



**Dan Rogers**  
**Gambier Island Local Trustee**

#306 1232 Harwood Street  
Vancouver BC V6E 1S2  
Telephone: **604.220.1500**

Email: [drogers@islandstrust.bc.ca](mailto:drogers@islandstrust.bc.ca)  
Web [www.islandstrust.bc.ca](http://www.islandstrust.bc.ca)

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Michael Shepard, Project Assessment Manager  
Environmental Assessment Office (EAO)  
PO Box 9426 Stn Prov Govt  
Victoria BC V8W 9V1

Dear: Environmental Assessment Office

Re: Woodfibre LNG Project Proposal

I write in my capacity as a Trustee of the Gambier Islands Trust Area. These are my comments as an individual Trustee, not the official comments of the Islands Trust or made on behalf of the Local Trust Committee. Thank you for the opportunity to make submissions.

### **Background related to the Gambier Island Trust Area**

As the EAO office is likely aware, the Gambier Island Trust (GIT) is one of 13 Local Trust areas created by the Islands Trust Act with planning authority for both the Islands of Howe Sound and the surrounding waters. (In fact jurisdiction expands beyond Howe Sound to encompass the waters and Islands up the Sunshine Coast to Pender Harbour but Howe Sound is the main focus of these comments). I point out that Bowen Island, while obviously in Howe Sound, is a separate Municipality within the Island Trust structure and thus not within the jurisdiction of the GIT Council.

The Gambier Local Trust Committee is subject to the principals of the Islands Trust Act and the overall Islands Trust Policy statement. As set out in s. 3 of the Act,

**“The object of the Trust is to preserve and protect the trust area and its unique amenities and environment for the benefit of the residents of the trust area and of British Columbia generally, in cooperation with municipalities, regional districts, improvement districts, other persons and organizations and the government of British Columbia”**

*Preserving **Island** communities, culture and environment*

The Islands Trust Policy Statement can be accessed here:  
<http://www.islandstrust.bc.ca/tc/pdf/orgpolstatement.pdf>,  
however the three main objects are to:

- a) foster the preservation and protection of the Trust Area's ecosystems;
- b) ensure that human activity and the scale, rate and type of development in the Trust Area are compatible with maintenance of the integrity of Trust Area ecosystems; and
- c) sustain island character and healthy communities.

These are important statutory objectives that the Islands Trust and the Gambier Islands Trust Committee takes seriously. The Policy Statement mandates an approach that includes not only technical planning issues but also an overall approach to development that impacts the area to advocate for the objects of both the Act and the Policy Statement.

## **My Background**

I am a landowner and part time resident on Keats Island. I am also a sailor and boater and kayaker and have travelled around Howe Sound and other areas of the Salish Sea for over 30 years. Before my recent retirement, I was a lawyer in Vancouver and elsewhere for close to 33 years.

I take the mandate of the Islands Trust very seriously. As a lawyer, I understand due process and natural justice. I was the Chair of our Community Association on Keats for over 10 years and the founder of the Keats Conservancy. I have attended workshops and meetings put on by the Howe Sound Forum, the Future of Howe Sound Society and other groups within Howe Sound and the Sea to Sky corridor. I have attended a number of the "open houses" hosted by the EAO and Woodfibre and attempted to educate myself on as many aspects of this application as I have been able to. As you can well imagine, it is extremely difficult for anyone for whom this is not a full time job to keep on top of most or even many of the fundamental issues however I have asked as many questions as I can in order to make an informed judgement about this application.

## **Main Comment and Conclusion**

I will expand on the reasons for my submission in what follows but in summary I have come to the conclusion that this application should not proceed and urge the EAO to strongly recommend to the Government that it refuse the Environmental permit sought by the proponent.

I will address a number of issues below starting with general observations and comments and then deal with some specific issues of most concern.

## **Islands Trust Objects**

In pursuing its review, the EAO should respect and heed the objectives of the Islands Trust Act. It is provincial legislation that should be a governing document in all applications for development that are within or affect the Islands Trust areas.

