TRANSCRIPT OF PROCEEDINGS

ENVIRONMENTAL PROTECTION AUTHORITY
HEARING

Chatham Rock Phosphate Limited
Marine Consent Application

HEARING at
NORWOOD ROOM, RA VANCE STAND,
BASIN RESERVE, WELLINGTON
on 26 SEPTEMBER 2014

DECISION-MAKING COMMITTEE:
Neil Walter (Chairperson)
Dr Nicki Crauford (EPA Board Representative)
Dr Gregory Ryder (Committee Member)
Lenny Johns (Committee Member)
David Hill (Committee Member)
CHAIRPERSON: Well, good morning and welcome to day two of the hearing. We are not trying to confuse you by coming in through a different entrance each day, but the door was locked out there and I’m not sure if we should read something into that or not.

On the programme today, first, the remaining four opening statements, first from Mr Currie on behalf of Greenpeace, the Deep Sea Conservation Coalition, and Kiwis Against Seabed Mining, and incidentally I do commend those organisations for having joined forces behind one presenter which is exactly what we’ve been encouraging people to do.

Second will be the Deepwater Group, then comes the Royal Forest and Bird Protection Society, and finally we hear from the Environmental Defence Society.

We will try somewhere in there to fit in a tea break around 11 o’clock, and once again there will be no questions of opening statements, apart perhaps from the committee.

Then we begin what you might call the regular representations from groups and individuals. The applicant will lead off this afternoon with representations from Mr Chris Castle, Dr Robin Falconer and Mr Ray Wood, and as I mentioned yesterday the committee will have first crack at questioning and I will then invite questions from parties which have given advanced notification of their questions, and finally there will be an opportunity for other parties to ask questions, but we do have a full programme, we will be anxious to keep things moving and to avoid repetition.

So that’s the day’s programme, and just before starting I’ve got two brief announcements to make on behalf of the committee.

First, I remind you that all participating parties are invited to submit their views on the CRP’s application to extend the deadline for the staff report. Please ensure that any responses are with our secretariat by 5.00 pm on Monday, and I think the application itself and the direction from the committee are to go on the website this morning and possibly will be emailed out.

Second, in the Crown’s opening statement yesterday reference was made to a memorandum that related to uranium levels present in the Chatham Rise Phosphate and its potential implications, we understand that the applicant had provided email advice to the Crown on this
matter and the Crown suggested it might be helpful for that advice to be provided as an addition to the evidence that is available to all parties. We don’t know what the advice says, but if CRP are willing to provide it on that basis we would certainly be prepared to grant leave to do that, and I will perhaps leave it with CRP to consider that and - - -

MR WINCHESTER: I was going to address the committee on that this morning, sir, just as a matter of housekeeping.

We have contacted the author of the email, who is also one of the witnesses, Dr Bull, and he is going to transform the email into a short supplementary statement, so with your leave that will be filed as a supplementary statement to go on the record and should be with the committee no later than Monday.

CHAIRPERSON: Fine, thanks very much indeed. You certainly have leave to do that and we look forward to receiving it.

Okay, so now I invite Mr Currie to deliver his opening statement.

MR CURRIE: Thank you, Mr Chairman. If I may, just on that particular point, sir, certainly we have one witness who has given evidence on uranium and I know there’s been at least one radioactive expert conference which has reported, so obviously not having seen the evidence, sir, I don’t know whether it will be necessary, but perhaps it will be necessary to reserve the opportunity to make some brief supplementary statement if necessary.

CHAIRPERSON: Fine.

[9.07 am]

MR CURRIE: Thank you, Mr Chairman.

These opening submissions are made on behalf of Kiwis Against Seabed Mining (which is KASM), Greenpeace New Zealand (Greenpeace) and the Deep Sea Conservation Coalition (DSCC), which I have called the three submitters for brevity, and this is a joint submission as you have stated, sir, in the interests of time and efficiency, and except where otherwise stated all three share in the submission and the views stated.

By way of introduction, DSCC is a coalition of over 70 non-governmental organisations around the world concerned with deep sea conservation, the New Zealand branch of DSCC similarly aims to protect and preserve the marine environment of the seabed and subsoil.
Greenpeace, which I should also add, sir, is actually a member of the Deep Sea Conservation Coalition as well, is the New Zealand office of Greenpeace International which has 24 million supporters worldwide and offices in 40 countries.

KASM was incorporated in 2006 and is focused on seabed mining. KASM was an active submitter in the TTR ironsands proposal which was heard earlier this year and is a respondent in the High Court Appeal by TTR against the decision of the DMC in that case to decline consent. The first pre-hearing conference was held on Tuesday of this week.

The three submitters oppose the proposed activity and submit that the application should be declined in full as it will negatively impact both the mining area and the area surrounding the mining site, as well as the affected marine environment, killing corals and other benthic life, causing the ecosystem stress and reducing the ability for life in the water column and particularly on the seabed to exist, thus degrading the quality of the ocean as a whole.

This runs contrary to kaitiakitanga stewardship by both tangata whenua and coastal communities over the environment.

Potential adverse effects of the mining application are identified in our expert evidence and specifically include effects on the marine biodiversity, the benthos and marine mammals, and the impact of uranium on the marine environment.

We have combined evidence by the three submitters to save the hearing time and where possible we have endeavoured not to duplicate evidence by other submitters.

With respect to the impact of uranium, KASM, Greenpeace and DSCC will also call a non-expert witness, Dr Dave Santillo, to give evidence on the regulation and international policy on the release of radioactive material into the marine environment.

We have two preliminary procedural matters to which we would like to draw the attention of the DMC. Firstly, in our memorandum of 12 September and again on 17 September, we raised with the DMC several concerns we have with regard to the exchange and preparation of evidence for this hearing.

Principally, evidence of the applicant being filed late or not at all, experts who have filed evidence failing to appear at expert
conferencing, causing postponements at short notice, and where experts whose reports the applicant has relied on in their application were not called as witnesses.

In the interests of fairness and natural justice, all parties, by which we mean participants in this process, must be held against the same standard.

Mr Chairman, if our experts cannot meet deadlines or attend expert conferencing we would not have called them, it’s as simple as that.

Furthermore, where the applicant has not allowed other parties to respond to its experts’ evidence because it is either submitted late or where an experts’ report is relied on with the applicant’s application but not called as a witness, the DMC is, in our submission, hindered in its ability to make a decision based on the best available information in accordance with section 34 of the Act.

This is both a requirement of the Act and natural justice.

We repeat that the three submitters are voluntary and public interest organisations without legal aid funding. While we will continue to meet deadlines and commitments we submit that it is unfair for the applicant and others to increase costs to ourselves while claiming that there is no prejudice. There most certainly has been prejudice in the delays and extensions to date.

The very late expert conference on marine mammals in October will, in our submission, seriously hamper the ability of the DMC to obtain the best available information on effects of marine mammals. Real difficulties will arise if experts give evidence before the joint witness statement is available.

Finally, on procedural matters, one hallmark of this application is that a number of reports have been presented, such as by Lee Torez, where the author is not called as a witness. In other matters, as with Dr Ashley Rowden, an author has written a number of reports but is only called on restricted matters. In these cases the report in question, in our submission, must be given very little weight indeed where the author is not presented to questioning.

Moving beyond procedural matters, this submission, like our evidence, focuses on legal matters and some evidential matters, particularly benthic effects, marine mammals and the effect of uranium on the marine environment.
This submission discusses some statutory provisions, international legal provisions and discusses evidential matters. It particularly focuses on the issue of uncertainty and the inadequacies of any adaptive management approach to meet that uncertainty.

By way of summary, as noted in our submission, this application fails to provide active protection of Māori interests and taonga, particularly over fisheries as afforded by section 12, it also negates kaitiakitanga by tangata whenua over the environment and further submissions on this will be made by KASM in the Hamilton hearing.

[9.12 am]

The application fails to satisfy the requirements of sections 10, 11 and 12 as well as section 59 of the Act. The assessment of environmental effects is flawed being based on incomplete scientific research and therefore does not supply an adequate baseline study, nor does it adequately describes the effects of the mining proposal.

In our submission the EPA should not have accepted it as complete and should have returned it as incomplete under section 41 of the Act. The application will not promote the sustainable management of natural resources of the exclusive economic zone or EEZ and the continental shelf as is required by section 10.

It will not sustain the potential of natural resources excluding minerals to meet the reasonably foreseeable needs of future generations and will not safeguard the life supporting capacity of the environment. The application will fail to avoid remedy or mitigate adverse effects appropriately, give the material uncertainty and lack of essential information including baselines and adequate assessment of effects.

An adaptive management approach will not allow the activity to be undertaken under section 61 of the Act. The application will run contrary to New Zealand’s obligations under various international conventions relating to the marine environment including the United Nations Convention on the law of the sea, the convention on biological diversity and the Noumea Convention and will not enable New Zealand to protect and preserve the marine environment and it is not in accordance with New Zealand’s duty to protect and preserve the marine environment, all these matter are relevant under section 11 of the Act.

A precautionary approach to this proposal is required in light of the many scientific uncertainties and section 62.2 should be applied to decline the application. Turning to the TTR decision a few notes, sir, as we noted KASM was an active participant in the TTR hearing and is
currently respondent in the appeal. We submit in contrast to the applicant which is paragraph of their submission yesterday that the appeal should be given no weight by the DMC.

It is subdued to say sir and indeed may not be determined by the time the DMC must makes its decision however the decision of the TTR DMC itself in our submission is a matter to which the DMC should pay some regard. Section 59.2 of the Act requires the DMC to take into account any other matters the EPA considers relevant and reasonably necessary to determine the application.

While of course the factual situations of the two applications are different and the TTR decision is not binding on the DMC, the TTR decision was the first arising under the Act and the TTR DMC had to address a number of matters arising under the Act that this DMC will have to address.

The DMC should in our submission at least read the TTR decision and consider the ways in which it addresses various matters. The applicant in its opening submissions stated that there were important differences between the consent applications. We would submit that one important difference is that TTR made a specific proposal with details of the mining vessel and procedures. Here there is a only a general proposal, this is very deep, up to 450 metres giving rise to very different uncertainties, engineering challenges, difficulties in mining monitoring and research and environmental effects on the benthos.

The TTR matter involved potential damage to coral through sediment but this matter involves direct destruction of deep water coral. This matter is the first deep water mining application of which we are aware other than one in Papua New Guinea for sulphate mining which is yet to commence.

The deep sea conservation coalition underlines international concern with this deep seabed mining application. While the applicant noted some differences there are a number of similarities including in our submission the importance of the plume and modelling and accompanying uncertainties, the smothering of benthic life, inadequacies in the baseline information and environmental impact assessment, uncertainties in the marine mammal presence and in rehabilitation and recolonisation of mined areas and effects on marine life and on fisheries.

Turning to consultation and environmental effects. The three submitters note and strongly rebut CRPs assertion made yesterday that it or its submissions to support commercial fishing or acquiesce to the effects
of commercial fishing. This assertion is without foundation and false. Greenpeace and the SSE neither support nor oppose commercial fishing as such. Greenpeace and the SSE oppose destructive and unsustainable fishing practices and have done so for many, many years.

The SSE has since its inception in 2006 consistently opposed damage to the deep water ecosystem caused by bottom trawling and it continues to do so very actively around the world. It is a leading international NGO and environmental Act opposing destructive bottom trawling and unsustainable fishing of deep water species. This is well known to the fishing industry.

[9.17 am]

Greenpeace is also well known to activity oppose destructive fishing practices including bottom trawling as well as unsustainable fishing. KASM, Mr Chairman, focuses solely on seabed mining. It neither supports nor opposes the commercial fishing industry as such, that the fishing industry opposes the seabed mining proposal, as does KASM, it cannot be construed as KASM supporting or opposing fishing.

While KASM is focused on the impact of seabed mining on the ocean environment, KASM is generally opposed to any unsustainable and damage in practices in the coastal and marine area. KASM provided witness statements on the following topics, *(INDISTINCT 5.37)* of marine mammals, Barrie Peake, on the impacts on uranium on the marine environment, Ms Watling on benthic impacts and Davison Tillo *(ph 05.42)* on international policy and regulatory environment and best practices for the disposal at sea of radioactive substances.

Turning to statutory matters we will endeavour to avoid repeating submissions of other submitters on statutory matters but we will highlight some specific issues relating to the issue of scientific uncertainty and adaptive management approaches.

Turning to scientific uncertainty section 10 of the Act makes it clear that the purpose of the Act is to promote the sustainable management of the natural resources of the exclusive economic zone and of the continental shelf. Economic wellbeing is not defined but clearly the economic wellbeing of people is to be provided for. It is to be done while sustaining the potential of natural resources excluding minerals to meet the reasonably foreseeable needs of future generations and (b) safeguarding the life supporting capacity of the environment and (c) avoiding remedying or mitigating any adverse effects of activities on the marine environment.
In our submission all three requirements must be satisfied in order to achieve the purpose of the Act. The Supreme Court in the case EDS versus King Salmon which is in my friend’s bundle of authorities made it clear that while means at the same time. As the Supreme Court said as we see it the use of the word “while” before paragraphs A, B and C means that these paragraphs must be observed in the course of the management referred to in the opening part of the definition. Therefore it is in our submission beyond doubt in light of this very recent and authoritative decision that section 10 requires the DMC to be satisfied that parts A, B and C will be satisfied.

We note in this context that the Supreme Court did not contrary to the submissions of CRP yesterday decide that paragraphs A, B and C are not environmental bottom lines as such but are to be weighted in the balancing exercise, rather the Supreme Court held that the definition of sustainable management should be read as an integrated whole and I have quoted I think rather sensibly from the case, I will read the parts in bold with your permission, sir.

The use of the word “protection” links particularly to subparagraph C, in addition the opening part uses the words “at a way, or at a rate” these words link particularly to the intergenerational interests in subparagraphs A and B. As we see it the use of the word “while” before subparagraphs A, B and C means that those paragraphs must be observed in the course of the management referred to in the opening part of the definition that is “while” means at the same time as and the Supreme Court went onto say and fourthly and the parts in bold, “the definition indicates that environmental protection is a core element of sustainable management”.

Sir, if you turn to paragraph 19 we have quoted the EDS decision at length because in our submission far from supporting CRP’s assertions it holds the opposite. Since as CRP notes the definition of sustainable management in the Act is similar the EDS decision carries considerable weight, in particular “while” means at the same time as, it is not a balancing exercise and paragraphs A through C must be realised.

Nor do the three submitters share the restrictive view expressed by counsel for CRP yesterday that the EPA should not manage the effects on the environment except for they fall within the definition of natural resources. Firstly, we note that natural resources includes all forms of organisms in the exclusive economic zone as well as sub soil sedentary species on the continental shelf, now sedentary species sir, are obviously species that are sitting on the continental shelf in general.
Secondly, sections 10 define sustainable management as managing the use, development and protection of natural resources in a way or at a rate that enables people to provide for the economic wellbeing while achieving the state of paragraphs A through C such as safeguarding the life supporting capacity of the environment. Thus it is clear particularly from the EDS’ case that in managing the use, development and protection I have emphasised of natural resources, the DMC must support the life supporting capacity of the environment.

[9.22 am]

Now turning to information principles, under section 10 “in order to achieve the statutory purpose decision makers must a) take into account decision making criteria specified in relation to particular decisions and; b) apply the information principles to consideration of applications for marine consent”.

In section 61 of the Act provides information principles and again, sir, I’ll just read the parts I’ve highlighted. “b) base decisions on the best available information; c) take into account any uncertainty or inadequacy in the information available.” And then subsection two, “if in relation to making a decision under this Act the information available is uncertain or inadequate, the EPA must favour caution and environmental protection.”

Moving to paragraph 5, the section states that “in this section best available information means the best information that in the particular circumstances is available without unreasonable cost, time or effort.”

CRP claimed yesterday that the DMC has the best available information on marine mammals. We submit this is incorrect, and based on the evidence of Associate Professor Slooten, CRP should have undertaken scientifically robust acoustic and visual surveys.

Such surveys are in our submission basic and entirely necessary, let alone being reasonable. It is essential to know what marine mammals are or maybe in the vicinity, and maybe affected by the proposed activity. It is entirely reasonable, and we submit essential, to undertake best practice studies as part of the EAA. Dr Torres, in her report noted the CRP is relying on data sets of opportunist sightings auscultation species, and due limited citation, distribution data over the Chatham Rise it is difficult to assess the impact from the dredging operations and the disposal system auscultations. That’s their own report, sir.

Dr Childerhouse states that perhaps the single biggest limitation of the application is that the applicant has not provided any data from
dedicated and systematic marine mammal surveys of the proposed mining area and therefore there is virtually no data derived specifically from the area in question upon which to base any conclusions. He also states that more robust marine mammal data could have been collected relatively easily through the use of dedicated marine mammal observers on board vessels traveling to the area for other survey work.

However, sir, if no further information is available that leaves the DMC with paragraph 61.1C and 61.2, meaning the DMC must then “take into account any uncertainty or inadequacy in the information available, and if in relation to making a decision under this Act the information available is uncertain or inadequate the EPA must…” that is “must” sir, “…favour caution and environmental protection.”

(INDISTINCT 3.00) that section 61 incorporates the precautionary approach. In our submission the precautionary approach is different, and while it is still applicable it is not stated, in our submission, section 61.2, which states that “if in relation to making a decision under the Act the information available is uncertain or inadequate the EPA must favour caution and environmental protection.”

The precautionary approach is, however, stated in principle 15 of the 1992 Rio Declaration which reads in principle that “in order to protect the environment the precautionary approach shall be widely applied by states according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainly shall not be used as a reason for postponing cost effective measures to prevent environmental degradation.”

The precautionary approach is just that, precautionary, not simply cautious. It moves the decision making time forward. In other words, action is not to be delayed until full scientific certainty is obtained. Instead, measures to protect environmental degradation must be taken where there are threats of serious or irreversible damage.

This will be discussed further in the context of international law, but for now we wish to submit that the precautionary approach is particularly an important way of handling scientific uncertainty. In fact section 62.2 of the Act better encapsulates the precautionary approach, “to avoid doubt the EPA may refuse an application for a consent if it considers that it does not have adequate information to determine the application.”

Section 62.2 in our submission provides a scope in context for the application of the precautionary approach, in addition to the reactions in section 61.
Turning to International Law and Obligations. Section 11 reads that “this Act continues or enables the implementation of New Zealand’s obligations under various international conventions relating to the marine environment, including the UN convention on the law of the sea and the convention on biological diversity.”

[9.27 am]

Whether in a specific respect the Act continues the implementation of New Zealand’s obligations or enables them, in our submission the result is the same the DMC should take notice of those international obligations.

The Act essentially filled a hole in New Zealand’s environmental regime. Before the Act there was no regulatory regime that assessed the potential environmental impacts of a proposed activity in the exclusive economic zone beyond the 12 mile territorial sea limit, being the reach of the RMA or on the continental shelf, and there is no way for the decision to be made whether the activity should be allowed to occur.

Put really simply, we are here because of international law. The continental shelf and exclusive economic zone are entirely products of international law. It is thus important in our submission to understand the requirements, and I have included a small chart there, sir, which I think shows again that the 12 mile limit going from the baseline, which is at the water’s edge if you like, and then the exclusive economic zone going out for 200 nautical miles and beyond, which is the high seas.

An interesting thing to note perhaps, is that the continental shelf can extend beyond the exclusive economic zone, so you can have a situation where the continental shelf on which mining is taking place is actually underneath the high seas, and you can see that in the cross hatched area in the bottom right hand side.

Though the (INDISTINCT 6.20) purpose is clear, in the applicant’s submission from the wording of the statute it is also confirmed by the speech of the Minister of the Environment in moving the third reading of the Bill, and again, if I may sir, I will read only the part in bold. “New Zealand has international rights but also obligations around the way that we use the exclusive economic zone and continental shelf, and the marine environment that surrounds us. Those rights specifically refer to and protect our sovereign right to explore and exploit our offshore and undersea resources, and call on us to ensure that development is undertaken in a way that balances economic return with
environmental safeguards. This Bill recognises, and has been demonstrated to be consistent with those international rights and obligations, and their decision making framework requires the consenting authority to undertake just such an exercise.”

In addition, section 59.2 requires the EPA to take into account any other applicable law and any other matter that EPA considers relevant and reasonably necessary to determine the application. Taking into account these and other provisions, section 59.2 and 11, international obligations are in our submission relevant matters to which the DMC should take into account.

In section 11 New Zealand refers to the international obligations including, as I said, UNCLOS and the CBD. These include the obligations to protect and preserve the marine environment, the obligation to conduct an environmental impact assessment, the obligation to not to cause trans-boundary harm, and the obligation of taking a precautionary approach. And we discuss these in turn.

Numerous articles in the Law of the Sea Convention impose New Zealand relevant international obligations to protect the marine environment with respect to seabed mining, and I have cited articles 192 to 194. 192 of which provides very simply “states have the obligation to protect and preserve the marine environment.” And article 194 is quite lengthy, but I have cited of specific interest paragraph 5 at the bottom “the measures taken in accordance with this part shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.”

New Zealand is also bound by the (INDISTINCT 8.37) Convention, which has been discussed by other submitters. Articles 5 and 8 impose similar obligations, and a relevant extract I have included, turning over the page to article 8 which provides again, without qualification “the parties shall take all appropriate measures to prevent, reduce and control pollution in the convention area, resulting directly or indirectly from exploration and exploitation of the subbed and its subsoil.”

The International Tribunal for the Law of the Sea, known as ITLOS in its advisory opinion in 2010, on which I was a counsel, sir, describe the article 192 obligation to protect the marine environment as a general obligation, and went further stating that there is a general obligation of due diligence. In that case, it states sponsoring deep seabed mining applications – and this in what’s called “the area”, sir, which is not the area that is before this particular application, but more generally
applicable, as is seen from a case which New Zealand itself brought called the Southern Bluefin Tuna cases.

The due diligence obligation is an obligation to deploy adequate means to exercise best possible efforts to do the upmost to obtain the result. It is in that sense an obligation of conduct not result, and this emerges very clearly from the judgement of the International Court of Justice in the Pulp Mills case, an obligation to adopt regulatory or administrative measures and to enforce them is an obligation of conduct. And I will move on, sir.

[9.32 am]

Obligation to perform an environmental impact assessment.

And this is in article 206 of the Law of the Sea Convention which just provides very simply: it states that reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall as far as practical assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments in the manner provided in article 205. It also stated it should be stressed that the obligation to conduct an environmental impact assessment is a direct obligation under the convention and a general obligation under the customary international law. So this is another requirement of due diligence.

In the Pulp Mills Case, the ICJ said that due diligence and the duty of vigilance and prevention which it implies but not be considered to have been exercised for party planning works liable to affect the regime of the river in that case, or the quality of its waters to not undertake an environmental impact assessment on the potential activities of such works. In article 14 I’ve noted of the CBD contains similar provisions as does article 16 of the Noumea Convention.

Moving to the obligation to take a precautionary approach, and I have already cited Principle 15. The loss also observed in its advisory opinion that the cautionary approach has been incorporated into a number of international treaties and other instruments. And the Pulp Mills International Court held that a cautionary approach may be relevant in the interpretation and application of provisions there of the statute.

And finally the ICJ case involving a dam involved that the court is mindful in the field of environmental protection, vigilance and
prevention are required on account of the often irreversible character of damage to the environment and of their limitations inherent in the very mechanism of their creation of this type of damage.

Finally, sir, the London Convention and London Protocol provide the legal framework for the prevention of marine pollution by the dumping of waste and other matters at sea. New Zealand is a party to both. Under article 2 of the London Protocol contracting parties shall individually and collectively protect and preserve the marine environment from all sources of pollution and take effective measures according to their scientific, technical and economic capabilities to reduce, prevent and where practicable eliminate pollution caused by dumping or incineration at sea of waste or other matter. In the specific case of the dumping of waste or other matter the application of the precautionary approach is interpreted as the need to take appropriate preventative measures where there was reason to believe that waste or other matter introduced into the marine environment are likely to cause harm even where there is no conclusive evidence to prove a causative relation between inputs and their effects.

We submit that with regard to the discharge of uranium and other heavy metals into the marine environment, the EEZ Act should be read consistently with the London Protocol and Convention, and therefore the precautionary principle should apply in this regard. And Dr David Santillo addressed this in his evidence.

Turning now to restoration and spatial planning. The applicant and his experts, including Dr Ashley Rowden and Raymond Wood, claim to be undertaking an exercise in spatial planning. CRP claims to have undertaken a thorough and New Zealand first spatial planning exercise whereby it is sought to maximise the conservation and economic values of the consent area that was in his opening submission yesterday. The three submitters strongly submit that this is wrong headed and inappropriate. The application is already taking place inside a benthic protected area. The very fact that the mining application is being made within the BPA clearly demonstrates that the attempt of the applicant to purport to engage in a spatial planning exercise within the framework of this application and this legislation is misconceived and is fatally flawed.

They wish to undertake one activity: mining; within one central regime: the EEZ Continental Shelf Act; inside an area that in another central regime: The Fisheries Act, has already been declared off limits to that central activity, being fishing. Any spatial planning, Mr Chairman, must involve all sectors, all stake holders, and take place under a statutory framework and involving decision makers with a very
different mandate than this DMC. To cite one obvious example, submitters are here because they made a submission, or they made submissions, on this seabed mining application. Submitters on a quite different matter, spatial planning on the Chatham Rise, or fishing, are not here in that capacity. They may be, and I would submit most certainly would be, far more and different stakeholders in that exercise. That expert evidence would be different, and the mandate and indeed identity of the decision makers different.

[9.37 am]

The three submitters strongly submit that the DMC should resist the attempts by CRP to frame this exercise as one of spatial management. The DMC simply does not have the statutory mandate to undertake that role. Any offset or areas not mined are by way of avoidance and mitigation under section 25.1(a). It is not spatial planning. The decision is to be made under section 59-63 of the Act. Specifically under section 62.1, after complying with sections 59-61, the EPA may grant an application for a marine consent, in whole or in part, and issue a consent or be refused the application.

(indistinct 5.41) the DMC three conditions purport to engage in spatial management. Under section 63.1 the EPA may grant a marine consent on any condition that it considers appropriate to deal with adverse effects of the activity authorised by the consent on the environment or existing interests. Section 63.1 does not allow the EPA to allow adverse effects of mining in a particular area to carry on justified prohibiting mining in another area within the footprint of the application area. This is also common sense, otherwise any applicant can simply apply for large areas unwanted and then offer not to mine in part of it.

Finally, any condition would not control other central activities such as fishing. It would be ultra vires the DMC to impose the condition on the fishing industry, for example, to mitigate the effects of seabed mining by the applicant. To be clear in another context, the three submitters are in favour of a strategic environmental assessment of the Chatham Rise involving all stakeholders in all central activities. But this, quite simply, is not the place for it. The DMC simply cannot undertake that exercise under this statute and under this consent application. To do so would be ultra vires. We note that the applicant does state that in all likelihood such protection would be most achieved through future marine protected areas legislation. And that was in their opening submission. This appears to acknowledge that different legislation would be required. We would add that again an entirely different process with entirely different participants is required as well. Suffice it
to submit that spatial planning is outside the scope of this hearing and this Act.

Turning to uncertainties in the evidence. The DMC will have to make a decision based on the inadequate information that they had before them on the impacts of the proposed mining. This comes through strongly in the evidence on benthic effects, effects on marine mammals and the unknown effects of uranium on the marine environment. For instance, on benthic impacts, the evidence of Professor Les Watling is that while the application, or the application, has looked at the impact on benthic species none of the studies in the area have identified any of the species associated with the suspension feeders so that we have no way to know how many species might be displaced when the habitat forming species are removed. Furthermore, with regard to benthic substrate, Professor Watling then goes on to describe the uncertainty around the long term effects of mining on benthic organisms and their ability to recover. And he said “the ability on deep water scleractinians to clear themselves of settled sediment particles is currently open to debate because there is very little information, and none on G. dumosa”.

When looking at the impact of the returned sediment to the bottom after the phosphate has been obtained and removed, Watling comments that the model does not appear to account for the possibility that grain size could change due to the mechanical effects of both the sediment fluoridisation process, the turbulence within the riser pipe or the sorting and sieving on the surface vessel. Thus it is quite possible that the returned sediment would have a much higher proportion of silt and clay sized particles than the source sediment. Professor Watling then concludes that it is likely that settled sediment may move around much more than the model would predict. Restoration of nodules would then be even more problematic. The applicant has failed to provide adequate information about the real life practicalities of restoration and the cost of restoration.

Professor Watling said “contrary to the EIA most of the recolonisation studies cited are not comparable to the situation here. The shallow water dredging studies deal with a recolonisation of the trench tract which may differ considerably than the surface layer of sediments that were removed, especially with regard to the food quality of the remaining sediment itself”.

The Staff Report comes to a similar conclusion. At paragraph 17 the staff consider that uncertainty remains with respect to the current state of the environment in the area where it is proposed that the activity will be undertaken, and the environment surrounding this area. This limits
the understanding of the baseline marine environment against which to assess effects of seabed mining.

Again, at paragraph 87, EPA staff conclude that the best available information was not used to characterise the state of sediments in the area. Overall, the Staff Report finds that studies carried out by CRP are not thorough enough to be representative of the benthic communities that exist on the Rise.

[9.42 am]

Many invertebrate species would not have been captured or entered into the database and EPA staff conclude that however the total abundance of benthic organisms from the database would not be representative of benthic communities in the proposed marine consent area.

In terms of uranium, as the EPA staff report comments, the effects of discharge back into the sea of mined materials are some of the most significant effects of the proposal and the DMC will need to address the uncertainty and inadequacy of the information associated with the effects of the discharge when considering those effects on the environment.

From the EPA staff report, it comments extensively on other uncertainties in the CRP reporting around the impact of uranium. Similarly with regards to the impact of fish in the area, the EPA staff report states that the level of effect, risk and overall impact were not estimated.

Professor Barry Peake gave evidence on the impact of uranium on the marine environment. He points out that the applicant did not estimate the likely timeframe over which the mixing of the sediment back into the surrounding seawater after filtration will occur within the water column. This, he concludes, could have major and long term impacts on fisheries and other species in the area. This is also noted in the review of the modelling by Gardline.

The extent of the plume and the region sedimentation have not been quantified for the modelled scenarios and in many cases the plots showed model sediment concentration and taonga above threshold as saturated and are consequently difficult to interpret.

Peake goes on to state that within this 15 km wide mixing zone there will be elevated levels of trace elements in the water column, including those of uranium, to which any pelagic organisms will be exposed...
during the period of mixing. Given that there is no toxicological information on thresholds for maximum allowable concentrations of uranium that have been published, for example there are no guidelines for uranium in drinking water and the Canadian Council of Environment Ministers stated that insufficient data were available to derive a water quality guideline for uranium for the protection of marine life, according to the protocol there.

He notes that there is no toxicity data for uranium in the marine environment, leading to the question do the likely elevated levels of total uranium in the water of the mixing zone relative to those in the surrounding ocean pose any threat to the ecology and health of any organism living in that part of the water column through ingesting water from that mixing zone during the time of mixing. That question is, in our submission, not answered in the evidence.

After reviewing the lack of available evidence from the uptake of uranium from the water column, Professor Peake concludes that if there was bio uptake the uranium would be expected to increase up the marine food chain, ending up in adult hoki, ling, hake and warehou fish for instance. However, the mechanisms and effects of that bio uptake would be very much in the domain of a fishery biologist. The fundamental difficulty in my view is that no consideration has been given to the ecotoxicity of even total uranium, irrespective of speciation to the predominant fish living in the Chatham Rise oceanic area.

Professor Peake points out that if the discharge of uranium exceeds the toxicology level of any life stage of these four predominant fish, then much more research is required to establish the effect of other factors, such as speciation of the uranium within the water column in the mixing zone in relation to the ecotoxicity and the radiation levels likely to be omitted from the various uranium isotopes present in any natural sample of uranium.

