

**BEFORE A DECISION-MAKING COMMITTEE  
OF THE ENVIRONMENTAL PROTECTION AUTHORITY**

5

**Under** the Exclusive Economic Zone and  
Continental Shelf (Environmental  
Effects) Act 2012

10

**In the matter of** an application for a marine  
dumping consent to dump dredged  
material at a deep-sea site east  
of Great Barrier Island

15

**By** **Coastal Resources Ltd**

Applicant

20

Held in the Kiwi Ballroom at the Jetpark Airport Hotel  
and Conference Centre, Auckland, commenced Friday,  
30 November 2018 at 9.30 a.m.

25

**Board Committee Members:**

Mark Farnsworth (Chair)

Basil Morris

Gillian Wratt

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**TRANSCRIPT OF PROCEEDINGS**

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## I N D E X

5		
	<b>DAY 3 (30 November 2018)</b>	
10		<b>Page No.</b>
	House Keeping	164
15	<b>LYN MAYES AND ANDREW JEFFS</b>	
	Evidence	166
	Questioned by Committee Members	180
	Questioned by Mr Slyfield	196
20	<b>DAVID BOERSON</b>	
	Evidence	198
	Questioned by Ms Arthur	201
25	<b>SHANE McINNES</b>	
	Evidence	203
	Questioned by Committee Members	203
	<b>KENT RUSSELL</b>	
	Evidence	205
30	<b>GARETH WILSON</b>	
	Evidence	207
35	<b>MARK THOMPSON</b>	
	Evidence	208
	Questioned by Committee Members	214
	Questioned by Mr Slyfield	217
40	<b>CRAIG SHEARER</b>	
	Evidence	220
	<b>EUGENE GEORGIADES</b>	
	Evidence	225
	Questioned by Committee Members	225
45	Questioned by Mr Slyfield	229
	<b>ALISON UNDORF-LAY</b>	
	Evidence	232
	Questioned by Committee Members	236

**HOUSE KEEPING**

**CHAIR:** Kia ora people, this Decision-Making Committee  
5 hearing is reconvened to hear an application from  
Coastal Resources Limited to authorise the dumping  
of 250,000 cubic metres of dredge material in the  
Northern Disposal Area to the East Coast of Great  
Barrier.

10 Good morning, I am Mark Farnsworth, I am the  
Chair, I am assisted in this by two fellow  
Commissioners, Gillian Wratt and Basil Morrison.

**MR MORRISON:** Good morning.

**CHAIR:** A few new people, so we have to go to a  
15 commercial break straight out. So I will ask the  
hearings administrator to do that.

**TUF IOANE:** Good morning. Please ensure that you have  
all signed the attendance register when you come  
into the room, it's just by the door. Please  
20 turnoff all cellphones when you're in the room.  
Please note these proceedings are being recorded,  
so please speak into the microphone when it's your  
turn to speak.

In the unlikely event of an emergency, an  
25 alarm will sound continuously, please leave the  
venue immediately via the nearest exit, which is  
that door there. Assemble in the carpark just  
outside the main reception there.

In the event of an earthquake, drop, cover and  
30 hold, get under a table and wait for further  
instructions.

Toilets are just out through the cafe and it's  
just down the hallway, just along the side. Thank  
you.

**CHAIR:** Welcome everyone. The first people on our agenda this morning are the Auckland Conservation Board, welcome. Would you both like to come up here, please?

5

**LYN MAYES AND ANDREW JEFFS**

5 **CHAIR:** Can you introduce yourself and your witness,  
please?

**MS MAYES:** Morena, my name is Lyn Mayes, I am the Chair  
of the Auckland Conservation Board. Thank you for  
inviting me to present at this hearing on behalf of  
10 the Board.

I was appointed to the Board in 2014 and  
elected Chair by Board members in 2016.

Our Board comprises nine members who are  
appointed for three year term by the Minister of  
15 Conservation.

Under the Mana Whenua o Tamaki Makaurau  
Collective Redress Act 2014, three members are  
appointed for a three year term by the Minister on  
the recommendation of the Ngati Whatua ropu;  
20 Marutuahu ropu and the Waiohua Tamaki Ropu.

Board members have individual expertise in  
marine science, biodiversity, statutory process,  
cultural redress, tourism and communications and  
collectively bring a wealth of experience to our  
25 hui.

Board members are eligible for reappointment to  
ensure continuity, with new members appointed to broaden  
experience. The Board meets at least four times per year  
with meetings open to the public and the Board is  
30 serviced by Department of Conservation staff.

The Tamaki Makaurau Auckland Conservation Board is  
an independent statutory body appointed by the Ministry  
of Conservation. It was established by section 6L of the  
Conservation Act 1987.

The Board has the responsibility for overseeing the development and implementation of the Conservation Management Strategy and Conservation Management Plans for its region. As well as providing for interaction between the public and the Department of Conservation at the regional level, the Board also acts as an advocate for the protection of conservation values. Its prime role is to advise the Department and the New Zealand Conservation Authority.

5  
10 The functions of the Board are set out in section 6M of the Conservation Act 1987.

And under section 6N of the Act, the Board is conferred the right to appear before Courts and Tribunals in New Zealand and be heard on matters affecting or relating to the Board's functions. It is in this capacity we are here today.

15  
20 It is important to note that the Board is separate to and distinct from the Department. It's our role to hold the Department to account in the Auckland region, to ensure it provides the resources necessary to deliver on the Conservation Management Strategy which was set out in 2014 and has effect for 10 years.

In this respect, the Board has recently conducted a review of the CMS implementation to date and made draft recommendations to the Conservation Authority.

25  
30 Boards can and have taken different positions from the Department. For example, the Taranaki-Whanganui Conservation Board appealed the decision by the EPA to approve an application by Trans Tasman Resources Limited to undertake seabed mining of the South Taranaki bight. In this case, the Department did not submit against the proposal during the public consultation phase of the application but the Board submitted and appealed, as part of its legal and statutory responsibilities, and was

successful in its appeal, reinforcing the important questions that the Conservation Boards ask in these sorts of processes.

5 This appeal process is ongoing with further appeals due.

We represent the Auckland region and its 1.53 million people with the district structure consisting of mainland Auckland; an Inner Islands District including Hauturu; and Great Barrier/Aotea. We work closely with the Northland Board to have a unified approach to the co-governance of the Kaipara Harbour and with the Waikato Board in the Firth of Thames.

15 The Board's single remit is to protect and conserve our ecosystems. We work closely with the Department to achieve this. However, whilst the Department works within its budgetary limits, our role is not to assess competing demands but to focus 100% on the protection of our biodiversity. We are concerned about Auckland's declining indigenous biodiversity. The Auckland region and especially the Hauraki Gulf contains an exceptionally high diversity of seabirds, including white tern, Kermadec white faced storm petrel, fairy tern, and the black petrel which only breeds on Hauturu and Aotea. We don't want to be the Board which presides over the extinction of any species in our region.

25 The need to manage business as usual by the Department puts an ongoing strain on the resources. This will not abate but increase in line with the increasing population of Auckland and the encroachment of urban areas on previously rural sites.

30 The coastal and marine environment is a major focus for the CMS for Auckland and of particular concern for the Board.

The region has more marine reserves than any other

Department of Conservation region, all in the Hauraki Gulf, including Long Bay to Okura, Motu Manawa to Pollen Island; Tawharanui; and Te Matuka.

5 Human activities in marine reserves must not be detrimental to scientific study or conservation values or detract from visitor experience.

10 Our region includes a very high diversity of marine mammals including the Maui dolphin, the world's smallest and probably rarest marine dolphin which is found only on the West Coast of the North Island of New Zealand. The Department of Conservation Auckland has contributed to active monitoring of the population and established a Research Advisory Group to monitor progress toward recovery of the remaining population. The Hauraki Gulf is also recognised as an internationally significant habitat of marine mammals. The Board supports this work.

15 The Department has also been actively engaged with other stakeholders, especially the shipping industry, to develop ways of preventing ship strike of a nationally critically endangered population of Bryde's whales in the Hauraki Gulf. In 2015 the Board wrote to the Ministers of Conservation and Transport and to Ports of Auckland advocating for an international advisory notice to be lodged by Maritime New Zealand requesting a speed limit on charts to prevent ship strike. In the relatively short time, these new measures to slow vessel movements while passing through areas of birdless habitat appear to have been successful in greatly reducing reported incidence of ship strike.

20 25 30 In June 2017, the Board wrote to the Ministers of Conservation and Transport to bring to their attention the potential significant environmental hazard posed by the Niagara ship wreck to the Hauraki Gulf Islands. The Nigara was sunk by a German mine in June 1940 and fuel



oil continues to leak from the wreck. The Board remains concerned about the leakage and its potential to impact the Waitemata Harbour and agrees with the recommendations of The Sea Change Marine Spatial Plan that the oil be removed from the wreck.

5

We have submitted against the CRL application because the vastly increased barge movements across the Hauraki Gulf Marine Park to the dumping ground on the Continental shelf beyond Aotea presents, in our Board's view, a significant and clear threat to the marine ecosystem in the park, especially the marine mammals.

10

We have consulted with tangata whenua and the local community of Aotea and are supportive of many of the concerns they have raised in their submissions to the EPA on the application.

15

We also support the Department's submission with regards to the impact of increased dredging movements and dumping at sea. Our submission by Board member Professor Andrew Jeffs focuses on the potential effect of underwater sound pollution on marine mammals. Professor Jeffs will provide evidence and take questions on this.

20

In conclusion, the Auckland Conservation Board would contend that given the ecological significance of the wider Hauraki Gulf area, there is a strong case to proceed with considerable caution in the absence of evidence of environmental effect.

25

We believe that the information provided by the applicant is uncertain and inadequate. And, therefore, that the EPA must favour caution and environmental protection. There are other options open to the applicant in terms of disposing of the sediment at landfill and whilst these may be a more costly option in terms of financial considerations, our Board contends they are a better option for protecting our important

30

marine environment in the Hauraki Gulf. Thank you.

**CHAIR:** Ms Mayes, have you read the recent matters that have been put before us? Where are you up to in terms of understanding the information that's been put before this Committee?

**MS MAYES:** I have seen some of it, in terms of - not stuff that came through yesterday but I've seen the -

**CHAIR:** So, in your mind as a lay person, do you still think the uncertainties exist?

**MS MAYES:** Yes.

**CHAIR:** In what particular area?

**MS MAYES:** The evidence that my Board colleague will present -

**CHAIR:** Understand I'm seeking your view as a lay person.

**MS MAYES:** My view as a lay person is, we don't know what we don't know. And we don't know what the impact on the marine mammals is. We do know that they have hearing capacity and that the level of sound that is coming through from these increased movements is going to have an impact.

So, as a lay person, as I am a lay person, I am concerned.

**CHAIR:** Panel members, questions? (No questions).  
Department of Conservation questions?

**MS ARTHUR:** No Sir.

**CHAIR:** Applicant questions?

**MR SLYFIELD:** No.

**CHAIR:** Thank you. Can we move on Professor Jeffs.

**MR JEFFS:** My name is Andrew Jeffs. I am a professor at the University of Auckland in Marine Science. I work partly in the area of underwater sound. I am also a member of the Auckland Conservation Board

and have been since I was appointed by the Minister two years ago.

5 The Board has asked me to, after consideration of the application, asked me to prepare a more detailed submission and I've also participated in the expert witness facilitation meeting with Simon Childerhouse who is a marine mammal expert.

10 So, I will just read through my evidence. A major concern for the Conservation Board is the international significance of the Hauraki Gulf as a marine mammal habitat. It has high diversity and in abundance. 33 species, some of them are pictured on the next slide and they include dolphins, baleen whales, toothed whales and seals.

15 Many of these - a number of these species have been assessed as being nationally critical, nationally endangered and nationally vulnerable.

