

# Friends of Nelson Haven & Tasman Bay Inc

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**Our Annual General Meeting will be on Tuesday August 31, 2021 at 7 pm at NIWA, 217 Akersten Street, Port Nelson. It will be followed at 7.30 pm by a talk:-**

**Dr. Sean Handley, NIWA marine biologist, will speak on Tasman Bay and its history learned from sediment cores, surveys of fishing, biodiversity, Boulder Bank and shellfish data.**

## **Annual Report July 2020 to June 2021**

Our Society ("Friends"), founded in 1973, is a long-standing voluntary organisation located in Nelson and active in the coastal marine area of the top of the South Island. Our aim is to care for and protect this environment for future generations through sustainable management. We are founded on the principle that citizens need to take an active role in assessing proposals to exploit the environment for commercial or personal gain. Without such public concern, the health and integrity of the commons is at risk. Friends have, with considerable success, used the courts to test the sustainability of selected applications. We participate and work with other like-minded groups and individuals.

### **Introduction**

Friends continues to work to maintain biodiversity of the coastal marine area. This is in line with David Attenborough's advocacy of the need to reverse the trend of human activity which destroys the biodiverse - "*We are replacing the wild with the tame.*"

The perception of the importance of biodiversity has been downgraded over time. It was only in 1994 that Hon Denis Marshall, Minister of Conservation, identified the importance of biodiversity: "*Without a diversity of life-forms to call on we could not adapt to changing environmental conditions. To maintain diversity is to maintain our future options.*"

However by 2011, The National Policy Statement was not so much directing but encouraging local authorities to identify bottom-line categories of values to be recognized and protected. The same National Policy Statement intended biodiversity to be a relevant 'consideration' to be weighed along with other considerations to achieve the sustainable purpose of the Resource Management Act. Then, only a few years ago, the Department of Conservation provided a new direction for the biodiversity strategy, another sharp divergence from the 1994 objective: "*Aotearoa New Zealand's economic activity provides for the restoration and protection of indigenous biodiversity.*" ... and ... "*Aotearoa New Zealand is making a meaningful contribution to the global biodiversity, conservation and management.*"

While more than 80% of the world's population lives in countries that are running ecological deficits, using more resources than their ecosystems can regenerate, New Zealand is still relatively resilient. But our overall approach to maintaining cohesive ecosystems while allowing sustainable use of the environment has not much to celebrate. Central government had tried to stand back and leave the making and enforcing of any environmental plans and rules to under-resourced local councils. This has resulted in an enormous task for organisations like ourselves to challenge well-resourced applicants. We are painfully aware how cheap it still is to exploit the environment. Our laws for protection of the natural world have resulted in a loose affiliation of protected areas while ignoring the physical and ecological connectivity of the whole. Professor Gretchen Daily, a pioneer in the field known as natural capital, advised: "*Reserves are too small, too few and too isolated to sustain enough nature, we have to be able to integrate nature into our normal lives.*"

#### On the positive side for the coastal environment:

- There are recent hopeful signs of national coastal improvements, with the Hauraki Gulf getting expanded marine protected areas (MPAs) along with a ban on bottom trawling and dredging.
- The Department of Conservation has appointed a Marine Reserve Ranger with monitoring and compliance duties for the two Top of the South reserves aided by a surveillance camera.
- A group in Golden Bay has formed, Marine Farming Impacts Group (MFIG), which has got local and nationwide attention and has been surveying and studying the noise and light impacts of mussel farming in the Bay.

#### Obituaries

We are saddened by the recent deaths of three people who have made major contributions to the society.

Helen Campbell with her detailed knowledge of the Resource Management Act and consents process has been an invaluable committee member for many years. She was well versed in coastal planning and landscape matters providing Friends with a standing in a wide range of forums and working groups for better outcomes for the environment. Helen's considerable input into Friends' work will be very much missed.

