovering from the toxic le gacies of previous industries. This is unacceptable.</p> <p>HEALTH: Social costs and health impacts of air pollution Woodfibre LNG is estimating air pollution emissions of 295.7 tonnes of nitrous oxides (NOx) and 43.8 tonnes of sulfur dioxide (SO2) every year (See Table 5.2-14 of the Air Quality Section of Woodfibre LNG's environmental assessment application). Emissions of NOx and SO2 interact with other compounds to form fine particles, which can affect both the lungs and the heart. Exposure to these particles is linked to increased risk of respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; decreased lung function; aggravated asthma; onset of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease.A new study published in the scientific journal, Climatic Change, estimates the true social costs of air pollution that aren't accounted for in the cost of fossil fuels and other pollutants. Social costs include the he alth impacts of air pollution as well as impacts from climate change. The study found that sulfur dioxide costs \$42,000 per tonne, and nitrous oxides cost \$67,000 per tonne.</p> <p>Sources: Mills et al (2009) Adverse cardiovascular effects of air pollution. Nature Clinical Practice Cardiovascular Medicine 6: 36-44 Shindell (2015) The social costs of atmospheric release. Climatic Change</p> <p>SITE SUITABILITY: The Woodfibre site is not a safe location for a hazardous LNG facility On February 15th, 2015, a 3.4 magnitude earthquake hit Vancouver's coast that was felt throughout Howe Sound. The Woodfibre LNG proposal is located within this zone of moderate to high earthquake risk, on two known thrust faults. The Woodfibre site also has a history of slope failure. In 1955 a wharf and three warehouses collapsed into Howe Sound at the Woodfibre site, causing \$500,000 – \$750,000 in</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>damages (Bornhold, B.D., 1983, Fiords, GEOS, no. 1, p 1-4). A recent, but unreleased, geotechnical study by Knight Piesold identifies that approximately 46% of the study area was mapped as having rapid mass movement. This means landslides and slope slumpage... including existing natural landslide hazards as well as terrain where construction activity may increase landslide initiation. Why hasn't the geotechnical study by Knight Piesold been released?</p> <p>Source: B.C. Ministry of Energy and Mines</p> <p>ECONOMY: The requested socio-economic study has not been provided During construction, only 4.3% of jobs (=38.5 out of 895) will be for locals living in the Squamish/Whistler corridor (See Table 6.2-8 of the Labour Market section of Woodfibre LNG's environmental assessment application). Why are there so few jobs predicted to be filled by workers in the Squamish/SLRD area? The EA application is also very unclear about how many of the 100 full-time jobs will be filled by residents of Howe Sound once the LNG terminal is operational. What are the benefits to Squamish? What are the costs? There is still no clarity around how much in municipal taxes will be paid to the District of Squamish. How will this project impact existing small businesses and existing industries in Howe Sound?</p> <p>CLIMATE CHANGE: 142 thousand tonnes of greenhouse gas emissions is unacceptable Woodfibre LNG is now estimating greenhouse gas emissions to be 142 thousand tonnes of CO2 equivalent every year. These annual emissions of CO2 equivalent from Woodfibre LNG is equal to adding over 18,000 cars to the highway, driving to Vancouver and back, every day. This is more than six times greater than current highway traffic. It is irresponsible to approve this kind of polluting industry at a time when we need to transition away from fossil fuels to mitigate the risks associated with climate change, and to reduce the economic and health impacts of air pollution in general.</p> <p>GOVERNMENT REGULATION: Inability of government to monitor, enforce, and respond to issues There are no regulations adopted to regulate this LNG industry from a technical standpoint. Any of the current standards are not applicable to the LNG industry. Do the regulators have the knowledge and the expertise and the capacity to oversee this industry or will they be relying on the proponent to monitor themselves and report to the regulator? Self-monitoring industries have created several examples of accidents with resulting environmental destruction in recent years, including the Lac Megantic rail disaster and the Mt Polley tailing pond spill.</p> <p>ENVIRONMENT: Removal of water from Mill Creek unsustainable for fish life Woodfibre LNG has</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>bought the water license to take water from Mill Creek. The Department of Fisheries and Oceans has objected to this because the amount of water that WLNG is proposing to remove will reduce water levels in Mill Creek to levels that will no longer support fish life, especially in the summer months. Woodfibre LNG needs to source water for this project from somewhere else.</p> <p>ENVIRONMENT: Missing baseline studies</p> <p>The following baseline studies are either missing or are inadequate as they do not conform to any recognized scientific standards: fish, birds, marine mammals, air quality, shipping, water quality, marine sound, and atmospheric sound, marine life near the Woodfibre site, and the cumulative impact assessment. Proper studies need to be completed before any decisions can be made regarding this project.</p> <p>VIEWSCAPES: BC Hydro clearcut of two 64 metre swaths of forest at the Woodfibre site will impact views from the Sea to Sky highway and the gondola BC Hydro is proposing to clearcut two 64 metre swaths of forest at the Woodfibre site which will create visible scars in the Howe Sound viewscape which will be very visible from the highway and the gondola. This information was only made available during the recent BC Hydro open house held on 19th March, near the end of the public comment period. This information is not included in the cumulative impact assessment of the Woodfibre application and it should be. This late release of information pertinent to this project and the timing of the BC Hydro open houses is unsatisfactory.</p> <p>ENVIRONMENT: Will there be smog? Will there be a smell? Will there be noise?</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
834	March 22, 2015	Michele March - Langdale, British Columbia	<p>A very large part of the Sunshine Coast borders Howe Sound, specifically, Gibsons and Area F of the Sunshine Coast Regional District. Excluding Gibsons in your public process is simply wrong. As is the obscure and difficult to reach locations you have selected. Ferry travel is challenging and expensive. I went to Gambier Island yesterday. The open house was very informative. While I now like the project even less than I previously did, after discussing the issues with Woodfibre representatives, I believe all communities that will be affected by this project should have an opportunity to learn about the project. I think the comment period should be further extended to allow full public process.</p>	Public Consultation	<p>Thank you for your comment.</p> <p>The location of the EAO Open Houses are determined by the EAO. The Proponent defers to the EAO to answer this question.</p> <p>Woodfibre LNG Limited takes its responsibility to consult with the public seriously.</p> <p>Since planning on the Woodfibre LNG Project began in 2013, Woodfibre LNG has undertaken public consultation in the form of:</p> <ul style="list-style-type: none">• 7 Open Houses in: Squamish; Bowen Island; District of West Vancouver; Whistler; Britannia Beach and Furry Creek, attended by more than 870 people• 1 Community Roundtable on Gambier Island, attended by 53 people• 10 Small Group Meetings, involving more than 200 people• 2 Telephone Town Halls with 765 participants• 310+ Stakeholder Meetings• 5 Newsletters• Askwoodfibrelng.ca website, allowing people direct access to project experts• Regularly monitored Project Information Line• Regularly monitored Project Email Address, info@woodfibrelng.ca• YouTube Channel <p>In addition, Woodfibre LNG has opened a Community Office in Squamish to respond to questions.</p>	<p>For more information related to comments on the Environmental Assessment process please see "EAO Response to Public Comments – Application Review Public Comment Period for Woodfibre LNG, January 22 – March 23, 2015" under the Application Review EAO Generated Documents [Link].</p>

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
835(i)	March 22, 2015	Robin Spano - Lions Bay, British Columbia	The financials of this project look precarious at best. The BC government is touting keywords like jobs and profits, but the assessments I've heard from other, less invested accountants and observers leave me not only doubting that taxpayers will see any benefit, but actually convinced that this project will be a net loss.	Economic Justification of the Project	<p>Thank you for your comments.</p> <p>An independent third party economic impact assessment of the proposed Woodfibre LNG project is included in the Application. Accounting and Consulting firm MNP found the following economic benefits of the project (2014 CAD):</p> <ul style="list-style-type: none"> • \$83.7 MILLION: Estimated in tax revenue for all three levels of government during the construction phase of the Project. • \$86.5 MILLION: Estimated in tax revenue for all three levels of government per year of operation. • \$243.3 MILLION: Estimated to the District of Squamish, Resort Municipality of Whistler, Electoral Area D of Squamish-Lillooet Regional District, Squamish First Nation communities, and Metro Vancouver gross domestic product (GDP) during construction and more than • \$122.8 MILLION in GDP per year during operation. <p>CONSTRUCTION JOBS</p> <ul style="list-style-type: none"> • Create 650+ jobs each year of construction. • Create an additional 1,080+ jobs (indirect* and induced** employment) during the construction phase of the Project. <p>LONG-TERM OPERATION JOBS</p> <ul style="list-style-type: none"> • Create 100+ local jobs during operation. • Create an additional 330+ local jobs (indirect* and induced**) during operation. <p>*Indirect impacts arise from changes in activity for suppliers.</p> <p>**Induced impacts arise from shifts in spending on goods and services as a consequence of changes to the payroll of the directly and indirectly affected businesses.</p> <p>For more information, please refer to Section 2.6 Project Benefits of the Application. Additional benefits from the Project are described in greater detail in Section 6.2 Labour Market, Section 6.3 Sustainable Economy and Section 7.2 Infrastructure and Community Services.</p> <p>Please also refer to the Sustainable Economy information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
835(ii)	March 22, 2015	Robin Spano - Lions Bay, British Columbia	<p>During construction, only 4.3% of jobs (=38.5 out of 895) will be for locals living in the Squamish/Whistler corridor. The EA application is also very unclear about how many of the 100 full-time jobs will be filled by residents of Howe Sound once the LNG terminal is operational.</p> <p>There is still no clarity around how much in municipal taxes will be paid to the District of Squamish. How will this project impact existing small businesses and existing industries in Howe Sound? How will it impact property values along the Sea-to-Sky corridor?</p>	Employment	<p>For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 15.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
836	March 22, 2015	Robin Spano - Lions Bay, British Columbia	<p>Antarctica is melting, the earth is facing a potential sea level rise of anywhere between 1-5 meters, and all over Earth, we're fiddling while Rome burns.</p> <p>It is time for every responsible person, corporation, and government to think about reducing emissions. Increasing them instead is to deny future generations the right to thrive as we are.</p> <p>Woodfibre LNG is now estimating greenhouse gas emissions to be 142 thousand tonnes of CO2 equivalent every year. These annual emissions of CO2 equivalent from Woodfibre LNG is equal to adding over 18,000 cars to the highway, driving to Vancouver and back, every day. This is more than six times greater than current highway traffic. It is irresponsible to approve this kind of polluting industry at a time when we need to transition away from fossil fuels to mitigate the risks associated with climate change, and to reduce the economic and health impacts of air pollution in general.</p>	GHG Emissions	<p>Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 16.</p>	
837	March 22, 2015	Personal Information Withheld - Vancouver, British Columbia	<p>The Woodfibre plant should not be placed through either the streets of Squamish or the Howe Sound.</p>	LNG Project Pipeline	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited is of the view that the Woodfibre site is the right fit for an LNG facility. It features: zoned industrial, more than 100 years of industrial use, deepwater port, access to established shipping routes, access to FortisBC pipeline, access to BC Hydro transmission grid, and access to labour force.</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p> <p>Woodfibre LNG notes that the comment about the streets of Squamish is in reference to the Fortis BC Eagle Mountain Pipeline Expansion Project. FortisBC's Eagle Mountain – Woodfibre Gas Pipeline Project is undergoing a separate environmental assessment certificate application review process. Please see EAO website for more information:</p> <p>http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_document_406_38521.html</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
838(i)	March 22, 2015	Robin Spano - Lions Bay, British Columbia	In recent years, following the \$70 billion clean up of Howe Sound from the devastation caused by the Britannia Beach copper mine, herring, salmon, and marine mammals such as orcas, dolphins and porpoises have slowly returned to Howe Sound.	Industrial Legacy	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>The Woodfibre site has been used for industrial purposes for 100 years and is zoned for industrial use. As a condition of acquiring the site, Woodfibre LNG required the completion of remediation work on site. On December 22, 2014 the Ministry of Environment issued two Certificates of Compliance (uplands and water lot) evidencing completion of the remediation.</p> <p>Woodfibre LNG Limited intends to perform additional remediation and restoration in the Project area. Plans for additional remediation include the removal of approximately 3,000 existing creosote-coated piles from the waterfront in the Project area and the creation of a Green Zone around Mill Creek. This work will be carried out in partnership with the local groups, where suitable, so that local conservation and restoration targets can be met (please refer to Section 2.6.7 Ecological Benefits of the Application).</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p>	
838(ii)	March 22, 2015	Robin Spano - Lions Bay, British Columbia	Woodfibre LNG has bought the water license to take water from Mill Creek. The Department of Fisheries and Oceans has objected to this because the amount of water that WLNG is proposing to remove will reduce water levels in Mill Creek to levels that will no longer support fish life, especially in the summer months. Woodfibre LNG needs to source water for this project from somewhere else.	Mill Creek	<p>For a response to this comment, please refer to the “<i>Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions</i>”, comment # 18.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
838(iii)	March 22, 2015	Robin Spano - Lions Bay, British Columbia	Industrial vibrations are particularly harmful to marine mammals' food-finding, navigation, and reproduction. How will Woodfibre LNG ensure that the vibrations they cause are small enough that they will not undo the taxpayers' cleanup work and drive the orcas and dolphins out of the sound all over again?	Effect of the Project on Marine Mammals	<p>Woodfibre LNG is committed to building a project that is right for Squamish and right for BC – and this includes protecting the waters of Howe Sound.</p> <p>Potential effects of underwater noise and vibrations from the Project on marine mammals are assessed by comparing Project underwater noise levels (or suitable proxies) against established acoustic thresholds for marine mammals and fish, and not in direct comparison to ambient noise levels (as with other disciplines such as atmospheric noise or water quality). Ambient noise levels would be well below the established injury thresholds for marine mammals, which are the thresholds applied during mitigation and management planning.</p> <p>An assessment of the potential effects of the Project on marine mammals is included in Section 5.19 Marine Mammals, and includes an assessment of the effects of noise. Woodfibre LNG Limited will retain a contractor to perform underwater acoustic monitoring for pre, during and post project construction. The underwater monitoring will collect underwater sound levels and marine mammal presence (e.g., of those species present, their frequency and seasonality). This will contribute further to baseline information for both underwater sound levels and mammal presence in the project area and in the vicinity of the Project Site to monitor potential changes of marine mammals over time.</p> <p>Please also refer to the Marine Mammals information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
839	March 22, 2015	Del Escott - Brackendale, British Columbia	Woodfibre LNG, is a great opportunity to showcase eco friendly sustainable coexistence. Make it happen, vote yes.	LNG Project	Thank you, your comment is noted.	
840(i)	March 22, 2015	Personal Information Withheld - Whistler, British Columbia	I live in Whistler and fully understand the benefits of tourism to this province, as does the Provincial Government, I would assume. To put an LNG port in a narrow, scenic waterway which is viewed by thousands of tourists weekly seems like killing the goose that laid the golden egg. Our natural beauty is something we all own and did nothing to deserve. We are so lucky to live here. Let's preserve and protect it. It's the least we can do.	Tourism	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited is of the view that the Woodfibre site is the right fit for an LNG facility. It features: zoned industrial, more than 100 years of industrial use, deepwater port, access to established shipping routes, access to FortisBC pipeline, access to BC Hydro transmission grid, and access to labour force.</p> <p>Woodfibre LNG Limited is also of the view that tourism and industry can work together to create responsible economic development in Squamish. BC Ferries and Squamish Terminals have shown how industry can successfully coexist with local tourism and recreation, and Woodfibre LNG Limited is working hard to follow that example.</p> <p>An assessment of the potential effects of the Project on tourism is included in Section 6.2 Labour Market and Section 6.3 Sustainable Economy. The Application concluded that there were no Project-related significant adverse residual effects to the economy.</p> <p>The Application assesses the potential effects of the Project to outdoor recreation in Section 7.4 Land and Resource Use. With the proposed mitigation, it is not likely that there will be significant residual effects to outdoor recreation.</p> <p>Please also refer to the Sustainable Economy information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
840(ii)	March 22, 2015	Personal Information Withheld - Whistler, British Columbia	Also, the effects of climate change are becoming, and I believe will become, ever more apparent. The oil and gas industry will not be a good investment as time goes on. It seems irresponsible and most likely a bad business decision to allow this type of operation, with subsidies, to be built.	Climate Change	<p>Current forecasts are that the global demand for energy will increase by 35% by 2035, and the specific demand for natural gas is expected to increase by 55%¹.</p> <p>The increasing standards of living and rapid economic growth in Asia (6-8% GDP growth annually) are the key triggers for the increase in demand². China's energy demand increases by 5% annually³. Not only is Asia seeking new sources of energy to meet needs (diversify), Asia is looking for cleaner alternatives (e.g. China aims to reduce coal consumption to less than 65% total energy usage by 2017)⁴.</p> <p>Natural gas is the cleanest burning fossil fuel and has been identified as the best and most reliable way to help transition away from high-emission fuels such as oil and coal. This is particularly true in energy-hungry Asian markets, where Woodfibre LNG Limited plans to sell its product. In fact, replacing just one 500 Megawatt coal-fired power plant with natural gas fueled power generation for one year equates to taking 557,000 cars off the roads over the same time period⁵.</p> <p>Section 5.3 Greenhouse Gas Management of the Application includes an assessment of the potential Project-related effects to greenhouse gases. The influence of Project-related greenhouse gas emissions on climate change was evaluated by assessing whether any measurable change in climate could result from the Project-generated greenhouse gas emissions. The relatively minor increase in global emissions associated with the Project would correspond to a change in climate that is unlikely to be measurable.</p>	

¹ BP Statistical Review of World Energy Report, June 2013. < http://www.bp.com/content/dam/bp/pdf/statistical-review/statistical_review_of_world_energy_2013.pdf>

² ICIS. China Natural Gas Annual Report <<http://www.icis.com/energy/channel-info-about/china-natural-gas-annual-report/>>

³ Wood Mackenzie. LNG Service Tools: Understanding the dynamics of the global LNG industry < http://public.woodmac.com/content/portal/energy/highlights/wk3_Nov_13/LNG%20Service%20and%20Tool.pdf>

⁴ National Development and Reform Commission. 2014. Social Development and National Economics Statistics Bulletin 2011 – 2013.

⁵ Centre for Liquefied Natural Gas. http://www.lngfacts.org/resources/CLNG-PACE_Study_one-pager.pdf.

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
840(iii)	March 22, 2015	Personal Information Withheld - Whistler, British Columbia	This foreign built plant will employ very few local people in the end, and the product will be shipped offshore, resulting in the most benefit to the company itself, not the province.	Employment / Provincial Economy	<p>Woodfibre LNG Limited took ownership of the Woodfibre site in February 2015 and is already contributing to the District of Squamish's tax revenue. Woodfibre LNG is expected to pay an estimated \$2 million per year during operation, should the Project go ahead.</p> <p>The Application includes information on the economic benefits of the Woodfibre LNG Project, should it go ahead.</p> <ul style="list-style-type: none">• \$83.7 MILLION: Estimated in tax revenue for all three levels of government during the construction phase of the Project.• \$86.5 MILLION: Estimated in tax revenue for all three levels of government per year of operation.• \$243.3 MILLION: Estimated to the District of Squamish, Resort Municipality of Whistler, Electoral Area D of Squamish-Lillooet Regional District, Squamish First Nation communities, and Metro Vancouver gross domestic product (GDP) during construction and more than \$122.8 MILLION in GDP per year during operation. <p>An independent third party economic impact assessment of the proposed Woodfibre LNG project is included in the Application. Accounting and Consulting firm MNP found the following economic benefits of the Project (2014 CAD):</p> <p>CONSTRUCTION JOBS</p> <ul style="list-style-type: none">• Create 650+ jobs each year of construction.• Create an additional 1,080+ jobs (indirect* and induced** employment) during the construction phase of the Project. <p>LONG-TERM OPERATION JOBS</p> <ul style="list-style-type: none">• Create 100+ local jobs during operation.• Create an additional 330+ local jobs (indirect* and induced**) during operation. <p>*Indirect impacts arise from changes in activity for suppliers.</p> <p>**Induced impacts arise from shifts in spending on goods and services as a consequence of changes to the payroll of the directly and indirectly affected businesses.</p> <p>For more information, please refer to Section 2.6 Project Benefits of the Application. Additional benefits from the Project are described in greater detail in Section 6.2 Labour Market, Section 6.3 Sustainable Economy and Section 7.2 Infrastructure and Community Services.</p> <p>Please also refer to the Sustainable Economy information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
840(iv)	March 22, 2015	Personal Information Withheld - Whistler, British Columbia	All told, very little benefit and many risks, such as pollution, warm water release, affecting animal life and us, and heaven forbid, an accident, in out beautiful Howe Sound. All for an operation based on fracking, a business model which is likely to become outdated.	Effects of the Project on the Environment Safety Hydraulic Fracturing	<p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section 14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p> <p>Woodfibre LNG will be designed for the safe and efficient handling of liquefied natural gas, both on land and on water. This includes standards set out in the BC Oil and Gas Activities Act and the associated Liquefied Natural Gas Facility Regulation, national and BC building codes, as well as national and international standards, guidelines and codes of practice where there are no applicable codes for BC.</p> <p>LNG shipping is absolutely safe. In fact, LNG has been shipped for more than 50 years around the world without one incident of loss of containment.</p> <p>It's also important to know that Howe Sound has been an established shipping route for more than a century, and that it is well suited for the movement of LNG.</p> <p>The Accidents and Malfunctions section (Section 11.0) of the Application assessed the consequence and frequency of effects resulting from credible worst case scenarios for the Project. It showed that potential risks to the public were within the tolerable risk criteria regulated by the BC Oil and Gas Commission (OGC). The OGC will include a review of the quantitative risk assessment for this Project in the permit application review to confirm that the study and results meet the regulated requirements. Additional information on accidents and malfunctions was provided to the EAO on April 29, 2015. Woodfibre LNG acknowledges the expressed concern regarding hydraulic fracturing. Hydraulic fracturing activities are outside the EA scope of the Project.</p> <p>Woodfibre LNG Limited is not engaged in oil or gas extraction or production activities. The gas delivered to the Project site will be supplied to the Project from western Canadian market hubs through an expansion of the existing gas transmission system by Fortis BC,</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
					<p>and is the same gas that is supplied to Squamish, Metro Vancouver, Whistler, the Sunshine Coast and Vancouver Island through the Fortis BC pipeline system.</p> <p>Like other customers along the pipeline route, Woodfibre LNG will buy its feed gas from third party suppliers, potentially including aggregators. This natural gas will be delivered in a co-mingled stream through the Fortis BC pipeline to the site.</p> <p>Additional information on the seawater cooling system intake and discharge was provided to the EAO on April 23, 2015. Please also refer to the Seawater Cooling System information sheet that have been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
840(v)	March 22, 2015	Personal Information Withheld - Whistler, British Columbia	The IPCC has stated that, to,hold down the temperature rise to 2 degrees, 2/3 of the fossil fuels in the ground have to stay there. Who to believe is more likely right...the IPCC or Christy Clark? The future of my children depends on these kinds of decisions. Anyone who says that change cannot or will not happen and we are stuck with the fossil fuel industry forever needs to realize that the one constant in human endeavour is change. Motorola sold the first cell phone, weighing over a pound, in 1983 for \$4,000. Look where that went. As climate change becomes more threatening to our existence, we will change because we will have no choice. We can start by not allowing or investing in through subsidies, an LNG plant in Howe Sound.	Climate Change	<p>Natural gas is the cleanest burning fossil fuel and has been identified as the best and most reliable way to help transition away from high-emission fuels such as oil and coal. This is particularly true in energy-hungry Asian markets, where Woodfibre LNG Limited plans to sell its product. In fact, replacing just one 500 Megawatt coal-fired power plant with natural gas fueled power generation for one year equates to taking 557,000 cars off the roads over the same time period⁶.</p> <p>Section 5.3 Greenhouse Gas Management of the Application includes an assessment of the potential Project-related effects to greenhouse gases. The influence of Project-related greenhouse gas emissions on climate change was evaluated by assessing whether any measurable change in climate could result from the Project-generated greenhouse gas emissions. The relatively minor increase in global emissions associated with the Project would correspond to a change in climate that is unlikely to be measurable.</p>	
841	March 22, 2015	James Smyth - Victoria, British Columbia	My concern is with the environmental impact and the damage that Fracking can cause especially in a fragile seismic area.	Hydraulic Fracturing	<p>Woodfibre LNG acknowledges the expressed concern regarding hydraulic fracturing. Hydraulic fracturing activities are outside the EA scope of the Project.</p> <p>Woodfibre LNG Limited is not engaged in oil or gas extraction or production activities. The gas delivered to the Project site will be supplied to the Project from western Canadian market hubs through an expansion of the existing gas transmission system by Fortis BC, and is the same gas that is supplied to Squamish, Metro Vancouver, Whistler, the Sunshine Coast and Vancouver Island through the Fortis BC pipeline system.</p> <p>Like other customers along the pipeline route, Woodfibre LNG will buy its feed gas from third party suppliers, potentially including aggregators. This natural gas will be delivered in a co-mingled stream through the Fortis BC pipeline to the site.</p> <p>Natural gas liquefied in the Woodfibre LNG facilities will be produced and processed primarily in the northeastern region of BC, but may also originate from other wells connected to the Western Canadian Gas Transmission System. The Oil & Gas Commission (OGC) regulates these extraction activities under the Oil & Gas Activities Act and related regulations.</p>	

⁶ Centre for Liquefied Natural Gas. http://www.lngfacts.org/resources/CLNG-PACE_Study_one-pager.pdf.

