

BEFORE THE DECISION-MAKING COMMITTEE

IN THE MATTER of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2011

AND

IN THE MATTER of an application for marine consent by Chatham Rock Phosphate Limited to mine phosphate nodules on the Chatham Rise

OPENING SUBMISSIONS OF COUNSEL FOR THE ENVIRONMENTAL DEFENCE SOCIETY

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Introduction

1. Environmental Defence Society Inc (**EDS**) is a public interest environmental organisation established in 1971. Its membership is largely comprised of resource management professionals. EDS seeks to achieve good environmental outcomes through improving the quality of New Zealand's legal and policy frameworks and participating in statutory decision-making processes. Marine environmental management is a key focus area for EDS.¹
2. Chatham Rock Phosphate (**Chatham Rock**) has applied for a marine consent under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2011 (**EEZ Act**). EDS's submission seeks that the application be declined. EDS's case is that Chatham Rock's proposal will destroy or put at risk significant biodiversity, adverse effects are not avoided, remedied, mitigated or compensated, and uncertainty is not addressed through an adequate adaptive management approach.
3. These opening submissions address preliminary legal issues. Expert conferencing joint witness statements were not available when these submissions were prepared. As a result, these submissions only briefly address evidential matters. EDS will present further submissions at the conclusion of the hearing.
4. The following issues are addressed:
 - a. Purpose and principles
 - b. Decision-making criteria, including other marine management regimes
 - c. Environmental effects
 - d. Information principles
 - e. Adaptive management
 - f. Environmental compensation
 - g. Other matters
 - h. Conclusion

¹ EDS's recent marine policy publications include *Wonders of the Sea: the protection of New Zealand's marine mammals* (2012) and *Safeguarding Our Oceans: Strengthening marine protection in New Zealand* (2012). In 2011, EDS released a policy paper titled *Governing our Oceans: Environmental Reform for the Exclusive Economic Zone*. EDS made comprehensive submissions on the EEZ Bill as well as participating in development of regulations under the EEZ Act.

Purpose and principles

5. The EEZ Act is environmental legislation.² At the first reading then Environment Minister Nick Smith stated:³

“This bill is an integral part of the Government’s blue-green programme to strengthen New Zealand’s environmental and resource management systems. This significant bill puts in place a system of environmental protection for the ocean beyond the 12-mile territorial sea covering the 400 million hectares in the exclusive economic zone and the 170 million hectares in the extended continental shelf.”

6. Section 10 states:

- (1) *The purpose of this Act is to promote the sustainable management of the natural resources of the exclusive economic zone and the continental shelf.*
- (2) *In this Act, sustainable management means managing the use, development, and protection of natural resources in a way, or at a rate, that enables people to provide for their economic well-being while—*
- (a) *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 environment.*
- (3) *In order to achieve the purpose, decision-makers must—*
- (a) *take into account decision-making criteria specified in relation to particular decisions; and*
- (b) *apply the information principles to the development of regulations and the consideration of applications for marine consent.*

7. Comparison between the EEZ Act and RMA purposes is “inevitable”.⁴ The *Trans-Tasman Resources Marine Consent Decision (June 2014) (TTR decision)*⁵ outlines differences.⁶ The

² It is not “fundamentally ... a resource and economic development statute” as Chatham Rock suggests: CRP Opening Submissions, at [34].

³ (13 September 2011) 675 NZPD 21214

similarities are also substantial. The structure and much of the wording of s10 EEZ Act is identical to s5 RMA. RMA jurisprudence should be treated as highly persuasive in regard to these similarities.

8. In *Environmental Defence Society Inc v The New Zealand King Salmon Company Ltd* [2014] NZSC 38 (*EDS v King Salmon*) the Supreme Court discussed the meaning of ‘while’ in section 5 of the RMA:

*As we see it, the use of the word “while” before subparas (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”.*⁷

9. Chatham Rock suggests this statement is consistent with a “balancing exercise”.⁸ With respect, EDS submits that interpretation of the Supreme Court decision is incorrect. The Supreme Court stated that the bottom lines in subparas (a), (b) and (c) “must be observed”. They cannot be ‘traded off’ for economic benefits.
10. The EEZ Act purpose has the same structure as the RMA purpose: the first part of the sustainable management definition is followed by the word “while” and three sub-paragraphs (a), (b) and (c). The *EDS v King Salmon* approach applies to the EEZ Act purpose: subparagraphs (a), (b) and (c) are bottom lines to be achieved at the same time as enabling. They cannot be ‘sacrificed’ to enable people to provide for their economic wellbeing.
11. The Supreme Court also discussed the status of ‘environmental protection’ within the concept of ‘sustainable management’. Use of the word “protection” in the phrase “use, development and protection of natural and physical resources” and “avoiding” in sub-para (c) means that:

⁴ *TTR Decision*, at [78]

⁵ The *TTR decision* (the first seabed mining decision under the EEZ Act) is referenced throughout these submissions. TTR has appealed that decision to the High Court on points of law. TTR’s Notice of Appeal is wide ranging. Although subject to appeal, the DMC is entitled to have regard to the TTR decision. It is not bound by the TTR decision. It may be persuasive on certain issues. EDS may address this further in closing.

⁶ The differences are: 1. The things to be sustainably managed under the EEZ Act are “natural resources” compared with “natural and physical resources” under the RMA. 2. The EEZ Act definition of sustainable management refers to “economic wellbeing” compared with “social, economic, and cultural well-being and for their health and safety” under the RMA. 3. The RMA has no equivalent to the decision-making criteria in sections 59 and 80 and the information principles contained in section 61. 4. The EEZ Act has no equivalent to sections 6 and 7 of the RMA: *TTR decision*, at [80] to [90].

⁷ *EDS v King Salmon*, at [24]

⁸ CRP Opening Submissions, at [31]

*The definition [of sustainable management] indicates that environmental protection is a core element of sustainable management.*⁹

12. The words “protection” and “avoiding” are also used in the equivalent parts of the EEZ Act purpose. The *EDS v King Salmon* approach is highly persuasive and applies to the EEZ Act purpose: environmental protection is a core element of sustainable management under the EEZ Act.
13. A key point of difference between the EEZ Act and RMA is the presence of information principles in the EEZ Act (and not in the RMA). The EEZ Act information principles require (“must”) the EPA to “favour caution and environmental protection” in circumstances of inadequate or uncertain information. The requirement to “favour” indicates that primacy is to be given to environmental protection.¹⁰ This cautious approach is a fundamental difference between the EEZ Act and the RMA. Parliament has clearly indicated that the EEZ Act regime is to be more heavily weighted toward avoiding risk and protecting the environment than the RMA.

Decision-making criteria

14. Chatham Rock’s opening submissions focused in large part on the scale of the effects of the proposal when compared to existing fishing activities. With respect, this is not the correct legal test. The DMC must consider the proposal in accordance with sections 59 to 71 of the EEZ Act.