*Rest in Peace*

*To a Warrior*

*To a Trojan*

*For this Top of the South Island environment*

*That remains as exquisitely beautiful for "us"*

*Because of Helen's efforts.*

Diane Lookman

Stuart Slack, a long serving committee member, kept us informed with his knowledge especially in relation to Port Nelson, where he represented Friends for years on the Port's environment consulting committee.

Henk Heinekamp, who was a member of the committee for many of the early years and chair in his final year 1999-2000, has died recently at age 95. His knowledge was immense, with special interest in birds and his contribution in the past was very important.

## **A. General**

1. Friends co-sponsored, with the Nelson Canoe Club, a well-attended talk at the Richmond library by Mike Bell on King Shag research on August 4, 2020.
2. Friends produced our second Newsletter Dec. 2020. Both newsletters are available on our website.
3. In February 2021, Rob Schuckard was asked by Stuff to write an article about their view on aquaculture. This opinion piece provided context to the significant additional marine farm area required to maintain the same production levels in both mussels and salmon.
4. National Environmental Standards for Marine Aquaculture (NES-MA) became law on 20 December 2020 ruling that all consented marine farms be outside further involvement of the public, and that re-consenting be non-notified. Exceptions are AMAs in Tasman Bay, Golden Bay and Wainui Bay. So, our further involvement in allocation of resources to industry will be severely constrained as outcomes become more directed and decided by government, regulator and industry. There is a certain irony that it is considered that more certainty for the industry is provided through the exclusion of the public on managing public space. Yet, uncertainty through climate change will require full collaboration of all parties and stakeholders working for the common good. Friends supported a letter to Minister David Parker from the Clova Bay Residents Association concerned that the new policy should ensure that existing aquaculture activity that is found to be inappropriate is not re-consented for 20 or more years.
5. The Cawthron Scitech for primary and secondary schools was cancelled last year due to Covid-19, but will resume again this year. We will continue to support this with awards for projects on coastal conservation. Committee members also volunteer as judges at the event.
6. Friends participated in the King Shag Research Group, which was formed to further progress with the science required for the management of king shags. The process included the formation of a collaborative working group in 2017. This group was initiated and in part funded by the Marine Farming Association, New Zealand King Salmon, Department of Conservation, Marlborough District Council, tangata whenua, Ministry of Primary Industries and local community members. An action plan and research strategy for king shag was developed for the period between 2018-2022.

## **B. Tasman District Council (TDC) area**

1. Friends made a submission on the Tasman Resource Management Plan (TRMP) with special attention to Plan Change 71 - Coastal Occupation Charges and Plan Change 72 – Moorings, and our concern on lack of identifying areas of Natural Landscape, Natural Character and Biodiversity. Friends were represented at meetings of the General Plan and responded to TDC's request for comments on the Tasman Environment Plan.
2. Friends made a submission on the Freedom Camping Bylaw especially in relation to coastal areas. We were pleased that camping will be stopped at Taupata Gravel Reserve in Golden Bay.

3. Friends submitted on the Tasman Bio Strategy with feedback on the "aspirational/high level" documents.
4. Friends were represented at TDC's Native Habitats Tasman Oversight Group (NHTOG).
5. Friends met with the Tasman Coastal Group which has been established to guide TDC in regard to aquaculture, landscape and natural character.
6. Committee members attended the TDC's Biodiversity Forum public talks.