Again, Professor Peake states that note of these issues have been adequately addressed, nor has the applicant addressed how seasonal effects may change the nature of the chemical interaction between the sediment remains and the organisms.

Turning to marine mammals, Professor Slooten states that the information on marine mammals provided by the applicant is inadequate and suffers from several methodological problems. No marine mammal studies were carried out in any of CRP’s six research expeditions. Due to this lost opportunity, Torez et al were forced to rely on anecdotal data, one from DOC and one from Dr Martin Cawthorn.
Slooten found that the information provided by CRP essentially consists of a species list which is obviously inadequate, a scientifically robust survey is required.

This survey should be designed to provide data on marine mammal densities and habitat use in the area. Without such data it is impossible adequately to address the potential impacts of the proposed project on marine mammals.

In paragraph 65 please delete the words “on noise” and just say that she points out that the lack of information on benthic communities makes it difficult to assess the flow-on effects for marine mammals, and so adequate assessment in this regard is missing.

She states that while neither the killer whale nor white whale have been reported within the proposed marine consent area, the data used for CRP’s analyses are opportunistic in presence only. The information on marine mammal distribution rely entirely on review of limited desktop information. This precludes scientifically robust conclusions on the likely environmental impacts of the proposed mining operation.

The EPA staff report likewise observed that the information presented in CRP’s application on incidental sighting of marine mammals has a low reliance as most of this data would have been gathered by untrained observers and may, therefore, be factually incorrect.

Turning to the adaptive management approach, the evidence to date shows that the adaptive management approach will not, in our submission, cure the many uncertainties that are present in this application, but the DMC will need to address it.

The adaptive management approach is not part of the precautionary approach, rather it is held by the Supreme Court in Sustain Our Sounds versus New Zealand King Salmon. The overall question is whether any adaptive management regime can be considered consistent with a precautionary approach.

Section 61.3 provides that, and again the EPA must first consider whether taking an adaptive management approach would allow the activity to be undertaken.

Section 64 goes on to provide that an adaptive management approach includes, (a) allowing activities to commence on a small scale or for a
short period, so that the effects on the environment and existing interests can be monitored; (b) any other approach that allows an activity to be undertaken so that its effects can be assessed and the activity discontinued or continued with or without amendment on the basis of those effects; and then in order to incorporate an adaptive management approach into a marine consent the EPA may impose conditions under section 63 that authorised activities should be undertaken in stages, with the requirement for regular monitoring and reporting before the next stage of the activity may be undertaken, or the activity continued for the next period.

Finally, a stage may relate to the duration of the consent, the area over which the consent is granted, the scale or intensity of the activity or the nature of the activity.

In our submission, Mr Chair, this means adaptive management requires a small scale or a short period or any other approach that allows an activity to be undertaken so that its effects can be assessed and the activity discontinued or continued with or without amendment on the basis of those effects. Being able to assess effects and discontinue the mining activity or amend the activity are essential.

The Supreme Court in the SOS case laid down a four part test for adaptive management, and they said that the secondary question of whether the precautionary approach requires an activity to prohibited until further information is available rather than an adaptive management approach, rather the approach will depend on the assessment of a combination of factors, and again I have highlighted the extent of the environmental risk, the importance of the activity, the degree of uncertainty and the extent to which an adaptive management approach would sufficiently diminish the risk and the uncertainty, and then again the overall question is whether any adaptive management regime can be considered consistent with the precautionary approach.

At paragraph 139 the Supreme Court found that the answer to the overall question of whether risk and uncertainty will be diminished efficiently for an adaptive management regime to be consistent with the precautionary approach will depend on the extent of risk and uncertainty remaining and the gravity of the consequences if the risk is realised.

For example, a small remaining risk of annihilation of an endangered species may mean an adaptive management approach is unavailable. That’s the words of the Supreme Court, sir.
A larger risk of consequences of less gravity may leave room for an adaptive management approach.

While that case was under the RMA the reasoning of the Supreme Court and the wording of the EEZ Act show that the principles lay down, they are applicable under the Act that covers this hearing, sir.

We submit that the Supreme Court’s decision is highly relevant because their underlying principles are equally applicable to this legislation, and in fact they are applicable (INDISTINCT 9.30). We submit this because of the special or the specific provisions in the Act.

Firstly, under section 61.2, if the information available is uncertain or inadequate the EPA must favour caution and environmental protection. So not only caution but also environmental protection must be favoured.

Secondly, under section 61.3, if favouring caution and environmental protection means that an activity is likely to be refused, the EPA must first consider whether taking an adaptive management approach will allow the activity to be undertaken. In other words, the governing principle is that the EPA must favour caution and environmental protection. The adaptive management approach is only to be undertaken conditionally if this would allow the activity to be undertaken.

[9.52 am]

Thirdly, section 62.3 puts the matter beyond doubt, to avoid doubt the EPA may refuse an application for a consent if it considers that it does not have adequate information to determine the application. As submitted earlier this is entirely consistent with a precautionary approach which is endorsed by the Supreme Court.

In our submission the approach taken by the Supreme Court in SOS even though taken under the RMA is consistent with this approach but must be read with caution, as it is of course under the RMA so the DMC should in our submission apply the same four point test, but once it has done so it is tested as defined by section 59 to 62 to be read in light of the purpose in section 10, New Zealand’s international obligations in section 11 and the Treaty provisions in section 12.

A similar submission was upheld in the context of the TTR mining decision, paragraph 798 states that a number of parties including the applicant suggested we apply SOS given that it was the decision of the
Supreme Court was recent, was on point and was the case involved when the New Zealand CPS precautionary policy.

We agree and have set out our finding in relation to TTRs application and the adaptive management regime proposed. The DMC then went on to assess the proposed adaptive management approach against the criteria set out in SOS. We submit the DMC should similarly apply the SOS test to the decision here.

In conclusion sir, the uncertainty and this being addressed must be satisfied before approving a consent. The uncertainty is in no way addressed by delaying the assessment until after a baseline is obtained. The information is not available when the consent is granted. Section 61.2 provides that if in relation to making a decision under this Act, the information available is uncertain or inadequate, the EPA must favour caution and environmental protection and section 62.2 provides that to avoid doubt the EPA may refuse an application for consent if it considers that it does not have the adequate information to determine the application.

Both are in the present tense, they do not contemplate that the EPA may sometime in the future get certain or adequate information after it has determined the application. Therefore if after applying a test in section 10 the seabed mining proposal will taking into account scientific uncertainty fail to sustain the potential of natural resources to meet the reasonably foreseeable needs of future generations and will not safeguard the life supporting capacity of the environment, consent should not be granted.

If the mining whatever the potential through the benthic destruction sedimentation, plume and noise to cause significant damage to the benthic environment, fish and marine mammals and there is insufficient certainty in the evidence for the DMC to be satisfied that the three tests in section 10.2 are met the consent should not be granted.

The DMC cannot apply an adaptive management approach in the hope the conditions will ameliorate the problems in time. Instead the applicant should be sent back to properly carry out the scientific investigations such as baseline research and make a fresh application once that science is available.

The DMC should apply section 62.3 to refuse an application for a consent in our submission since it considers that it does not have adequate information to determine the application and thus apply the precautionary approach.
That concludes our submission, sir.

CHAIRPERSON: Thank you very much, Mr Currie, any questions from the committee?

MR HILL: Yes, if I may, thank you. Thank you, Mr Currie, which question do I take first, probably the simplest one. In the early part of your submission you have raised objection to certain reports on the grounds of the witnesses not before us, but you have not actually specified those particular reports other than an allusion to Dr Torris’ one can you supply the detail of those ones that you are saying?

MR CURRIE: I would be happy to, sir.

MR HILL: That would be helpful, thank you. Your submission on the relevance of international convention, etc and clearly we had a position stated to us yesterday from the Crown with respect to that particular issue, as well as from Mr Winchester and just trying to think that one through. I am trying to work out if one was minded to accept your submissions on the matter what the relevance of section 29C of the Act is which you did not discuss which is the ability of the Minister to make regulations for this particular purpose and who might just sort of rehearse that?

MR CURRIE: I do not see that as being particularly relevant to this process sir, this is not a matter for regulation, this is a decision being made obviously under section 63 and so on. I did not share one approach from my friend that section 59 makes the international matters irrelevant for consideration. I do not think it really matters much whether they come under section 59 or 11.

I tried to put them into context by making the first observation that New Zealand only has a continental shelf because of international law and therefore clearly in my submission it is relevant and section 11 I think supports that. Obviously the clear wording of the statute prevails and I think the value of the international instruments and the ones I cited the obligation to protect the marine environment took a precautionary approach to conducting EIA are all, I think to be seen in the context of the Act in this decision making process, if you like.

I do think I place it more highly than that, I think it is a matter to which the DMC may pay regard to the extent of which is helpful and certainly I think for example there will be some considerable discussion I suspect later on in the hearing about the London Protocol and the
London Convention in the context of mining for example and it is one specific way that I think the DMC will find international regulations and international law specifically helpful.

MR HILL: All right, and just one final one if I may. One of the issues obviously we are going to have try and work our way through is where and or whether there is a threshold of risk at an individual element level which in actual fact tips the balance in terms of this issue. I mean whilst I accept the argument that you are making in terms of the Supreme Court’s decision on that it does not I suspect help us in terms of how far we go on particular matters.

As you have indicated it is not a, or at least on your submission, it is not simply a balancing of a number of different attributes however there maybe one element in the whole suite of things that we are considering that does actually lead us to that conclusion. Again, I am not quite sure how we are going to get to a point on that. We have not yet got all the expert conferencing notes to know whether there are any of those sort of fine points that are coming out either numerically, quantitatively, qualitatively or whatever. I just wonder again whether you have a comment on that?

MR CURRIE: Well I do, I think firstly there are two points in your question, sir, the point I tried to make in the EDS’ case and I was addressing my friend’s argument about balancing is a bit of a different one than a threshold question in my submission. That is a question as to whether the three paragraphs simply are to be weighed in a balancing exercise as my friend suggested or as the EDSI case and I would encourage you to read it, sir.

This is may I say one of the most important decisions I think of certainly my career if I may put it that high and I know my friend in EDS knows far more about it than I do and the Supreme Court made it very clear in my view sir that A, B and C are not a balancing exercise, they must all be achieved.

Now to move to the threshold issue, yes that comes up in the second Supreme Court case, the Sustain our Sounds’ case and that specifically is relevant to the question of adaptive management. Now adaptive management is obviously a matter that specifically arises under the Act and it was perhaps very fortunate that the Supreme Court came down with this ruling before the TTR decision and before this decision because it has given some very specific guidance, sir, in my submission to both of these DMCs because the law is very, very similar that are dealing with.
They grappled with it and in my submission in a very strong and a very sound way so the four part test they have laid down, I submit is binding on this DMC. The job of the DMC is to assess the facts as they come out during this hearing. Once they have those facts then apply those facts to that four part test and then of which the most important one I believe, sir, is the deed, whether the uncertainty and risk is sufficiently reduced by an application of the adaptive management regime.

MR HILL: That is my point is reduced to what?

MR CURRIE: Reduced to be sufficiently certain and the risks are sufficiently low to be able to grant consent because neither sections 10 particularly and 11 of 12 of the Act so yes, it is taken back to the section 10 exercise to make sure that, you know, to paraphrase the environment is protected and so on and that, you know, these areas – matters are provided for, so that’s your final test but to get there you have to apply the four part test of adaptive management, and to get there, yes you’ll need to, in my view, assess the evidence, particularly from the applicant, look at the proposed seabed mining.

[10.02 am]

MR HILL: I think you’re going around in circles.

MR CURRIE: Okay – well, okay I’m trying to layout the pathway, sir, but - - -

MR HILL: Now – yes, no.

MR CURRIE: - - - perhaps I think maybe I answer your question.

MR HILL: Thank you.

MR CURRIE: Thank you.

MR HILL: Yes, thank you, sir.

CHAIRPERSON: Could I just ask for some clarification, you spoke of the importance of our applying the precautionary approach stemming from the Rio Declaration Supreme Court decision. Over the years I’ve seen different renditions of the precautionary principle - - -

MR CURRIE: Yes.

CHAIRPERSON: - - - and I would be interested to have your views, what is the authoritative “rendition” and second, how does that relate to the
requirement in the Act that we favour caution when faced with uncertainty or inadequate information?

MR CURRIE: Yes, thank you, Mr Chairman. To answer the first part of the question, I will clearly state principle 15 which I’ve included on page 12 of my submissions of the Rio Declaration, is the principle which is being applied by all countries, been endorsed by New Zealand and others and then indeed if not mistaken it was used by the Supreme Court as well, so I have no hesitation in suggesting that principle 15 is the authoritative formulation. And I think to address the second point, the precautionary approach is indeed relevant to section 62(2) to refute the client the consent.

As I said, I think – I have difficulty with section 61 because they use the word “caution”, which is helpful and favouring environment protection in “caution” is certainly mandated by the Act, there’s no doubt about that. But I just want to avoid the DMC being misled if you like into thinking, “Oh, that’s the environment, there’s the precautionary principle right there in 61” because I don’t believe it is, sir, because again “caution” is not the same as “precaution”, and so that’s why I’ve taken some pains to try to explain the difference between the two.

I think precau-, both principles are helpful. Obviously when considering the evidence, being “caution” favouring environmental protection is mandated, but also when deciding whether to, particularly in the context of “adaptive management” as the Supreme Court said, like you know the job as they explained it, is to try to reach adaptive management but if you can’t, precautionary principle prevails, that’s the way of getting to the precautionary principle rather than precautionary principle itself.

CHAIRPERSON: Thank you very much for that and for the statement, and I now invite the Deepwater Group to present their opening statement.

MS APPLEYARD: My name is Jo Appleyard and I appear for the Deepwater Group, I have (INDISTINCT 3.13) with me.

CHAIRPERSON: It might be easier if you have the microphone yourself, either is okay.

MS APPLEYARD: Do you want me to swap - - -

MR………..: It might be better just in case if that comes out.

MS APPLEYARD: Where should I put - - -
MS APPLEYARD: Got papers spread everywhere now, but we’ll sort it out, does that work, yes.

CHAIRPERSON: It should be going.

MS APPLEYARD: Okay, thank you.

Thank you, if I can start at paragraph 2 of my submissions, this representation is made on behalf of Deepwater Group in opposition to the application.

Deepwater Group is a non-profit organisation, representing participants in New Zealand’s deep water fishing industry. Its shareholders own around 95 percent of the quota in New Zealand’s deep water fisheries, including hake, hoki, ling and scampi.

Deepwater Group shareholders have an existing interest under the EEZ Act, which they say would be adversely affected by the marine consent being granted. In short, the existing interest is Deepwater Group shareholders individual transferrable quota or ITQ rights held under the Fisheries Act 1996, along with and importantly all associated rights and expectations.

[10.07 am]

Deepwater Group seeks that CRP’s application be declined on the grounds that the proposal will have significant adverse effects on the environment that cannot be avoided, remedied or mitigated through the imposition of conditions. It will have significant adverse effects on Deepwater Group shareholders existing interests, which include the utilisation and importantly the sustainability of fisheries’ resources and in the protection of the benthic environment in the mid-Chatham Rise benthic protection area.

It is based on inadequate information and has a high level of uncertainty. It is of dubious short term economic benefit. It does not protect the biological diversity and integrity of marine species, ecosystems and processes. It will interfere with the successful operation of existing management regimes, including the quota management system and the protection of bio diversities through the benthic protection area (or BPA network), and it does not include conditions that are able to adequately reduce the level of uncertainty or avoid, remedy or mitigate the adverse effects of the proposal.
So I’m just going to elaborate now on some of these points in a legal context, dealing first with the BPAs, the Benthic Protection Areas.

Around 30 percent of New Zealand’s exclusive economic zone is protected by a network of BPAs. That network was initiated by the deep water fishing industry and was implemented with the support of government. The fisheries Benthic Protection Areas Regulations of 2007 prohibit the use of bottom trawling and dredging as fishing methods in 17 BPAs that were established throughout the EEZ.

This application (the proposed mining area) is located almost entirely within the mid-Chatham Rise BPA. More extensive explanation of the BPA will be found in evidence of Mr Clement.

The history and purpose of the BPA, in 2005 it was the Deepwater Group on behalf of quota owners, who adopted a strategy of “closing areas” to avoid the adverse effect of bottom trawling in parts of the EEZ, contained in a network of protection areas.

After developing the initial proposal for the network the Deepwater Group worked with the Ministry of Fisheries and the Department of Conservation to refine the BPAs, to ensure that they were properly represented of the benthic ecosystems in the EEZ. That process also involved public consultation and input.

In 2007 the Deepwater Group and the Ministry of Fisheries signed an accord relating to benthic protection areas within New Zealand’s Exclusive Economic Zone, and the Minister agreed to “implement” BPAs via regulations. This is the only legal mechanism providing benthic protection in the EEZ.

The Fisheries Act 1996 was and still is, the only existing legal mechanism through which to incorporate this protection, which is why the regulations arise in the fisheries’ context and under the Fisheries Act.

By establishing the BPA network, quota owners sought to provide certainty for their future access to deep water fisheries in the EEZ. Certainty about future access to the fish stocks, including the ongoing use of trawling as a fishing method helps maintain the value of quota and ensures that the incentives for sustainable management provided by the quota management system in the Fisheries Act operate as they were intended. This avoidant strategy is most suited to the protection of deep water habitats, which have a relatively low prevalence of benthic biota that is fragile, slow growing and has long regeneration times.
The BPAs exhibit the attributes of a marine protected area network and comply with all relevant international and domestic design principles for establishing such a network. The BPAs are large, both at an individual level and in aggregate.

Protection was placed over areas that were predominantly untouched and un-trawled, so as to protect pristine samples of marine biodiversity. BPAs have simple straightforward boundaries, making compliance easy. Finally, BPAs are broadly representative of the marine environment and are spread evenly across the EEZ and protect the benthic habitat at a variety of depths.

[10.12 am]

As well in the benthic environment generally BPAs also incidentally protect vulnerable marine eco-systems. That is eco-systems that are rare or unique, functionally significant, fragile, slow to recover and structurally complex. BPAs are also biologically significant by virtue of the fact that they protect a portion of nine of the 15 bi-diversity hot spots identified by the World Wildlife Fund.

New Zealand is obliged to establish a network of marine protected areas because it is a signatory to the convention on biological diversity1992. In the absence of a comprehensive statutory marine biodiversity protection regime, the BPAs established under the fisheries Act remain the only mechanism for protecting benthic diversity in New Zealand EEZ.

In the context of Fisheries’ management BPA’s play a major role in fulfilling the industries obligations to ensure sustainability and protect significant habitat and these are obligations imposed under the Fisheries Act. BPAs provide certainty for ongoing fishing industry operations which is vital for future investment in deep water fisheries.

The BPAs also holds significant value for the reputation of New Zealand seafood. The environmental impact of fishing has become a critical determinate of trade access for the New Zealand seafood sector to markets in the EU, Australia and the USA. The BPAs allow New Zealand exporters to differentiate their product on the basis of quality and environmental sustainability and to demonstrate the industries commitment to sustainable management.

Chatham Rock Phosphate has made several criticisms of the values of the BPAs in its opening representation and its evidence. The Deep Water Group would like to reiterate that BPAs are legally protected areas that have received international recognition as providing
appropriate protection for their environment in the EEZ. They were created in circumstances in which commercial fishing was at that time, the only activity undertaken in the EEZ, hence the focus on protection, from the adverse effects of fishing. They were also created in partnership with the Department of Conservation and the Ministry of Fisheries and are properly representative of the various benthic ecosystems found in the EEZ as well as protecting some highly valuable and rare benthic communities.

The mid Chatham Rise BPA is vital in maintaining the representative nature of that BPA network. The mix of habitats protected by that BPA is not replicated anywhere else in the BPA network. The mid Chatham Rise BPA is recognised as an area of high bio-diversity values as it includes three known under water typographical features, extensive sponge beds and dispersed and thick, dense thickets of stony corals, gorgonian corals, including in the area where phosphorite nodules occur. Water cold thickets are listed as sensitive environments in schedule six of the EEZ Act. Given its direct association with New Zealand’s largest deep sea fishery, the destruction of, or a significant reduction in the value of the mid Chatham Rise BPA is of significant concern to the Deep Water Group.

The Marine Stewardship Council. The Marine Stewardship Council, MSC is an independent, international, non-Governmental Charity that has developed and maintains a standard for the certification of sustainable fisheries. Products from fisheries that have been certified as meeting the sustainable requirements of the council are eligible to carry the MSC Council label. MSC certification provides a benchmark for sustainable fisheries and also ensures that New Zealand’s deep water fisheries can reach high value markets and receive a premium for sustainably harvested seafood. Supermarket chains in the USA, Australia and Europe are committing themselves to responsible sourcing polices for seafood products and are increasingly requesting or requiring certification to confirm that fish are sourced from well managed fisheries.

The MSC brand is very strong in the markets targeted by New Zealand seafood for exporters. There are also a growing number of consumers choosing to purchase sustainably managed seafood. A combination of New Zealand origin and the MSC certification branding, provides significant and highly valuable market advantages, and that is explained in the evidence of Mr Clement for the Deep Water Group and Mr Sundakov called jointly between the Deep Water Group and Ngai Tahu.
Habitat protection plays an important role in achieving the MSC standard for certification of sustainable fisheries. Currently the Chatham Rise hoki, hake and ling fisheries hold the MSC certification, however I am actually in the evidence, ongoing certification may be put at risk and at the very least will be more costly to achieve, with the loss of the BPA protected habitat in the mid Chatham Rise. I won’t read out the sections from the Act.

Paragraph 27, the Act requires the DMC to take certain matters into account, you will have been referred to these before and in paragraph 29, it is set out the definition of existing interests and highlight that includes rights of access, navigation and in particular, fishing. So over at paragraph 30, he concept of existing interests is deliberately broad, the word interest indicates a concern or matter of importance to a person or a financial stake a person has in something. It is more than just a use of the environment. Commercial deep water fishing is a well-established activity in the EEZ and is authorised under the Fisheries Act and Regulations. The activity involves commercial harvesting of fish, using trawling and long lining methods, as well as the preservation and sustainable management of fish stocks. DWG’s shareholders have a clearly identifiable interest in harvesting fish, and in ensuring that fish stocks are kept at sustainable levels and the environmental effects of fishing, on the marine environment are avoided, through the BPA network and other non-regulatory voluntary methods of avoidance really.

The DMC must take into account any effects on existing interests of allowing the proposal including cumulative effects. It can only disregard those effects if written approval has been obtained, Chatham Rock has not obviously obtained written approval from Deep Water Group. In considering the effects of an activity on existing interests, the EPA must have regard to, and you will be aware of those formatters, so I am going to address each of those separately.

The first of them is the effectively the overlap, the area that the activity of mining would have in common with the existing interests. As noted, Deep Water Group shareholders existing interests are in the form of commercial fishing rights, the ITQ and the annual catch rights which flow from that quota, and deep water stocks that are fished on the Chatham Rise and elsewhere. ITQ or Quota Shares, as they are more commonly referred to, are a form of property right, conferring rights to harvest a proportion of a particular fish stock and perpetuity. They’re fully transferrable, ie they can be bought and sold and they can be subject to a mortgage or a caveat. This makes the quota shares and the corresponding annual catch entitlement, or ACE flowing from each quota share a significant proprietary right of high value. Because ITQ is
issued in perpetuity, it provides owners with an interest in the future development and sustainable management of the fisheries. The existing interest of quota owners is therefore dynamic and may change in the way it is expressed, ie, through the use of new fishing methods, different regulatory arrangements and decisions to take fewer or greater quantities of fish annually.

Mr Clement spent some time explaining the ITQ rights and quota system in his evidence. Via their quota ownership Deep Water Group shareholders hold annual catch entitlement from various Chatham Rise stock including hoki, hake, silver warehou, ling, orange roughy, oreo, scampi, squid, jack mackerel, barracuda and associated middle depths and deep water species. DWD shareholders fish using long lining methods inside and beyond the application area and trawling occurs beyond that application area in the area that will be affected by Chatham’s Rock proposed activity.

It is important to understand that the Fisheries Act has two purposes. It has a dual purpose of providing for the utilisation of fisheries’ resources while ensuring their sustainability, consistent with that purpose ITQ quota provides quota owners with a permanent and highly valuable interest, not only in the harvest of fish, but also in the management and protection of fisheries’ resources and the wider marine environment. For quota owners deciding not to fish, in an area in order to ensure re-stainability, is as much an expression of their rights, as a positive decision to fish in an area.

The activities that form part of Deep Water Group shareholders’ existing interests include, utilising fisheries resources, for example trawl fisheries for hoki, hake, orange roughy, oreos and long line fisheries for ling. Ensuring sustainability of fisheries’ resources. For example, by implementing non-regulatory area closures in order to protect juvenile hoki and improve stock recruitment. Avoiding remedying or mitigating adverse effects of fishing. For example, by setting aside BPAs in which trawling is prohibited, and optimising value. For example, by harvesting high quality fish and seeking independent third party certification such as the MSC certification of sustainable fishing practices.

As well as the ITQ the Deepwater Group shareholders’ interests include the rights of access and navigation in the application area, and areas affected by the application, and for some companies interests and activities, such as aquaculture, which may be affected by aspects of the proposed activities and I’m not going through that in any detail, it was
covered in evidence of a number of the company representatives to be called by the Deepwater Group, which I have set out at paragraph 41.

So what are the effects on DWG’s existing interests? We say there is a significant overlap between Chatham Rock’s activity and the existing interests of DWG’s shareholders. The proposed activity overlaps entirely with existing quota rights to catch middle depth and deep water fish stocks on the Chatham Rise. Furthermore, 90 percent of the application area is within the mid Chatham Rise BPA. The spatial and temporal extent of the adverse effects caused by the proposed mining activity is uncertain. So the area in common with DWG’s shareholders existing interests cannot be defined with certainty and could be very large.

The existence of ITQ commercial fishing, or a BPA in an area does not necessarily exclude other environmentally compatible activities. However, Chatham Rocks’ activities will directly exclude commercial fishing, particularly long lining activities. The BPA and Chatham Rocks’ proposed mining activities are mutually exclusive. If the mining activity proceeds it will undermine the value and effect of the BPA and may impact on the sustainability of Chatham Rise fish stocks.

Why the existing interests can’t be exercised somewhere else. It is most important that part of the activity of protecting and maintaining the mid Chatham Rise BPA can’t obviously be undertaken elsewhere. It is constrained wholly to the area in which the application relates and can’t be moved other than for a legislative process. The location of the mid Chatham Rise BPA is specified in existing regulations, and they can’t be amended through this process. In addition, the BPA can’t simply be moved to another part of the seabed as there are no alternative locations that are relatively pristine and represent similar habitat classes as those in the mid Chatham Rise BPA.

For example, in the evidence of Dr Katrin Berkenbusch will show it is possible that the benthic communities associated with stony coral species found in the application area may not occur anywhere else on the Chatham Rise or within the EEZ. It is uncertain whether commercial fishing, which is displaced by the application could take place elsewhere on the Chatham Rise within the relevant quota management area as the area affected by the proposed mining cannot be defined with any certainty. The proposed mining activity will have the following adverse effects on Deepwater Group’s shareholders existing interests which are in the utilisation, preservation and optimisation of fisheries’ resources.
Long line fisheries will be directly excluded from active mining blocks and displaced from surrounding waters throughout the application area. Trawling activities will also be displaced, and you will hear some evidence from Dr Jeremy Helson on that. The combined effects of multiple adverse environmental effects on the area, such as sedimentation, increased total suspended solids, noise, habitat loss, possible re-suspension of heavy metals and food web changes may cause changes to fish stock abundance, reproduction and distribution. The cumulative effects of both fishing and mining activities have not been considered and may also have significant impacts.

And I did notice with some interest yesterday Mr Winchester’s submissions, which I have only looked at briefly, where he gives the description of the impacts of fishing, and I think his submission was to the effect that the fishing industry has a double standard. The point is that there are effects of fishing as Mr Winchester explained, but they are authorised and we say the cumulative effects of both fishing and mining have not been considered and jointly may have significant impacts.

The mid Chatham Rise BPA will be destroyed, eliminating the core element of the fishing industry and the government’s obligations to avoid adverse effects of fishing on the Chatham Rise, and undermining the BPA network generally. Destruction of the BPA and other negative effects of the proposal will cause economic loss to Deepwater Group shareholders. And you will hear evidence that that is between $270 million and $1.5 billion in present value terms. Flying from potential reduction of fish stocks, loss of value from fish stocks, reputational damage, potential loss of certification, and corresponding reduced access to export markets. And I have set out the witnesses in the footnote that will address that issue. And reduction of fish stocks, or the economic viability of fisheries in the Chatham Rise will have a significant adverse effect on DWG’s own shareholders, employees and their families.

Effects on the environment. The Chatham Rise is one of New Zealand’s most productive deep water fisheries. Deepwater Group is concerned that the environment supporting these fisheries will be irreversibly adversely effected by the proposed activity. The DMC must consider the importance of protecting the biological diversity and integrity of marine species, ecosystems and processes, and the importance of protecting rare and vulnerable ecosystems and habitats of threatened species.
These important services are provided by the mid Chatham Rise BPA as described in the evidence of Mr Clements. Allowing mining in the BPA will damage the biological diversity and integrity of the benthic ecosystems, and put rare and vulnerable ecosystems at risk. The proposed mining exclusion zones will not make up for the loss of the full protection of the BPA. CRP stated in its opening representation that the physical impacts of fishing are unregulated under the EEZ Act and therefore parliament and New Zealand society can be deemed to have accepted the adverse environmental effects of fishing on the Chatham Rise. This statement ignores the regulations which parliament enacted via a public consultation process to ensure that the adverse environmental effects of fishing on the Chatham Rise were avoided through the establishment of the BPA network.

CRP has also called Deepwater Group hypocritical for voicing its concerns over the effects of the proposal on the benthic environment. CRP discussed in its submission the disturbance caused by trawling on the seabed. However, it did not acknowledge the fundamental fact that the fishing industry does not trawl in the BPA. The commercial fishing industry explicitly instigated the BPA network and is very concerned to make sure that the benthic environment is protected in some places from the adverse effects of trawling methods.

As set out in its evidence to the extent that comparison is even relevant given the above, trawling is also considerably less intrusive and does not result in permanent compositional changes in the seabed. Even Chatham Rock can see that new communities will be different from mining and categorised with soft sediments.

Overall, Deepwater Group is concerned that the extraction of the seabed and phosphorite nodules in the mining blocks will destroy the benthic habitat and have a devastating effect on the benthic communities relying on that habitat. This impact is likely to be irreversible as the removal of the phosphorite nodule habitat will prevent recolonisation of the original benthic communities and lead to a significant shift with unknown ecological consequences.

The Chatham Rise provides a habitat for numerous benthic species. The application area and the surrounding affected area is a habitat for hake, hoki, ling, white warehou, silver warehou and other fish. It is also an important spawning ground for ling. As well as impacting those commercially important species, the application will adversely affect species such as invertebrates, coral, zooplankton and many other fish. Destruction of this habitat could have significant impacts on the benthic ecosystems on the Chatham Rise. The likelihood and rate of
recolonisation of these areas is highly uncertain, again leaving a real risk that the habitat destruction will be irreversible.

The disposal of mine tailings and other sediments will cause a sediment plume, and sedimentation of the surrounding area which could have significant adverse effects on fish and other benthic species. The mining activities may also release toxic contaminants and heavy metals into the environment. It will also dramatically alter the natural sediment regime in the Chatham Rise.

Fish and other benthic fauna will be exposed to multiple environmental stressors resulting from the application, including loss of habitat, sedimentation and sediment plumes, noise, potential release of heavy metals and contaminants, food web trophic effects and adverse effects on juvenile fish, fish eggs and fish spawning. This may result in avoidance and displacement of more mobile species such as fish and could be far more damaging to slow moving or sessile species such as stony coral.