20 The abundance of marine mammals in the Hauraki Gulf is one of the reasons why there is a burgeoning tourist industry around marine mammal watching, which is where a lot of the data in this slide comes from. Each dot represents a sighting of a marine mammal and the colour relates to the individual species. You can see there's a great diversity of species and a large number of sightings. This is a database run by DOC and the majority of the sightings are in the central area of the Gulf but that's largely because the tourist operators provide data for the database.

25 The Outer Gulf, there's fewer observations and that's largely a result of fewer vessels out there with trained observers looking and providing data back to the Department.

30 On this figure, I have overlaid what I believe are the likely routes to the dumpsite by the tug and barge

duo from the indicated dredge sites in the region from the CRL application. It includes Pine Harbour, Hobsonville, Sandpit, Half Moon Bay, Bayswater, Whitianga Marina and Ports of Auckland, whether it's the ports or the America's Cup development.

Even if these routes are not quite correct, they demonstrate that to navigate from the dredge sites to the dumpsite involves traversing a significant area of marine mammal habitat.

The existing dumping approval has already facilitated many hundreds of transits to the dumpsite. This is proposed to potentially increase by up to five times under the application before the DMC. This voyage takes 15-25 hours return, according to the applicant. Hence, there is potentially significant increase of underwater vessel noise being introduced into key marine mammal habitat in the Hauraki Gulf.

Marine mammals, especially the cetaceans, that is the name a scientist gives to whales and dolphins, are highly social animals. However, living in the underwater environment, it is quite difficult to maintain social relationships if you are trying to rely on sight. If any of you have ever been diving, as I know some of you have, it's often very difficult to see any distance in front of you. Underwater sound travels long distances underwater and it's an excellent way of maintaining a social part of the operation. And so, cetaceans use that to communicate with one another, to find each other, to navigate, one can call to another and then they can find their way back to each other, for example if you're trying to find a mate. They call to each other in a group so they can keep the group cohesion together. They also have developed phenomenal - some of them have developed phenomenal ability to echolocate, so radar finding

underwater. They also listen out to underwater sound cues.

5 There's some evidence that Bryde's whales in the Hauraki Gulf are listening out for fish accumulations, what we call bait balls, and the sound seabirds diving on those and dolphins feeding on them, so hearing those sound cues is important for their feeding.

10 There are also some marine mammals that actually use extreme levels of underwater sound that they make to actually kill or stun their prey so they can catch them.

15 Can we play that sound? You've probably all heard whales before but this is a Humpback whale making a call in the Hauraki Gulf. These sounds can travel over hundreds of kilometres simply because sound in the underwater environments does cover long distances.

20 We can cut that off before you call me a hippy. In contrast, human noise and underwater sound is quite different. It's the result of heavy machinery noise, such as vessel motors, as well as the water moving against the hull and the cavitation around the propeller. Cavitation is water vapour bubbles formed by the force of the propeller working against the water and it basically vaporises the water in tiny bubbles and when they collapse they make a tiny sonic boom but when there's thousands of them, it generates a significant amount of noise.

30 Vessel noise tends to be intense and often has a low frequency noise. That is a low pitch sound, like a deep voice.

Vessel noise has been shown to have a wide variety of impacts on marine mammals in many species, that includes disturbance of natural activities, they can be attracted to vessel noise, they can avoid vessel noise,

it's been shown to interfere with feeding and changes in their social behaviour. They may group up or disperse. They commonly change their vocalising behaviour. That can be they can vocalise more, vocalise less, they can  
5 make louder vocalising or change their frequency, basically trying to communicate through the noise. And these effects can have impacts on the population health. So, there's studies that show that disturbance lead to reduced reproductive success in marine mammals. These  
10 impacts are varied by sound, source, location and the individual species involved.

There's also concern around vessel "masking". Vessel "masking" is probably the easiest way to understand as being in a busy restaurant where you're  
15 trying to hear your friends around the table and you can't hear them, what they're saying, because the background noise is so intense it's drowning out the sound that you're trying to hear. So, that is also a problem for marine mammals, in that you can either be  
20 disturbed by the sound or the sounds you're listening for, it might be feeding queue or your mates, your friends or your family, you can't hear them because the background noise from human-made sources is too loud.

Of concern to the Conservation Board, is given the  
25 significance of the marine mammal habitat in the Hauraki Gulf and the potential for this dumping activity to impact marine mammals, scant regard was given to appraising or mitigating this potential in the application. The focus of the material presented in the  
30 application was largely in relation to the dumping activity itself and not the associated activities such as vessel sound emissions.

While the vessel operation during transit to the dumpsite is conducted in a large part outside the direct

authority of the EPA's jurisdiction (and partly within),  
the dumping activity itself gives rise to the need to  
transit to and from the site. Therefore, we would  
contend that this is an integral part of the  
5 environmental impact of the activity that any approval  
would consequently generate and therefore needs to be  
considered and adequately addressed by the applicant.

We have a vessel noise on there. Do you want to go  
back? Is it possible to - (vessel noise played). You  
10 can see that it's what you would expect a machine to  
sound like. It's a low rumbling background noise  
basically, usually quite intense.

These are some graphs of some recordings from the  
Hauraki Gulf without vessels present. By international  
15 standards, the Hauraki Gulf remains relatively unpolluted  
by human-made underwater noise, this is despite the  
suggestion to the contrary by Dr Childerhouse in his  
evidence, which estimated the number of vessel movements  
from CRL would be a small contributor to overall vessel  
20 traffic. He estimated around 1% of total vessel  
movements in the Hauraki Gulf annually. In my view, this  
is misleading data as many boats used in the Hauraki Gulf  
have very little acoustic outputs, take yachts or row  
boats for example, and many vessels don't leave the Inner  
25 Gulf.

You can see in this graph on the left-hand side is  
how loud the sound is and on the bottom of the graph is  
the pitch of the sound, so low frequency, low frequency  
on the left, and high frequency on the right, and you can  
30 see that in the Inner Gulf there's higher levels of sound  
and that's largely a result of increased boat traffic in  
the Inner Gulf. There's been some measurements done at  
Bean Rock which is pretty much just off Mission Bay.  
Around 35% of the sound there is due to human sources,

mostly boats. Whereas, you get out into the Outer Gulf and the sound level is on the bottom graph, much lower, and it's been estimated less than 2% of the background sound there is due to vessel noise. It is an  
5 acoustically quiet area in the Outer Gulf where many of these marine mammals are living.

Interestingly, the Royal New Zealand Navy runs an underwater listening station on the eastern coast of Aotea, Great Barrier Island, and I understand the reason  
10 for originally siting the listening station in the area with the low ambience sound levels in this area, especially from vessels. Underwater sound is cumulative in the marine environment. The CRL vessels will be contributing to this background noise in an important  
15 marine mammal habitat. We do not know by how much as the applicant has provided no data whatsoever on the underwater sound output of the vessels they intend to use.

Here are some underwater sound recordings produced  
20 by vessels operating in the Hauraki Gulf compared to the background noise. The background noise is the natural noise, the graph I showed you initially. You can see that overall, these are vessels all operating in the Hauraki Gulf and you can see the sound output of them is  
25 generally much, much larger than the background natural noise.

This is essentially what the concern is.

In the top area, Dr Childerhouse and myself looked through the literature and tried to find examples of  
30 recordings of sound levels from tugs towing barges and you can see that these measurements tend to be in the higher sound outputs and where frequency data was available, it was tended to be in the low frequencies which are much more prone to long distance distribution



or travel.

We do not have data for the CRL vessels but from a few studies from overseas, the barges towing are between 160 and 191.5 decibels. What I have done here is used a similar vessels, calculations from a similar vessel, and overlaid it on the vessel tracks. The width of the red bars indicates the area over which a dolphin would be able to hear the vessel passing. And the width of those tracks in the Inner Gulf is around 990 metres wide, so that's a sphere basically around the vessel as it moves along. In the Inner Gulf, 990 metres, around a kilometre, we would expect a dolphin to be able to hear that vessel and respond if there's any behavioural interaction. In the mid Gulf, it's around 2.8 kilometres, a sphere of influence of sound around the vessel. Once you get into the quieter area around the Gulf, it's around 3.6 kilometres, of a sphere of sound moving as the vessel moves along.

Just as an example, an important species nationally critical is the Bryde's whale. There's been a great deal of concern about this species in the Hauraki Gulf. There's about 250 of the species in New Zealand but around 50 of them live in New Zealand year round and there's been particular concern around these whales being struck by vessels.

While it's not a concern for the CRL, vessels which I understand will be travelling at lower speeds, this species spends a lot of time on the surface and we now know that it sleeps on the surface at night. "Sleeps" is a comparative term for a whale, they have an unusual way of resting, and we know they're likely to be sensitive to low frequency sound and so there's a significant chance, given that most of the vessel movements for the dumping are undertaken at night, that this species will be

disturbed by vessel movements.

I've just overlaid it. This is some other data. Each dot there is an observation of Bryde's whale taken between the year 2000-2016. You can see, again, from the vessel tracks, there's quite a significant influence over the Bryde's whale population in the area.

Sound does not just affect marine mammals but it also can affect the use of sound in other marine organisms. Here are two examples which we know something about from the Hauraki Gulf. One is the Big Eye which is a common red fish which hides in caves during the day and comes out at night and it uses social calling to maintain the school of fish as they feed away from the reef at night in darkness basically. So, they're calling to each other and keeping the group together.

We know there is a recent study that shows that vessel noise has the potential to interfere with the schooling behaviour in the species.

The one next to it is the post larval stage of a crayfish, it's tiny, it's about the size of a jelly bean. These swimming stages are coming back from oceanic waters, they're looking for a reef to settle on and setup as a baby crayfish, basically. We now know they listen out for the sound of a reef from the animals living on the reef in order to be able to navigate towards that reef and find somewhere to setup home.

It's challenging to determine an acoustic impact threshold for marine mammals and other marine life because every species has different hearing sensitivities and even different types of ways of actually hearing. Human-made sounds also vary in their loudness, frequency composition and duration.

In the US, the national oceanic and atmospheric administration has developed some threshold guidelines

for marine mammals.

They recommend 120 decibels RMS, which is an average level of sound, of continuous noise as the threshold for eliciting behavioural disruption for continuous noise.

5 Continuous noise is a drilling activity or some sort of activity where there's a continuous noise from one fixed location.

We had a look at some of this data. I think Simon Childerhouse mentioned it earlier in the week and we  
10 looked at trying to model some of this. When I went back and had a closer look at some of the assumptions, I was concerned that they may not be or probably are not relevant to this situation.

Their data is based on bow head whales which is one  
15 species of whale for which we know a little bit about its hearing. It's based on their response to drilling noise and in the arctic ocean which is a very different environment to the Hauraki Gulf acoustically. Likewise, drilling is not the same as a transiting vessel noise.

20 So, there needs to be some caution in applying these US thresholds to the Hauraki Gulf situation if the DMC was considering putting a threshold on any CRL approval.

Alternatively, the easiest way would be to dump the spoil to land and then you would avoid all risks of  
25 acoustic impacts to marine life of the Hauraki Gulf.

**CHAIR:** Thank you for that.

**MR JEFFS:** Thank you.

**CHAIR:** Panel members?

30 **LYN MAYES AND ANDREW JEFFS - QUESTIONED BY  
COMMITTEE MEMBERS**

**MS WRATT:** Thank you, Professor Jeffs. That's new information we've had, so I'm sort of trying to

process some of that, particularly your information around noise in the Gulf and the contribution of vessel movements.

5 So, can we flick back to that slide that shows the percentage of noise from vessel? I guess, my key question is, if 35.2% of the underwater noise was vessel noise, what's the rest of the noise?

**MR JEFFS:** In the marine environment, lots of animals make noises. So, it could be and is one organism, 10 in particular a thing called a snapping shrimp which is very common and they have claws which they snap with. Basically, it makes a cavitation in the claw and they use it to stun their prey or to communicate with one another.

15 There's other sources. The earthquakes is another source, waves breaking on the surface and rainfall are the major contributors.

20 So, either background noise, if there's strong noise and you have breaking waves on the surface, the background noise increases.