### **C. Nelson City Council (NCC) area**

1. Plant & Food Research (P&F) applied to place three 3 tonne blocks on the seabed on NCC's coast at 3 sites of 20-30 metres depth. The sites are 1) northern end of Boulder Bank, 2) off Horoirangi Marine Reserve and 3) western Delaware Bay. They will be within 3 nautical miles of the coast so as not to interfere with shipping traffic. This is a \$18.75 million five-year Open Ocean Aquaculture Research Project. Friends requested the application be publicly notified, but that has been declined by NCC stating the effects are no more than minor. The blocks will have test cages attached each up to 2000 m<sup>3</sup> with design "commercially sensitive". A second application is expected to request fish (snapper or salmon likely) be put in the cages and fed. Friends is very concerned with any effects on Nelson's only Marine Reserve. Our request was that trials be in the Aquaculture Management Area (AMA) in the deeper waters of Tasman Bay. P&F has produced a 99-page Assessment of Environmental Effects (AEE) and plan a benthic survey of the area, which Friends have asked to see. The AEE has no benthic data.
2. Friends has submitted on the Nelson Plan.
3. Friends is represented at the NCC Biodiversity Forum and gave a talk on "Fixing Tasman Bay" based on the NZ Geographic May/June 2021 article "Fixing Hauraki Gulf". The 'fixings' are identical. In Tasman Bay the restorative work of establishing a Marine Reserve and coastal plantings are often volunteer initiatives - for example the Reserve was from a decade-long effort of the local volunteer Forest & Bird group.
4. A Marine sub-group of the NCC Biodiversity Forum has been meeting for over a year with much information being shared and two summary newsletters produced by mainly volunteer effort: "Tasman Bay Marine Matters" No. 1 (April 2021) and No.2 (June 2021). These are available, along with the Tasman Bay Guardians newsletter, at [www.tasmanbayguardians.org.nz](http://www.tasmanbayguardians.org.nz)
5. Friends attended a waste water compliance & monitoring meeting on application RM 105388/A in August 2020 where little environment information was supplied.
6. NCC has hired a marine biologist and ornithologist on staff planning coastal restorative projects for Nelson Haven/Parororoa. They met for a consultation with Friends.
7. Friends was also consulted about plans for Council owned infilled land at Akersten Street.

## **D. Marlborough District Council (MDC) area**

Again, we are looking back at a year where our commitment has been stretched to the limit to give effect to our objectives. Ongoing input into further expansion of the marine farmed areas in the sounds, changes in conditions of salmon farms, a new application for expansion of salmon farming in the Cook Strait and the Marlborough Environment Plan has again been a major focus of the Society.

### **1. Proposed Marlborough Environment Plan - Natural Character, Landscape and Biodiversity.**

On the 31st August 2016 Friends submitted their extensive submission on the Marlborough Environment Plan (MEP). The MEP Hearings Panel issued their decision in the form of the proposed Marlborough Environment Plan (pMEP) on 21st February 2020. The proposed plan was appealed by Friends on 6th May 2020 on three topics, Natural Character, Landscape and Indigenous Biodiversity.

In March 2021, 6 days were allocated for mediation on Natural Character, followed in May 2021 with 8 days for Landscape mediation and 13 days for mediation about indigenous fauna. Due to confidentiality clauses, we cannot report about the progress of this court administered process.

### **2. Proposed Marlborough Environment Plan – Aquaculture**

Council decided not to notify the aquaculture chapter together with the rest of the proposed Marlborough Environment Plan (pMEP). Friends participated in the Marlborough Aquaculture Review Working Group in order to find common ground for this activity prior to notification. In 2017, the overall objective was to produce a section on aquaculture to be incorporated into the proposed plan, Chapter 13, including the rules on aquaculture. Instead, the Aquaculture provisions have been presented 9 months after notification of the plan as a variation: Variation 1 (mussel farming) and 1A (salmon farming). It could be argued that such a process has severely compromised the integrated management that is envisaged in the Resource Management Act (RMA). On the 16th June 2021, Friends submitted an extensive submission on these plan variations. The following are some of our concerns with the sustainability of aquaculture as it stands in the Sounds:

While the National Environmental Standards for Marine Aquaculture (NES-MA) depends on the presumption that marine farm consents have been granted while taking cumulative effects into account, in actual fact the allocation of space for these over time has happened on an ad hoc basis. An overall assessment of the effect on the wider marine environment has never happened. Such an analysis is essential to ensure that matters of sustainability are met, and to create certainty of outcomes for both industry and people in the Sounds coastal environment. Without such analysis, the guiding principles of allowing public space for economic use have no foundation.

