

# Statement of Evidence - Shelley King

## Marlborough Environment Plan – Variation 1

24/10/2021

### Background

From 2015-December 2020 my family lived and managed a farm at Manaroa in Clova Bay. I have a varied work history with a degree in Landscape Architecture.

### Rubbish Collection Data

I can confirm that the rubbish collection data in the Kenepuru and Central Sounds Residents Association Inc and the Clova Bay Residents Association Inc submissions on Variation 1 to the Marlborough Environment Plan is true and correct.

This data was collected over a six month period in 2020 and involved many hours of voluntary beach cleaning, sorting and recording by myself.

The source of the vast majority of the plastics found was quite obviously the mussel industry in Clova Bay and the wider Beatrix catchment.

While much was older “historic” rope, new rope was washed up continuously - as can be evidenced by the fact that each beach clean done over and over in the same area continued to produce as much waste as the first. Regardless of whether the rope was new or old, the Marine Farming Association agreed that it was both from the industry and, importantly, the responsibility of the industry to clean up.

Most of the marine farm waste ending up on the beaches is the black synthetic (plastic) rope which can be easily littered into the water if not following best practice, or even if following best practice but harvesting under trying weather conditions.

Mussel buoys and their fragments are another problem - less quantity but larger debris to contend with.

Further to the issue of rope waste is the shedding of micro plastics as the ropes are lifted and stripped, and the breakdown of the rope fragments resulting in first filaments then micro plastics. It is now well documented that plastics are in our food chain and disrupting the biology of sea-based organisms, including mussels.

During our time beach cleaning we found these filaments entangled in the reed beds at the head of the bay, choking the mudflats, grown over by shells and used in the making of bird nests. As an estuarine area of the sounds this level of pollution is alarming in a fish and bird breeding area.

To put the micro plastic issue into light, one can use data from the recently published “*Potential micro plastic release from the maritime industry: Abrasion of rope.*” [Imogen Ellen Napper, et al. University of Plymouth].

The study showed that 50m of new marine rope shredded 700-2000 micro plastics per haul; with old rope shedding up to 40,000.

Taking the lowest factor of 700 micro plastics per 50m of rope and applying this to the length of rope currently being used in the Marlborough Sounds (approximately 37,000km) - we can calculate an

educated presumption that the marine farming industry is contributing a pollution loading of 518,000,000 micro plastics per harvest or other servicing. Best case scenario.

**That's five hundred and eighteen million for those at the back of the room.**

If the mussel farming industry is going to legitimately promote itself as being sustainable then it has a lot of work to do in cleaning up its contribution to environmental pollution.

If the Marlborough District Council is to be seen as having kaitiaki of the Marlborough Sounds environment, then it requires that plastic pollution on all levels is regarded as pollution at the very least. That there are limits, and regulations and penalties are needed to control the effects on the environment.

Signed  
Shelley King

***APPENDIX – Photos of Rubbish, Manaroa Beach, Clova Bay***



New rope washing up  
on tide, Manaroa,  
Clova Bay



Marine farm debris: buoy fragments, drilled coils, hydraulic parts, mussel line spacers.

Cockle shell  
grown over  
mussel rope  
filaments





Clova Bay beach cleans rope sorting



Birds nest  
with mussel  
rope  
filaments  
found at  
Manaroa  
2020



Mussel rope filaments tangled in reed beds, Clova Bay



Mussel rope breaking up into filaments, found on Clova Bay beaches

