

**BEFORE THE PROPOSED WAIKATO REGIONAL COASTAL PLAN HEARING PANEL
AT HAMILTON**

UNDER

the Resource Management Act 1991
(the Act)

IN THE MATTER

of a change to Waikato's Regional
Coastal Plan under the First Schedule
to the Act

**STATEMENT OF EVIDENCE OF JACOB ALLAN BARTROM
IN SUPPORT OF THE SUBMISSIONS OF THE COROMANDEL MARINE FARMERS'
ASSOCIATION AND AQUACULTURE NEW ZEALAND**

Dated this 1st day of April 2025

GASCOIGNE WICKS
LAWYERS
BLENHEIM

Solicitors: Amanda L Hills



Submitter's Solicitors
79 High Street
P O Box 2
BLENHEIM 7240
Tel: (03) 578-4229
Fax: (03) 578-4080

1. My full name is Jacob Allan Bartrom, but people call me Jake. I am a second generation marine farmer, working alongside my parents in our family business, Gulf Mussel Farms Limited. I live in Coromandel and run the family's Greenshell mussel farming operation in the Hauraki Gulf.
2. I am providing my evidence in support of the joint submissions and further submissions of Aquaculture New Zealand (AQNZ) and the Coromandel Marine Farmers' Association (CMFA). Gulf Mussels has also made a submission. My father, Allan, has provided a separate statement of evidence for our family's business.
3. I hold a degree in Mechanical Engineering from the University of Auckland.

Scope of Evidence

4. In this evidence I:
 - (a) Briefly introduce myself
 - (b) Give you an overview of Gulf Mussels
 - (c) Touch on our involvement in the community
 - (d) Give you an overview of mussel spat:
 - (i) What it is
 - (ii) Where it comes from
 - (iii) The different phases of mussel farming
 - (iv) The challenges with spat supply and survival
 - (v) What mussel farmers need from the Proposed Plan to help overcome these challenges.

My Background

5. I have been involved in the marine farming industry for 30 years. As a child I helped my parents on the mussel farm both out at sea and on land. After graduating engineering school, I worked overseas in the oil and gas industry both onshore and offshore before returning home to get involved in the family business.
6. My current day to day role involves managing our family's mussel farming business. This involves managing 3 mussels harvesters, 26 staff, a land depot and 700 mussels lines between the top of the South Island and the Hauraki Gulf.

7. I am also on the executive of the Coromandel Marine Farmers' Association and was part of the Stakeholder Working Group on the Hauraki Gulf Sea Change project. The Stakeholder Working Group had 14 members with different backgrounds and interests - mana whenua, environmental and conservation, commercial and recreational fishing, aquaculture, land use, farming and infrastructure. I am currently a Director of Ariki Tahi Sugar Loaf Wharf Ltd, which is a company set up to deliver an expanded commercial wharf in Coromandel Harbour with funding from the Provincial Growth fund. I have previously been a director of Aquaculture New Zealand.
8. I am a shareholder/Director of North Western Mussels Limited which is in the process of applying for a 700 hectare mussel spat catching and nursery off the Waikato West coast. I also own and operate the Coromandel Mussel Kitchen.

Gulf Mussel Farms

9. The aquaculture industry makes an important contribution to the Waikato economy and community. I understand that Gary Hooper and Tom Hollings will talk about the industry's economic contribution. Gulf Mussel Farms is one part of that bigger picture, so I would like to give you some idea of what that contribution looks like at the individual/company level. Of course there are many farmers in the Waikato industry, from larger companies through to family or individual operators.
10. Gulf Mussel Farms was established in the 1980's by my parents Allan and Jane Bartrom. Today we operate 4 vessels, employ 26 staff, and grow around 6,000 tonnes of Greenshell mussels per year. Gulf Mussel Farms also manages mussel farms for Pare Hauraki Kaimoana and OPV limited. We supply our product to Foodstuffs North Island, Centre Island Seafoods Whitianga and Talleys South Island.
11. We are a member of the Coromandel Marine Farmers' Association and registered with Aquaculture NZ's A+ environmental program.
12. Gulf Mussel Farms supports many local and regional businesses/suppliers/service providers that enable or benefit from the aquaculture industry in the Waikato.
13. The Coromandel is renowned for its Greenshell mussels and in more recent years the recreational fishing in and around the mussel farms has become a

major draw card for people to come and visit Coromandel. The Coromandel Mussel Kitchen is one way we showcase our product.

Community Involvement

14. Something that really stands out in this industry is the active role many people play in their local communities. We employ local people, and they form part of the lifeblood of rural communities.
15. Community involvement is embedded within the people who work for Gulf Mussel Farms and their families through coaching sports teams, environmental management, pest control, pre-school committees, assisting with/funding community events, and providing services such as justice of peace.