[10.32 am]

There is an additional risk that the cumulative effects of fishing and mining in the application area and surrounding waters will have a significant effect on the environment. CRP has not provided any real analysis of those potential cumulative effects of both activities.

Finally, unplanned events such as malfunctions in the mining equipment, oil spills, vessel accidents and biosecurity incursions will increase the risk of significant adverse effect on the marine ecosystem. Chatham Rock is not experienced operating in the weather and tidal conditions which are present on the Chatham Rise and in Deepwater Group’s view it has underestimated those conditions, and you will hear some evidence from operators, actual operators on that.

It will also be operating equipment that at least is to some extent novel in an environment that it has not been used in before. This experience will increase the risk of environmental incidents.

Turning to the issue of uncertainty, when considering an application the committee must base its decision on the best available information and take into account any uncertainty or inadequacy in the information which is available. If the information which is available is uncertain or inadequate, the committee must favour caution and environmental protection. Best available information means the best information that is available in the circumstances without unreasonable cost, time and effort.
Chatham Rock submitted in opening representations that best available information in the EEZ sense must reflect the significant cost involved in access and working in the EEZ’s deep water and large distances. However, that does not provide an excuse for basic failures in information provision such as Chatham Rock’s failure to gather even a full year’s worth of data on the oceanographic tides and the currents present at the application site.

Tides, internal tides and residual flows are important and highly dynamic physical processes that will have a direct impact on the proposed mining operations.

The EPA staff report, for examples, notes that it considers that this information would have been readily available without incurring unreasonable cost, effort or time.

There is significant uncertainty concerning information limitations associated with this application. Again, as noted in the EPA staff report the validity of many of the environmental models used by Chatham Rock is questionable and it is still unclear to what extent the sediment plume will impact on benthic communities and fish species beyond the mining blocks.

Specifically there is uncertainty in information gaps in regards to the following aspects of the application: First, the application is overly reliant on un-validated models that lacked real baseline data, and that’s raised in a number of the briefs of evidence for Deepwater Group and Ngai Tahu.

Plume modelling cannot predict the spatial extent of the sediment plume with sufficient certainty. There is no analysis of the combined adverse effects to fish of the multiple environmental stressors resulting from the application, including loss of habitat, sedimentation and sediment plumes, noise, potential release of heavy metals and contaminants, food web trophic effects and the effects on juvenile fish, fish eggs and fish spawning.

There is no quantitative analysis of the spatial overlap between the wider area potentially affected by Chatham Rock’s proposed mining activities and commercial fishing interests. There is no analysis of the cumulative effects of both fishing and the proposed mining on the Chatham Rise, and the application lack any in depth information about the mining approach and operations in the Chatham Rise conditions, and how unexpected events will be dealt with.
In light of that uncertainty, the DMC should favour caution and environmental protection and refuse the application. If favouring caution and environmental protection means that an activity is likely to be refused, the DMC must first consider whether taking an adaptive management approach would allow the activity to be undertaken.

Deepwater Group supports the opening representation of Ngai Tahu, which discussed the inadequacies of the adaptive management regime proposed by Chatham Rock. As Ngai Tahu noted, the Supreme Court has held that before an adaptive management regime can be considered there must be adequate evidential foundation to have reasonable assurance that the adaptive management approach will achieve its goals of sufficiently reducing uncertainty and adequately monitoring any remaining risk.

As the Supreme Court said, adaptive management is not a “suck it and see” approach.

[10.37 am]

Deepwater Group does not consider that the proposed adaptive management approach here provides enough certainty and protection to allow the activity to be undertaken despite the uncertainties involved in the application, and that’s discussed in some detail in the evidence of Ms Andrea Rickard.

Other issues that are of concern to Deepwater Group, the unclear economic benefit. The evidence that will be called by Deepwater Group and Ngai Tahu from Mr Sundakov demonstrates that the proposal is of dubious economic value, especially when considered against the significant economic impact that the proposal will have on the commercial fishing industry and the value of commercial fishing industry to the New Zealand economy.

Chatham Rock undertook its economic assessment based on an inadequate and unverifiable modelling system. In addition, Chatham Rock has not adequately considered the potential costs of the project. The World Bank price for rock phosphate to 2025 is US$105 a tonne. Mr Sundakov estimates that a market price on US$126 a tonne is required for the project to be financially viable.

Chatham Rock has assumed an unrealistic price for its phosphate of US$184 a tonne. The economic viability of the project has been overstated by Chatham Rock. The most likely expected value of phosphate price leads to much smaller project benefits than those estimated by Chatham Rock.
In contrast, the negative economic impacts of the proposal on the commercial fishing industry and iwi interests are potentially very large.

Even on Mr Clough’s rerun of the model at US$108 a tonne it appears that the rerun is still reliant on an inadequate and unverifiable modelling system.

Other issues, Deepwater Group considers that the application negatively impacts the nature and effective existing management regimes. The application will interfere with the successful operation of existing environmental management regimes, including the quota management system and the protection of biodiversity through the BPA network.

A marine management regime, and that’s referred to obviously in section 59, includes regulations, rules and policies established under other legislation, including the Fisheries Act 1996. Both BPA’s and the quota management system were established and operate under the Fisheries Act 1996 so they can rightly be considered marine management regimes operating in the Chatham Rise.

The BPA management regime, allowing seafloor mining in the mid Chatham Rise BPA will authorise an activity that is fundamentally incompatible with the protection provided by the BPA and would render the BPA essentially redundant as the ecosystems it was designed to protect would be largely destroyed. This will jeopardise the integrity of the BPA network as an internationally recognised marine protected area.

In addition, the BPA’s contribution to meeting the sustainable management obligations under that other legislation, the Fishing Act, will be compromised.

Quota management regime, the quota management regime ensures that fisheries and fish stocks are allocated and regulated sustainably by providing economic incentives for sustainable management. The value of quota conferred under the quota management system is entirely dependent on the abundance of the fisheries and the reliable presence of future stocks. This creates a strong incentive for quota owners to initiate further marine protection measures.

If owners fear that their quota will be affected by an external force, they may be more likely to harvest that stock to the maximum allowable levels today while they can be certain of obtaining a benefit,
and less inclined to manage the stocks in a sustainable management way for the future.

If quota owner's non-regulatory measures to protect fish stock on the Chatham Rise are less effective, those are the voluntary ones for example, as a result of the impacts of Chatham Rock’s proposed mining activities, quota owners will be less confident in the value of implementing such voluntary measures in the future. The application will have a serious impact on the operation of the incentives which are inherent in the quota management regime.

As discussed above and by many other submitters, the application does not represent an efficient use for development of natural resources. It is likely to be of low economic value, it has significant adverse environmental impacts, it has adverse effects on existing interests of several groups and organisations, and it damages the sustainable and economically valuable commercial fishing industry.

The DMC must take into account best practice in relation to an industry or activity when making a decision on a mining consent application. I don’t intend to repeat this because it was covered yesterday by Mr Christensen for Ngai Tahu, but we support the submission he made that Chatham Rock has not identified best practice or relevant management regimes, nor applied associated robust management methodologies, and he referred to some evidence that would be given Mr Tara Ross-Watt.

[10.42 am]

Briefly touching on the issue of consultation in her evidence, Ms Sanders discussed Chatham Rock’s consultation with Deepwater Group. Deepwater Group wishes to clarify a few points about its engagement. Ms Sanders claims that Chatham Rock provided Deepwater Group with a copy of their withdrawn application to enable Deepwater Group to better understand Chatham Rock’s project.

What Ms Sanders did not mention was that DWG had to get that application by making an application under the Official Information Act and they only received a copy once they learned it had already been released to Ngai Tahu. Ms Sanders states that the Deepwater Group has been obstinate throughout the process and has failed to advise Chatham Rock of its specific concerns.

However, Deepwater Group would like to make the Committee aware that that is not an accurate description of the interactions that the parties have had. For example Deepwater Group commissioned an
Independent review of the fisheries information and analysis in July 2013 and met with Chatham Rock to share the outcomes of that review at Deepwater Group’s initiative.

Deepwater Group also instigated the Joint Expert Risk Assessment Workshop involving all interested parties to fill information gaps identified in the review before Chatham Rock lodged its revised application. Overall, Deepwater Group has invested considerable resource into working with and assisting Chatham Rock’s experts and Ms Sanders comments are entirely without foundation.

The issue of environmental compensation. Deepwater Group notes that Ngai Tahu has commented extensively on the inadequacies of the environmental compensation package and we support those submissions that have been made by Mr Christensen.

Ms Taylor gives details of Chatham Rock’s proposed environmental compensation package, which includes the establishment of a trust before mining activities commence. Chatham Rock would pay $350,000 per annum, inflation adjusted, into the trust until mining ceases and the proceeds of the trust will be used for various research and environmental enhancement projects. And in particular, the provision of mining exclusion areas, areas within the proposed marine consent area that will not be mined by Chatham Rock.

Now Chatham Rock advises that these have been developed using modelling data input into a spatial planning tool and that the exclusion areas will be ground truthed before mining commences and they may be adjusted while assuring that the total exclusion area does not decrease.

These representations do not expand on the appropriateness of the environmental compensation trust, however, Deepwater Group has a number of concerns with the provision of the mining exclusion areas which Chatham Rock states that these areas would be provide better targeted protection than the BPA.

In particular, the spatial planning tool appears to have inputted areas that were likely to have high conservation values, areas predicted to have large amounts of phosphorite, areas that maximised predicted biodiversity and areas that minimise the impact on economic value.

Accordingly, it is not really a network of conservation areas, but rather it is an output resulting from areas based on several values representing a compromise between Chatham Rock’s ability to access phosphorite
resources and minimise its economic loss while providing token protection for areas it predicts will present high biodiversity.

Secondly, no weight can be placed on a proposal not to mine in an area when there is no mining already. The Chatham Rise is an entirely different environment to that related to a mining proposal on land and in that context it is totally inappropriate for Chatham Rock to rely on the decision in the West Coast Environmental Network Incorporated and West Coast Regional Council line of cases, an example of where the Court used appropriate compensation in a land mining context for destruction in the deep sea.

Now expanding on the Escarpment Case. I was counsel for the mining company in that case. It is a coal mining case, Mr Anderson, my friend, in how many cases we had, nine cases that went all the way to the Supreme Court, opposed me all the way, and that is where the suggestion of no mining exclusion areas and best endeavours conditions to place legal protection mechanisms in place come from.

S just some reference and context about that case, and I am sure Mr Anderson will comment on it as well. Expanding on the Escarpment. Counsel for Chatham Rock has only referred to the final decision that was issued by the Environment Court in that case.

[10.47 am]

In fact before there were two interim decisions where the Environment Court had raised considerable concerns about the entire Denniston Plateau being poised for destruction, ie, under threat of mining, which is not the case here. Chatham Rock’s approach to the compensation reflects which appears to be largely an optimisation exercise.

Chatham Rock also appears to have misunderstood the Environment Court’s core concern that prompted its request for parties to work on formalising effectively a no mining protection area in the first place. And Mr Anderson and myself and the parties involved were involved on working on identifying this area, but the Court noted “the purpose of additional protection is not to deny potential miners coal, but it is to provide the best possible conditions for indigenous ecosystems with indigenous flora and fauna to flourish”.

That outcome is already achieved here because the area is already protected by the existing presence of the BPA and further protection achieves nothing over what is occurring at the moment. As a further matter as noted that in the Escarpment process and this is factual context which is highly relevant. The Court had available to the benefit
of an existing statute where it could place these mining exclusion areas, ie, it had available to it adding the land to schedule 4 of the Crown Minerals Act. And in what is a highly unique and unprecedented situation, the Court had directly to it a letter written by the Minister of Conservation and the Minister responsible for the minerals, the Minister of Energy and Resources and the Court described that, as I think, unprecedented or unique or words to that effect, wrote directly to the Court and told the Court of their willingness to facilitate the formal protection of the area, including through adding it to schedule 4 of the Crown Minerals Act.

The Court called for significant amounts of evidence on this to satisfy itself that this might and could happen. This is significantly different here, we do not even know what statutory mechanism is proposed, and it is significantly different here than the possibility of some unknown legislative reform foreshadowed by Chatham Rock.

I think probably the main distance here was that the Minister of Conservation had written directly to the Court. He knew what the statutory mechanism was that he might use and he had convened meetings of the parties, in fact attended himself, and there was evidence of that, all given in sworn form before the Court. Mr Anderson will probably comment on that.

So in this case what I say is the Escarpment conditions were very much a product of the factual context that the Court had presented to it there, and here Deepwater Group submits that little weight should be put on the so called compensation package.

The application does not include conditions that are able to adequately reduce the level of uncertainty or avoid, remedy or mitigate the adverse effects of the proposal and you will hear from Ms Rickard on that. Chatham Rock states that condition 6 and 16 provide a safeguard by restricting the mining operations to a relatively small area for the first five years of the project. There is no explicit statement to that effect.

So in conclusion Deepwater Group strongly opposes the proposal and seek that marine consent is declined. The proposal is based on highly uncertain information and will have significant adverse effects on existing interest of Deepwater Group’s shareholders, as well as the EEZ environment. Deepwater Group does not consider that the conditions proposed by Chatham Rock will avoid, remedy or mitigate those effects efficiently for consent to be granted.

Thank you.
CHAIRPERSON: Thank you very much, any questions from the Committee?

MR RYDER: One, I was wondering whether you had had a chance to look at the outcome from the conferencing of the commercial fishing group experts?

MS APPLEYARD: No, I have not. I know it went up on the website yesterday or the day before. Nici Gibbs is present who represents the Deepwater Group, she attended, sorry did not, no, so we have not had a chance to haven’t a look at that.

MR RYDER: I was just wondering whether there was anything that came out of that that may have influenced or otherwise your submissions?

MS APPLEYARD: No, I will have a look at it and if there is anything I will come back to you on it. Mr Clement is giving evidence and he is probably the best person to comment on that so we could update you at the time he gives his evidence if there is anything that has come out of that, that changes anything. I am not aware of anything.

MR RYDER: Okay, thanks.

MR HILL: Just one back background question, Ms Appleyard if I may, yesterday Mr Winchester told us with respect to the EEZ Bill as it was then, the Parliamentary Commissioner, her recommendation was that the BPA be excluded or a mechanism for that and that was rejected by the house.

MS APPLEYARD: Yes.

MR HILL: Going back to the BPAs themselves and the regulation, was there any discussion in the course of developing of those regulations about the potential future mining of phosphorite within the BPA?

MS APPLEYARD: My understanding is not, I understand that at the time fishing was effectively the activity which was the threat and of course this was being done under the fisheries legislation. Ms Gibbs will correct me if I am incorrect, but my understanding at the time was that was the clear and present threat and that mining was not contemplated at that particular time.

MR HILL: I guess the question is whether the industry was on notice this might be a future contingency under the BPA?
MS APPLEYARD: The question is best addressed to Mr Clement, but my understanding is not that the context at the time was really the concern about the obvious threat which was trawling and that this was not contemplated, but Mr Clement can certainly answer the question better than I can.

MR HILL: Thank you.

CHAIRPERSON: Okay, thank you very much for the opening statement. So we should take our break now, let us say we will return at 11.15 and the Royal Forest and Bird Protection Society will have the floor at that point.

MR ANDERSON: Mr Anderson for the Forest and Bird.

CHAIRPERSON: Okay.

MR ANDERSON: I thought you were looking at the wrong person there.

CHAIRPERSON: Camera number three and not camera number one.

MR ANDERSON: That is correct, sir.

CHAIRPERSON: Okay, thanks very much.

ADJOURNED [10.54 am]

RESUMED [11.19 am]

CHAIRPERSON: I’ve got one brief announcement, we’ve had a couple of more requests from media wishing to cover the hearing and I guess there, conceivably will be another one or two coming in, and just to avoid doing this piecemeal, we’ve said that we’ve laid down the rules and we expect all media to comply with them and on that basis we approve their recording, filming, photographing – the important thing is that if they record or film or photograph any presenter or witness they must get that person’s explicit approval.

Okay, and with that we move to the Royal Forest and Bird Protection Society, Mr Anderson.

MR ANDERSON: Thank you. I have a couple of additional copies of my submissions, if anyone hasn’t got them.

There is a correction I’d like to make paragraph 88 to – 68, to delete that, I’ve done that in the copy I’ve sent up to you, so just – there’s a
couple of copies that are around that haven’t got that deletion in it - so I’ll start at paragraph 1.

The Chatham Rise is home to many important features. It is New Zealand’s most important seabird environment. The benthic environment is also significant with the mining area containing three benthic communities not found elsewhere, two of which have evolved in association with the phosphorite nodules that are proposed to be mined.

The importance of the rare benthic communities was recognised which the mining area within a benthic protection area which protects the area from fishing and dredging. The mining activity will have significant adverse effects on the values of the mining area and the wider Chatham Rise.

The key issues that Forest and Bird is concerned about relate to the effects on seabird, particularly from lighter traction and the effects of the mining on the benthic and pelagic environment. Forest and Bird also considers that the economics of the project as set out in the CRP evidence is overly optimistic and should not be relied on.

There are a number of other matters of concern for Forest and Bird such as marine mammals and fish and the issues relating to the amount of uranium in the phosphate. However, these matters are addressed by other parties and are not commented on further.

There is significant risk to seabirds associated with light attraction. The biggest risk is to the critically endangered Chatham Islands tāiko, where the death of one bird, if one of the remaining 15 breeding pairs – and I note there’s some dispute about the number, it might be 20, it might be 15 so just don’t – it may hasten the species extinction. This species is known to be vulnerable to light attraction but its presence and abundance near the application site is not known. These effects can be managed by conditions but the condition proposed by CRP are not appropriate.

In terms of the marine environment the removal of the benthos will have significant adverse effects on the benthic environment within the mining footprint. There are also significant risks to the benthic and pelagic environment from the sediment plume.

The benthic environments surrounding the mining footprint are sensitive or highly sensitive to sediment deposition and there is a large amount of uncertainty about the impact on these as well as the pelagic
environment from the sediment clogging filter feeders. This impact could occur over vast areas of ocean.

The economic benefit of the activity are uncertain. The project was conceived when the phosphorus price was high. The price has since plummeted to – and can I change “less than half” to “about two thirds” – of the price and is expecting to stay at those levels for some time.

The economics of the proposal appear marginal at best, with a larger portion of the benefit of the mine proposed to make its way to the (INDISTINCT 4.18). Domestic inputs are dominated by fuel for mining vessels.

The uncertainty related to the application means that the environment protection and caution must be exercised. As one of the possible outcomes is that this consent is declined, adaptive management must be considered. Adaptive management is not appropriate given the lack of information, lack of trigger points and the irreversible adverse effects.

Given that known significant adverse effects the inadequate and uncertain information and the inappropriateness of adaptive management, the application does not serve the purpose of the EEZ Act and should be declined.

Forest and Bird is calling evidence from Mr JA Sandy Bartle. Mr Bartle’s expertise is in plankton and seabirds and his evidence considers the impact of the application will have on these matters, including the ecosystem effects of the productivity of the plankton is impacted by the mining operation. Mr Bartle has the advantage of actually having been to the Chatham Rise.

[11.24 am]

Now I’m talking about the Act itself, I have looked at the submissions presented by some of the other parties and they cover these matters, so I don’t think there’s much need in me repeating the statutory provisions which have been presented to you so I’ll now move to paragraph 17 I think is the best thing to do.

So after setting out the relevant provisions, it is submitted the most effects of these relate to the adverse effects of the activity, the importance of the protection of biological diversity and the integrity of marine species, ecosystems and processes and rare and vulnerable species, economic benefit conditions and relevant regulations.
Section 61(2) and (3) provide, where there is uncertainty or the information provided is inadequate, the DMC must favour caution and environmental protection, although the appropriate adaptive management must be considered if consent is going to be declined – I’ll take those two provisions as read.

In order to assess this application it is necessary to consider the Chatham Rise and environment in the actual and potential effects that this application will have. It is also necessary to consider whether there is inadequate or incomplete information such that a caution and environmental protection should be favoured, including an evaluation or the appropriateness of adaptive management.

Adaptive management is not “suck it and see” and Sustain our Sounds and New Zealand King Salmon Limited, the Supreme Court are as follows:

“As to the threshold question of whether an adaptive management regime can even be considered, there must be adequate evidential foundation to have reasonable assurance that the adaptive management approach will achieve its goals of significantly reducing uncertainty and adequately managing any remaining risk.”

The threshold question is an important step and must always be considered. As Preston CJ said in Newcastle, “Adaptive management is not suck it see”, is not a “suck it and see approach”, the Board did not explicitly consider this question, but rather seem to assume that an adaptive management approach was appropriate, this maybe however because there was a clearly inadequate foundation in this case.

The Supreme Court considered that before endorsing an adaptive management approach, it would have to be satisfied that, there will be good baseline information about the receiving environment. The conditions to provide for effective monitoring of adverse effects using appropriate indicators. Thresholds are set to trigger remedial actions before the effects become overly damaging, and effects that might arise can be remedied before they become irreversible.

As noted above, the purpose of the EEZ is to promote the sustainable management of the natural resources of the EEZ and the continental shelf. These matters must be achieved at the same time as economic wellbeing is enabled, including safeguarding the life (INDISTINCT 8.12) capacity of the environment.

In order to achieve the purpose of sections 10(1) and (2) of the EEZ Act, decision makers must take into account decision making criteria,
apply the information principles to the development of regulations in the consideration of the marine consents.

The requirement to favour caution and environmental protection where the information is uncertain or inadequate is critical. The decision in the application by Trans-Tasman Resources state that this is an explicit statement that was in the context of the EEZ Act, that taking of risks in the environment is not encouraged and protection is not to be traded off against the attainment of economic wellbeing.

Favouring caution and environmental protection, section 61(2) contains an important direction. “We must favour caution and environmental protection where the information is uncertain or inadequate.” This provision is an explicit statement that, within the context of the EEZ Act, the promotion of sustainable management requires a cautious approach.

The taking of risks in this environment is not encouraged, and we note that this direction is not to be traded off against the attainment of economic wellbeing. In other words, the requirement to favour caution and environmental protection in the face of uncertainty or inadequate information is an absolute one. And we remind ourselves that section 10(3) which makes it clear that applying information principles in section 61 is one of the ways of which the purpose of the EEZ Act is achieved.

I just want to briefly divert from my written submissions to follow up on a matter that my friend, Mr Currie, referred to this morning about the fact that the TTR decision is under appeal to the High Court.

It seems most unlikely that the decision will come out of that appeal before this decision making Committee has to issue its decision, so - - -

[11.29 am]

MS………: I think it’s 9th of March next year.

MR ANDERSON: I’ve just been advised that the hearing for that is 9th of March next year, so in my submission that means that the Trans-Tasman Resource’s position does provide useful guidance for this Decision Making Committee with respect to this application.

So now I’ll move onto this application. The Chatham Rock phosphate application does not serve a sustainable management purpose of the EEZ Act when a number of the compulsory statutory considerations, including section 59.2(d) relating to the importance of protecting the
biological diversity and the integrity of marine species ecosystems and processes. Section 59.2(e) relating to the importance of protecting rare and vulnerable ecosystems and the habitats of threatened species. Section 59.2(a) relating to effects. Section 59.2(f) relating to the economic benefit of New Zealand. Section 61.2 relating to the uncertainty and requirement to exercise environmental protection and caution, and section 61.3 when exercising environmental protection and caution, the requirement to consider adaptive management before declining consent.

Seabirds. Seabirds raise a number of mandatory considerations, particularly with respect to the importance of the protection of species, the effects of the application, the conditions, uncertainty and the adaptive management proposed.

As noted earlier, the Chatham Rise is New Zealand’s most important seabird area, hosting 52 seabird species, including at least 14 Albatross, 11 Petrel, eight Shearwater, five prion and five storm petrel species. Of these, 21 breed regularly on the Chatham Islands being endemic, ie breeding nowhere else. Four are threatened and three are treated as critically endangered.

Protection of these species are important because any mortality caused by mining operations in the area, including collision with lights at sea, could accelerate early extinction.

The effects on seabirds. All the bird experts refer to the potential adverse effects associated with light attraction, where birds are attracted to night lights and are injured or killed from collisions with mining equipment, such as lights, superstructure, masts and cables. Bird mortality may also occur as a result with entanglement in dredge equipment. Albatross are attracted to vessels and may become entangled in dredge equipment.

Filter-feeding prions, storm petrels, the small diving petrel are very vulnerable to light attraction, young birds often on their first flight to sea are at their most vulnerable.

A particular concern is the Chatham Island aiko, there are only 15 or 20 breeding pairs of the species and is known to be vulnerable to light attraction. This raises issue with respect to section 59.2(d). It is uncertain whether the species is present on Chatham Rise, but if one of the breeding birds is killed as a result of light attraction, this may hasten the extinction of the species.
The options for addressing light associated mortality are limited. The use of green light has been shown to result in improvements in terms of bird mortality and injury from light attraction elsewhere. However, its effectiveness on the Chatham Rise has not been established, despite advice that this be worthwhile.

The conditions proposed, and I have set those conditions out there, and what I have done is I’ve highlighted the use of the words “minimise” and “maximise”, “not needed” and “as practicable”. I submit that these conditions are inadequate. The use of the words minimise and maximise should not be used, because they are unenforceable.

How is maximise and minimise determined? It requires a subjective assessment that is not appropriate for a condition. This is because CRP can simply say they have maximised the use of green lights and cannot be really challenged. Some objective standard is required.

There are in uncertainties relating to the effects — moving onto uncertainty and adaptive management. There are uncertainties relating to the effects on seabirds, particularly around light attraction. There is uncertainty how much green light will be used, there is uncertainty how effective the green light will be and the extent to which some seabirds, particularly the critically endangered Chatham Island taiko are present in the application area.

This uncertainty has been acknowledged in the conditions that provide for adaptive management. These conditions provide for review of the procedures in the event that defined triggers of seabird mortality from light attraction are met. CRP must review this situation to determine if a solution can be found. If it can, it must be implemented.

However, the proposal does not meet the requirements of adaptive management in that if no solution can be found nothing need be done. Effective adaptive management usually involves a signalling of triggers. When these triggers are met there is a requirement to implement a solution that is known to reduce the effects of the activity.

A good example of appropriate adaptive management is Groom (ph 4.53) in the West Coast Regional Council. This case involved a reduction of flow associated with hydro scheme. Triggers were set, and if those triggers were breached the minimum flow in the river was increased. The increase in flow would reduce the impacts of the flow reduction.

[11.34 am]
If the triggers were further breached a further increase of flow was required. Similarly with marine farms, monitoring is undertaken and if specific triggers are breached this size of the farm is reduced to address the adverse effects.

The difficulty is that the method in reducing effects of light attraction is not identified. If no solution is found there is no requirement to do anything. It is submitted that these conditions are not appropriate. This is the “suck it and see” approach that was criticised by the Supreme Court.

CRP indicated that this consent can be addressed by review conditions, however, if CRP is not able to find a solution as part of adaptive management, it seems unlikely that a review of consent conditions would achieve the solution. The outcome of review is to change conditions but consent could not be withdrawn.

Forest and Bird considers that conditions can properly manage the light attraction risk. The risk can be mitigated by preventing operations at night between June and September inclusive. The conditions therefore should prevent operations at night between June and December inclusive.

If CRP provide evidence that the light attraction risk can be effectively managed for juvenile birds during this period night operations may be able to be carried out subject to strict conditions. If triggers are set, similar to those proposed, if triggered, require that night operation cease between June and December inclusive. Conditions of this nature unnecessarily adequately address the concerns of light attraction for birds.

Moving now to the marine environment. The protection of the benthic environment within the application area is important due to the species and communities present. In terms of the species, the stony corals within the application area are absolutely protected species under the Wildlife Act 1953.

In terms of the communities, according to the evidence of Dr Rowden, there are five infaunal communities and 12 epifaunal communities. Two of the five infaunal communities have been found elsewhere but one appears to be unique. Two of the epifaunal communities have been found elsewhere, but a number of them appear to be unique. Dr Rowden concluded “these apparently unique epifaunal communities include the two communities dominated by a high balance of the stony coral Goniocorella dumosa. This stunning coral is a protected species and (INDISTINCT 7.27) forms is considered a sensitive
environment”. Dr Rowden opinions are consistent with the evidence of other experts.

This evidence leads to the inescapable conclusion that in accordance with section 59.2(c) it is important to protect the benthic environment in the mining area.

What are the effects of the activity? The mining will remove the benthos from the mining area. Mr Kennedy for CRP considers that this is a significant adverse effect.

Another important effect arises from the sediment plume and the potential adverse effects of suspended and deposited sediment. In terms of the suspended sediment a key concern is also the effect on the pillaging environment and the food web. The mining activity will result in unwanted particulates of sediment becoming suspended in the water column, contaminating the clear ocean water and impacting on the pillaging environment.

The impact occurs when the sediment clogs the feeding apparatus of key planktonic filter feeders, such as copepods and euphausiids.

A potential effect is the significant of zooplankton mortality in the dredging area, preventing the oceanic food web from operating efficiently and potentially causing some downstream mortality of zooplankton predators - fish, squid, birds, baleen whales - as these key food resources become rarer.

The key question is whether the plume will rise far above the sea floor to interfere with the filter feeders. The uncertainty about this is discussed below when the modelling was assessed.

In terms of the deposited sediment, in its original submission Forest and Bird expressed concern that the environment was sensitive and there was uncertainty surrounding the effects of the sediment. Dr Hewitt of CRP responded to this submission, expressing the opinion that “all epifaunal communities were sensitive or highly sensitive”. She said “all the epifaunal communities described at the image (INDISTINCT 9.18) level were highly or very highly sensitive to smothering and highly sensitive to suspended sediment.” That is, that a defining (INDISTINCT 9.25) in the community is expected to be destroyed or damaged by sedimentation with recovery taking more than 25 years, if at all.”

Dr Hewitt disagreed with some of the detail of the Forest and Bird submission around uncertainty but agreed that there was a large amount
of uncertainty. However, it is true that there was a large degree of uncertainty in the likelihood of effects and the potential for recover.

Given this level of uncertainty, the environment protection caution must be favoured, adaptive management is relevant.

Uncertainty in Adaptive Management. Perhaps the most important area of uncertainty in this application relates to the efforts of the sediment plume. This is important because the potential adverse effects of the sediment plume are very serious, potentially smothering the benthos over vast areas of ocean.

[11.39 am]

The sediment plume has been modelled by CRP and the key problem with the modelling is that it is purely a desktop exercise, as Mr Lescinski said. To adequately simulate the movement spreading of the sediment plume as a result of mine tailings being discharged near the seabed, a dedicated set of state of the art numerical models were set up to include all the relevant processes that try and influence plume movement.

Before setting up these models a comprehensive study on the oceanography of the Chatham Rise was undertaken by reviewing literature and analysing the available data from recent measurements.

It is obvious that Dr Lescinski recognised that the modelling was extremely complex. Unfortunately there has been no attempt to verify the outcomes of the modelling with real data, they therefore remain theoretical. There is therefore significant uncertainty relating to a number of aspects of the effect to the sediment plume, particularly relating to the value of the benthic communities potentially effected, the depth of sediment that were deposited across space and time, the height the sediment plume will reach above the seafloor.

CRP indicate that they expect the plume will not raise above 10 metres above the seafloor, however, Mr Bartle’s evidence is that the subtropical conversion zone crosses the Chatham Rise and this increases vertical turbulence. The effect of this is that the plume could interfere with filter factors which in turn could damage the food web. Without any verification of the model, there is uncertainty about the height to which the plume will reach. Whether benthic communities will recover from smothering, and if so, the timeframe for such recovery.
There was also a mismatch between the modelling and the adaptive management response. CRP has proposed an adaptive response in condition 17 when the TSS concentration is greater than 15 milligrams per litre 5 kilometres from the site. This will be easy to achieve based on CRP modelling. The rig (ph 2.05) is therefore not meaningful or robust.