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
842(i)	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	<p>no to further fossil fuel develeopment?</p> <p>To whom it may concern,</p> <p>On principle, I am opposed to everything related to new fossil fuel development, including LNG. We have entered a climate crisis and I do not see our governments doing anything about it. Therefore I cannot support any further fossil fuel development.</p> <p>As a society, we need to make a more concerted effort toward alternate fuels.</p>	LNG Industry Climate Change	<p>Thank you for your comments.</p> <p>Natural gas is the cleanest burning fossil fuel and has been identified as the best and most reliable way to help transition away from high-emission fuels such as oil and coal. This is particularly true in energy-hungry Asian markets, where Woodfibre LNG Limited plans to sell its product. In fact, replacing just one 500 Megawatt coal-fired power plant with natural gas fueled power generation for one year equates to taking 557,000 cars off the roads over the same time period⁷.</p> <p>Section 5.3 Greenhouse Gas Management of the Application includes an assessment of the potential Project-related effects to greenhouse gases. The influence of Project-related greenhouse gas emissions on climate change was evaluated by assessing whether any measurable change in climate could result from the Project-generated greenhouse gas emissions. The relatively minor increase in global emissions associated with the Project would correspond to a change in climate that is unlikely to be measurable.</p>	
842(ii)	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	<p>Others have gone into detail on most of the issues I have so I will just summarize. Note that for every voice that is heard, hundreds go unheard.</p> <p>Howe sound should be a UNESCO site, it is an incredible example of a fjordland with the rare Glass Sponges recently found and the return of whales to the area. The area is recovering and should be supported. The underwater noise of the tankers is detrimental to the well being of all marine creatures. PLEASE REVIEW THE ENVIRONMENTAL COSTS AND THE LACK OF RESEARCH</p>	Effects of the Project on Marine Life	<p>The goal of Woodfibre LNG Limited is to develop a project that provides sustained economic growth while continuing to support the work that has been done to improve Howe Sound.</p> <p>Woodfibre LNG expects that three to four LNG carriers will arrive at the site each month. The carriers will navigate through the established commercial shipping route in/out of Howe Sound (through Queen Charlotte Channel) to the Strait of Georgia and out to the Pacific Ocean. The carriers will be escorted by at least three tug boats, at least one of which will be tethered, and will be piloted by BC Coast Pilots who are experts with Howe Sound navigation.</p> <p>Glass sponges are addressed in both the Application document (Section 5.16.2.4.1) and Marine Baseline Studies Report (Appendix 5.10).</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p> <p>Potential effects of underwater noise from the Project on marine mammals are assessed by comparing Project underwater noise levels (or suitable proxies) against established acoustic thresholds for marine mammals and fish, and not in direct comparison to ambient noise levels (as with other disciplines such as atmospheric noise or water quality). Ambient noise levels would be well below the established injury thresholds for marine mammals, which are the thresholds applied during mitigation and management planning.</p> <p>An assessment of the potential effects of the Project on marine</p>	

⁷ Centre for Liquefied Natural Gas. http://www.lngfacts.org/resources/CLNG-PACE_Study_one-pager.pdf.

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
					<p>mammals is included in Section 5.19 Marine Mammals, and includes an assessment of the effects of noise. The Application concluded that there is the potential to marine mammals to experience short-term behavioural disturbances from construction activity (pile driving) and vessel traffic.</p> <p>Woodfibre LNG Limited will retain a contractor to perform underwater acoustic monitoring for pre, during and post Project construction. The underwater monitoring will collect underwater sound levels and marine mammal presence (e.g., of those species present, their frequency and seasonality). This will contribute further to baseline information for both underwater sound levels and mammal presence in the Project area and in the vicinity of the Project site to monitor potential changes of marine mammals over time.</p> <p>Please also refer to the Marine Mammals information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
842(iii)	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	<p>The economics do not add up. There will be a handful of jobs for locals and most labour and jobs will come from outside to make the project "economical". While they will purchase "local", I believe that will only last until the project is approved and then for "economic reasons" they will source from overseas. They will go with the cheapest option. The old mill hired a huge portion of the community. This will offer a handful of jobs. The impact is not worth the economics. PLEASE ANALYZE THE ECONOMIC NUMBERS.</p>	Economic Justification of the Project	<p>Woodfibre LNG anticipates sourcing the majority of its direct construction employment, approximately 60% (1,067 FTE jobs) from the local labour force (Metro Vancouver to Whistler). Squamish's labour force totaled 10,270 workers in 2011 (Statistics Canada), and the construction industry was the largest labour force sector in Squamish with 1,430 workers (14.0%). Given the large pool of workers in Metro Vancouver (1,363,300 workers in 2013), it is anticipated that Metro Vancouver would be the main source of construction workers, accounting for approximately 55% of direct construction employment.</p> <p>An independent third party economic impact assessment of the proposed Woodfibre LNG project is included in the Application. Accounting and Consulting firm MNP found the following economic benefits of the Project (2014 CAD):</p> <p>CONSTRUCTION JOBS</p> <ul style="list-style-type: none">• Create 650+ jobs each year of construction.• Create an additional 1,080+ jobs (indirect* and induced** employment) during the construction phase of the Project. <p>LONG-TERM OPERATION JOBS</p> <ul style="list-style-type: none">• Create 100+ local jobs during operation.• Create an additional 330+ local jobs (indirect* and induced**) during operation. <p>*Indirect impacts arise from changes in activity for suppliers.</p> <p>**Induced impacts arise from shifts in spending on goods and services as a consequence of changes to the payroll of the directly and indirectly affected businesses.</p> <p>For more information, please refer to Section 2.6 Project Benefits of the Application. Additional benefits from the Project are described in greater detail in Section 6.2 Labour Market, Section 6.3 Sustainable Economy and Section 7.2 Infrastructure and Community Services.</p> <p>Please also refer to the Sustainable Economy information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
842(iv)	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	The tax income to the community is quoted at 2 Million which is absurdly low for the impact this project will have on the community. If we are going to have an industry on the site, we need a lower impact industry and a better contribution to the community coffers	Local Economy	<p>Woodfibre LNG Limited took ownership of the Woodfibre site in February 2015 and is already contributing to the District of Squamish's tax revenue. Woodfibre LNG is expected to pay an estimated \$2 million per year during operation, should the Project go ahead.</p> <p>An independent third party economic impact assessment of the proposed Woodfibre LNG project is included in the Application. Accounting and Consulting firm MNP found the following economic benefits of the project (2014 CAD):</p> <ul style="list-style-type: none">• \$83.7 MILLION: Estimated in tax revenue for all three levels of government during the construction phase of the Project.• \$86.5 MILLION: Estimated in tax revenue for all three levels of government per year of operation.• \$243.3 MILLION: Estimated to the District of Squamish, Resort Municipality of Whistler, Electoral Area D of Squamish-Lillooet Regional District, Squamish First Nation communities, and Metro Vancouver gross domestic product (GDP) during construction and more than• \$122.8 MILLION in GDP per year during operation. <p>For more information see Section 2.6 Project Benefits of the Application.</p>	
842(v)	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	We need to stop this gold rush mentality and extract more sustainably. Fracking is harmful. If we keep opening up to make instant money, our children will have nothing.	Hydraulic Fracturing	<p>Woodfibre LNG acknowledges the expressed concern regarding hydraulic fracturing. Hydraulic fracturing activities are outside the EA scope of the Project.</p> <p>Woodfibre LNG Limited is not engaged in oil or gas extraction or production activities. The gas delivered to the Project site will be supplied to the Project from western Canadian market hubs through an expansion of the existing gas transmission system by Fortis BC, and is the same gas that is supplied to Squamish, Metro Vancouver, Whistler, the Sunshine Coast and Vancouver Island through the Fortis BC pipeline system.</p> <p>Like other customers along the pipeline route, Woodfibre LNG will buy its feed gas from third party suppliers, potentially including aggregators. This natural gas will be delivered in a co-mingled stream through the Fortis BC pipeline to the site.</p> <p>Natural gas liquefied in the Woodfibre LNG facilities will be produced and processed primarily in the northeastern region of BC, but may also originate from other wells connected to the Western Canadian Gas Transmission System. The Oil & Gas Commission (OGC) regulates these extraction activities under the Oil & Gas Activities Act and related regulations.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
842(vi)	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	The climate of the sound, the waves and storms can wreak havoc on floating structures. We have had accidents in the past and I am not confident about the emergency plans.....or the frightening lack. PLEASE REVIEW THE LACK OF EMERGENCY PLANNING	Emergency Planning	<p>The Accidents and Malfunctions section (Section 11.0) of the Application assessed the consequence and frequency of effects resulting from credible worst case scenarios for the Project. It showed that potential risks to the public were within the tolerable risk criteria regulated by the BC Oil and Gas Commission (OGC). The OGC will include a review of the quantitative risk assessment for this Project in the permit application review to confirm that the study and results meet the regulated requirements. Additional information on accidents and malfunctions was provided to the EAO on April 29, 2015.</p> <p>In order to prevent accidents and malfunctions from happening, prior to operation of the Project, the Liquefied Natural Gas Facility Regulation requires that Woodfibre LNG Limited prepare a Safety Loss and Management Program that complies with CSA Z276. This program includes a detailed Emergency Response Plan that includes documented emergency response plans, required equipment, training requirements, identification of trained personnel and plans for emergency drills and exercises.</p> <p>It is Woodfibre LNG Limited's intention to be self-sufficient for all possible emergency situations and it is not anticipated that Woodfibre LNG Limited would require First Responder emergency services. In addition, Woodfibre LNG Limited will continue discussions with local government and other emergency service providers in the LAA to ensure a robust communications plan in the unlikely event of an emergency related to the Woodfibre LNG Project.</p> <p>Please also refer to the Public Safety and Marine Transport information sheets that have been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
843	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	<p>The company is following due process and complying with government regulation. However we all know that government regulations have been watered down drastically and no longer offer the protection they used to. We have seen a lot of examples of accidents and disasters that were "complying" with government regulations. It is not good enough for this area. PLEASE ENSURE THE TOUGHEST REGULATIONS WE HAVE ARE ADDRESSED.</p> <p>Your office has the power to do it's due diligence and make the decision. To date I only know of one instance where a project has not been rubber stamped by the EAO. For the public this tells us that the office is not an independent body. This is your opportunity to do the right thing and turn this application down. Prove that you really are an independent body. Put your jobs on the line.</p>	Regulatory Requirements	<p>Thank you for your comment.</p> <p>Woodfibre LNG will be designed for the safe and efficient handling of liquefied natural gas, both on land and on water. This includes standards set out in the BC Oil and Gas Activities Act and the associated Liquefied Natural Gas Facility Regulation, national and BC building codes, as well as national and international standards, guidelines and codes of practice where there are no applicable codes for BC.</p> <p>The Project will also require a Facility Permit from the OGC as well as numerous other environmental permits. The construction and operation of the Project will be regulated by the OGC and the BC Safety Authority and Woodfibre LNG Limited anticipates that the appropriate government agencies will inspect the facility as required.</p> <p>Should an Environmental Assessment Certificate be granted for the Project, a Table of Conditions will be developed that outlines all of the requirements with which the Project will have to comply. Woodfibre LNG Limited will be legally responsible for ensuring all conditions are met.</p>	For more information related to comments on the Environmental Assessment process please see "EAO Response to Public Comments – Application Review Public Comment Period for Woodfibre LNG, January 22 – March 23, 2015" under the Application Review EAO Generated Documents [Link] .