**MS WRATT:** Yep. So, how has that been measured? You say it is the result of a study?

**MR JEFFS:** Yes. Basically, in that study it was undertaken by the University of Auckland by a PhD 25 student. A continuously recording hydrophone, which is an underwater microphone basically, was deployed at Ben rock and Horn Rock and actually four other sites in the Hauraki Gulf. They took the recordings and then manually separated the 30 sound component that was due to vessel noises from the background noise.

**MS WRATT:** How do you deal with - vessel noises will be transitory, whereas your other noises will probably be there more consistently. How do you take

account of that?

**MR JEFFS:** For example, in the Inner Gulf, there's sufficient vessel traffic there that it's virtually continuous. Plus in the Inner Gulf, you've also  
5 got other activities, things like vehicle movements on the port where there's heavy concrete pylons going into the seabed, you're getting continual rumbling noise being transmitted into the water. Likewise, say for example sea water pumps at Kelly  
10 Tarltons will be transmitting noise out through their sea water intake.

**MS WRATT:** In that context, you could say the barge movements will be very transitory? The barge is moving past a point?

**MR JEFFS:** Yes but you've got a large number of  
15 movements travelling over 15-25 hours at a time. Each time with a large sphere of potential disturbance of marine mammals and travelling into an area of the Gulf where the background noise from  
20 vessels is very low, less than 2%.

**MS WRATT:** Before I move on, I guess I'm wondering if either of my colleagues have any questions around the noise generated.

**MR JEFFS:** That Inner Gulf area is Ben Rock which is the  
25 area right inside the Waitemata Harbour, this side of Rangitoto Island where so much of Auckland boaties go and transit through. It's a major fairway for ferries going to Devonport and to Waiheke. It is not a major marine mammal habitat.  
30 It is the outer, mid and outer areas of the Gulf that are the important marine mammal habitats.

**CHAIR:** So, spatially draw that for us? Where does the differentiator lie?

**MR JEFFS:** Maybe if we go back to the slide. This is

the Inner Gulf here and Bean Rock is at about here,  
whereas Horn Rock is about here. So, this is the  
Mid Gulf, Inner Gulf. You can see most of the  
observations are in this Mid Gulf area but I'm sure  
5 if whale watching vessels were out in this area,  
I've done a lot of work out in this area and  
travelled through that area and regularly see  
marine mammals in that area. I suspect the  
abundance of marine mammals in the Outer Gulf is  
10 probably quite similar to this area in here but we  
just don't have the observation, because people  
haven't recorded them.

**MS WRATT:** One perspective on that could be to say if  
that's the observation records for marine mammals,  
15 then the shipping traffic wouldn't appear to be  
impacting? You've got your line straight through  
and that's also a line where not only the tugs go  
out, there is a lot of vessel traffic that goes out  
through that same route, as I understand it?

20 **MR JEFFS:** That's correct.

**MS WRATT:** But we are still seeing large numbers of  
marine mammals in that area?

**MR JEFFS:** Just because you see them doesn't mean to say  
there isn't an impact on them.

25 **MS WRATT:** Yep.

**MR JEFFS:** We're still seeing Bryde's whales but we've  
killed half the population by hitting them with  
ships. Does that mean, you know, that the ships  
aren't having an effect on them? We know they are.

30 **MS WRATT:** But you have agreed that vessel impact is not  
a major issue for tug traffic? I think you made  
that statement.

**MR JEFFS:** In terms of ship strike, we, so long as the  
speed is held below 9-10 knots, yes.

**MS WRATT:** Our challenge is to try and identify what is the added impact in this case from noise of the added movement of the barges through the vicinity.

**MR JEFFS:** Absolutely, yes.

5 **MS WRATT:** I am still struggling, even with your added information, to see just what that is.

**MR JEFFS:** I'll be honest with you, it is a challenging question that even I have difficulty with because there isn't a framework to work with but what we're  
10 seeing in the last 10 years is the knowledge of the acoustic impacts on marine mammals. If you look, the scientific literature has grown exponentially.

What we are starting to realise is that we are having a significant impact, not only on marine  
15 mammals but also on other marine life. For example, I just marked a PhD thesis from the Great Barrier Reef where they found that respiratory stress, the amount of breathing stress in the coral reef fishes was exacerbated, you know, go into  
20 stress just from a single motor boat, a single vessel with an outboard transiting past. So, stress is a major issue for fish. You know, it releases hormones which basically affects their endogenous biology.

25 **MS WRATT:** While accepting that, we are operating in an area which is the Hauraki Gulf which is an area of high vessel activity and the applicant's case is that the added impact on these tug movements is relatively minor?

30 **MR JEFFS:** Yes but, I guess, the issue is it's about cumulative effects and, in the case of underwater sound, it is cumulative. So, the more, you know, if you have another application tomorrow, say from the Ports of Auckland, who said they want to dump

there, you'd say, oh yes, that's fine, and then there would be another application. Where do you draw the line?

**MS WRATT:** Good question.

5 **MR JEFFS:** Somewhere you have to, the regulatory, those in charge have to make a decision. I understand in the application for sand mining off the Taranaki, the decision included a recommendation on noise limits on the vessels. So, it's starting to happen  
10 all over the world. New Zealand led the way in terms of marine reserve national parks and other protections on the marine environment. We have an area that is of international significance in terms of marine mammals. We should be proactive about  
15 protecting that diversity and a special part of what is Auckland and New Zealand. I think we've got an obligation to act conservatively and to protect that natural environment.

**MS WRATT:** So, where do you think that places -

20 **BASIL MORRISON:** Jill, while you're thinking on that, I must confess, I'm having some difficulty. We're having a vessel or vessels that have been travelling at relatively low speeds, round 4, 5, 6 knots, we've acknowledged and understood that, so  
25 that's one thing. The second thing is, I accept your comments and view that sightings in the Inner Gulf, the numbers really relate to vessels and observation of that. And if we had the same amount of boat traffic or vessel traffic out towards the  
30 disposal area, you'd probably have a similar number almost. So, I've got that in my mind.

And then I'm trying to relate that back to the vessel traffic that's coming in and out of the harbour through the Colville Channel into the



harbour. We all see it, we all see it. I mean, I live in that vicinity, as you may or may not know, and I enjoy fishing out there and I see vessels go past through the Colville Channel into the harbour.  
5 You'd think the Coromandel Range is moving, they're massive, and it will be three-quarters of an hour before the wake hits you, and that's growing. You are aware of the debate, the Ports of Auckland issue.

10 When I put all that in my mind and then I try and say what is the impact that this proposal is going to have on what is an undiscovered on under identified amount of life around the zone because people haven't been out there to see it, a low speed vessel, the  
15 continuing growth of big vessels into the Gulf, how this is going to change it in any way.

I then say to myself, well, if this is the issue, how on earth are we, as whomever, going to stop the increasing growth of vessels? They're not getting  
20 smaller and it's not becoming less, coming into the harbour. Help me.

**MR JEFFS:** Well, I guess the situation is that you're not being asked to consider the number of vessels coming into the harbour. You are being asked to  
25 consider hundreds of movements over a 25 hour period, up to a 25 hour period across the Gulf, and that's what's in front of you now.

What I am arguing with you is, that is going to contribute significantly to the background noise levels  
30 in the Hauraki Gulf and potentially impact marine mammals.

**MR MORRISON:** Significantly?

**MR JEFFS:** Yes, potentially.

**MS WRATT:** We are not looking at hundreds of movements

over a 25 hour period, which was the statement you just made. We are looking at potentially four movements.

**MR JEFFS:** I didn't say over a 25 hour period.

5 **MS WRATT:** You did actually.

**MR JEFFS:** Sorry, I'll clarify. They last the duration of a return journey to the dumpsite which is 15-25 hours as per the applicant's evidence.

**MS WRATT:** Correct, yes.

10 **CHAIR:** I'm struggling with your cumulative sell. I am a diver, I will put that clearly. I sit under the water, a boat goes past, I can hear it come. When it goes, the sound disappears. My fellow Commissioner has said this is a moving sound. So,  
15 how does a moving sound, is it cumulative over a wide area or cumulative in a narrow area because I have actual experience sitting under there and the sound disappears and it goes back.

Now, I struggle with you saying it's significant  
20 over the whole Gulf when that just doesn't gel with what I know.

**MR JEFFS:** The reason you're struggling with it is because your ears are designed to hear in air and animals that live in water have ears that are  
25 completely differently constructed in order to hear in water. Sound in air and sound in water are completely different in the way they behave. Air is very compressible.

As you know, you can get a balloon and you can  
30 squeeze it. A balloon of water is very hard to compress. As a result, sound is a wave of pressure and it travels through water and can travel long distances. Particularly low frequency sound is very slow to be what's called attenuated or

absorbed by the water. What reduces underwater sound is the spreading of it, the dispersal or dissipation of it. By gradually spreading out, the pressure field becomes less and less. So, it can travel very long distances.

Some marine mammals can call to each other over hundreds of kilometres just by using low frequency calls. The reason you can hear a vessel passing underwater is even though your ears are not even designed to hear underwater and their sensitivity underwater is terrible, you can hear that vessel because it is so loud. And if you were a marine mammal, you would be able to hear that vessel travelling off into the distance for some distance. I have given you some estimates of that.

For example, for the type of vessel we are potentially looking at, if you are a dolphin in the Outer Gulf you would hear that travelling away for 3.5 kilometres away from where you were underwater.

**MS WRATT:** Just to come back to these percentages. The student who did the study, 1.9% of the noise at Horn Rock was vessel traffic; am I reading that correctly?

**MR JEFFS:** Yes, yes.

**MS WRATT:** So, if you were to say, I mean the figure that we've given was that the barge movements are less than 1% of the vessel movements in the Gulf. Now, I guess there is a question of whereabouts in the Gulf you say that is but 1% of 1.9% of the noise is actually a very small amount of the noise in that environment, if that's what you're saying?

**MR JEFFS:** No, I'm not saying that at all. Simon Childerhouse took broad figures of how many vessels were operating in Auckland, over the whole Auckland area, and then made some wild assumptions that the

number of CRL vessel movements in comparison to all vessel movements over the whole Auckland area. I don't see how that is particularly relevant.

**MS WRATT:** Even if it was 50%, I mean I guess again what I'm trying to get my head around is, what is the significance of the vessel, the noise from vessels? If we're saying that 1.9% of the noise in that area is vessel noise, then vessel noise is actually a relatively - I mean, I appreciate that that's an added noise and it is a different noise from the natural noises that the whales or the marine mammals would be dealing with but 1.9% of the noise in the environment, you know, I guess I'm just trying to get my head around what does that actually mean?

**MR JEFFS:** Well, it is a very low level of existing vessel noise. So, despite your concerns about the number of vessels coming into the harbour on the Colville Channel, for example, in that area the vessel noise is relatively low currently. But what's in front of you is, I guess, approving an activity which will increase that.

**MR MORRISON:** And, I guess, it's the amount of increase that's of interest?

**MR JEFFS:** Yes, and I guess - yeah.

**MR MORRISON:** It's difficult -

**MS WRATT:** We need to assess the significance, obviously the significance of that impact on the marine mammals. Perhaps if I could just move on to a related but different question, I guess, which is the applicant are indicating that they're keen to put conditions around their activities that will manage the impact of those activities. Do you have any suggestions of conditions if we are minded to

grant the consent?

**MR JEFFS:** I, kind of, directed towards that at the end of my presentation. Essentially, you could put a noise limit on the vessel and the tug and the barge, it has to be the combination because the barge will also be producing noise, just by the mere fact it's being towed through the water.

**MS WRATT:** How would you identify what those noise limits should be?

**MR JEFFS:** As I said, there's a US threshold for behavioural effects in marine mammals which is 120 decibels but it's based on a whale that lives in the Arctic Ocean and to drilling noise. I discussed it with Simon Childerhouse. It is a possible framework to work with, given that it's got some debate amongst scientists because it's not, you know, it doesn't fit every situation and I would argue in the Hauraki Gulf we've got an area of significant marine mammal habitat and it would be best to proceed with caution but if you were going to introduce a threshold, that would be what I'd be looking at, I guess.