Environmental criteria

15. Sections 59(2) and (3) outline mandatory criteria that the EPA must “take into account” or “have regard to”. There is no explicit internal hierarchy. Particular environmental criteria¹¹ are preceded by the qualifying words “*the importance of protecting*”. This puts “*apparent emphasis on the protection of the intrinsic value of important biological resources.*”¹² No other criteria have been given such an emphasis.

⁹ *EDS v King Salmon*, at [24]

¹⁰ Compare with *EDS v King Salmon* where the Supreme Court stated that Section 6 does not “give primacy to preservation or protection” but that “does not mean ... that a particular planning document may not give primacy to preservation or protection in particular circumstances.” In that decision, the New Zealand Coastal Policy Statement 2010 (NZCPS) gave primacy to preservation or protection of outstanding landscapes and natural character.

¹¹ (d) the importance of protecting the biological diversity and integrity of marine species, ecosystems, and processes, and (e) the importance of protecting rare and vulnerable ecosystems and the habitats of threatened species

¹² *TTR decision*, at [106]

16. This is consistent with *EDS v King Salmon* in which the Supreme Court noted that although the numbering of objectives and policies in the NZCPS is not an indication of relative importance (in the same way the order of matters in section 59(2) is not an indication of relative importance), differences in wording between various objectives and policies are material to the question of relative importance.¹³
17. EDS accepts this “added emphasis” is not “blanket protection”.¹⁴ However, the “added emphasis” on these two environmental criteria does mean that the DMC must give greater weight to these matters.
18. The “importance of protecting the biological diversity and integrity of marine species, ecosystems, and processes” and “importance of protecting rare and vulnerable ecosystems and the habitats of threatened species” are particularly relevant to the effects of the proposal on deep water coral communities. Deep water coral communities within the proposed mining area are “rare or distinct habitats with comparatively higher diversity, composed of fragile, slow-growing species”.¹⁵

Cumulative effects

19. The DMC must consider “any effects on the environment or existing interests”.¹⁶ “Effects” is defined in section 6 and refers to (*inter alia*) cumulative effects. It is therefore interesting that section 59 explicitly references cumulative effects. This may be seen as redundancy or deliberate double-counting. Alternatively the added emphasis reflects the importance of considering cumulative impacts on the environment. EDS submits that the latter view should be preferred. The words were deliberately chosen by Parliament. They reflect the difficulty of managing cumulative effects, particularly in the context of a management regime that does not provide for strategic planning.
20. Cumulative effects are of particular importance in this case. In response to Further Information Request #37 (regarding the cumulative effects of fishing and mining), Chatham Rock notes that “there is almost no overlap between fishing effort on the Chatham Rise and the proposed mining operations”.¹⁷ While this may be a ‘positive’ in terms of effects on

¹³ *EDS v King Salmon*, at [141]

¹⁴ CRP Opening Submissions, at [224]

¹⁵ Evidence of Thomas Hourigan for the Crown (12 September 2014), at [27]

¹⁶ Section 59(2)(a) EEZ Act

¹⁷ Response to Request for Further information #37

http://www.epa.govt.nz/eez/EEZ000006/EEZ000006_Response%20to%20EPA%20Further%20Info%20Request%20Q37.pdf

existing interests, it is a 'negative' in respect of cumulative effects on the marine environment.

21. The lack of overlap arises because most of the proposed mining area is within a Benthic Protection Area,¹⁸ established to protect the marine environment from trawling. Marine protected areas (including Benthic Protection Areas) are a method to address cumulative human impacts on the marine environment. This proposal would open more than half of the Mid-Chatham Rise Benthic Protection Area to seabed mining, significantly reducing the area of this seabed habitat type protected from human impact.¹⁹ The cumulative effect of the mining proposal and existing effects is significant. The "added emphasis" placed on cumulative effects in the EEZ Act means this matter should be given significant weight by the DMC.

Other marine management regimes

22. The EPA must take into account the nature and effect of other marine management regimes, including the Fisheries Act 1996, Wildlife Act 1953 and Resource Management Act 1991.²⁰

Fisheries Act

23. The Fisheries (Benthic Protection Areas) Regulations 2007 prohibit the use of a dredge or the use of a trawl net (in certain circumstances) within seventeen identified areas of the exclusive economic zone, including the Mid-Chatham Rise Benthic Protection Area.
24. The proposed marine consent area overlaps significantly with the Mid-Chatham Rise Benthic Protection Area.²¹ The proposal would have significant adverse effects on the benthic environment²² and negate any environmental benefit arising from protection of that part of the Mid-Chatham Rise Benthic Protection Area.²³
25. To address this issue, Chatham Rock offers 'Mining Exclusion Areas' to replace parts of the Mid-Chatham Rise Benthic Protection Area proposed for seabed mining.

¹⁸ Evidence of Ian Tuck for Chatham Rock Phosphate (8 August 2014), at [4]

¹⁹ It is "expected to reduce the conservation value of that BPA as a measure to prevent impacts to benthic epifauna, including deep-sea corals": Evidence of Thomas Hourigan for the Crown (12 September 2014), at [1]. Also at [48]: "[BPA] protection may have contributed to the continued existence of relatively rich *G. dumosa* habitat patches. Mining in these areas would negate any benefits that such habitats have gained by being included in the BPA".

²⁰ Sections 59(2)(h) and 7 EEZ Act

²¹ Evidence of Ian Tuck for Chatham Rock Phosphate (8 August 2014), at [4]

²² Evidence of Paul Kennedy for Chatham Rock Phosphate (29 August 2014), at [61]

²³ Evidence of Thomas Hourigan for the Crown (12 September 2014), at [48]: "[BPA] protection may have contributed to the continued existence of relatively rich *G. dumosa* habitat patches. Mining in these areas would negate any benefits that such habitats have gained by being included in the BPA".

(1) Marine Spatial Planning

26. Chatham Rock “commissioned” a “marine spatial planning exercise” to identify proposed Mining Exclusion Areas.²⁴
27. Marine spatial planning is a strategic and integrated approach to marine planning. It focuses on managing conflicts between human activities and the marine environment (such as dredging and benthic habitats) as well as between competing marine uses (such as fishing and aquaculture) by spatially identifying the location of important values and resources and areas appropriate for different human activities.²⁵ Marine spatial planning must involve all sectors and stakeholders.
28. The Applicant’s approach cannot properly be characterised as marine spatial planning. Chatham Rock’s approach has been a unilateral one.

(2) Are the proposed Mining Exclusion Areas ‘equivalent’?

29. The principle of equivalency is that negative effects should be counterbalanced by equivalent positive ecological outcomes. This is determined by how alike losses and gains are in time, space and type.²⁶
30. The proposed Mining Exclusion Areas cover an area of 1,024 km² compared to approximately 5151 km² of Benthic Protection Area affected by proposed mining activity.²⁷ This suggests that losses and gains are not alike in space.
31. Mining Exclusion Areas may not include significant amounts of cold water coral communities.²⁸ The Mining Exclusion Areas provide reduced protection for biodiversity (compared to direct Zonation analyses) and further evaluation is required before robust decisions can be made.²⁹ Hence losses and gains are not alike in type.