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
844	March 22, 2015	Dave Sharpe - Whistler, British Columbia	<p>Please please please do not allow LNG development in our beautiful Howe sound.</p> <p>I have been camping and fishing in that area for 20 years and know exactly how bad it can be with development. It's bad enough that the gravel pit will destroy a perfectly good fish habitat and we still have one pulpmill spewing poison.</p> <p>Don't make it worse</p> <p>NO TO LNG!!</p>	Industrial Legacy	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited is of the view that the Woodfibre site is the right fit for an LNG facility. It features: zoned industrial, more than 100 years of industrial use, deepwater port, access to established shipping routes, access to FortisBC pipeline, access to BC Hydro transmission grid, and access to labour force.</p> <p>The Woodfibre site has been used for industrial purposes for 100 years and is zoned for industrial use. As a condition of acquiring the site, Woodfibre LNG required the completion of remediation work on site. On December 22, 2014 the Ministry of Environment issued two Certificates of Compliance (uplands and water lot) evidencing completion of the remediation.</p> <p>Woodfibre LNG Limited intends to perform additional remediation and restoration in the Project area. Plans for additional remediation include the removal of approximately 3,000 existing creosote-coated piles from the waterfront in the Project area and the creation of a Green Zone around Mill Creek. This work will be carried out in partnership with the local groups, where suitable, so that local conservation and restoration targets can be met (please refer to Section 2.6.7 Ecological Benefits of the Application).</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
845	March 22, 2015	M.A. Sredzki - Lions Bay, British Columbia	BC government must NOT allow to kill Glass Sponges in Halkett Bay with the LNG tankers getting over the 9000 year old reef.	Glass Sponge Reef	<p>Thank you for the comment.</p> <p>Glass sponges are addressed in both the Application document (Section 5.16.2.4.1) and Marine Baseline Studies Report (Appendix 5.10).</p> <p>Woodfibre LNG expects that three to four LNG carriers will arrive at the site each month. The carriers will navigate through the established commercial shipping route in/out of Howe Sound (through Queen Charlotte Channel) to the Strait of Georgia and out to the Pacific Ocean. The carriers will be escorted by at least three tug boats, at least one of which will be tethered, and will be piloted by BC Coast Pilots who are experts with Howe Sound navigation.</p> <p>The minimum water depth along the shipping route is 60 metres, and the LNG carriers draft will sit approximately 12 metres to 15 metres below the water surface.</p> <p>The sailing line (shipping route) is a minimum of 1300 metres (and typically more than 1500 metres) from the location of the sponge reefs located at Halkett Point and Lost Reef between Pam rocks and Christie Islets. At depths ranging between 20 m and 40 m (i.e., associated depths where glass sponge reefs have been observed at these locations), the velocity produced by a propeller wash is considered negligible due to dissipation of the prop-wash with distance from sailing line.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section 14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p>	
846	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	Un Natural, Un enviromental, Un easy, Un safe, un necessary, Un attuned, Un balanced, Un clear, Un relaxed etc		Thank you for your comment.	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
847	March 22, 2015	Personal Information Withheld - Sechelt, British Columbia	The tankers do not have enough clearance to get over the 9000 year old glass sponge reefs. Give this project a failing grade!	Glass Sponge Reef	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>Woodfibre LNG expects that three to four LNG carriers will arrive at the site each month. The carriers will navigate through the established commercial shipping route in/out of Howe Sound (through Queen Charlotte Channel) to the Strait of Georgia and out to the Pacific Ocean. The carriers will be escorted by at least three tug boats, at least one of which will be tethered, and will be piloted by BC Coast Pilots who are experts with Howe Sound navigation. This arrangement of tugs also serves as an emergency provision to address contingencies that may require the vessel to stop or engage in manoeuvres at very short notice.</p> <p>The minimum water depth along the shipping route is 60 metres, and the LNG carriers draft will sit approximately 12 metres to 15 metres below the water surface.</p> <p>The sailing line (shipping route) is a minimum of 1300 metres (and typically more than 1500 metres) from the location of the glass sponge reefs located at Halkett Point and Lost Reef between Pam rocks and Christie Islets. The glass sponge reefs are located at depths ranging between 20 m and 40 m at these locations.</p> <p>Please also refer to the Marine Transport information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
848	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	<p>SAFETY: Siting an LNG facility in Howe Sound violates international safety standards and practices, putting Howe Sound residents at risk As LNG tankers transit Howe Sound, there is a high-danger zone for 1,600 metres (1-mile) on either side of the LNG tanker. If an accident happens, people within this zone risk death by asphyxiation, or death/injury by fire or explosion. Every time a tanker travels through Howe Sound (approximately 6-8 transits a month according to Woodfibre LNG) several Howe Sound communities will be in that high-danger zone, including: Bowen Island, Bowyer Island, Anvil Island, Passage Island, Porteau Cove, West Vancouver, and parts of the Sea to Sky highway. The Society of International Gas Tanker and Terminal Operators (SIGTTO) LNG Terminal Siting Standards states that LNG terminals should not be located in narrow, inland waterways with dense local populations and significant commercial, recreational, and ferry traffic. Why would that guideline not apply to Howe Sound? The proposed siting of the Woodfibre LNG terminal and associated transit of LNG tankers through Howe Sound poses an unacceptable risk to safety of people in communities along the shores of Howe Sound.</p> <p>Source: Sandia Report, 2004 and SIGTTO LNG Terminal Siting Standards</p>	LNG Project	<p>Thank you for your comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 11-21, and 45.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>ENVIRONMENT: The once-through seawater cooling system proposed by Woodfibre LNG is outdated Woodfibre LNG is proposing an outdated and damaging cooling method to help cool the LNG facility. They propose to extract 17,000 tonnes (= 3.7 million gallons, or 7 Olympic-sized 50-meter swimming pools) of seawater from Howe Sound, chlorinate it, heat it, and then spit it back out into the sound every hour of every day for the next 25 years. This method has been banned in California and several other places as it is very damaging to marine life such as juvenile salmon, herring, and plankton which are the building blocks for all other life in Howe Sound. If the herring are impacted, the dolphins, orcas, and humpbacks are also impacted as they no longer have a food supply. The impacts of increased water temperatures and the addition of chlorinated seawater will likely reverse the recent revival of marine life in Howe Sound, which is just now recovering from the toxic le gacies of previous industries. This is unacceptable.</p> <p>HEALTH: Social costs and health impacts of air pollution Woodfibre LNG is estimating air pollution emissions of 295.7 tonnes of nitrogen dioxide (NO2) and 43.8 tonnes of sulfur dioxide (SO2) every year (See Table 5.2-14 of the Air Quality Section of Woodfibre LNG's environmental assessment application).</p> <p>Nitrogen Dioxide (NO2) is a reddish-brown gas with a pungent, irritating odour. It absorbs light and leads to the yellow-brown "smog" pollution haze seen hanging over cities. It is known to irritate the lungs and increase susceptibility to respiratory infections. In combination with either ozone (O3) or sulphur dioxide (SO2), nitrogen dioxide may cause injury at even lower concentration levels.</p> <p>Sulphur Dioxide (SO2) is a toxic gas with a pungent, irritating, and rotten smell. Current scientific evidence links short-term exposures to SO2, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects including bronchoconstriction and increased asthma symptoms. These effects are particularly important for asthmatics at elevated ventilation rates (e.g., while exercising or playing). Studies also show a connection between short-term exposure and increased visits to emergency departments and hospital admissions for respiratory illnesses, particularly in at-risk populations including children, the elderly, and asthmatics.</p> <p>Emissions of NOx and SO2 interact with other compounds to form fine particles, which can affect both the lungs and the heart. Exposure to these particles is linked to increased risk of respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; decreased lung function; aggravated asthma; onset of chronic bronchitis; irregular heartbeat; nonfatal heart</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>attacks; and premature death in people with heart or lung disease.</p> <p>A new study published in the scientific journal, Climatic Change, estimates the true social costs of air pollution that aren't accounted for in the cost of fossil fuels and other pollutants. Social costs include the health impacts of air pollution as well as impacts from climate change. The study found that sulfur dioxide costs \$42,000 per tonne, and nitrous oxides cost \$67,000 per tonne.</p> <p>Sources:</p> <p>Mills et al (2009) Adverse cardiovascular effects of air pollution. Nature Clinical Practice Cardiovascular Medicine 6: 36-44 Shindell (2015) The social costs of atmospheric release. Climatic Change</p> <p>SITE SUITABILITY: The Woodfibre site is not a safe location for a hazardous LNG facility On February 15th, 2015, a 3.4 magnitude earthquake hit Vancouver's coast that was felt throughout Howe Sound. The Woodfibre LNG proposal is located within this zone of moderate to high earthquake risk, on two known thrust faults. The Woodfibre site also has a history of slope failure. In 1955 a wharf and three warehouses collapsed into Howe Sound at the Woodfibre site, causing \$500,000 – \$750,000 in damages (Bornhold, B.D., 1983, Fiords, GEOS, no. 1, p 1-4). A recent, but unreleased, geotechnical study by Knight Piesold identifies that approximately 46% of the study area was mapped as having rapid mass movement. This means landslides and slope slumpage... including existing natural landslide hazards as well as terrain where construction activity may increase landslide initiation. Why hasn't the geotechnical study by Knight Piesold been released?</p> <p>Source: B.C. Ministr y of Energy and Mines</p> <p>ECONOMY: The requested socio-economic study has not been provided During construction, only 4.3% of jobs (=38.5 out of 895) will be for locals living in the Squamish/Whistler corridor (See Table 6.2-8 of the Labour Market section of Woodfibre LNG's environmental assessment application). Why are there so few jobs predicted to be filled by workers in the Squamish/SLRD area? The EA application is also very unclear about how many of the 100 full-time jobs will be filled by residents of Howe Sound once the LNG terminal is operational. What are the benefits to Squamish? What are the costs? There is still no clarity around how much in municipal taxes will be paid to the District of Squamish. How will this project impact existing small businesses and existing industries in Howe Sound?</p> <p>CLIMATE CHANGE: 142 thousand tonnes of greenhouse gas emissions is unacceptable Woodfibre LNG is now estimating greenhouse gas emissions to be 142 thousand tonnes of CO2</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>equivalent every year. These annual emissions of CO2 equivalent from Woodfibre LNG is equal to adding over 18,000 cars to the highway, driving to Vancouver and back, every day. This is more than six times greater than current highway traffic. It is irresponsible to approve this kind of polluting industry at a time when we need to transition away from fossil fuels to mitigate the risks associated with climate change, and to reduce the economic and health impacts of air pollution in general.</p> <p>GOVERNMENT REGULATION: Inability of government to monitor, enforce, and respond to issues There are no regulations adopted to regulate this LNG industry from a technical standpoint. Any of the current standards are not applicable to the LNG industry. Do the regulators have the knowledge and the expertise and the capacity to oversee this industry or will they be relying on the proponent to monitor themselves and report to the regulator? Self-monitoring industries have created several examples of accidents with resulting environmental destruction in recent years, including the Lac Megantic rail disaster and the Mt Polley tailing pond spill.</p> <p>ENVIRONMENT: Removal of water from Mill Creek unsustainable for fish life Woodfibre LNG owns the existing water license to take water from Mill Creek. The Department of Fisheries and Oceans has objected to this because the amount of water that WLNG is proposing to remove will reduce water levels in Mill Creek to levels that will no longer support fish life, especially in the summer months. Woodfibre LNG needs to source water for this project from somewhere else.</p> <p>ENVIRONMENT: Missing baseline studies The following baseline studies are either missing or are inadequate as they do not conform to any recognized scientific standards: fish, birds, marine mammals, air quality, shipping, water quality, marine sound, and atmospheric sound, marine life near the Woodfibre site, and the cumulative impact assessment. Proper studies need to be completed before any decisions can be made regarding this project.</p> <p>VIEWSCAPES: BC Hydro clearcut of two 64 metre swaths of forest at the Woodfibre site will impact views from the Sea to Sky highway and the gondola BC Hydro is proposing to clearcut two 64 metre swaths of forest at the Woodfibre site which will create visible scars in the Howe Sound viewscape which will be very visible from the highway and the gondola. This information was only made available during the recent BC Hydro open house held on 19th March, near the end of the public comment period. This information is not included in the cumulative impact assessment of the Woodfibre application and it should be. This late release of information pertinent to this project and</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>the timing of the BC Hydro open houses is unsatisfactory.</p> <p>ENVIRONMENT: 9000 year old glass sponge reefs endangered by tanker traffic LNG tankers do not have enough clearance to get over the 9000 year old reef if they go off course. These 9000 year old glass sponge reefs have been called "Living Fossils" by National Geographic as until recently this species was thought to have gone extinct over 60 million years ago. MLA Jordan Sturdy recently made a statement in the House about the importance of this discovery in Halkett Bay near Gambier Island, and to support the proposal to expand the Provincial Park Protected Area to ensure these reefs are protected.</p> <p>Sources:</p> <p>http://news.nationalgeographic.com/news/2013/10/131018-glass-sponge-reef-canada-ocean-science/</p> <p>http://jordansturdymla.ca/bcltv_videos/mla-sturdy-halkett-bays-glass-sponges/</p> <p>ENVIRONMENT: Will there be smog? Will there be a smell? Will there be noise?</p> <p>Howe Sound is a recovering jewel that is worth so much more than the rather small and uncertain sum of taxes being proposed for Squamish and the Province. Please think long-term.</p>			
849	March 22, 2015	Personal Information Withheld - Paradise Valley District of Squamish, British Columbia	<p>SAFETY: Siting an LNG facility in Howe Sound violates international safety standards and practices, putting Howe Sound residents at risk As LNG tankers transit Howe Sound, there is a high-danger zone for 1,600 metres (1-mile) on either side of the LNG tanker. If an accident happens, people within this zone risk death by asphyxiation, or death/injury by fire or explosion. Every time a tanker travels through Howe Sound (approximately 6-8 transits a month according to Woodfibre LNG) several Howe Sound communities will be in that high-danger zone, including: Bowen Island, Bowyer Island, Anvil Island, Passage Island, Porteau Cove, West Vancouver, and parts of the Sea to Sky highway. The Society of International Gas Tanker and Terminal Operators (SIGTTO) LNG Terminal Siting Standards states that LNG terminals should not be located in narrow, inland waterways with dense local populations and significant commercial, recreational, and ferry traffic. Why would that guideline not apply to Howe Sound? The proposed siting of the Woodfibre LNG terminal and associated transit of LNG tankers through Howe Sound poses an unacceptable risk to safety of people in communities along the shores of Howe Sound.</p> <p>Source: Sandia Report, 2004 and SIGTTO LNG Terminal Siting Standards</p> <p>ENVIRONMENT: The once-through seawater cooling system proposed by Woodfibre LNG is outdated Woodfibre LNG is proposing an outdated</p>	LNG Project	Thank you for your comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 11-21, and 45.	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>and damaging cooling method to help cool the LNG facility. They propose to extract 17,000 tonnes (= 3.7 million gallons, or 7 Olympic-sized 50-meter swimming pools) of seawater from Howe Sound, chlorinate it, heat it, and then spit it back out into the sound every hour of every day for the next 25 years. This method has been banned in California and several other places as it is very damaging to marine life such as juvenile salmon, herring, and plankton which are the building blocks for all other life in Howe Sound. If the herring are impacted, the dolphins, orcas, and humpbacks are also impacted as they no longer have a food supply. The impacts of increased water temperatures and the addition of chlorinated seawater will likely reverse the recent revival of marine life in Howe Sound, which is just now recovering from the toxic legacies of previous industries. This is unacceptable.</p> <p>HEALTH: Social costs and health impacts of air pollution Woodfibre LNG is estimating air pollution emissions of 295.7 tonnes of nitrogen dioxide (NO2) and 43.8 tonnes of sulfur dioxide (SO2) every year (See Table 5.2-14 of the Air Quality Section of Woodfibre LNG's environmental assessment application).</p> <p>Nitrogen Dioxide (NO2) is a reddish-brown gas with a pungent, irritating odour. It absorbs light and leads to the yellow-brown "smog" pollution haze seen hanging over cities. It is known to irritate the lungs and increase susceptibility to respiratory infections. In combination with either ozone (O3) or sulphur dioxide (SO2), nitrogen dioxide may cause injury at even lower concentration levels.</p> <p>Sulphur Dioxide (SO2) is a toxic gas with a pungent, irritating, and rotten smell. Current scientific evidence links short-term exposures to SO2, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects including bronchoconstriction and increased asthma symptoms. These effects are particularly important for asthmatics at elevated ventilation rates (e.g., while exercising or playing). Studies also show a connection between short-term exposure and increased visits to emergency departments and hospital admissions for respiratory illnesses, particularly in at-risk populations including children, the elderly, and asthmatics.</p> <p>Emissions of NOx and SO2 interact with other compounds to form fine particles, which can affect both the lungs and the heart. Exposure to these particles is linked to increased risk of respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; decreased lung function; aggravated asthma; onset of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease.</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>A new study published in the scientific journal, Climatic Change, estimates the true social costs of air pollution that aren't accounted for in the cost of fossil fuels and other pollutants. Social costs include the health impacts of air pollution as well as impacts from climate change. The study found that sulfur dioxide costs \$42,000 per tonne, and nitrous oxides cost \$67,000 per tonne.</p> <p>Sources:</p> <p>Mills et al (2009) Adverse cardiovascular effects of air pollution. Nature Clinical Practice Cardiovascular Medicine 6: 36-44 Shindell (2015) The social costs of atmospheric release. Climatic Change</p> <p>SITE SUITABILITY: The Woodfibre site is not a safe location for a hazardous LNG facility On February 15th, 2015, a 3.4 magnitude earthquake hit Vancouver's coast that was felt throughout Howe Sound. The Woodfibre LNG proposal is located within this zone of moderate to high earthquake risk, on two known thrust faults. The Woodfibre site also has a history of slope failure. In 1955 a wharf and three warehouses collapsed into Howe Sound at the Woodfibre site, causing \$500,000 – \$750,000 in damages (Bornhold, B.D., 1983, Fiords, GEOS, no. 1, p 1-4). A recent, but unreleased, geotechnical study by Knight Piesold identifies that approximately 46% of the study area was mapped as having rapid mass movement. This means landslides and slope slumpage... including existing natural landslide hazards as well as terrain where construction activity may increase landslide initiation. Why hasn't the geotechnical study by Knight Piesold been released?</p> <p>Source: B.C. Ministr y of Energy and Mines</p> <p>ECONOMY: The requested socio-economic study has not been provided During construction, only 4.3% of jobs (=38.5 out of 895) will be for locals living in the Squamish/Whistler corridor (See Table 6.2-8 of the Labour Market section of Woodfibre LNG's environmental assessment application). Why are there so few jobs predicted to be filled by workers in the Squamish/SLRD area? The EA application is also very unclear about how many of the 100 full-time jobs will be filled by residents of Howe Sound once the LNG terminal is operational. What are the benefits to Squamish? What are the costs? There is still no clarity around how much in municipal taxes will be paid to the District of Squamish. How will this project impact existing small businesses and existing industries in Howe Sound?</p> <p>CLIMATE CHANGE: 142 thousand tonnes of greenhouse gas emissions is unacceptable Woodfibre LNG is now estimating greenhouse gas emissions to be 142 thousand tonnes of CO2 equivalent every year. These annual emissions of CO2 equivalent from Woodfibre LNG is equal to adding over 18,000 cars to the highway, driving to</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>Vancouver and back, every day. This is more than six times greater than current highway traffic. It is irresponsible to approve this kind of polluting industry at a time when we need to transition away from fossil fuels to mitigate the risks associated with climate change, and to reduce the economic and health impacts of air pollution in general.</p> <p>GOVERNMENT REGULATION: Inability of government to monitor, enforce, and respond to issues There are no regulations adopted to regulate this LNG industry from a technical standpoint. Any of the current standards are not applicable to the LNG industry. Do the regulators have the knowledge and the expertise and the capacity to oversee this industry or will they be relying on the proponent to monitor themselves and report to the regulator? Self-monitoring industries have created several examples of accidents with resulting environmental destruction in recent years, including the Lac Megantic rail disaster and the Mt Polley tailing pond spill.</p> <p>ENVIRONMENT: Removal of water from Mill Creek unsustainable for fish life Woodfibre LNG owns the existing water license to take water from Mill Creek. The Department of Fisheries and Oceans has objected to this because the amount of water that WLNG is proposing to remove will reduce water levels in Mill Creek to levels that will no longer support fish life, especially in the summer months. Woodfibre LNG needs to source water for this project from somewhere else.</p> <p>ENVIRONMENT: Missing baseline studies</p> <p>The following baseline studies are either missing or are inadequate as they do not conform to any recognized scientific standards: fish, birds, marine mammals, air quality, shipping, water quality, marine sound, and atmospheric sound, marine life near the Woodfibre site, and the cumulative impact assessment. Proper studies need to be completed before any decisions can be made regarding this project.</p> <p>VIEWSCAPES: BC Hydro clearcut of two 64 metre swaths of forest at the Woodfibre site will impact views from the Sea to Sky highway and the gondola BC Hydro is proposing to clearcut two 64 metre swaths of forest at the Woodfibre site which will create visible scars in the Howe Sound viewscape which will be very visible from the highway and the gondola. This information was only made available during the recent BC Hydro open house held on 19th March, near the end of the public comment period. This information is not included in the cumulative impact assessment of the Woodfibre application and it should be. This late release of information pertinent to this project and the timing of the BC Hydro open houses is unsatisfactory.</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>ENVIRONMENT: 9000 year old glass sponge reefs endangered by tanker traffic LNG tankers do not have enough clearance to get over the 9000 year old reef if they go off course. These 9000 year old glass sponge reefs have been called "Living Fossils" by National Geographic as until recently this species was thought to have gone extinct over 60 million years ago. MLA Jordan Sturdy recently made a statement in the House about the importance of this discovery in Halkett Bay near Gambier Island, and to support the proposal to expand the Provincial Park Protected Area to ensure these reefs are protected.</p> <p>Sources: http://news.nationalgeographic.com/news/2013/10/131018-glass-sponge-reef-canada-ocean-science/ http://jordansturdymla.ca/bcltv_videos/mla-sturdy-halkett-bays-glass-sponges/</p> <p>ENVIRONMENT: Will there be smog? Will there be a smell? Will there be noise?</p>			
850	March 22, 2015	Personal Information Withheld - Whistler, British Columbia	<p>SAFETY: Siting an LNG facility in Howe Sound violates international safety standards and practices, putting Howe Sound residents at risk As LNG tankers transit Howe Sound, there is a high-danger zone for 1,600 metres (1-mile) on either side of the LNG tanker. If an accident happens, people within this zone risk death by asphyxiation, or death/injury by fire or explosion. Every time a tanker travels through Howe Sound (approximately 6-8 transits a month according to Woodfibre LNG) several Howe Sound communities will be in that high-danger zone, including: Bowen Island, Bowyer Island, Anvil Island, Passage Island, Porteau Cove, West Vancouver, and parts of the Sea to Sky highway. The Society of International Gas Tanker and Terminal Operators (SIGTTO) LNG Terminal Siting Standards states that LNG terminals should not be located in narrow, inland waterways with dense local populations and significant commercial, recreational, and ferry traffic. Why would that guideline not apply to Howe Sound? The proposed siting of the Woodfibre LNG terminal and associated transit of LNG tankers through Howe Sound poses an unacceptable risk to safety of people in communities along the shores of Howe Sound.</p> <p>Source: Sandia Report, 2004 and SIGTTO LNG Terminal Siting Standards</p> <p>ENVIRONMENT: The once-through seawater cooling system proposed by Woodfibre LNG is outdated Woodfibre LNG is proposing an outdated and damaging cooling method to help cool the LNG facility. They propose to extract 17,000 tonnes (= 3.7 million gallons, or 7 Olympic-sized 50-meter swimming pools) of seawater from Howe Sound, chlorinate it, heat it, and then spit it back out into the sound every hour of every day for the next 25 years. This method has been banned in California and</p>	LNG Project	Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 11-21, and 45.	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>several other places as it is very damaging to marine life such as juvenile salmon, herring, and plankton which are the building blocks for all other life in Howe Sound. If the herring are impacted, the dolphins, orcas, and humpbacks are also impacted as they no longer have a food supply. The impacts of increased water temperatures and the addition of chlorinated seawater will likely reverse the recent revival of marine life in Howe Sound, which is just now recovering from the toxic le gacies of previous industries. This is unacceptable.</p> <p>HEALTH: Social costs and health impacts of air pollution Woodfibre LNG is estimating air pollution emissions of 295.7 tonnes of nitrogen dioxide (NO2) and 43.8 tonnes of sulfur dioxide (SO2) every year (See Table 5.2-14 of the Air Quality Section of Woodfibre LNG's environmental assessment application).</p> <p>SITE SUITABILITY: The Woodfibre site is not a safe location for a hazardous LNG facility On February 15th, 2015, a 3.4 magnitude earthquake hit Vancouver's coast that was felt throughout Howe Sound. The Woodfibre LNG proposal is located within this zone of moderate to high earthquake risk, on two known thrust faults. The Woodfibre site also has a history of slope failure. In 1955 a wharf and three warehouses collapsed into Howe Sound at the Woodfibre site, causing \$500,000 – \$750,000 in damages (Bornhold, B.D., 1983, Fiords, GEOS, no. 1, p 1-4). A recent, but unreleased, geotechnical study by Knight Piesold identifies that approximately 46% of the study area was mapped as having rapid mass movement. This means landslides and slope slumpage... including existing natural landslide hazards as well as terrain where construction activity may increase landslide initiation. Why hasn't the geotechnical study by Knight Piesold been released?</p> <p>Source: B.C. Ministr y of Energy and Mines</p> <p>ECONOMY: The requested socio-economic study has not been provided During construction, only 4.3% of jobs (=38.5 out of 895) will be for locals living in the Squamish/Whistler corridor (See Table 6.2-8 of the Labour Market section of Woodfibre LNG's environmental assessment application). Why are there so few jobs predicted to be filled by workers in the Squamish/SLRD area? The EA application is also very unclear about how many of the 100 full-time jobs will be filled by residents of Howe Sound once the LNG terminal is operational. What are the benefits to Squamish? What are the costs? There is still no clarity around how much in municipal taxes will be paid to the District of Squamish. How will this project impact existing small businesses and existing industries in Howe Sound?</p> <p>CLIMATE CHANGE: 142 thousand tonnes of greenhouse gas emissions is unacceptable</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>Woodfibre LNG is now estimating greenhouse gas emissions to be 142 thousand tonnes of CO2 equivalent every year. These annual emissions of CO2 equivalent from Woodfibre LNG is equal to adding over 18,000 cars to the highway, driving to Vancouver and back, every day. This is more than six times greater than current highway traffic. It is irresponsible to approve this kind of polluting industry at a time when we need to transition away from fossil fuels to mitigate the risks associated with climate change, and to reduce the economic and health impacts of air pollution in general.</p> <p>GOVERNMENT REGULATION: Inability of government to monitor, enforce, and respond to issues There are no regulations adopted to regulate this LNG industry from a technical standpoint. Any of the current standards are not applicable to the LNG industry. Do the regulators have the knowledge and the expertise and the capacity to oversee this industry or will they be relying on the proponent to monitor themselves and report to the regulator? Self-monitoring industries have created several examples of accidents with resulting environmental destruction in recent years, including the Lac Megantic rail disaster and the Mt Polley tailing pond spill.</p> <p>ENVIRONMENT: Removal of water from Mill Creek unsustainable for fish life Woodfibre LNG owns the existing water license to take water from Mill Creek. The Department of Fisheries and Oceans has objected to this because the amount of water that WLNG is proposing to remove will reduce water levels in Mill Creek to levels that will no longer support fish life, especially in the summer months. Woodfibre LNG needs to source water for this project from somewhere else.</p> <p>ENVIRONMENT: Missing baseline studies The following baseline studies are either missing or are inadequate as they do not conform to any recognized scientific standards: fish, birds, marine mammals, air quality, shipping, water quality, marine sound, and atmospheric sound, marine life near the Woodfibre site, and the cumulative impact assessment. Proper studies need to be completed before any decisions can be made regarding this project.</p> <p>VIEWSCAPES: BC Hydro clearcut of two 64 metre swaths of forest at the Woodfibre site will impact viewscapes from the Sea to Sky highway and the gondola BC Hydro is proposing to clearcut two 64 metre swaths of forest at the Woodfibre site which will create visible scars in the Howe Sound viewscape which will be very visible from the highway and the gondola. This information was only made available during the recent BC Hydro open house held on 19th March, near the end of the public comment period. This information is not included in the cumulative impact assessment of the</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>Woodfibre application and it should be. This late release of information pertinent to this project and the timing of the BC Hydro open houses is unsatisfactory.</p> <p>ENVIRONMENT: 9000 year old glass sponge reefs endangered by tanker traffic LNG tankers do not have enough clearance to get over the 9000 year old reef if they go off course. These 9000 year old glass sponge reefs have been called "Living Fossils" by National Geographic as until recently this species was thought to have gone extinct over 60 million years ago. MLA Jordan Sturdy recently made a statement in the House about the importance of this discovery in Halkett Bay near Gambier Island, and to support the proposal to expand the Provincial Park Protected Area to ensure these reefs are protected.</p> <p>Sources: http://news.nationalgeographic.com/news/2013/10/131018-glass-sponge-reef-canada-ocean-science/ http://jordansturdymla.ca/bcltv_videos/mla-sturdy-halkett-bays-glass-sponges/</p> <p>ENVIRONMENT: Will there be smog? Will there be a smell?</p> <p>Woodfibre LNG is estimating air pollution emissions of 295.7 tonnes of nitrogen dioxide (NO2) and 43.8 tonnes of sulfur dioxide (SO2) every year (See Table 5.2-14 of the Air Quality Section of Woodfibre LNG's environmental assessment application).</p> <p>Nitrogen Dioxide (NO2) is a reddish-brown gas with a pungent, irritating odour. It absorbs light and leads to the yellow-brown "smog" pollution haze seen hanging over cities. It is known to irritate the lungs and increase susceptibility to respiratory infections. In combination with either ozone (O3) or sulphur dioxide (SO2), nitrogen dioxide may cause injury at even lower concentration levels.Sulphur Dioxide (SO2) is a toxic gas with a pungent, irritating, and rotten smell. Current scientific evidence links short-term exposures to SO2, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects including bronchoconstriction and increased asthma symptoms. These effects are particularly important for asthmatics at elevated ventilation rates (e.g., while exercising or playing). Studies also show a connection between short-term exposure and increased visits to emergency departments and hospital admissions for respiratory illnesses, particularly in at-risk populations including children, the elderly, and asthmatics. The addition of these air pollutants in Howe Sound is of particular concern as recent research has shown that the Howe Sound airshed and Lower Fraser Valley airshed are connected. Emissions from Woodfibre LNG will add to the pollution in Howe Sound, exacerbating the existing air quality conditions, particularly in the Squamish-Brackendale corridor.</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
851(i)	March 22, 2015	Jeff - Squamish, British Columbia	<p>Our family, which consists of Jeff Wilgosh, Kristeen MacIsaac, Lizzy MacIsaac, and Kaiden Wilgosh are openly opposed to the WoodFibre LNG facility and the Fortis pipeline which is designed to support its operations.</p> <p>We have lived in Squamish for 8 years and the Sea to Sky region since 1998. We have, and continue to successfully raise our family here in Squamish where we are heavily invested in the community in all aspects. We derive our livelihood directly from tourism and public service. We are an extremely active family. Our quality of life and our health in every respect is dependent on our environment and our access too that environment, specifically those areas around Howe Sound and the ocean itself. We believe this project even under the best possible circumstances and without incident would have a significant impact on our livelihood, quality of life, and the environment in which we have chosen to call home.</p>	Effect of the Project on Environment Human Health	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p>	
851(ii)	March 22, 2015	Jeff - Squamish, British Columbia	<p>More importantly we believe this industry and the company which is purposed to build and operate this facility in our home town is NOT of a credible nature and will NOT operate under the best possible circumstances. The benefits are NOT in our towns best interest or are being offered in ruse and hold no honest intention of being fulfilled once approval for their project is gained.</p> <p>We believe this purposed facility will do far more harm then good and do NOT support a decision for this project at all levels of Government</p> <p>Thank you for your attention, and thank you in advance for supporting our community, our environment, and our right to quality of life by NOT considering Woodfibre LNG or the Fortis pipeline as a project for Squamish/Howe Sound. Please feel free to contact me directly if you wish to further discuss our wishes.</p>	Corporate Ownership	<p>The Woodfibre LNG Project is owned by Woodfibre LNG Limited, a privately held Canadian company based in Vancouver with a Community Office in Squamish.</p> <p>Woodfibre LNG Limited is a subsidiary of Pacific Oil and Gas (PO&G) which develops, builds, owns and operates projects throughout the energy supply chain.</p> <p>Woodfibre LNG Limited intends to operate in a manner consistent with its core values of a triple bottom line approach, where results benefit the community, the country and the company.</p> <p>Woodfibre LNG will comply with all applicable regional, provincial and federal laws, regulations, guidelines and standards including but not limited to: employment standards; health and environmental regulations and standards; taxation; and, First Nations agreements.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
852	March 22, 2015	Irene Wanless - Bowen Island, British Columbia	In view of the fact that Howe Sound is finally coming to life again after decades of industrial pollution from a copper mine and two pulp mills, it is imperative that we protect this beautiful sound from industrial damage again. The herring, salmon, dolphins and whales are back and we need more time to properly assess the LNG proposal to make sure they will not be endangered again.	Recovery of Howe Sound	<p>Thank you for the comment.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>The Woodfibre site has been used for industrial purposes for 100 years and is zoned for industrial use. As a condition of acquiring the site, Woodfibre LNG required the completion of remediation work on site. On December 22, 2014 the Ministry of Environment issued two Certificates of Compliance (uplands and water lot) evidencing completion of the remediation.</p> <p>Woodfibre LNG Limited intends to perform additional remediation and restoration in the Project area. Plans for additional remediation include the removal of approximately 3,000 existing creosote-coated piles from the waterfront in the Project area and the creation of a Green Zone around Mill Creek. This work will be carried out in partnership with the local groups, where suitable, so that local conservation and restoration targets can be met (please refer to Section 2.6.7 Ecological Benefits of the Application).</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p> <p>Please also refer to the Marine Mammals information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
853(i)	March 22, 2015	Personal Information Withheld Squamish, British Columbia	<p>There is no accountability demonstrated on the part of the proponent or our government on the "what if" scenario when the LNG export market fails and the WLNG plant sits idle with no local jobs as promised and no tax benefit to our community.</p> <p>The proposal assumes the lng market is stable which contradicts the global market.</p>	Corporate Responsibility LNG Industry	<p>Thank you for your comment.</p> <p>As LNG Projects involve significant capital investment which is recovered over a long period of time, final investment decisions (FIDs) on LNG projects are not made lightly, nor are they based on the price of oil or gas on any given day, or even a given year. Rather, FIDs are made based on long-term forecasts and take into account numerous factors, many of which are specific to the project or the proponent(s).</p> <p>The Woodfibre site is an active industrial site with an operating power plant and leachate treatment plant; accordingly, if the Project does not proceed, Woodfibre LNG Limited will continue to own and operate the Woodfibre site as a responsible owner.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
853(ii)	March 22, 2015	Personal Information WithheldSquamish, British Columbia	The proposal also does not demonstrate or prove there will be no negative impacts to the marine life and environment. Alternatively it down plays the negative impacts at a time when our local herring population is recovering and Howe Sound is finally seeing marine life return.	Effect of the Project on Marine Life, Environment	<p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>The Woodfibre site has been used for industrial purposes for 100 years and is zoned for industrial use. As a condition of acquiring the site, Woodfibre LNG required the completion of remediation work on site. On December 22, 2014 the Ministry of Environment issued two Certificates of Compliance (uplands and water lot) evidencing completion of the remediation.</p> <p>Woodfibre LNG Limited intends to perform additional remediation and restoration in the Project area. Plans for additional remediation include the removal of approximately 3,000 existing creosote-coated piles from the waterfront in the Project area and the creation of a Green Zone around Mill Creek. This work will be carried out in partnership with the local groups, where suitable, so that local conservation and restoration targets can be met (please refer to Section 2.6.7 Ecological Benefits of the Application).</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p>	
853(iii)	March 22, 2015	Personal Information WithheldSquamish, British Columbia	The proponent did not disclose detailed information on safety as it relates to extreme weather conditions. In a world with uncertain and extreme weather the safety issues around dangerous cargo are amplified, especially when tankers are passing so close to residential areas and through Howe Sound which is already known for heavy winds.	Marine Transport	<p>At Woodfibre LNG, safety is the number one priority.</p> <p>The carriers will be escorted by at least three tug boats, and will be piloted by BC Coast Pilots who are experts with Howe Sound navigation. BC Coast Pilots will source their own wind and weather conditions data, and Woodfibre LNG will meet or exceed and utilize the expertise and intimate local knowledge of the BC Coast Pilots, Pacific Pilotage Authority, Transport Canada and the Canadian Coast Guard.</p> <p>As part of the TERMPOL review, Woodfibre LNG will present the operational and environmental limitations for docking and undocking of an LNG carrier for appraisal, including in adverse weather conditions. The limitations will be reflected in the Port Information Book, in conformance with TERMPOL 3.16.</p> <p>In case of an unplanned maintenance event at the terminal that cannot be resolved while the LNG carrier is at the berth, the LNG carrier would be disconnected from the berth and escorted out of Canadian waters until the terminal issue is resolved or rectified.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
854	March 22, 2015	Robert D'Arcy - Sechelt, British Columbia	Recent disclosure of glass sponges makes this project very bad for all. Please reject it or impose some sort of infallible protections of the reef.	Glass Sponge Reefs	<p>Glass sponges are addressed in both the Application document (Section 5.16.2.4.1) and Marine Baseline Studies Report (Appendix 5.10).</p> <p>Woodfibre LNG expects that three to four LNG carriers will arrive at the site each month. The carriers will navigate through the established commercial shipping route in/out of Howe Sound (through Queen Charlotte Channel) to the Strait of Georgia and out to the Pacific Ocean. The carriers will be escorted by at least three tug boats, at least one of which will be tethered, and will be piloted by BC Coast Pilots who are experts with Howe Sound navigation.</p> <p>The minimum water depth along the shipping route is 60 metres, and the LNG carriers draft will sit approximately 12 metres to 15 metres below the water surface.</p> <p>The sailing line (shipping route) is a minimum of 1300 metres (and typically more than 1500 metres) from the location of the sponge reefs located at Halkett Point and Lost Reef between Pam rocks and Christie Islets. At depths ranging between 20 m and 40 m (i.e., associated depths where glass sponge reefs have been observed at these locations), the velocity produced by a propeller wash is considered negligible due to dissipation of the prop-wash with distance from sailing line.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
855	March 22, 2015	Amanda Rose - Squamish, British Columbia	<p>I think this is a very bad idea all around. As someone that lives in squamish and alberta it is just a time bomb in the ocean that will be an eye sore as well as a damage when something goes wrong. And it will. I have seen oil trackers blow up at the end of my street and kill f eilds of wheat. I have seen oil and gas leak I to the river and kill the fish and animals that depend on its eco systems. The whales and wild like have just returned to squamish and this is a very big blessing!!!! Squamish is a special place. I have traveled all over the world and have seen many sights. PLEASE KEEP SQUAMISH THE WAY IT IS. the land animals water and people do not need this project. There needs to be a better way over greed and money. This land is sacred. Please leave this beautiful water and green clean land be. We need to protect it for many many generations to com e ♥♥♥ please let my voice be heard. All my relations ♥♥♥</p>	Accidents and Malfunctions	<p>Thank you for the comment.</p> <p>Woodfibre LNG will be designed for the safe and efficient handling of liquefied natural gas, both on land and on water. This includes standards set out in the BC Oil and Gas Activities Act and the associated Liquefied Natural Gas Facility Regulation, national and BC building codes, as well as national and international standards, guidelines and codes of practice where there are no applicable codes for BC.</p> <p>Liquefied natural gas has been shipped safely around the world for more than 50 years. There has never been a recorded incident involving a loss of containment of an LNG carrier at sea. LNG carriers are among the most modern and sophisticated ships in operation. These ships have robust containment systems, double-hull protection and are heavily regulated by international and federal standards.</p> <p>In the unlikely event there is a spill from an LNG carrier, LNG will never mix with water. Instead, it will quickly return to a gas state, and because methane is lighter than air, the gas will rise and dissipate into the air.</p> <p>The Accidents and Malfunctions section (Section 11.0) of the Application assessed the consequence and frequency of effects resulting from credible worst case scenarios for the Project. It showed that potential risks to the public were within the tolerable risk criteria regulated by the BC Oil and Gas Commission (OGC). The OGC will include a review of the quantitative risk assessment for this Project in the permit application review to confirm that the study and results meet the regulated requirements. Additional information on accidents and malfunctions was provided to the EAO on April 29, 2015. Please also refer to Public Safety and Marine Transport Information Sheets that have been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
856(i).	March 22, 2015	Charlie Bradbury - Lions Bay, British Columbia	<p>As a coastal resident of Howe Sound with very young children, I am utterly opposed to this project for a number of reasons; apart from the obvious potential for tanker traffic and environmental catastrophe and the promised jobs for local economy that are everything but, my primary concern is the future...</p> <p>Just suppose the LNG shipping facility does happen. What then? Well, I can very easily see that all of a sudden this will become an epicentre for the export of this commodity, so naturally, all the great 'boardroom thinkers' will say...</p> <p>"Well, to keep transfer costs to their absolute minimum – after all profits are everything - we need to source the gas as close to this Woodfibre LNG terminal as possible".</p> <p>And before we know it, hydraulic fracturing operations will radiate out from this facility like a contaminating spider-web bringing with it forever polluted water and earth tremors.</p>	Hydraulic Fracturing	<p>Woodfibre LNG acknowledges the expressed concern regarding hydraulic fracturing. Hydraulic fracturing activities are outside the EA scope of the Project.</p> <p>Woodfibre LNG Limited is not engaged in oil or gas extraction or production activities. The gas delivered to the Project site will be supplied to the Project from western Canadian market hubs through an expansion of the existing gas transmission system by Fortis BC, and is the same gas that is supplied to Squamish, Metro Vancouver, Whistler, the Sunshine Coast and Vancouver Island through the Fortis BC pipeline system.</p> <p>Like other customers along the pipeline route, Woodfibre LNG will buy its feed gas from third party suppliers, potentially including aggregators. This natural gas will be delivered in a co-mingled stream through the Fortis BC pipeline to the site.</p> <p>Natural gas liquefied in the Woodfibre LNG facilities will be produced and processed primarily in the northeastern region of BC, but may also originate from other wells connected to the Western Canadian Gas Transmission System. The Oil & Gas Commission (OGC) regulates these extraction activities under the Oil & Gas Activities Act and related regulations.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
856(ii)	March 22, 2015	Charlie Bradbury - Lions Bay, British Columbia	The only think that separates this life abundant planet from the rest of the solar system's lifeless landscapes is the presence of water, yet, companies think it is OK to pollute it. WATER IS LIFE. We need to protect this most precious of resources and allowing it to become polluted/sold off the highest bidder just so the board members can buy another holiday home is nonsensical. I want to live and bring up my children somewhere that works with the environment, OUR HOME, OUR LIVELIHOOD, not somewhere that sees it as expendable.	Water Quality	<p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p>	
856(iii)	March 22, 2015	Charlie Bradbury - Lions Bay, British Columbia	No, I don't like the sound of the Woodfibre LNG facility one little bit. Relying on carbon emitting fossil fuels is a slow death sentence for us and the planet. British Columbia should be leading the world in the environmental movement. We have the location, resources, skills, economy and mindset to do the right job and we could be energy self sufficient in decades... That is the kind of thinking that makes me excited about the future, not fearful of it.	Renewable Energy	<p>Natural gas is the cleanest burning fossil fuel and has been identified as the best and most reliable way to help transition away from high-emission fuels such as oil and coal. This is particularly true in energy-hungry Asian markets, where Woodfibre LNG Limited plans to sell its product. In fact, replacing just one 500 Megawatt coal-fired power plant with natural gas fueled power generation for one year equates to taking 557,000 cars off the roads over the same time period⁸.</p> <p>Section 5.3 Greenhouse Gas Management of the Application includes an assessment of the potential Project-related effects to greenhouse gases. The influence of Project-related greenhouse gas emissions on climate change was evaluated by assessing whether any measurable change in climate could result from the Project-generated greenhouse gas emissions. The relatively minor increase in global emissions associated with the Project would correspond to a change in climate that is unlikely to be measurable.</p>	

⁸ Centre for Liquefied Natural Gas. http://www.lngfacts.org/resources/CLNG-PACE_Study_one-pager.pdf.