**MS WRATT:** But what you're also saying is, there is no information as to what the noise generated by the tugs in the barge is in relation to that noise level?

**MR JEFFS:** No, we don't have any data. CRL hasn't presented any that I know of.

**MS WRATT:** You comment that the easiest way would be to dump to land?

**MR JEFFS:** Yes.

**MS WRATT:** I agree, that would be the easiest way to remove the sound from the marine mammals environment but there would be some question as to

whether that's the easiest way to deal with the sediment and, for example, you know, all your whale watching boats, they come out of marinas where the dredgings are coming from and if you were to put  
5 the dredgings on land in Auckland, you would also create some significant, both social and environmental issues.

Any inspired thoughts as to what else can be done with the dredgings.

10 **MR JEFFS:** I would argue that most tourists, if they knew that they were having - you know with an interest in marine mammals, if they knew they were having an effect on marine mammals as a result of the marina their boat was parked in, I think they  
15 would be happy to pay a bit more to go on the boat. Likewise, if you look around the marinas in Auckland, the marinas are full of boats which are worth millions and millions of dollars. Most boat owners love the Hauraki Gulf, they enjoy seeing the  
20 whales and the dolphins in the Gulf. I'm sure they would be prepared to pay a bit more to see that material dumped on land, rather than potentially affect the marine mammals that everyone loves to see and is proud of. Let's be honest, Auckland is  
25 proud to having such a diverse range of marine mammals in the Hauraki Gulf.

**MS WRATT:** They may be but you didn't answer the question, which is what are the alternatives? Do you have any idea of what the alternatives is?

30 **MR JEFFS:** For disposal?

**MS WRATT:** Land disposals.

**MR JEFFS:** Other countries dispose marinas to the land to avoid the impacts on the marine environment. Yes, maybe it's more expensive but that's just the

price you have to wear to protect your environment.

**MS WRATT:** Okay.

**MR MORRISON:** So, you'd see, we're talking about boats, millions of dollars of boats, we're also talking  
5 about the ferry, transport issues within the Gulf. We've heard evidence in regards to the siltation and just what could happen in a short number of years, like 5 or 10 years, in regards to ferries being able to access some of these marinas, a very  
10 short period of time at high tide. We've heard that.

We've also heard and understand the issues of trying to shift these volumes by way of on land, if we assume the land can be found, the transport of that, roads, all  
15 of those issues. As my colleague has said here, it would be really inspiring if you could roll all that together, notwithstanding your focus of your responsibility in what we have to hear and make a decision on. It would be interesting. I don't know, I just can't put that  
20 altogether.

**MR JEFFS:** Are you trying -

**BASIL MORRISON:** Ferries would not be able to access some of these marinas other than high tide.

**MR JEFFS:** From the point of view of the Conservation  
25 Board, our role is to look out for the environment.

**MR MORRISON:** I understand.

**MR JEFFS:** What I'm saying to you as a DMC, you also need to consider that, it's in your legal requirement to consider the potential effects on  
30 the environment.

**MS WRATT:** Which is why we're here.

**MR JEFFS:** Absolutely. The fact that the applicant hasn't perhaps considered the options of land-based disposal and worked with the regulatory authorities

to facilitate that in some other way, is not really the concern of the Board.

**MR MORRISON:** I understand.

**MR JEFFS:** Our role is to advocate for the environment.

5 **MR MORRISON:** I understand. As my colleague said, it would be interesting to hear some inspired view of where and how it could go.

**MR JEFFS:** I appreciate the position you are in.

**MR MORRISON:** Which isn't your focus but I find that  
10 interesting.

**MS WRATT:** The applicant has done more work since the original application, in terms of other options, and we have also had comment from Auckland Council in terms of other options and there are  
15 environmental impacts, different environmental impacts of looking at other disposal options.

Carbon omissions, for example, if you put vast numbers of trucks on the road to carry the dredge material. I mean, that's just one of a number.  
20 It's not quite as simple as the environmental impact is minimised if you take the dredgings and put them on land.

**MS MAYES:** You now have some electric vehicles for Waste Management trucks.

25 **MS WRATT:** But you do have slight vehicle congestion problems in Auckland as well.

**MS MAYES:** Yes.

**MS WRATT:** So, are you going to build larger motorways, anyway -

30 **MR JEFFS:** I understand your focus and acknowledge that.

**CHAIR:** I'm going to come back to Horn Rock, please.

The 1.9 is currently at Horn Rock of vessel movements. Given what's proposed, is that going to significantly raise that figure?



**MR JEFFS:** For Horn Rock specifically?

**CHAIR:** Yes, for Horn Rock.

**MR JEFFS:** I couldn't answer that question sitting here now. I'd have to go away and look at the numbers.

5 **CHAIR:** You have said there's a significant impact. A significant impact to me, it would have to be significant at the 95%, whatever it is. It might only add a small portion to that, could it not?

**MR JEFFS:** It might, yes.

10 **CHAIR:** That's what we're struggling with. You've said there's a significant cumulative effect. That's kind of the base sound at Horn Rock. I am just thinking, well, is it really significant, the added -

15 **MR JEFFS:** Well, I think the issue is you're looking at it in one spot and it is not in one spot. It is a vessel transiting through a population of animals living in a wide area. So, the potential to disturb animals over a wider area is what we see as  
20 the issue.

I guess, in the transiting, you know, I've outlined what some of the potential, the swarf of potential disturbance to marine animals is. It is a broadband, unless you can bring the sound level of that vessel  
25 significantly down and use a quieter vessel which is one of the options I have suggested. What threshold you put on that is up for discussion, I guess.

**MS WRATT:** I appreciate that. Can I just move on to one other aspect, which is the dumping site itself?

30 **MR JEFFS:** Yes.

**MS WRATT:** You and Mr Childerhouse have come up with some revised, a revised condition in terms of monitoring for marine mammals in the vicinity of the dumping site.

**MR JEFFS:** Yes.

**MS WRATT:** To remove any acoustic recording from the tug as it's taken the barge or from the barge as it's depositing and some changes to the observation  
5 conditions.

There could be potential to put in a remote acoustic monitoring, hydrophone. Mr Childerhouse said that he felt that would be a difficult and costly thing to do effectively which would be excessive in terms of the  
10 potential impact of the activity. Have you any comments on that?

**MR JEFFS:** Yeah, I discussed it with Dr Childerhouse in the facilitator meeting and we both agreed that putting in a remote listing buoy there would be  
15 probably quite difficult to do and reasonably expensive.

However, I should say that the Royal New Zealand Navy has a listening station in that area. Whether it's available for civilian use, I  
20 don't know, but my understanding is they've got recordings going back for many years. They've probably got CRL vessels going backwards and forwards to the site. They've certainly got recordings with marine mammals on it. It may be  
25 possible to use that.

The hydrophone setup for that is an array. So, it means that there's multiple, basically multiple microphones on the sea floor, and from that you can actually triangulate and work out exactly where a marine  
30 mammal call is coming from.

So, it would be potentially possible to tell whether there is a marine mammal, provided the marine mammal is calling, you could tell whether it was in the area of the dumpsite.



Hearing adjourned from 10.31 a.m. until 10.46 a.m.

**CHAIR:** We will reconvene, people. Just a little bit of direction from the Chair. We've got a whole series of marina companies, so we will keep it really  
5 focused, please, on the key points. All the submissions are relatively similar to us, so we'll have empire capital Limited, please.

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**DAVID BOERSON**

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**MR BOERSEN:** My name is David Boerson, I am the Property and Development Manager for the Empire Capital Group of companies. I have strategic oversight for our consenting matters for our marinas and, in particular, here today we have Bayswater, Hobsonville and Pine Harbour Marinas and obviously our company, Dredging New Zealand company as well in terms of that.

We've made significant investments in our marina assets and we have approximately 25% of marina berths in the Auckland market that we own and operate.

In addition to that, through our dredging business we have a significant role in the maintenance of both our own marinas but also a significant other number of marinas in the Auckland area and the Coromandel.

Without dredging and part of that component of dredging is being able to dump the material, we wouldn't be able to function with our marinas and that's on a practical and financial basis. Without the dredging, the marinas would silt up over time and each of our marina managers will talk to the specifics of that and also financially.

Our operating costs for the marinas are borne by the berth holders and that cost for them of disposal is a significant item of their operational costs, somewhere between 25% and 50% of their operating costs in terms of those.

So, obviously, if the marina the dumping costs were increased, and we have seen numbers up to five or six

times, to disposal to land, that would be a significant cost in terms of the operations of the marinas and make them unviable in terms of our operations of our marinas if we have to dispose to land in terms of that.

5           Then that would be a significant impact on the boating community because all those berths that we current maintain would be taken out in terms of working through that there as well.

10           As it's been alluded to, whilst we have a recreational need, there is also an element of our marinas that is around public transport. Each of our marinas have ferries that operate to and from and that is not dissimilar to a number of other marinas around Auckland. The ferry network has potential for a large  
15           amount of growth and that is something we see happening. The harbour is not constrained like the network of roads are within Auckland, so it is an area for growth in terms of working through that there.

20           There has been some discussions, we understand, around the consented quantities versus the actual quantities and the total quantities that are being sought. We have a real simple look on that and are happy to answer any questions there around that. The consented quantities is what's actually needed to maintain the  
25           marinas at the designed depths etc. but that's balanced by the reality of what is being able to be afforded in terms of costs of the dredging and getting that through. And I suppose there's a couple of aspects like that and that's just a practical one.

30           For some of our boat owners, the difference for them between the marina being 1.9 metres versus 2 metres deep, they can live with from time to time but if you took one of our larger marinas at 10 hectares, that extra centimetres is another 10,000 cubic metres. It's quite a

significant volume in terms of working through that.

The other aspect, it comes back to the cost to the berth holders themselves. Like you and I with a house at home, sometimes you have to make the decision do you fix  
5 the broken step or paint the front of the house. It is one of those decisions that we have to weigh up overall in terms of working through that.

Part of this consent, it also provides for future expansions of both our existing marinas. We have 25% of  
10 the 35 hectares that are zoned for marina expansions in Auckland as part of two of our marinas at Hobsonville and Pine Harbour. Again, our own research and our own understanding of the market indicates there is strong demand for new marinas and marina expansions and that's  
15 something we're working on.

Obviously, we couldn't currently expand our marinas if there's nowhere for us to actually dump the material that would be required to be removed as part of the construction of those marinas, so we need that to happen  
20 going through there.

Because of our position in the market, we're very aware of the other developments that are happening. We've seen the numbers from market economics and we believe they are a fair representation of the amount of  
25 dredging that needs to happen and is planned to happen within the wider Auckland area in terms of reasonably anticipated projects. We possibly believe it's possibly undercooking the numbers that are there. Sorry to use such a loose term on that.

30 **MS WRATT:** It's a very technical term.

**MR BOERSEN:** Oh, very technical in terms of working through that.

For example, any one of those bigger projects that have been spoken to at the moment, if we

didn't have the consent that we are here discussing today, that would take out all dredging capacity for the disposal site for the next 5 or 6 years. So, you couldn't really, on a practical basis,  
5 either maintain the existing marinas or develop a new marina simultaneously in terms of that going forward, so that's quite a bit of work through there.

As I alluded to, we have made significant  
10 investments in our assets and we see them as long-term assets. We also see the value and merit for needing to have a disposal option that is both feasible and practical long-term in terms of that. So, all our marinas have consents now generally out to 2050. It  
15 would be nice to have certainty around disposal sites out to 2050 as well. Hence, we support the longer duration of consenting that has been sought by CRL in this application.

That's it from me in terms of the summary there.

20 Happy to answer questions.

**CHAIR:** I will see if there's any questions from the panel. (Panel members indicate they have no questions). Applicant?