²⁴ Evidence of Carmen Taylor for Chatham Rock Phosphate (29 August 2014), at [10]

²⁵ Peart, Serjeant, Mulcahy ‘Governing Our Oceans: Environmental Reform for the Exclusive Economic Zone’ (April 2011), pg

³⁷ Available online: <https://www.eds.org.nz/content/documents/publications/EEZ%20Policy%20Document%20Final.pdf>

²⁶ Evidence of Marie Brown for EDS (12 September 2014), at [29]

²⁷ Environmental Impact Assessment, p327

²⁸ Evidence of Thomas Hourigan for the Crown (12 September 2014), at [G]. Model results should not be relied on and even if the model is correct the predicted suitable habitat is in an area where significant bottom-trawling has already occurred and coral habitats there may have been damaged: at [34].

²⁹ Evidence of John Leathwick for the Crown (12 September 2014) at [C] and [D]: “likely to have resulted in reduced protection for biodiversity...”, “further evaluation and iteration is required before robust decisions can be made...”

32. Additional concerns relate to the need for significant buffer zones to prevent secondary impacts from sedimentation.³⁰
33. Proposed conditions provide for ‘ground-truthing’ of mining exclusion areas and their adjustment or expansion.³¹ This presents a difficulty for the DMC. A robust process is not proposed to occur until *after* consent is granted.
34. Equivalency is important and should be required if the DMC intends to place weight on proposed Mining Exclusion Areas. The best available information indicates that equivalency will not be achieved.

(3) Are the proposed Mining Exclusion Areas ‘secured’?

35. The DMC has jurisdiction to grant or decline the marine consent sought by Chatham Rock.³² It has no jurisdiction to protect Mining Exclusion Areas from future marine consent applications or activities not controlled under the EEZ Act (e.g. trawling).
36. Proposed conditions require Chatham Rock to use ‘best endeavours’ to secure protection of Mining Exclusion Areas.³³ Proposed conditions allow the marine consent to be exercised if ‘best endeavours discussions’ are exhausted without a satisfactory legal mechanism being established.³⁴ At best, it is a process duty and does not create certainty of outcome.
37. Dr Marie Brown addresses this issue of ‘security for setasides’ in the context of good practice environmental compensation:³⁵

“The effective exclusion of environmentally damaging activities from Mining Exclusion Areas is outside of CRP’s control and that of the Environmental Protection Authority. This exchange is therefore not secure and as such should not be given any weight in the context of ecological compensation. Adverse effects are typically certain, and uncertain gains can result in long term ecological effects. It must be definitive and certain that ecological compensation will eventuate.”

38. An exchange that is not secure, and dependent on 3rd party approvals, does not merit weight. If DMC is to grant consent it must be clear about the nature of the effects being authorised

³⁰ Evidence of Thomas Hourigan for the Crown (12 September 2014), at [H]

³¹ Conditions 36(a)(iii) and 10

³² http://www.epa.govt.nz/eez/EEZ000006/EEZ000006_CRP_Hearing_Procedures_updated_22_August_2014.pdf

³³ Condition 50(a)

³⁴ Condition 50(b)

³⁵ Evidence of Marie Brown for EDS (12 September 2014), at [21]

(the 'effects envelope'). This requires certainty about the mitigation that will be implemented.

39. The purpose of the EEZ Act is relevant. It includes the requirement to avoid, remedy or mitigate adverse effects on the environment. A method which is proposed but not implemented will not avoid, remedy or mitigate adverse effects on the environment.
40. The information principles are also relevant.³⁶ It is uncertain whether the Mining Exclusion Areas will in fact be protected. The DMC must favour caution and environmental protection. Chatham Rock's approach means the risk is borne by the environment. To allow the destruction of the benthic environment in a Benthic Protection Area when 'replacement' Mining Exclusion Areas may not be secured would be inconsistent with the requirement to favour caution and environmental protection.

(4) Conclusion on proposed Mining Exclusion Areas

41. EDS submits that the proposed Mining Exclusion Areas are not equivalent and cannot be secured through the marine consent process. For each of these reasons it is submitted that the DMC can give no weight to the proposed Mining Exclusion Areas.

Wildlife Act 1953

42. A number of coral families and species³⁷ which are "absolutely protected through New Zealand and New Zealand fisheries waters" occur in the application area.³⁸ The mining activity is expected to permanently destroy *G. dumosa* (the primary habitat-forming stony coral), its habitat and associated communities.³⁹
43. EDS submits that 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 species contributes significantly to the 'biological diversity and integrity of marine species, ecosystems, and processes' in the proposed marine consent area and in a context where proposed Mining Exclusion Areas are not equivalent or secured (as set out above).

³⁶ Section 61(2) states: 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.

³⁷ Evidence of Tom Hourigan for the Crown (12 September 2014), at [B]

³⁸ Section 3 Wildlife Act 1953

³⁹ Evidence of Tom Hourigan for the Crown (12 September 2014), at [D]. Section 53 of the Wildlife Act allows an application to be made to the Director-General of Conservation for a permit to authorise any person to "kill for any purpose" any absolutely protected wildlife. CRP lodged such an application in May 2014 and DOC is currently in the process of considering the application: Evidence of Carmen Taylor for Chatham Rock Phosphate (29 August 2014), at [63d].

Resource Management Act

44. The Resource Management Act regime includes subordinate statutory planning documents such as the NZCPS. The NZCPS gives “guidance as to the important values within the coastal marine area and how sustainable management (in the RMA sense of that term) is to be achieved”.⁴⁰ A finding that the proposal would not satisfy the relevant policies of the NZCPS would “provide important guidance as to whether the potential effects of the proposal, as mitigated, are acceptable in the marine environment”.⁴¹ EDS submits the DMC must consider whether the proposal would satisfy the relevant policies of the NZCPS and a finding that it does not would be a weight against the grant of consent. Policies which may be relevant are set out in Appendix 1.

Environmental effects

Benthic effects

45. The proposal would have very serious adverse effects on the benthic environment:
- a. Unique and ecologically important communities are located in the proposed mining area^{42,43}
 - b. Mining will permanently destroy the coral, its habitat and associated communities within the mined area.⁴⁴ These communities will not recover.⁴⁵
 - c. Mining activities will result in suspended and deposited sediments that are likely to damage or destroy corals in areas adjacent to mining.^{46,47}
 - d. Hard-substrate habitat creation is unproven⁴⁸ and is likely to be impractical and expensive.⁴⁹

⁴⁰ *TTR decision*, at [754]

⁴¹ *TTR decision*, at [760]

⁴² Evidence for Ann-Katrin Berkenbusch for Ngāi Tahu (11 September 2014), at [20]

⁴³ Evidence for Ann-Katrin Berkenbusch for Ngāi Tahu (11 September 2014) at [21]. See also Evidence of Thomas Hourigan for the Crown (12 September 2014), at [B] to [G].