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
857	March 22, 2015	Personal Information Withheld - West Vancouver, British Columbia	Ships of such mass with questionably dangerous cargo should not be allowed into an area that has struggled for several years to regain some of its destroyed Eco system in Howe sound.	Marine Transport	<p>Thank you for your comment.</p> <p>Woodfibre LNG expects that three to four LNG carriers will arrive at the site each month. The carriers will navigate through the established commercial shipping route in/out of Howe Sound (through Queen Charlotte Channel) to the Strait of Georgia and out to the Pacific Ocean. The carriers will be escorted by at least three tug boats, at least one of which will be tethered, and will be piloted by BC Coast Pilots who are experts with Howe Sound navigation.</p> <p>Liquefied natural gas has been shipped safely around the world for more than 50 years. There has never been a recorded incident involving a loss of containment of an LNG carrier at sea. LNG carriers are among the most modern and sophisticated ships in operation. These ships have robust containment systems, double-hull protection and are heavily regulated by international and federal standards.</p> <p>In the unlikely event there is a spill from an LNG carrier, LNG will never mix with water. Instead, it will quickly return to a gas state, and because methane is lighter than air, the gas will rise and dissipate into the air.</p> <p>The Accidents and Malfunctions section (Section 11.0) of the Application assessed the consequence and frequency of effects resulting from credible worst case scenarios for the Project. It showed that potential risks to the public were within the tolerable risk criteria regulated by the BC Oil and Gas Commission (OGC). The OGC will include a review of the quantitative risk assessment for this Project in the permit application review to confirm that the study and results meet the regulated requirements. Additional information on accidents and malfunctions was provided to the EAO on April 29, 2015. Please also refer to Public Safety and Marine Transport Information Sheets that have been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
858(i)	March 22, 2015	Personal Information Withheld - Gail Morrison, British Columbia	A LNG facility in the Howe Sound is a really bad idea. Actually the entire fracking industry is an industry that is a bad fit for our Province.	LNG Facility Hydraulic Fracturing	<p>Thank you for your comments.</p> <p>Woodfibre LNG Limited is of the view that the Woodfibre site is the right fit for an LNG facility. It features: zoned industrial, more than 100 years of industrial use, deepwater port, access to established shipping routes, access to FortisBC pipeline, access to BC Hydro transmission grid, and access to labour force.</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p> <p>Woodfibre LNG acknowledges the expressed concern regarding hydraulic fracturing. Hydraulic fracturing activities are outside the EA scope of the Project.</p> <p>Woodfibre LNG Limited is not engaged in oil or gas extraction or production activities. The gas delivered to the Project site will be supplied to the Project from western Canadian market hubs through an expansion of the existing gas transmission system by Fortis BC, and is the same gas that is supplied to Squamish, Metro Vancouver, Whistler, the Sunshine Coast and Vancouver Island through the Fortis BC pipeline system.</p> <p>Like other customers along the pipeline route, Woodfibre LNG will buy its feed gas from third party suppliers, potentially including aggregators. This natural gas will be delivered in a co-mingled stream through the Fortis BC pipeline to the site.</p> <p>Natural gas liquefied in the Woodfibre LNG facilities will be produced and processed primarily in the northeastern region of BC, but may also originate from other wells connected to the Western Canadian Gas Transmission System. The Oil & Gas Commission (OGC) regulates these extraction activities under the Oil & Gas Activities Act and related regulations.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
858(ii)	March 22, 2015	Personal Information Withheld - Gail Morrison, British Columbia	The Howe Sound is finally recovering from decades of abuse from industry .	Industrial Legacy	<p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>The Woodfibre site has been used for industrial purposes for 100 years and is zoned for industrial use. As a condition of acquiring the site, Woodfibre LNG required the completion of remediation work on site. On December 22, 2014 the Ministry of Environment issued two Certificates of Compliance (uplands and water lot) evidencing completion of the remediation.</p> <p>Woodfibre LNG Limited intends to perform additional remediation and restoration in the Project area. Plans for additional remediation include the removal of approximately 3,000 existing creosote-coated piles from the waterfront in the Project area and the creation of a Green Zone around Mill Creek. This work will be carried out in partnership with the local groups, where suitable, so that local conservation and restoration targets can be met (please refer to Section 2.6.7 Ecological Benefits of the Application).</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p>	
858(iii)	March 22, 2015	Personal Information Withheld - Gail Morrison, British Columbia	Save our Sea to Sky area. Tourism is our business. LNG is not for us.	Tourism	<p>Woodfibre LNG Limited is of the view that the Woodfibre site is the right fit for an LNG facility. It features: zoned industrial, more than 100 years of industrial use, deepwater port, access to established shipping routes, access to FortisBC pipeline, access to BC Hydro transmission grid, and access to labour force.</p> <p>Woodfibre LNG Limited is also of the view that tourism and industry can work together to create responsible economic development in Squamish. BC Ferries and Squamish Terminals have shown how industry can successfully coexist with local tourism and recreation, and Woodfibre LNG Limited is working hard to follow that example.</p> <p>An assessment of the potential effects of the Project on tourism is included in Section 6.2 Labour Market and Section 6.3 Sustainable Economy. The Application concluded that there were no Project-related significant adverse residual effects to the economy.</p> <p>The Application assesses the potential effects of the Project to outdoor recreation in Section 7.4 Land and Resource Use. With the proposed mitigation, it is not likely that there will be significant residual effects to outdoor recreation.</p> <p>Please also refer to the Sustainable Economy information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
859	March 22, 2015	Bob Curry - Gibsons, British Columbia	We in BC are fortunate to host this wonderful natural sub sea phenomenon Lets make sure it is well protected and preserved for future generations	Glass Sponge Reefs	<p>Thank you for your comment. Woodfibre LNG Limited interprets this comment to refer to the glass sponge reefs.</p> <p>Glass sponges are addressed in both the Application document (Section 5.16.2.4.1) and Marine Baseline Studies Report (Appendix 5.10).</p> <p>Woodfibre LNG expects that three to four LNG carriers will arrive at the site each month. The carriers will navigate through the established commercial shipping route in/out of Howe Sound (through Queen Charlotte Channel) to the Strait of Georgia and out to the Pacific Ocean. The carriers will be escorted by at least three tug boats, at least one of which will be tethered, and will be piloted by BC Coast Pilots who are experts with Howe Sound navigation.</p> <p>The minimum water depth along the shipping route is 60 metres, and the LNG carriers draft will sit approximately 12 metres to 15 metres below the water surface.</p> <p>The sailing line (shipping route) is a minimum of 1300 metres (and typically more than 1500 metres) from the location of the sponge reefs located at Halkett Point and Lost Reef between Pam rocks and Christie Islets. At depths ranging between 20 m and 40 m (i.e., associated depths where glass sponge reefs have been observed at these locations), the velocity produced by a propeller wash is considered negligible due to dissipation of the prop-wash with distance from sailing line.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
860	March 22, 2015	Brigitta - Lions Bay, British Columbia	<p>The glass sponge reefs of Halkett Bay deserve preservation, they are one of a kind and recognized by the international marine community, yet still not protected because of all the industrial threats paraded as opportunities currently being placed on Howe Sound. Howe Sound is Vancouver's pristine waterway, that tourists, boaters, cottagers, residents, businesses and film makers from around the world have fought and paid to cleanup after every industry that has polluted it's waters and air. Stop the abuse, say no to woodfibre LNG project in Howe Sound, even MLA Jordan Sturdy wants the reefs protected.</p> <p>http://jordansturdymla.ca/bcltv_videos/mla-sturdy-halkett-bays-glass-sponges/</p>	Glass Sponge Reefs	<p>Thank you for the comment.</p> <p>Glass sponges are addressed in both the Application document (Section 5.16.2.4.1) and Marine Baseline Studies Report (Appendix 5.10).</p> <p>Woodfibre LNG expects that three to four LNG carriers will arrive at the site each month. The carriers will navigate through the established commercial shipping route in/out of Howe Sound (through Queen Charlotte Channel) to the Strait of Georgia and out to the Pacific Ocean. The carriers will be escorted by at least three tug boats, at least one of which will be tethered, and will be piloted by BC Coast Pilots who are experts with Howe Sound navigation.</p> <p>The minimum water depth along the shipping route is 60 metres, and the LNG carriers draft will sit approximately 12 metres to 15 metres below the water surface.</p> <p>The sailing line (shipping route) is a minimum of 1300 metres (and typically more than 1500 metres) from the location of the sponge reefs located at Halkett Point and Lost Reef between Pam rocks and Christie Islets. At depths ranging between 20 m and 40 m (i.e., associated depths where glass sponge reefs have been observed at these locations), the velocity produced by a propeller wash is considered negligible due to dissipation of the prop-wash with distance from sailing line.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section 14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p>	
861	March 22, 2015	Robert W Cannon Brow - Gibsons, British Columbia	<p>In addition to the environmental impact of the proposed Woodfibre LNG Project itself, the positive economic impact of the project could stimulate growth well beyond Squamish. If a road link were built between Squamish and Langdale, then, jobs at the LNG plant could be accessible to the entire population of the Southern Sunshine Coast. When you add the additional jobs that will be created in the Squamish area over and above those created by the LNG project itself, then, the impact on the Sunshine Coast economy could be significant, if there is a road link. I am in favour of a road link so that Sunshine Coasters can benefit from the Woodfibre Project. Let's consider the environmental impact of such a road now, so that when the road is</p>	Access Road	<p>The proposed Woodfibre LNG Limited Project site is accessible by water only. Employees and materials will be transported to the Project site via worker ferry from Darrell Bay and by barge.</p> <p>For environmental, safety and security reasons, Woodfibre LNG Limited is not considering a road to access the site as part of this Project.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			built, it is done so with minimal impact, and with the full support of the Sunshine Coast.			
862	March 22, 2015	Personal Information Withheld - Whistler, British Columbia	<p>HEALTH: Social costs and health impacts of air pollution Woodfibre LNG is estimating air pollution emissions of 295.7 tonnes of nitrogen dioxide (NO2) and 43.8 tonnes of sulfur dioxide (SO2) every year (See Table 5.2-14 of the Air Quality Section of Woodfibre LNG's environmental assessment application). Emissions of NOx and SO2 interact with other compounds to form fine particles, which can affect both the lungs and the heart. Exposure to these particles is linked to increased risk of respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; decreased lung function; aggravated asthma; onset of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. A new study published in the scientific journal, Climatic Change, estimates the true social costs of air pollution that aren't accounted for in the cost of fossil fuels and other pollutants. Social costs include the health impacts of air pollution as well as impacts from climate change. The study found that sulfur dioxide costs \$42,000 per tonne, and nitrous oxides cost \$67,000 per tonne. Sources:</p> <p>Mills et al (2009) Adverse cardiovascular effects of air pollution. Nature Clinical Practice Cardiovascular Medicine 6: 36-44 Shindell (2015) The social costs of atmospheric release. Climatic Change</p> <p>SITE SUITABILITY: The Woodfibre site is not a safe location for a hazardous LNG facility</p> <p>On February 15th, 2015, a 3.4 magnitude earthquake hit Vancouver's coast that was felt throughout Howe Sound. The Woodfibre LNG proposal is located within this zone of moderate to high earthquake risk, on two known thrust faults. The Woodfibre site also has a history of slope failure. In 1955 a wharf and three warehouses collapsed into Howe Sound at the Woodfibre site, causing \$500,000 – \$750,000 in damages (Bornhold, B.D., 1983, Fiords, GEOS, no. 1, p 1-4). A recent, but unreleased, geotechnical study by Knight Piesold identifies that approximately 46% of the study area was mapped as having rapid mass movement. This means landslides and slope slumpage... including existing natural landslide hazards as well as terrain where construction activity may increase landslide initiation. Why hasn't the geotechnical study by Knight Piesold been released?</p> <p>Sources: http://www.cbc.ca/news/multimedia/every-fault-line-in-british-columbia-1.2919420</p> <p>Bornhold, B.D., 1983, Fiords, GEOS, no. 1, p 1-4</p> <p>B.C. Ministry of Energy and Mines</p> <p>CLIMATE CHANGE: 142 thousand tonnes of greenhouse gas emissions is unacceptable</p>	LNG Project	Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 13, 14, 16, 17, and 45.	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>Woodfibre LNG is now estimating greenhouse gas emissions to be 142 thousand tonnes of CO2 equivalent every year. These annual emissions of CO2 equivalent from Woodfibre LNG is equal to adding over 18,000 cars to the highway, driving to Vancouver and back, every day. This is more than six times greater than current highway traffic. It is irresponsible to approve this kind of polluting industry at a time when we need to transition away from fossil fuels to mitigate the risks associated with climate change, and to reduce the economic and health impacts of air pollution in general.</p> <p>GOVERNMENT REGULATION: Inability of government to monitor, enforce, and respond to issues</p> <p>There are no regulations adopted to regulate this LNG industry from a technical standpoint. Any of the current standards are not applicable to the LNG industry. Do the regulators have the knowledge and the expertise and the capacity to oversee this industry or will they be relying on the proponent to monitor themselves and report to the regulator? Self-monitoring industries have created several examples of accidents with resulting environmental destruction in recent years, including the Lac Megantic rail disaster and the Mt Polley tailing pond spill.</p> <p>ENVIRONMENT: 9000 year old glass sponge reefs endangered by tanker traffic</p> <p>LNG tankers do not have enough clearance to get over the 9000 year old reef if they go off course. These 9000 year old glass sponge reefs have been called "Living Fossils" by National Geographic as until recently this species was thought to have gone extinct over 60 million years ago. MLA Jordan Sturdy recently made a statement in the House about the importance of this discovery in Halkett Bay near Gambier Island, and to support the proposal to expand the Provincial Park Protected Area to ensure these reefs are protected.</p> <p>Sources:</p> <p>http://news.nationalgeographic.com/news/2013/10/131018-glass-sponge-reef-canada-ocean-science/</p> <p>http://jordansturdymla.ca/bcltv_videos/mla-sturdy-halkett-bays-glass-sponges/</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
863(i)	March 22, 2015	Personal Information Withheld - Garibaldi Highlands, British Columbia	<p>I am a resident of Squamish and I am completely opposed to the development of the proposed Woodfibre LNG Project</p> <p>We live in one of the few regions on the planet that still can boast a somewhat pristine natural landscape, and this is what should be driving our economy. Recreation, tourism, clean water and air. Our continued dependence on fossil fuels is a ridiculous, short-sighted strategy. The money being spent on this project, and others like it, should be going towards developing clean, renewable energy. The potential for wind, solar and tidal energy is obvious. Many other countries are proving that it is possible to move away from fossil fuels. These types of projects provide just as many jobs.</p>	Renewable Energy / Sustainable Economy	<p>Woodfibre LNG Limited is of the view that the Woodfibre site is the right fit for an LNG facility. It features: zoned industrial, more than 100 years of industrial use, deepwater port, access to established shipping routes, access to FortisBC pipeline, access to BC Hydro transmission grid, and access to labour force.</p> <p>Woodfibre LNG Limited is also of the view that tourism and industry can work together to create responsible economic development in Squamish. BC Ferries and Squamish Terminals have shown how industry can successfully coexist with local tourism and recreation, and Woodfibre LNG Limited is working hard to follow that example.</p> <p>An assessment of the potential effects of the Project on tourism is included in Section 6.2 Labour Market and Section 6.3 Sustainable Economy. The Application concluded that there were no Project-related significant adverse residual effects to the economy.</p> <p>The Application assesses the potential effects of the Project to outdoor recreation in Section 7.4 Land and Resource Use. With the proposed mitigation, it is not likely that there will be significant residual effects to outdoor recreation.</p> <p>Natural gas is the cleanest burning fossil fuel and has been identified as the best and most reliable way to help transition away from high-emission fuels such as oil and coal. This is particularly true in energy-hungry Asian markets, where Woodfibre LNG Limited plans to sell its product. In fact, replacing just one 500 Megawatt coal-fired power plant with natural gas fueled power generation for one year equates to taking 557,000 cars off the roads over the same time period⁹.</p> <p>Section 5.3 Greenhouse Gas Management of the Application includes an assessment of the potential Project-related effects to greenhouse gases. The influence of Project-related greenhouse gas emissions on climate change was evaluated by assessing whether any measurable change in climate could result from the Project-generated greenhouse gas emissions. The relatively minor increase in global emissions associated with the Project would correspond to a change in climate that is unlikely to be measurable.</p> <p>Please also refer to the Sustainable Economy information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

⁹ Centre for Liquefied Natural Gas. http://www.lngfacts.org/resources/CLNG-PACE_Study_one-pager.pdf.