The result is that CRP could undertake operations without appropriate care knowing it is unlikely an adaptive management response would be required.

In terms of the questions set out by the Supreme Court in Sustain Our Sounds, the first question, there will be good baseline information about the receiving environment. The baseline information is inadequate. Condition 36 of the conditions volunteered by CRP acknowledges this by requiring that baseline monitoring is undertaken. The conditions provide for effective monitoring of adverse effects using appropriate indicators. So the proposed conditions appear to provide for adequate monitoring.

Thresholds are said to trigger remedial action before the effects become overly damaging. The thresholds are not set robustly or meaningfully with treatment unlikely based on the modelling.

Effects that might arise can be remedied before they become irreversible. There is uncertainty about the effects of the sedimentation, but they may be long term and irreversible before remedied by adaptive management.

On the basis of this evaluation it is submitted that adaptive management is not appropriate to address the adverse effects of the sediment plume.

Conditions cannot avoid, remedy or mitigate the significant adverse effects for the removal of the benthos. The adverse effects will be permanent as the removal of the phosphorite nodules will mean that the community will not re-establish itself.

CRP has indicated it will undertake research to determine if a hard substrate can be used to recreate the habitat that will be lost with the removal of the phosphorite nodules. Little weight can be placed on this condition, it is unenforceable. The decision about whether there is a viable alternative is made by CRP.

In terms of relevant regulations, Ms Appleyard has dealt with those in a great amount of detail and I don’t propose to add much to that except to
say that if you were fishing in this area with a dredge, you would be liable for a fine of up to $100,000.

In terms of compensation, and again Ms Appleyard has dealt with this in a bit of detail, as part of the compensation package the CRP has proposed the best endeavours condition relating to the creation of protected areas. It is submitted that this condition is inappropriate and should be given no weight.

The proposed condition appears to have been based on the conditions resulting from the Environment Court decision in West Coast ENT Incorporated and West Coast Regional Council, relating to appeals by Forest and Bird and West Coast Environmental Network on Buller Coal as currently mined on Denniston Plateau.

However, the circumstances of West Coast ENT are vastly different from here. In West Coast ENT the best endeavours clause related to the protection of a defined area on the Denniston Plateau where there was evidence that the decision-makers, the Minister of Conservation and the Ministry of Energy Resources, had been approached and were willing to consider providing for the protection area.

In this case the proposed protection area has not been identified, it will be identified after further research. In addition, there is no evidence about what the protection mechanism might be or whether the decision-makers who might provide for it, whoever they might be, have been consulted.

[11.44 am]

The one thing, and I think Ms Appleyard has covered this quite comprehensively, the one thing I would add in terms of my involvement in the Escarpment Case is that mining has started on the – or the consent has been exercised on the escarpment mine where the condition required that best endeavours be exercised to create the protection area, the protection area hasn’t yet been created and the mining is underway. And so in the situation where we had a whole lot more information about what the area was going to be, the Ministers were expressing a degree of interest in the whole process and support for it, yet that hasn’t come to pass in a best endeavours context, and here we have something that is far less certain and yet you are asking that to be given weight. So my submission is that this condition should not be allowed.

The other point is the mechanism which was really obvious in Escarpment, being schedule 4, what is it to be here, there’s no obvious
mechanism available. So in these circumstances the condition should not be allowed.

Economic benefit to New Zealand: Section 59.2(f) requires consideration of economic benefit to New Zealand of the application. The economic analysis undertaken by CRP is not compelling. There are two main reasons for this criticism. The workings of the NZIR model are not explained, which makes the verification of the outcomes impossible. This is despite the code of conduct for expert witnesses requiring that an expert witness identify the data, information, facts and assumptions considered in forming the witnesses opinions, and describe any examinations, tests or other investigations on which the expert evidence has relied to identify and give details of the qualifications of any person who carried them out.

In my submission, the analysis undertaken and set out in Mr Clarke’s evidence does not comply with those requirements of the code of conduct.

There are some outcomes which defy common sense. Now, this one is the price sensitivity of the model, because you would expect a significant change in the phosphorus price such as from the $180 to $110 to result in a significant change to the benefit to New Zealand of the activity, however, there is relatively little difference. This outcome is noted in economic caucus by Dr Sundakov as follows: “CT models are poorly suited to assessing the welfare benefits of deployment of capital. This is illustrated by the fact that the model produces almost the same level of welfare and GDP at $US108 and $US180, even though at $US108 per tonne this would be a significantly loss making project and a bad deployment of capital”.

The combination of these matters means, it is submitted, the CRP evidence on the economic benefit of the mining cannot be relied on.

Consideration of key issues when deciding whether to grant or decline consent. Trans-Tasman Resources considered the following four factors were relevant when considering whether or not consents should be granted: The extent of the environmental risk, including the gravity of the consequences if the risk was realised, the importance of the activity which could in some circumstances be an activity that is hoped will protect the environment, the degree of uncertainty and the extent to which an adaptive management approach will sufficiently diminish the risk and the uncertainty. When these matters are considered it is clear that consent should be declined.
In terms of the extent of environmental risk, there are a number of known significant adverse effects, the most significant of these relates to the effects on the benthic environment arising from its removal.

There is also uncertainty about a number of other effects. The Board of Inquiry for Trans-Tasman Resources addressed similar uncertainty as follows: “In relation to the first point we have set out the effects and the risks in this decision. Without repeating them here we have found that there was considerable uncertainty and that some of the effects from the proposal have the potential to be more than minor. This is largely due to the lack of baseline monitoring and real data as opposed to modelling information, that is, we don’t know.

Given this and the range of effects that may be created it is not possible to determine the environmental risk, especially over a 20 year time scale. We accept that if the mining stopped the plume would dissipate within a short timeframe. Experts opined that mined areas would recover within a decade, we are not confident if the effects that have already occurred will have been significant and/or irreversible”.

The same applies here. There was a lack of baseline monitoring and real data and over reliance on modelled information. The key difference between this application and TTR is that there are some effects, such as on the benthic environment, which were accepted to be significant.

[11.49 am]

The importance of the activity. The TTR decision addressed this matter as follows with respect to the importance of the activity we accept that the activity is important to TTR but that is not what the Supreme Court is getting at.

The mining proposal will provide economic benefit to New Zealand, although I have noted there are some uncertainties as to the size of that benefit. There also is likely to be some local reasonable benefits of a smaller scale. Overall we have concluded that while the proposal will have economic benefits these must have benefits that make it a truly important activity.

It is submitted that this description is equally for the CRP application, the CRP application does have the possibility of improving the build-up of cadmium in the soil however the economists have agreed that there is no reliable way of quantifying these values. The CRP proposal is important to CRP but the benefits beyond that are not must have in the same way that the TTR benefits were not must have.
The degree of uncertainty. The considerable uncertainty associated with this application has already been discussed and it is submitted a strong factor against declining consent.

Adaptive management to diminish the risk and uncertainty. Given the uncertainty and inadequate information consideration needs to be given to the extent that adaptive management approach will sufficiently diminish the risk and the uncertainty. There are shortcomings to the adaptive management approach to sea birds and the sediment plumes set out above.

CRP has also proposed a staged implementation which is problematic. The additional stages depend on the outcomes and monitoring of the earlier stages. The TTR decision was critical of the absence of an option of scaled or staged implementation and the CRP proposal appears to be developed with that in mind.

The staged approach. The CRP conditions provide that if certain adaptive management requirements are met on MP55549 CRP may undertake mining within ML50270 and PP55971 provided it obtains the relevant mining permits.

The problem with this is that the EIA does not address the values within the additional areas in detail. It is not appropriate to effectively provide consent for this large area to adaptive management of the smaller area. There is an inadequate evidential foundation with regard to the existing environment. There is temporal variability and the proposed mining have reasonable assurance that any adaptive management approach will achieve its goals to sufficiently uncertainty and adequately manage any remaining risk.

Conclusion. Sustainable management under the EEZ Act requires a cautious approach. Risks in the marine environment is discouraged, critically this direction is absolute not to be traded off against the obtainment of economic wellbeing. The CRP application does not take a cautious approach. Instead there is considerable risk posed to the benthic and pelagic environments and also the seabirds for Chatham Rise.

The adaptive management is “suck it and see.” The proposal is to maximise the use of green light to reduce light attraction for birds. However, if the triggers are breached no solution is provided. This is to be determined later. The triggers for the sediment plume are set far above the modelled outcomes providing no incentive to minimise the effects of the plume and the staged approach to mining provides mining
in the areas that have only been considered in a cursory manner in the application.

The economics for the proposal are marginal at best and are not must haves. When all the relevant matters are considered consent should be declined, the end of my submissions.

CHAIRPERSON: Thank you, Mr Anderson, questions from the committee?
No, you have satisfied us.

MR ANDERSON: Satisfied you, well, I am not entirely sure about that, but that is good.

CHAIRPERSON: Okay, so the final opening statement is from the Environmental Defence Society and I now give them the floor.

MR ENRIGHT: So just while our submission is being handed out, my name is Rob Enright, I appear with Nicola de Wit as counsel for Environmental Defence Society and we appreciate that we are probably going to cover to some extent common ground with a few different points of emphasis, so we will endeavour to keep it flowing smoothly for you.

Before I begin I just wanted to confirm through the Chair whether the committee does have copies of the earlier decision on Trans-Tasman Resources, we make some brief reference to it and it is also being referred to by my friend for the Society, so you do, okay, thank you, that is helpful to know that.

[11.54 am]

So paragraph 1 just to outline EDS as a public interest in environmental organisation and membership largely comprise of resource management professionals and it is involved as stated in paragraph 1 in improving the quality of legal and policy frameworks including marine environmental management.

You will be aware of course paragraph 2 of the application for marine consent, EDSs position here is that the application be declined and for the reasons stated in the third sentence paragraph 2 that it will destroy or put at risk significant biodiversity, adverse effects are not avoided, remedied, mitigated or compensated and uncertainty is not addressed for an adequate adaptive management regime.

Now the point about compensation you may recall EDS is calling one expert witness, Dr Marie Brown, and she deals with issue of offsetting or ecological compensation and my co-counsel, Ms de Wit, will address you briefly on that issue.
The issue of offsetting of course only arises where you decide there are a residual category of effects that cannot be avoided, remedied or mitigated and then it becomes a matter of well, is that a reason to decline or alternatively is offsetting an option. One of the problems you have here in EDS’s submission is that the proposed offsetting methodologies are inadequate and essentially you are being offered by the applicant matters that are not within their power to give you. For example a best endeavours offer, also an offer not to mine areas where they do not currently have consent anyway, those are illusory and do not constitute offsetting in any substantive sense.

Paragraph 3 essentially we have tried to focus just on preliminary legal issues, unfortunately the joint witness statements have only just started coming out now so we have not been able to address you on those today. Paragraph 4 just gives you a bit of a sense of the issues to be addressed.

Just before dealing with, I am going to deal with just A and B and Ms de Wit will deal with the balance of the submissions, but I just wanted to take you briefly back to the written legal submissions of counsel for the applicant Chatham Rock. There were just a couple of points to pick up with you if you have handy those submissions from Mr Winchester.

Just picking up a couple of paragraphs, paragraph 5, and I suppose it is really just where the applicant has in some ways perhaps understated things and it stuck out from my perspective.

In the first sentence the suggestion is made that all of that all that know about the proposal is the depth of operation now I mean that might be simplistically right but of course it is also the receiving environment, a very sensitive receiving environment, a great deal of uncertainty and so perhaps you give consideration to that point.

Also paragraph 6, now the point made in the first sentence is about the dredging being one of the most environmentally benign forms of mining and again I submit that is an understatement. The analogy is drawn in the second sentence to the fact that there is no removal of over burden now that is obviously a land use type analogy because if you think about quarrying normally you have got an issue with over burden.

Here of course the over burden if that is the right term of art is being removed and deposited in the benthic environment basically so I think again it is probably not quite accurate the way in which it is described with respect to my friend.
Next I just dwell on paragraph 7 now I put to you was the point halfway through paragraph 7 that because alternative supplies necessitate removal of vast quantities of over burden contain high levels of cadmium and shipped halfway around the world the potential for damage is much greater from alternative sources. Now with respect those may well be right in terms of there are effects of course from souring it internationally, but that is not the issue for you. The issue for you here is what are the effects within New Zealand context, New Zealand jurisdiction as distinct from what the effects are perhaps overseas. I think again it is not a point you shouldn’t place much weight on. A more appropriate comparison might be an alternative source within the New Zealand context.

[11.59 am]

Then just perhaps finally paragraph 9 there is the statement about context so a criticism put forward of the submitters in opposition state in paragraph 9 last sentence that essentially submitters have not had due regard to context. Now of course that is a key issue, what is the receiving environment what takes place, I submit to you, and I think the point was put quite forcefully yesterday by my friend, Ngai Tahu, that you are dealing here with players if that is the right word, or stakeholders is probably a better word who are very familiar with context and in terms of fishing interests for example they are in the marine ocean environment all the time of course. Again, it is that context you will see the flavour of that from the witnesses who do give evidence in terms of fishing as a good example and iwi as kaitiaki.

A point and I will come to it in the written submissions just finally is about what weight or what consideration should we give, should the DMC sorry give to the decision made earlier, the first decision on Trans-Tasman Resources. We pick on that to some extent in our written submissions but at a high level EDS submits you can have regard to the approach taken in the first decision on Trans-Tasman. It is under appeal and that is not denied.

There is a hearing in the High Court next year but it is still useful in my submission to consider the approach taken. Some of the statements made in that decision are wholly uncontroversial but actually quite helpful in terms of just the analytical framework applied and my submission is it is worthwhile having a look at the approach taken there naturally, the factual context is different here, but nonetheless it is of assistance.

Just turning to paragraph 5 in the EDS written submissions we are just taking you back to the first reading statement by the Environment
Minister, Nick Smith, the Bill at that point was an integral part of the government’s blue green programme to strengthen New Zealand environment and resource management systems.

It put in place a system of environmental protection for the ocean beyond the 12 mile territorial sea covering the 400,000,00 hectares in the EEZ and 170,000,000 in the continental shelf. Now you have already been addressed on section 10 and I will not read that out. Paragraph 7 the comment or sort of an observation made by the DMC in relation to the Trans-Tasman decision was that a comparison between the EEZ Act and the RMA is somewhere inevitable.

It is actually probably helpful too because there is that established body of case law under the RMA and it does give you at least a sense of what some of the statutory language used in the EEZ Act is intended to mean. There are of course significant differences as well and that is not denied by EDS.

The point made in paragraph 7 is that there are substantial similarities particularly around section 10 of the EEZ Act and that in terms of those similarities are a major and can be treated as highly persuasive. Now, it is not binding on you, you do not have to apply RMA case law, it can only ever be persuasive or perhaps highly persuasive and the point we make in our submissions is that certainly the EDS King Salmon decision and the SOS decision, both of the Supreme Court formed that category of being highly persuasive and of assistance to you when you approach the meaning of adaptive management and also this issue of what are the environmental bottom lines or are there environmental bottom lines in section 10 of the EEZ Act.

Just another point and it was made well by my friend for Ngai Tahu yesterday again was in terms of the differences between the RMA and EEZ there is a greater focus on the EEZ Act on caution and the phrase used there is deliberate rather than precautionary so there is a slight difference in flavour in terms of the approach taken but you are required to approach with caution the environmental effects where that test is triggered in section 16.

So turning then to section 10 of the EEZ Act and we just put an analogy to in paragraph 9 of our written submissions about that provision and essentially the point we make for you is in section 10 subsection 2 you have a very similar wording and formula to that using the RMA because it says although the definition of sustainable management is narrower referring to natural resources but the actual formula is the same so you are required to manage the use of
development and protection of natural resources and then the key word “while” and then you have the list A, B, C.

Now we say to you that brings it squarely within the province of section 5.2 and the environmental bottom lines’ approach endorsed by the Supreme Court so we would counter the submission put to you yesterday by counsel for the applicant that it requires a balancing exercise, in fact section 10 creates three environmental bottom lines that need to be achieved.

It may just be helpful to take you to the Supreme Court decision just briefly and I note my friend has helpfully for Chatham Rock has provided that casebook so it is tab 5 of the casebook. It is paragraph 24 that I would like to take you to because that is where the DMC discusses the definition of sustainable management section 5 RMA and it is clause C that I would like to particularly draw your attention to where the Supreme Court refers to some controversy considering the effect of the word “while”.

The controversy in terms of the definition is sometimes viewed as having two distinct parts linked by the word “while” and then goes on to say it carries the risk, the first part of the definition is seen as addressing one set of interests essentially developmental, the second part another set essentially intergenerational and environmental. The definition should not be read in that way and read as an integrated whole and if you read on just the last three sentences these words link particularly to the intergenerational interests in sub paragraphs A and B. As we see it the use of the word “while” before A, B, C means those paras must be observed in the course of the management referred to in the opening part of the definition that is “while” means at the same time as and essentially that is akin to saying the environmental bottom and they have to be achieved as environmental bottom lines. There is a lot more discussion about that further through the decision as well of course. So that really is the point we were trying to take you to in our paragraphs 8, 9 and 10 and probably 11.

Paragraphs 12 and 13 the words “protection and avoiding” are also used in the equivalent parts of the EEZ purpose and again the King Salmon approach is helpful here in terms of environmental protection being a core element of sustainable management. Avoid of course the Supreme Court there looked at the meaning of the word “avoid” in the context of the New Zealand Coastal Policy Statement and took the view that it meant to prevent, so a very important definitive if you like approach to that wording.
Now, as I mention for paragraph 13 there is that key point of difference in terms of the information principles and the requirement to favour caution and environmental protection. The submission here is that the requirement to favour and indicate primacy should be given to protection, environmental protection and that is a fundamental difference between the two statutes and that is with respect an important difference between the two Acts.

In terms of paragraph 14 the opening submissions by the applicant are focused on the large part of the scale of the effects the proposal by comparison to existing fishing activities, that is not the correct legal test, obviously the correct test is in sections 59 to 61 of the Act.

Now sections 59.2 and 3 as you are aware outline mandatory criteria that the EPA must take into account or have regard to with there being no explicit internal hierarchy.

Now that’s a point made well in my submission, by the DMC dealing with Trans-Tasman Resources and their discussion is of some assistance at paragraph 106, where they discuss section 59 and just quoting from that briefly, para 106. The extensive list of matters that must be taken to account, contains no explicit internal hierarchy, the different considerations will vary, in their relative importance, depending on the factual context of each application, the nature of the environment and the extent and nature of existing interest. They go on to say, same paragraph, we note there is an apparent emphasis on the protection of the intrinsic value of important biological resources, through use of the qualifying words, the importance of protecting. This qualifier is not applied to any of the other consideration were preceded on the basis of parliament deliberately chose to use these words for biological resources and not other matters. So there is again, my submission here, quite an important point made by the DMC and it is not so much that the DMC said it, it just that the point should give this committee pause for reflection on what the emphasis means, in that section, section 61.

Turning to paragraph 16 of the River Submissions, and we are drawing a bit of an analogy here again with King Salmon, where in that case the Supreme Court noted, “while the numbering of objectives and policies was not itself an indication of relative importance, differences of wording between your various objectives and policies are of course material to what is relatively important”. I think it is just worth another point to raise with you in terms of section 59(3). I am not sure that has been given much emphasis around their oral submissions, but it’s
It’s interesting for that reason, that section 59 in sub section 2a(i) also refers to cumulative effects. Now you could say that’s just a sort of redundancy or deliberate double counting, because it’s obviously already included within the word “effects” anyway, but another way of seeing this while there is an added emphasis and perhaps reflects the importance of cumulative effects on the marine environment and the decision here is that the latter view should be preferred. The words were deliberately chosen by parliament, so we have not just the word effects but cumulative effects emphasised for you and they reflect the difficulty of managing cumulative effects in a context of a management regime that does not provide for strategic planning.

Paragraph 20, in terms of cumulative effects, the applicant Chatham Rock notes there is almost no overlap between fishing effort on the Rise and proposed mining operations. While that may be a positive in terms of existing interests, it is a negative in terms of cumulative effects for the marine environment, and in a sort of simple sense the benthic protection areas are mitigation from a, for the fishing that takes
place, as an existing activity because there are obviously no go areas for dredging purposes. If you allow mining to take place in those BPA areas your usurping that mitigation, and that is obviously a classic, in terms of what is a cumulative effect essentially.

Now, we have made that same point in paragraph 21, because we say picking up in the second third sentence, this proposal would open more than half of the benthic protection areas to seabed mining, significantly reduced in the area of this habitat type protected from human impact and that cumulative effect is significant. Just turning to other marine management regimes in first the Fisheries Act and so the Fisheries Regulation 2007 prohibit use of a dredge or use of a trawl net in defined circumstances within 17 identified areas which includes the mid Chatham Rise BPA. The prosed consenters overlaps significantly with that BPA on the evidence the proposal would have significant adverse effects and negate any environmental benefits arising from the protection that otherwise would apply. Now as you know para 25 mining exclusion areas have been offered to replace those BPA areas and those are in a submission made by EDS Bill in picking up what was said from the council from Ngai Tahu illusory because they don’t have a consent yet to mine those areas in any event.

Now just on this marine spatial planning point. As you had heard I think in opening submissions and it certainly covered in the evidence, Chatham Rock commissioned a marine spatial planning exercise to identify proposed exclusion areas and the essential point we make in paragraph 27, is that if you’re going to go through a marine spatial planning exercise, it can’t be done unilaterally, you need to involve stakeholders and identify what are the no go areas, where are the areas where existing users should have priority and where are the appropriate areas for mining and EDS’s submission, a unilateral approach was taken rather than one that brought together a collaborative input of other key stakeholders.

And, I just perhaps take you back to paragraph 12 of the legal submissions for Chatham Rock and I will just, you don’t need to grab them again, but the point that counsel made there was and I quote here “the role of BPAs in future marine conservation protection exercises involve wider policy issues that submit of the DMC should be cautious about making judgement calls about such issues in the context of the present consent application.” And just to query that, because of course you are required here to make a judgement call about the appropriateness of this activity where it overlaps with existing interests and you are required to obviously make a judgement call, I reference to the sensitivity of the receiving environment, so you do have to grapple with obviously those issues in EDS’s submission.
So, paragraph 29. The issue raised here is about equivalency and when you have the option to review Dr Marie Brown’s evidence, the witness for EDS, she deals with the meaning of that in some detail. Essentially it’s a like for like concept though, in simple terms. And, so the principle of altered equivalency is that negative effects should be counter balanced by equivalent positive ecological outcomes and to ensure a “oranges to oranges” comparison, this is determined by how alike loses and gains are in time space and type. Now a proposed exclusion areas cover an area of 1,024 square kilometres, compared to the approximate 5,151 kilometres affected by mining, that clearly suggests in spatial terms the losses and gains are not a like.

[12.19 pm]

Mining exclusions areas may not include significant amounts of cold water coral communities. The exclusion areas provide reduced protection for biodiversity and further evaluation is required before robust decisions can be made.

Again, we’re asking you to consider that issue of “equivalency”, are they equivalent, EDS submission is they’re not.

32, and again this may be quite an important point because, it relates to the need for buffer zones, so you can have an exclusion area but what about the buffer area around that where secondary impacts arise and particularly from sedimentation.

Proposed condition provide for a ground-truthing of mining exclusion areas and their adjustment for expansion, but that presents a difficulty here because their robust ground-truthing process is not proposed to occur until after consent is granted – once again it’s an example where baseline analysis hasn’t been done, and I submit the baseline concept is actually quite helpful for you, I note my friend for the counsel for the applicant said that was a bit of an “overused term” but it is quite helpful.

To what extent you need the baseline information, the ground-truthing before you can decide about adaptive management and whether it’s appropriate or not, the submission here makes the baseline research just hasn’t been done, and it still needs to be done before you could be confident about granting consent on an adaptive management basis.

Para 34: Equivalency is important and should be required if you decide to place weight on the proposed exclusion areas. The best available information indicates equivalency will not be achieved.
And in terms of whether the proposed mining exclusion areas are secured, you’ve heard I think quite a lot on this point and so I won’t read through that and again my friend for Ngāi Tahu dealt with it very concisely and well. In terms of jurisdiction, the DMC has jurisdiction to grant – decline the subject application for marine consent. It has no jurisdiction to potent mining exclusion areas from future applications or activities not controlled under the Act such as a trawling.

You’ve heard about the “best endeavours” clause, at best that is a process duty and does not create certainty of outcome.

Dr Marie Brown addresses the issue in the context of “good practice environmental compensation”, she makes the point in evidence, first sentence: “The effective exclusion of environmental damaging activities is outside the applicant’s control and also the EPA.” The exchange is therefore not secure and should not be given weight. It must be definitive and certain that compensation will eventuate.

Para 38 makes a similar point, except to say that you should also – you need also to be clear about the nature of the effects being authorised or the effects envelope as much as you need certainty about the mitigation to be implemented.

The purpose of the EEZ Act is also relevant, which of course refers to avoid, remedy or mitigate adverse effects. A method which is proposed by not implemented does none of those things, and also as we say the information principles are also relevant and you’ve heard a great deal about that so I don’t need to read 40.

Paragraph 42, in terms of the Wildlife Act: A number of coral families and species which are “absolutely protected” through New Zealand and New Zealand fishery waters, occur in the application area. The mining activity is expected to permanently destroy gydumosa (ph 4.11), the primary habitat forming stony coral, its habitat and associated communities. EDS submits it would be inconsistent with the nature and effect of the wildlife Act regime, to allow wide scale destruction of absolutely protected species, particularly where that—sorry, that word should be “that”, not “than” – contribute significantly to biological diversity and integrity of marine ecosystem and processes in the proposed consent area, and especially where exclusion areas are not equivalent or secured.

Now just before I hand over to Ms de Wit, we have raised and I think possibly first party to raise with you in legal submissions the relevance of the New Zealand Coastal Policy Statement.
Now obviously we’re well outside the coastal marine area which is only within the 12 mile nautical mile limit, but the submission put to you is that, there is some relevance and assistance to be gained from the New Zealand Coastal Policy Statement. It is really the only planning—holistic planning document you can have regard to in the marine environment. It was found to be of assistance by the DMC in the Trans-Tasman decision, although I accept immediately that that application there were direct affects both within and outside the 12 mile limit.

[12.24 pm]

But we do put the point forward, as the CPS providing guidance, as the important values within the coastal marine area, how sustainable management is to be achieved, and EDS submits the DMC should consider whether the proposal satisfies that the relevant policies of the CPS - and we’ve given you relevant policies.

Now, again that – perhaps we just ask that you hold that in your minds and there may be some spill over effects within the CMA which we’ll come to later – I notice there was a reference to impacts in the freshwater environment arising from uranium and that might itself to be lead into the CPS, so it’s a point we will come back to perhaps during closing or in cross-examination.

Thank you, I now ask Ms de Wit to speak from that point on.

MS DE WIT: Good afternoon, I’m moving onto our section on environmental effects, firstly the benthic effects.

So as recognised by the applicant yesterday in their opening submissions, the proposal would have serious adverse effects on the benthic environment. Unique and ecologically important communities are located in the mining area. Mining will permanently destroy the coral habitat and associated communities and recovery is not predicted.

Mining will result in suspended and deposited sediments which may damage or destroy corals in adjacent areas. Hard substrate habitat creation is unproven and there are suggestions that it will be impractical and expensive.

My friend has already discussed problems of “equivalency” and “security” with the proposed mining exclusion areas, and lastly that in (F) we’ve noted that, the deep water corals provide habitat for other species and there is uncertainty about flow on effects for the wider ecosystem.
In terms of marine mammals, the evidence notes that there are at least 12 species visitations, beaked whales, fur seals and sea lions in the area, including two threatened species. An uncertainty that arises is the lack of a systematic survey for marine mammals, and that means that there’s uncertainty about the significance of the area as a marine mammal habitat.

This makes affects assessment difficult because of course the ongoing disturbance of a critical habitat will have greater effects than the ongoing disturbance of a less important habitat.

We’ve noted that in 49 that noise effects which could arise from the mining may cause significant behavioural changes and potential for temporary and permanent threshold shifts in hearing. Of course we haven’t got the benefit of joint witness statements yet on these topics, so this is as far as we can go at this stage, but we’ll address you in closing further on these effects when we’ve got more material.

In terms of seabirds, the evidence shows that the Chatham Rise is an important zone for a large number of seabirds. Again, no quantitative surveys have been carried out so there is some uncertainty there.

The evidence shows that there is a high to serious risk to seabirds from vessel lighting and there is not certainty that vessel lighting mitigation methods will reduce that risk significantly. There is also a risk from seabird strike or entanglement with mining equipment, and uncertainty regarding effects on the food supply of seabirds and cumulative effects.

I note in 52 that the consequences of a single mortality for the Chatham Island tāiko or Chatham petrel are significant, and that is of course those threatened species are a matter to which the importance is emphasised in section 59 of the Act.

We just note that in 53 potential effects on demersal fishes and cephalopods.

54, in conclusion, it is clear that the proposal will have significant adverse effects, the primary one as noted is the destruction of the benthic environment in a benthic protection area. It is our submission that you may only grant marine consent if those effects can be successfully avoided, remedied, mitigated and compensated. At this stage EDS submits that this will not be achieved and granting consent would be inconsistent with the purpose of sustainable management.

[12.29 pm]
I move on next to the information principles. Section 61 sets out the information principles. This section is unlike any other provision in the RMA where they have nothing to compare it to there and it is highly directive.

The first direction to discuss is the one about best available information. We expect that the best available information will arise from the large amount of material that will be put before you in this process. Nevertheless, in some circumstances the best available information may remain uncertain or inadequate.

So moving on to section 61.2, where there is uncertainty and inadequacy that requires you to favour caution and environmental protection. While some of the information available is certain, there are at this stage significant uncertainties and inadequacies in the information before you. I have set out in the next couple of pages some examples, and I take those as read, there is no need to go through those.

So turning to paragraph 61. On the basis of the evidence that is currently available there are these significant uncertainties and inadequacies, and it is our submission that the requirement to favour caution and environmental protection is triggered.

I have noted there in 60 as well the joint witness statements will give more guidance on this issue of uncertainties and again we will address that in closing.

Section 61.2 uses the word “must” – the requirement to favour caution and environmental protection is absolute. It cannot be traded off for economic wellbeing. We have also noted that the requirement is to favour caution and environmental protection as opposed to caution and sustainable management.

So the question for you, if you decide that there is uncertainty or a lack of information is how do you favour caution and environmental protection? Is adaptive management something that can achieve that outcome or must consent be declined?

So the EEZ Act, unlike the RMA, expressly provides for adaptive management. Yourselves must first consider whether taking an adaptive management approach will allow the activity to be undertaken. “First consider” of course means that there will be circumstances in which an adaptive management approach will not allow the activity to be undertaken.
You have already been referred to the SOS decision a number of times. Unfortunately I am going to go there one more time. The Supreme Court, in that decision, sets out two tests, the first one is a threshold question, and that is set out at paragraph 66 of our submissions so I am not going to read it because you have already heard it.

Basically that means that there are some situations where the uncertainty is so great concerning the activity and the adaptive management approach that no amount of adaptive management will be sufficient. That is the first threshold test that must be passed.

The second test is whether an adaptive management approach can be used instead of prohibiting development. The Supreme Court in SOS set out four factors, and those are set out at paragraph 68 of our submissions.

The Supreme Court said that paragraph D was the vital part of that test, so that is the extent to which an adaptive management approach will sufficiently diminish the risk and the uncertainty. It set out four more factors for deciding that, and they are set out at paragraph 69 again.

At paragraph 70 I turn now to the TTR decision. TTR proposed an adaptive management approach involving qualitative environmental performance objectives, preoperational baseline monitoring, the development of quantitative trigger values at a later date, operational monitoring, and adaptively managing operations to ensure that those objectives were achieved – that is a broad outline.