A

day in the life of a Mussel Farmer

16. Mussel farming is a rewarding yet challenging career that requires dedication, knowledge, and hard work. It connects farmers not only with the ocean but also with their communities, emphasizing sustainable practices and environmental stewardship. Each day presents new opportunities and challenges, making it a dynamic and fulfilling profession. Each day a mussel farmer will:
 - **Weather Check:** Before heading out, they check local weather conditions and tides. Mussels are sensitive to environmental changes, and weather can significantly impact harvesting schedules.
 - **Travel to the Site:** The farmer travels to the mussel farm, often by boat. The journey itself is vital for observation of the marine environment.
 - **Inspect Gear:** Checking buoys, lines, and other equipment is crucial. Farmers ensure everything is in good condition to prevent loss of mussels or damage due to rough waters.
 - **Collecting Mussels:** Using specialized tools, farmers carefully harvest mussels from ropes or nets. This requires skill to ensure that the mussels remain intact and alive.
 - **Sorting and Cleaning:** After collection, mussels are sorted by size and quality. Farmers clean them, removing any barnacles or debris to prepare for market.
 - **Inspect Mussels:** Farmers check the growth rate and overall health of the mussels. They look for signs of disease or environmental stress.

- **Repairing Equipment:** Farmers may need to fix or replace damaged lines, buoys, or harvesting tools.
- **Site Clean-Up:** Keeping the farm clean and organized is crucial for both productivity and environmental responsibility.
- **Engage with Other Farmers:** Connecting with fellow mussel farmers can provide valuable insights and support. They may share tips on best practices or discuss market trends.
- **Attend Workshops/Meetings:** Occasionally, farmers participate in local aquaculture meetings or workshops to stay updated on regulations and best practices.
- **Travel Back:** After a long day, the farmer returns home, reflecting on the successes and challenges faced throughout the day.

Spat – The Foundation of our Industry

17. Since 1980 the Hauraki Gulf has grown to 3,100 hectares in size and produced up to 25,000 tonnes of Greenshell mussels annually, creating 326 jobs. Since 2020 we have seen consecutive years of decline in total tonnage in the Waikato aquaculture industry and it is under threat from a lack of spat and quality nursery space. These are the two major issues facing the mussel industry in Waikato (and New Zealand): access to reliable sources of Greenshell mussel spat, and quality nursery space to support the survival of spat to a size where it can be successfully reseeded to grow out to adult mussels.

What is Spat?

18. Mussel spat are the baby mussels. A mussel farmer would typically refer to mussel spat as anything from the size of a grain of sand up to the size of an apple seed. Mussel spat is the very first point of the mussel's journey through the cultivation process by the mussel farmer. Without spat, you cannot grow mussels.

Sources of Spat

19. There are 3 sources of mussel spat:
 - (a) Ninety Mile beach cast spat, (which is attached to seaweed that washes up on the beach),

- (b) Wild caught mussel spat (which is free floating in the ocean and is usually caught at longline mussel farms on fluffy spat catching ropes designed for that purpose), and
 - (c) Hatchery spat.
- 20. Coromandel relies almost completely (approx. 95%) on Ninety Mile beach cast spat and 5% on Aotea Harbour wild caught spat. Ninety Mile beach cast spat comes from wild mussel beds along the North Island's west coast spawning and the larvae settling on seaweed which then gets broken off the rocks and washes up on Ninety Mile beach. It is collected off the beach and sent to Coromandel in 10kg bags. Wild caught mussel spat from Aotea Harbour (on the Waikato west coast) is sourced from hanging spat rope in the water and larvae from the same North Island mussel beds drift past and grab onto the rope. The rope is then transported back to Coromandel.
- 21. For wild caught spat, some spat farms will perform well one year, and not so well at other times. Farming is subject to all sorts of influences, and we don't always understand the drivers that make things vary from season to season or year to year.

The Three phases of Mussel Farming

- 22. The first phase of mussel farming is sourcing the mussel spat. This process is a naturally occurring one along Ninety Mile beach. When the beach cast mussel spat arrives in Coromandel the spat encrusted seaweed is sprinkled around a rope (called a dropper) and held in place by a cotton stocking, then hung in the nursery water space on a marine farm.
- 23. The second stage of mussel farming is growing the spat into seed. This process takes 9-12 months and the mussels grow in size from 1mm up to 70mm depending on certain parameters.
- 24. The third phase of mussel farming is growing the seed into crop (ie. ready for harvest). This stage involves harvesting the seed by stripping it from the ropes, and re-seeding the mussels back onto a rope at a thinner rate to allow the mussels room to grow. Growing mussels from seed to crop takes 12-18 months. Usually mussels are harvested when they are around 120mm long.