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
863(ii)	March 22, 2015	Personal Information Withheld - Garibaldi Highlands, British Columbia	Claiming that LNG is a "green" energy is laughable. Fracking contaminates the water, pollutes the air and causes seismic activity.	Hydraulic Fracturing	<p>Woodfibre LNG acknowledges the expressed concern regarding hydraulic fracturing. Hydraulic fracturing activities are outside the EA scope of the Project.</p> <p>Woodfibre LNG Limited is not engaged in oil or gas extraction or production activities. The gas delivered to the Project site will be supplied to the Project from western Canadian market hubs through an expansion of the existing gas transmission system by Fortis BC, and is the same gas that is supplied to Squamish, Metro Vancouver, Whistler, the Sunshine Coast and Vancouver Island through the Fortis BC pipeline system.</p> <p>Like other customers along the pipeline route, Woodfibre LNG will buy its feed gas from third party suppliers, potentially including aggregators. This natural gas will be delivered in a co-mingled stream through the Fortis BC pipeline to the site.</p> <p>Natural gas liquefied in the Woodfibre LNG facilities will be produced and processed primarily in the northeastern region of BC, but may also originate from other wells connected to the Western Canadian Gas Transmission System. The Oil & Gas Commission (OGC) regulates these extraction activities under the Oil & Gas Activities Act and related regulations.</p>	
863(iii)	March 22, 2015	Personal Information Withheld - Garibaldi Highlands, British Columbia	Building pipelines cuts up the landscape in ways detrimental to water, to wildlife, and to the communities along the route. And then they leak.	Pipelines	<p>Woodfibre LNG notes that the comment is directed to the Fortis BC Eagle Mountain Pipeline Expansion Project. FortisBC's Eagle Mountain – Woodfibre Gas Pipeline Project is undergoing a separate environmental assessment certificate application review process. Please see EAO website for more information:</p> <p>http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_document_406_38521.html</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
863(iv)	March 22, 2015	Personal Information Withheld - Garibaldi Highlands, British Columbia	<p>Howe Sound is finally healing from years of pollution and degradation and would be jeopardized by the construction of the LNG facility. The massive tankers would disrupt marine life and be a serious threat to the entire area if there were ever an accident.</p> <p>It's time to move toward a more sustainable future. Let's put Squamish into the forefront of the new economy, and make up for the mess that poor planning has made of the town in the past.</p>	Safety	<p>Liquefied natural gas (LNG) has been shipped safely around the world for more than 50 years. There has never been a recorded incident involving a loss of containment of an LNG carrier at sea. LNG carriers are among the most modern and sophisticated ships in operation. These ships have robust containment systems, double-hull protection and are heavily regulated by international and federal standards.</p> <p>In the unlikely event there is a spill from an LNG carrier, LNG will never mix with water. Instead, it will quickly return to a gas state, and because methane is lighter than air, the gas will rise and dissipate into the air.</p> <p>The Accidents and Malfunctions section (Section 11.0) of the Application assessed the consequence and frequency of effects resulting from credible worst case scenarios for the Project. It showed that potential risks to the public were within the tolerable risk criteria regulated by the BC Oil and Gas Commission (OGC). The OGC will include a review of the quantitative risk assessment for this Project in the permit application review to confirm that the study and results meet the regulated requirements. Additional information on accidents and malfunctions was provided to the EAO on April 29, 2015.</p> <p>The potential for effects of the Project on marine life were assessed in the Application, please refer to components of the marine environment that have been assessed including Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p> <p>Please also refer to Public Safety and Marine Transport information sheets that have been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
864	March 22, 2015	Personal Information Withheld - West Vancouver, British Columbia	<p>Proceed carefully with checks in place. It's a good project for the site and needed infrastructure for the region.</p>	LNG Project	<p>Thank you, your comment is noted.</p> <p>Should an Environmental Assessment Certificate be granted for the Project, a Table of Conditions will be developed that outlines all of the requirements with which the Project will have to comply. Woodfibre LNG Limited will be legally responsible for ensuring all conditions are met.</p> <p>The Project will also require a Facility Permit, Leave to Commence Construction and Leave to Operate from the Oil and Gas Commission (OGC) as well as numerous other environmental permits.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
865	March 22, 2015	Personal Information Withheld - Whistler, British Columbia	Siting an LNG facility in Howe Sound violates international safety standards and practices, putting Howe Sound residents at risk and the environment risk. OMG, when will it all stop. It is a full time job as a resident to keep oneself and one's environment safe. Isn't that your job? Don't you have children whose future you need to secure? This is all very short minded and narrow minded.	Safety	<p>Thank you for your comment.</p> <p>Siting of the Woodfibre LNG facility complies in every way with the Society of International Gas Tanker & Terminal Operators Ltd's (SIGTTO) guidance as the location of the site is not within a narrow waterway as defined by SIGTTO and TERMPOL (Technical Review Process of Marine Terminal Systems and Transshipment Sites).</p> <p><i>Narrow channel/waterway</i></p> <p>TERMPOL specifies a body of navigable water of width four times the vessel's beam to be a one-way narrow channel, and seven times the beam to be a two-way narrow channel. SIGTTO specifies a body of navigable water of width five times the vessel's beam to be a one-way narrow channel. So, for a characteristic 45 metre beam LNG carrier calling at the proposed Woodfibre LNG Terminal, this would imply a width of 180 meters for a one-way narrow channel and 315 metres for a two-way narrow channel.</p> <p>The US 5th Circuit court in its judgments has specified that under Rule 9 of the International Regulations for Preventing Collisions at Sea (COLREGS) and the U.S. Inland Navigation Rules, a "narrow channel" to be 1000 feet (305 metres) while other court judgments have considered any body of water with width less than 1060% the beam of the vessel, which would be 488 metres for Woodfibre LNG, to be a narrow channel.</p> <p>SIGTTO's guidance principles also recommend turning circles to have a minimum diameter of twice the overall length of the largest LNG carrier (i.e., 600 m for Woodfibre LNG) and TERMPOL requires turning circle of 2.5 times the length, which equates to 750 m.</p> <p><i>LNG Carriers & Howe Sound Shipping Channel / Route</i></p> <ul style="list-style-type: none">• An LNG carrier needs a 180-metre (one way) wide channel for transit and 600 metre wide channel for turning with tugs.• Howe Sound at its narrowest along the shipping route is 1400 metres, or 4593 feet.• The width of Howe Sound at the proposed Woodfibre LNG terminal is 5.2 km or 17,060 feet with nearest distance to Darrell Bay being 2.7 km or 8858 feet and 60 meters deep with no large vessel movements within 2.7 km or 8858 feet. <p><i>Additional Information</i></p> <p>Subject to the recommendations of Transport Canada's TERMPOL Review Committee, which includes Transport Canada, Pacific Pilotage Authority, BC Coast Pilots and Canadian Coast Guard, Woodfibre LNG has always maintained that it would deploy at least three tugs in an escort pattern, at least one of which will be tethered, to provide a dynamic safety awareness zone for recreational and pleasure craft around the LNG carrier during its transit within Howe Sound. This dynamic safety awareness zone would extend up to 50 metres on either side of the vessel and up to 500 metres in front and, being dynamic in nature, would be transient with the movement of the LNG carrier. This arrangement of tugs also serves as an emergency provision to address contingencies that may require the vessel to stop or engage in manoeuvres at very short notice.</p> <p>Woodfibre LNG will develop a Squamish Harbour Vessel Traffic Plan to identify strategies to minimize displacement of marine-based recreational activities. As a component of the Squamish Harbour Vessel Traffic Plan, Woodfibre LNG will also work with Matthews Southwest and Bethel Lands Corporation, and District of Squamish, to minimize displacement of recreation activity by Project-associated ferry and water taxi traffic that travels to and from the Project site.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
866	March 22, 2015	Sean easton - Squamish, British Columbia	I oppose this project due to safety, environmental, health and quality of life issues, this project creates risks and adverse effects to our Squamish community This requires detailed study by the government Important questions are unanswered Please stop this hazardous project from proceeding	LNG Project	<p>Thank you for your comment.</p> <p>Woodfibre LNG will be designed for the safe and efficient handling of liquefied natural gas, both on land and on water. This includes standards set out in the BC Oil and Gas Activities Act and the associated Liquefied Natural Gas Facility Regulation, national and BC building codes, as well as national and international standards, guidelines and codes of practice where there are no applicable codes for BC.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p> <p>The potential effects of the Project on the public is assessed in Section 9.2 Public Health, and includes an assessment on community health and well-being (for example, population and demographics, education and training, alcohol and drug abuse and crime) and a human health risk assessment for Project-related emissions. The assessments concluded that there were no Project-related significant adverse effects to public health.</p> <p>Woodfibre LNG Limited conducted a human health risk assessment that quantifies potential health risks associated with the Project, such as those associated with air emissions. The conclusion of the risk assessment as set forth in Section 9.2 was that the Project will have negligible or not significant residual effects to human health.</p> <p>Please also refer to the Public Safety information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
867	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	I support the Woodfibre LNG export facility. This project appears to be well funded and managed in a professional and responsible manner. The main reason that I support this project is because Squamish needs the jobs and a more diversified economy. The location of this project is far enough away from where the majority of Squamish residents live and work but close enough to make a positive impact on our economy and tax base. From what I understand about this brown-field site, the proponent is not looking to rezone the property but rather use it for its intended purpose. I believe there are worse industries than LNG exportation that would be allowed to operate in this location. The Woodfibre LNG plant will be a relatively safe and clean operation that will benefit Squamish for decades to come. I support Woodfibre LNG!	LNG Project	<p>Thank you, this comment is noted.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
868	March 22, 2015	Ann Metcalfe - New Westminister, British Columbia	Hi, I am certainly against this LNG pipeline project. My husband and I want to retire in Squamish, we love it there but we are heart broken to hear of these plans and are now having second thoughts. It is the worst idea ever for the environment and the safety of the people living in Squamish. Please do not do it.	Effect of the Project on Environment / Safety	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited is of the view that the Woodfibre site is the right fit for an LNG facility. It features: zoned industrial, more than 100 years of industrial use, deepwater port, access to established shipping routes, access to FortisBC pipeline, access to BC Hydro transmission grid, and access to labour force.</p> <p>Woodfibre LNG will be designed for the safe and efficient handling of liquefied natural gas, both on land and on water. This includes standards set out in the BC Oil and Gas Activities Act and the associated Liquefied Natural Gas Facility Regulation, national and BC building codes, as well as national and international standards, guidelines and codes of practice where there are no applicable codes for BC.</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p> <p>The Accidents and Malfunctions section (Section 11.0) of the Application assessed the consequence and frequency of effects resulting from credible worst case scenarios for the Project. It showed that potential risks to the public were within the tolerable risk criteria regulated by the BC Oil and Gas Commission (OGC). The OGC will include a review of the quantitative risk assessment for this Project in the permit application review to confirm that the study and results meet the regulated requirements. Additional information on accidents and malfunctions was provided to the EAO on April 29, 2015.</p> <p>During operation, major accidents at LNG facilities are very rare. LNG is not explosive in an unconfined environment. Two fire / vapour cloud explosions at LNG facilities are known to have occurred in the past 60 years. A vapour cloud and fire in Ohio occurred in 1944 because of leaks from an LNG tank constructed from inappropriate material, and in 2004 an explosion occurred in Algeria because of a steam boiler problem (boilers are not part of the Project design). Standards for modern LNG facilities have benefited from the lessons learned from these accidents, and include design requirements that avoid these accidents.</p> <p>Please also refer to Public Safety information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
869	March 22, 2015	Steve March - Gibsons, British Columbia	I would like to know how Woodfiber plans to protect the ships and the LNG plant from a possible terrorist attack. We are living in an era of global hostility. These tankers propose, in my opinion a major risk to the population of Vancouver and Howe Sound, should a terrorist group decide to attack us.	Security	<p>Thank you for your comment.</p> <p>Transport Canada's marine security programs, including strategies, programs and regulations, protect and preserve the efficiency of Canada's marine transportation system against unlawful interference, terrorist attacks or use as a means to attack our allies. (see http://www.tc.gc.ca/eng/marinesecurity/menu.htm)</p> <p>In addition, as part of the OGC permitting process, Woodfibre LNG Limited will be required to prepare a Safety and Loss Management Plan, which will include an emergency response plan and a security management plan. In addition, the site will be fenced and a control zone around the marine portion of the Project area will be established. The objective for the control zone and fencing is for public safety reasons, but will also be designed to prevent access by saboteurs.</p> <p>Security for LNG carriers in transit will be addressed by the Canadian Coast Guard and Transport Canada. It is unlikely that an attack on a LNG carrier would successfully penetrate an LNG container and result in loss of containment, given the multiple layers of steel that would need to be penetrated. The consequence and frequency for a worst case scenario for potential loss of containment of LNG on an LNG carrier due to grounding and collision with another vessel is considered in Appendix 11-1 of the Application.</p> <p>Is it not anticipated that penetration of an LNG container on an LNG carrier would result in an explosion. It is not anticipated that a collision can result in damage to more than one container. Additional analysis for marine risks will be carried out during the TERMPOL assessment for the Project.</p> <p>Please also refer to the Public Safety Information Sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
870	March 22, 2015	Christine Wilding - Whistler, British Columbia	<p>key concerns with Woodfibre LNG's application</p> <p>We have compiled a list of our key concerns with Woodfibre LNG's application below. Please feel free to cut and paste as many of these as you'd like to include. You can submit comments as many times as you like.</p> <p>SAFETY: Siting an LNG facility in Howe Sound violates international safety standards and practices, putting Howe Sound residents at risk As LNG tankers transit Howe Sound, there is a high-danger zone for 1,600 metres (1-mile) on either side of the LNG tanker. If an accident happens, people within this zone risk death by asphyxiation, or death/injury by fire or explosion. Every time a tanker travels through Howe Sound (approximately 6-8 transits a month according to Woodfibre LNG) several Howe Sound communities will be in that high-danger zone, including: Bowen Island, Bowyer Island, Anvil Island, Passage Island, Porteau Cove, West Vancouver, and parts of the Sea to Sky highway. The Society of International Gas Tanker and Terminal Operators (SIGTTO) LNG Terminal Siting Standards states that LNG terminals should not be located in narrow, inland waterways with dense local populations and significant commercial, recreational, and ferry traffic. Why would that gui</p>		<p>Thank you for your comment, For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 11-21, and 45.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>deline not apply to Howe Sound? The proposed siting of the Woodfibre LNG terminal and associated transit of LNG tankers through Howe Sound poses an unacceptable risk to safety of people in communities along the shores of Howe Sound.</p> <p>Sources: Sandia Report, 2004 and SIGTTO LNG Terminal Siting Standards</p> <p>ENVIRONMENT: The once-through seawater cooling system proposed by Woodfibre LNG is outdated Woodfibre LNG is proposing an outdated and damaging cooling method to help cool the LNG facility. They propose to extract 17,000 tonnes (= 3.7 million gallons, or 7 Olympic-sized 50-meter swimming pools) of seawater from Howe Sound, chlorinate it, heat it, and then spit it back out into the sound every hour of every day for the next 25 years. This method has been banned in California and several other places as it is very damaging to marine life such as juvenile salmon, herring, and plankton which are the building blocks for all other life in Howe Sound. If the herring are impacted, the dolphins, orcas, and humpbacks are also impacted as they no longer have a food supply. The impacts of increased water temperatures and the addition of chlorinated seawater will likely reverse the recent revival of marine life in Howe Sound, which is just now recovering from the toxic le gacies of previous industries. This is unacceptable.</p> <p>HEALTH: Social costs and health impacts of air pollution Woodfibre LNG is estimating air pollution emissions of 295.7 tonnes of nitrogen dioxide (NO2) and 43.8 tonnes of sulfur dioxide (SO2) every year (See Table 5.2-14 of the Air Quality Section of Woodfibre LNG's environmental assessment application). Emissions of NOx and SO2 interact with other compounds to form fine particles, which can affect both the lungs and the heart. Exposure to these particles is linked to increased risk of respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; decreased lung function; aggravated asthma; onset of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. A new study published in the scientific journal, Climatic Change, estimates the true social costs of air pollution that aren't accounted for in the cost of fossil fuels and other pollutants. Social costs include the health impacts of air pollution as well as impacts from climate change. The study found that sulfur dioxide costs \$42,000 per tonne, and nitrous oxides cost \$67,000 per tonne. Sources:</p> <p>Mills et al (2009) Adverse cardiovascular effects of air pollution. Nature Clinical Practice Cardiovascular Medicine 6: 36-44 Shindell (2015) The social costs of atmospheric release. Climatic Change</p> <p>SITE SUITABILITY: The Woodfibre site is not a safe location for a hazardous LNG facility</p> <p>On February 15th, 2015, a 3.4 magnitude</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>earthquake hit Vancouver's coast that was felt throughout Howe Sound. The Woodfibre LNG proposal is located within this zone of moderate to high earthquake risk, on two known thrust faults. The Woodfibre site also has a history of slope failure. In 1955 a wharf and three warehouses collapsed into Howe Sound at the Woodfibre site, causing \$500,000 – \$750,000 in damages (Bornhold, B.D., 1983, Fiords, GEOS, no. 1, p 1-4). A recent, but unreleased, geotechnical study by Knight Piesold identifies that approximately 46% of the study area was mapped as having rapid mass movement. This means landslides and slope slumpage... including existing natural landslide hazards as well as terrain where construction activity may increase landslide initiation. Why hasn't the geotechnical study by Knight Piesold been released?</p> <p>Sources: http://www.cbc.ca/news/multimedia/every-fault-line-in-british-columbia-1.2919420</p> <p>Bornhold, B.D., 1983, Fiords, GEOS, no. 1, p 1-4</p> <p>B.C. Ministry of Energy and Mines</p> <p>ECONOMY: The requested socio-economic study has not been provided</p> <p>During construction, only 4.3% of jobs (=38.5 out of 895) will be for locals living in the Squamish/Whistler corridor (See Table 6.2-8 of the Labour Market section of Woodfibre LNG's environmental assessment application). Why are there so few jobs predicted to be filled by workers in the Squamish/SLRD area? The EA application is also very unclear about how many of the 100 full-time jobs will be filled by residents of Howe Sound once the LNG terminal is operational. What are the benefits to Squamish? What are the costs? There is still no clarity around how much in municipal taxes will be paid to the District of Squamish. How will this project impact existing small businesses and existing industries in Howe Sound?</p> <p>CLIMATE CHANGE: 142 thousand tonnes of greenhouse gas emissions is unacceptable</p> <p>Woodfibre LNG is now estimating greenhouse gas emissions to be 142 thousand tonnes of CO2 equivalent every year. These annual emissions of CO2 equivalent from Woodfibre LNG is equal to adding over 18,000 cars to the highway, driving to Vancouver and back, every day. This is more than six times greater than current highway traffic. It is irresponsible to approve this kind of polluting industry at a time when we need to transition away from fossil fuels to mitigate the risks associated with climate change, and to reduce the economic and health impacts of air pollution in general.</p> <p>GOVERNMENT REGULATION: Inability of government to monitor, enforce, and respond to issues</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>There are no regulations adopted to regulate this LNG industry from a technical standpoint. Any of the current standards are not applicable to the LNG industry. Do the regulators have the knowledge and the expertise and the capacity to oversee this industry or will they be relying on the proponent to monitor themselves and report to the regulator? Self-monitoring industries have created several examples of accidents with resulting environmental destruction in recent years, including the Lac Megantic rail disaster and the Mt Polley tailing pond spill.</p> <p>ENVIRONMENT: Removal of water from Mill Creek unsustainable for fish life</p> <p>Woodfibre LNG has secured the water license to extract water from Mill Creek, which flows through the Woodfibre site. The Department of Fisheries and Oceans has objected to this because the amount of water that WLNG is proposing to remove will reduce water levels in Mill Creek to levels that will no longer support fish life, especially in the summer months. Woodfibre LNG needs to source water for this project from somewhere else to protect this important stream habitat which is home to several native fish species.</p> <p>ENVIRONMENT: Missing baseline studies</p> <p>The following baseline studies are either missing or are inadequate as they do not conform to any recognized scientific standards: fish, birds, marine mammals, air quality, shipping, water quality, marine sound, and atmospheric sound, marine life near the Woodfibre site, and the cumulative impact assessment. Proper studies need to be completed before any decisions can be made regarding this project.</p> <p>VIEWSCAPES: BC Hydro clearcut of two 64 metre swaths of forest at the Woodfibre site will impact views from the Sea to Sky highway and the gondola</p> <p>BC Hydro is proposing to clearcut two 64 metre swaths of forest at the Woodfibre site which will create visible scars in the Howe Sound viewscape which will be very visible from the highway and the gondola. This information was only made available during the recent BC Hydro open house held on 19th March, near the end of the public comment period. This information is not included in the cumulative impact assessment of the Woodfibre application and it should be. This late release of information pertinent to this project and the timing of the BC Hydro open houses is unsatisfactory.</p> <p>ENVIRONMENT: 9000 year old glass sponge reefs endangered by tanker traffic</p> <p>LNG tankers do not have enough clearance to get over the 9000 year old reef if they go off course. These 9000 year old glass sponge reefs have been called "Living Fossils" by National Geographic as</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>until recently this species was thought to have gone extinct over 60 million years ago. MLA Jordan Sturdy recently made a statement in the House about the importance of this discovery in Halkett Bay near Gambier Island, and to support the proposal to expand the Provincial Park Protected Area to ensure these reefs are protected.</p> <p>Sources: http://news.nationalgeographic.com/news/2013/10/131018-glass-sponge-reef-canada-ocean-science/ http://jordansturdymla.ca/bcltv_videos/mla-sturdy-halkett-bays-glass-sponges/</p> <p>ENVIRONMENT: Will there be smog? Will there be a smell?</p> <p>Woodfibre LNG is estimating air pollution emissions of 295.7 tonnes of nitrogen dioxide (NO2) and 43.8 tonnes of sulfur dioxide (SO2) every year (See Table 5.2-14 of the Air Quality Section of Woodfibre LNG's environmental assessment application). Nitrogen Dioxide (NO2) is a reddish-brown gas with a pungent, irritating odour. It absorbs light and leads to the yellow-brown "smog" pollution haze seen hanging over cities. It is known to irritate the lungs and increase susceptibility to respiratory infections. In combination with either ozone (O3) or sulphur dioxide (SO2), nitrogen dioxide may cause injury at even lower concentration levels. Sulphur Dioxide (SO2) is a toxic gas with a pungent, irritating, and rotten smell. Current scientific evidence links short-term exposures to SO2, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects including bronchoconstriction and increased asthma symptoms. These effects are particularly important for asthmatics at elevated ventilation rates (e.g., while exercising or playing). Studies also show a connection between short-term exposure and increased visits to emergency departments and hospital admissions for respiratory illnesses, particularly in at-risk populations including children, the elderly, and asthmatics. The addition of these air pollutants in Howe Sound is of particular concern as recent research has shown that the Howe Sound airshed and Lower Fraser Valley airshed are connected. Emissions from Woodfibre LNG will add to the pollution in Howe Sound, exacerbating the existing air quality conditions, particularly in the Squamish-Brackendale corridor.</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
871(i)	March 22, 2015	Dolores Dawson - West Vancouver, British Columbia	As a former resident of Lions Bay I am very familiar with the beauty of Howe Sound and the opportunities the area has to offer tourism and recreation. Opportunities that will support far more permanent jobs than the development of LNG.	Tourism	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited is of the view that the Woodfibre site is the right fit for an LNG facility. It features: zoned industrial, more than 100 years of industrial use, deepwater port, access to established shipping routes, access to FortisBC pipeline, access to BC Hydro transmission grid, and access to labour force.</p> <p>Woodfibre LNG Limited is also of the view that tourism and industry can work together to create responsible economic development in Squamish. BC Ferries and Squamish Terminals have shown how industry can successfully coexist with local tourism and recreation, and Woodfibre LNG Limited is working hard to follow that example.</p> <p>An assessment of the potential effects of the Project on tourism is included in Section 6.2 Labour Market and Section 6.3 Sustainable Economy. The Application concluded that there were no Project-related significant adverse residual effects to the economy.</p> <p>The Application assesses the potential effects of the Project to outdoor recreation in Section 7.4 Land and Resource Use. With the proposed mitigation, it is not likely that there will be significant residual effects to outdoor recreation.</p> <p>Please also refer to the Sustainable Economy information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
871(ii)	March 22, 2015	Dolores Dawson - West Vancouver, British Columbia	I am also familiar with the limitations that Howe Sound would have for the transport of LNG by huge tankers and the danger to the environment and residents of this pristine area.	Shipping Route	<p>Siting of the Woodfibre LNG facility complies in every way with the Society of International Gas Tanker & Terminal Operators Ltd's (SIGTTO) guidance as the location of the site is not within a narrow waterway as defined by SIGTTO and TERMPOL.</p> <p>TERMPOL specifies a body of navigable water of width four times the vessel's beam to be a one-way narrow channel, and seven times the beam to be a two-way narrow channel. So, for a characteristic 45 metre beam LNG carrier calling at the proposed Woodfibre LNG Terminal, this would imply a width of 180 meters for a one-way narrow channel and 315 metres for a two-way narrow channel. The US 5th Circuit court in its judgments has specified that under Rule 9 of the International Regulations for Preventing Collisions at Sea (COLREGS) and the U.S. Inland Navigation Rules, a "narrow channel" to be 1000 feet (305 metres) while other court judgments have considered any body of water with width less than 1060% the beam of the vessel, which would be 488 metres to be a narrow channel.</p> <p>The width of Howe Sound at the proposed Woodfibre LNG terminal is 5.2 km or 17,060 feet with nearest distance, to Darrell Bay, being 2.7 km or 8858 feet and 60 meters deep with no large vessel movements within 2.7 km or 8858 feet.</p> <p>Subject to the recommendations of Transport Canada's Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) Review Committee, which includes Transport Canada, Pacific Pilotage Authority, BC Coast Pilots and Canadian Coast Guard, Woodfibre LNG Limited has always maintained that it would deploy at least three tugs, at least one of which will be tethered, to provide a dynamic safety awareness zone for recreational and pleasure craft around the LNG carrier during its transit within Howe Sound. This dynamic safety awareness zone would extend up to 50 metres on either side of the vessel and up to 500 metres in front and, being dynamic in nature, would be transient with the movement of the LNG carrier. This arrangement of tugs also serves as an emergency provision to address contingencies that may require the vessel to stop or engage in manoeuvres at very short notice.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
					Woodfibre LNG will develop a Squamish Harbour Vessel Traffic Plan to identify strategies to minimize displacement of marine-based recreational activities. As a component of the Squamish Harbour Vessel Traffic Plan, Woodfibre LNG will also work with Matthews Southwest and Bethel Lands Corporation, and District of Squamish, to minimize displacement of recreation activity by Project-associated ferry and water taxi traffic that travels to and from the Project site.	
872	March 22, 2015	Personal Information Withheld - Vancouver, British Columbia	I'm against the word fibre LNG project. Every one I know is against this project. The communities along the proposed shipping routes are against this project so why is this still an issue? This sounds like a classic example of profit before people.	LNG Project	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited has undertaken public consultation in the form of more than 300 community meetings, two telephone town halls, three rounds of formal public consultations, and has opened a Community Office in Squamish to respond to questions. Woodfibre LNG also regularly engages the public through its web site (woodfibrelng.ca), email, and Facebook page.</p> <p>A public consultation report will be filed with the EAO in accordance with the environmental assessment process.</p> <p>In response to public consultation, Woodfibre LNG has made meaningful changes to the Project. For example, in response to concerns about the possibility that the LNG facility would run on a gas turbine, Woodfibre LNG committed to powering the facility plant using electricity from BC Hydro. This decision will reduce greenhouse gas emissions by about 80 per cent, and will help make Woodfibre one of the cleanest LNG plants in the world.</p>	
873	March 22, 2015	Personal Information Withheld - Lions Bay, British Columbia	<p>Why would any Government wish to start projects that clash with the ecology of this area.</p> <p>In the future Howe Sound will become a sanctuary for the huge population that will become Greater Vancouver.</p>	Value of Howe Sound	<p>Thank you for the comment.</p> <p>Woodfibre LNG Limited is of the view that the Woodfibre site is the right fit for an LNG facility. It features: zoned industrial, more than 100 years of industrial use, deepwater port, access to established shipping routes, access to FortisBC pipeline, access to BC Hydro transmission grid, and access to labour force.</p> <p>Woodfibre LNG Limited is also of the view that tourism and industry can work together to create responsible economic development in Squamish.</p> <p>BC Ferries and Squamish Terminals have shown how industry can successfully coexist with local tourism and recreation, and Woodfibre LNG Limited is working hard to follow that example.</p> <p>An assessment of the potential effects of the Project on tourism is included in Section 6.2 Labour Market and Section 6.3 Sustainable Economy. The Application concluded that there were no Project-related significant adverse residual effects to the economy.</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
874(i)	March 22, 2015	Barry Devonald - Vancouver, British Columbia	I have concerns about the glass sponge reefs close to Halkett Bay in Howe Sound. An LNG tanker off course and/or adrift could wipe them out. They are protected in other parts of BC. They should be protected in Howe Sound.	Glass Sponge Reefs	<p>Thank you for your comments.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>Woodfibre LNG expects that three to four LNG carriers will arrive at the site each month. The carriers will navigate through the established commercial shipping route in/out of Howe Sound (through Queen Charlotte Channel) to the Strait of Georgia and out to the Pacific Ocean. The carriers will be escorted by at least three tug boats, at least one of which will be tethered, and will be piloted by BC Coast Pilots who are experts with Howe Sound navigation. This arrangement of tugs also serves as an emergency provision to address contingencies that may require the vessel to stop or engage in manoeuvres at very short notice.</p> <p>The minimum water depth along the shipping route is 60 metres, and the LNG carriers draft will sit approximately 12 metres to 15 metres below the water surface.</p> <p>The sailing line (shipping route) is a minimum of 1300 metres (and typically more than 1500 metres) from the location of the glass sponge reefs located at Halkett Point and Lost Reef between Pam rocks and Christie Islets. The glass sponge reefs are located at depths ranging between 20 m and 40 m at these locations.</p> <p>Please also refer to the Marine Transport information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
874(ii)	March 22, 2015	Barry Devonald - Vancouver, British Columbia	<p>I also have concerns at the operation of LNG tankers in Howe Sound in fog. Will multiple bow lookouts be posted? Radar (even if being used and large vessel commercial shipping is notorious for not keeping 24/7 radar watches) will not detect small vessels using passive (inactive) radar reflectors - they are next to useless. Many small vessels in fact have no radar reflector. Will active reflectors be mandated?</p> <p>Even in clear weather recreational boaters are at risk from very large commercial vessels such as LNG tankers. The near field forward visibility from the stern mounted bridge of such vessels is extremely poor. Will port, ahead and starboard lookouts be mandated at all times?</p>	Marine Traffic	<p>Subject to the recommendations of the TERMPOL Review Committee, which includes Transport Canada, Pacific Pilotage Authority, BC Coast Pilots and Canadian Coast Guard, Woodfibre LNG Limited has always maintained that it would deploy at least three tugs, at least one of which will be tethered, to provide a dynamic safety awareness zone for recreational and pleasure craft around the LNG carrier during its transit within Howe Sound. This dynamic safety awareness zone would extend up to 50 metres on either side of the vessel and up to 500 metres in front and, being dynamic in nature, would be transient with the movement of the LNG carrier. This arrangement of tugs also serves as an emergency provision to address contingencies that may</p> <p>The two BC Coast Pilots will direct the safe conduct of the LNG carrier using the escort tugs and personnel resources on board the LNG carrier to ensure the vessel proceeds safely in the prevailing condition of normal or restricted visibility and that adequate bridge, navigational watch-keeping and visual lookouts including those on the bow are maintained during navigation in Howe Sound.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
875	March 22, 2015	Personal Information Withheld - Whistler, British Columbia	The LNG benefits big business, not the local economy and certainly not the environment, which is why residences such as myself have chosen and made sacrifices to live in the Sea to Sky Corridor. I do not support the proposal.	Local Economy / Effect of the Project on Environment	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p> <p>An independent third party economic impact assessment of the proposed Woodfibre LNG project is included in the Application. Accounting and Consulting firm MNP found the following economic benefits of the Project (2014 CAD):</p> <p>CONSTRUCTION JOBS</p> <ul style="list-style-type: none">• Create 650+ jobs each year of construction.• Create an additional 1,080+ jobs (indirect* and induced** employment) during the construction phase of the Project. <p>LONG-TERM OPERATION JOBS</p> <ul style="list-style-type: none">• Create 100+ local jobs during operation.• Create an additional 330+ local jobs (indirect* and induced**) during operation. <p>*Indirect impacts arise from changes in activity for suppliers.</p> <p>**Induced impacts arise from shifts in spending on goods and services as a consequence of changes to the payroll of the directly and indirectly affected businesses.</p> <p>For more information, please refer to Section 2.6 Project Benefits of the Application. Additional benefits from the Project are described in greater detail in Section 6.2 Labour Market, Section 6.3 Sustainable Economy and Section 7.2 Infrastructure and Community Services.</p> <p>Please also refer to the Sustainable Economy information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
876(i)	March 22, 2015	Robert Dingle - Whistler, British Columbia	No LNG Tankers in Howe Sound, too narrow!	Shipping Route	<p>Thank you for your comments.</p> <p>Siting of the Woodfibre LNG facility complies in every way with the Society of International Gas Tanker & Terminal Operators Ltd's (SIGTTO) guidance as the location of the site is not within a narrow waterway as defined by SIGTTO and TERMPOL.</p> <p>TERMPOL specifies a body of navigable water of width four times the vessel's beam to be a one-way narrow channel, and seven times the beam to be a two-way narrow channel. So, for a characteristic 45 metre beam LNG carrier calling at the proposed Woodfibre LNG Terminal, this would imply a width of 180 meters for a one-way narrow channel and 315 metres for a two-way narrow channel. The US 5th Circuit court in its judgments has specified that under Rule 9 of the International Regulations for Preventing Collisions at Sea (COLREGS) and the U.S. Inland Navigation Rules, a "narrow channel" to be 1000 feet (305 metres) while other court judgments have considered any body of water with width less than 1060% the beam of the vessel, which would be 488 metres to be a narrow channel.</p> <p>The width of Howe Sound at the proposed Woodfibre LNG terminal is 5.2 km or 17,060 feet with nearest distance, to Darrell Bay, being 2.7 km or 8858 feet and 60 meters deep with no large vessel movements within 2.7 km or 8858 feet.</p> <p>Subject to the recommendations of Transport Canada's Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) Review Committee, which includes Transport Canada, Pacific Pilotage Authority, BC Coast Pilots and Canadian Coast Guard, Woodfibre LNG Limited has always maintained that it would deploy at least three tugs, at least one of which will be tethered, to provide a dynamic safety awareness zone for recreational and pleasure craft around the LNG carrier during its transit within Howe Sound. This dynamic safety awareness zone would extend up to 50 metres on either side of the vessel and up to 500 metres in front and, being dynamic in nature, would be transient with the movement of the LNG carrier. This arrangement of tugs also serves as an emergency provision to address contingencies that may require the vessel to stop or engage in manoeuvres at very short notice.</p> <p>Woodfibre LNG will develop a Squamish Harbour Vessel Traffic Plan to identify strategies to minimize displacement of marine-based recreational activities. As a component of the Squamish Harbour Vessel Traffic Plan, Woodfibre LNG will also work with Matthews Southwest and Bethel Lands Corporation, and District of Squamish, to minimize displacement of recreation activity by Project-associated ferry and water taxi traffic that travels to and from the Project site</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
876(ii)	March 22, 2015	Robert Dingle - Whistler, British Columbia	No more air pollution on the Sea to Sky, we have enough already!!	Air Quality	<p>The Woodfibre LNG Project will be powered by electricity provided by BC Hydro. By powering the plant with electricity, instead of natural gas, greenhouse gas emissions will be reduced by about 80%. This will make Woodfibre LNG one of the cleanest LNG facilities in the world.</p> <p>Woodfibre LNG undertook air dispersion modelling based on planned activities and equipment use — including marine vessels — to predict air emissions from the Project operation phase. The results of the dispersion modelling were compared against federal and provincial standards and guidelines; and all predicted concentrations were below these standards and guidelines.</p> <p>Woodfibre LNG characterized current climate and climate trends using the Squamish Airport climate station. At peak capacity, the Project will have a greenhouse gas intensity of 0.059 t CO2e per tonne LNG, which is below the threshold of 0.16 t CO2e per tonne LNG in the Greenhouse Gas Industrial Reporting and Control Act.</p> <p>For more information, please see:</p> <ul style="list-style-type: none">• Section 9.2.2 Human Health Risk Assessment includes an assessment of the potential effects on humans by Project-related emissions. The Application concluded that there were no Project-related significant adverse effects.• Section 5.2 Atmospheric Environment (Air Quality) of the Application includes an assessment of the potential Project-related effects to air quality. The Application concluded that the changes to air quality as a result of Project-related effects are below ambient air quality criteria for all indicator compounds and the residual effects are considered negligible or not significant. <p>Please also refer to Air Quality information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
876(iii)	March 22, 2015	Robert Dingle - Whistler, British Columbia	Fracking gas is unsustainable, environmentally unsound.	Hydraulic Fracturing	<p>Woodfibre LNG acknowledges the expressed concern regarding hydraulic fracturing. Hydraulic fracturing activities are outside the EA scope of the Project.</p> <p>Woodfibre LNG Limited is not engaged in oil or gas extraction or production activities. The gas delivered to the Project site will be supplied to the Project from western Canadian market hubs through an expansion of the existing gas transmission system by Fortis BC, and is the same gas that is supplied to Squamish, Metro Vancouver, Whistler, the Sunshine Coast and Vancouver Island through the Fortis BC pipeline system.</p> <p>Like other customers along the pipeline route, Woodfibre LNG will buy its feed gas from third party suppliers, potentially including aggregators. This natural gas will be delivered in a co-mingled stream through the Fortis BC pipeline to the site.</p> <p>Natural gas liquefied in the Woodfibre LNG facilities will be produced and processed primarily in the northeastern region of BC, but may also originate from other wells connected to the Western Canadian Gas Transmission System. The Oil & Gas Commission (OGC) regulates these extraction activities under the Oil & Gas Activities Act and related regulations.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
876(iv)	March 22, 2015	Robert Dingle - Whistler, British Columbia	Promote non carbon energy or face world destruction for our Grandchildren.	Renewable Energy	<p>Natural gas is the cleanest burning fossil fuel and has been identified as the best and most reliable way to help transition away from high-emission fuels such as oil and coal. This is particularly true in energy-hungry Asian markets, where Woodfibre LNG Limited plans to sell its product. In fact, replacing just one 500 Megawatt coal-fired power plant with natural gas fueled power generation for one year equates to taking 557,000 cars off the roads over the same time period¹⁰.</p> <p>Section 5.3 Greenhouse Gas Management of the Application includes an assessment of the potential Project-related effects to greenhouse gases. The influence of Project-related greenhouse gas emissions on climate change was evaluated by assessing whether any measurable change in climate could result from the Project-generated greenhouse gas emissions. The relatively minor increase in global emissions associated with the Project would correspond to a change in climate that is unlikely to be measurable.</p>	
877(i)	March 22, 2015	Susan Bibbings - West Vancouver, British Columbia	<p>Dear Sir/Madam,</p> <p>I am deeply deeply concerned about the possibility and implications of a LNG project in my family's area This is truly insanity in light of the grave threats to our local population, local environment and planetary environment as a whole in this era of global climate crisis with the upcoming Paris Summit to seek an international solution on this, the gravest threat of our time. I have outlined several reasons below to explain in detail. I am so passionate about stopping a ludicrous project of this nature that I am willing to go to great lengths to protect what we hold so dear - out families and nature.</p> <p>SAFETY: Siting an LNG facility in Howe Sound violates international safety standards and practices, putting Howe Sound residents at risk As LNG tankers transit Howe Sound, there is a high-danger zone for 1,600 metres (1-mile) on either side of the LNG tanker. If an accident happens, people within this zone risk death by asphyxiation, or death/injury by fire or explosion. Every time a tanker travels through Howe Sound (approximately 6-8 transits a month according to Woodfibre LNG) several Howe Sound communities will be in that high-danger zone, including: Bowen Island, Bowyer Island, Anvil Island, Passage Island, Porteau Cove, West Vancouver, and parts of the Sea to Sky highway. The Society of International Gas Tanker and Terminal Operators (SIGTTO) LNG Terminal Siting Standards states that LNG terminals should not be located in narrow, inland waterways with dense local populations and significant commercial, recreational, and ferry traffic. Why would that guideline not apply to Howe Sound? The proposed siting of the Woodfibre LNG terminal and associated transit of LNG tankers through Howe Sound poses an unacceptable risk to safety of people in communities along the shores of Howe Sound.</p> <p>Sources: Sandia Report, 2004 and SIGTTO LNG</p>	LNG Project	<p>Thank you for your comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 11-21, and 45.</p>	