[12.34 pm]

In terms of the decision, that notes that the adaptive management approach proposed by TTR did not prescribe quantitative triggers. Instead it established a process to establish them. This meant that the objectives became the cornerstone pillars of TTR’s approach. The DMC in that case determined that those objectives did not provide sufficient certainty, clarity or robustness to form the foundation of an adaptive management approach, and it was concerned that without staged implementation there was no compelling adaptive management alternatives should those objectives not be met. It concluded that the proposed regime would not meet that test, it would not sufficiently diminish the risk and the uncertainty.

Of course, there are a number of differences between what TTR proposed and what CRP are putting before you. TTR proposed a very long list of qualitative objectives addressing quite a large range of matters – pretty much everything. In this case CRP has proposed some
quantitative triggers on a couple of matters, and there isn’t that broad range of objectives.

Despite those differences, consideration of the TTR decision and a comparison of the two approaches is a useful exercise, we suggest.

Turning now to Chatham Rock’s proposal. In terms of the SOS four part test, the proposal clearly has environmental risk as set out earlier, and uncertainty. We submit that the critical issue when assessing the adaptive management approach is whether it would sufficiently diminish that risk and uncertainty.

So I am going to go through now those four parts of the test that were set out in SOS. So the first one, baseline monitoring. Condition 36, as set out in the latest lot of evidence, provides the baseline monitoring for a couple of matters which are set out in paragraph 73. It is our submission that the proposed baseline monitoring is narrow in scope and there are numerous characteristics which are currently uncertain which are not proposed for baseline monitoring. Adaptive management cannot apply to those matters.

Turning then to B, effective monitoring. Again condition 36 provides for operational monitoring. There is a broader range of matters covered there, but as for baseline monitoring it is pretty narrow in scope. Again there are numerous impacts which are currently uncertain which are not proposed for operational monitoring, and again adaptive management can’t apply to those matters.

So the third step, are thresholds set to trigger remedial action. In paragraph 77 I note Dr Brown’s evidence that triggers have not been identified for the majority of ecological effects and the adaptive management paradigm does not apply to those. Similarly, Ms Rickard has stated that it is not clear to her what environmental parameters, triggers and requirements Chatham rock have to meet before mining can commence, and what might authorise continuation of mining activities.

Paragraph 78. Condition 17 sets a trigger value for total suspended solids of 50 milligrams per litre. We note there the evidence that this is very high and does not appear to be environmentally justified.

In EDS’s submission the adaptive management response proposed for this trigger is also inadequate. The condition allows the applicant to set the timeframe for implementing adaptive management and there is no certainty that this will be environmentally justified. It is also not clear
what steps will be taken to reduce the concentration of total suspended solids in the event the threshold is breached.

Condition 18 sets a trigger value for effects on seabirds. When triggered that requires the notification of the EPA and DoC. It requires an assessment of options and if a solution is identified, a timeframe for implementation must be identified by the applicant, and then the Chief Executive of the EPA has a certifying role.

[12.39 pm]

Condition 19 provides for an adaptive management response for these unexpected adverse impacts. So this is a catch all. There are no thresholds qualitative or quantitative that have been provided for these matters. It is uncertain when an adverse impact will be considered unexpected and how this will be transparently determined.

A similar approach for condition 18 is provided here for if the threshold, if you can call it that, is breached.

So paragraph 81, conditions 18 and 19 do not require a solution that brings the impacts within a certain threshold. Solutions that avoid, remedy or minimise may still allow additional adverse effects that were not contemplated by yourselves. In addition, the timeframe for implementation is not required to be environmentally justified or the activity stopped until that solution can be implemented.

I turn now to the certifying role that is proposed for the Chief Executive of the EPA in conditions 18 and 19. In EDS’s submission the certifying role leaves considerable room for discretion. The proper role for a certifier is simply to identify how performance criteria in conditions should be met. I refer in our submissions to the final decision of the Board of Inquiry into the Transmission Gully proposal.

In that decision they record that they were concerned about the extensive use of management plans to be approved later by council officers rather than the Board. Concern that that meant they might be delegating their obligations. They determined that that was not the case provided the consent conditions imposed clear objectives to provide focused management plan provisions which operate as bottom lines which the management plans must achieve.

In other words, the conditions imposed by the Board identified performance standards which had to be met and the management plans would identify how those standards were to be met.
Similarly, I refer to Royal Forest and Bird Protection Society and Gisborne District Council, where the Environment Court stated a condition must also be certain, it can leave the certifying of detail to a delegate but cannot delegate the making of substantive decisions.

Conditions 18 and 19 fail to specify meaningful performance standards or assert the effects envelope. Condition 19 is also particularly difficult because there is uncertainty in the baseline information currently available, so how will anyone know if an effect is unexpected. These conditions also require the DMC to delegate its decision-making obligations to the EPA.

It is EDS’s submission that these are an invalid delegation of your decision-making obligations and they do not meet the test required, that is they do not adequately diminish the risk and uncertainty associated with the proposal.

So the final step of the approach outlined by the Supreme Court in SOS is whether effects can be remedied before they become irreversible.

Chatham Rock has proposed two slightly different adaptive management approaches. The first one they refer to a staged approach where mining is restricted to the mining permit area for the first five years and can only move on if a range of criteria are met.

EDS submits that this is not a staged approach. Adaptive management is to allow an activity to be undertaken so its effects can be assessed and the activity discontinued or continued with or without amendment on the basis of those effects.

As Dr Brown states in her evidence, the first stage would enable 820 square kilometres of the marine seabed to be subject to mining activities, 820 square kilometres is an extensive area and adverse effects may potentially occur across it with no provision for a step-wise approach. The purpose of staging is to determine the nature and extent of adverse effects at a small scale before the potential risk is multiplied over a large area.

EDS submits that this staged approach does not diminish the risk and uncertainty associated with the proposal.

The second part of Chatham Rock’s adaptive management approaches is the unexpected adverse impacts as well as the thresholds for total suspended solids and seabird injury and death. I have already described
them and I have summarised the concerns again in this paragraph 89, but I won’t read those out.

In paragraph 90 I refer to indications that a break in production or changes to mining methods could threaten the viability of the project, and of course this is relevant to adaptive management because that expressly refers to the possibility of effects having to be discontinued or altered on the basis of an assessment of environmental effects.

To conclude on adaptive management, EDS submits that at this stage the proposed adaptive management approach does not ensure effective baseline monitoring and operational monitoring, it does not set appropriate or sufficient thresholds to trigger remedial action and does not provide for effects to be remedied appropriately. It does not sufficiently diminish the risk and the uncertainty.

My friends have already referred to the fact that adaptive management is not a “suck it and see” approach, so unless these failures can be remedied through this hearing process EDS submits that marine consent should be declined.

I turn now to the issue of environmental compensation, which my friend has already discussed at the beginning of these submissions.

Paragraph 93 we have referred to the applicant’s proposed environmental compensation package and we note that the figure has been increased from $200,000 per annum to $350,000 per annum.

At paragraph 94, I note that the objectives of the trust have now been included in the proposed conditions.

Paragraph 95, Dr Brown’s evidence addresses the proposed environmental compensation. She notes that there are currently no statutory principles for assessing proposed environmental compensation but good practice principles are well accepted and these are set out at paragraphs 29-34 of her evidence.

There are six key principles and they are outlined in the bullet points there.

Dr Brown sets out in her evidence the key ways in which the proposed environmental compensation currently departs from these principles. First, there is no explicit link between the effects of the proposal and the proposed environmental compensation. The figure has increased, but we don’t know what that’s linked to. The figure has not been granted in any provided calculation.
Second, there is no requirement that the trust make decisions regarding the destination of funding based on those good practice principles outlined in Dr Brown’s evidence.

Third, there is no provision for the monitoring of ecological gains resulting from environmental compensation, and fourth, there is no certainty the ecological gains will be maintained for a period of time.

Dr Brown concludes that the proposed environmental compensation falls short of meeting best practice principles and will not effectively reduce the residual ecological effects of the proposal.

If you just turn back to condition 46C on the previous page as well, I’d just like to highlight that, it’s at paragraph 94 of our submissions, to support research into and technological improvements in seabed mining methods which reduce or mitigate adverse effects on the marine environment.

It is EDS’s submission that this is an inappropriate objective for environmental compensation. Mining research is a matter for the miner and not for environmental compensation.

Environmental compensation that does not meet a high standard of rigor is effectively a cheque writing exercise and inconsistent with the sustainable management purpose of the Act.

EDS submits that the weight that you can give to environmental compensation is commensurate with the robustness of it when assessed against those good practice principles outlined in Dr Brown’s evidence.

It is our submission that the proposed environmental compensation currently fails to meet those principles in a number of respects, and unless it is amended to address those deficiencies you can give little or no weight to it.

Finally, I just have a couple of minor matters to address. In section 102 I refer to Chatham Rock’s opening submissions that stated that EDS and other environmental organisations support commercial fishing or aqueous to its effects but inconsistently criticised Chatham Rock’s proposal.

[12.49 pm]

I just note there that EDS has been and is currently engaged in a number of processes to address the adverse effects of fishing and EDS
in particular has been heavily involved in advocating for new marine protected areas legislation.

At paragraph 103 I just note that EDS would like to acknowledge the effort made by Chatham Rock to consult with EDS prior to the lodgement of its application.

To conclude, the proposal will cause significant adverse effects including effects on matters giving added emphasis by the Act and protected under other legislation. These effects will not be adequately avoided, remedied, mitigated or compensated for. There is also significant uncertainty or inadequacy in the information regarding other adverse effects at this time and the requirement to favour caution and environmental protection is triggered.

EDS’ submission is that the proposed adaptive management approach at this stage does not sufficiently diminish the risk and uncertainty and on that basis the DMC must decline the marine consent application.

Thank you.

CHAIRPERSON: Thank you, Mr Enright and Ms de Wit, any questions from the Committee?

MR HILL: Just two if I may, Mr Chair, thank you. The first question just to be clear because you repeatedly the phrase avoid, remedy, mitigate or compensate are you distinguishing compensation for mitigation and that is deliberately done?

MS DE WIT: Yes. I think Dr Brown addresses this in her evidence, but in any case she would be a fantastic, the basic position is that mitigation directly minimises the effects of the proposal whereas compensation is doing other positive things to balance out adverse effects.

MR HILL: My next question is probably fairly obvious then where is the authority for compensation in the Act?

MS DE WIT: The same place it is in the RMA so under the RMA that also uses avoid, remedy or mitigate and it has become accepted that environmental compensation is a valid technique and the EEZ Act similarly refers to avoidance for mediation and mitigation and is silent on compensation at this stage. Do you have anything you want to add to that?

MR ENRIGHT: Just to add, your question, sir, is correct, it is not explicitly referred to in section 10 and it can only be seen as a secondary
consideration if you like, but again if you come to that position where you decide there are a number of physical effects that have not been avoided, remedied or mitigated, it is within your discretion to have regard to an offset offer or an ecological compensation package that is offered but of course one has to look at that with a critical eye in terms of is what is being offered substantive in the environment wins from that or is it simply illusory or it does not address the underlying principles of the Act. I mean that is a slightly longer answer.

MR HILL: I want to take you to 66 it was in yours Ms de Wit, but I think also Mr Enright, you also covered the point. I read the extract you have given us there from the Supreme Court and on the third line there it has two elements. The first element is sufficiently reducing uncertainty which you have certainly stressed a lot and other parties have stressed that but the second part of that which is the conjunctive and adequately managing any remaining risk suggests to me and then this is for your comment, that you obviously reduce risk or uncertainty to a certain level, but then you have to close that gap with management technique. You do not have to close the risk right down obviously by that implication, can you just comment on that?

MS DE WIT: Yes, I think that reflects the four stages that the Supreme Court sets out later in its test in terms of baseline monitoring and operational monitoring might give you some more certainty about the effects but then the next two steps are the really key ones and that is what you actually do to manage that remaining risk and for that you need the triggers and you need the adaptive management response.

MR HILL: I will leave that one now, thank you.

CHAIRPERSON: Okay, well that was the last of the opening statements so this afternoon we will make a start on participating parties representations beginning with the applicant. In adjourning this session for lunch I would like to compliment all the presenters of opening statements, both for the content of the statements and the manner in which they were presented. They, I thought maintained a very high standard throughout and I think we can all feel reassured that if our committee is seen to fail in its task it will not be for lack of advice on how we should approach it. We should come back here at two o’clock and we will begin with the representations. Thank you.

ADJOURNED [12.55 pm]

RESUMED [2.00 pm]
CHAIRPERSON: Okay, let’s begin the afternoon session. This will make you wonder whether I can start a session without making a short announcement. I’m sorry about that, but they keep coming up. I have to tell you that scheduling for the hearing, not this afternoon, but next week, is proving difficult. It’s a combination of first the various constraints around the availability of some experts, and in the case of overseas experts a marked reluctance to give us what we need by video at 2.30 in the morning. And then the sheer unpredictability of how long questions and answers will take after each representation.

We can more or less control the timing of the representations and we have a high tech system over there, you will hear a ping on a glass when the 15 minutes is up, and that is a kind of cautionary note at least. And for the rest, for the questions and answers, I will just encourage people to keep them as short and to the point as possible, I mean, have a fair say, but we do need to move on and preferably not misuse the time with repetitive or irrelevant questions.

Okay, sermon finished, and it is now for CRP, I think, to make the first representation.

MR WINCHESTER: Thank you, sir, I call Chatham Rock’s first witness, who is Mr Chris Castel. He has prepared a statement of evidence-in-chief, plus an executive summary of his evidence in writing. He has one minor correction I understand, to his statement of evidence-in-chief with which he will advise the Board and parties of. There is one issue that I wanted to raise quickly before he commences his evidence. You will be conscious perhaps from the submissions made by various parties this morning and yesterday afternoon, that an issue around economic benefit has been raised arising from the economist’s evidence, and indeed assertions made about the profitability of Chatham Rocks commercial enterprise.

My submission on that, sir, is that profitability is a matter for the applicant and commercial viability are fundamentally matters for an applicant and one would ask the question as to why they are pursuing this project if it isn’t commercially viable. Nevertheless, if it is a matter that is of interest and of relevance to the Committee, and in my submission it should not be, Mr Castle is prepared to disclose profitability forecasts to the Committee, but because of two commercial sensitivity issues, one being the New Zealand Stock Exchange continuous disclosure requirements, which are rigorous, and also contractual negotiations with another publicly listed company, which is Boskalis, he is not prepared to provide that information in public, so would only do so in terms of protection under section 158 of the Act.
It is his current intention not to provide that information, but should the Committee require it, Mr Castle can provide it. So without further ado sir, I am happy to hand over to Mr Castle.

5 CHAIRPERSON: Thank you.

MR CASTLE: Thank you. I will start off by correcting my evidence-in-chief. It relates to the royalties. If you go to paragraph 80 of my evidence-in-chief, it talks about CRP paying the higher of a royalty based on net sales revenue, then it says “and in accounting profits royalty of 10 percent”, it is clearly one or the other not both.

CHAIRPERSON: An important correction.

MR CASTLE: Well my heart stopped for a minute when I saw that.

MS CRAUFD: Which paragraph was that?

MR CASTLE: Paragraph 80, it’s right at the end.

20 MR WINCHESTER: Sorry, or should be substituted for “and”.

MR CASTLE: Thank you, I will now go through my notes of quick summary and I think I will get it done in less than 15 minutes. My full name is Christopher David Castle, I founded Chatham Rock Phosphate in 2007 and have led it full time as Managing Director since.

[2.05 pm]

I have a BCA degree from Victoria University, I’m a member of the Certified Finance and Investment Professional of the Institute of Finance Professional New Zealand Inc which actually just means “investment analyst”. I’m a Chartered Accountant with close to 40 years’ experience in the minerals investment and corporate finance sectors. I’m also an accredited member of the Institute of Directors and will become a chartered a member on 1 October.

The introduction, Chatham Rock Phosphates Limited, phosphate mining project will enable New Zealand to substantial phosphate resources on the Chatham Rise to be developed in a commercially viable and sustainable way.

CRP is committed to the sustainable development of natural resources and has engaged a wide range of New Zealand and international experts to assess the environmental effects of the project and develop appropriate mitigation methods.
CRP’s business partner, Boskalis who you’ll hear from next week, is equally focused on mitigating environmental impact. The mining system designed by Boskalis employs conventional dredging techniques that have performed well in rough conditions for many years. The design has been subject to rigorous analysis to ensure that it is safe, effective and appropriate for the conditions.

CRP’s business plan is to employ a dredging company to annually contract-mine and deliver to a New Zealand port 1.5 million tonnes of dry rock phosphate for a period of at least 15 years. The present understanding is that the rock will be delivered at an agreed cost per tonne. The rock will be stored at a rented port site facility before being either exported - about 75 percent of it will be exported or shipped to New Zealand customers.

CRP takes ownership of the rock as its delivered to port then immediately sells it on a free on board basis to local and overseas buyers. That means that they take control of it at that point and they pay the freight, they organise shipping and its off our hands.

As all port sites facilities are leased, CRP will only need to finance whatever level of stockpile is necessary to ensure the customer demands are not affected by interruptions to the mining schedule. The only significant assets that CRP will hold are the mining permit/the environmental consent. The operating assets are owned by Boskalis or could be leased from another party but will be managed by Boskalis.

The Genesis of the Project: Now this project has arisen largely in response to four factors. (1) Agriculture and horticulture are fundamental building blocks for New Zealand’s economy but New Zealand is totally reliant on imported phosphate, there are no other local sources of any size. Fertiliser made from imported rock phosphate contributes to an environmental problems caused by intensification of land use, namely nutrient leaching into waterways and the accumulation of unwanted minerals in New Zealand soils, which I discuss further below.

The existence of significant rock phosphate reserves in the Chatham Rise has been known since the 1950s and technological advances and market conditions are now such that mining the resource can be done in a sustainable and viable manner.

The ability to access any reserves and to deliver them onshore at much lower costs than the cost of imported product – I emphasise there at a “much lower cost” than the cost of imported product.
Transport cost to imported rock phosphate are roughly 65 to 70 US dollars a tonne and that’s roughly equivalent to the quoted cost to CRP of mining it on the Chatham Rise and delivering onshore to an east coast port.

Recent contract prices and transport costs I’ve heard for overseas product are – and this is all in US dollars – are 145 dollars a tonne ex-Morocco. 120 dollars a tonne for lower grade product S Jordan and which needs to be added US dollars, 65 dollars a tonne, in other words, landed cost of 185 to 210 dollars a tonne.

Now the economist who you’ve heard from or their reports talk about a world price of 100 dollars a tonne, that’s a quoted World Bank statistic, which is published on the 5th of each month. The World Bank doesn’t know what contracts are being negotiated between fertiliser companies and rock phosphate suppliers.

I do because our marketing manager is a Moroccan who used to work for the largest supplier in the world and keeps close contacts with them so we do know what’s happening in the fertiliser world.

As New Zealand has no significant local resource, imported rock phosphate is the core ingredient of the phosphatic fertilisers used in New Zealand. Approximately 185 million dollars per tonne is spent on importing rock phosphate into New Zealand, although this amount obviously varies as a result in the price. Statistics New Zealand reports that New Zealand currently imports approximately 770,000 tonnes of rock phosphate per annum.

However, my discussions with industry sources suggest that import volumes might be closer to a million tons per annum, which would equate to approximately NZ$300 being spent each year, based on a March 2013 price of $250 per ton, or NZ$304 per ton.

Now at the moment only large shipments, 30,000 tons or more of rock phosphate are economic to keep the transport costs down, so the fertiliser companies have to buy large shipments.

Environmental benefits of Chatham Rock Phosphate. The use of Chatham Rise rock phosphate has significant environmental benefits that could go some way to address leaching into waterways and build-up with unwanted minerals in New Zealand soils.
The use of direct application of rock phosphate could help New Zealand increase its agricultural output by reducing, this is somewhat repetitive, but increasing adverse effects on waterways from current farming practices.

Studies carried out by the Ministry of Agriculture and Fisheries in the 1980s show that when directly applied to pasture, Chatham Rise phosphate can be as effective as superphosphate for pasture growth over time with less environmental impact from runoff into adjacent waterways. In fact the tests show that the runoff is 80 percent less, so when it rains heavily a certain amount of superphosphate goes into the waters when it rains on direct application of CRP rock 80 percent less goes off.

Direct application of Chatham Rise rock phosphate is a slow release method of applying fertiliser whereby superphosphate typically contains other compounds for fast release, resulting in increased runoff rather than long term absorption to the soil. Because it’s slow release, this means less frequent applications of fertiliser would be needed, which would help reduce New Zealand’s carbon footprint, because the total amount of fertiliser use would be lower and the number of applications would be reduced.

Reference has already been made in our opening submission to the use of Chatham rock phosphate for direct application in either high country or other locations where further applications of superphosphate would be counterproductive. Dr Alec Mackay will elaborate further on this.

Moving onto Cadmium. Chatham Rise phosphate contains significantly lower concentrations of cadmium than the phosphate rock presently imported from Morocco, reducing the potential for soil contamination by cadmium. This is an issue which has risen in some intensively farmed areas of New Zealand and is likely to get worse.

Carbon footprint. The carbon footprint associated with shipping rock phosphate from Morocco into the Asia-Pacific region would be meaningfully reduced by about 75 percent, with more localised source of rock phosphate.

Now, I'll just talk a little bit more on that. For every kilogram of fertiliser put on New Zealand soil of superphosphate the carbon emissions relating to that are 216 grams, and 68 percent of that relates to transport from Morocco. So clearly you take away the transport from Morocco, even if you’re mining it with the same emissions, you have reduced it by that percentage.
CRP has engaged a variety of experts to access all parts of the project, particularly its environmental effects and mitigation measures. We have used New Zealand experts where possible, however, some international has been used where the expertise was not available in New Zealand. The organisations used include NIWA, Deltas, Golder Associates, NZIER, Ketten (ph 3.37), the British based HR Wallingford, among others.

Through this work, CRP has invested at least 12 million into the New Zealand economy already. Since acquiring a license in 2010, CRP has conducted a significant amount of further research. This has included six cruises and two programmes which are described by Mr Ray Wood.

Commercial Viability. CRP is confident its product is commercial through its own assessment and other organisations assessment which have been undertaken through the project. The following independent private sector organisations have found the project to be commercially viable through their own reports. Rock Point Corporate Finance, Symonds Corporate Finance, McDouall Stuart Securities, Edison Research London, and Daniel Stewart and Co. London.

The NZIR was commissioned on May 2012 to prepare an independent study on the economic impact of the projects of both the mining permit and the marine consent applications. The review included an independent assessment of present and likely future fertiliser market dynamics and did not challenge the indicative mining costs. The project included the project would have a direct and indirect effect on the New Zealand economy of 900 million.

In May 2012 CRP engaged London based Edison Research to prepare an independent report and valuation of the company. Edison is one of the largest independent investment company research companies worldwide with more than 350 clients, including a strong focus on mining research, with nine dedicated analysts and coverage of 75 mining companies on major exchanges around the world.

[2.15 pm]

In September 2012 Edison produced its first full report on CRP evaluating the company at approximately $NZ400 million on an unrisked basis. Unrisked basis means assuming the project goes ahead. The evaluation agreed by Edison’s international panel of valuers followed a critical review of existing and forecast market conditions. In September 2013, January 2014 and May 2014 Edison has produced and published a series of updated evaluations, each of which notwithstanding the presently depressed rock phosphate market, have
continued to value the project on an unri
sked basis approximately $NZ400 million.

In April 2014 Daniel Stewart and Co. were appointed nominated advisors and joint brokers in respect of our proposal as listing on the London (INDISTINCT 1.03) market. In conjunction with this an independent report was prepared by them which valued the company at approximately $US223 million or $NZ256 million.

In summary, shareholders prospective investors, raisers of capital and independent stakeholders of various persuasions who each assessed the viability of our project and have concluded it is a viable business case for the project which is why we are here. We would not be here if we did not think it was a viable business.

CRP has had dialogue with a number of domestic and international fertiliser companies for potential sales of its phosphorite, this has included sending analytical data and/or samples of phosphate to prospective customers for testing, which have indicated the product is at an acceptable standard. Given the high global demand for fertiliser in food production, the no environmental benefits of Chatham Rise phosphorite and the economic feasibility of mining the phosphorite, Chatham is confident there will be a market for its phosphorite, and we think we will be allocating the product rather than trying to sell it in 2017.

Royalties. Just running through that again. We are liable to pay royalties which are the higher of two percent of the net sales revenue, or an accounting profits of 10 percent for the accounting profits as calculated by the Ministry of Petroleum Resources. Based on our current profit projections we will pay $5.9 million annually in royalties. And I am not allowed to tell you about profit. If you work it backwards you will start to get a bit closer to it. And $14.9 million in income tax. And annual total of roughly $20 million and $300 million for the lifetime of the project. That is just taxes from us. It does not count all the other inputs.

In addition we will pay port charges of several million dollars, we don’t know yet, because that is a matter of commercial negotiation as well. But I guess the numbers I have just been quoting before depend on how we much we end up paying in port charges.

Other economic benefits. A number of local employment opportunities will be associated with this project, including: port support services related to product handling – there will be a large amount of dark, black rock arriving at a port somewhere and having to be handled; there will
be at least 30 overseas vessels a year coming to take it away; we will be funding survey vessel services, portside engineering services, there will jobs on the mining vessel – using 50 percent local employees is a Boskalis policy, and there are over 40 jobs on the ship; there will be other jobs relating to environmental monitoring services; there will be maritime training opportunities offered by Boskalis on their vessels and in their fleet; ongoing scientific research and data gathering will continue as part of our monitoring; mining service provisioning and bunkering is an obvious activity; and last, but certainly not least, there will be jobs arising from increased farming inputs where CRP rock is used on marginal land.

Now I will just quote briefly from an email we had from the Federated Farmers representative in the Chatham Islands, who said that if they had a normal level of fertiliser applied to their land stock units would go from, I think, $5000 to roughly $50,000. That would create 350 new jobs on the Chatham’s. Now I have no idea where they would all live, but that is the sort of impact you have when you put fertiliser on land which has not been fertilised for some time. And that will be the case in some of the high country land.

Now I have almost certainly missed out on other direct or indirect job creation activities, but even those I have talked about should create dozens of new jobs. What we are talking here is the establishment of a new industry, not just a business.

With that I will conclude, thank you very much for listening to me.

CHAIRPERSON: Mr Castle, thanks very much for that overview. I will just make a quick comment which is that the Committee is certainly interested to explore the economic benefits the project holds out for New Zealand, essentially though we will be awaiting the presence of the experts concerned to go into those issues in detail.

Although we are not directly concerned about CRPs commercial viability there is some overlap obviously in terms of the factors that feed into your assessment of that and the assessment of the economic benefits for New Zealand so we will give some thought to Mr Winchester’s offer of additional information and come back to you on that.

Any questions from the Committee?
MR HILL: Thank you, Mr Castle, can I just take you to your paragraph 8 and you may well want to pass this on subsequently to your Boskalis’ colleagues, but in your last sentence there you talk about a design having been subject to rigorous analysis. I guess in my readings I have not anticipated that the design got much beyond conceptual, can you just confirm or otherwise that?

MR CASTLE: The design uses traditional components which are used in dredging on a routine basis daily worldwide.

MR HILL: Has it been subject to rigorous analysis to ensure it is safe, effective and appropriate for these particular conditions?

MR CASTLE: I guess you are probably going to need to, I am not quite sure what you are getting it, you probably need to ask Boskalis but the components that they are using.

MR HILL: If you think I need to ask Boskalis I will certainly ask Boskalis, thank you. I guess a couple of other matters if I may Mr Chairman, one of the things that we are being asked to anticipate is that there will be something in the order of a 75/25 percent split between what is sold onshore and what is sold offshore. What confidence can we have going over the lifetime of the consent that you are seeking which I understood to be 35 years even though you are talking about a 15 year life of a mine, what confidence can we have that split will be the average if you like over that time?

MR CASTLE: Is the purpose of your question that you are concerned about it producing or increasing the export percentage?

MR HILL: The purpose of my question is simply to have an answer.

MR CASTLE: Okay, what we would intend to do is actually sell more onshore by increasing the proportion of product we sell for direct application. At the moment we are assuming 350,000 tonnes will be sold in New Zealand and 1.15,000,000 will be sold offshore, of that 350,000 tonnes we are assuming 100,000 tonnes is for direct application which is roughly the market for that at the moment. It is our intention to try and grow that market share.

MR HILL: I certainly accept that that is your intention, I guess the question is what confidence can we have in terms of the benefits that are being claimed that that will be the case?

MR CASTLE: Well I can only express from intention and one of the reasons why we would quite like to do it is we get significantly more for that product. The direct application rock is sold by Ravensdown at a balance of $432 a tonne, New Zealand dollars. That is roughly 345 US. We are assuming at the moment on average we get roughly 125
US a tonne for the weighted average mix of our product and obviously increasing the weight towards direct application will mean we would be significantly more profitable.

Now to that end we have also done quite a lot of market research on selling our material, not just to farmers, but at a retail level in smaller packs and that is where the margins are much, much higher and also it would extend the usage.

MR HILL: Just a final quick one that 30,000 tonnes per shipload that mentioned in your evidence was that the Moroccan figure that you were giving us in terms of an economic loading if you like?

MR CASTLE: No, that is a number that I have heard from both of the main fertiliser companies from someone recently who is going to import direct application rock from somewhere else that they had to buy 35,000 tonnes to make it work.

MR HILL: Okay, thank you.

CHAIRPERSON: Thanks, Greg?

MR RYDER: Just following on about the direct application product for phosphorite two questions I guess, what is the current use of that in New Zealand at the moment, the proportion of the total?

MR CASTLE: Oh, it is roughly 100,000 tonnes and it just goes straight on so it is not processed. The roughly 1,000,000 tonnes of other rock which comes in increases in bulk when it is combined with sulphuric acid so it is up to I think something like 1.3 to 1.5,000,000 tonnes. Those are the proportions roughly but the 100,000 tonnes is a number that was quoted by Balance and there are six or seven other small suppliers who actually sell direct application rock so I cannot estimate the total market size.

[2.25 pm]

MR RYDER: So in your paragraph 31 you are saying this is one of the environmental benefits of the proposal, is an anticipated increased in the direct application of phosphorite fertiliser.

MR CASTLE: Correct, correct.

MR RYDER: But that presumably is going to assume on a number of factors, such as the availability of it and the New Zealand price of it, and I guess the regulatory environment too as to whether there is a requirement or pressure to adopt that type of practice.
MR CASTLE: It would be nice if there was a regulatory requirement, and talking to officials in the Ministry of Agriculture, or the Ministry of Primary Industries as it is now, there are some officials who would like to see that happen. Sorry, I have really sort of, we expect we can extend our market share through the network of distributors who are interested in selling our product. Does that really answer your question?

MR RYDER: I guess I am trying, you have stated it is an environmental benefit on the proposal and what I am trying to do, what we have to do is try and weigh up that degree of environmental benefit. And that is obviously going to depend on a number of factors outside of your control.

MR CASTLE: It would be fair to say that the people who sell that rock now have been approaching us and are competing with each other for the right to distribute it. So it would substitute for - some of the best RPR comes from Sechura rock, which comes from Peru. That is high in cadmium. So we have got a few cards to play here – we have got the cadmium card and we have got the low carbon footprint card and we have got it is a better rock anyway. And when it goes onto the soil it is nine percent phosphorus, which is roughly the same as Super 10 P, basically. It has got the same level of contained phosphorus. So it is a product which should receive more and more support from government as people start to better understand what superphosphate actually does to soils.

If you read the farming magazines it is full of people saying superphosphate has been hoisted on you by the fertiliser companies, this is not good for your soil. If you have enough time I can point you towards some of these people. But the sort of people who run the people selling RPR are fervent about how much better this is going to be for the soils. And there is plenty of scientific evidence to support that.