It is acknowledged that the Woodfibre LNG plant itself including the storage ships are not physically within the area of the GIT. There is a “carve out” around Squamish harbor which apparently includes the location of the proposed LNG facility. It is also acknowledged that the Islands Trust Act is not the originating statute for the EAO. However, it is provincial legislation setting the object and policy of the Province governing all many aspects within the Islands Trust areas.

The Woodfibre proposal will impact marine, shipping, air quality and land development values (amongst other things) within Howe Sound and the Salish Sea. It clearly has an impact on the areas covered by the Gambier Islands Trust Council. The fact that Howe Sound will be impacted is clear from the fact that the working group includes members from communities throughout Howe Sound.

Beyond the “preserve and protect” mandate of the Islands Trust Act, the first object of the Trust Policy (which is adopted by the government as a Provincial Regulation!) is to **foster** the preservation and protection of the Trust areas ecosystems. I submit that the EAO must be guided by that principle in reviewing this proposal.

Having reviewed the proposal, there is nothing in the proposal which actually purports to “foster” the Trust Areas ecosystems. There are measures proposed to purportedly “mitigate” impacts on ecosystems but nowhere are there measures or proposals to “foster” protection of the ecosystems... to make those ecosystems better than they currently are. There is nothing to have this project actually ensure that it is more likely that herring, and dolphins, and rock cod and glass sponges and seabirds and reefs and whales do better – have a greater chance to thrive and increase in numbers. That is what the word “foster” means ... to enhance.

In other words, in my view a primary criterion for reviewing this project is not on the basis of whether the “effects” of the proposal can be “mitigated” but whether the proposal actually enhances the ecosystem of Howe Sound. This is a very different review but in my view is mandated by the terms of the Islands Trust Act and regulations and this view should apply to all reviews done within an Islands Trust area.

On this standard the proposal fails and I suggest should be rejected.

## **Industrial Proposal for Howe Sound Inappropriate**

Many individuals have commented to the proponent and the EAO that “Howe Sound is just recovering and here you are proposing reindustrialization”. Many of those people have long

histories in Howe Sound and can speak eloquently about the impacts of prior industrial development before there was a widespread understanding of the impacts on the ecosystem. As you will have heard, it was devastating. I won't belabour the point.

My point is that Howe Sound has in many ways moved beyond large scale industrial development. That happens to areas where the activities of people and the reality of the environment and usage of the natural environs make it inappropriate any longer to consider industry and particularly a resource industry.

While not a perfect analogy, think of False Creek in Vancouver. It was an industrial zone for decades and frankly mostly unfit for human habitation (let alone marine life) for much of the last century. Expo 86 started to radically change that and now False Creek is surrounded by thriving residential and commercial areas. It is entirely different and people use it differently than they used to. It moved beyond industrial development.

Interestingly, one piece of heavy industry in False Creek has remained, a cement plant that has managed to adapt to its neighbours and thus thrives while the community changes.

In Howe Sound, much of the heavy industry has gone. Squamish is radically changing, obviously Britannia has cleaned up, and the Woodfibre pulp mill has gone. One heavy industrial plant remains (Howe Sound pulp and paper) by getting along with its neighbours, adapting and cleaning up.

In the meantime however much has also changed in Howe Sound since the heavy industry started to leave. Bowen Island is a thriving ecology minded municipality. Lions Bay has expanded. Summer camps on Keats, Anvil and Gambier continue to thrive with busy recreational property sites. Fury Creek is now a recreational and residential development. Britannia has plans to become a residential destination. Many areas on Gambier (including much of the east side) have become recreational properties. Howe Sound is full of recreational boaters. The Sea to Sky Gondola has become a success. And Squamish and Howe Sound are marketing themselves as the recreational capital of Canada!!

The point is, Howe Sound has changed and should no longer be considered as a location for heavy industry that is not compatible with these changes and frankly an LNG plant is not. And a prime reason is that the pristine recreational attractions are far more valuable than the heavy industry and will be threatened by this project.