¹⁰ Centre for Liquefied Natural Gas. http://www.lngfacts.org/resources/CLNG-PACE_Study_one-pager.pdf.

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>Terminal Siting Standards</p> <p>ENVIRONMENT: The once-through seawater cooling system proposed by Woodfibre LNG is outdated Woodfibre LNG is proposing an outdated and damaging cooling method to help cool the LNG facility. They propose to extract 17,000 tonnes (= 3.7 million gallons, or 7 Olympic-sized 50-meter swimming pools) of seawater from Howe Sound, chlorinate it, heat it, and then spit it back out into the sound every hour of every day for the next 25 years. This method has been banned in California and several other places as it is very damaging to marine life such as juvenile salmon, herring, and plankton which are the building blocks for all other life in Howe Sound. If the herring are impacted, the dolphins, orcas, and humpbacks are also impacted as they no longer have a food supply. The impacts of increased water temperatures and the addition of chlorinated seawater will likely reverse the recent revival of marine life in Howe Sound, which is just now recovering from the toxic le gacies of previous industries. This is unacceptable.</p> <p>HEALTH: Social costs and health impacts of air pollution Woodfibre LNG is estimating air pollution emissions of 295.7 tonnes of nitrogen dioxide (NO2) and 43.8 tonnes of sulfur dioxide (SO2) every year (See Table 5.2-14 of the Air Quality Section of Woodfibre LNG's environmental assessment application). Emissions of NOx and SO2 interact with other compounds to form fine particles, which can affect both the lungs and the heart. Exposure to these particles is linked to increased risk of respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; decreased lung function; aggravated asthma; onset of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. A new study published in the scientific journal, Climatic Change, estimates the true social costs of air pollution that aren't accounted for in the cost of fossil fuels and other pollutants. Social costs include the health impacts of air pollution as well as impacts from climate change. The study found that sulfur dioxide costs \$42,000 per tonne, and nitrous oxides cost \$67,000 per tonne. Sources: Mills et al (2009) Adverse cardiovascular effects of air pollution. Nature Clinical Practice Cardiovascular Medicine 6: 36-44 Shindell (2015) The social costs of atmospheric release. Climatic Change</p> <p>SITE SUITABILITY: The Woodfibre site is not a safe location for a hazardous LNG facility</p> <p>On February 15th, 2015, a 3.4 magnitude earthquake hit Vancouver's coast that was felt throughout Howe Sound. The Woodfibre LNG proposal is located within this zone of moderate to high earthquake risk, on two known thrust faults. The Woodfibre site also has a history of slope failure. In 1955 a wharf and three warehouses</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>collapsed into Howe Sound at the Woodfibre site, causing \$500,000 – \$750,000 in damages (Bornhold, B.D., 1983, Fiords, GEOS, no. 1, p 1-4). A recent, but unreleased, geotechnical study by Knight Piesold identifies that approximately 46% of the study area was mapped as having rapid mass movement. This means landslides and slope slumpage... including existing natural landslide hazards as well as terrain where construction activity may increase landslide initiation. Why hasn't the geotechnical study by Knight Piesold been released?</p> <p>Sources:http:// www.cbc.ca/news/multimedia/every-fault-line-in-british-columbia-1.2919420</p> <p>Bornhold, B.D., 1983, Fiords, GEOS, no. 1, p 1-4</p> <p>B.C. Ministry of Energy and Mines</p> <p>ECONOMY: The requested socio-economic study has not been provided</p> <p>During construction, only 4.3% of jobs (=38.5 out of 895) will be for locals living in the Squamish/Whistler corridor (See Table 6.2-8 of the Labour Market section of Woodfibre LNG's environmental assessment application). Why are there so few jobs predicted to be filled by workers in the Squamish/SLRD area? The EA application is also very unclear about how many of the 100 full-time jobs will be filled by residents of Howe Sound once the LNG terminal is operational. What are the benefits to Squamish? What are the costs? There is still no clarity around how much in municipal taxes will be paid to the District of Squamish. How will this project impact existing small businesses and existing industries in Howe Sound?</p> <p>CLIMATE CHANGE: 142 thousand tonnes of greenhouse gas emissions is unacceptable</p> <p>Woodfibre LNG is now estimating greenhouse gas emissions to be 142 thousand tonnes of CO2 equivalent every year. These annual emissions of CO2 equivalent from Woodfibre LNG is equal to adding over 18,000 cars to the highway, driving to Vancouver and back, every day. This is more than six times greater than current highway traffic. It is irresponsible to approve this kind of polluting industry at a time when we need to transition away from fossil fuels to mitigate the risks associated with climate change, and to reduce the economic and health impacts of air pollution in general.</p> <p>GOVERNMENT REGULATION: Inability of government to monitor, enforce, and respond to issues</p> <p>There are no regulations adopted to regulate this LNG industry from a technical standpoint. Any of the current standards are not applicable to the LNG industry. Do the regulators have the knowledge and the expertise and the capacity to oversee this industry or will they be relying on the proponent to monitor themselves and report to the regulator?</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>Self-monitoring industries have created several examples of accidents with resulting environmental destruction in recent years, including the Lac Megantic rail disaster and the Mt Polley tailing pond spill.</p> <p>ENVIRONMENT: Removal of water from Mill Creek unsustainable for fish life</p> <p>Woodfibre LNG has secured the water license to extract water from Mill Creek, which flows through the Woodfibre site. The Department of Fisheries and Oceans has objected to this because the amount of water that WLNG is proposing to remove will reduce water levels in Mill Creek to levels that will no longer support fish life, especially in the summer months. Woodfibre LNG needs to source water for this project from somewhere else to protect this important stream habitat which is home to several native fish species.</p> <p>ENVIRONMENT: Missing baseline studies</p> <p>The following baseline studies are either missing or are inadequate as they do not conform to any recognized scientific standards: fish, birds, marine mammals, air quality, shipping, water quality, marine sound, and atmospheric sound, marine life near the Woodfibre site, and the cumulative impact assessment. Proper studies need to be completed before any decisions can be made regarding this project.</p> <p>VIEWSCAPES: BC Hydro clearcut of two 64 metre swaths of forest at the Woodfibre site will impact views from the Sea to Sky highway and the gondola</p> <p>BC Hydro is proposing to clearcut two 64 metre swaths of forest at the Woodfibre site which will create visible scars in the Howe Sound viewscape which will be very visible from the highway and the gondola. This information was only made available during the recent BC Hydro open house held on 19th March, near the end of the public comment period. This information is not included in the cumulative impact assessment of the Woodfibre application and it should be. This late release of information pertinent to this project and the timing of the BC Hydro open houses is unsatisfactory.</p> <p>ENVIRONMENT: 9000 year old glass sponge reefs endangered by tanker traffic</p> <p>LNG tankers do not have enough clearance to get over the 9000 year old reef if they go off course. These 9000 year old glass sponge reefs have been called "Living Fossils" by National Geographic as until recently this species was thought to have gone extinct over 60 million years ago. MLA Jordan Sturdy recently made a statement in the House about the importance of this discovery in Halkett Bay near Gambier Island, and to support the proposal to expand the Provincial Park Protected Area to ensure these reefs are protected.</p> <p>Sources:</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
			<p>http://news.nationalgeographic.com/news/2013/10/131018-glass-sponge-reef-canada-ocean-science/ http://jordansturdymla.ca/bcltv_videos/mla-sturdy-halkett-bays-glass-sponges/</p> <p>ENVIRONMENT: Will there be smog? Will there be a smell?</p> <p>Woodfibre LNG is estimating air pollution emissions of 295.7 tonnes of nitrogen dioxide (NO2) and 43.8 tonnes of sulfur dioxide (SO2) every year (See Table 5.2-14 of the Air Quality Section of Woodfibre LNG's environmental assessment application). Nitrogen Dioxide (NO2) is a reddish-brown gas with a pungent, irritating odour. It absorbs light and leads to the yellow-brown "smog" pollution haze seen hanging over cities. It is known to irritate the lungs and increase susceptibility to respiratory infections. In combination with either ozone (O3) or sulphur dioxide (SO2), nitrogen dioxide may cause injury at even lower concentration levels. Sulphur Dioxide (SO2) is a toxic gas with a pungent, irritating, and rotten smell. Current scientific evidence links short-term exposures to SO2, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects including bronchoconstriction and increased asthma symptoms. These effects are particularly important for asthmatics at elevated ventilation rates (e.g., while exercising or playing). Studies also show a connection between short-term exposure and increased visits to emergency departments and hospital admissions for respiratory illnesses, particularly in at-risk populations including children, the elderly, and asthmatics. The addition of these air pollutants in Howe Sound is of particular concern as recent research has shown that the Howe Sound airshed and Lower Fraser Valley airshed are connected. Emissions from Woodfibre LNG will add to the pollution in Howe Sound, exacerbating the existing air quality conditions, particularly in the Squamish-Brackendale corridor.</p> <p>I watch this process with keen eyes and a hopeful heart that this project will be stopped before money for a few is traded for our world. Please do the right thing. We need brave leadership to stand against this insanity and greed, if not for our sakes, for our children who can not advocate for themselves. Thank you!</p>			

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
878	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	I moved to Squamish for kiteboarding. I have three jobs that support the community and plan to settle here for the long term. If the plant/tankers were to leak and I could no longer kite the beautiful waters of howe sound I would be forced to leave and set up roots elsewhere. I know many community members who feel the same way, not to mention the 100-200 tourists per day who flock to the spit to kite and stop for meals and shopping in squamish's downtown core. LNG might create a few short term jobs, but the high risk of an accident isn't worth it if it means many other community members, doctors, teachers, and business owners, would leave Squamish to settle elsewhere.	Outdoor Recreation Local Economy	<p>Thank you for your comment.</p> <p>Woodfibre LNG will be designed for the safe and efficient handling of liquefied natural gas, both on land and on water. This includes standards set out in the BC Oil and Gas Activities Act and the associated Liquefied Natural Gas Facility Regulation, national and BC building codes, as well as national and international standards, guidelines and codes of practice where there are no applicable codes for BC.</p> <p>The Accidents and Malfunctions section (Section 11.0) of the Application assessed the consequence and frequency of effects resulting from credible worst case scenarios for the Project. It showed that potential risks to the public were within the tolerable risk criteria regulated by the BC Oil and Gas Commission (OGC). The OGC will include a review of the quantitative risk assessment for this Project in the permit application review to confirm that the study and results meet the regulated requirements. Additional information on accidents and malfunctions was provided to the EAO on April 29, 2015. During operation, major accidents at LNG facilities are very rare. LNG is not explosive in an unconfined environment. Two fire / vapour cloud explosions at LNG facilities are known to have occurred in the past 60 years. A vapour cloud and fire in Ohio occurred in 1944 because of leaks from an LNG tank constructed from inappropriate material, and in 2004 an explosion occurred in Algeria because of a steam boiler problem (boilers are not part of the Project design). Standards for modern LNG facilities have benefited from the lessons learned from these accidents, and include design requirements that avoid these accidents.</p> <p>A preliminary quantitative risk assessment (QRA) was conducted for the Project (see Appendix 11-1 of the Application). The QRA showed that the full rupture of a loading arm during offloading operations resulting in a release of LNG to sea and a subsequent pool or flash fire represents a credible worst-case scenario having the potential to affect public safety. Results of the QRA showed that the effects of this scenario have the potential to extend approximately 410 m past the Project boundary. If a member of the public was present within this potential zone of effect 24 hours a day, 7 days a week, and 52 weeks a year, the risk of fatality to this individual is approximately one in every 1.75 million years. Given the low likelihood of this scenario and the location of the Project, which is approximately 7 km away from downtown Squamish, public risk associated with a rupture from the loading arm is considered to be very low.</p> <p>Liquefied natural gas has been shipped safely around the world for more than 50 years. There has never been a recorded incident involving a loss of containment of an LNG carrier at sea. LNG carriers are among the most modern and sophisticated ships in operation. These ships have robust containment systems, double-hull protection and are heavily regulated by international and federal standards.</p> <p>In the unlikely event there is a spill from an LNG carrier, LNG will never mix with water. Instead, it will quickly return to a gas state, and because methane is lighter than air, the gas will rise and dissipate into the air.</p> <p>Please also refer to Public Safety and Marine Transport Information Sheets that have been prepared as part of the Woodfibre LNG Limited response to public comments</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
879(i)	March 22, 2015	Oliver Dietrich - North Vancouver, British Columbia	<p>Howe sound is a prestine biological oceanic paradise internationally recognized by deep see divers and environmentalists for its unique biodiversity. The orca's are even returning with their young on what now appears to be an annual basis. The LNG project proposes to extract 17,000 tonnes (= 3.7 million gallons, or 7 Olympic-sized 50-meter swimming pools) of seawater from Howe Sound, chlorinate it, heat it, and then spit it back out into the sound every hour of every day for the next 25 years. This method has been banned in California and several other places as it is very damaging to marine life such as juvenile salmon, herring, and plankton which are the building blocks for all other life in Howe Sound. If the herring are impacted, the dolphins, orcas, and humpbacks are also impacted as they no longer have a food supply. The impacts of increased water temperatures and the addition of chlorinated seawater will likely reverse the recent revival of marine life i n Howe Sound, which is just now recovering from the toxic legacies of previous industries. This is unacceptable.</p> <p>The Woodfibre LNG will contribute nothing but destruction and negatively impact the oceanic wild and just as important mine.</p>	Seawater Cooling System	<p>In LNG facilities, seawater cooling is used primarily to remove waste heat generated from the main refrigerant compressors, which are used to cool the gas. Seawater cooling is used widely, including in about half of the LNG facilities currently in operation in the world. Seawater cooling is energy efficient, and produces less environmental noise and less visual effects than air cooling.</p> <p>California did not ban seawater cooling. Section 316(b) of the US Clean Water Act requires the Environmental Protection Agency (EPA) to issue regulations on the design and operation of intake structures, in order to minimize adverse environmental impacts¹¹. The EPA brought regulations into force in 2014 that cover facilities that withdraw more than two million gallons per day (315 m³/h) of cooling water. These regulations govern the controls that must be in place at new and existing plants related to entrainment and impingement of marine organisms.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit. The seawater cooling system will be designed to meet BC water quality guidelines. The release temperature of the seawater will be less than 21°C or 10°C above ambient water temperature of Howe Sound, whichever is less. Near-field simulation modeling shows that, with a release temperature of 10°C greater than the ambient temperature, the total volume of water that would have a temperature greater than 1°C above ambient is 125 m³ (for context, this volume is approximately 5% of an Olympic-size pool). This volume will not increase over time.</p> <p>Residual levels of chlorine at the discharge ports will be less than 0.02 mg/L. This is much less than the chlorine in drinking water, which is approximately 0.04 mg/L to 2.0 mg/L.</p> <p>The effects of the Project on marine water quality have been assessed in Section 5.10 Marine Water Quality of the Application. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). The assessments in the Application concluded that there were no Project-related significant adverse residual effects to the environment.</p> <p>Additional information on the seawater cooling system intake and discharge was provided to the EAO on April 23, 2015. Please also refer to the Seawater Cooling System information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

¹¹ Source: <http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/upload/Final-Regulations-to-Establish-Requirements-for-Cooling-Water-Intake-Structures-at-Existing-Facilities.pdf>

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response												
879(ii)	March 22, 2015	Oliver Dietrich - North Vancouver, British Columbia	<p>I am an asthmatic north shore resident. I have chosen this as a home for my family and their future families as it is one of the healthiest and cleaned places to live. All my friends along the Howe and Squamish agree. Woodfibre LNG is estimating air pollution emissions of 295.7 tonnes of nitrogen dioxide (NO2) and 43.8 tonnes of sulfur dioxide (SO2) every year (See Table 5.2-14 of the Air Quality Section of Woodfibre LNG's environmental assessment application). Emissions of NOx and SO2 interact with other compounds to form fine particles, which can affect both the lungs and the heart. Exposure to these particles is linked to increased risk of respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; decreased lung function; aggravated asthma; onset of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. A new study published in the scientific journal, Climatic Change, estimates the true social costs of air pollution that aren't accounted for in the cost of fossil fuels and other pollutants. Social costs include the health impacts of air pollution as well as impacts from climate change. The study found that sulfur dioxide costs \$42,000 per tonne, and nitrous oxides cost \$67,000 per tonne. Sources:</p> <p>Mills et al (2009) Adverse cardiovascular effects of air pollution. Nature Clinical Practice Cardiovascular Medicine 6: 36-44 Shindell (2015) The social costs of atmospheric release. Climatic Change</p> <p>In conclusion the Woodfibre LNG project will contribute nothing to the lively hood of the surrounding residents and leave nothing but a devastating scar in this community.</p>	Air Quality	<p>The Woodfibre LNG Project will be powered by electricity from BC Hydro. By powering the plant with electricity, instead of natural gas, Woodfibre LNG will reduce its greenhouse gas emissions by about 80%. This will make Woodfibre LNG one of the cleanest LNG facilities in the world.</p> <p>The majority of Woodfibre LNG air emissions will come from elements removed from the natural gas prior to liquefaction, which are incinerated.</p> <p>Estimated emissions in tonnes per year for the LNG plant powered by electric drive vs. the plant powered by gas turbines:</p> <table><tr><th></th><th>Electric Drive</th><th>Gas Turbine</th></tr><tr><td>GHG</td><td>80,000</td><td>450,000</td></tr><tr><td>NOx</td><td>20</td><td>310</td></tr><tr><td>SOx</td><td>17</td><td>17</td></tr></table> <p>As part of the Application, air dispersion modelling based on planned activities and equipment use — including marine vessels and flaring — were undertaken to predict air emissions from the Project operation phase. Baseline air quality data from Langdale, Squamish, and Horseshoe Bay were used in the model. The results of the dispersion modelling were compared against federal and provincial ambient air quality criteria. All predicted concentrations were below the air quality criteria.</p> <p>Woodfibre LNG Limited expects that monitoring of plant air emissions will be required as part of the waste discharge permit under section 14 of the <i>Environmental Management Act</i>,</p> <p>At peak capacity, the Project will have a greenhouse gas intensity of 0.059 t CO2e per tonne LNG, which is well below the threshold of 0.16 t CO2e per tonne LNG in the Greenhouse Gas Industrial Reporting and Control Act.</p> <p>Section 9.2.2 Human Health Risk Assessment included an assessment of the potential effects on humans by Project-related emissions. The purpose of the human health risk assessment (HHRA) is to quantify the potential health risks to people from the baseline case (present-day) and application case (predicted using modelling) environmental quality in the Project area, and to determine any effects resulting from the Project. The Application concluded that there were no Project-related significant adverse effects to human health.</p> <p>Please also refer to the Air Quality information sheet that has been prepared as part of the Woodfibre LNG response to public comments.</p>		Electric Drive	Gas Turbine	GHG	80,000	450,000	NOx	20	310	SOx	17	17	
	Electric Drive	Gas Turbine																
GHG	80,000	450,000																
NOx	20	310																
SOx	17	17																