Effects on the Benthos (Sea floor organisms): Sediments produced by mussel farms change the sea floor biogeochemistry, making it enriched with a high organic matter content, with a low oxygen anaerobic environment where hydrogen sulphide is released. The result is a reduction in the abundance of some taxa that are relatively intolerant of such conditions below the farms while an increase in abundance of other species, eg nematodes and polychaetes. Those that disappear are important prey species for a variety of flatfish. Overall there is a decreased

ecosystem performance and decreased biodiversity.

Denitrification: Mussel farms extract nitrogen and phosphorus from their environment. Removal of nitrogen is an ecosystem service, but how this effect is spread across the wider area has not been considered. While there is a net removal of phosphorus and nitrogen from the ecosystem in the form of mussel meat, mussel farms also increase the retention time of both nutrients in the coastal area, through the deposition of faeces and pseudo-faeces on the sea-bed. The amount of nitrogen deposited is approximately twice that harvested, and the amount of phosphorus is approximately five times. Denitrification and nitrification are processes of fundamental importance to how the ecosystem functions, and are integrated in the NIWA biophysical modelling of the Marlborough Sounds. Nitrification is the process whereby aerobic bacteria produce soluble nitrates in the water column which are available for algae. In denitrification, anaerobic bacterial produce nitrogen gas which escapes into the atmosphere. The denitrification rate used in the NIWA model is of fundamental importance and on-going work is required to improve the reliability of the model predictions.

Zooplankton: While suspension-feeding bivalves were formerly thought to feed only on phytoplankton it is now accepted that they also consume zooplankton, fish eggs and shellfish larvae. In fact Ministry of Primary Industry has raised the following about filter feeding aquaculture operations:

‘The presence of high densities of filter feeders could reduce larval recruitment into fishery populations through consumption of fish eggs and larvae by farmed mussels and oysters.’ and ‘Effects occur within the farm but may have longer-term consequences at the population level, depending on the species and population range.’

and ‘Further modelling (and validation) is required to improve estimates of larval mortality associated with mussel and oyster farming and, in turn, the effects of shellfish aquaculture on wild fish populations.’ At present zooplankton are not included in the standard monitoring protocol in the Marlborough Sounds, yet there is no information to substantiate the proposition that phytoplankton can be used as a proxy for zooplankton depletion. They are fundamentally different. Because zooplankton have in general lower maximum growth rates than the phytoplankton, they take longer to recoup the biomass lost to mussels. Also, zooplankton gain no immediate benefit from the increased bio-available nitrogen generated from mussel farm detritus. Their mortality can have a significant influence upon overall ecosystem dynamics. Techniques are available to monitor zooplankton communities, so it is astounding that after so many years the science here is still stuck with only measuring phytoplankton and chlorophyll.

For a summary of all submissions to the aquaculture variations see

<https://www.marlborough.govt.nz/your-council/resource-management-policy-and-plans/proposed-marlborough-environment-plan/variations/variation-1-and-1a>

### 3. **Salmon Farming**

In 2011, a Board of Inquiry (BOI) granted New Zealand King Salmon with three additional farms in the Marlborough Sounds. Two of these farms were located in the Waitata Reach in Pelorus Sound, and one of the farms was going to be developed in Ngamahau in Tory Channel. These farms were granted consent based on modelling that was presented to the BOI. When