The value of maintaining the pristine ecosystem in Howe Sound in purely economic terms is set out in the thorough study by the David Suzuki foundation which can be found here :

<http://davidsuzuki.org/publications/reports/2015/sound-investment-measuring-the-return-on-howe-sounds-ecosystem-assets/>

In summary, it is my submission that Howe Sound has evolved in a different direction from a resource extraction based heavy industry development. It has changed and that change

must be reflected in the consideration of whether to approve this project. New heavy industry wouldn't be allowed in False Creek and shouldn't be allowed in Howe Sound.

**The Proposal is being advanced in the absence of a full environmental review or a Regional plan.**

This comment relates to both the absence of full environmental hearings and the fact that the proposal is being considered in the absence of a comprehensive management plan for Howe Sound.

Howe Sound is a unique ecosphere. And it is an awkward geopolitical location. Surrounded by 3 Regional Districts, a number of municipalities including Squamish, Britannia, Lions Bay, West Vancouver, Bowen Island and Gibsons and much of it encompassed by the Gambier Island Local Trust area. It is of course the traditional home of the Squamish First Nation – the Skwxwú7mesh Úxwumixw.

All of these groups have expressed a strong desire to come together to plan and determine the future of Howe Sound. They have done so through a number of forums and meetings organized by the Howe Sound Forum and the Future of Howe Sound Society and other groups. These regional political groups joined with the Union of BC Municipalities to call for a comprehensive regional plan to determine the future of Howe Sound. The Squamish Nation has supported the need for such a plan and is taking steps to develop their own plans. They are doing their own environmental assessment of the Woodfibre proposal and have indicated that they will develop a marine plan for the Sound. This is laudable and entirely understandable.

Yet in the face of the clear need and unanimous view of those affected that a regional planning process is needed, the province has said none will be forthcoming. What they have offered instead is an assessment tool called "Cumulative Effects Assessment" which is very much still in the development stage and will not be ready for use for years to come. It is effectively not of any use to us in this EAO process.

In this void of a proper land or marine or air shed management plan, this project is being assessed on a short time frame without a full environmental hearing process. While I appreciate that this decision was made by the Minister and not the EAO office, I cannot help but comment that in the context of a major industrial development with other development proposals in the offing in Howe Sound and the complete lack of a management plan, the failure to have a full public hearing is negligent.

Keeping in mind that this is a project that has been opposed by many of the local politicians and Councils in the vicinity and for which public opposition has been very vocal and continuous, in the absence of a full public hearing that allows full participation and proper presentation of expert and other evidence, there can be no community endorsement of any positive outcome. In current parlance, there can be no social license for this project given the minimal opportunity for public involvement.

A complete hearing process would allow:

- a) evidence to be presented and tested about the environmental and economic impacts of the proposal;
- b) an independent review (or reviews) of the evidence and arguments;
- c) an ability for interveners to retain their own experts to review and respond to the experts hired by the proponent. At this point there is no such ability;
- d) a time frame that would allow for the involvement of counsel and a hearing panel to review the arguments for and against the proposal.

None of this is present. Instead we have thousands of pages of documents much of it technical in nature presented to the public with the instruction for them to review and comment. There are no resources provided to allow for the public to have an independent expert review any of the reports or proposals. And the time frame is measured in days and weeks, not months. And there is a parallel process ongoing on another proposal by Fortis to build a pipeline to deliver the natural gas to this plant.

The public part of the process was a series of “open houses”. Granted there have been presentations to various municipal governments most particularly Squamish and perhaps those residents are better served, but the open houses have been full of lightly veiled promotional material for the project, not real opportunities to really test the assertions of the proponent. My experience is that if you start to really question someone, you were “swarmed” by representatives wearing Woodfibre tags all of whom began to challenge you. I will acknowledge the EAO team was far more open and informative but the reality was these open houses were simply Woodfibre managed “information” sessions. Not anything like a public hearing process.

This is not “natural justice” as my professional training would lead me to understand the process. It’s a review process but one that ends up being determined by the governmental bodies that are tasked to review it. In other words, there is an great amount of “trust us” in this process. Trust the expert studies from the proponent, trust the consultants hired by the Woodfibre, and trust the EAO staff to review the proposal fully and with the appropriate considerations in mind and finally trust the Minister and Cabinet to take an independent and impartial view of the various information despite repeated political calls for these projects to be approved.