⁴⁴ Evidence of Thomas Hourigan for the Crown (12 September 2014), at [B] to [G]

⁴⁵ Evidence of Thomas Hourigan for the Crown (12 September 2014), at [50]

⁴⁶ Evidence of Thomas Hourigan for the Crown (12 September 2014), at [B] to [G]

⁴⁷ Evidence of Les Watling for Greenpeace NZ, KASM and DSCC (11 September 2014), at [11]

⁴⁸ Evidence of Thomas Hourigan for the Crown (12 September 2014), at [B] to [G]

⁴⁹ Evidence of Les Watling for Greenpeace NZ, KASM and DSCC (11 September 2014), at [16] and [35]: To restore 20% of the mining area 164 million large blocks would be required.

- e. Proposed Mining Exclusion Areas do not include significant amounts of verified *G.dumosa* dominated communities and/or any such communities may have already been impacted by trawling.⁵⁰
- f. Deep water corals and other sessile organisms provide habitat for other species so their removal will have unknown flow-on effects for the wider ecosystem.⁵¹

Marine Mammal effects

- 46. At least twelve species of cetaceans, a group of beaked whale species, New Zealand fur seal and New Zealand sea lion occur in the Chatham Rise area. This includes two threatened species the killer whale (nationally critical) and southern right whale (nationally endangered).⁵²
- 47. However, no systematic survey for marine mammals has been completed (the description of marine mammal distribution is based on two incidental sightings databases).⁵³ As a result, there is uncertainty regarding the significance of the Chatham Rise as a marine mammal habitat.⁵⁴
- 48. The unknown ecological importance of the proposed mining area makes effects assessment difficult. The ongoing disturbance of a critical habitat (e.g. where large numbers of individuals congregate or important ecological aspects of the species life cycle occur) can cause effects of a higher magnitude than ongoing disturbance of general oceanic habitat.⁵⁵
- 49. Noise may cause significant behavioural changes (e.g. avoiding or leaving an area, affecting communication and/or echolocation, or altering feeding or breeding) and both Temporary and Permanent Threshold Shifts in hearing at varying distance from the operation.⁵⁶ Other risks (ship strike, entanglement with mining equipment, sediment plumes) are considered to be low.⁵⁷

Seabird effects

⁵⁰ Evidence of Thomas Hourigan for the Crown (12 September 2014), at [B] to [G]

⁵¹ Evidence for Ann-Katrin Berkenbusch for Ngāi Tahu (11 September 2014) at [49]

⁵² Evidence of Michael Huber for the DMC (12 September 2014), Annexure B, at [3] and [77]

⁵³ Evidence of Michael Huber for the DMC (12 September 2014), Annexure B, at [3] and [82]

⁵⁴ Evidence of Michael Huber for the DMC (12 September 2014), Annexure B, at [9]

⁵⁵ Evidence of Michael Huber for the DMC (12 September 2014), Annexure B at [71] and [9]

⁵⁶ Evidence of Simon Childerhouse for the Crown (17 September 2014) at [F]. Note the Evidence of Michael Huber for the DMC (12 September 2014), at [8] appears to disagree: The predicted underwater noise is unlikely to result in temporary or permanent hearing loss for marine mammals. The most likely behavioural effect is avoidance of the mining area.

⁵⁷ Evidence of Michael Huber for the DMC (12 September 2014), Annexure B at [6-7]

50. The Chatham Rise is an important zone for a large number of seabirds, including five *threatened* species and nineteen *at risk* species. However no quantitative surveys have been carried out.⁵⁸
51. There is a high to serious risk to seabirds from vessel lighting. It is not certain that proposed vessel lighting mitigation methods will significantly reduce this risk.⁵⁹ There is a high to serious risk to seabirds from seabird strike or entanglement with mining equipment.⁶⁰ There is uncertainty regarding the potential effect on the food supply of seabirds⁶¹ and cumulative impacts on seabirds.⁶²
52. The consequences of even a single mortality for the Chatham Island taiko or Chatham Petrel are significant.⁶³ The Chatham Island taiko is vulnerable to light attraction. This is relevant to section 59(2)(e).

Effects on plankton, fish and cephalopods:

53. Loss of benthic habitats will have a high adverse effect on demersal fishes and cephalopods as the benthic environment provides structural habitat for these groups.⁶⁴ The effect of underwater noise on plankton, fish and cephalopods is low to moderate.⁶⁵

Conclusion

54. It is certain that the proposal will have significant adverse effects, including the destruction of the benthic environment in a benthic protection area. The DMC may only grant marine consent if these effects can be avoided, remedied, mitigated or compensated. EDS submits that this will not be achieved and granting consent would be inconsistent with the purpose of sustainable management.

Information Principles

55. Section 61 sets out information principles. It is “unlike any provision in the RMA. It is directive.”⁶⁶

⁵⁸ Evidence of Leigh Bull for the DMC (12 September 2014), Annexure B

⁵⁹ Evidence of Leigh Bull for the DMC (12 September 2014), Annexure B

⁶⁰ Evidence of Leigh Bull for the DMC (12 September 2014), Annexure B

⁶¹ Evidence of Leigh Bull for the DMC (12 September 2014), Annexure B

⁶² Evidence of Leigh Bull for the DMC (12 September 2014), Annexure B

⁶³ Evidence of Graeme Taylor for the Crown (12 September 2014)

⁶⁴ Evidence of Michael Huber for the DMC (12 September 2014), Annexure B at [5]

⁶⁵ Evidence of Michael Huber for the DMC (12 September 2014), Annexure B at [6]

⁶⁶ *TTR decision*, at [116]

Best available information

56. Section 61(1)(b) requires the DMC to base decisions on the best available information. This is defined to mean the best information that, in the particular circumstances, is available without unreasonable cost, effort, or time.⁶⁷
57. It is expected that the “best available information” will arise out of expert and non-expert evidence, expert conferencing and cross-examination as well as submissions presented to the DMC. Nevertheless, in some circumstances the “best available” information may remain uncertain or inadequate.