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
880(i)	March 22, 2015	Personal Information Withheld - Gambier Harbour, British Columbia	Concerned about proposed saltwater cooling system. The return of 17,000 cubic m.per hour of sterile (chemical treated and heated) seawater into the head of Howe Sound. Apparently this method has been banned in California and was originally chosen due to power limitations. Now going with BC Hydro. Propose a contained recirculation system, which could be linked to something green ie a hatchery,support buildings, greenhouse to use heat.	Seawater Cooling System Heat Capture	<p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>California did not ban seawater cooling. Section 316(b) of the US <i>Clean Water Act</i> requires the Environmental Protection Agency (EPA) to issue regulations on the design and operation of intake structures, in order to minimize adverse environmental impacts¹². The EPA brought regulations into force in 2014 that cover facilities that withdraw more than two million gallons per day (315 m³/h) of cooling water. These regulations govern the controls that must be in place at new and existing plants related to entrainment and impingement of marine organisms.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p> <p>At the request of certain members of the Squamish community, Woodfibre LNG has participated in very preliminary discussions surrounding CO₂ capturing. Woodfibre is happy to continue participation in such discussions and will continue to investigate the technical and economic feasibility of these alternatives.</p> <p>Additional information on the seawater cooling system intake and discharge was provided to the EAO on April 23, 2015. Please also refer to the Seawater Cooling System and Marine Mammal Information Sheets that have been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
880(ii)	March 22, 2015	Personal Information Withheld - Gambier Harbour, British Columbia	They also propose to use freshwater from Mill Creek which will be returned?	Mill Creek	<p>In British Columbia, water licences must be appurtenant to land, a mine or an undertaking. The water licences for the Project are appurtenant to the fee simple land. As such, they were transferred to Woodfibre LNG Limited with the transfer of the Woodfibre property. Woodfibre LNG Limited has committed to maintaining minimum instream flow releases, which will be determined by a qualified professional. This means that the water licence could not be used to capacity during low flows, and flows that are protective of fish and</p>	

¹² Source: <http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/upload/Final-Regulations-to-Establish-Requirements-for-Cooling-Water-Intake-Structures-at-Existing-Facilities.pdf>

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
					fish habitat will remain in Mill Creek. More information is included in Section 5.9 Water Quantity and Section 5.15 Freshwater Fish and Fish Habitat of the Application.	
881	March 22, 2015	Personal Information Withheld - Gabriola Island, British Columbia	ENVIRONMENT: The once-through seawater cooling system proposed by Woodfibre LNG is outdated Woodfibre LNG is proposing an outdated and damaging cooling method to help cool the LNG facility. They propose to extract 17,000 tonnes (= 3.7 million gallons, or 7 Olympic-sized 50-meter swimming pools) of seawater from Howe Sound, chlorinate it, heat it, and then spit it back out into the sound every hour of every day for the next 25 years. This method has been banned in California and several other places as it is very damaging to marine life such as juvenile salmon, herring, and plankton which are the building blocks for all other life in Howe Sound. If the herring are impacted, the dolphins, orcas, and humpbacks are also impacted as they no longer have a food supply. The impacts of increased water temperatures and the addition of chlorinated seawater will likely reverse the recent revival of marine life in Howe Sound, which is just now recovering from the toxic legacies of previous industries. This is unacceptable.	LNG Project	Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 12.	
882	March 22, 2015	Personal Information Withheld - Gabriola Island, British Columbia	HEALTH: Social costs and health impacts of air pollution Woodfibre LNG is estimating air pollution emissions of 295.7 tonnes of nitrogen dioxide (NO2) and 43.8 tonnes of sulfur dioxide (SO2) every year (See Table 5.2-14 of the Air Quality Section of Woodfibre LNG's environmental assessment application). Emissions of NOx and SO2 interact with other compounds to form fine particles, which can affect both the lungs and the heart. Exposure to these particles is linked to increased risk of respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; decreased lung function; aggravated asthma; onset of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. A new study published in the scientific journal, Climatic Change, estimates the true social costs of air pollution that aren't accounted for in the cost of fossil fuels and other pollutants. Social costs include the health impacts of air pollution as well as impacts from climate change. The study found that sulfur dioxide costs \$42,000 per tonne, and nitrous oxides cost \$67,000 per tonne. Sources: Mills et al (2009) Adverse cardiovascular effects of air pollution. Nature Clinical Practice Cardiovascular Medicine 6: 36-44 Shindell (2015) The social costs of atmospheric release. Climatic Change	LNG Project	Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 13.	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
883	March 22, 2015	Personal Information Withheld - Gabriola Island, British Columbia	ECONOMY: The requested socio-economic study has not been provided During construction, only 4.3% of jobs (=38.5 out of 895) will be for locals living in the Squamish/Whistler corridor (See Table 6.2-8 of the Labour Market section of Woodfibre LNG's environmental assessment application). Why are there so few jobs predicted to be filled by workers in the Squamish/SLRD area? The EA application is also very unclear about how many of the 100 full-time jobs will be filled by residents of Howe Sound once the LNG terminal is operational. What are the benefits to Squamish? What are the costs? There is still no clarity around how much in municipal taxes will be paid to the District of Squamish. How will this project impact existing small businesses and existing industries in Howe Sound?	LNG Project	Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 15.	
884	March 22, 2015	Edith Goetsch - Lions Bay, British Columbia	PLEASE keep thos Tankers out of Howe Sound which is FINALLY recovering from all the Damage that has been done over the last 50 Years - WHY oh WHY do we start again????	LNG Project	<p>Thank you for the comment.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>The Woodfibre site has been used for industrial purposes for 100 years and is zoned for industrial use. As a condition of acquiring the site, Woodfibre LNG required the completion of remediation work on site. On December 22, 2014 the Ministry of Environment issued two Certificates of Compliance (uplands and water lot) evidencing completion of the remediation.</p> <p>Woodfibre LNG Limited intends to perform additional remediation and restoration in the Project area. Plans for additional remediation include the removal of approximately 3,000 existing creosote-coated piles from the waterfront in the Project area and the creation of a Green Zone around Mill Creek. This work will be carried out in partnership with the local groups, where suitable, so that local conservation and restoration targets can be met (please refer to Section 2.6.7 Ecological Benefits of the Application).</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
885	March 22, 2015	Personal Information Withheld - Gabriola Island, British Columbia	GOVERNMENT REGULATION: Inability of government to monitor, enforce, and respond to issues There are no regulations adopted to regulate this LNG industry from a technical standpoint. Any of the current standards are not applicable to the LNG industry. Do the regulators have the knowledge and the expertise and the capacity to oversee this industry or will they be relying on the proponent to monitor themselves and report to the regulator? Self-monitoring industries have created several examples of accidents with resulting environmental destruction in recent years, including the Lac Megantic rail disaster and the Mt Polley tailing pond spill.	LNG Project	Thank you for the comment. For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 17.	For more information related to comments on the Environmental Assessment process please see "EAO Response to Public Comments – Application Review Public Comment Period for Woodfibre LNG, January 22 – March 23, 2015" under the Application Review EAO Generated Documents [Link] .
886	March 22, 2015	Personal Information Withheld - Gabriola Island, British Columbia	ENVIRONMENT: Will there be smog? Will there be a smell? Woodfibre LNG is estimating air pollution emissions of 295.7 tonnes of nitrogen dioxide (NO2) and 43.8 tonnes of sulfur dioxide (SO2) every year (See Table 5.2-14 of the Air Quality Section of Woodfibre LNG's environmental assessment application). Nitrogen Dioxide (NO2) is a reddish-brown gas with a pungent, irritating odour. It absorbs light and leads to the yellow-brown "smog" pollution haze seen hanging over cities. It is known to irritate the lungs and increase susceptibility to respiratory infections. In combination with either ozone (O3) or sulphur dioxide (SO2), nitrogen dioxide may cause injury at even lower concentration levels.Sulphur Dioxide (SO2) is a toxic gas with a pungent, irritating, and rotten smell. Current scientific evidence links short-term exposures to SO2, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects including bronchoconstriction and increased asthma symptoms. These effects are particularly important for asthmatics at elevated ventilation rates (e.g., while exercising or playing). Studies also show a connection between short-term exposure and increased visits to emergency departments and hospital admissions for respiratory illnesses, particularly in at-risk populations including children, the elderly, and asthmatics. The addition of these air pollutants in Howe Sound is of particular concern as recent research has shown that the Howe Sound airshed and Lower Fraser Valley airshed are connected. Emissions from Woodfibre LNG will add to the pollution in Howe Sound, exacerbating the existing air quality conditions, particularly in the Squamish-Brackendale corridor.	LNG Project	For a response to this comment, please refer to the "Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions", comment # 13 and 21.	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
887	March 22, 2015	Personal Information Withheld - Lions Bay, British Columbia	Protection of the glass sponge reefs is imperative! Please take the fragility of this natural wonder seriously and protect Howe Sound from the tankers.	Glass Sponge Reef	<p>Thank you for your comment.</p> <p>Glass sponges are addressed in both the Application document (Section 5.16.2.4.1) and Marine Baseline Studies Report (Appendix 5.10).</p> <p>Woodfibre LNG expects that three to four LNG carriers will arrive at the site each month. The carriers will navigate through the established commercial shipping route in/out of Howe Sound (through Queen Charlotte Channel) to the Strait of Georgia and out to the Pacific Ocean. The carriers will be escorted by at least three tug boats, at least one of which will be tethered, and will be piloted by BC Coast Pilots who are experts with Howe Sound navigation.</p> <p>The minimum water depth along the shipping route is 60 metres, and the LNG carriers draft will sit approximately 12 metres to 15 metres below the water surface.</p> <p>The sailing line (shipping route) is a minimum of 1300 metres (and typically more than 1500 metres) from the location of the sponge reefs located at Halkett Point and Lost Reef between Pam rocks and Christie Islets. At depths ranging between 20 m and 40 m (i.e., associated depths where glass sponge reefs have been observed at these locations), the velocity produced by a propeller wash is considered negligible due to dissipation of the prop-wash with distance from sailing line.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p>	
888	March 22, 2015	Personal Information Withheld - West Vancouver, British Columbia	<p>I am concerned about the environmental impact of this development.</p> <p>Especially the noise caused by the ship traffic. I live in a highrise which is semi waterfront in Dundarave and sometimes the noise from the diesel engines is unbearable and I have been considering moving from this location because of this. Howe Sound becomes a narrow channel and I can't imagine the noise which will be created bouncing off the shoreline.</p>	Effect of the Project on Noise	<p>Thank you for your comment.</p> <p>Section 5.4 Atmospheric Sound of the Application assesses the potential Project-related effects to sound. The Application concluded there were no significant adverse effects. At a distance of approximately 500 m from the LNG carrier, the sound level is less than 35 dBA, which is equivalent to a soft whisper at 2 m. At a distance of less than 200 m from the LNG carrier, the sound level is less than 40 dBA, which is equivalent to a quiet living room (see Table 5.4-5 of the Application).</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
889	March 22, 2015	Claire Johnson - Whistler, British Columbia	This project represents a significant lack of vision. The future is in sustainable energy and environmental protection, and the longer we spend trying to ram through projects like this, the more public funds have been wasted. And will be wasted, again and again, in mitigating harm. Let's do it right, let's build homegrown clean energy businesses now, rather than end up buying tech from other countries. There are so many reasons to follow another strategy: please, let's do it right.	Renewable Energy	<p>Thank you for your comment.</p> <p>Natural gas is the cleanest burning fossil fuel and has been identified as the best and most reliable way to help transition away from high-emission fuels such as oil and coal. This is particularly true in energy-hungry Asian markets, where Woodfibre LNG Limited plans to sell its product. In fact, replacing just one 500 Megawatt coal-fired power plant with natural gas fueled power generation for one year equates to taking 557,000 cars off the roads over the same time period¹³.</p> <p>Section 5.3 Greenhouse Gas Management of the Application includes an assessment of the potential Project-related effects to greenhouse gases. The influence of Project-related greenhouse gas emissions on climate change was evaluated by assessing whether any measurable change in climate could result from the Project-generated greenhouse gas emissions. The relatively minor increase in global emissions associated with the Project would correspond to a change in climate that is unlikely to be measurable.</p>	
890	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	I do NOT want the Woodfibre LNG project to go ahead.	LNG Project	Thank you for your comment.	
891	March 22, 2015	Personal Information Withheld - Lions Bay, British Columbia	Please take these concerns seriously. It feels like industry and the economy play a far greater role than our health, well being and mother nature. The dolphins and whales have returned. This in itself should be enough evidence to leave the Sound alone.	LNG Project	<p>Thank you for your comment.</p> <p>The goal of Woodfibre LNG Limited is to develop a project that provides sustained economic growth while continuing to support the work that has been done to improve Howe Sound.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p> <p>An assessment of the potential effects of the Project on marine mammals is included in Section 5.19 Marine Mammals, and includes an assessment of the effects of noise. Woodfibre LNG Limited will retain a contractor to perform underwater acoustic monitoring for pre, during and post project construction. The underwater monitoring will collect underwater sound levels and marine mammal presence (e.g., of those species present, their frequency and seasonality). This will contribute further to baseline information for both underwater sound levels and mammal presence in the project area and in the vicinity of the Project Site to monitor potential changes of marine mammals over time.</p>	

¹³ Centre for Liquefied Natural Gas. http://www.lngfacts.org/resources/CLNG-PACE_Study_one-pager.pdf.

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
892	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	Squamish has amazing natural beauty to sell to tourists. We also have an increasingly well educated population here. We can be forward thinking town not based on dirty resource extraction and consumption. LNG doesn't fit where our town is heading.		<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited is of the view that the Woodfibre site is the right fit for an LNG facility. It features: zoned industrial, more than 100 years of industrial use, deepwater port, access to established shipping routes, access to FortisBC pipeline, access to BC Hydro transmission grid, and access to labour force.</p> <p>Woodfibre LNG Limited is also of the view that tourism and industry can work together to create responsible economic development in Squamish. BC Ferries and Squamish Terminals have shown how industry can successfully coexist with local tourism and recreation, and Woodfibre LNG Limited is working hard to follow that example.</p> <p>An assessment of the potential effects of the Project on tourism is included in Section 6.2 Labour Market and Section 6.3 Sustainable Economy. The Application concluded that there were no Project-related significant adverse residual effects to the economy.</p> <p>The Application assesses the potential effects of the Project to outdoor recreation in Section 7.4 Land and Resource Use. With the proposed mitigation, it is not likely that there will be significant residual effects to outdoor recreation.</p> <p>Please also refer to the Sustainable Economy information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
893	March 22, 2015	Maddy Paquette - East Van, British Columbia	Having grown up watching the changes made to Britannia Beach, I cannot be anything other than opposed to LNG coming to town. Our river was once so acidic it ate metal. Our hillsides were clear cute and scarred. Both in the name of energy. The copper run off from the men, the clear cutting for the timber industry. Only now, twenty years later, have things come back around. The salmon are back in the stream, the hills are filling in. Both of these are examples on a relatively small scale compared to LNG. with LNG, there would be no recovery, only damage. Damage to the estuary, damage to the precious ecosystem that is our heritage, damage to people when (and track records will tell you it is when, not if) the pipelines leak and damage from the fracking. This is an irreversible, ugly, shameful path that Squamish should avoid by all means necessary. It goes against what I believe the people of Squamish stand for, and I know it certainly goes for what residents of Britannia Beach stand for. Funnily enough, it seems to go against what this entire province stands for, if you've been paying attention. I've seen towns come together for change, and I've see that change happen first hand. We will not be cowed by the bullies in suits with their dirty money, and we will not stand for this atrocity you call "clean" energy. Wind power, solar power, hydro-tidal power, these are industries that Squamish should be developing. They still keep work in town, they still feed families, they just don't kill the world we live in. How is that a hard choice to make?	Industrial Legacy LNG Industry Hydraulic Fracturing Pipeline	<p>Thank you for your comments.</p> <p>The goal of Woodfibre LNG Limited is to develop a project that provides sustained economic growth while continuing to support the work that has been done to improve Howe Sound.</p> <p>The Woodfibre site has been used for industrial purposes for 100 years and is zoned for this use. Woodfibre LNG's purchase of the property was contingent on its former owner, Western Forest Products (WFP), obtaining a Certificate of Compliance (COC) from the BC Ministry of Environment (MOE). On December 22, 2014, the MOE issued two COCs for the Woodfibre property. The COCs confirm that WFP has cleaned up the site to acceptable contaminant levels and existing site contamination does not pose an ecological or human health risk. These COCs include conditions related to monitoring and management of residual contamination, and reporting requirements that must be undertaken by a BC MOE Approved Professional.</p> <p>Woodfibre LNG Limited intends to perform additional remediation and restoration in the Project area. Plans for additional remediation include the removal of approximately 3,000 existing creosote-coated piles from the waterfront in the Project area and the creation of a Green Zone around Mill Creek. This work will be carried out in partnership with the local groups, where suitable, so that local conservation and restoration targets can be met (please refer to Section 2.6.7 Ecological Benefits of the Application).</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
					<p>Woodfibre LNG notes that the comment about the pipeline is directed to the Fortis BC Eagle Mountain Pipeline Expansion Project. FortisBC's Eagle Mountain – Woodfibre Gas Pipeline Project is undergoing a separate environmental assessment certificate application review process. Please see EAO website for more information:</p> <p>http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_document_406_38521.html</p> <p>Woodfibre LNG acknowledges the expressed concern regarding hydraulic fracturing. Hydraulic fracturing activities are outside the EA scope of the Project.</p> <p>Woodfibre LNG Limited is not engaged in oil or gas extraction or production activities. The gas delivered to the Project site will be supplied to the Project from western Canadian market hubs through an expansion of the existing gas transmission system by Fortis BC, and is the same gas that is supplied to Squamish, Metro Vancouver, Whistler, the Sunshine Coast and Vancouver Island through the Fortis BC pipeline system.</p> <p>Like other customers along the pipeline route, Woodfibre LNG will buy its feed gas from third party suppliers, potentially including aggregators. This natural gas will be delivered in a co-mingled stream through the Fortis BC pipeline to the site.</p> <p>Natural gas liquefied in the Woodfibre LNG facilities will be produced and processed primarily in the northeastern region of BC, but may also originate from other wells connected to the Western Canadian Gas Transmission System. The Oil & Gas Commission (OGC) regulates these extraction activities under the Oil & Gas Activities Act and related regulations.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
894(i)	March 22, 2015	Laurie MacBride - Gabriola Island, British Columbia	<p>I am a resident of Gabriola Island and have a number of concerns and questions with regard to the Woodfibre LNG Project ("WFLNG").</p> <p>I am a life-long resident of this region, including, for a total of about 50 years, living within 1 km of the shoreline along the tanker route. I have also been a boater for most of my life, and I continue to make regular and frequent use of beaches, shorelines and waters that would be directly impacted by a tanker spill or accident. In my professional life I was co-founder and for 17 years, Executive Director of the Georgia Strait Alliance, a conservation group focused on the marine environment in and around the Strait of Georgia. I served on numerous advisory and consultative panels, addressed governmental committees at all levels and was an invited conference speaker on many issues impacting the Strait and Georgia Basin, including marine safety and spill preparedness and response.</p> <p>A worst-case spill from a transiting LNG tanker would be extremely dangerous to the human population of our region – and while one might argue that this is unlikely, the accident at Lac Megantic has shown that worst-case accidents are very much within the realm of the possible, and need to be seriously considered in any assessment. Moreover, while no LNG tanker has exploded or been seriously breached to date, there have been several close calls, and an explosion of an LNG tanker seems only a matter of time.</p> <p>My husband and I own our home, which is less than 1 km from the shore and close to the tanker route. Nearby local amenities are important factors in residential property values; in our case this means accessible beaches, unspoiled parks and marinas. A tanker spill, explosion or other serious accident in the Strait of Georgia would be detrimental to these amenities, so would substantially deflate our property value and thereby impact our financial security in addition to our quality of life</p>	Safety	<p>Thank you for your comments.</p> <p>Woodfibre LNG will be designed for the safe and efficient handling of liquefied natural gas, both on land and on water. This includes standards set out in the BC Oil and Gas Activities Act and the associated Liquefied Natural Gas Facility Regulation, national and BC building codes, as well as national and international standards, guidelines and codes of practice where there are no applicable codes for BC.</p> <p>Liquefied natural gas has been shipped safely around the world for more than 50 years. There has never been a recorded incident involving a loss of containment of an LNG carrier at sea. LNG carriers are among the most modern and sophisticated ships in operation. These ships have robust containment systems, double-hull protection and are heavily regulated by international and federal standards.</p> <p>In the unlikely event there is a spill from an LNG carrier, LNG will never mix with water. Instead, it will quickly return to a gas state, and because methane is lighter than air, the gas will rise and dissipate into the air.</p> <p>The Accidents and Malfunctions section (Section 11.0) of the Application assessed the consequence and frequency of effects resulting from credible worst case scenarios for the Project. It showed that potential risks to the public were within the tolerable risk criteria regulated by the BC Oil and Gas Commission (OGC). The OGC will include a review of the quantitative risk assessment for this Project in the permit application review to confirm that the study and results meet the regulated requirements. Additional information on accidents and malfunctions was provided to the EAO on April 29, 2015. Please also refer to Public Safety and Marine Transport Information Sheets that have been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
894(ii)	March 22, 2015	Laurie MacBride - Gabriola Island, British Columbia	<p>I have owned a number of boats (both sail and power) and have cruised for most of my life, to destinations from Sooke to Prince Rupert, including the Lower Mainland and the entirety of Howe Sound. My primary cruising area has been the southern Strait of Georgia and Gulf Islands, and I know these waters very well, including their navigational and marine safety hazards, which are considerable. I have witnessed a huge increase in commercial and recreational marine traffic in recent years, bringing a much higher risk of accidents. When huge tankers are added to this mix – especially when they carry such dangerous cargo as LNG – both the risk and the consequences of accidents are increased tremendously.</p> <p>If the safety restrictions that are imposed by the US and Australia are followed here for the WFLNG, tankers will have a 1.6 km travelling exclusion zone around them. That may decrease the risk of accidents somewhat, but at the cost of boaters having to heave-to in several narrow areas of Howe Sound and, along the length of the tanker route, to steer well off their desired course, regardless of what weather or tidal hazards this might present. This would have an extremely disruptive effect on recreational boaters like myself whenever LNG tankers are transiting the route, and could even put boaters into danger. Such disruption could thereby result in a considerable loss to the marine-based tourism industry in southwestern BC.</p>	Marine Traffic	<p>There is currently no regulation in Canada, which stipulates an exclusion zone; however, Woodfibre LNG will complete a voluntary Transport Canada Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) for the Project. The review will include a comprehensive risk assessment to ensure safety of vessel transits from terminal to open ocean; the development of recommendations to improve safety and minimize risk; and, the development of detailed safety procedures and emergency response plans.</p> <p>Subject to the recommendations of TERMPOL Woodfibre LNG Limited would deploy at least three tugs, at least one of which will be tethered, to provide a dynamic safety awareness zone for recreational and pleasure craft around the LNG carrier during its transit within Howe Sound. This dynamic safety awareness zone would extend up to 50 metres on either side of the vessel and up to 500 metres in front and, being dynamic in nature, would be transient with the movement of the LNG carrier. This arrangement of tugs also serves as an emergency provision to address contingencies that may require the vessel to stop or engage in manoeuvres at very short notice.</p> <p>Please also refer to the Marine Transport information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
894(iii)	March 22, 2015	Laurie MacBride - Gabriola Island, British Columbia	<p>Tourism would also be impacted negatively in another way, also because of the requirement for an exclusion zone. Presumably the exclusion would apply to passenger ferries along the route, causing a huge disruption to schedules and impacting residents and visitors alike. I expect that the annoyance this would create would have a very damaging effect on the tourism industry of the Sunshine Coast, Vancouver Island and Gulf Islands – areas where tourism is key to the economy. It is very difficult to see how any economic benefits from the WFLNG project could offset the losses in the tourism industry of our region.</p>	Tourism	<p>Woodfibre LNG Limited is of the view that the Woodfibre site is the right fit for an LNG facility. It features: zoned industrial, more than 100 years of industrial use, deepwater port, access to established shipping routes, access to FortisBC pipeline, access to BC Hydro transmission grid, and access to labour force.</p> <p>Woodfibre LNG Limited is also of the view that tourism and industry can work together to create responsible economic development in Squamish. BC Ferries and Squamish Terminals have shown how industry can successfully coexist with local tourism and recreation, and Woodfibre LNG Limited is working hard to follow that example.</p> <p>An assessment of the potential effects of the Project on tourism is included in Section 6.2 Labour Market and Section 6.3 Sustainable Economy. The Application concluded that there were no Project-related significant adverse residual effects to the economy.</p> <p>The Application assesses the potential effects of the Project to outdoor recreation in Section 7.4 Land and Resource Use. With the proposed mitigation, it is not likely that there will be significant residual effects to outdoor recreation.</p> <p>Please also refer to the Sustainable Economy information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
894(iv)	March 22, 2015	Laurie MacBride - Gabriola Island, British Columbia	Swells from enormous LNG tankers and their accompanying tugs are also a concern for boaters, kayakers and other operators of small craft, as well as having detrimental impacts on the sensitive shorelines along the route.	Shipping Wake	<p>As part of the Application, a Vessel Wake Assessment was carried out by Moffatt & Nichol. Moffatt & Nichol is a leading global infrastructure advisor with a BC presence specializing in the planning and design of facilities that shape coastlines, harbours and rivers, as well as an innovator in the planning for transportation complexities associated with the movement of freight.</p> <p>The vessel wake assessment estimated that the wake generated by the carriers in normal conditions would be less than 10 centimetres at 50 metres away from the LNG carrier, which is less than the wind-generated waves typically encountered in Howe Sound. In addition, it identified that any wake generated by a LNG carrier along the shipping route would diminish in size the further it traveled away from an LNG carrier, and would be unnoticeable at the shoreline, given the natural occurrence of typical wind-generated waves in Howe Sound.</p> <p>Indirect wake effects from shipping activities were considered in the assessment (Section 7.3.3.2.1 Potential Interactions) and, based on the analysis by Moffatt & Nichol, the potential wake effects were determined to be negligible (i.e., they would not have a measurable change).</p> <p>For more information on the Vessel Wake Assessment, please see Appendix 7.3-2 of the Application. Additional information on the vessel wakes was provided to the EAO on April 23, 2015.</p>	
894(v)	March 22, 2015	Laurie MacBride - Gabriola Island, British Columbia	I am also very concerned about the impacts of air, light, sound and water pollution from WFLNG and its cooling system (through the use of seawater) on the marine life in Howe Sound. After many years of effort by citizens and conservation groups, Howe Sound has finally been coming back to life after years as being used as a dumping ground by industry. Recent runs of herring and salmon, and sightings of dolphins and whales in the Sound are hugely encouraging developments. However, the WFLNG plant can only set back this restoration effort and harm marine life. It is appalling to see that this cooling process – which has been banned in other jurisdictions because of its deleterious effects on marine life – would even be considered here in BC, especially in such a sensitive area as Howe Sound.	Effect of Project on Marine Life	<p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>California did not ban seawater cooling. Section 316(b) of the US <i>Clean Water Act</i> requires the Environmental Protection Agency (EPA) to issue regulations on the design and operation of intake structures, in order to minimize adverse environmental impacts¹⁴. The EPA brought regulations into force in 2014 that cover facilities that withdraw more than two million gallons per day (315 m³/h) of cooling water. These regulations govern the controls that must be in place at new and existing plants related to entrainment and impingement of marine organisms.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section 14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures</p>	