This is not a process that leads to public acceptance particularly, as I said, when there has been no overall strategy or plan advanced or proposed or even contemplated for Howe Sound as a whole.

It’s completely understandable that the Squamish Nation is doing its own environmental review. If others had the jurisdiction and the wherewithal to do it as well, we would.

It is impossible to support this project given this process as it leaves far too many questions unanswered and an overwhelming feeling that the outcome was predetermined.

**Any process or project that doesn't consider the larger impact on Climate Change is fatally flawed.**

This is obviously a "high level" concern about the project but in my view our society and province must come to grips with Climate Change and the impact of Green House Gas emissions on that problem. We are hopefully not Florida where Environmental Officers are not allowed to refer to Climate Change. Indeed B.C. proudly (and justly) points to its carbon tax as a successful model to combat climate change.

I appreciate the EAO does not have the mandate to consider this point, but the reality is that LNG plants are not a positive step forward to combat Climate Change as they massively expand the use of fossil fuels at a time when we must be cutting back on them. The review of this project is limited to the GHG emissions created by the plant itself (enough of a concern) but the reality is that the expansion of the natural gas industry means a large growth in GHG emissions. Most of the largest emitters of GH gasses in BC are Natural Gas processing plants in Taylor, Chetwynd, Fort Nelson and elsewhere. I will not even comment on the emissions from the extraction process especially fracking as others undoubtedly will.

B.C. will definitely not be able to meet its Carbon emissions targets with industries focused on the expansion of the extraction, processing and export of natural gas. Yet this review does not even consider this environmental impact for Howe Sound or indeed for anywhere.

**"Once Through" Seawater cooling system is inappropriate**

This system has attracted a lot of attention and criticism for its potential impact on the Marine habitat in Howe Sound. Here is what we know:

- a) This system is designed in order to help dissipate a great deal of the heat that is generated in cooling the natural gas.
- b) The system as designed will extract 17,000 cubic metres (17,000,000 litres) per hour from Howe Sound - that is 408,000 cubic metres per day (408 million litres or about 100,000,000 gallons per day) and thus just over 148,000,000 cubic metres per year or 148 Billion litres. Or approximately 35 billion gallons. That's a lot of water.
- c) The system will attempt to exclude sea life from the water that is sucked up from 75 feet below the surface and will also try to extract sea life it does suck up and return it to the sound.
- d) The water will be returned to the Sound at a depth of about 25 metres with a small amount of chlorine added and as much as 10 degrees warmer than it was extracted.
- e) The "diffuser" used to distribute the warmed seawater will, according to the proponent, ensure that the water will be no more than 1 degree warmer than ambient temperature once it is 10 metres from the diffuser.

“Once through” Seawater cooling systems are very controversial and have effectively been banned for power plants in California all of which are being retrofitted with either air cooling towers or alternate closed cooling systems. In fact wet cooling or closed cooling systems have been determined under the US Clean Water Act to be the **Best Technology Available**. That technology is not being proposed or considered here.

We have been constantly told that this facility will have world class technology and will be the cleanest greenest LNG facility in the world. The plan is to withdraw 17 million litres of water per hour (and any sea life that happens to be in that 17 million litres and get sucked through the screens ... assuming they live), try and extract that sea life and put it back into the Sound unharmed, then heat the water and return 17 million litres per hour (every hour) 10 degrees warmer and rely upon “dilution” to lower the water temperature back.

I know Howe Sound is a relatively big body of water but it is also has a relatively speaking narrow exit. Near the outlet of this warm water are some extremely important salmon spawning rivers and some important forage fish and herring spawning areas.

Frankly I have trouble believing with the volume of water we are talking about that we can rely on “computer modelling” (and that is the answer when asked how they know it will only be one degrees warmer at 10 metres from the outlet) when so much depends on the health of our marine ecosystem.

This is also at a time when we are justly worried about our oceans increasing in temperature and this proposal suggests purposely adding to that increase in temperature to the tune of 408 million litres of warm water per day!