Uncertainty or inadequacy of information

58. Section 61(2) requires the EPA to favour caution and environmental protection, if the information available is uncertain or inadequate.
59. Some of the information available to the DMC is certain. For example, it is clear that the proposal will destroy the benthic environment of a benthic protection area. There are however significant uncertainties and inadequacies in the information available to the DMC. These include:
- a. Sediment plume:
 - i. EPA peer reviewers retain a number of concerns regarding the sediment plume modelling.⁶⁸
 - ii. Chatham Rock does not intend to mine the chalk/ooze layer but it is unclear how this result will be achieved.⁶⁹
 - iii. The ultimate location of the suspended sediment is unknown as it exits the boundaries of the model.⁷⁰
 - iv. The returned sediment will have a smaller mean particle size and higher water content than the in situ sediment. The model does not appear to

⁶⁷ Section 61(5) EEZ Act

⁶⁸ Evidence of Shaw Mead for the DMC (12 September 2014), Annexure B

⁶⁹ Evidence of Peter Longdill for the Crown (12 September 2013) at [33-40]

⁷⁰ Evidence of Peter Longdill for the Crown (12 September 2013) at [22-27]

account for a change in grain size. It will probably spread farther than the model predicts.⁷¹

b. Benthic effects:

- i. There are substantial gaps in knowledge of the benthic communities and habitats in the marine consent application area resulting in significant uncertainty⁷² (including a particular lack of information of the additional mining areas⁷³).
- ii. The predictive habitat modelling has not been ground-truthed. Model validation is particularly important in areas which have received considerable bottom-trawl fishing effort (over 70% of the predicted suitable habitat).⁷⁴
- iii. The extraction method is still in the conceptual design phase. The mining methods and operation may be modified which could change the associated impacts.⁷⁵
- iv. There is uncertainty regarding the effects of sedimentation on coral communities.⁷⁶⁷⁷⁷⁸⁷⁹
- v. The broader ecological implications from the removal of benthic communities from the Chatham Rise crest area are unknown⁸⁰ (e.g. changes to trophic interactions, biogeochemical processes, sediment properties, and productivity).
- vi. There is no empirical data to provide an indication of the recolonization and/or recovery potential of benthic fauna affected by the mining operation.⁸¹

⁷¹ Evidence of Les Watling for Greenpeace NZ, KASM and DSCC (11 September 2014), at [14] and [25]

⁷² Evidence for Ann-Katrin Berkenbusch for Ngāi Tahu (11 September 2014), at [18] and [35-36] and [55-59]

⁷³ Evidence of Daniel Govier for Ngāi Tahu (11 September 2014) at [17]

⁷⁴ Evidence for Ann-Katrin Berkenbusch for Ngāi Tahu (11 September 2014) at [46] – [47]

⁷⁵ Evidence for Ann-Katrin Berkenbusch for Ngāi Tahu (11 September 2014) at [65]

⁷⁶ Evidence of Thomas Hourigan for the Crown (12 September 2014), at [E]

⁷⁷ Evidence of Les Watline for Greenpeace NZ, KASM and DSCC (11 September 2014), at [21]

⁷⁸ Evidence of Les Watline for Greenpeace NZ, KASM and DSCC (11 September 2014), at [22]

⁷⁹ Evidence for Ann-Katrin Berkenbusch for Ngāi Tahu (11 September 2014) at [86]

⁸⁰ Evidence for Ann-Katrin Berkenbusch for Ngāi Tahu (11 September 2014) at [73]

⁸¹ Evidence for Ann-Katrin Berkenbusch for Ngāi Tahu (11 September 2014) at [89]

vii. There is uncertainty regarding the equivalency and security of the proposed Mining Exclusion Areas.⁸²

c. Ecotoxicology:

- i. There is no estimate of the likely timeframe of dilution of trace elements in the water column resulting from the returned sediment.⁸³
- ii. There is no published toxicological information of thresholds for maximum allowable concentrations of uranium.⁸⁴
- iii. There is uncertainty regarding biomagnification rates for uranium and hence whether any local bio-uptake would be expected for the predominant pelagic species.⁸⁵

d. Seabird effects:

- i. There has been no systematic or quantitative survey of seabird occurrence and abundance on the Chatham Rise.⁸⁶
- ii. The assessment of seabird effects includes a limited combination of factors (some of which are inappropriate when assessing the impact on seabirds).⁸⁷
- iii. There is uncertainty regarding potential effects on the food supply of seabirds.⁸⁸

e. Marine mammal effects:

- i. There has been no systematic survey for marine mammals has been completed (the description of marine mammal distribution is based on two incidental sightings databases).⁸⁹
- ii. The ecological importance of the proposed mining area is unknown. The ongoing disturbance of a critical habitat (e.g. where large numbers of

⁸² See paragraphs 26 to 41 above.

⁸³ Evidence of Barrie Peake for Greenpeace NZ, KASM and DSCC (12 September 2014), at [10]

⁸⁴ Evidence of Barrie Peake for Greenpeace NZ, KASM and DSCC (12 September 2014), at [11]

⁸⁵ Evidence of Barrie Peake for Greenpeace NZ, KASM and DSCC (12 September 2014), at [14]

⁸⁶ Evidence of Leigh Bull for the DMC (12 September 2014), at 'Executive Summary' [4]

⁸⁷ Evidence of Leigh Bull for the DMC (12 September 2014), at 'Executive Summary' [5]

⁸⁸ Evidence of Leigh Bull for the DMC (12 September 2014), at 'Executive Summary' [8]

⁸⁹ Evidence of Michael Huber for the DMC (12 September 2014), Annexure B at [3] and [82]

individuals congregate or important ecological aspects of the species life cycle occur) can cause effects of a higher magnitude than ongoing disturbance of general oceanic habitat.⁹⁰

60. Expert conferencing joint witness statements were not available at the time these submissions were prepared. Statements are required to record agreement and disagreement regarding areas of uncertainty or lack of information.⁹¹ Uncertainties and inadequacies should be clarified by expert conferencing.
61. On the basis of the evidence currently available, EDS submits there are significant uncertainties and inadequacies and the requirement to favour caution and environmental protection is triggered.
62. Section 61(2) uses the word “must”. This means the requirement to favour caution and environment protection is “absolute” and “cannot be traded off against the attainment of economic wellbeing”.⁹² It is important that the requirement is to favour “caution and environmental protection”, not “caution and sustainable management”.⁹³
63. The question for the DMC is, therefore, how to “favour caution and environmental protection”: can adaptive management achieve this outcome or must consent be declined?

Adaptive management

64. The EEZ Act expressly provides for adaptive management: If the requirement to favour caution and environmental protection means consent is likely to be refused, the EPA must “first consider” whether taking an adaptive management approach⁹⁴ would allow the activity to be undertaken.⁹⁵ The necessary corollary of the words “first consider” is that there will be circumstances in which an adaptive management approach would not allow the activity to be undertaken.

⁹⁰ Evidence of Michael Huber for the DMC (12 September 2014) , Annexure B at [9] and [71]

⁹¹ DMC Minute 9, Appendix 3. Available online:

http://www.epa.govt.nz/eez/EEZ000006/EEZ000006_DMC_Minute_9_Expert_Conferencing_Schedule.pdf

⁹² *TTR decision*, at [139]. See also section 10(3) “which makes it clear that applying the information principles in section 61 is one of the ways the purpose of the EEZ Act is achieved.”

⁹³ Compare with section 10(d) of the Fisheries Act: the absence of, or any uncertainty in, any information should not be used as a reason for postponing or failing to take any measure to achieve the purpose of the Act (to *provide for the utilisation of fisheries resources* while ensuring sustainability).

⁹⁴ Section 64(2) EEZ Act: An adaptive management approach includes – (a) allowing an activity to commence on a small scale or for a short period so that its 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. Section 64(4): 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.

