

20 November 2017

Simon Male  
Kaipara Limited  
190 Jack Lachlan Drive  
Beachlands  
Auckland 2147

Dear Simon,

## Review of Coastal Resources Limited draft marine dumping consent application

On 19 September 2017 we received your draft application for the dumping of dredged sediment in the Northern Disposal Area (NDA). We have reviewed the draft impact assessment, along with the following documents.

- Appendix 3: Northern Disposal Area - Physical Oceanography Assessment
- Appendix 4: Assessment Of Source Material, Ecological And Sediment Quality Effects and Disposal
- Consultation document for the replacement marine consent for the disposal of dredge spoil

This letter and the attached document contain our feedback. We apologise for the delay in our response.

### General feedback:

We feel that the application would benefit from providing more information and detail about the key issues raised in the attached document. While we appreciate that some of this information may have been provided to both the EPA and Maritime New Zealand in the past, all of this information needs to be included as the decision making committee will be assessing the application as a new consent under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012. The decision making committee has to make a decision based on information explicitly included in an application and cannot take into account any information outside the application, submission and evidence.

A careful review to ensure consistency across all the documents would be beneficial for the decision-making committee and potential submitters.

### Specific feedback:

We have attached a document containing feedback on your application particularly in relation to the requirement of section 39 of the EEZ Act. Please consider these prior to lodging your application. Although we have provided feedback on your draft application it does not guarantee that the application will be accepted as complete or that the decision-making committee will not request further information.

Please feel free to contact Richard Mohan (Email: [Richard.Mohan@epa.govt.nz](mailto:Richard.Mohan@epa.govt.nz)) should you require any clarification on these points.

Yours sincerely

A handwritten signature in black ink, appearing to read 'R. Johnson', written in a cursive style.

Richard Johnson  
Manager EEZ Applications  
**Climate, Land & Oceans**

## EPA feedback on the draft CRL application

1. All of the reports which have been provided are largely based on the impacts of the previous dumping. This is understandable, however, the application is for a much larger volumes in slightly different locations which could potentially have a different effect, and this fact needs to be fully considered in the application. There is a need for baseline evaluation information including appropriate characterisation of the receiving environment against which to assess effects.
2. The key sections that we need more information on are outlined below. While it is adequate to summarise information in the Impact Assessment (IA), a full detailed summary of the following topics is required in the supporting documentation. Further comment about the relevant matters in section 39 of the EEZ Act are listed in the table in the following pages.
3. We recommend that the NIWA publication “Preparation of Environmental Impact Assessments: General guidelines for offshore mining and drilling with particular reference to New Zealand” be reviewed before submitting the application<sup>1</sup>. Although this document is specifically designed for offshore mining and drilling, much of the guidance is relevant for this application particularly around characterising the existing environment and estimating effects on the environment.

### Sediment plume

4. More information is required about the nature and behaviour of the sediment plume immediately after dumping. A full detailed discussion of how long does it take for all the material to settle, what are the risks that this material might pose, what are the likely seasonal impacts, how might this differ with different material being deposited is required. All of the monitoring information must be fully explained i.e. how it was carried out, what the results mean and what uncertainties exist.

### Resuspension of dumped material

5. Currently this section is very short and quite high level with the reader being directed off to multiple references which have not been provided. Ideally this section would contain more information about how the conclusions have been reached.