At the very least I would ask the EAO to have significant independent scientific review of these assumptions and conclusions to ensure the end result and to ensure that this is sustainable over time. I imagine the Sound actually warming up because of this process which would be catastrophic.

Alternatives should be sought. Nobody seems to have considered taking the heat and finding ways to pipe it to Squamish or elsewhere to use to warm homes or the like. Why are these proposals not more environmentally benign and “world class” solutions being sought to deal with this excess heat.

I asked a lot of questions and based on the answers I frankly could not support this proposal on this issue alone. This to my mind has the prospect of having the greatest environmental impact on the marine life and overall health of Howe Sound.

### **Shipping Rules aren't even established**

There are have been many questions about shipping and ship safety that have arisen and the answers have tended to focus on the proposal to tether the large LNG ships to large tugs



(that I don't believe even exist yet?) to guide them in and out of Howe Sound. This sounds good as far as it goes and certainly large tugs are an important part of any safety mitigation

It is my understanding however that the rules of shipping surrounding this proposed project haven't even been developed and thus there has been no opportunity for the public to comment or even ask questions about the rules. My understanding is that the TERMPOLE Review Committee will not even begin hearing from the proponent until August of 2015 and the regulations or recommendations will not be issued until December of 2015 at the earliest.

The problem, naturally, with this timeline is that the EAO process will be over. At the very least the matter will be in the hands of the politicians. And **then** the shipping recommendations will come out.

This is actually an absence of public and community participation not merely an inadequacy. The marine hazard mitigation processes, the effect on other forms of shipping, the controls on time and speed of transfer... none of these are known at this time.

It is impossible to support a project that has potentially tremendous impact on a region by the very fact that enormous ships are transiting a narrow water way without knowing what the rules for that transiting will be.

### **Siting in Howe Sound seems to violate international Standards**

It is my understanding that 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?

I have asked this question and have never received a suitable answer. Here are more questions. Why isn't Woodfibre or its parent company a signatory to SIGTTO as I understand it is not? Wouldn't Woodfibre want to comply with the "gold standard" for siting of LNG terminals?

Does Woodfibre not believe that Howe Sound is a "narrow inland waterway with a dense local population and significant commercial, recreational and ferry traffic:". If Woodfibre challenges that assertion then I would challenge their judgement on most matters.

It is clear that Woodfibre chose its current site because:

- a) it's a brown site so they do not have to deal with degrading an existing green site;
- b) there is an existing power and gas supply; and
- c) there is a deep water port.

My sense is they are ignoring or disregarding the SIGTOO standards because of these economic factors. This is unacceptable.

### **Glass Sponge Reefs off Halkett Bay**

As you may be aware, 9000 year old glass sponge reefs have been located off Halkett Bay. This marine life is important to protect. Other similar reefs in the Strait of Georgia are in the process of receiving federal protection as valuable habitat and ecosystems.

There is a tremendous unknown about what impact the extremely large LNG vessels would have on these reefs. Nothing close to the size of these vessels transits up Howe Sound at present and little large marine traffic at all goes up the Sound north of Bowyer Island.

I would expect that a thorough study of the impact on these reefs (and of course all other wildlife ) of the impact of propellers, wake and noise from these large ships be undertaken independently and that the public and the EAO be certain that no harm can come to these creatures or other marine life before this project is considered.

### **Summary**

I am fully cognizant that hundreds of other comments and submissions will be filed with the EAO and I am grateful for this opportunity to add to the consideration. I am confident the EAO will carefully consider these as well as all other submissions. I am also confident that others will raise a multitude of other concerns that I might share.

As will be clear from the above, I can see nothing from the proposal that adds to or enhances the ecosystem of Howe Sound and in particular the Gambier Island Trust Area. In the absence of evidence of enhancement and for all of the other reasons I lay out above, I opposed the application and urge the EAO to not recommend issuing an environmental license.

Yours sincerely,

(signed) *"Dan Rogers"*

Dan Rogers  
Gambier Island Local Trustee

cc Islands Trust Northern Office