⁹⁵ Section 61(3) EEZ Act

65. This issue has recently been considered by the Supreme Court (in the RMA context) in *Sustain our Sounds Incorporated v The New Zealand King Salmon Company Limited* [2014] NZSC 40 (*SOS v King Salmon*). The Supreme Court considered two questions:

(1) Can an adaptive management approach legitimately be considered?

66. In relation to the first question, the Supreme Court said *there must be an adequate evidential foundation to have reasonable assurance that the adaptive management approach will achieve its goals of sufficiently reducing uncertainty and adequately managing any remaining risk. The threshold question is an important step and must always be considered.*⁹⁶

67. This means that there are some situations where significant uncertainty as to the nature of the receiving environment, how that environment might be affected by a proposed activity, or the extent to which those effects can be managed, means no amount of adaptive management will be sufficient to provide an adequate level of assurance.⁹⁷

(2) When can an adaptive management approach be used instead of prohibiting development?

68. In relation to the second question, the Supreme Court stated that this will depend on a combination of factors:

- a. the extent of the environmental risk (including the gravity of the consequences if the risk is realised);
- b. the importance of the activity (which could in some circumstances be an activity it is hoped will protect the environment);
- c. the degree of uncertainty; and
- d. the extent to which an adaptive management approach will sufficiently diminish the risk and the uncertainty.

69. The Supreme Court referred to (d) as “[t]he vital part of the test” and accepted the following four factors are appropriate to assess this issue:

- (i) there will be good baseline monitoring about the receiving environment;

⁹⁶ *SOS v King Salmon*, at [125]

⁹⁷ Evidence of Andrea Rickard for Ngāi Tahu (12 September 2014) at [33]

(ii) the conditions provide for effective monitoring of adverse effects using appropriate indicators;

(iii) thresholds are set to trigger remedial action before the effects become overly damaging; and

(iv) effects that might arise can be remedied before they become irreversible.

70. This framework was applied in the TTR decision.⁹⁸ TTR did not propose a staged approach. Instead it proposed an ‘adaptive management approach’ involving:⁹⁹

- a. specified qualitative environmental performance objectives, and
- b. pre-operational baseline monitoring, and
- c. development of quantitative trigger values to inform compliance with environmental performance objectives, and
- d. operational monitoring, and
- e. adaptively managing operations to ensure the environmental performance objectives are achieved.

71. The adaptive management approach did not prescribe quantitative triggers. Instead, it prescribed a process to establish them. As a result, the Environmental Performance Objectives became the “cornerstone pillars” of the adaptive management approach.¹⁰⁰ The DMC determined that the proposed Environmental Performance Objectives “d[id] not provide sufficient certainty, clarity or robustness on which to form the foundation of an appropriate adaptive management approach”.¹⁰¹ It was also concerned that without staged implementation there was no “compelling adaptive management alternatives should the environmental objectives not be met”.¹⁰² The DMC concluded that the proposed adaptive management regime would not sufficiently diminish the risk and the uncertainty and therefore it was not an appropriate approach.¹⁰³

⁹⁸ *TTR decision*, from [798]

⁹⁹ *TTR Decision*, at [796]

¹⁰⁰ *TTR decision*, at [816]

¹⁰¹ *TTR decision*, at [850]

¹⁰² *TTR decision*, at [851]

¹⁰³ *TTR decision*, at [797]

72. CRP's proposal has environmental risk¹⁰⁴ and uncertainty¹⁰⁵. The critical issue is the extent to which the proposed adaptive management approach would sufficiently diminish that risk and uncertainty.

(a) There will be good baseline monitoring about the receiving environment

73. Condition 36 provides for baseline monitoring and studies:

- a. "at least one" monitoring mooring to measure turbidity, current speed and direction, temperature, conductivity, sound and sedimentation.
- b. Completion of bathymetry data over the whole mining permit area.
- c. Completion of an infaunal survey within the mining permit area to ground-truth the mining exclusion areas.

74. The proposed baseline monitoring is narrow in scope. There are numerous baseline characteristics which are currently uncertain¹⁰⁶ and which are not proposed to be included: including the benthic environment, ecotoxicology, marine mammals, and seabirds. Adaptive management cannot apply to those matters.

(b) The conditions provide for effective monitoring of adverse effects using appropriate indicators

75. Condition 36 also provides for operational monitoring:

- a. A survey of the sound generated by the mining vessel and mining system.
- b. Four moorings measuring turbidity, current speed and direction, temperature, conductivity, sound and sedimentation.
- c. Use of an AUV (or similar equipment) to track and map turbidity in the water column during mining operations.
- d. Establishment of two control sites and four impact sites on the seabed and surveys to sample the spatial impacts of sedimentation.
- e. Assessment of the biodiversity of benthic communities in mined areas to assess changes in the structure of epifaunal and infaunal communities.

¹⁰⁴ See paragraphs 45 to 54 above.

¹⁰⁵ See paragraph 59 above.

¹⁰⁶ See paragraph 59 above.

- f. Establishment of four test sites with hard substrate material and surveys of those areas.

76. As above, the proposed operational monitoring is narrow in scope. There are numerous impacts which are currently uncertain¹⁰⁷ yet would not be included in the proposed operational monitoring. Adaptive management cannot apply to those matters.

(c) Thresholds are set to trigger remedial action before the effects become overly damaging

77. Dr Brown notes that triggers have not been identified for the majority of ecological effects and therefore “the adaptive management paradigm does not apply to them”.¹⁰⁸ Similarly, Ms Rickard states “from the information provided so far, it is not clear to me what environmental parameters, triggers and requirements CRP have to meet before mining can commence, and the details of the process that might authorise continuation of mining activities are also unclear”.¹⁰⁹

78. Condition 17 sets a ‘trigger value’ for total suspended solids: 50 mg/L, while mining is occurring, at a point 5km or greater away from the mining operations. This threshold is “very high” and does not appear to be environmentally justified.¹¹⁰ The adaptive management response to this trigger being activated is inadequate. The condition allows the applicant to set the timeframe for implementing adaptive management. There is no certainty that the time between an exceedance and adjustment of operations will be environmentally justified.¹¹¹ It is also not clear what steps would be taken by the Applicant to reduce total suspended solids in the event the threshold is breached.

79. Condition 18 sets out a ‘trigger value’ for effects on seabirds: injury or death of any Chatham Island taiko and Chatham petrel or injury or death of more than 2 seabirds. When triggered, the condition requires that the Chief Executive and DOC are notified, adaptive management approaches that will avoid, remedy or minimise the effects are assessed, (if a solution is identified) a timeframe for implementation is to be identified by the applicant, and the Chief Executive then has a certifying role as to whether “the proposed solution meets the requirements of this condition”.

¹⁰⁷ See paragraph 59 above.