resuspension was considered in the model (resuspension is highest in high flow sites like Waitata and Ngamahau), almost no accumulation of deposits was predicted and net depositional flux reaching the seabed did not exceed 0.5 kg/m<sup>2</sup>/year for any of the feed loadings modelled (2000-8000 tonnes/year). All farms were required to start with low feed amounts during the initial stages of adaptive management. After the first low-feed stage of the Waitata farm, a significant diversion from the original model has arisen. Depositions of more than 10 kg/m<sup>2</sup>/year have been measured, and the footprint is a staggering 58% larger compared to the consented conditions. It may be no surprise that New Zealand King Salmon is actively pursuing a change in the consent conditions. And at the same time they also want to increase the feed levels to the next stage of adaptive management. Friends presented their submission on this at council hearings and a commissioner is assessing all the technical reports and submissions to make a ruling. The same Waitata farm has also had some major salmon mortality. Friends are concerned that data about this needs to be in the public domain for biosecurity purposes since the disease could spread to wild fish. The matter was raised a decade ago at the Board of Inquiry. Friends has applied for this information since it is relevant for future salmon farm applications. However, the Ombudsman's office has declined our application as the information is considered "commercially sensitive".

#### **4. Open Ocean Salmon Farming near Cape Lambert**

New Zealand King Salmon lodged an application for a resource consent for an open ocean salmon farm of 1800 ha, near Cape Lambert in the Marlborough Sounds on 5 July 2019. Friends submitted to this application. We also formed a coalition with Guardians of the Sounds, Marlborough Environment Centre, and Kenepuru Central Sounds Residents Association to deal with this application in Cook Strait. And we contacted experts for preparation of evidence and hearing documents.

Then on 30th October 2020 we received an update from the applicant that the proposal would be revisited and that a 'Submitter Engagement Pack' was being prepared. It was only at the 10th August 2021 that we finally received the outlines of the new application. We were given exactly 2 weeks to prepare for expert workshops, and further submissions are due at 11th October 2021. The total application is now 1000 pages long.

#### **5. Mussel Farming**

The cumulative effect of mussel farming has never been addressed, and marine farm development has resulted in a continuous ribbon of farms in many bays. For now, Friends and others concerned will need to submit on every application for expansion for further space. We have submitted on a farm expansion at Blowhole Point near the entrance of Pelorus Sound. The hearing scheduled for September 2020 was postponed after the applicant made some significant changes to the application from the original 10.4 ha to 2.9 ha of increased farm area. This waste of everybody's time is unfortunately what we are dealing with. It seems likely that the applicant will now pursue its expansion during the hearing about the aquaculture variation of the MEP.

Friends also submitted to an expansion of a marine farm near the king shag colony in Tawhitinui Bay. While mussel farms can have a significant local impact on benthic flora and fauna, how these effects vary between the shallow and deeper habitats is unknown. Further study is required to identify the interaction between mussel farms, their benthic footprint and prey

species of king shag.

Friends have been a party to marine farm occupancy in Pig Bay, Port Gore. Under Appendix D2 of the operational plan, the farm should be removed at the end of the lifespan of the consent. We believe that there is no scope for this farm to become part of the Variation 1 and 1A of the new plan, and the farm should be removed from this site. As a result, we will support Council again if the applicant has a different view on this matter.

## **Acknowledgements**

1. The voluntary work of our committee members is essential and makes all the above possible. Friends only exists due to the dedication of these people - as is true of many voluntary groups.
2. Member support is always essential and the support is very much appreciated. Since we are occasionally asked in Court what our membership is, your continued membership adds to our mana and believability. (N.B. we need more members.)
3. We are also dependent on the pro-bono and reduced-fee work by experts and legal counsel and this is very much appreciated and essential.
4. The support from the New Zealand T-Gear Charitable Trust is very much appreciated.
5. Thanks to the Ministry for the Environment Legal Assistance Funds.
6. We work collaboratively with many groups and individuals and this is also very much appreciated. These include Nelson/Tasman Forest & Bird, Guardians of the Sounds, Kenepuru & Central Sounds Residents Association, Friends of Golden Bay and the Environmental Defence Society.

Respectfully submitted,



Dr Gwen Struik, chair (with essential help from committee members)