¹⁴ Source: <http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/upload/Final-Regulations-to-Establish-Requirements-for-Cooling-Water-Intake-Structures-at-Existing-Facilities.pdf>

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
					are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that there were no Project-related significant adverse residual effects to the environment. Additional information on the seawater cooling system intake and discharge was provided to the EAO on April 23, 2015. Please also refer to the Seawater Cooling System and Marine Mammal Information Sheets that have been prepared as part of the Woodfibre LNG Limited response to public comments.	
894(vi)	March 22, 2015	Laurie MacBride - Gabriola Island, British Columbia	<p>In addition to these concerns, I have the following questions:</p> <p>Please provide details of the recreational traffic in Howe Sound and the Strait of Georgia – ferries, sailboats, power boats, tour boats, kayaks, etc. – and how the presence of these large tankers with the necessary exclusion zones around them will affect this traffic. Please ensure these studies are done when there is summer traffic on the water.</p> <p>How will CO2 emissions from the WFLNG be measured and monitored?</p> <p>With respect to the heating and chlorination of sea water, what will WFLNG do to apply best practices to cool and de-chlorinate this water when returning it to the ocean to minimize the environmental damage?</p>	Marine Traffic	For a response to this comment, please refer to the “Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions”, comment #32, 35 and 36.	
894(vii)	March 22, 2015	Laurie MacBride - Gabriola Island, British Columbia	What alternative approaches to cooling have been considered and discarded by WFLNG, and why?	Alternatives Means of Undertaking the Project	<p>In selecting a preferred cooling method, Woodfibre LNG Limited considered environmental effects, regulatory issues, and capital and operating cost considerations (e.g., maintenance, reliability, energy efficiency). Reliability and maintainability of heat exchangers is perhaps the most critical factor in the consideration of the preferred cooling media.</p> <p>Linde Group (2014) conducted a cooling study on seawater vs. air cooling, and WorleyParsons (2013) conducted a cooling media study on the following cooling media options:</p> <ul style="list-style-type: none">• air cooling• evaporative cooling• freshwater cooling from local streams• seawater cooling from Howe Sound <p>Through this study, seawater cooling was chosen as the preferred cooling media. Seawater is one of the most abundant and efficient cooling mediums available¹⁵. Seawater cooling produces less environmental noise and visual effects than air cooling. During operation, it is preferable that the cooling medium be at a consistent temperature through the year. The seawater temperature fluctuations are less over the year than the temperature fluctuations of the air or creek water.</p> <p>In addition, Woodfibre LNG Limited would like to note that two of the factors that Woodfibre LNG Limited took into consideration when assessing alternatives was public concern about noise and visual effects from using air cooling.</p>	

¹⁵ Thomas C. and Burlingame R. n.d. Direct Seawater Cooling in LNG Liquefaction Plants. Available at: http://www.ivt.ntnu.no/ept/fag/tep4215/innhold/LNG%20Conferences/2007/fscommand/PO_36_Thomas_s.pdf.

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
894(viii)	March 22, 2015	Laurie MacBride - Gabriola Island, British Columbia	<p>How long will LNG or natural gas be stored in the floating storage and offloading units at WFLNG? Will the government limit the storage of LNG at any given time in order to minimize the chance of explosion?</p> <p>Please provide information on how an explosion, however remote, of an LNG tanker will affect the population of Howe Sound and other areas adjacent to the tanker route (see federal government decision to refuse LNG tanker traffic on the east coast of Canada).</p> <p>The scope of the assessment for this project, according to sections 11 and 13, is to consider "the potential adverse environmental, economic, social, heritage and health effects of the proposed Project, including cumulative effects and practical means to avoid, minimize or otherwise manage any such potential adverse effects."</p> <p>In my opinion, an analysis of the information to date requires a recommendation of non-approval to the Minister. I ask the EAO to uphold the clear mandate it is given under the Environmental Assessment Act and to recommend rejection of this project. The "potential adverse effects" are of such significance that mitigation measures are not the answer. Outright rejection is the only answer. Furthermore, as this review is being done as a substitute process for any Canadian environmental assessment, the clear language in section 5 of the Canadian Environmental Assessment Act requires consideration of fish and fish habitat, aquatic species and migratory birds, all of which will suffer serious negative effects if this project is allowed to proceed.</p>	LNG Storage	For a response to this comment, please refer to the “Woodfibre LNG Limited May 2015 Memo to Frequently Asked Questions”, comment # 28, 37 and 47.	For more information related to comments on the Environmental Assessment process please see “EAO Response to Public Comments – Application Review Public Comment Period for Woodfibre LNG, January 22 – March 23, 2015” under the Application Review EAO Generated Documents [Link] .

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
895	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	Bring jobs back to Squamish. This can be done in an environmentally friendly way with the Squamish community winning with support from business.	Local Economy	<p>Thank you for your comment.</p> <p>Woodfibre LNG will develop a Local Hiring Strategy, a Local Training Strategy and Local and Regional Procurement Strategy in order to ensure that the local workforce and economy can realize (to the maximum extent possible) the potential economic benefits of the Project. These strategies will ensure that the labour force is well-positioned to seek Project employment based on individual capacities to supply needed skills; maximize employment opportunities for residents in Squamish, Whistler and Metro Vancouver; and ensure that local and regional businesses can access the benefits of increased demand for goods and services from the Project.</p> <p>An independent third party economic impact assessment of the proposed Woodfibre LNG project is included in the Application. Accounting and Consulting firm MNP found the following economic benefits of the Project (2014 CAD):</p> <p>CONSTRUCTION JOBS</p> <ul style="list-style-type: none">• Create 650+ jobs each year of construction.• Create an additional 1,080+ jobs (indirect* and induced** employment) during the construction phase of the Project. <p>LONG-TERM OPERATION JOBS</p> <ul style="list-style-type: none">• Create 100+ local jobs during operation.• Create an additional 330+ local jobs (indirect* and induced**) during operation. <p>*Indirect impacts arise from changes in activity for suppliers.</p> <p>**Induced impacts arise from shifts in spending on goods and services as a consequence of changes to the payroll of the directly and indirectly affected businesses.</p> <p>For more information, please refer to Section 2.6 Project Benefits of the Application. Additional benefits from the Project are described in greater detail in Section 6.2 Labour Market, Section 6.3 Sustainable Economy and Section 7.2 Infrastructure and Community Services.</p> <p>Please also refer to the Sustainable Economy information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
896(i)	March 22, 2015	D Lynn Chapman - Roberts Creek, British Columbia	<p>I am opposed to the LNG proposal receiving any permits to proceed. I object for the following reasons:</p> <p>1. Damage to the marine environment from the release of heated coolant water which will result in raising the temperature of the surrounding waters in Howe Sound and harm to marine habitat and fisheries.</p>	Seawater Cooling System	<p>Thank you for your comments.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>The seawater cooling system will be designed to meet BC water quality guidelines. The release temperature of the seawater will be less than 21°C or 10°C above ambient water temperature of Howe Sound, whichever is less. Near-field simulation modeling shows that, with a release temperature of 10°C greater than the ambient temperature, the total volume of water that would have a temperature greater than 1°C above ambient is 125 m³ (for context, this volume is approximately 5% of an Olympic-size pool). This volume will not increase over time.</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p> <p>Additional information on the seawater cooling system intake and discharge was provided to the EAO on April 23, 2015. Please also refer to the Seawater Cooling System and Marine Mammal Information Sheets that have been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
896(ii).	March 22, 2015	D Lynn Chapman - Roberts Creek, British Columbia	2. The inherent risks associated with tankers carrying potentially explosive LNG through the narrow passages of Howe Sound and the catastrophic risks to people, communities and properties from a tanker accident.	Accidents and Malfunctions	<p>Liquefied natural gas (LNG) has been shipped safely around the world for more than 50 years. There has never been a recorded incident involving a loss of containment of an LNG carrier at sea. LNG carriers are among the most modern and sophisticated ships in operation. These ships have robust containment systems, double-hull protection and are heavily regulated by international and federal standards.</p> <p>In the unlikely event there is a spill from an LNG carrier, LNG will never mix with water. Instead, it will quickly return to a gas state, and because methane is lighter than air, the gas will rise and dissipate into the air.</p> <p>The Accidents and Malfunctions section (Section 11.0) of the Application assessed the consequence and frequency of effects resulting from credible worst case scenarios for the Project. It showed that potential risks to the public were within the tolerable risk criteria regulated by the BC Oil and Gas Commission (OGC). The OGC will include a review of the quantitative risk assessment for this Project in the permit application review to confirm that the study and results meet the regulated requirements. Additional information on accidents and malfunctions was provided to the EAO on April 29, 2015. Please also refer to Public Safety and Marine Transport Information Sheets that have been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
896(iii)	March 22, 2015	D Lynn Chapman - Roberts Creek, British Columbia	3. The unreasonable expectation of interrupting ferry traffic so the tankers can pass.. At least 40 days per year as I understand it.	Marine Traffic	<p>An assessment of the effect of the LNG carriers on other marine traffic is included in Section 7.3 Marine Transport of the Application. BC Ferries has not identified scheduling delays or interruptions as a potential effect.</p> <p>Following detailed discussions with BC Ferries, Pacific Pilotage Authority and BC Coast Pilots, it has been determined that there will be no serious effect to BC Ferries when sharing the waterway near Horseshoe Bay with LNG carriers. Coordination with these vessels will follow normal communication protocols under the Marine Communication and Traffic Services (MCTS).</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
896(iv).	March 22, 2015	D Lynn Chapman - Roberts Creek, British Columbia	4. The unacceptable damage to the Glass Sponge reefs off Gambier Is and in the tankers route and at a depth more shallow than the tankers can reliably clear without harm to the reefs.	Glass Sponge Reefs	<p>Glass sponges are addressed in both the Application document (Section 5.16.2.4.1) and Marine Baseline Studies Report (Appendix 5.10).</p> <p>Woodfibre LNG expects that three to four LNG carriers will arrive at the site each month. The carriers will navigate through the established commercial shipping route in/out of Howe Sound (through Queen Charlotte Channel) to the Strait of Georgia and out to the Pacific Ocean. The carriers will be escorted by at least three tug boats, at least one of which will be tethered, and will be piloted by BC Coast Pilots who are experts with Howe Sound navigation.</p> <p>The minimum water depth along the shipping route is 60 metres, and the LNG carriers draft will sit approximately 12 metres to 15 metres below the water surface.</p> <p>The sailing line (shipping route) is a minimum of 1300 metres (and typically more than 1500 metres) from the location of the sponge reefs located at Halkett Point and Lost Reef between Pam rocks and Christie Islets. At depths ranging between 20 m and 40 m (i.e., associated depths where glass sponge reefs have been observed at these locations), the velocity produced by a propeller wash is considered negligible due to dissipation of the prop-wash with distance from sailing line.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p>	
896(v)	March 22, 2015	D Lynn Chapman - Roberts Creek, British Columbia	5. The intended use of relatively clean electrical power (185MW as I understand it) to liquefy fracked gas which is a fossil fuel and will contribute to climate change and ocean acidification when burned elsewhere in the world is environmentally suicidal. Changing cleaner energy into dirtier energy is simply wrong. The unspoken linkage between this LNG project and Site C dam is clear and unacceptable.	LNG Industry	<p>Natural gas is the cleanest burning fossil fuel and has been identified as the best and most reliable way to help transition away from high-emission fuels such as oil and coal. This is particularly true in energy-hungry Asian markets, where Woodfibre LNG Limited plans to sell its product. In fact, replacing just one 500 Megawatt coal-fired power plant with natural gas fueled power generation for one year equates to taking 557,000 cars off the roads over the same time period¹⁶.</p> <p>Section 5.3 Greenhouse Gas Management of the Application includes an assessment of the potential Project-related effects to greenhouse gases. The influence of Project-related greenhouse gas emissions on climate change was evaluated by assessing whether any measurable change in climate could result from the Project-generated greenhouse gas emissions. The relatively minor increase in global emissions associated with the Project would correspond to</p>	

¹⁶ Centre for Liquefied Natural Gas. http://www.lngfacts.org/resources/CLNG-PACE_Study_one-pager.pdf.

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
					a change in climate that is unlikely to be measurable. Woodfibre LNG Limited is not aware of any linkage between the Woodfibre LNG Project and the Site C dam.	
896(vi)	March 22, 2015	D Lynn Chapman - Roberts Creek, British Columbia	<p>6. This project cannot proceed without extensive and unmitigatable environmental damage and danger and is not justified by the need for this project nor the relatively few economic benefits of jobs and money for those people and environments who will bear the greatest risks.</p> <p>I ask that this project not receive approval by the EAO. I also ask this on behalf of my husband</p>	Economic Justification of the Project	<p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p>	
897(i)	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	<p>The EA office should reject the proposal to use two old and deregistered LNG tankers permanently moored and used for LNG storage for two reasons: Being deregistered as ocean-going vessels the IMO rules re safety, port state inspections etc. will not apply. The BC Safety Authority charged with the inspection of pressure vessels, even if they have jurisdiction (which is not clear) over "floating tanks", has no experience in the inspection and permitting of pressure vessels of this kind.</p>	Floating Storage and Offloading Unit	<p>The two LNG carriers will be structurally integrated into one unit and will be surveyed and maintained in class by the Classification Society for the duration of their life cycle at the Terminal in compliance of the pertinent IMO rules and Canadian regulations as applicable to these units.</p>	
897(ii)	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	<p>This will impact negatively on the scenic beauty of the Howe Sound.</p> <p>It will impact on the future tourist potential as anyone driving or boating up the sound or going up on the world class Sea to Sky Gondola will be left with a negative impression on how this environment is managed.</p>	Visual Quality / Tourism	<p>The Project's visual effects are expected to be minor given their scale and the historical and current level of human-related disturbance within the regional assessment area.</p> <p>Woodfibre LNG is designing the facility to reduce the size of the disturbed area and to blend it into the environment as much as possible.</p> <p>Mitigation measures have been developed to avoid, minimize, restore onsite or offset the potential adverse effects of the Project. Mitigation measures that would be implemented to reduce the visibility of the facility would include the following:</p> <ul style="list-style-type: none"> reducing the level of contrast of buildings by using external surface finishing that has low glare and natural colours monitoring and maintaining natural screening to ensure minimal visibility of infrastructure providing additional screening of land-based infrastructure through temporary or permanent plantings where possible and safe to do so <p>For more information, please see Section 7.5 Visual Quality of the Application, which includes an assessment of the potential effects of the Project on the viewscape, including from the Sea-to-Sky Gondola.</p> <p>Woodfibre LNG Limited is of the view that the Woodfibre site is the right fit for an LNG facility. It features: zoned industrial, more than 100 years of industrial use, deepwater port, access to established shipping routes, access to FortisBC pipeline, access to BC Hydro</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
					<p>transmission grid, and access to labour force.</p> <p>Woodfibre LNG Limited is also of the view that tourism and industry can work together to create responsible economic development in Squamish. BC Ferries and Squamish Terminals have shown how industry can successfully coexist with local tourism and recreation, and Woodfibre LNG Limited is working hard to follow that example.</p> <p>An assessment of the potential effects of the Project on tourism is included in Section 6.2 Labour Market and Section 6.3 Sustainable Economy. The Application concluded that there were no Project-related significant adverse residual effects to the economy.</p> <p>The Application assesses the potential effects of the Project to outdoor recreation in Section 7.4 Land and Resource Use. With the proposed mitigation, it is not likely that there will be significant residual effects to outdoor recreation.</p> <p>Please also refer to the Sustainable Economy information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	
898(i)	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	I'm very concerned about warm chlorinated water being discharged into Howe sound and the impact this may have on the marine environment.	Seawater Cooling System	<p>Thank you for your comments.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p> <p>Additional information on the seawater cooling system intake and discharge was provided to the EAO on April 23, 2015. Please also refer to the Seawater Cooling System and Marine Mammal Information Sheets that have been prepared as part of the Woodfibre LNG Limited response to public comments.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
898(ii)	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	I'm worried about effects on our airshed, and the impact tanker traffic will have.	Air Quality	<p>The Woodfibre LNG Project will be powered by electricity provided by BC Hydro. By powering the plant with electricity, instead of natural gas, greenhouse gas emissions will be reduced by about 80%. This will make Woodfibre LNG one of the cleanest LNG facilities in the world.</p> <p>Woodfibre LNG undertook air dispersion modelling based on planned activities and equipment use — including marine vessels — to predict air emissions from the Project operation phase. The results of the dispersion modelling were compared against federal and provincial standards and guidelines; and all predicted concentrations were below these standards and guidelines.</p> <p>Woodfibre LNG characterized current climate and climate trends using the Squamish Airport climate station. At peak capacity, the Project will have a greenhouse gas intensity of 0.059 t CO2e per tonne LNG, which is below the threshold of 0.16 t CO2e per tonne LNG in the Greenhouse Gas Industrial Reporting and Control Act.</p> <p>For more information, please see:</p> <ul style="list-style-type: none">• Section 9.2.2 Human Health Risk Assessment includes an assessment of the potential effects on humans by Project-related emissions. The Application concluded that there were no Project-related significant adverse effects.• Section 5.2 Atmospheric Environment (Air Quality) of the Application includes an assessment of the potential Project-related effects to air quality. The Application concluded that the changes to air quality as a result of Project-related effects are below ambient air quality criteria for all indicator compounds and the residual effects are considered negligible or not significant. <p>Please also refer to Air Quality information sheet that has been prepared as part of the Woodfibre LNG Limited response to public comments.</p> <p>Woodfibre LNG Limited will develop a Squamish Harbour Vessel Traffic Plan (M6.3-1) to identify strategies to minimize effects to marine-based recreational activities. Its development will incorporate consultations with Squamish Harbour users. Woodfibre LNG Limited will develop and publish the daily worker ferry schedule times (M7.3-13). Woodfibre LNG Limited commits to further consultation with recreational stakeholder groups in Howe Sound (M7.3-14) to identify areas of concerns and where practicable, to identify additional mitigation that can be implemented to reduce effects.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
898(iii)	March 22, 2015	Personal Information Withheld - Squamish, British Columbia	The glass reef at Halkett bay is too shallow to allow such traffic. The placement of this facility in Howe sound is a bad idea!	Glass Sponge Reefs	<p>Thank you for your comment.</p> <p>Glass sponges are addressed in both the Application document (Section 5.16.2.4.1) and Marine Baseline Studies Report (Appendix 5.10).</p> <p>Woodfibre LNG expects that three to four LNG carriers will arrive at the site each month. The carriers will navigate through the established commercial shipping route in/out of Howe Sound (through Queen Charlotte Channel) to the Strait of Georgia and out to the Pacific Ocean. The carriers will be escorted by at least three tug boats, at least one of which will be tethered, and will be piloted by BC Coast Pilots who are experts with Howe Sound navigation.</p> <p>The minimum water depth along the shipping route is 60 metres, and the LNG carriers draft will sit approximately 12 metres to 15 metres below the water surface.</p> <p>The sailing line (shipping route) is a minimum of 1300 metres (and typically more than 1500 metres) from the location of the sponge reefs located at Halkett Point and Lost Reef between Pam rocks and Christie Islets. At depths ranging between 20 m and 40 m (i.e., associated depths where glass sponge reefs have been observed at these locations), the velocity produced by a propeller wash is considered negligible due to dissipation of the prop-wash with distance from sailing line.</p> <p>All discharges to the marine environment will meet or exceed applicable legislation and guidelines, including the BC Water Quality Criteria (marine and estuarine life), the Canadian Environmental Quality Guidelines (water quality guidelines for the protection of aquatic life – marine), and the Fisheries Act. The seawater cooling system will require a waste discharge permit under section 14 of the <i>Environmental Management Act</i>. Woodfibre LNG Limited is legally required to comply with all requirements as outlined in the permit.</p> <p>For more information on the effects of the Project on marine water quality please refer to Section 5.10 Marine Water Quality. Additional components of the marine environment that have been assessed include Freshwater Fish and Fish Habitat (Section 5.15), Marine Benthic Habitat (Section 5.16), Forage Fish and Other Fish (Marine) (Section 5.18) and Marine Mammals (Section 5.19). A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. The Application concluded that there were no Project-related significant adverse residual effects to the environment.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
899	March 22, 2015	Jenna - Squamish, British Columbia	<p>Out of the many environmental concerns the LNG plant poses, the potential harm to the estuary is my primary consideration. In my opinion, the estuary is Squamish's most valuable environmental asset. Not only is it a site for rich biodiversity, it acts as a giant water filtration system. In an ecosystem that is in recovery mode from a history of resource extraction, how can we agree to bringing an LNG plant into operation when it has the potential of harming our most valuable environmental regulator? Cleaning up the old site pales to the levels of pollution that will be put into the surrounding water and air. We can't keep relying on natural environmental processes to clean up our day to day waste and industrial messes. I do not believe that the short-term economic 'benefits' outweigh the long-term environmental and social concerns for our community.</p>	Effect of the Project on the Estuary	<p>Thank you for your comment.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>The Woodfibre site has been used for industrial purposes for 100 years and is zoned for industrial use. As a condition of acquiring the site, Woodfibre LNG required the completion of remediation work on site. On December 22, 2014 the Ministry of Environment issued two Certificates of Compliance (uplands and water lot) evidencing completion of the remediation.</p> <p>Woodfibre LNG Limited intends to perform additional remediation and restoration in the Project area. Plans for additional remediation include the removal of approximately 3,000 existing creosote-coated piles from the waterfront in the Project area and the creation of a Green Zone around Mill Creek. This work will be carried out in partnership with the local groups, where suitable, so that local conservation and restoration targets can be met (please refer to Section 2.6.7 Ecological Benefits of the Application).</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p>	

Comment #	Date Received	Author	Comment	Issue / Theme	Proponent's Response	EAO's Response
900	March 22, 2015	Ines - Squamish, British Columbia	<p>Protection of this pristine environment should be of utmost priority. This is the most privileged area to live in and Squamish being a young community with 70% population families and children our government should care about the young generations growing here. Considering that there is no way back after a disaster happens is obvious. We have to protect what is Canadian, and protecting the lifestyle of Canadians in Howe Sound is providing us with confidence in our government. Confidence brings about support, and with that our future can be clean and clear of any potential damage outside corporations are willing to risk just for profit.</p>	Effect of the Project on the Environment	<p>Thank you for the comment.</p> <p>Woodfibre LNG Limited recognizes the community concerns about the potential effects of the Project on the waters and marine and plant life in Howe Sound. From the very beginning, Woodfibre LNG has been committed to listening to the community and building a project that is right for Squamish and right for BC – and this includes environmental stewardship.</p> <p>Woodfibre LNG Limited is of the view that the Woodfibre site is the right fit for an LNG facility. It features: zoned industrial, more than 100 years of industrial use, deepwater port, access to established shipping routes, access to FortisBC pipeline, access to BC Hydro transmission grid, and access to labour force.</p> <p>The Woodfibre site has been used for industrial purposes for 100 years and is zoned for industrial use. As a condition of acquiring the site, Woodfibre LNG required the completion of remediation work on site. On December 22, 2014 the Ministry of Environment issued two Certificates of Compliance (uplands and water lot) evidencing completion of the remediation.</p> <p>Woodfibre LNG Limited intends to perform additional remediation and restoration in the Project area. Plans for additional remediation include the removal of approximately 3,000 existing creosote-coated piles from the waterfront in the Project area and the creation of a Green Zone around Mill Creek. This work will be carried out in partnership with the local groups, where suitable, so that local conservation and restoration targets can be met (please refer to Section 2.6.7 Ecological Benefits of the Application).</p> <p>An assessment of the potential Project-related effects on the environment is included in Section 5.0 of the Application. A summary of the residual and cumulative environmental effects that cannot be avoided or mitigated through the re-design or relocation of the Project, or through Proponent commitments to mitigation measures are included in Section 21.0 Summary of Project-related Residual Effects. Mitigation measures are summarized in Section 22.0, and include mitigation measures to reduce or avoid effects to the marine environment. The Application concluded that, with mitigation measures in place, there were no Project-related significant adverse residual effects to the environment.</p>	