¹⁰⁸ Evidence of Marie Brown for EDS (12 September 2014), at [14]

¹⁰⁹ Evidence of Andrea Rickard for Ngāi Tahu (12 September 2014) at [39]

¹¹⁰ Evidence of Peter Longdill for the Crown (12 September 2014), at [41]

¹¹¹ Evidence of Peter Longdill for the Crown (12 September 2014), at [43b]

80. Condition 19 provides for an adaptive management response if other “unexpected adverse impact[s]” arise (including sedimentation and marine mammal effects). There are no thresholds (qualitative or quantitative) for these other matters. It is uncertain when an adverse impact will be considered “unexpected” and how this will be transparently determined. If an “unexpected adverse impact” arises, the condition requires that the Chief Executive is notified, adaptive management approaches that will avoid, remedy or minimise the effect are assessed, (if a solution is identified) a timeframe for implementation is to be identified by the applicant, and the Chief Executive then has a certifying role as to whether “the proposed solution meets the requirements of this condition”.
81. Condition 18 and 19 do not require a solution that brings the impacts within a certain threshold: “remedy or minimise” may still allow additional adverse effects not contemplated by the DMC. In addition, the timeframe for implementation is not required to be environmentally justified (or the activity stopped until the solution is implemented).
82. The Chief Executive’s certifying role leaves considerable room for discretion. The proper role of a certifier is simply to identify how performance criteria specified in conditions should be met. The *Final Report and Decision of the Board of Inquiry into the Transmission Gully Proposal* explains this issue as follows:¹¹²
- The Board was initially concerned that the extensive use of management plans which were to be approved or certified by Council Officers rather than the Board, might mean that we were in effect delegating our decision making obligations. Ultimately, we determined that was not the case, provided the conditions of consent imposed contained clear objectives to provide focus to management plan provisions and performance criteria which operate as bottom lines which the management plans must achieve. In other words, the conditions imposed by the Board would identify the performance standards which had to be met and the management plans would identify how those standards were to be met.*
83. Similarly, the Environment Court stated in *Royal Forest and Bird Protection Society Inc v Gisborne District Council* [2013] NZRMA 336:
- A condition must also be certain. It can leave the certifying of detail to a delegate, using that person's skill and experience, but cannot delegate the making of substantive decisions.*¹¹³

112 At [190]

113 At [88]

84. Conditions 18 and 19 fail to specify any meaningful performance standards or effects envelope. They require the DMC to delegate its decision-making obligations to the Chief Executive. EDS submits that the proposed conditions are an invalid delegation of the DMC's decision-making obligations.

(d) Effects that might arise can be remedied before they become irreversible.

85. CRP states that it has proposed a two adaptive management approaches.¹¹⁴

(1) Staged approach

86. CRP propose a "staged approach whereby mining is restricted to the mining permit area for at least the first five years and can only move into the remainder of the marine consent area provided a range of criteria are met".¹¹⁵

87. 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.¹¹⁶ Dr Brown states:¹¹⁷

If granted, the marine consent would enable 820km² to be subject to seabed mining activities with the ability to undertake mining in an additional area (for which CRP does not currently hold a mining permit) in the life of the marine consent.⁵ 820km² is an extensive area and adverse effects will potentially occur right across it with no provision for a stepwise 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.

88. EDS submits that such an approach does not diminish the risk and the uncertainty associated with the proposal.

(2) Unexpected adverse impacts

89. The second adaptive management approach relates to a proposed total suspended solids threshold, a seabird injury/death threshold and "other unexpected adverse impacts[s]". These are described and discussed at (c) above. In summary, the concerns with this approach are:

¹¹⁴ Evidence of Carmen Taylor for Chatham Rock Phosphate (29 August 2014), at [93]

¹¹⁵ Evidence of Carmen Taylor for Chatham Rock Phosphate (29 August 2014), at [93]

¹¹⁶ Section 64(2)

¹¹⁷ Evidence of Marie Brown for EDS (12 September 2014), at [15]

- a. Thresholds are only provided for two matters
 - b. Inappropriate total suspended solids threshold
 - c. Considerable uncertainty regarding “other unexpected adverse impacts[s]”
 - d. Inappropriate/uncertain response requirements where thresholds triggered (including lack of clarity regarding situation where it is not possible to avoid, remedy or mitigate impacts)
90. In addition, indications that a break in production or changes to mining methods could threaten the financial viability of the project¹¹⁸ are relevant to the assessment of whether effects that might arise can be remedied before they become irreversible. The definition of “adaptive management approach” expressly refers to the possibility of activities being discontinued on the basis of an assessment of effects.¹¹⁹

Conclusion on adaptive management

91. EDS submits that the proposed adaptive management approach does not ensure effective baseline monitoring and operational monitoring, 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”.
92. Adaptive management is not a “suck it and see” approach.¹²⁰ Unless these failures can be remedied through the hearing process, EDS submits that the DMC must decline consent.

Environmental Compensation

93. The Applicant has proposed environmental compensation to address effects that cannot be avoided, remedied or mitigated.¹²¹

As these impacts cannot be avoided, remedied or mitigated, CRP proposes to implement an environmental compensation package that will include establishing a trust that will receive \$200,000 per annum from CRP [EDS acknowledges that this figure was increased to \$350,000 in the evidence of Carmen Taylor] while mining operations are occurring. The trust’s objectives

118 EIA, 11.4.2, pg 447: “Any prolonged period of reduced production or a significant break in production in response to a requirement to adapt or modify the mining system, could threaten the financial viability of the project.”

119 Evidence of Andrea Rickard for Ngāi Tahu (12 September 2014) at [41]

120 *SOS v King Salmon*, at [125]

121 Non-technical summary (May 2014) http://www.epa.govt.nz/eez/EEZ000006/EEZ000006_CRP_Non-tech_Summary_May_2014.pdf

will focus on ecological sustainability and enhancement, preferably in relation to the marine environment of the Chatham Rise or the Chatham Islands. The trust will also provide financial support for targeted research connected to the impacts of CRP's mining operations.

94. Condition 46 sets out the proposed objectives of the Trust:

The objectives of the Trust are:

- a) to advance environmental and biodiversity enhancement in the marine environment of the Chatham Rise, and on or around the Chatham Islands;*
- b) to support scientific research of the Chatham Rise, in particular geographic areas and biological communities relevant to the Consent Holder's mining operations; and*
- c) to support research into and technological improvements in seabed mining methods which reduce or mitigate adverse effects on the marine environment.*

95. The evidence of Dr Brown addresses the proposed environmental compensation.¹²² There are currently no statutory principles for assessing proposed environmental compensation. However, good practice principles are well accepted and are described at paragraphs 29 to 34 of Dr Brown's evidence. The principles are:

- a. Equivalency
- b. Spatial proximity
- c. Additionality
- d. Timing
- e. Duration and compliance
- f. Currencies and ratios

96. Dr Brown sets out the key ways in which the proposed environmental compensation departs from these principles:

- a. There is no explicit link between the effects of the proposal and the proposed environmental compensation¹²³ (and the figure is not grounded in any provided calculation)
 - b. There is no requirement for the Trust to make decisions regarding the destination of funding based on the principles outlined in Dr Brown's evidence¹²⁴
 - c. There is no provision for monitoring of the ecological gains resulting from the environmental compensation
 - d. There is no certainty that the ecological gains will be maintained for any period of time
97. Dr Brown concludes that the proposed environmental compensation falls short of meeting good practice principles and will not effectively address the residual ecological effects of the proposal.
98. Condition 46(c) suggests that environmental compensation could be directed to research into mining methods. This is an inappropriate objective. Mining research is a matter for Chatham Rock, not environmental compensation.
99. As identified by Dr Brown, allowing environmental compensation that does not meet a high standard of rigour is effectively a 'cheque-writing' exercise.¹²⁵ Such an exercise is inconsistent with the sustainable management purpose of the EEZ Act.
100. EDS submits that the weight to be given to environmental compensation by a decision-maker must be commensurate with the robustness of the environmental compensation as assessed against good practice principles.
101. The Applicant's proposed environmental compensation fails to meet the good practice principles in a number of respects. Unless it is amended to address these deficiencies, EDS submits that the DMC can give little or no weight to the proposed environmental compensation.