MR RYDER: Okay, thank you.

MS CRAUFORD: I would just like to follow up on that. I am not suggesting I do not believe you but you are not giving us much evidence of the environmental benefits of this. You are telling us that it would be good for people but you are not giving us evidence that actually people would take it up. And I note in Dr Bull’s evidence, he is suggesting that the Chatham Rock phosphate would need to be blended with a higher grade phosphate at a ratio of no more than 25 – 75 percent in order to make it acceptable for New Zealand farmers. And I wonder if your calculations have taken that into consideration?
MR CASTLE: Yes, that is a good question. We are talking about two different product uses. The blend he is talking about is when you blend it with high grade rock from Morocco - - -

MS CRAUFORD: Yes, I understand that.

MR CASTLE: - - - and then you make superphosphate. And what I am talking about is direct application where you just grind it up and chuck it on the ground the way it is. Two different uses.

MS CRAUFORD: Okay, so you are suggesting that, which are you suggesting in your evidence then?

MR CASTLE: What I have said is we expect to sell 250,000 tonnes, and that is exactly, because the ratio of 75/25 is not coincidental. We are talking about something 20,000 tonnes, because there is roughly a million tonnes of rock coming in to make superphosphate here. So we expect to substitute for 25 percent of that. But we are going to sell that for a much lower figure than we can if we grind it up and put it on the soil. Because it is organic, and organic eggs cost twice as non-organic eggs, it is the same fertiliser.

MS CRAUFORD: I guess if we are going to establish the economic benefit we are going to need a little bit more evidence of that.

MR CASTLE: I agree, and there is significant scientific support for tat, and I think you will find Alec McKay’s evidence and his address here very helpful. It is not something that we have dreamed about, this is a sort of fertiliser, which is how fertilisers were originally applied, and it is people going more back to their roots.

MS CRAUFORD: It is not so much the scientific evidence but the assessment of the market, acceptability of the product.

MR CASTLE: Yes, okay, I take that point. The market acceptability of the product was served pretty well supported by the field trials done in the 1980s, and I think we have tabled results from those. And we are doing some pot trials now to re-show the farmers the fact that the 1980s data is still relevant, so we’re going to be using – so thanks for drawing that out, I did mention that.

[2.30 pm]

CHAIRPERSON: Can I just ask one supplementary question, stacked up against the advantages of direct application, phosphate as I understand
it, that there is a time lag before the production is boosted to the extent that superphosphate for example would in two years/three years and I guess farmers might be a little resistant for that reason?

MR CASTLE: It’s not as – I don’t think it’s quite so long as that, sir. It’s not immediate, it’s not like a flush of growth straight away, but for example, in our pot trials, which have only been going a few months, our RPR, the direct application of rock is keeping up pretty well in the race with the superphosphate and the triple phosphate, so it’s not as long as that.

There is a delay and so, what farmers quite often do is they add a sort of a little vitamin pill to go with it to get it started quickly, to get the immediate growth and then the RPR kicks in.

CHAIRPERSON: Okay, thanks.

MR JOHNS: Yes, thank you. Hello, Mr Castle.

MR CASTLE: Hello, Mr Johns.

MR JOHNS: You’ve mentioned the figure of 350 jobs being created on the Chatham Islands, I’m just wondering where that figure came from, you’ll have to explain.

MR CASTLE: The representative of Federated Farmers, it’s actually tabled I think in my evidence or other evidence, he just worked out for that number of stock units, you need – it’s two – I think it’s – in fact I was wrong, I think it goes in 5,000 to 70,000 stock units and for every 2,000 stock units you have another job.

MR JOHNS: Okay.

MR CASTLE: Hence that, but as I said before, I don’t know where you would put them. You guys would probably very conscious of that once you’ve been there as well, there’s not a lot of room for an extra 300 families.

MR JOHNS: Thank you.

CHAIRPERSON: Okay, we have two notifications of questions, one Mr Currie on behalf of the Coalition.

MR CURRIE: Thank you, Mr Chairman and good afternoon, Mr Castle.

Yes, just a few questions for Greenpeace Conservation Coalition and KASM, firstly to follow up some questions from the Committee and to
talk a little bit about the export of the phosphate, if I understand you correctly from paragraph 20 in your evidence, you say at least initially 75 percent will be exported is that right?

MR CASTLE: Correct.

MR CURRIE: So – and I think you said about 1.1 million tonnes?

MR CASTLE: 1.5.

MR CURRIE: Would that not expand New Zealand’s carbon footprint in terms of transport?

MR CASTLE: It would offset some of the savings from Morocco (INDISTINCT 2.58) that.

MR CURRIE: And you talk about the benefit of local supply in paragraph 30, so if that phosphate is exported that would at least to your 75 percent negate that wouldn’t it?

MR CASTLE: It would mean that it’s being used somewhere else, but we can’t – you can’t actually sell much more than we were proposing to sell to the fertiliser companies because they can’t use more than 25 percent is a blend.

MR CURRIE: No. And if you increase the phosphate use such as in Chatham’s the example you gave, do you accept that would also increase runoff for example?

MR CASTLE: No because it would be used out there as an indirect application. We would supply the rock as it is so there would be much less runoff than if they were buying fertiliser from - - -

MR CURRIE: I understand that, but if they’re using phosphate where they were not previously using it is my question.

MR CASTLE: Yes, that’s true.

MR CURRIE: On paragraph 51 you discuss engaging experts as part of your EIA, so you contracted NIWA as part of that didn’t you – it’s on page 13 of your main - - -

MR CASTLE: I think so, an awful lot of NIWA experts turning up, so - - -

MR CURRIE: Yes. Can you tell me why NIWA did not carry out marine mammal surveys?
MR CASTLE: I can’t answer that question, I’m not an expert on that.

MR CURRIE: Did you contract them or is that someone else in your company?

MR CASTLE: I have a team of people who work with me, they organise that.

MR CURRIE: All right, I’ll put the question to them, thank you.

And you didn’t negotiate the cost or anything like that, you didn’t make any calls on cost?

MR CASTLE: The contracts – there are a large number of contracts which were negotiated, usually for us by Golder Associates and then once they’d been negotiated by them I approve them and paid them.

MR CURRIE: Okay, thank you.

Professor Watling gave evidence about restoration, did you happen to read that evidence?

MR CASTLE: No.

MR CURRIE: Okay. Well if I just put it to you that he, he calculated that to restore the hard substrate in the area, he calculated the number of blocks would be in the order of 164 million to cover 20 percent of the mining area, so not to get into the practicalities but my question to you is as CEO of Chatham Rock, would that cost of anywhere near 160 million blocks not be prohibitive?

[2.35 pm]

MR CASTLE: What we are planning to do is do a trial to see what it would cost for a small area, but I will be able to tell you the answer after that.

MR CURRIE: Yes, but if you took 20 percent of the mining area and taking Professor Watling’s numbers, he’s talking 164 million. I mean do you accept we are in the ballpark of that or is there another witness I can put the question to?

MR CASTLE: Yes, you are not asking the right person.

MR CURRIE: Okay, thank you. To talk about Boskalis, which you do talk about in paragraph 46, for example. If I understand you correctly there are no contracts in place for seabed mining, is that right?
MR CASTLE: That’s correct.

MR CURRIE: So they were for initial engineering and design?

MR CASTLE: Correct.

MR CURRIE: If you’re successful in gaining a consent, do I understand correctly that you will then enter into negotiations with Boskalis?

MR CASTLE: Correct.

MR CURRIE: Would that be Boskalis in the Netherlands, or do they have a New Zealand subsidiary?

MR CASTLE: No, that will be in the Netherlands, but they would establish a New Zealand subsidiary.

MR CURRIE: They would establish?

MR CASTLE: They would establish an entity here. I don’t know whether it would be a company or an office, but they would certainly be based here, they would be based at whatever port we base ourselves at.

MR CURRIE: And they currently have a 15.8 percent share in CRP, is that right, or was that in 2012?

MR CASTLE: It’s 14 percent now, they’ve been diluted by a recent capital arrangement.

MR CURRIE: Thank you. And may that be increased following negotiations?

MR CASTLE: I have no idea.

MR CURRIE: Could they gain a controlling interest in your company?

MR CASTLE: It would seem unlikely, there are a number other major shareholders would quite like it to stay.

MR CURRIE: Who would pay for the mining ship to be built, would that be you or Boskalis?

MR CASTLE: That would be probably a consortium, which includes Boskalis and possibly the shipyard that does it, but it may not be built, it may be an adapted vessel that Boskalis already holds.
MR CURRIE: If you were to be granted a consent and if mining was to commence, then if later on, for example due to a condition your licence or your consent was to cease, who would bear that loss, CRP or Boskalis?

MR CASTLE: Well they would own the asset, so I imagine it would depend on how the contact was negotiated within the shape of that.

MR CURRIE: And you accept in paragraph 48 that seabed mining will by its very nature always involve some degree of environmental risk, so if something does go wrong and there was an unforeseen event or an accident, have you investigated who will be liable – Chatham Rock or Boskalis?

MR CASTLE: Again it would depend on the shape of the contract.

MR CURRIE: Boskalis will carry out the mining in practice will they not?

MR CASTLE: Yes, they will be the operators of the vessel and probably the owners of it.

MR CURRIE: So if there was an oil spill or some other unforeseen damage Boskalis could be held to be responsible, is that right?

MR CASTLE: I would think so, just like the owner of any fishing boat out on the Chatham Rise.

MR CURRIE: And so could Chatham Rock as well?

MR CASTLE: It would depend on the nature of the contract.

MR CURRIE: And has Chatham Rock set aside any funds for contingencies against that?

MR CASTLE: Chatham Rise would get insurance.

MR CURRIE: Mining for phosphate hasn’t been carried out at these depths before, has it Mr Castle?

MR CASTLE: No.

MR CURRIE: Has Boskalis to your knowledge ever carried out seabed mining?

MR CASTLE: Not of phosphorous at that level but they do operate at much greater depths with (INDISTINCT 3.32) vessels and they recover large
quantities of material using a very similar dredging mechanism all over the world, and have done for nearly 100 years.

MR CURRIE: But dredging yes, for seabed mining no, is that correct? Seabed mining at 450 metres have they carried that out.

MR CASTLE: The physical process is the same.

MR CURRIE: Have they carried out seabed mining at 450 metres of any kind.

MR CASTLE: No.

MR CURRIE: Thank you. Were you aware that in May of this year Boskalis was said by the Maldives Environment and Protection Authority to be in breach of their environmental requirements in the Maldives?

MR CASTLE: No.

MR CURRIE: And if I put that to you that that was a report, which I can put to, I have copies if you want to see it, would that give you any concern about Boskalis’ environmental record?

MR CASTLE: No, they have an exemplary environmental record, and one of the reasons why we picked them is because of their environmental record. There were four dredging companies for us to pitch to work for us, three of them proposed and their one was more environmentally sensitive and had had the best record.

MR CURRIE: I would like to put this document to your then, Mr Castle.

CHAIRPERSON: Thanks.

[2.40 pm]

MR CURRIE: I will give you a minute to read that, it is quite short.

MR CASTLE: I do not think I am in a position to comment any further anyway, I think the people you should be asking about this are the Boskalis people. I cannot hypothesise about this situation which is just reported in a piece of media.

MR CURRIE: I will do that then, thank you Mr Castle. Just a few more questions. In some of the answer to the Committee you talked about the environmental benefits of phosphate, are you aware of any other alternatives of phosphate for agriculture, to use as fertiliser?
MR CASTLE: No, there is no replacement for phosphate. You have to have nitrogen, phosphorus and potassium, all three, NPK.

MR CURRIE: Are you aware of any other farming methods that use other?

MR CASTLE: ultimately they must be unsuccessful because you have to have phosphorus. It is needed for your bones, it is essential for human life.

MR CURRIE: No further questions, thank you.

CHAIRPERSON: Thank you very much. And Mr Christensen, I think you have also notified the intention.

MR CHRISTENSEN: Thank you, I only have a couple of specific questions. Mr Hill asked you about the assurance that the Committee could have in relation to the proportion of the product which found its way into New Zealand soils versus exported, and you have talked about a 25/75 split and the intention hopefully to grow that 25.

MR CASTLE: No, I did not actually, I talked about 35 percent, of which 10 percent is for direct application and 25 is for superphosphate.

MR CHRISTENSEN: Is there any reason why you wouldn’t agree to a condition on your consent which required some split or proportion to be retained in New Zealand so as to secure that benefit?

MR CASTLE: Off the cuff that is quite an interesting question. You are asking us to sort of guarantee that we can immediately take over a certain market share when we are a new supplier. I think that is probably an unreasonable immediate requirement. But over time probably could be contemplated.

MR CHRISTENSEN: The purpose of my question is that it would seem on the face of the consent as it is currently drafted there is no obligation for any of the product to be retained in New Zealand and it could all be exported, and as I apprehend Mr Hill’s question, it was really what confidence could we have that there is actually going to be a proportion that is retained in New Zealand.

MR CASTLE: We are a private enterpriser company, we can get significantly higher returns selling it in New Zealand than exporting. So I think you would have to assume the profit motive is going to push us towards doing it.
MR CHRISTENSEN: Do you accept that without an assurance, though, in the consent, it is difficult for the Committee to place any weight in its considerations on the benefits of application in New Zealand?

MR CASTLE: I cannot hypothesise about what the Committee might or might not want.

MR CHRISTENSEN: In your evidence then, and the evidence for others for the company, significant weight is put on the Boskalis’ connection and reliance upon their international expertise. Is that a fair summary?

MR CASTLE: They are at the front of the queue to get a contract with us. The other people missed out on the design contracts with us are still in touch, still have international expertise and are watching closely.

MR CHRISTENSEN: So it is possible that the mining might be undertaken by an entity other than Boskalis.

MR CASTLE: It might be undertaken by another Dutch company or a Belgian company. They would be just the same sort of operation, the same expertise, the same international reach, it would just have a different name on the funnel.

MR CHRISTENSEN: There is no evidence at all in front of the Committee about those other entities, though, is there?

MR CASTLE: No, none has been put there because Boskalis is pretty firmly in the camp, it’s a 14 percent shareholder in the business, we work closely, they are here for the hearings next week, we work very closely together and have for about three years. But let us say they decided they wanted to go and mine something somewhere else, we have backups. And the good news about that is that is going to help us get a pretty good contract price when we finally negotiate the terms.

[2.45 pm]

MR CHRISTENSEN: To the extent though that it may not be Boskalis that eventually is successful in contracting with CRP what utility does evidence about Boskalis’ credentials have in front of this committee?

MR CASTLE: We have much closer ties to Boskalis than to anybody else. They are a 14 percent shareholder, none of the other dredging companies would want to work for us if they were a shareholder for a start. We have an existing design contract but it does not give them the automatic right for the mining contract.
That would be a really dumb commercial move for us to have given them that right so we have kept our options open but we do intend to work with them. You will see when they turn up there next week, you will see that we are pretty much part of the same family.

MR CHRISTENSEN: In your evidence-in-chief you talk about at paragraph 77 of your evidence, you talk about some of the benefits of the rock and you refer there to the possibility to certify the rock as organic, why is that an important quality?

MR CASTLE: It is not important but you get more of a premium when you sell it. It is the same argument as I used before for eggs, organic eggs you get more for, an organic chicken you pay more for, organic fertiliser you get more for it. It would help our margins.

MR CHRISTENSEN: Is that similar to sustainable fisheries’ certification do you think?

MR CASTLE: I have no idea about sustainable fisheries certification.

MR CHRISTENSEN: I think that addresses all the matters I wanted to raise, thank you.

CHAIRPERSON: Thank you very much, does any other party wish to address a question to Mr Castle at this stage? If not, thank you, Mr Castle.

MR CASTLE: Thank you.

DR FALCONER: Thank you. You will have read my evidence in which I talk largely about the history of the project and I just want to briefly recap on that here. In this, saying and talking about Chatham Rock phosphate as on the slide, I am not talking about Chatham Rock Phosphate as the company, but more the project about phosphate from the Chatham Rise and its overall history.

It started in the 1950s, 1952 in fact and one solitary sample was obtained in the eastern end of the Rise and a manuscript was written by Reid and Hornerbrook on that and they actually pointed out at that stage that this material was quite rich in phosphate and therefore was interesting. It started 62 years ago basically.

Then in the 1960s there was more activity, there had been a bit more discussion about other samples from the Chatham Rise but in 1960s a US company Global Marine took a licence out on the Rise and they came in in two separate cruises, did a lot of sampling, all along the
extent of the Rise you can see that in my evidence, this is a diagram of
where the samples were.

They covered a large area of the Rise and showed that there was
phosphate in many different locations and that really attracted a lot of
interest for people at that stage. I myself got involved in 1967 and I was
on a US research ship and we did a line along the Chatham Rise just on
the edge of the current licence area. I used to say that my history work
went back to 32 years, 1981, but I have now discovered that it actually
goes back 47 years on this project.

In the 1970s several things started to develop. A company called JBL
Minerals, a New Zealand company got access to all the Global Marine
samples – Global Marine didn’t pursue their interests in the 60s but in
the 1970s JBL got hold of the samples, did some more analysis of them
and had Lockheed Minerals look at the cost of mining and developing
mining systems for it.

[2.50 pm]

The reason the interest was developing in the 70s was because, New
Zealand was getting pretty well all its phosphate from Naru and
Christmas and those suppliers had known that they were going to run
out, so there was a national concern about, “Where are we going to
phosphate from” and that led to a lot of interest in the mid-70s, it
developed even stronger and New Zealand Government got in behind
with DSIR, mainly the New Zealand Oceanographic Institute in 1975
started to do some cruises on the Rise and they did five cruises between
75 and 78 specifically orientated towards looking at the phosphate
deposits of the Chatham Rise.

Then the West German Government got involved (or government and
industry), in 1978 they brought their research ship the Valdivia out to
New Zealand and they did an extensive cruise on the Rise. In the centre
of the Rise, just quite a small area they studied that it had already been
identified as the richest area. So you had at that stage New Zealand
Government and West German Government and West German industry
involvement.

Then – got to press the right button – can you give me the next one
please? Okay.

1980s the interest was continuing. The interesting thing at that stage
was that, we now had a large volume of sample from the Chatham Rise
from the 1978 cruise, so they were starting to agronomic tests and
finding that the Chatham Island rock had this direct application
possibility, it was a good slow release fertiliser, you’d only have to put it on every two or three years so you could cut the application costs.

And up until that time it had always been supposed that the material would only be used as superphosphate and it wasn’t viewed as particularly good for superphosphate, but the scientific studies done in the early 80s was really changing the picture.

So 1981 the Germans came again with their large research vessel the Sonne and they did three large cruise there in three separate phases and that was when I got most directly involved, I was on the ship for two of the three phases and I was working as a consultant for Fletcher Challenge at the time, who had taken a license out over the area.

So there was a lot of interest in the early 80s and then it all stopped in 1984. Why? Basically New Zealand Government wasn’t really backing it so the West German Government decided that wasn’t an equal share so they decided not to back it quite so much.

The New Zealand economy had gone down a bit so the use of fertiliser was actually dropping a little bit in the early 80s, so that raise some questions about the marketability of it. But more particularly a lot of new phosphate mines opened up around the world about that time in Jordan and in Peru and other places and they were, a lot of them were government subsidised and so the materials coming onto the market at quite a low rate. So Fletcher Challenge decided that the risk return was not good enough and so the project basically stopped in 184.

Can we have the next one please?

1990s, silence, nothing happening, hard times.

The next slide, the 2000s, nothing happening, silence again, I was doing other things.

Then 2010 the next slide, life starts again, Chatham Rock Phosphate was formed, took out the license, was able to draw on all of the previous work. Chris Castle has calculated about 70 million dollars in today’s term of research work had been done and there was a huge amount of data of it – there was a huge amount of data available that CRP was able to draw on.

2011, Boskalis joined the project, as a partner with Chatham Rock as Mr Castle has identified, and since then of course you will see in your numerous volumes, a large amount of activity taking us through to
today. And then we’re looking ahead to actual mining – assuming we’ll get the consent – in 2017 which will be 65 years from the start in 1952.

[2.55 pm]

So now I want to turn over to the next slide, the next piece, I just want to talk just very briefly here about integrating data and leading through to knowledge. In several of the submissions and so on it seems as if people think that if you have data at various points that you don’t have a huge amount of knowledge about an area. And I just want to just show a couple of examples that illustrate how you take individual data that might be quite widely scattered and integrate it into quite a significant knowledge of the sea floor.

This is an example from some of my own my work that I am going to show.

So if we have the first slide – this is a map that shows the colours, the bathymetry, the water depth, and the dots on it are basically showing you the samples that were collected by Global Marine in the 1960s, by the (INDISTINCT 1.04) in the 1970s and This Honour (ph 1.07) in the 1980s. I was keeping this simple, I haven’t put the more recent samples. Chatham Rock has collected over 170 new samples in the area, but mostly in the intense area.

This is the area in the centre where most of the activity has been concerned – you can see the mining licence outlined there on the sort of left hand side or western side, and then the other boundary is the remaining block around it, the mining, prospecting licence area, the 50270 area.

And the dots, you might not see them too easy on the screen, the red is where phosphate is present and there are black crosses where there are samples that phosphate is not present in the samples that were obtained.

So this is sample data. And the next slide will show a different form of data. These are the track lines for high resolution seismic system that was yours on This Honour in 1981 and this tells you about the top few metres of the seabed. It is really a high powered ecosounder and so you can get an idea of what is in the upper layers of the seabed, and this is the coverage of the regional work that was done on that.

There was very much more in the centre area where the samples are very dense, and if I draw the track lines on that that piece in there would go black, so these were the regional lines. I myself was helping run the equipment on every one of those lines and I did the
interpretation of every one of them. There are over 200 lines and I recall doing all that.

And it is all published in one volume as the summary of the 1981 sonic cruise (ph 2.51) up until the recent work for the EIA, then this book would have been the most complete knowledge of the Chatham Rise, but that is now considerably superseded.

So now let’s just go over in the next slide to how one fills in things. I showed you before just points, little samples, some lines. But then using one’s experience you take the character of the sea floor from the seismic records, the samples, the nature of them – quite a few of them were dated, so there were geological ages of them, and then integrating this picture and we come here to a diagram which is basically showing an interpretation of the nature of the sea floor. And it shows some areas that are hard basin and outcrop, some of the areas that are more prospective for phosphate, some of the areas that are not prospective.

So in essence, what you see here is basically an integration of knowledge that covers virtually the whole of that central licence, those two licence areas in that map.

This concept of taking individual data and then integrating it to a much more complete understanding is a central part of quite a lot of what you will hear in the next few weeks from expert witnesses. And you will find on the Chatham Rock side people like Campbell McKenzie and Ray Wood do this, Ashley Rowden from NIWA and other experts will be doing this integration and bringing knowledge together on the whole project area.

So that is all I wanted to say today. So we will have the next slide, just so that we have a white screen.

CHAIRPERSON: Okay. Thank you very much, Dr Falconer. Look, I would just like – I am not sure whether I am flagging a couple of questions that should be better addressed to somebody with particular expertise, but just to run over them anyway, it was useful to get that outline of the history of the project and the kind of research and surveying that has been done, and we have had a couple of questions about the economic benefits to New Zealand, it is obvious that at a certain point in that history of the project the economics changed and suddenly it became an economically attractive proposition, and the NZIER evidence suggests that it still is. [3.00 pm]
But I think you can expect a lot of questions, and maybe it is best left until we have the economists in front of us, about both the data that has been used to establish that, things like the supply/demand situation that is forecast, world prices/projections, exchange rate and so on, and also the appropriateness and the reliability of the CGE model to this particular situation since that was used to calculate what the welfare benefit might be to New Zealand and how it would be distributed.

So I am not sure if this is your area, so you could perhaps just register that.

The other question on my mind at the moment, this is a “first of its kind” project in terms of the depth at which it will be operating, and we were told the dredging or mining has been carried out elsewhere in the world in a number of cases at depths of around 200 to 250 metres, and we did ask for information about any environmental assessments that were done in the wake of those projects, or any studies that had been done, and I think all we received were some reports on projects around 25 to 40 metres in depth. So I just wonder whether it is difficult to get those assessments or they haven’t been done, or is there more information out there that we could actually wire into?

MR FALCONER: Okay. Just on the first question of the economics, I am a director of CRP so I understand that side of it, but I wouldn’t consider myself to be the expert in this forum to answer the questions on the economics so I will defer that to the later people.

On the question of the environmental studies, at the present time the mining, as one might classically describe it, is done for diamonds off south west Africa to depths of about, towards 150 metres. There is a certain amount of environmental work done there, but it hasn’t required formal environmental assessments in that sense. So we have heard that there isn’t mining per se in deeper than that. So the question of deep water environmental studies in the 200-250 metre, there are not in the mining sense. But Sander Steenbrink next week, I am sure, could talk more fully on this for you.

CHAIRPERSON: Okay. Thank you. Committee?

MR HILL: Just on your paragraph 63, Dr Falconer, I think you gave the answer but I’m not quite sure, but I just want to check it out – you indicate there at that period of time that there was a problem with the phosphate in terms of its suitability for the chemical processing. Was that simply because of the compositional nature or the proportion of pentoxide, or what was the reason why it was unsuitable at that point in time as opposed to now?
MR FALCONER: It had a lower P content than the Nauru imported material and there was also just, to be honest, conservatism in the fertiliser processing companies of the time in that they were used to handling just Nauru and Christmas and really didn’t have to handle anything else. Nowadays they have to handle material from large areas of the world and so they are much more flexible in how they run their processing plants.

MR HILL: Right, okay. Yes, thank you. Nothing more.

CHAIRPERSON: Okay. The notification of questions I have is from Mr Christensen.

MR CHRISTENSEN: Thank you. Dr Falconer, can I ask you firstly, in the conversations that you had with the international dredging companies when you were eliciting their interest, was it explained to them that the mining was to take place in a protected benthic environment?

MR FALCONER: That certainly would have been raised at the time. This was 2010/11 and the BPA was in place at that stage. We did with all of the companies we met with, and they all did feasibility studies for us.

[3.05 pm]

We did emphasise environmental conditions in that. They always would be clear that getting the environmental consent was the responsibility of CRP, but their ability to operate in an environmentally sensitive way was part of our judgement process.

MR CHRISTENSEN: Did you draw to their attention that it was a legally protected benthic environment and did they express any concern about their willingness to operate in such an environment?

DR FALCONER: I cannot recall whether there was as direct a conversation as that, but we certainly gave them an introduction to the whole scenario of the Chatham Rise, of fishing, of the nature of the Rise, of the oceanography and son on.

MR CHRISTENSEN: Okay, thank you. At paragraph 23 of your evidence you talk about your role back in 1987 with the IMMS and the Environmental Code and you note that the code is part of CRP’s operating procedures. Can you explain more of what that means?

DR FALCONER: The International Marine Mining Society has developed a code, they didn’t develop in 1987, they were created in 1987 and I was
the founding member at that stage. Their code has been developed more recently and Ms Taylor would be better placed to give you a detailed rundown of the details of that code. I am familiar with it.

5 MR CHRISTENSEN: What do you mean when you say it is part of CRP’s operating procedures?

DR FALCONER: We have looked at the IMMS code in terms of developing our project but Carmen Taylor could explain further.

10 MR CHRISTENSEN: The code says, and this under the functions of the code, it says “where the code sets higher standards than those legally required, companies are encouraged to follow the code and strive to improve the legally binding requirements accordingly. Adoption of the precautionary principle in the code is a notable achievement in this regard”. Are you familiar with that part of the code?

15 DR FALCONER: I know the general principles of the code, but I am not an expert on it.

20 MR CHRISTENSEN: Are you familiar with that part of the code?

DR FALCONER: I am not an expert on the code, I will leave that to Ms Taylor.

25 MR CHRISTENSEN: So you are saying you are not familiar with that part of the code?

DR FALCONER: I have read the code but it has got a lot of material in it. I am not an expert on it and that is not part of my role in CRP.

30 MR WINCHESTER: My friend wants to put questions about the code to Dr Falconer. Perhaps he could supply him with a copy of it.

35 MR CHRISTENSEN: I have not got a copy to supply him, I thought he was familiar with it, it would have been because he said it is part of his company’s operating procedures. I am going to ask one more question in relation to the code.

40 Under the heading Operating Guideline – Responsible and Sustainable Development, the code says “minimise the impacts of mining operations on and protect the biodiversity, ecosystem services, ecological and cultural heritage, knowledge and values of the marine environment, including designated marine protected areas and reserves”. Do I take it you are not familiar with that part of the code either?
DR FALCONER: I have said previously I am familiar with the general principles of the code, I am not an expert, there will be several witnesses in subsequent weeks who will address the question that you are asking.

MR CHRISTENSEN: Do you consider that the mining that the mining proposal is consistent with the principles of the code?

DR FALCONER: I am not an expert on it.

MR CHRISTENSEN: Thank you. No further questions.

CHAIRPERSON: Okay, does any other party wish to address questions to Dr Falconer? Yes, if not, we are moving far too quickly. Yes, thank you, sir, you have come to our rescue.

MR CURRIE: You, I think, alluded to diamond mining I believe. Can you explain to the DMC how that marine diamond mining is carried out, are you familiar with that?

DR FALCONER: Yes, I am reasonably familiar with it from public documents, not from anything more detailed than that.

MR CURRIE: Am I correct in assuming there is a drill involved in one type and, maybe you can explain it then?

DR FALCONER: They have done different approaches, they have done some approaches of trailer suction in a similar mode to the present project to strip over burden.

[3.10 pm]

The issue with the diamond mining is that the diamonds are generally underneath some overburden, and they have in some cases dredged that off, in other cases and mostly commonly nowadays they use a drill arrangement to drill down to the bedrock and then suck the material from the bedrock, because they’re only looking at very small volumes.

MR CURRIE: Thank you.

CHAIRPERSON: Just to that, were you saying before that in fact there is only one incidence of this kind of operation having been carried out at a depth much closer to the 400-450 metres on the Chatham Rise, ie the diamond mining?
DR FALCONER: No.

CHAIRPERSON: Because the information we got I think suggested that there had been several cases of dredging operations anyway having been carried out at 200-250 metres depth.

DR FALCONER: Not dredging in the way that we understand it, no. There are a lot of operations at that depth and even deeper in terms of in placing material, like sand for example in a very controlled fashion on the seabed to cover up pipelines or to bury other things, that is sort almost the inverse of dredging. There has been some project work off New Finland in order to dig holes in the seafloor to put oil head structures into holes in the seafloor at depths of 200 metres, but that’s not dredging in the way we are talking about.

CHAIRPERSON: Okay, or mining, yes.

DR FALCONER: Or mining, no.

CHAIRPERSON: Okay. All right, well I think you are now excused Dr Falconer.

DR FALCONER: Okay.

CHAIRPERSON: And it’s for Mr Wood to take the stand.

MR WOOD: Good afternoon. Rather than summarise my evidence, what I thought I would try to do today is give you some examples and some of the data that underlies the environmental interpretations that are in the evidence you have been receiving, and talk about BPAs.

In light of a number of opening statements, I think I could expand on those comments if you like, and perhaps clarify some of the uncertainties and misunderstandings about those two topics, if that’s okay with you? If I do that it might that a bit more than 15 minutes, but I think the committee might find it useful if I did elaborate on some of those things.

CHAIRPERSON: I’m sure Sharon can adjust her watch accordingly.

MR WOOD: So I apologise, I don’t have really fancy software. I am going to show you some videos. The data collected by the ROVs on transects (ph 3.16), the primary data used for the environmental interpretations. So I will show you some of the videos of that, and I’m going to pause those occasionally and then try and show you some photographs taken,
so we look at maps of the seafloor and then some photographs of what we saw.

Now, when we’re finished I’ll show you two transects and when we’re finished with that I’ll talk a little bit about the BPAs.