**MR SLYFIELD:** None from me, thank you, Sir.

25

**DAVID BOERSON - QUESTIONED BY MS ARTHUR**

30 **MS ARTHUR:** Your last point, 2050?

**MR BOERSEN:** Yes.

**MR SLYFIELD:** That is your consenting?

**MR BOERSEN:** Across the three marinas they vary.



I will now have Shane join us from Hobsonville  
marina.

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**SHANE MCINNES**

5 **MR MCINNES:** Good morning. My name is Shane McInnes, I  
am the Marine Manager at Hobsonville Marina.

The marina out there has just shy of 600  
berths, ranging from 10.5 metres up to 18 metres.  
Most of our berth holders are average Mums and  
10 Dads. Boats are sort of in that \$100,000 to  
\$200,000 vicinity and we do have a couple  
of million dollar boats but mostly just your  
average boat.

The marina was constructed 30 years ago and was  
15 literally dug out of the mud. It's up in West Auckland  
in the Henderson Creek, so we are very reliant on  
dredging.

So, currently, as David said, we've got two 35 year  
dredging consents, one for our marina itself, for 20,000  
20 cubic metres annually, and we're four years into that.  
And the other one that was granted this year is for a  
further 5,000 in our channel which tends to silt up.

So, if we were to cease dredging, we would have to  
shut the marina fairly promptly. The accretion is such  
25 that we just couldn't continue to operate. We've got a  
hard stand business out there as well and there are  
several contractors that rely on that hard stand to live.  
So, yeah, I think I said maybe about 4 years and we would  
need to shut the gates and shut up shop.

30 I think David's said the rest.

**SHANE MCINNES - QUESTIONED BY COMMITTEE MEMBERS**

**CHAIR:** And you have a ferry operation?

**MR McINNES:** Yes, West Harbour Ferry. They have just had their one millionth passenger.

**CHAIR:** Without sufficient water depth, the ferry would only be able to operate two hours either side of the tide?

**MR McINNES:** That's correct. They're getting to the stage where the boats are too small and we can't put on bigger boats out there because of the depth.

**CHAIR:** Thank you. Any questions? Applicant, any questions?

**MR SLYFIELD:** No, thank you.

**MS ARTHUR:** No, thank you.

**CHAIR:** Thank you very much for that, Mr McInnes.

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**KENT RUSSELL**

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**MR RUSSELL:** Good morning, Kent Russell, General Manager Pine Harbour Marina. Along the same lines, our marina is totally dependent on dredging. It was also dredged out of land and so, therefore, at low  
10 tide around the marina is land, shall we say, or seabed.

We have about 570 berth holders and about 200 dry stack vessels, small recreational vessels. The community has expanded somewhat out at Pine Harbour as a result of  
15 the ferry operations and the ferry operator with Auckland Transport have currently got 22 vessel movements per day, commuter ferries into town. So, without dredging of our marina and our access channel, those people would have to find alternative means to get into the city which would  
20 also take a significant amount of time.

**CHAIR:** The point you made at around about 23 of your evidence?

**MR RUSSELL:** Yep. Obviously, we've got future expansion in the marina which would include 200 berths and  
25 this would have a significant impact on the dredging and disposal site. And so, therefore, we're supporting that getting expanded, as currently we wouldn't be able to expand the marina without further dredging.

30 We also require some certainty around the capacity of disposal in order to support our operations. As David alluded, our dredging consent is out until 2050. That is all I have to say.

**CHAIR:** Questions from the panel? Applicant?

**MR SLYFIELD:** No, thank you.

**MS ARTHUR:** No, thank you.

**CHAIR:** Thank you very much for that, Mr Russell.

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**GARETH WILSON**

5 **MR WILSON:** I am Gareth Wilson, Bayswater Marina  
Manager. I have been managing there for the last  
five years or so. Bayswater Marina opened in the  
late '90s. We've got 419 berths ranging from  
10.5 metres to 40 metres in length. Bayswater  
10 Marina recently obtained occupation consent out  
to - dredging consent out to 2049. The consent  
allows for 5,000 cubes per annum with 175,000 total  
up to 2049.

If we stop dredging, there would only be a number of  
15 years before the marina was unusable. This would  
displace, you know, over 400 berth holders, marina staff.

We've got 53 businesses who work directly for the  
marina and 248 registered contractors work for our  
clients. We've got 500 commuters who catch the ferry  
20 daily, so that's 1,000 movements a day for commuters.  
And these obviously would get displaced onto our roads if  
they couldn't catch the ferries.

If you're familiar with Lake Road, it's pretty much  
a standstill, as it is at the moment.

25 At Bayswater we understand the alternatives of clean  
fill to disposal of our sediment but this is most  
definitely not a viable economic solution for us.

There's not really much to add there, thank you.

**CHAIR:** We don't need to make the same comment. Any  
30 questions?

**MR SLYFIELD:** No, thank you, Sir.

**MS ARTHUR:** No, thank you.

**CHAIR:** Thank you very much.

**MARK THOMPSON**

5 **CHAIR:** Mr Thompson, is it?

**MR THOMPSON:** Yes. Good morning, Commissioners. I am  
Mark Thompson, I am the General Manager of Dredging  
New Zealand. I'm going to speak mainly towards the  
practical sense of dredging and answer any  
10 questions.

We currently are dumping around 40,000 cubes a  
year at the dumpsite under the current consent.

**CHAIR:** You may want to comment on Auckland Conservation  
Board's comment on, you know, effective noise and  
15 your vessels.

**MR THOMPSON:** I can comment on a lay basis on some of  
those sound things.

**CHAIR:** We would appreciate that. It would be really  
nice to get your observations on that.

20 **MR THOMPSON:** Would you like me to do that now?

**CHAIR:** No, carry on, sorry.

**MR THOMPSON:** Cool. So, my scope of evidence is on how  
we undertake dredging at the moment and we use the  
site currently and obviously a little bit of how we  
25 go forward in the future if this consent is  
granted.

Currently, with customers that I currently  
service, we have around 47,000 cubic metres of  
dredging required by them. Taking out Hobsonville  
30 Point, which is going through an ownership change  
from Housing New Zealand at the moment to private  
enterprise, and we did 30,000 for Housing New  
Zealand but we still have another 200,000 of  
capital dredging up at the Hobsonville Point site.

It's unsure but the current Willis Bond who are taking over that property are quite keen to develop that further and we are in discussions with them at the moment about how much dredging but they are  
5 consented for 200,000. So, there could be quite a substantial amount coming out of that area.

My existing clients are just about maxing the dumpsite currently at the moment. We have America's Cup and a few other Ports of Auckland coming online. We just  
10 don't have the capacity and I guess that's why we're all here today.

**MS WRATT:** You have seen the Market Economics Report?  
You've presumably seen the market economics report?

**MR THOMPSON:** Yes, I sat with CRL and inputted to that  
15 and I am very comfortable with that report.

**MS WRATT:** Thank you.

**MR THOMPSON:** I also have five other marinas that are interested at the moment for doing dredging. They get into the situation where they're starting to  
20 have boats touching the bottom which is not good business, so I'm in discussions with another five marinas for further works. This is where this consent becomes very important for them to allow to be kept operating.

25 Currently, I have seven barges and tugs in my fleet. We also are classed as low risk by Maritime New Zealand. We got audited just this year in April. We are also licensed for them until 2025. They have a period of up to 5 years that they will licence an operator for, and  
30 they audit you depending on your risk profile. We have just received an audit and came through as low risk. They see us as a safe operator, as such.

A lot of the dredging methodology that we use is quite clear on my evidence. One of the main points I



want to put out is a lot of people talk about tonnage and cubic metreage. Most of the sediments I am doing at the moment is 1.6 tonne to the cubic metre.

5           When we start talking about road transport or moving material, it's quite a bit heavier than water which is one-to-one. So, when we're loading our barges, we talk about cubic metres but our tonnage you have to times it by 1.6. That is sort of quite simple maths for a mariner as such.

10           We do a lot of notifications at the moment. We take a lot of evidential photographs during our trips. The master's log, notification 12 hours before departure. We're fully in support of keeping those conditions. So, I mean, the hard mast, the Environmental Protection  
15           Authority, CRL, and our Head Office all have those reports sent 12 hours before by the Master, so we know what time they're departing, we know what time they're at the dumpsite and we know what the vessel is returning. We have quite a controlled method. It's not just like  
20           the boat fills up and heads out of the harbour, there's multiple people notified beforehand.

            During the trip, the Master takes a number of records which we will continue to do under the new consent, which is on around load line to make sure the  
25           vessels are not overloaded. Maritime New Zealand sets a coastal load line because we're going 2.5 nautical miles into the coastal area. The restricted limits stop at the 12 mile limit. So, our load lines, they are lower down the hull, so we have more freeboard because we are going  
30           to the coastal area than what you would normally use in the Hauraki Gulf and the Inner Gulf.

            We also start marine mammal watching before we dump everything by my crew which are trained to spot marine mammals. Myself does most of the training and I spent

10 years actually running a dolphin watching vessel down in the South Island, and they are little Hector's dolphins, so they're quite hard to find sometimes being so small.

5           We record obviously at the dumpsite. We take hydrogram recording at the moment but I know that's - we haven't had any recorded incidences on the hydrophones in the last 4 years that I've been running the operation. I think we're looking at dropping that at the moment.

10           Obviously, we have a ship's logbook and we have an acknowledgment form. I don't know if you've seen one from the EPA, we fill in on every dump. It goes through where the source material came from, how much is on board, when we left port, when we returned to port, what  
15           time we were at the dumpsite, how long the dump took, how far off the centre of the dumpsite we were within metres, and that's all calculated through.

          We send those through to CRL, we submit those, and we're envisaging continuing that because it gives good  
20           oversight for the regulatory body.

          Sort of coming down into our barges as such. Some of my smaller barges around 337 cubic metres of material and my larger barge around 430 cubic metres of material. So, relatively small in the game of shipping compared to  
25           the large ships that come into Auckland but large to the recreational fleet. So, we're sort of in the middle. We're 46-40 metres, most of my barges.

          We did have a video clip of us leaving Hobsonville Marina which might be quite useful to demonstrate that if  
30           we go larger for a lot of the marinas we literally cannot fit in the marina and it means loading is quite difficult. We will play the dredging video. It is sped up a little bit. It's actually a marketing video but it shows quite clearly. My guys don't move quite that fast.

So, the back hoe digger which is the smaller one there goes around the marina. That is the maximum size you can use and dredges all the berth with the back hoe and then transfers it to a dump vessel which is the larger vessel.

5

So, I've got two sister ships identical, they are 337 cubic metre self-propelled.

So, you can see how it gets quite tight in the corner here. We use the pusher boat to pull the bow around just to assist on the corner there and also for safety and then she will be away.

10

**MS WRATT:** Which marina is this on?

**MR THOMPSON:** Hobsonville. This is Shane's marina. So, we generally sail around the high tide or close to the high tide because that vessel is drawing 2.5 metres of depth and then our drive unit is sticking down about another metre below that.

15

As you can see, we're not losing any sediment. The sediment is sealed in that bin and it's literally impossible to open that bin without starting up the hydraulic system which is only started up 5 minutes before the dumpsite.

20

As you can see, the water is clear behind it. We're not losing a drop of sediment as we head out. It's like that all the way to the dumpsite.

25

This is a slightly different material than the sediment we generally dredge. This is up in New Caledonia. It shows how quickly the vessels dump their load. The sediment goes at the same speed. That's due to the weight of the material and it will head to the bottom, as we've had presented.

30

So, probably around the noise that you talk about, the sound, if we can just go back to the video on the picture of the boat and I can explain a little bit about

that vessel particularly.

5 She's got a pod drive system. She has her main engine sitting up on the main deck. It is quite a quiet vessel. If you look at the vessel there, you can see the red box just behind the wheel house at the stern of the vessel.

