

Speech for Waste Water Hearings Rawene 18th May 2023

Kia Ora katoa,

thank you for the opportunity to speak on behalf of the charitable Carbon Neutral NZ Trust. I am Inge Bremer, from the Northland of Germany, one of five trustees, all of us retired from business, banking, educational, and health sectors in leading roles. I have been a grateful resident in the Far North for 21 years, during which I have tried to learn a lot about the whenua and the local environment. We formed the Trust five years ago in order to raise public awareness of Climate Change and what can be done against greenhouse gas emissions.

Clean waterways prominent among our environmental concerns, as water can sequester a lot of CO₂ when it is healthy.

I am a member of the Green Party, where our principles are based on Te Tiriti including honouring tikanga. I am presently studying te reo at te Pou o Manako in Kerikeri where tikanga is a large part of the curriculum.

I have many years of project management experience, the first and most difficult forming and managing two joint ventures in the North of China, re-introducing non- electronic German technology in textile production, followed by a jig and fixture joint venture in Malaysia for the car industry, so I am well familiar with factories and the people involved who are vital to be successful. Here in New Zealand I have chosen to look wastewater issues in Northland and participated in an extra mural course with professor Susan Krumdieck of Canterbury on Transition Engineering, dealing with wicked problems: that means problems that cannot be solved with old methods, but where new methods are considered not feasible due to diverse reasons. This brings us to the wastewater issues in Opononi and Kohukohu.

In our submission we have raised numerous reasons to object to Council's application to extend the expired WWTP consents with the suggested improvements. Based on what we have witnessed so far, we trust that these reasons have been read attentively. It follows for us that the application needs to be rejected. We object to the disposal of wastewater effluents to rivers, lakes and the sea. It is necessary to maintain the CO₂ sequestering properties of water and providing aquatic life recovery of the Hokianga.

We have read and listened to the contributions from council's representatives and experts. While the effects of ingress of more or less cleaned wastewater have been described as minor, mostly based on desk top research with very little consistent locally acquired data, it was stated that the shellfish should not be eaten! Fish, shellfish, and kina are a very important food source which must be kept safe as the highest priority - this is the background for the corresponding tikanga of definitely not putting any wastewater remnant into the water ways. On no account can this be outweighed by financial considerations.

These financial considerations are based on the assumption that land discharge, as desired by the population, is too expensive. Furthermore it is said the clay soil does not absorb water discharge sufficiently. These conditions are existent in other locations as well, where methods have been found to clean the water to a food safe status so that it can be used for irrigation and for fertilisation. These are proven and patented processes. Surplus irrigation water is stored in reservoirs for use during draught times.

Speaking from a financial point of view, we are frankly amazed that for wastewater plants for communities as small as less than 200 and the other of less than 600 people very large amounts of rate payer's money have been spent on consultants over many years and no improvement is visible. A lot of desk top research has been done, but local involvement and inclusions in looking for solutions seem to have been missing to a large extent.

It has been mentioned several times that we need a solution to the problem of wastewater removal is needed that observes tikanga, thus preserving aquatic life as a food resource. In accordance with Transition Engineering it is better to think of wastewater as a never ending resource, which it is indeed. In Japan they used it as payment for rent until the Americans came along after the second World War.

One of the solutions is a more than 100 years' old proven system of Electro-Coagulation: effective elimination of bacteria and viruses, phosphates and nitrates using small amounts of electricity, some iron substrates, some vinegar, and "Bob's your uncle" as Bert Munro would have said. The chemical process of electrocoagulation with iron plates eliminates algae as well, but this is definitely not the only purpose of it. The Electro-Coagulation process was patented in Germany in 1906 by a Mr Dietrich, and then also patented in 1909 in America. It has been and is being used world wide mostly for industrial wastewater, easily traceable through chat gpt for example. It has even been used to clean the extremely polluted Lake Konstance in in the 1980s.

Here in Northland the process was introduced by Andreas Kurmann, a scientist from Switzerland, who was in charge of 40 wastewater stations over there. His patient explanations were so convincing that 18 months ago we installed a EC unit at our Kerikeri retreat with 5 one bedroom houses to further improve the effluent of the old consented large septic tank. Our EC unit has been set up as a demo model and we explained in a leaflet.

The unit produces about 0.6 cubic metres of food-safe irrigation water every day, which is distributed in the garden with drip lines, and about 20 litres of liquid food-safe fertiliser per day, with a power consumption of about 5 kWh/day. - Small EC units are also working in Manganui, Cable Bay and others in New Zealand. The system can be upscaled to any size. It is not a laboratory idea as mentioned by one of the experts. The EC units work fully automated and can be monitored off-site. **By the way: FNDC is about to install EC units in Rawene and another one in Taipa.**

The numerous small Northland communities need low cost, easy to maintain, pathogen removing systems that do not rely on chemicals, long distance advice, and excessive financing; systems that are in accordance with local tikanga and enhance and revitalise aquatic life again, and that can be monitored daily by remote sensors and locally trained staff.

We urge you to follow the requests of local kaitiaki to stop discharging wastewater into the Hokianga. Please do not to extend the resource consents for such long periods of time. Solving old problems with new methods will be financially beneficial and satisfy our rate paying people, as well as honouring the tikanga that has been broken for so many years.

Mauri Ora!

Short comments from the other trustee present: Rolf Mueller-Glodde:

FNDC's failures have been sufficiently outlined & scolded

No senior FNDC representatives to listen anyway.

Annoyed about NRC' lack of control & endorsement in view of consents expired 7 and 4 years ago.

Commissioners subcontracted to decide on behalf of NRC, then disappear. Strong signal that this cannot continue

EC out flow is clean! Irrigation water & fertiliser are valuable and can be sold: council does not need to purchase land for disposal.

Deny consent for this unacceptable application.

Agree to extend for a short period with conditions to improve and to strictly enforce by NRC.

Notice not to swim is not good enough!

Surprise that no senior NRC and FNDC staff are present here to listen and learn.

Appeal: pass all the community wisdom and discontent to NRC and FNDC, so it will not be lost after your departure.