Other matters

¹²³ Evidence of Marie Brown for EDS, at [25]

¹²⁴ Evidence of Marie Brown for EDS, at [35]

¹²⁵ Evidence of Marie Brown for EDS, at [27]

102. Chatham Rock's opening submissions stated EDS (and other environmental organisations) "support commercial fishing or acquiesce to its effects ... but quite inconsistently, criticise CRP's proposal".¹²⁶ This is incorrect. EDS has been and is currently engaged in a number of processes to address the adverse effects of fishing.
103. EDS would like to acknowledge the effort made by Chatham Rock to consult with EDS prior to the lodgement of its marine consent application.

Conclusion

104. The proposal will cause significant adverse effects, including effects on matters given "added emphasis" by the EEZ Act and protected under other legislation. These effects will not be avoided, remedied, mitigated, or compensated. There is also significant uncertainty and/or inadequacy in the information regarding other adverse effects. The requirement to "favour caution and environmental protection" is triggered. The proposed adaptive management approach proposed does not sufficiently diminish the risk and uncertainty. The DMC must decline the marine consent application.

Dated this 26th day of September 2014

R B Enright / N M de Wit
Counsel for Environmental Defence Society Inc

¹²⁶ CRP Opening Submissions, at [103]

APPENDIX 1 - RELEVANT NZCPS POLICIES (NON-EXCLUSIVE)

Policy 3: Precautionary approach

1. Adopt a precautionary approach towards proposed activities whose effects on the coastal environment are uncertain, unknown, or little understood, but potentially significantly adverse.
2. In particular, adopt a precautionary approach to use and management of coastal resources potentially vulnerable to effects from climate change, so that:
 - a. avoidable social and economic loss and harm to communities does not occur;
 - b. natural adjustments for coastal processes, natural defences, ecosystems, habitat and species are allowed to occur; and
 - c. the natural character, public access, amenity and other values of the coastal environment meet the needs of future generations.

Policy 4: Integration

Provide for the integrated management of natural and physical resources in the coastal environment, and activities that affect the coastal environment. This requires:

- a. co-ordinated management or control of activities within the coastal environment, and which could cross administrative boundaries, particularly:
 - i. the local authority boundary between the coastal marine area and land;
 - ii. local authority boundaries within the coastal environment, both within the coastal marine area and on land; and
 - iii. where hapū or iwi boundaries or rohe cross local authority boundaries;
- b. working collaboratively with other bodies and agencies with responsibilities and functions relevant to resource management, such as where land or waters are held or managed for conservation purposes; and
- c. particular consideration of situations where:

- i. subdivision, use, or development and its effects above or below the line of mean high water springs will require, or is likely to result in, associated use or development that crosses the line of mean high water springs; or
- ii. public use and enjoyment of public space in the coastal environment is affected, or is likely to be affected; or
- iii. development or land management practices may be affected by physical changes to the coastal environment or potential inundation from coastal hazards, including as a result of climate change; or
- iv. land use activities affect, or are likely to affect, water quality in the coastal environment and marine ecosystems through increasing sedimentation; or
- v. significant adverse cumulative effects are occurring, or can be anticipated.

Policy 7: Strategic planning

1. In preparing regional policy statements, and plans:

- a. consider where, how and when to provide for future residential, rural residential, settlement, urban development and other activities in the coastal environment at a regional and district level; and
- b. identify areas of the coastal environment where particular activities and forms of subdivision, use, and development:
 - i. are inappropriate; and
 - ii. may be inappropriate without the consideration of effects through a resource consent application, notice of requirement for designation or Schedule 1 of the Resource Management Act process; and provide protection from inappropriate subdivision, use, and development in these areas through objectives, policies and rules.

2. Identify in regional policy statements, and plans, coastal processes, resources or values that are under threat or at significant risk from adverse cumulative effects. Include provisions in plans to manage these effects. Where practicable, in plans, set thresholds (including zones, standards or

targets), or specify acceptable limits to change, to assist in determining when activities causing adverse cumulative effects are to be avoided.

Policy 11: Indigenous biological diversity (biodiversity)

To protect indigenous biological diversity in the coastal environment:

a. avoid adverse effects of activities on:

- i. indigenous taxa⁴ that are listed as threatened⁵ or at risk in the New Zealand Threat Classification System lists;
- ii. taxa that are listed by the International Union for Conservation of Nature and Natural Resources as threatened;
- iii. indigenous ecosystems and vegetation types that are threatened in the coastal environment, or are naturally rare⁶;
- iv. habitats of indigenous species where the species are at the limit of their natural range, or are naturally rare;
- v. areas containing nationally significant examples of indigenous community types; and
- vi. areas set aside for full or partial protection of indigenous biological diversity under other legislation; and

b. avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on:

- i. areas of predominantly indigenous vegetation in the coastal environment;
- ii. habitats in the coastal environment that are important during the vulnerable life stages of indigenous species;
- iii. indigenous ecosystems and habitats that are only found in the coastal environment and are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass and saltmarsh;
- iv. habitats of indigenous species in the coastal environment that are important for recreational, commercial, traditional or cultural purposes;
- v. habitats, including areas and routes, important to migratory species; and
- vi. ecological corridors, and areas important for linking or maintaining biological values identified under this policy.

Policy 22: Sedimentation

1. Assess and monitor sedimentation levels and impacts on the coastal environment.
2. Require that subdivision, use, or development will not result in a significant increase in sedimentation in the coastal marine area, or other coastal water...

Policy 23: Discharge of contaminants

1. In managing discharges to water in the coastal environment, have particular regard to:
 - a. the sensitivity of the receiving environment;
 - b. the nature of the contaminants to be discharged, the particular concentration of contaminants needed to achieve the required water quality in the receiving environment, and the risks if that concentration of contaminants is exceeded; and
 - c. the capacity of the receiving environment to assimilate the contaminants; and:
 - d. avoid significant adverse effects on ecosystems and habitats after reasonable mixing;
 - e. use the smallest mixing zone necessary to achieve the required water quality in the receiving environment; and
 - f. minimise adverse effects on the life-supporting capacity of water within a mixing zone....