**CHAIR:** We can see that.

**MR THOMPSON:** That's the engine in that box. So, I'm not an expert in this field at all but we don't  
10 have it down the hull transmitting noise through the hull itself for two of my vessels. They are quite quiet and they're very low horse power. That vessel there is only 360 horse power. They're very good design and very economical and very low fuel  
15 burn which is obviously one of the main reasons we use them, and they've got quite an economical hull. If you have quite a slim vessel and quite long, they're quite easy to push through the water. That's where good economics come in, especially the  
20 way fuel prices are going these days.

So, in my belief, as a layman, is that our vessels are a lot quieter than most of the major shipping that we do see in the Gulf which is much larger but I'm definitely not an expert in this field.

25 **MS WRATT:** Your other vessels, how do they compare with these two?

**MR THOMPSON:** I have a tug which is quite a traditional tug. She has a lower speed engine, has a large caterpillar engine that's quite a low speed engine.  
30 It is a lot quieter than your Maritomos and all your fast boats that you see around the Gulf and nowhere near the horse power that was stated on the American study that they looked at. We're around 450-odd horse power. It's 378 kilowatts and you

times that, I haven't got the maths with me at the moment.

**MR BOERSEN:** I think it would be beneficial for the Panel if you explain the speeds you are travelling at and consistency of speed.

**MR THOMPSON:** Once the vessel comes into the channel and is within 500 metres of the marina, fully loaded our tug is doing 5-5.5 knots. With a barge coming home empty, the same vessel can get a rocking 7.5 knots on a good day and the tug, we have recorded at nearly 8 knots with a barge in tow. So, we're not going fast at all. Most people pass us, probably including the dolphins and whales, yeah. Yeah, if there's any questions?

15

**MARK THOMSON - QUESTIONED BY COMMITTEE MEMBERS**

**MS WRATT:** A question on the suggestion from our previous submitters. In terms of setting a noise condition set by that NOA, those NOA limits, any thoughts on that.

**MR THOMPSON:** No, I wouldn't be able to answer that, I am not an expert in that field. As a layman regarding the vessels, they aren't normally noisy compared to other vessels I've been on in my career but I wouldn't be able to suggest any limits or anything on that.

**MR MORRISON:** Just a quick one. Any evasive species on the hulls of the various vessels, we've heard the evidence but, for the purposes of this hearing, can you just outline to us how you keep the hulls clean in regards to any other nasties?

**MR THOMPSON:** Yep. So, for my power driven vessels, I need to slip them every 3 years by Maritime

New Zealand and we put a 5 year antifoul system on them. The cleaner we keep the hulls, means the more efficient the vessel runs. We want to keep them as clean as possible.

5           So, for the two Soundchems as such, we put a 5 year system on every 3 years. We've just had one of the - that vessel in particular, go to Whitianga and fanworm has been a big thing going on at the moment. We had a biosecurity certificate issued by a certified  
10           company in Auckland where they drove the vessel, took all day and checked for any evasive species. She came through with a clean report which gave me the peace of mind that we could go to Whitianga, which it has been working out of, and I'm not transmitting any nasties  
15           around the Gulf. We have slipped the vessel either the 3 year or 5 year for the non-powered barge. We haven't seen any invasive species on our hulls. If we'd started to, we would look at bringing our slipping periods forward on looking at the antifoul systems but we use a  
20           well proven commercial antifoul system, yeah.

**MS WRATT:** Just a couple of other quick questions that don't relate specifically to where we've been so far.

          We had a little bit of discussion the other day  
25           about the days that the sea state would prevent sailing.

**MR THOMPSON:** Yes.

**MS WRATT:** I am still not clear about that. Your comment was 50 days of your days that you would otherwise operate?

30 **MR THOMPSON:** Yes.

**MS WRATT:** In terms of the 365 days a year, do you have any records or can you comment on how many days in a full year would there be sea conditions in the area you're operating that would prevent you

sailing?

**MR THOMPSON:** I only know from my experience. There's only that 50 days that generally affect us at the dumpsite. Because of its location, sort of with the North Island the way the shape of it is, like I say, it's only the early direction that affects us.

**MS WRATT:** You wouldn't be dumping tomorrow with the forecast coming?

**MR THOMPSON:** No. My vessel working out of Whitianga, she's in port and the boys are off for the weekend for a long weekend. The guys had a really busy early part of the week because we could see the weather coming. The forecasting is pretty good these days. We can forecast generally 7 days in advance and we do our roster around the forecast. If we can avoid the weekends, we do, if the weather is nice during the week but if it's not then the team end up working over the weekends.

I don't see it being an issue at all because I'm running at quite a low capacity at the moment due to the current consents and current clients but I could probably double my capacity quite easily with the fleet that I have and weather would not affect me at that stage.

**MR MORRISON:** Can I just ask, you mention in the potential clients you talked about the Whitianga waterways?

**MR THOMPSON:** Yes.

**MR MORRISON:** My local knowledge tells me that's a pretty sandy sort of material and that they've done a lot of building, if you like, of islands within for residential?

**MR THOMPSON:** Yes.

**MR MORRISON:** Question, wouldn't they be using that material to continue to build their subdivision?

**MR THOMPSON:** So, in discussions with them, what has happened is literally they're building themselves out where they're running out of land available. If you go there now, I think the waterways are  
5 about 80% or 90% done and the housing is just finishing off the last few spare bits of land that they've got.

We had a meeting with them last week looking at next year starting to come in and start doing  
10 some of the dredging for them. They are talking at least in two years time that they will need to be moving it out of there and to another site.

**MR MORRISON:** Okay. So, land disposal ceases to be an option from then, that's what you're saying?

15 **MR THOMPSON:** Yeah. About 2 years they were talking, when I was talking to Lee Hopper who's the developer.

**CHAIR:** Questions from the applicant?

20

**MARK THOMPSON - QUESTIONED BY THE APPLICANT**

**MR SLYFIELD:** I wonder if Mr Thompson can help us. The  
25 Committee has heard that over the period of time that CRL has been operating there's only been two emergency dumps and I wonder if you have any knowledge about those incidents, if you can help with some understanding of what caused those and  
30 how they were handled?

**MR THOMPSON:** Yes. So, what happened on both occasions were log strikes, generally around the Colville area we've had a lot of or a few issues with logs. Obviously, the logging industry out in the



Coromandel generally lets some go down the tide,  
down the rivers. We've upped our watchkeeping in  
the Colville area channel and we tend to be  
managing that a little bit better but, yeah, we  
5 have had a couple of log strikes which has damaged,  
one damaged the steering system because we're pod  
driven, and the other one damaged the propeller  
which was vibrating. The Master made the call that  
he needed to dump the load. We've got cellphone  
10 coverage 95% of our trip, so he was able to make  
contact and we were able to talk to Council on one  
occasion because it was during the day, or to talk  
to Regional Council because we're dumping inside  
the EPA. They gave their approval.

15 We also talked to Maritime New Zealand because  
the Master was in an okay position for a couple of  
hours but it was going to take us 8 hours to get  
the tug out there to assist him, so it was decided  
for the safety of the vessel and the environment,  
20 getting rid of the load obviously takes a lot of  
weight off the vessel. The vessel is around 300  
tonne, there's 550 tonne of cargo or sediment on  
board, so it means the vessel is a lot more  
maneuverable. He moved into a safe location and  
25 then we sent a tug out immediately and he brought  
the vessel home.

So, that's sort of how it has happened. Out of  
hundreds of trips that we've done, we've had those two  
occasions.

30 Maritime audited us quite heavily after the last one  
we had to make sure our maintenance programme was up and  
we came through with flying colours because obviously  
they were concerned about the guys on the boat and about  
shipping matters.

**MS ARTHUR:** I have no questions.

**CHAIR:** Thank you, Mr Thompson.

**MR BOERSEN:** Now we have Craig Shearer, our planning  
consultant, and Craig has some feedback around the  
5 conditions that we're working through.

\*\*\*

**CRAIG SHEARER**

5 **CHAIR:** Mr Shearer, welcome.

**MR SHEARER:** Good morning, Mr Chairman and  
Commissioners. I've got some notes here that I  
would like to - (notes distributed).

I have some notes here that I will read at the start  
10 and then I'll explain what this is all about as I read  
the first couple of pages. The first page is - do you  
want me to start, Mr Chair?

**CHAIR:** Yes, Mr Shearer, you can. I shouldn't have  
looked at your conditions first, I got distracted  
15 by a word.

**MR SHEARER:** Good morning to the Committee. My name is  
Craig Shearer, as you know. I do not intend  
traversing the evidence I submitted to the  
Committee. You all would have read that and I am  
20 happy to respond to any questions you may have on  
it.

Look, I'm sorry for the size of the font. It's just  
when you have comments, it always gets reduced. I did  
try to increase it but I'm not technically competent  
25 enough to do so, so you'll have to put up with it.

In summary, I support the application. In my  
experience working with the marina industry, there is  
reliance on dumping dredged material into marina dumping  
grounds. Land-based alternatives are not viable on a  
30 large scale and many of the marinas have a backlog of  
material they need to dredge and dispose of.  
Sedimentation is an ongoing problem. And there is a  
shortage of marina berthage space, meaning extensions to  
existing marinas or more marinas are needed.

I will not elaborate at this stage as other submitters representing the Empire Capital Group have already addressed you, I thought they were going after me, and they are in a better position to elaborate on operational requirements for dredging and dumping. I think you've heard from all five of those.

5  
10 I have read many of the technical reports, the various expert witness statements and listened to some of the evidence to be presented to the Committee. Although I understand there are parties opposed to the granting of consent, I note this is not the view of the many technical experts informing the Committee. Rather, it is the possible conditions that are the focus of attention.

15 I believe the application can be granted with conditions which will ensure the proposal will comply with the requirements of the EEZ Act.

The focus of my presentation today will be on those conditions not agreed at the Planning Expert Conferencing which I attended.

20 The Planning Expert Conferencing was an excellent process and a large degree of agreement was reached amongst the parties on conditions that would be appropriate should the DMC decide to grant consent. I suggest it would be appropriate for a further conferencing session to occur to try and achieve consensus on the remaining issues. Mr Chairman, I understand arrangements are underway to try and make that happen.

**CHAIR:** Yes.

30 **MR SHEARER:** In my experience, it's always useful for Hearing Committees to receive agreed positions from the experts informing the process. However, although I am an optimist, consensus may not be achievable.

So, therefore, on the following pages I have provided my opinion for you, via notes in the right-hand column, on some of the conditions that are important to the Empire Capital Group, and that were still in  
5 contention at the conclusion of the expert conferencing. The following notes will ensure you know my position on these matters in the event differences are not resolved through further conferencing or if indeed it does not occur. I have deleted all conditions below which are  
10 agreed on or which I have no view.

What I have done, is I've deleted most of the conditions because they're either agreed on or none of us disagreed on them. And I really just highlighted the ones that we have a view on where there may not have been  
15 consensus.

**CHAIR:** Just pause there, sorry carry on first.

**MR SHEARER:** I am happy to go through them individually and am prepared to do so. You may just decide that I can table it and then if you need to refer to it  
20 later on, you can refer back to it.

**CHAIR:** Sorry, I need to talk to the Panel first.  
(Panel members confer).

Mr Slyfield I might need your advice. We as a Panel are just discussing the merits of working  
25 through a set of conditions when in actual fact all conditions are going to be considered by a further caucus of planners. In some ways, it would be better that we just come to grips with any residuals that are outstanding from any of the  
30 planners at the end of that process.

**MR SLYFIELD:** My sense is that would be a more efficient way to deal with the matter and prevent perhaps confusion by you grappling with different iterations from different planners at different

stages in the process.

**MR SHEARER:** Mr Chairman -

**CHAIR:** Mr Shearer, just wait a minute please.

**MS ARTHUR:** I think that is the right approach just to  
5 leave it. We have been having discussions  
yesterday and last night and it's continuing, so  
even some of these ones that Mr Shearer has pointed  
out, we've probably got to a different stage in the  
process.

10 **CHAIR:** I had a feeling that might be the case. Now,  
Mr Shearer?