So just before we zoom down here, these are the data, the bisymmetry data, multiple bisymmetry data that we collected as part of our project. You can see the high resolution data there. Those are essentially maps of the seafloor and each those little cells if you like, is about the size of this room, its 25 square metres. So that data have taken the average depth of that kind of information, again is displayed here in colour, and I don’t know if you’re close enough but you can probably see that this whole area is covered with iceberg scours, there is linear features, little pits and things, those were all done by icebergs.

So what I’m going to do is show you – and these lines are where we had this ROV go down and make photographs and detailed measurements of the seafloor. Now the ROV we used is about the size of a small car, it was equipped with multiple cameras, this high resolution bisymmetry data and other instruments. So I’m going to show you photographs along a transect here in the northeast and another transect down the south central part. To give you an idea of the variety of things we saw in these transects.

[3.15 pm]

So, zooming down and you can see that there is some high areas here, but you can see these long iceberg scours that show up even on this relatively coarse data, you can start seeing the high resolution information here that is collected by the ROV and we have to reverse it off to the north west there so at the start of the line here, so I will just pause briefly to give value what we are seeing.

The width of the track is about 12 metres so it is sort of the width of this room, that is the width of information we are getting and the resolution is 10 centimetres so it is maybe twice the size of this club so we are looking at objects which are that size on the seafloor we can detect with this information.

The black contour lines are half a metre contours so this little slope from there to there is about one metre, that is two contour lines and the colours go, the reds are shallow and the blues and greens are slightly deeper, but the overall change on this line, I have forgotten, is maybe 10 or 20 metres total difference in elevation.
If we look at, I am just going to pause this now, you can see there is a change in the nature of the seafloor, this is kind of rough sort of pocky looking and this out here is smooth and maybe a few holes in it. I am going to show you a photograph of something right in here, so this is what we are looking at. These are the corals that we have all been talking about. This is the thicker coral on the seafloor.

You can see some black objects there which do not have coral on those are phosphate nodules sitting on the seafloor. The area you are looking at is about four metres wide and maybe five or six metres in depth so that is the type of seafloor we associate with that type of terrain.

This is very slow, can you help me get back to, so we have gone a bit farther and so just for comparison, I will stop here as well. As well as the contour lines we have some markers along the line here. Those are observations made by people, I will not show you today, but at the same we were collecting this data we had a video, a big screen like this was on display.

There are two biologists and two geologists looking at in real time and making records on their computer of what they saw on the screen so these are geological observations, there are probably two or three times as many observations made by the biologists of scampi, fish, starfish, all that kind of thing is all logged and in this case we colour coded what these are and the little yellow orangey things are corals, the green ones are nodules, these grey things are cauldrons, this is signs of animal life in soft sediment which you will see a picture of now.

So we are going to look at an example this seafloor here you can see is quite different in character to the other one, if we have a quick look and see what that looks like I think, can you help me switch back to the images please?

That is the seafloor now in this different character and you can it is very, very different, there is no coral, there is no nodules, there is some other organisms there and there are these pits where the fish or other organisms have dug in the soft sediment and so on so you can see it is very, very different and that is over a distance of 10 or 20 metres so this is the kind of thing we are seeing on these transacts can we go back to the video?

This is very painful can you start it for me? We are only going to run it for about another 15 seconds or so like if you could stop it again and go back to the picture. So we are now looking somewhere in the middle here and look at this photo so here is another example this is just a little farther on the line and you can see there is coral there with the cursor
is, but there are lots and lots of nodules there but there is no coral, relatively little coral so what we are seeing is that some places there is lots and lots of coral associated with nodules and other places, just because you have nodules it doesn’t mean you have to have corals, so this – and again this is probably 50 or 100 metres away from the other spot.

[3.20 pm]

Okay, so carry on – and all these contours are related to the iceberg scour), we’re getting a bit shallow here, and you can see – right pause it again – you can see where – this is a small ridge and you can see that texture there, this is the coral texture, and it recorded nodules and coral and so on, so there’s a little bit ridge with an iceberg scour on either side.

More of these patches of coral you can see in the scale there, that’s about eight metres wide and in this case it’s eight metres long – going off the track. All the elevated parts of the line, seem to have coral associated with it, the deeper parts in the iceberg furrows are characterised by that second shot I showed you which was, no coral, just the soft sediment.

And I need to stop this – can you stop it on – right now? Thanks.

Now look at a couple of photographs on top of this mound – can you get me to the photos please?

Can you move to the next photo?

So this is a close up of this you see again, lots and lots of corals, but just because there’s coral it doesn’t mean there’s phosphate it doesn’t mean there’s coral, so there’s lots and lots of phosphate at the surface there as well.

Next photo please.

So zoomed in and the other interesting thing – I’m not a Biologist, I’m a Geologist – but the biologists have looked at these, okay look at the coral and you can see the sort of grey material in the coral, they’re telling me that that’s, that’s something on the coral so the message is, that just because materials on the coral is not instant death, you know natural environment the coral have adapted to cope with something on and it’s not – it not a totally pristine environment.
So if we go back to the movie please – can we carry on – if you can make it go a bit faster we can do that as well, this – you’re getting the idea, here’s another bump, coral on top, down an iceberg furrow, you can see those pits and burrows - another bump, you can see the coral there.

Down the trough more pits and burrows – we’re still seeing phosphate in there – another bump – another bump, corals, phosphate, down a trough phosphate, no coral, and you can see the elevation of these is one or two metres, so it’s very, very, you know, it’s sort of this tall is we’re looking at - now can you pause it here please.

So we’re going to look at the next photo, which is in the centre of the photograph here, is there an area of the – is nodules are reported and not coral.

Can we go back to the photos please? Next photo – two photos over – that one – so here again you’re seeing sort of scattered, widely scattered phosphate nodules, widely scattered coral so there’s coral-less environment but it’s not always in these – in the “thickets” that they were called by the biologist – and again every nodule doesn’t have a coral in it.

So go back to the movie please and we can speed it up, I just want to show you something from just the very end of line again – while we’re doing this, all the biologists took all this information, took the – we had something like 17,000 photographs, they looked at, I think it was one or eight, and they reanalysed all the animals they saw on those photographs, and in fact that was the information that was fed into the biological models.

So you can see it’s getting a bit deeper and now you can see the burrows – oh, the lightness in the ROV sort of tips this way and it loses the resolution, so it’s not – those aren’t in fact real of course.

[3.25 pm]

So we are down in a relatively deep iceberg through here are quite wide, and we come up on the other side. There are lots of nodules recorded but no coral.

I will get you to pause it there. Now this is the very end of the line and go to the last photograph as well please. We have a photograph sort of where that coral is, and what we are looking, we are actually looking the wrong way, we are looking sort of along the line, but this is the edge of one of those iceberg furrows. Again, lots of coral, which you
can all see some of these edges of the furrows are quite steep. This is where some of the hard rock has been exposed as the iceberg cut through it, so it is not always smooth.

Okay, so this just give you an impression of what the sort of north east part of the area is like. There is quite a lot of coral, but as you can see it is very variable. Some places it is thick, some places it is scattered, some places there is no coral at all.

So if we can go to the other video. 165. So now we are here down in the south central area, looking at this track. So you can see it is different here, there are not so many pockmarks, it is just very, very smooth sea floor. Nodules are reported but no corals. Here is a small ridge, and you can see that a little bit of the same texture that we saw in the other part, if we now go to the first photograph. That is what is on the sea floor. So there are lots of nodules here but in this part of the area there is no coral at all. In this photograph there is no coral. Just in general, in the western part of the area coral is recorded but it is much rarer, much more widely scattered in the east.

Just giving you an impression again. You can see these little spots, well, we will come back to that. Again, another bump, that just has phosphate on it, no coral. For the same sort of scale of effects there are several metres relief on these things.

In the lower areas you get the examples of bioturbation, on the ridges you have much less effect of that. When the Germans analysed, they saw a similar phenomenon when the Germans and the New Zealanders were there in 1981, they studied the characters of the ridges and valleys and could find no differences in the physical properties of the sea floor, so I don’t know if the biologists have a theory of why the animals are concentrated there or not. But there is no different in hardness as far as we know between the ridges and valleys and yet there is a difference in the distribution of animal activity.

So I tried to point out earlier but there are several places along the lien where you have these little sports, and with icebergs come rocks from Antarctica, so what we in fact see here are these are rocks from Antarctica, which are now preserved, this isn’t a particular big one, can’t we go back to the last photograph? The last one, right there, can you open that for me please?

So again, this is an example, you can see phosphate there, the black material on the sea floor, there is a sea urchin, and there is a rock there that is may be a metre, probably a bit smaller than this table. In other places we see some quite large ones, may be the size of this table and
so on. And you can see there it has been scoured around by the currents, and you can see there is a number of organisms living along it. But again, it is not totally encrusted with coral.

So take my word for it, the rest of the line is much the same. It is very, very different from the line in the north east, but very consistent along its entire length.

[3.30 pm]

So that gives you an idea of the type of data that underlie their interpretations. We had 39 transects like that as part of our project, each one, one nautical mile long, and as part of the Oceans 20/20 programme I think they collected another 15 similar transects outside our mining area to try and extend the interpretation.

One of the important things that I appreciate, we had the NIWA biologist plan the survey for us and one of the things I appreciate now is by these detailed surveys allow us to understand the spatial variability on a small scale, a scale of tens and hundreds of metres and the way they laid out the lines, by comparing what we see between the lines which are about one nautical mile apart, each of the three lines and then the very sets are about five kilometres apart.

On a scale of sort of one to five kilometres the scientists can start getting an idea about the variability on that scale as well. That is more the scale that is really appropriate for our impacts. I mean we are mining 10 square kilometre blocks so the variability on a small scale is incredibly important to understand the communities it actually talks about, but then how does the community distribute it in terms of understanding mining effects is probably much more appropriate on this larger scale the type of things we are seeing here between areas of lots and lots of coral and areas with very little coral. So that is all I will say about the data.

I would like now to just talk briefly about the BPAs, can we get rid of this and get back to my PowerPoint? I was involved, I provided GIS support for the Deepwater Group back in 2006 when they were drafting the BPAs and I was not involved in the industry discussions about them but I had lots of discussions with George Clement about how we would draft this thing, how we put it together, what the criterion were and so on and there was a question about did they know about minerals and they did.

I told the Deepwater Group, I told the Ministry of Fisheries, I told the Crown Minerals at that time that only is there phosphate on the
Chatham Rise, there are metallic sulphides in the Kermadec’s and magnese nodules in the Antipodes transect and no one wanted to know. All they cared about at the time was what are the fishing impacts and how that would fit into a Benthic Protection Area but they did know, they were informed.

The two criteria for the BPAs was fishing effort, quite rightly, the fishing industry was interested in preserving areas that have not been fished, and they were looking at regeneration so all the BPAs are located in areas where the fishing intensity was low, the blue areas on the map on the left are where the fishing has occurred since 1989 and then they used the marine environment classification which was the best information about the EEZ scale of the environment that we had in 2006.

I think you can see on the right that those areas are very broad, very general, primarily based on bathymetry but also somewhat on other factors. I mean you can see that the Chatham Rise and the Chatham Plateau on the west similar depths and so they are both coloured green, they are the same MEC classification and yet the Campbell Plateau for example is not significantly deeper to the south but is a whole different classification, so it is a plateau but it is a different latitude, different oceanographic position. These MEC classifications are very broad reflecting very large scale variations in the EEZ but they were the best available in 2006.

Go to the next line please, we will just zoom in and everyone is right, this is the BPA 8,732 square kilometres in the middle of the Chatham Rise, our consent area largely lies over the BPA. You can see that the BPA is entirely an MEC class 63. I will just deviate slightly in that I think a number of, some of the discussion I think has confused the consent area with the mining area.

I think in our opening statement we made it quite clear that we are proposing to mine 30 square kilometres a year so for 15 years we will lie 450 square kilometres which is about half of the mining consent area, the central part of our, half of our mining licence area which is the central part of the consent area there.

If we mine for 35 years it is about 1,000 square kilometres so we are not proposing to in fact mine 5,000 square kilometres of seafloor which is what the consent area covers, we are applying to mine a maximum of 1,000 square kilometres but the business case is built on 450 square kilometres so it is not, if anything went ahead and the BPA did not move, we are not going to destroy 60 percent of the BPA, that is not the
intention of our company. That is not what the best, not what our proposal says.

[3.35 pm]

There has also been some kind of perception that the BPAs sort of came down on stone tablets from the mountain, and that is not the case either. It was entirely done for convenience. You can see the BPA there is in the red outline, the fishing effort is in the red around there as well.

There is actually quite a large area of that central Chatham Rise MEC classification which is essentially all the area in there, which is available for conservation. I mean, we could have had alternatives for that BPA, this is just an example where you have two areas. It is not as nice, I mean, one of the criterion for the BPAs was that they were simple shapes, so this does not meet that criteria as well, but this has a similar area, has exactly the same conservation values in terms of the MEC classification as the BPA does.

Just an example, the next slide, I mean there is an infinite number of examples. Could we go to the next slide please?

Another example, I mean, you can get more complicated shapes that avoid fishing, avoid the consent area, and still have exactly the same conservation values as the BPA. In fact, I mean, based upon the work that we have done with NIWA, I think the biodiversity values, in fact preservation values, of this option, the two options I have shown you are probably very different. One is probably much better than the other. But in terms of the classification used for the BPAs, they are totally identical.

So I guess our point is not that the BPAs are bad, it is just that we have the technology today do better and like the fishing industry we were constrained in how we approach the conservation issues.

I will stop there. If you like, I can talk more about this if you would like in questions, but that is really all I want to talk about right now thanks.

CHAIRPERSON: I can sense growing interest in afternoon tea, and I think this is probably a good place to pause. So let’s take 10, 15 minutes for afternoon tea and then we will come back for questioning. Okay.

ADJOURNED [3.38 pm]
RESUMED [3.53 pm]
CHAIRPERSON: Okay, Mr Wood, I hope you got away for a cup of tea or coffee in the interim.

MR WOOD: Yes.

CHAIRPERSON: So first I turn to the committee for any questions.

MR RYDER: Your paragraph 48, you talk about, well that is a section on the baseline turbidity work that has been done and you talk about some problems with turbidity metres. So I was just wondering if you could elaborate on that, because obviously one of the proposals for monitoring is to monitoring turbidity and just trying to get a handle on the reliability of that sort of equipment in this sort of environment as a reliable indicator - - -

MR WOOD: Right. The problem that I referred there was when it was deployed the company we contracted to deploy the instrument didn’t test it properly before it left the wharf, so they took it out on the Chatham Rise, and when they went to deploy it from the ship they did the routine check and found out that the turbidity metre wasn’t working. So that was the problem. It wasn’t its performance in the water, it was the fact that it wasn’t able to be deployed when the current metres were being deployed. That is why there is a different, we had to go back subsequently and redeploy the turbidity metres.

So the turbidity metres themselves once they were in the water were perfectly fine, it was just that initial problem with getting them to perform.

MR RYDER: And the proposal is to use turbidity as a surrogate for suspended sediment?

MR WOOD: Yes.

MR RYDER: So my question is, how reliable is that relationship? Turbidity is measured in say NTUs or FTUs and correlating that back to suspended sediments and milligrams per litre or whatever - - -

MR WOOD: Right.

MR RYDER: - - - if you have got a condition with limit for suspended solids, the reliability of that relationship between turbidity, and as measured as NTUs versus going back to suspended solids - - -

MR WOOD: Yes.
MR RYDER: - - - particularly when you get potential for, is it, biofouls or sediment build up on sensors if they are deployed for a length of time.

MR WOOD: Well I am not an oceanographer, so you probably know this subject better than I do, but I will tell you what I understand anyway is that we have – as I mentioned in my evidence we have two planned monitoring systems, if you like, for looking at turbidity. One is there are standard mooring systems where the similar type instruments that we had deployed in 2012/13 will be put out there and maintained routinely.

The oceanography experts at NIWA say they can stay out for 12 months, but we are proposing to service them every six months. If that is a problem we will service them more often, but definitely the plan is that they will be serviced so that the biofouling is not an issue with the moorings when they are out there.

The other way, of course, as I mentioned in my evidence if we want to monitor turbidity is with an AUV or similar technology. And this has the similar issues that you referred to is that both of these system measure optical properties of the water and you have to then correlate that somehow with the true turbidity of the water.

And so when we obviously deploy the moorings what we take in water samples, this is I understand the standard technique for calibrating, so you take the water samples and then analyse those samples to then provide the calibration for the optical measurements.

We propose to do the same thing with an AUV, and that is why we are proposing a trial. I just had dinner last night with the scientist from Woods Hole who we are collaborating with on this proposal, and the system involves the AUV, it involves the optical measuring device, it involves a device to measure the size of the particles in the water, and then it involves a sampling system.

Now what he has reinforced to me last night is that all four of those elements exist and perform, but they haven’t been put together, and that’s why we need a trial to go out with the three instruments we are talking about on the AUV and demonstrate that, yes, in fact all those things when they are put together will in fact perform as we expect them to.

But we take into account exactly the point you raised, that it is not good enough to just have a measurement of the optical properties of water, you have to have physical samples of the water where those
measurements were made, and that is part of our surveying plan as well.

[3.58 pm]

MR RYDER: And you’re confident that one or two of these types of monitoring devices are sufficient, given that a plume is going to be spread out.

MR WOOD: Yes, that is why we have the two systems, we have the moorings, which are fixed essentially, and they provide the long term background levels, if you like, of what’s happening on the Chatham Rise, and that will include what’s happening when we’re not mining as well as when we are mining. But as you pointed out, and as we realised they do not adequately spatially sample where the plume might go. So the other component of monitoring is essentially an unmanned — it’s like a torpedo, it’s not shaped like a torpedo, but the concept which is loaded with instruments.

So we will go out with the ship with this device on it, we lower it over the side and we programme it to go underwater and track the plume basically. It has enough intelligence on it that it can sail through the plume until the levels start dropping off, and then it can change its survey course, and so it can in fact map the plume in three dimensions.

We proposed that for exactly the reason you’ve raised, is that we cannot think of another way to adequately sample the variability and where the plume may lie, depending on the currents at various times of the year.

MR RYDER: Okay, just one more. I think it was in your evidence, you talked about having the ability to avoid coral aggregations.

MR WOOD: Yes.

MR RYDER: Well first of all, the area to be mined would be surveyed first prior to that?

MR WOOD: Yes.

MR RYDER: So can you just briefly talk about how that would be surveyed in terms of a resolution that would be sufficient to detect clusters of coral or other things you may need to avoid.

MR WOOD: Well it’s probably not economic to do the type of survey I just showed you on the screen with an ROV, but we can the same device,
an autonomous underwater vehicle it’s called. You get the same device and equip it with a similar sensor, and if it flies at 10 or 20 metres above the seafloor we can cover a width of maybe 100 metres of the seafloor at a time, and we won’t get probably quite the 10 centimetre resolution but it’s maybe more like 20 or 30 centimetre resolution in mapping the seafloor, which we are confident will be adequate to identify the clusters of coral that we saw.

The characteristics of those areas are so different from the other areas of the seafloor that they will stand out on something with that kind of resolution, and so we’re confident we can map these areas quite efficiently with this technology and identify those areas comprehensively for the coral line.

MR RYDER: Then there would be some sort of threshold or criteria you would use to determine what to avoid.

MR WOOD: Well, again there are two things we are talking about here. We have proposed mining exclusion areas, so inside the mining license area we are not proposing to change our mining plan probably, it’s open for discussion. We are proposing to mine 450 square kilometres of the mining license area in the first 15 years. We have proposed a sequence of mining blocks, and it’s possible that some of those are particularly rich in coral, then we could set those aside and we could adjust the mining exclusion zones if it’s required.

Alternatively, we could say that – agree with you, that that entire area outside the mining exclusion zone in the mining license area could potentially be mined over the 35 years. We are also saying, however, that outside the mining license area at the moment we don’t know if there is any phosphate at all there. We are going to conduct similar surveys in those areas to try and find phosphate, but also to map the environment. So outside the mining license area is entirely conceivable that we could find areas which could be worth saving, which could in fact modify – this is what Carmen Taylor was talking about in her proposal, that we could modify those mining exclusion areas perhaps, if required, based upon those detailed surveys that will take place as part of our prospecting efforts.

MR RYDER: Okay. But you don’t have a criteria for what would be appropriate to exclude?

MR WOOD: Well I’m a geologist not a biologist. You could probably talk to someone like Ashley Rowden. My understanding is it’s more a question about the larger scale distribution of the coral and what needs to be preserved, and that’s really not a topic that I’m an expert in.
MR RYDER: Okay.

[4.03 pm]

MR HILL: Can I just, just a question on the AUV, you talked about the AUV mapping or following the plume, will it do it in three dimensions or simply – is it set at a certain height to follow or so will do the depth of plume as well as the width of the plume, you’ll get a full composite picture of that?

MR WOOD: That’s my understanding, I mean I have not been on AUV survey myself so I can’t say from personal experience.

MR HILL: Yes, well I was curious about that when you mentioned it.

MR WOOD: My understanding is, again from talking with the guy last night, that they can do things like follow the contours of the seafloor at a certain height above the seafloor, so conceivably we could set it to fly through the plume at two metres above the seafloor, when it reaches a certain threshold it could then turnaround and either – well both in fact – say go north for 50 metres and do the same thing - - -

MR HILL: I mean obviously one of the issues with - - -

MR WOOD: - - - and it could go up, it could then follow the terrain (INDISTINCT 0.58).

MR HILL: Yes, I mean one of the issues before us is just how buoyant the plume is going to be in - - -

MR WOOD: Yes.

MR HILL: - - - certain circumstances obviously.

MR WOOD: Yes. But that’s why I say 3D, it’s entirely part of our survey plan, it’s not only, spatially how far does it go, but vertically how far does it go as well.

MR HILL: Yes, okay, thanks.

MR WOOD: Thanks very much.

CHAIRPERSON: Okay, on my list of those who have notified us of questions, Mr Currie?
MR CURRIE: Thank you, Mr Chair. Yes, Mr Wood, I represent Greenpeace and Deep Sea Conservation Coalition and KASM.

Mr Wood, I’m a bit puzzled as to your role here today, you’re the Chief Operating Officer of CRP, are you not?

MR WOOD: That’s correct.

MR CURRIE: And you just clarify that you’re a geologist by trade and not a biologist?

MR WOOD: A geologist and geophysicist, yes.

MR CURRIE: And yet you say that you’ve read the expert practice note - - -

MR WOOD: Yes.

MR CURRIE: - - - this is why I’m a bit confused, are you here as an expert witness or are you here as the COO of CRP?

MR WOOD: I’m here as an expert witness and my specialties and, yes, that’s correct.

MR CURRIE: Well, did you read the practice note?

MR WOOD: Yes.

MR CURRIE: You said you did?

MR WOOD: Yes.

MR CURRIE: And paragraph 5.2.2 if I read that to you, “An expert witness is not and must not behave as an advocate for the party who engages the witness”, who engaged you, Mr Wood? You are the party, aren’t you, you are the applicant - - -

MR WOOD: Yes.

MR CURRIE: - - - you’re the COO of the applicants?

MR WOOD: Yes.

MR CURRIE: So you’re not independent, are you?

MR WOOD: No, and neither were the previous witnesses either.
MR CURRIE:  No, thank you. Have you published anything on marine spatial planning?

MR WOOD:  No.

MR CURRIE:  So when you explain the corals in the video, you did so as a layman really, not as an expert witness is that correct?

MR WOOD:  I did it as someone who has sat alongside biologists and looked at those images, yes.

MR CURRIE:  So that’s hearsay then, the most you can say is hearsay?

MR WOOD:  I’m not a lawyer, I’m just telling you that this is, this is, this is - - -

MR CURRIE:  Well you reported to us the - - -

MR WOOD:  - - - this is how I received the information, yes.

MR CURRIE:  Okay, so you reported to us the comments of someone else?

MR WOOD:  Yes.

MR CURRIE:  Thank you.

MR WOOD:  I said that in my testimony.

MR CURRIE:  And in response to Mr Ryder's questions, just to clarify, you – well CRP will destroy coral as part of the mining, in the mining area, am I correct?

MR WOOD:  Yes, that’s correct.

MR CURRIE:  Thank you. And am I correct that you don’t take any issue with the Beaumont and Rowden appendix 30 where they talk about the relationship between the phosphorites and the coral, is that correct? Do you accept that there’s a relationship between the phosphorites and the coral?

MR WOOD:  Yes, that’s why I’ve showed in the photographs is that, where phosphorite occurs the coral occur, but it is not a one way relationship, every nodule does not have coral on it, no.

MR CURRIE:  But you accept that the evidence of the biological experts that- - -
MR WOOD: Yes.

MR CURRIE: - - - there is a relationship?

MR WOOD: Yes.

MR CURRIE: Thank you. When you take issue with the EPA staff reports as, for example in paragraph 33, do you do that as the Chief Operating Officer for CRP or are you doing that as a purported independent expert?

MR WOOD: I’m honestly not entirely sure. I’m commenting here that in my experience I was on the vessel that collected much of this data and I know from my own knowledge how much information was collected by us in those areas, so this is – the 1,200 square kilometres of seafloor was mapped, 700 inside the mining area and 5 and I know that from my own knowledge.

MR CURRIE: Yes, but to the extent that these matters of opinion, you accept that you’re not here as an independent expert?

MR WOOD: I’m sorry I don’t – I’m not - - -

MR CURRIE: You don’t understand the question?

MR WOOD: - - - understand that, sorry.

MR CURRIE: Okay, thank you.

Well move along then, some questions that Mr Castle couldn’t answer, one of them concerns “restoration” and I put it to Mr Castle that Professor Watling in his evidence discussed the possibility of restoration, did you read Professor Watling’s evidence?

MR WOOD: Yes, I did.

MR CURRIE: So you’re familiar with his estimate of 164 million blocks to cover 20 percent of the mining area?

MR WOOD: Yes, he had certain assumptions that he made that came to that number, that’s correct.
MR CURRIE: And do you think the ballpark figure would be similar to 164 million blocks?

MR WOOD: I have not done the calculation but if you assume, make the same assumptions that you want to cover percent at the density he said, that is probably correct.

MR CURRIE: And do you have any idea how much each of these plots may cost?

MR WOOD: I am sure it depends on what they are made out of.

MR CURRIE: Well, would 100 dollars be a safe guess, or 10 dollars?

MR WOOD: I would only be offering an opinion.

MR CURRIE: Well, if they were $100 that would be $20 billion dollars, wouldn’t it?

MR WOOD: Probably, but if you give as assumptions that is the number, that is the area you need to recover and that is the way you are going to make compensation, that is correct, but that is not what we are proposing.

MR CURRIE: Do you not think it would have been useful to have done this research and these calculations before making your application?

MR WOOD: No, we are proposing a trial to see whether it is possible to have this kind of (INDISTINCT 1.01) or whether it is worthwhile doing it at all.

MR CURRIE: But is there any reason you could not have done that trial before you made this application?

MR WOOD: You need a permit.

MR CURRIE: Thank you. The other witness said you would need permit. Did you consider applying for a permit?

MR WOOD: Yes, it was not a priority for us at the time we were doing these surveys.

MR CURRIE: And have you even carried out a desktop study to see what the cost may be?
MR WOOD: We have done some general ideas about what a test might cost, yes.

MR CURRIE: And what may that test cost?

MR WOOD: Well, you are talking about going to sea for at least three weeks, which on a typical vessel is going to cost about the order of $2 million. Sourcing material costs about $100 a tonne. You are probably talking $2.5 million - $3 million for a test.

MR CURRIE: So the reason you did not do that is essentially cost, you did not want to spend that $2 million ahead of the - - -

MR WOOD: That is not entirely true. Again, I am only speaking my opinion here, I am not a biologist. But I understand that the whole issue of regeneration is not simple, that there are certain factors that biologists take into account. I mean some of these were raised in peoples submissions. The distance between islands that you might propose and so on, so it is not a simple matter to devise a trial that will adequately test the viability of this kind of solution.

MR CURRIE: No one says it is simple, Mr Wood, but I am asking you if given that this is what appears to be an important part of your application, I am trying to understand why you didn’t do the work before coming here.

MR WOOD: Well cost is certainly a factor.

MR CURRIE: And if $20 billion was a ballpark figure of the restoration that would prohibitive, would it not? In the context of your mining?

MR WOOD: It would make the mining uneconomic, that is true.

MR CURRIE: I will leave it there, thank you. Another question is regard to engaging experts. Was that part of your role in CRP to engage experts in NIWA.

MR WOOD: I was involved in those decisions. I was not the only person making those decisions.

MR CURRIE: Can you explain to me why NIWA did not carry out a marine mammal survey?

MR WOOD: You probably should talk to Paul Kennedy about that.
MR CURRIE: Okay, I will when he is here, thank you. And were you responsible for deciding who is called as an expert and who is not, or is that, again, someone else’s responsibility?

MR WOOD: That was a collective decision.

MR CURRIE: Well, for example, appendix 14, Beaumont et al, this is the paper by Beaumont and Baird and Hayden, why are those witnesses not called as expert evidence?

MR WOOD: You should probably ask our lawyer about that.

MR CURRIE: Thank you. I will move along then. When you talk about spatial planning you say at paragraph 134 that “CRP has committed to using its best endeavours to try to ensure that the areas identified through marine spatial planning, exercise can be protected through an appropriate legal mechanism”. What do you mean by that?

MR WOOD: That’s correct. I am actually glad you asked that because something I wanted to raise in my introduction. CRP found itself in the same position as the fishing industry in fact, that due to the lack of a marine policy in New Zealand, there is really no way for an industry such as ours to express our conservation values other than through the marine consent process. Just like the fishing industry, the only way they could express their conservation values was through a benthic protection area. That is one of the reasons in fact our consent area is larger than the mining permit area.

[4.13 pm]

30 There are two reasons it is larger, one is just a practical reason that we knew we needed to monitor outside the mining area and rather than keep getting consents to do that monitoring activity outside the mining area. We did not want to include that area as part of this consent.

35 The other area was, another reason was that we wanted to have a more spatial area to be able to express our conservation values through the no mining areas. We went through this process as if we had 800 square kilometres of seafloor than in fact all the conservation areas if you like are outside that area and then we would be criticised for if you like, saying that the conservation values are all out there and they were meaningless because we had no control over them.

40 The only area we could instigate meaningful conservation measures within the constraints of we operated was to in fact apply for a larger
consent area and then within that area operate no mining areas which we identified as having biodiversity values, sorry it is a long - - -

MR CURRIE: It is, let us get back to paragraph 134 by an appropriate legal mechanism are you saying that for example a further statute would be required.

MR WOOD: I am neither a lawyer nor a policy maker but that is probably my understanding, yes.

MR CURRIE: Yes, thank you. You mentioned BPAs just now I think the comment you made and I think in paragraph 108 reflects this, you said they were entirely done for convenience, is that correct, is that what you are saying?

MR WOOD: Let me refer to that paragraph please. Can you rephrase your question?

MR CURRIE: I thought you said in your presentation in your evidence in the beginning that these were done entirely, done for convenience by the fishing industry?

MR WOOD: Not convenience in the sense that the shapes would be simple, that is what I was referring to.

MR CURRIE: I see, and who were the stakeholders, well to back up, as I understand your evidence you were acting for the Deepwater Group when these were put into place, is that correct?

MR WOOD: I worked for GNS Science and they contracted, the Deepwater Group contracted me through GNS Science.

MR CURRIE: Was their stakeholder consultation at that time?

MR WOOD: I was not involved in a stakeholder consultation.

MR CURRIE: Are you aware of any consultations with environmental groups for example?

MR WOOD: I was not aware of anything but I was not the only person involved in the project.

MR CURRIE: Okay, thank you, no further questions.