Spat Supply and Survival Issues

25. The Hauraki Gulf environment is changing. We are experiencing longer La Nina ENSO cycles, increasing sea surface temperatures, marine heat waves, increasing fish predation and more impacts from terrestrial activities.
26. Mussel spat and seed production and supply into the Hauraki Gulf has been in decline for the 3 following reasons;
 - (a) A decline in mussel spat quality. The beach cast spat from Ninety Mile beach is becoming more sporadic, less reliable, and has reduced in numbers. The solution to this is not to gather more as the beach cast spat is a quota species and the quota is at its limit.
 - (b) Mussel spat mortality in the Hauraki Gulf: Ninety Mile beach cast spat once transferred to the Hauraki Gulf is dying through late summer and spring.
 - (c) Fish predation of mussel seed: The rising number of snapper within the mussel farms are eating the mussel seed when its growing through the range of 10-50mm, causing significant damage and cost to the farm structures as well as loss of the crop. It is estimated snapper predation is costing the Coromandel industry 5-10 million dollars per year.
27. The results of this decline in production is hundreds of jobs lost due to factories closing, farmers leaving the industry, no further investment, community financial hardship, and a return to a cottage industry.
28. Regardless of where spat is sourced from (Ninety Mile, wild caught or hatchery) industry needs more quality nursery space to raise that spat to a size where it is resilient enough to be re-seeded for grow-out. That means it needs to be able to withstand fish predation and warmer sea temperatures.

What the Industry needs from the Proposed Plan

29. We need clear support for existing spat catching and/or nursery sites in the region.
30. Many of Coromandel's nurseries are located amongst the islands and deep water. Mussel farms located in deep water and sheltered by islands provide numerous advantages, including protection from harsh weather, optimal

water quality, enhanced feeding opportunities, reduced predation, and a smaller ecological footprint. These factors contribute to healthier mussel populations and more sustainable aquaculture practices, making such locations ideal for mussel farming. By understanding and leveraging these benefits listed below, aquaculturists can optimize production.

- (a) **Sheltering Effect:** Islands provide a natural barrier against strong winds, waves, and storms. This protection helps minimize turbulence in the water, which can otherwise stress the mussels and make farming difficult.
 - (b) **Stable Environment:** A sheltered environment leads to more stable water conditions, reducing the risk of physical damage to the mussel structures (like ropes or rafts) and ensuring a more stable growing environment.
 - (c) **Reduced Sedimentation:** Deep water locations are often less prone to sedimentation compared to shallower areas. This is beneficial because excess sediment can smother mussels and hinder their feeding.
 - (d) **Better Water Circulation:** Deep water tends to have better water circulation, which helps maintain optimal oxygen levels and nutrient distribution necessary for mussel growth.
 - (e) **Plankton Availability:** Mussels feed on phytoplankton, so locations with good water circulation and minimal sedimentation are likely to have higher concentrations of plankton. Deep water farms can benefit from nutrient-rich waters that support abundant plankton growth.
 - (f) **Natural Filtration:** Mussels are filter feeders, and a stable environment with a healthy balance of nutrients can enhance their growth rates and overall health.
31. We can't just repurpose existing sites to catch and hold spat:
- (a) Existing farms in the Hauraki Gulf don't catch spat. Spat catching requires a large existing natural population of mussels which mostly exist on New Zealand's west coast. Whilst there are large mussel farms in the Hauraki Gulf, these farms do not provide the significant

population for the spawning event to successfully create the larvae which settles on the spat rope.

- (b) Mussel spat farming, the process of cultivating young mussels, is significantly affected by rough weather conditions. Wilson Area A and B, plus the Western Firth and Ponui Island are all exposed to rough weather conditions. These effects can be both direct and indirect, impacting the survival, growth, and overall productivity of the mussel spat. Strong winds and turbulent waters can damage or displace buoys and lines used to hold spat. This can lead to the cotton stocking being torn off the spat rope resulting in the loss of spat. These farms in the open Hauraki Gulf are also more susceptible to snapper predation, as the populations of fish are in greater numbers in and amongst these farms.

- 32. We need to adapt to survive. We need new spat catching areas on the Waikato's east and west coast that provide cooler oceanic water. We need 400 hectares of new nursery space for the current and projected crop space, based on what is already consented (some of which is undeveloped¹) and proposed in the Proposed Plan (ie. new ASA Colville space and Western Coromandel AMA). Regardless of the spat source, be it beach cast, hatchery or wild caught, the industry needs more nursery space to carry the spat from its infancy to seed. We need the ability to grow seed up to 70mm to survive fish predation and warmer sea surface temperatures during the summer months so they are more resilient when transferred into warmer waters. If we can catch and/or hold spat through to 70mm before bringing it back to (mainly) the Firth of Thames to grow to final crop, those larger mussels will be less susceptible to fish predation and warmer seas.
- 33. What works one year, might not work the next. Industry needs the ability to adapt over the life of the Proposed Plan. That might look like flexibility to use existing space in different ways, or the ability to apply for new spat catching and nursery space. Diversity across the region is likely to be important, as certain sites might perform well in one year and not another. We need to avoid an eggs in one basket scenario.

¹ A portion of that is consented, yet undeveloped water space in the Firth of Thames, but in the Auckland region.

Conclusion

34. I am not a writer. It's not my day job. I hope this short statement gives you a summary of the challenges mussel farmers are facing here in the Waikato. I am happy to speak at the hearing and hope I can answer your questions.

Jake Bartrom