**MR SHEARER:** I would agree as well. The reason why I've  
submitted these is we went through a Planning  
Expert Conferencing process. It is likely that we  
15 will have another one but that is not confirmed  
yet. And it's likely, and I know there are some  
subsequent to this which I see they have been  
further refined. My issue was, if I didn't put  
this in front of you now, there was a possibility I  
20 may not have had another opportunity because there  
may be no agreement further.

So, you need to know my view on the conditions as at  
the experts conferencing. Here they are. I am very  
happy for you to just have them as tabled. If we agree  
25 some further changes, as I said, I am an optimist so  
hopefully the whole lot, then you can throw this away  
because it will be of no consequence but if you don't  
agree, then you know what my opinion is.

**CHAIR:** Excellent.

30 **MR SHEARER:** I am happy to answer any questions.

**CHAIR:** Any questions?

**MR SLYFIELD:** None from me, thank you.

**MS ARTHUR:** No.

**CHAIR:** Thank you gentlemen very much. Now are we going

to - are we connected?

**MS HEWETT:** We're getting there.

5

\* \* \*

**EUGENE GEORGIADES**

(Via videoconferencing)

5

**CHAIR:** Good morning.

**MR GEORGIADES:** Good morning, how are you?

**CHAIR:** I am Mark Farnsworth, I am Chairing this DMC. I  
10 have with me Gillian Wratt on this side and Basil  
Morrison on the other side.

**MR GEORGIADES:** Nice to meet you.

**CHAIR:** Do you have any initial comments for us before  
we launch into questions?

15 **MR GEORGIADES:** Not really. I mean, the assessment was  
done by a colleague of mine, Dan Cluza. I peer  
reviewed it at the time and I was pretty much in  
agreement with what Dan came up with. So, whatever  
additional questions you might have, I'm more than  
20 happy to try and answer.

**EUGENE GEORGIADES - QUESTIONED BY COMMITTEE MEMBERS**

25

**CHAIR:** I think our questions are about risk and what  
level of risk is acceptable.

So, I'll move to Ms Wratt first to ask her  
questions. I think hers and mine actually are the same  
30 questions.

**MR GEORGIADES:** Okay.

**MS WRATT:** I guess we'll find out. Mine relate to a  
comment in some evidence from Waikato District  
Council where they mentioned two species that they



felt or one where they felt the comment was perhaps not quite correct and the other was an invasive species which hasn't been considered.

5 So, one was around window shell, with a comment that there is ubiquity across northeastern New Zealand but they commented that they felt that wasn't the case. And the other was they mentioned an invasive Australian Whelk which they say in Australia has been recorded down to 100 metres and there was a question as to whether there was  
10 any risk of that in fact establishing at the disposal site. Any comments on those?

**MR GEORGIADES:** Okay. I guess, the thing is, I mean, you've got to look at the whole pathway of the - like, these species need to be present at the  
15 actual sites dredging cells. They have to survive the dredging process. They need to survive the actual, not just the dredging process themselves, the actual, I guess, the amount of weight of sediment over them on the dredge, then over the  
20 time of the cartage to the site, and then the disposal at the site. So, if they survive all that, then they have to essentially breed or spawn and from there, potentially be transported to a site that's okay for the particular species to  
25 settle.

So, each of those diminishes the likelihood, let alone, I guess, the survival - like, particularly in biological processes and the physical process of the ocean, a lot of invertebrate species have quite  
30 large - in terms of the amount of gametes they output because of the attrition rate, whether it be predators or whether it be environment and things like that.

So, I guess in terms of likelihood, I mean we've got some model species that have been looked at. I mean, off

the top of my head, given this is information I'm only hearing today, it would be fairly unlikely.

**MS WRATT:** I think probably the one that seems of most risk potentially would be, and I'm now looking at their comment, which is:

"There has been no consideration of the invasive Australian Whelk. The species arrived in 2009 and is now common in muddy sandy sediments in Waitemata and Whangarei Harbours, not recorded in bioresearch and surveys. This species has been recorded in the intertidal damage to 100 metres depth in Australia. Given the NDA of 130-140 metres deep, this species is highly ... the NDA is potentially more invasive than other species listed".

**MR GEORGIADES:** I guess of any of the things listed that I've seen in the reports, it's probably the one that I guess is more likely than the others.

**MS WRATT:** Okay.

**CHAIR:** But the threat is low?

**MR GEORGIADES:** Yeah, I guess that's the thing, it's got to be picked up and it's got to survive the whole process. This is the conservatism inherent in the model that was conducted. It was just basically looking at particles and the survivability of those particles pretty much during essentially the whole process from the disposal to being beached, right? It didn't have an attrition rate and typically the attrition rate of invertebrate fertilised gametes and the larvae is quite high. So, yeah, it's probably on the low end of likely but, I mean, you know, it does seem to have a life cycle that is more conducive than the other species. So, bear in mind it may be worth looking at a bit further.

**MS WRATT:** So, if, for example, this organism was present in an area that was being dredged, would there be a particular process that MPI, Biosecurity New Zealand, would go through?

5 **MR GEORGIADES:** Essentially, I think what would happen is we'd actually have a look at the life cycle of the organism to actually do a risk assessment and then talk to the relevant people within MPI on the outcomes of that assessment.

10 **MS WRATT:** So, is that something that you would do if it was present or are you saying that's something you might do if it was present?

**MR GEORGIADES:** I guess, the question has to be asked, right? I guess if due diligence was done, it's  
15 like maybe that's something that needs to be assessed before the dredging takes place. So, essentially if the outcome of the assessment says, well, the risk is negligible, then they can just go ahead but is someone going to be there each side  
20 doing a species identification, I guess is the question. If not, then it's probably best to do the assessment beforehand.

**MS WRATT:** Okay, thanks for that.

**CHAIR:** Thank you. Just one other question from me.

25 **MR GEORGIADES:** Yep.

**CHAIR:** And that's MPI's concern, well not concern, view on the potential of shallow water effects, given that there may be, although there's a very low probability of an accidental spill, sorry an  
30 emergency dumping?

**MR GEORGIADES:** I guess it depends where the emergency dumping takes place, right? Obviously, the closer the coastal areas and the more shallow, you know, potentially the higher likelihood of level survival

and then sediment in an ideal sediment place, I guess.

But a lot of those probabilities are very hard to determine which is why, you know, the MetOcean model had all that inbuilt conservatism because as soon as you start digging into specifics, then the potential for error is quite large.

**CHAIR:** Okay, thank you. Applicant, any questions?

**MR SLYFIELD:** Just one.

10

**EUGENE GEORGIADES - QUESTIONED BY MR SLYFIELD**

15 **MR SLYFIELD:** I hope you can hear me.

**MR GEORGIADES:** Yep.

**MR SLYFIELD:** I am the lawyer for Coastal Resources Limited and I have one question just on conditions of consent. I don't know how familiar you are with the proposed set of conditions?

20

**MR GEORGIADES:** About zero.

**MR SLYFIELD:** Let me describe the nature of the condition to you and then just ask for your comment on it. It is a condition that requires the applicant to undertake biological testing on source sites before any material can be dredged from those sites.

25

**MR GEORGIADES:** Yep.

**MR SLYFIELD:** And the condition requires the results of that assessment to be provided to MPI.

30

**MR GEORGIADES:** Okay.

**MR SLYFIELD:** I am wondering really, whether that would, in your mind, act as a trigger for any action on MPI's part, depending on of course what's contained

in that assessment?

**MR GEORGIADES:** I guess the answer is potentially.

Look, to be fair, I am just a scientist, I give risk advice. Like, I don't make the decisions, I just give advice. So, yeah, look, depending on what is found and depending on the assessment of what is found, could potentially trigger decisions further down the line, I guess. But, I mean, it's dealing in the theoretical. It seems the best practice is being applied in terms of, you know, doing that biological monitoring before dredging takes place and essentially, that's all you can ask, right?

**MR SLYFIELD:** Thank you, I think that's a fair answer.

**CHAIR:** Department of Conservation?

**MS ARTHUR:** No, Sir.

**CHAIR:** Thank you very much for taking the time to address our small number of questions. We appreciate the effort that you've made, thank you.

**MR GEORGIADES:** Thank you very much, I hope it's helped.

**CHAIR:** It has helped. Have a good day.

**MR GEORGIADES:** Okay, you too, thank you.

**MS WRATT:** Thank you.

**CHAIR:** Thank you. We will just pause for a minute while I get some advice on behalf of the Committee. (Short pause). What we're going to do, we've been trying to get people here, so we're going to take an early break for lunch now and be back here at 1 o'clock when we'll have the final presentation for the day. So, we stand adjourn until 1 o'clock, thank you very much.

Sorry, can we just stop? Boy, just as well I've got reminders! Where are we at about the comments about Tuesday of next week?

**MR SLYFIELD:** It's fully supported by the applicant.

The only reservation I have is around Ms Clerk's ability to grapple with the evolution of the conditions between now and then. I understand she  
5 has some limitation on her availability over the weekend but she's got some time today and we're working to try and progress it.

**CHAIR:** Excellent. What we will do is we will take it on a rolling review type basis and we'll look at it  
10 on Monday and Tuesday. Thank you.

**Hearing adjourned from 11.45 a.m. until 1.46 p.m.**

15

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**ALISON UNDORF-LAY**

5 **CHAIR:** Okay, people, we are reconvened and welcome to our next person from Sanford.

Just quickly introduce yourself. Sorry, I should say, I am Mark Farnsworth, I am the Panel Chair. I am assisted in this by Gillian Wratt on this side and Basil  
10 Morrison on the other side, welcome.

**MS UNDORF-LAY:** Thank you very much. My name is - have I got 10 minutes?

**CHAIR:** Yes.

**MS UNDORF-LAY:** Or I can -

15 **CHAIR:** We can give you as long as you need.

**MR MORRISON:** It is Friday.

**CHAIR:** Just bear in mind, I've got to face the Northland traffic.

**MS UNDORF-LAY:** Okay, okay. My name is Alison  
20 Undorf-Lay and I work for Sanford. I am the industry liaison manager in Sanford and have been working at Sanford for 9 years.

I am on the senior management team and my primary responsibilities are across wild harvest and aquaculture,  
25 in terms of the engagement and policy and submissions that Sanford would make in issues such as this and with Regional Councils and government.

So, I'll just work through this. I have written it in a reasonably informal manner. I wanted to first say  
30 that Sanford has significant commercial interests in aquaculture, mussel farming and processing and wild harvest fishing. We are a quota owner and we are also a wild catch fisher along the East Coast of the North Island and including inside the Hauraki Gulf.

Sanford has marine farms that are sited, in our view, down-current, down-wind of the proposed dumpsite that we believe could, over time, be adversely affected by the applicant's proposed activities via cumulative effects from increased suspended sedimentation in the water column, elevated heavy metals and an elevated risk of biosecurity.

5

In respect to this application, Sanford's wild harvest fishing interests were covered in the submission presented by Fisheries Inshore New Zealand.

10

Cedenco Foods, which is also a co-submitter in this submission today, owns marine farms located in both the Auckland and Waikato coastal marine areas that are also down-current, down-wind of the proposed dumpsite.

15

Together, Sanford and Cedenco have a joint venture aquaculture business, called North Island Mussel Limited. An abbreviation we call that NIML. The JV includes marine farms, a farm management business located on the northern end of the Coromandel town and a mussel processing plant in Tauranga.

20

Attached, and I have put those just at the back of the submission, are two maps which show areas where Sanford and NIML hold existing marine rights in aquaculture and we provided these maps to the EPA about one and a half months ago.

25

The value of the existing assets held by Sanford and NIML within the area indicated by these circles is in excess of \$54 million. That can be broken down to Sanford owning 120 hectares of consented marine farming space where we have 320 lines, long lines in the water.

30

NIML has 250 hectares of consented marine space and 1,000 lines.

In our view, farming space in this area trades at \$100,000 a hectare. The value of mussel lines, in terms



of the capital asset, is \$12,000 per 100 metres. So, that's how we've got to the \$54 million.