CHAIRPERSON: Thank you very much. Now the Deepwater Group, Ms Appleyard?
MS APPLEYARD: I will be careful not to overlap with Mr Currie, but there are just a couple of points I wanted to pick up on matters that he has raised but the first one is in relation to this issue about your role here today because a lot of evidence you give is quite technical. I take it that your job is as you have described in paragraph 18 which is that as an employee of a company your role is to manage and contribute to the company’s activities to achieve a strategic goal of which one of them is obtained the consents for this hearing?

MR WOOD: Yes.

MS APPLEYARD: You said you have read the Code of Conduct so you will be aware that your obligation under that Code is to act impartially?

MR WOOD: Yes.

MS APPLEYARD: So how do you reconcile that obligation with the obligations to your employer that you have outlined in paragraph 18?

MR WOOD: I believe I have behaved the way the other two witnesses have.

MS APPLEYARD: Well I did not see the other two witnesses state that they were complying with the Code of Conduct whereas you have?

MR WOOD: I am sorry, this is the first time in my process, I would have to talk to my lawyer about that. I do not know, I do not understand.

MS APPLEYARD: Okay. I just want to ask you some questions about the BPA and your involvement, I am intrigued with your slides up there, can you explain to me what the purposes of providing that information to the DMC?

MR WOOD: I was just demonstrating that the BPA is not the only option that would have satisfied the criteria when they were established in 2007 and that there are, even today, there are options available if the government chose to do so to identify areas which are of comparable size and met the exact same requirements of the BPAs.

MS APPLEYARD: They cannot be amended through this process can they?

MR WOOD: No, that is why I said just a second ago that is one of the problems about the fishing industry we face there is a lack of an oceans policy, it is impossible in fact for us to propose a solution for overlapping interests.
MS APPLEYARD: Just taking the BPAs, take CRP out of it at the moment to change the boundaries of the BPA would involve amendments to the fisheries regulations would they not?

MR WOOD: I am neither a lawyer nor a policy maker so I cannot say.

[4.18 pm]

MS APPLEYARD: Do you know what steps Chatham Rock have taken to have the BPAs amended?

MR WOOD: We’ve taken no steps because we’re not involved in the fishing industry, we’re not involved in the bottom trawling industry, we didn’t think it was appropriate for us to initiate an action that would change something that was not – that we were not an interested party in that sense.

MS APPLEYARD: So you’ve had no discussions with Ministers or officials, Deepwater Group or NGOs regarding the BPAs?

MR WOOD: I can only speak for myself. I have had – I have mentioned this with some members of the Deepwater Group and they have several times suggested that we be proactive in terms of revising the BPAs, but as I told them, as I just told you now, I didn’t think it was appropriate for us to be leading in that activity.

MS APPLEYARD: Paragraph 112 of your evidence you say that the BPAs were established under fishery legislation and do not affect other activities in the EEZ, what do you mean by that?

MR WOOD: I think what I mean there is that the fishing regulations do not by themselves prohibit mining for example.

MS APPLEYARD: But you would accept that one of the matters that the Committee has to take into account in this case is the existence of other marine management regimes, do you accept that?

MR WOOD: That’s my understanding, correct.

MS APPLEYARD: Your paragraph 113 you talk about the value of BPAs for other values relevant to the fishing industry, have you read Mr George Clement’s evidence on behalf - - -

MR WOOD: Yes.
MS APPLEYARD: - - - of the Deepwater Group? So you’ll know that what Mr Clement says is that the values to the fishing industry of BPAs are not fish spawning, but are related to the industry being able to continue to fish in other areas, you read that?

MR WOOD: I remember reading that comment, I’m not sure I entirely understood that.

MS APPLEYARD: And also maintaining third party environmental certification, did you read that?

MR WOOD: Yes, I did.

MS APPLEYARD: And market access?

MR WOOD: Yes.

MS APPLEYARD: So where have you considered those values in your evidence?

MR WOOD: As I just told you that’s one of the problems that we as an industry face, is that there’s no mechanism for us to in fact acknowledge those kind of interests when we’re involved in a consent for mining and not fishing.

MS APPLEYARD: Now I want to turn to a different topic and this is the issue around turbidity that Dr Ryder's asked you about, and paragraphs 45-47 of your evidence, if you could just have that – I’m just wanting to make sure I understand your evidence, as I understand what you say in this section, one site was selected for half a year in 2011, is that correct?

MR WOOD: That’s correct.

MS APPLEYARD: And what was done was two moorings were put into measure turbidity and currents.

MR WOOD: That’s correct.

MS APPLEYARD: And they were intended to measure turbidity and currents for the entire mining permit area?

MR WOOD: That’s correct

MS APPLEYARD: So whose decision was it to only put in two?
MR WOOD: Well in fact there are two moorings, but one mooring had the current metres and one mooring had the turbidity metres. Again I’m not an Oceanographer - my advice was, that there is considerable information about the currents - - -

MS APPLEYARD: Sorry, my question was, whose decision was it to put in only the two?

MR WOOD: We collectively as a company decided that, yes.

MS APPLEYARD: And presumably collectively the company then, your conclusion was that these two moorings were sufficient to give an accurate picture of turbidity levels in the whole application area?

MR WOOD: That’s what I was just trying to explain to you. That is not – but that was not the intention. The intention I was trying to tell you, that there is actually quite a lot of information about the currents on the Chatham Rise, derived from Global models, and those – the purpose of the moorings was to calibrate those models to make sure that they met the local conditions.

The Oceanographers told us that the annual – inter-annual variability was similar to the annual variability if you like, so it’s less important how long the moorings were out there than the fact that we had a mooring for a significant part of a year.

MS APPLEYARD: Okay. But you can’t say that these would be representative of the oceanic – the oceanographic conditions on the central crest of the Chatham Rise, can you, you can’t make that statement?

[4.23 pm]

MR WOOD: I can only extrapolate from what I just said in that there are global information about the currents on the crest of the Chatham Rise, which do vary spatially and the purpose of the mooring was to calibrate those models to help us to predict the variation of the currents on the Chatham Rise.

MR APPLEYARD: And the current in total patterns might be very different at different points within the application area, might they not?

MR WOOD: It’s possible. Again, my understanding from the work that has been submitted in IA, is that the directions can change and the velocities can change but there are limits within which they do change, so it’s not an unbounded variation.
MR APPELEYARD: And if you were to deploy those same moorings in different years or at different times of years you might get different results?

5

MR WOOD: That’s exactly what I said just a minute ago, was that is in fact what’s predicted by the long term data, is that the inter-annual variability is as large as the annual variability, so we would expect some variations in the current flow.

10

MR APPELEYARD: So in your paragraph 48 you talk about the seven months, as I understand it, seven months’ worth of current data and six months’ worth of turbidity data, is that correct?

15 MR WOOD: That’s correct.

MR APPELEYARD: So simplistically does that mean that there is no data on the turbidity conditions for the other half of the year?

20 MR WOOD: That’s correct.

MR APPELEYARD: So you can’t say that the data is fully representative of the conditions in the mining application area, can you?

25 MR WOOD: That’s correct.

MR APPELEYARD: Does the data from the monitoring reflect the influence of full and new moons on tidal conditions and currents?

30 MR WOOD: I can’t say, I didn’t do the analysis myself.

MR APPELEYARD: Your paragraph 50, are you talking there about internal tide velocities, I’m just wanting to be clear the data you collected does not measure internal tide velocities during stratified ocean conditions, does it?

35 MR WOOD: I apologise, this is a misprint in my evidence, this paragraph should not be in my evidence, we inserted a number of things which I might have commented on, we decided in fact this would be commented on by the oceanographers rather than myself, so I apologise.

40 MR APPELEYARD: Okay, so this is a question I should address to who?

45 MR WOOD: Dr Jamie Lescinski.
MR APPLEYARD: Paragraph 61, can we talk about that, and I want to ask you some questions about the scale tests of these water jets. I take it from what you say here that this technology hasn’t been tested at full scale?

MR WOOD: The water jets are at full scale, but there is only one water jet.

MR APPLEYARD: And has it been tested outside the lab?

MR WOOD: No, it has not. Well the jets of course have been, these are standard jets off drag heads which are used around the world. The test in the lab involved using sediment from the Chatham Rise that was taken back to Holland and used in the lab there, so the only difference was the material the jets were testing.

MR APPLEYARD: But you can’t tell us anything about the differences between lab results and real world results can you?

MR WOOD: No, not yet.

MR APPLEYARD: How many scaled tests have been done?

MR WOOD: I didn’t do the test myself, but there would have been dozens.

MR APPLEYARD: And how are you going to verify the way this technology will perform in the real world environment?

MR WOOD: We are still discussing that with Boskalis, there is a possibility that we will go out and do a scaled test on the Chatham Rise. The engineers are in two minds about that. They also say they might in fact be cheaper and more efficient to go out with the mining ship with a certain drag head configuration and see how it mines. The engineers tell me that modifying the drag head is not a major undertaking for them.

MR APPLEYARD: But as far as this committee is concerned we don’t know how reliable this technology is going to be when exposed to real world conditions.

MR WOOD: Reliable in what sense?

MR APPLEYARD: Well we can’t verify the way in which it is going to perform.

MR WOOD: You should ask the Boskalis engineers about that.
MR APPELEYARD: I would like to ask you some questions about your paragraph 85, the AUV equipment, you have been asked some questions about this already. As we stand here today we don’t know whether this proposed equipment will be either available or suitable, do you?

[4.28 pm]

MR WOOD: I know that some equipment will be available, I cannot tell you now.

MS APPELEYARD: You talk about, and Mr Currie has asked you some questions about this, considering a voyage to test the capabilities of the equipment. Why has not that been done already?

MR WOOD: Several reasons. First of all, the AUV we are talking about using is based in the United States, in Massachusetts, it is booked up for about 90 percent of the year, we have difficulty getting it to New Zealand. The second is cost.

MS APPELEYARD: Sorry, just on the question, have you asked, or when did you ask?

MR WOOD: We are in constant contact with the Woods Hole, so we are aware of the availability of the AUV. I was about to carry on and say cost is an issue here. That a test like we are talking about is going to cost in the order of $1.5 – 2 million, so I want to make sure that the instruments are ready and everyone is ready to do the experiment before we undertake it.

MS APPELEYARD: If it is not suitable, how will Chatham Rock verify the suitability of your suggested alternative, the NIWA deep towed imaging system?

MR WOOD: The AUV is a 21st century solution to the problem. As Mr Hill said, this is the most efficient way to collect a dense variety of measurements about the water quality properties. The alternative I talk about here, NIWA’s deep tow system, is probably the most advanced 20th century solution. It is very similar but it is tethered to the ship and you pull it through the plume. We have similar issues there as the AUV. Again, all the instruments themselves are well known, the optical equipment, the sub particle sized tester, the water samples. To my knowledge those have not been put on NIWA’s system but I am told by the engineers it is a matter of just bolting them on, so that should not be a challenge.
If for any reason at all those do not operate or if they are not available, we can go back to the standard way of understanding turbidity of the water, and GNS and NIWA both have water sampling devices, we could transects through the water and collect many, many water samples on transects through the plume and get the same information. It would be slower, we wouldn’t have as dense a coverage of the information, but we can get information, enough information to track the plume through the water column in one of these ways.

MS APPLEYARD: Paragraph 86 you talk about the turbidity surveys taking place, I think, initially for six months and then once a year after that. Why can’t the surveying of turbidity be undertaken in real time?

MR WOOD: I am not aware of any, well, I am not quite sure I understand your question. First of all the AUV is not available full time. If CRP an AUV it would cost of the order of $US5 million. To keep it operating for a full year around-the-clock operation it costs of the order of $30,000 - 40,000 a day to run, times 365 days, is $10 million or something. Plus, vessel costs, I mean a 365 day operation, a) it is probably not feasible, but you are probably talking $20 million for that kind of operation.

MS APPLEYARD: Paragraph 95, you talk about the hard substrate trials. What can you tell us about the confidence you have about whether this recolonisation trial will be effective or not?

MR WOOD: I am not a biologist, I have no idea.

MS APPLEYARD: So you cannot give us any assurance of a positive outcome?

MR WOOD: You will have to talk to the biologists.

MS APPLEYARD: I think you told Mr Currie that you have not done hard substrate trials, but would not it have been sensible to do that at the same time as you were gathering baseline data?

MR WOOD: No, it would be a dedicated voyage to that kind of trail, it is not something you could just tack on to a survey that collected the kind of information I showed you earlier.

[4.33 pm]

MS APPLEYARD: Okay. So what again is your explanation for why it hasn’t been done?
MR WOOD: It wasn’t a priority for the company at the time.

MS APPLEYARD: Do you know what the cost of that is – would be?

MR WOOD: I think I told you earlier that the minimum cost for the ship alone would be something like, was it one and a half or two million dollars, plus the cost of whatever material you put on the seafloor.

MS APPLEYARD: Are you aware of the International Marine Mining Society’s code for environmental management of marine mining?

MR WOOD: I have scanned them, I’m like Dr Falconer I’m not an expert in them.

MS APPLEYARD: So do you know whether the restoration plan has been developed consistently with that?

MR WOOD: The restoration plan has not been developed.

MS APPLEYARD: Paragraph 104 and your discussion about the diffuser, this question comes – a point raised by some of the people who operate in the area who will be giving evidence, you note that the diffuser will be deployed near but not on the seafloor to provide the greatest control.

So in practical terms, how do you plan on controlling the diffuser in high seas?

MR WOOD: You better talk to Mr Van Raalte about that.

MS APPLEYARD: Sorry, Mr?

MR WOOD: Van Raalte, from Boskalis.

MS APPLEYARD: And what can you tell me about whether the crew in charge of operating the diffuser will be experienced with this sort of equipment or not?

MR WOOD: You should ask Boskalis experts that as well.

MS APPLEYARD: Paragraph 124 and you’re talking about the spatial planning and mining exclusion areas and you make the statement that Chatham Rock has minimised the impact on predicted economic value.

Did that spatial planning exercise and proposed exclusion areas involve consideration of the cost of the proposal to commercial fishing?
MR WOOD: I can tell you my understanding of zonation, but I’ll purpose it by saying you should probably follow it up by talking with Dr Rowden.

My understanding is that, that the zonation works, it can have both benefits and costs as inputs. Fish, hoki, hake and ling were included in the model my understanding is, as “benefits” if you like that is - - -

MS APPLEYARD: Are you talking about economic value, is that what you’re talking about?

MR WOOD: Talk to Dr Rowden about the specifics, but my understanding is that information about those three species was included in the model as values and phosphate was included as a cost. Now in fact what that means in terms of outputs, so the software you have to ask him about that.

MS APPLEYARD: Thank you.

MR WOOD: Again my understanding was, that fish could have been included as a cost, but for whatever reason the scientists decide to include them, but as a benefit.

MS APPLEYARD: You may not be getting the question, but you make some statements in paragraph 124 and 125 about the inputs to the spatial planning tool. Have the models used to get data – input data for zonation been ground-truthed?

MR WOOD: You should ask Dr Rowden that. They haven’t been tested since the models were done, but there is quite a lot of information collected before the models were run, and I know that he had some sort of internal calibration, internal validation was part of his process, but you have to ask him about exactly what he did and - - -

MS APPLEYARD: So you can’t tell me what’s been ground-truthed and what’s been derived from models – I have to ask him?

MR WOOD: I just told you, since the models were run and there’s been no validation done, as part of the whole model process there were some sort of quality control and validation but I cannot myself tell you what that was.

MS APPLEYARD: Okay. Now paragraph 134 and this vexed issue of “best endeavours” and “appropriate legal mechanisms”, I was going to ask you what you meant by appropriate legal mechanism but I understood your answer to Mr Currie to be that you weren’t entirely sure it would
be new legislation is that a fair summary of what the answer was you
gave to him?

MR WOOD: My answer is the same, yes.

MS APPLEYARD: So you can’t identify any specific legislation that could
be used now in order to protect these mining exclusion areas?

MR WOOD: I think as I said earlier, just one of the problems we have, is the
only mechanism we have to express our conservation values is through
the consent process.

MS APPLEYARD: So what does the phrase “best endeavours” mean when
you use that in your evidence?

MR WOOD: You should ask Carmen Taylor that.

[4.38 pm]

MS APPLEYARD: So you are not sure what CRP is going to do to comply
with the condition that is put forward?

MR WOOD: I can tell I am a passionate supporter of spatial planning in New
Zealand. I am a passionate supporter for development and
conservation. I would like to see all of these values maximised for
New Zealand. I will personally do all I can to achieve that goal.

MS APPLEYARD: So what have you done to date?

MR WOOD: I have been working with experts such as the NIWA scientists to
try and brand through the project identify the benthic organisms on the
Chatham Rise, the oceanographic conditions that govern their
distribution and work on techniques to try and identify the areas of
maximum biodiversity value and economic value.

MS APPLEYARD: You say in your paragraph 141 that the thickness of the
discharge sediment will be kept below one centimetre. I am just
curious how do you ensure that that happens?

MR WOOD: No, that is not what I say at all, what I say is that the predicted
levels will be designed to keep the thickness of the discharge sediment
below one centimetre in the mining exclusion areas, that is correct. I
do not guarantee it will happen. I said the system is designed to
achieve that goal.

MS APPLEYARD: In practical terms how does that work?
MR WOOD: I am sorry, I do not understand.

MS APPLEYARD: Can you tell us about the design?

MR WOOD: Well you talk to the Boskalis engineers about that. It is thoroughly described in the EIA and the subsequent information.

MS APPLEYARD: Okay, so why is it in your evidence?

MR WOOD: Because I was the one that worked on the intergrading, the predicted output from the plume models with the design of the mining exclusion zones.

MS APPLEYARD: The mining blocks targeted in the first five years, your paragraph 140, you say that the early blocks, some of them have been chosen in the eastern part of the area to test the prediction that there is no significant spatial variation in the physical characteristics of the seabed sediments, what will happen if there is significant variation in the physical characteristics of the seabed sediments in these blocks? What will the response be?

MR WOOD: That is best directed to the Boskalis engineers but it might require some redesign of the (INDISTINCT 2.43).

MS APPLEYARD: So you cannot tell us how environmental effects will be managed if the characteristics are different? You are not the person to ask, is that what you are telling me?

MR WOOD: I think the Boskalis engineers could probably answer that better.

MS APPLEYARD: Paragraph 150 and you are responding here to some submissions made by the Crown about marine protected areas are you familiar with the best practice marine protected area planning guidance?

MR WOOD: No, I am not.

MS APPLEYARD: Not withstanding that do you think that small dispersed areas with complex boundaries are more consistent with best practice design than large areas with simple boundaries as you have outlined here?

MR WOOD: I am not a planner you should ask one of them.
MS APPLEYARD: Your statement in paragraph 159 the broad statement that promoting the exclusion of mining from the BPA shifts the cost of mitigation of adverse effects for fishing to the mining industry, you have read Mr Clement’s evidence you have told me?

MR WOOD: Yes, I have.

MS APPLEYARD: You will be aware that the Deepwater Group is not promoting exclusion of mining from BPAs per se?

MR WOOD: Yes.

MS APPLEYARD: But only seeks to exclude those activities which are incompatible with the purpose of the BPA?

MR WOOD: Yes.

MS APPLEYARD: Paragraph 164 you mention there that Chatham Rock and Boskalis have identified procedures that will be followed if monitoring indicates that the mining system is not operating as predicted. What are those procedures?

MR WOOD: Sorry, that is not the 164.

MS APPLEYARD: Sorry, am I on the wrong paragraph, yes paragraph 164 right at the end there. What are those procedures?

[4.43 pm]

MR WOOD: You should talk to either Boskalis or I think maybe Carmen Taylor may also have talked about that.

MS APPLEYARD: So when you refer to CRP there, who is CRP, who is the person?

MR WOOD: I have been involved in those discussions but I am not the authoritative person to be talking to about those.

MS APPLEYARD: Thank you, I have no further questions.

CHAIRPERSON: Thank you, Ms Appleyard and next on our list is the Crown?

MR PREBBLE: Good afternoon, Mr Wood. This has already been raised I think so I am just going to quickly address you on this. In terms of the
zonation exercise the actual modelling of that and the detail that went into it has been undertaken by Dr Ashley Rowden, is that correct?

MR WOOD: With Carolyn Longquest (ph 00.49) that is correct.

MR PREBBLE: So the detailed question as to how that model is operated and what was taken into account, those kinds of questions should be put to that witness?

MR WOOD: Absolutely.

MR PREBBLE: Just a question then on your evidence where you talk at paragraph 4, you state the spatial planning exercise used a broad spectrum of input data and it identified there were areas predicted to have conservation values and relatively low economic value.

MR WOOD: That is true.

MR PREBBLE: Sorry to jump you around a bit but at paragraph 125 you refer to how Dr Falconer and you met with the NIWA scientists to agree on inputs into the modelling.

MR WOOD: That is true.

MR PREBBLE: You state there that chosen input layers included information relating to benthic communities, fish, phytoplankton, marine mammals and seabirds?

MR WOOD: That is correct.

MR PREBBLE: Not all of those values were actually included in that exercise is that right?

MR WOOD: You will have to ask Dr Rowden, I cannot say for sure.

MR PREBBLE: Right, okay. At paragraph 124 you also refer to how zonation has helped maximise predicted biodiversity and minimise the impact on predicted economic value and I think you have answered this already. I just want to confirm thought that where you talk about economic value here you are talking about the impact on the predicted economic value of mining.

MR WOOD: Yes, that is true. Sorry that was a bit loose statement.

MR PREBBLE: Now just a question on the little diagram that you have behind you, I just thought it would be helpful to alert the committee to...
the fact that as I understand it and you can confirm this for us, that area that extends outside of that red line which is the BPA line I understand as part of your prospecting licence, that includes an area that you are proposing as the mining exclusion areas is that right?

5 MR WOOD: Sorry, which area are you talking about?

MR PREBBLE: The area that extends outside of the BPA which is the red line is almost entirely made up of mining exclusions areas is that right, and I could take you to Carmen Taylor’s diagram at the back of her evidence that you may be familiar with this already?

MR WOOD: Are you talking about the white shaded areas?

10 MR PREBBLE: No, not your white shaded areas, just in terms of your prospecting licence and the outline of that. There is a part of it that extends outside of the BPA?

MR WOOD: Sorry, just north of it there?

15 MR PREBBLE: Yes, just north of it.

MR WOOD: Yes, that is true, that is correct, yes.

20 MR PREBBLE: That area is almost entirely made up of an area that you propose as a mining exclusion area?

MR WOOD: Yes, that is correct.

30 MR PREBBLE: Just picking up on an earlier question in terms of the monitoring that you propose, you said that you put forward quite a large area in terms of the overall licence and part of the reason for that for the application area was you wanted to undertake monitoring in it and that may relate to your exclusion areas, is that correct?

35 MR WOOD: There are two reasons there, one is we wanted to be able to monitor outside the mining licence area without having repeatedly getting concerns and the other reason was we wanted to be able to demonstrate our conservation values by identifying mining exclusion zones in parts of the area which we had some sort of control over through a marine consent.

40 MR PREBBLE: Just to confirm that and breaking it down a little bit in terms of the application before the committee you do not propose to undertake any monitoring ground truthing outside of that area?
MR WOOD: Outside of the mining permit area?

MR PREBBLE: Outside of the marine consent area?

MR WOOD: The marine consent area?

MR PREBBLE: Yes.

MR WOOD: I think that is correct, yes.

MR PREBBLE: We certainly could but we would require another permit to do that.

MR WOOD: Right, so in terms of just by way of example the area that has predicted high biodiversity values to the north west that is outside of the mining application area?

[4.48 pm]

MR WOOD: That is in fact about the north-west extremity of this illustration.

MR PREBBLE: So in terms of any monitoring of that rea of ground trothing of what might exist there, that is not within the scope of what you are planning?

MR WOOD: In fact it is, I mean, we have already talked to Dr (INDISTINCT 0.27) and his verification of his zonation model will include going to that area and making observations and samples. But that is not – we are concerned about part of the validation test, not so much part of the monitoring programme.

MR PREBBLE: Okay. Thank you, I have no further questions.

CHAIRPERSON: Okay, is there any other party who wants to address a question to Mr Wood at this point?

MR WINCHESTER: Sir, I would like to ask a question in re-examination if I could?

CHAIRPERSON: Yes, I don’t think we have re-examination as such, but if you wish to ask a question of the witness please go ahead.

MR WINCHESTER: Mr Wood, you were asked questions by my friends, Mr Currie and Ms Appleyard about hard substrate trials – do you recall those questions?
MR WOOD: Yes.

MR WINCHESTER: And the question was posed to you as to why Chatham Rock has not engaged in those trials.

MR WOOD: Yes.

MR WINCHESTER: You recall that? Based on your understanding of timeframes to demonstrate the efficacy of the trials, what advice do you have for the DMC about how long it would take to demonstrate whether they were working?

MR WOOD: I think that is included in, I have forgotten, someone’s evidence. But then again, I am not a biological expert, but from what I remember is it will take years, if not decades, to in fact look at – well, it will take years, not decades – to see what is happening on this recolonisation trials and see are sponges growing, are corals growing and so on. So it is not a short-term experiment.

MR WINCHESTER: Thank you. Thank you, sir.

CHAIRPERSON: Thanks very much. Okay. Look I have got one further brief announcement. Two questioners raised the question of Mr Wood’s status at this hearing, ie whether he is presenting as an expert witness or as an employee of CRP. That is not to question your good faith ought to deny your experience and very considerable qualifications at all, but I do think it may be worthwhile to clarify that question, and I think the Committee should reflect on that over the next couple of days, and I would be interested to receive, as soon as possible, a view from CRP on that. Not necessarily right now, but - - -

MR WINCHESTER: Well I can address the Committee on that particular point right now, sir, and this situation of companies employing experts and having employees giving evidence is not uncommon. It simply happens a lot in New Zealand, it is the nature of environment here. NZTA doesn’t need to call every particular expert witnesses as being a consultant that does not impact on someone’s ability to give expert evidence, they do not need to be from outside the company.

The issue is about the objectivity, the depth of the research, the qualifications, and those factors. That has been explained to the Chatham Rock witnesses. They have been asked to elect and make that choice as to whether they understand what their duties as an expert are, and Mr Wood believes he has the expertise and objectivity in relation to those technical matters, that is of assistance to the Committee.
For that reason, and it was specifically put to him, he could elect to record his agreed to the Code of Conduct or not, and he has chosen to do so. And that is all I have to say about the matter.

And I understand the basis for my friend’s questions. In my submission, they are somewhat mischievous.

CHAIRPERSON: Thank you very much. And I mean, just as a layperson it does seem to me quite a big ask of someone to perform, if you like, and reconcile the two interests. But look, we will take that into account, have a think about it, and come back to the hearing on, Mr Currie.

MR CURRIE: Also the question then is do you want oral submissions now, sir, because I certainly have some comments to make. Or would you prefer written submissions? I am at your disposal. Because I almost certainty have three minutes of oral submissions on that issue, if it would be of assistance.

[4.53 pm]

CHAIRPERSON: I would prefer three minutes of oral submission to anything in writing.

MR CURRIE: Thank you, sir. Well, simply to make two points, so firstly, as I said in my questions, if paragraph 5.2.2 states an expert witness is not, and must not behave as an advocate for the party who engages the witness. So in my submission we are not in a situation with a true independent expert who happens to be employed by the company. We have before us a witness who, certainly in my submission did act as an advocate, and I am not saying improperly, and again there are no aspersions, sir, but in terms of the weight the committee should place on his evidence. For example, we sat through, you know, 20 minutes of him discussing corals and the matters that he admits he is not qualified to take about.

So that is my first submission, sir, and I will just simply also note that we have an expert whom I took pains to nominate as a non-expert. The gentleman, at this stage until I – the gentleman is an expert in the sense that he has probably 20 years of experience in the London Convention, however, he is an employee of Greenpeace, so I considered he was not an independent expert, I therefore nominated him as a non-expert quite deliberately, sir.

So that is all I have to say.

CHAIRPERSON: Thank you very much. Anyone else?
MS APPLEYARD: I would echo his comment there. The issues aren’t to question his expertise, they are to question his objectivity. The other bit of the duty that he elected to say he would comply with the Code of Conduct is his duty to assist the Court impartially. He cannot do that when he is a paid employee.

The issue about the NZTA witnesses – I also appear for NZTA, we call NZTA witnesses to assist Committee members, but they do not have that paragraph in the evidence that says that they are acting independently and that they will comply with the Code of Conduct.

There is absolutely nothing wrong with company witnesses giving evidence, and it can be helpful and it certainly is, but it is not in the category of expert evidence.

CHAIRPERSON: Yes.

MS APPLEYARD: Because it is not impartial.

CHAIRPERSON: Okay, thank you for those views. I think it is worth trying to clarify that issue and we will do that and come back to you on it.

So we are close to the witching hour. I think we have had a good two days. The opening statements and the three representations this afternoon have set the scene, I think, very well, for what should be a very hard week of work coming up to us. We have got a lot of reading to do over the weekend I think, all of us, a combination of reports on the expert conferences as they have come in so far, plus the expert evidence and the other representations.

I understand that an updated schedule with the usual caveat that you shouldn’t trust it implicitly and it will change, has been or is about to be posted on the website, so please do take a look at that. And apart from the truckload of reading material you have, please have a good weekend and we look forward to seeing many of you anyway on Monday morning at 9 o’clock.

And one last – or second to last, sorry - - -

MR CURRIE: One procedural question. It is just, reflecting on Mr Woods presentation this morning – it is not a criticism at all, and I have had a request from Professor Watling who will be here on Tuesday – is the Committee quite happy to do a PowerPoint, if that is of assistance? Does the Committee want a summary? Because certainly in the TTR hearing, for example, there was a practice that it was a little bit
different in terms of timing because they followed the expert conferencing party, is that experts did tend to prepare and read a summary, or thirdly, do you want them to read the statement verbatim, which in my submission is a little bit of a waste of time given the time pressures we have, sir? It is really a question for the committee.

CHAIRPERSON: Yes. I think we are neutral on the question of whether overhead projections are used or not. If that helps with the presentation then that is fine. And our preference is that people not read verbatim from what we have got in front of us. We can read that. But highlight the main points and take us through it, you know, targeting the audience to the extent they can. Thank you.

MR WINCHESTER: Yes, thank you, sir. The issue I wanted to raise, and I have discussed it with most of my friends, is around the witnesses who are going to be called early next week, particularly on benthic ecology, and what seems to be the case is that there is a high likelihood that the caucusing statement of those witnesses will not be completed in time for when those witnesses are going to be giving evidence.

So we have got Ms Berkenbusch giving evidence on Monday afternoon, Mr Govier, Dr Hourigan and Dr Leathwick on Tuesday and Professor Watling on Tuesday as well, and I understand from discussions with my friend Mr Currie that Professor Watling is coming from Hawaii to be here in person.

So we do have some issues about how we deal with that around questioning of witnesses, their ability to give, I suppose unqualified evidence if they have not finalised a competency statement by that time.

[4.58 pm]

MR CURRIE: It may be worth hearing from the EPA if they have heard this because I have heard from recently from Professor Watling that the conferencing is going ahead.

CHAIRPERSON: I see. Yes. Two things there. First, my understanding is that we will have a report on the conferencing by Monday morning.

MR CURRIE: Good.

CHAIRPERSON: The second is that we shouldn’t allow the perfect to be the enemy of the good, to start shifting subject areas and witnesses around at this stage is going to be very, very difficult. It may be the case that on occasions a witness will have to appear out of sequence, out of time,
and I think we just have to accept that there is a small risk of that right through.

But on the main point, we do expect to have that report on the conferencing by Monday morning. So hopefully, we can get most of that benthic environment subject through.

MR CURRIE: Well that is great, I wasn’t aware of that information, so that is reassuring. Thank you, sir.

CHAIRPERSON: Okay. Before anyone raises any more problems, I would like to declare the meeting adjourned and look forward to seeing you on Monday morning. Thank you.

MATTER ADJOURNED AT 4.59 PM UNTIL MONDAY, 29 SEPTEMBER 2014