5 The position that Sanford took, and NIML took, into lodging this application or when the application was lodged, the submission that we lodged, was to oppose the application. And we've worked together to both meet the applicant and to present this oral submission.

10 Given our commercial interests in this area and the potential that these investments could be adversely affected, we think that our application is greater than that of the general public.

15 Sanford and NIML met with the applicant and their consultants. The meeting was cordial and resulted in some changes to the proposed conditions that we picked up on from reading the joint witness statement circulated by the EPA on the 28th of November. These changes go some way towards meeting our concerns.

20 The outstanding issues that Sanford and Cedenco have with this application is that we share the same ocean environment as the applicant. Our experience of similar discharge and dumping activities, such as the Lyttleton Port Company's channel extension capital works consent, is that the conditions on the consent should explicitly set out how the consent holder engages with affected parties.

25 To this end, we would appreciate the inclusion of a north disposal area liaison group, as proposed in condition 24, but add the following comments:

- 30 1. We would prefer that the group be called North Disposal Area Technical Advisory Group, TAG in short.
2. We request that included in the consent conditions that the purpose and the role of the TAG is set out and provides for technical advice into planning and ongoing operation of the consent including the

development of management plans, adaptive measures and monitoring.

5           3. That the consent holder should keep the TAG informed and involved throughout the life of the consent so that TAG members are in a position to give appropriate and timely feedback.

10           4. The TAG marine farming representatives be provided with an opportunity to propose two monitoring sites on existing marine farms - the details of what is monitored to be agreed with the consent holder and provided to the EPA prior to the consent being activated.

15           5. The consent holder to engage an independent marine biologist with marine farming/biosecurity experience as a member of the TAG.

20           6. Sanford and NIML do not require two places on the TAG. Rather, we propose that the second position be allocated to a representative of the Coromandel Marine Farmers Association, which is the industry grower collective that represents all marine farmers in the area.

          7. Other existing users and iwi holding tangata whenua rights to be invited to join the TAG.

25           8. The TAG to meet six monthly over the life of the consent and for at least five years after the expiry of the consent.

30           9. The consent holder at each six monthly meeting, and via bi-monthly email communications in between, provide information to the TAG including the volume and number of dumping and scheduled dumping events, any breaching of triggers and adaptive management responses actioned particularly as they relate to: the dumped soil - volume and plume spread, water quality, heavy metals, biosecurity risk (both at the dredging site and in dumped materials), unanticipated effects and adaptive

management responses and incidents of complaints and non-compliance.

10. The TAG to be invited to comment as part of the consent holders' annual monitoring and reporting requirements and TAG feedback and suggestions recorded in the reports provided to the EPA - whether they have been actioned, and if not why not.

Further relief that we seek. Sanford and NIML submit that the suggestions in clauses 1-10 above be included in the consent conditions, as subsections of condition 24.

Finally, we had proposed that the consent holder be required to consider off-setting contributions to assist in remedying potential adverse effects on the marine environment. As far as we can see, this suggestion has not been acted on and we suggest the following.

An annual financial contribution be made to the conveying of species living in the marine environment of the proposed dumpsite, or to organisations involved in their protection, such as for Southern Seabirds Solutions Trust and its work in black petrels or the beach clean up groups like Sustainable Coastlines or Sea Cleaners.

While the sum of the contribution and the recipient should be at the consent holder's discretion, we think the condition requiring off-setting should be written in. This is because we've seen no evidence of a desire to voluntary gift.

**ALISON UNDORF-LAY - QUESTIONED BY COMMITTEE MEMBERS**

**CHAIR:** I need a couple of points of clarification from you, please. How do you see the dumping in the NDA

affecting your marine farms on the West Coast of Great Barrier?

**MS UNDORF-LAY:** Okay.

**CHAIR:** And you need to tell me, you know, on what you  
5 base that on.

**MS UNDORF-LAY:** Okay. Well, we met with the applicant once and we provided to the applicant, we expressed to the applicant our concern about the hydrodynamic effects of the plume over time. And we gave some  
10 suggestions on how we thought that could be addressed and they weren't addressed. So, we haven't seen any conclusive evidence.

We also asked the applicant to - we provided some names of some people that we thought would be appropriate  
15 who understood aquaculture that would be able to give some technical advice as to the amount of risk on our marine farms. That hasn't been done. So, at this point, we are working on the assumption that potentially the re-suspension of those sediments once they've settled  
20 could potentially come down and meet our farms at some point in the future.

Given that this consent is for a very long time and we've got a significant financial asset in the area, we're prepared to put the time in to attend the TAG  
25 meetings.

**CHAIR:** Okay.

**MS UNDORF-LAY:** We are not asking for recompense or anything like that. We are basically asking that through the life of the consent we're kept informed  
30 and engaged.

**CHAIR:** Okay. Let's just traverse a couple of areas. We've had evidence that, first, the site is a retentative one. Because of its depth, there is going to be just about a negligible possibility of

resuspension from the dumping area.

Secondly, there is going to be a low probability of any major sedimentation beyond the boundary of the NDA.

**MS UNDORF-LAY:** If that's the case, then that is  
5 fantastic and I would suspect that the TAG, after  
it had been meeting for a couple of years, said,  
okay, we're satisfied that there's not a concern.

**CHAIR:** So, have you thought -

**MS UNDORF-LAY:** Currently, we're only basing these  
10 assumptions on modelling.

**CHAIR:** But have you read any of the evidence which has  
been put before us in the last couple of days?

**MS UNDORF-LAY:** No. I've read what the applicants have  
provided me but not the expert evidence in the last  
15 two days.

**CHAIR:** Okay.

**MS UNDORF-LAY:** That said, we are not actually opposed  
to the application. We're simply saying that we  
would like to be engaged and to have an opportunity  
20 to be kept informed of the process. Currently, the  
applicant is proposing to meet once a year and  
simply provide a summary of their activities. At  
that level of engagement, it's very difficult to  
provide an informed opinion back.

25 **CHAIR:** So, how far are the Thames Coromandel  
aquacultural units from the NDA, how many  
kilometres?

**MS UNDORF-LAY:** I'll answer that in a different way. I  
was in Tasmania recently and they were explaining  
30 to me that they had a severe weather event where  
they lost some equipment and that equipment landed  
up in New Zealand only a couple of weeks later on a  
beach.

**CHAIR:** Actually, you need to answer the question. I

understand what extreme weather events are. What is the distance from the NDA to the farms?

**MS UNDORF-LAY:** I have provided you the map. I have provided you the map and these circles indicate the level of interest. That's not one marine farm, that is basically the size of the circle in relation to the size of the investment that we have.

**CHAIR:** I've visited in another capacity. I am very familiar with it, so you are very fortunate I have traversed those areas. That's all from me.

**MR MORRISON:** Following on from the Chair's questions, I was born and still live in the area and I just struggle, the Chair has asked the question, with any drift that may come from the site down onto opposite Coromandel and further down to Waikawau and the main farms off there.

You are just giving this as an illustration, aren't you?

**MS UNDORF-LAY:** How do you mean?

**MR MORRISON:** Well, you're not saying that that's not where the drift could be?

**MS UNDORF-LAY:** No, absolutely not. These maps are showing you where our assets are sitting in the water.

**MR MORRISON:** Okay, that's good. Now, the second thing is, your comment at the end there, that you're not opposed to the proposition as long as you're involved in your suggestion of the TAG Group; is that about right?

**MS UNDORF-LAY:** And that the TAG Group is given a more defined purpose role and opportunity to engage.

And if at some point in the future it's deemed to be unnecessary, then I think the evolution of the process

will be you might want to write another condition into that, that says if at some point the members of the TAG agree it's not necessary to meet so frequently, that could go in as well.

5 **MR MORRISON:** Okay, thank you.

**MS WRATT:** Thank you for those comments. I have a couple of specific questions around the proposed conditions.

Your proposed condition 4, I appreciate it does only  
10 say that the TAG marine farming representatives be provided with opportunity to propose two monitoring sites. We have had quite a lot of information come back to us, in terms of the oceanographic analysis and the marine biology of the area. So, we as a DMC have had  
15 some independent reports back as well.

The information that we have received is it would be very hard to monitor, it's going to be very hard to monitor even at the boundary of the NDA any total suspended sediments, for example. Technically, that will  
20 actually be because of the likely very low level of total suspended sediments and any additional sediments from this activity and that has been discussed in joint conferencing and agreed by the experts.

So, my question is, do you think it is actually  
25 realistic to identify something which can feasibly be monitored at your marine farm sites which are a significant distance from the NDA, from the site?

**MS UNDORF-LAY:** Okay, so, we asked for the opportunity  
for the discussion. When we met with the  
30 applicant, we proposed these conditions and we had no further communications with them. So, from my perspective, I think there needs to be a conversation where we sit down and say, what could this monitoring look like? It's not necessarily

that the applicant monitor. It might be that Sanford monitors. We already do significant monitoring on our marine farms but it's about engagement.

5           And what I'm experiencing in other places, if these kinds of requirements are not written into consent conditions, is they don't happen.

**MS WRATT:** So, what you're raising is an issue around engagement and consultation. I'd still question whether, I mean monitoring on a marine farm on the western side of Great Barrier Island or on the inner coastline of the Coromandel, I mean how are you ever going to detect what has come from a dumping site off the eastern coast in the EEZ, as opposed to any other source of sediment or -

10  
15  
**MS UNDORF-LAY:** You're not going to. I mean, it's about - obviously there's nuances like El Nino and El Nina and productivity, all those sorts of things. I understand it's complicated but I think there should be the discussion.

20  
25           Now, I circulated the submission amongst the marine farmers in the Coromandel that work for Sanford and we all agreed that it wasn't unreasonable to have the discussion to see what we could monitor.

**MS WRATT:** Okay, thank you. Another question in relation to the composition of the TAG, you comment that - you suggest the invitation of other existing users and iwi holding tangata whenua rights. I guess, just to confirm, what you're suggesting, in fact, is just one, a single stakeholder group which you detail as the Technical Advisory Group how you think you would like to see that look?

**MS UNDORF-LAY:** That's right.



**MS WRATT:** Those are my questions, thank you.

**CHAIR:** Just one comment. We're precluded by the Act to involve any condition which smacks of adaptive management. We are not allowed to do it. It is a legislative restriction on us. So, the conditions have to be certain. So, adaptive management is not within our gambit.

**MS UNDORF-LAY:** I was actually thinking that the adaptive management is more likely to come through the Environmental Management Plan that the applicant will do.

**CHAIR:** I don't think that's even allowed. There's been a recent Court case which has kind of set the benchmark for what we can do and what we can't do.

**MS UNDORF-LAY:** Okay, well that's unfortunate for the applicant because it definitely gives them more flexibility.

**CHAIR:** Absolutely, and that's been known, the lack of flexibility.

**MS WRATT:** The applicant will be able to change things that they do as a course of managing the activity but the legislation, in terms of dumping, specifically identifies in the legislation that adaptive management is not a response that is allowed within a consent for dumping. It's quite clear and, as the Chair said, there has been a recent Court case on that.

**CHAIR:** Moving to the Department of Conservation, any questions?

**MS ARTHUR:** No questions.

**CHAIR:** The applicant, any questions?

**MR SLYFIELD:** No questions.

**CHAIR:** Thank you very much for coming. I am sorry that you had to drag your way out from Auckland out here

but thank you for coming in.

**MS UNDORF-LAY:** Thank you.

**CHAIR:** Ladies and gentlemen, I better get some advice  
from staff, that concludes? Yes, ladies and  
5 gentlemen, we are adjourned for the day. The venue  
for the hearing shifts to Auckland Central on  
Monday. Gen, 9.30?

**MS HEWETT:** Yes.

**CHAIR:** 9.30 on Monday. I and the Panel look forward to  
10 seeing you all on Monday morning. We will  
diligently do our reading over the weekend because  
it's going to be wet. Thank you, travel safely  
everyone, thank you.

15

**Hearing adjourned at 2.12 p.m.**