---

<sup>1</sup>[https://www.researchgate.net/profile/Geoffroy\\_Lamarche/publication/318786024\\_Preparation\\_of\\_Environmental\\_Impact\\_Assessments\\_General\\_guidelines\\_for\\_offshore\\_mining\\_and\\_drilling\\_with\\_particular\\_reference\\_to\\_New\\_Zealand\\_Preparation\\_of\\_Environmental\\_Impact\\_Assessments\\_General\\_gui/links/597eb253a6fdcc1a9accb893/Preparation-of-Environmental-Impact-Assessments-General-guidelines-for-offshore-mining-and-drilling-with-particular-reference-to-New-Zealand-Preparation-of-Environmental-Impact-Assessments-General-gui.pdf](https://www.researchgate.net/profile/Geoffroy_Lamarche/publication/318786024_Preparation_of_Environmental_Impact_Assessments_General_guidelines_for_offshore_mining_and_drilling_with_particular_reference_to_New_Zealand_Preparation_of_Environmental_Impact_Assessments_General_gui/links/597eb253a6fdcc1a9accb893/Preparation-of-Environmental-Impact-Assessments-General-guidelines-for-offshore-mining-and-drilling-with-particular-reference-to-New-Zealand-Preparation-of-Environmental-Impact-Assessments-General-gui.pdf)

### **Long term risks to marine organism based on the ecotoxicity of the sediment**

6. The approach used to mitigate long term risks to marine organisms needs to be outlined in detail. In particular much more information needs to be provided about the protocols behind all of the monitoring that takes place pre dredging and post dumping (for example, sampling protocols, how is the decision made regarding which contaminants to measure, chain of custody, laboratory accreditation for each of the chemicals that are being analysed etc). In addition the risk assessment process that exists when deciding whether or not the material should be disposed of should be explained (for example, what happens if an ANZECC (Low) guideline value is exceeded).

### **A detailed description of the available alternatives for dealing with the sediment**

7. We are aware that more information may be supplied in the future, but the current level of detail about the suitability of alternative methods of dealing with the sediment is inadequate.

## Comparison of the application to the requirements Section 39 of the EEZ Act

Section 39 requirements	EPA comments
S 39(1)(a) to describe the activity for the which the consent is sought	<ol style="list-style-type: none"> <li>1. A map or diagram with all of the dumping locations (as per proposed Condition 9) would be helpful. Without this it is very hard to understand how the proposal compares to the existing approval.</li> <li>2. What is the rationale for the staggered disposal sites?</li> <li>3. Page 1 of the IA states that consent is required over a 35 year time period yet Page 3 of the IA states that the consent will expire in December 2038? Can we have a rationale for the proposed timeframe?</li> <li>4. Clarification is needed about what will happen after the disposal of 3 million m<sup>3</sup> of sediment. A consent for either 21 or 35 years at a rate of 250,000 m<sup>3</sup> per annum would allow for significantly more than 3 million m<sup>3</sup> (page 23 of the IA). Will the dumping begin again at location (a)?</li> <li>5. Location's e and f in condition 9 are the same (page 23 of the IA).</li> <li>6. Page 23 of the Beca Report recommend that there should be no more than 2 barge disposal per hour – yet elsewhere it is suggested that an hour is needed for the plume to effectively disperse. Page 13 of the IA states that <i>“On occasions it is possible that multiple disposals from different vessels may occur within a 24 hour period but provided the time between disposals exceeds 1 hour (the time required for turbidity to return to background levels) it is not anticipated that there will be any short term cumulative effects.”</i></li> <li>7. How much certainty exists regarding the sources of the sediment in Table 6, in particular the Ports of Auckland?</li> </ol>
S 39(1)(b) to describe the current state of the area where it is proposed that the activity will be undertaken and	<ol style="list-style-type: none"> <li>1. Include distance to closest land mass - this is included in the Bioreserches Report but not main IA.</li> <li>2. It would be helpful to include more detail upfront regarding the site rather than referring the reader to Appendices 3 and 4.</li> <li>3. The map in Figure 1 of the IA is very hard to read – It should be made clearer. There could also be some indication of the location of Auckland</li> </ol>

environment surrounding the area;

Harbour, Great Barrier Island, the authorised dumping site east of Cuvier Island, the CRL permitted disposal (Northern Disposal Area) site, and showing the 12 nm boundary.

4. All maps should have a scale bar.
5. Water depths are different on page 4 versus page 7 of the IA.
6. Is it possible to get a graphic representation of the current mound at the NDA, for example a contour map?
7. None of the reports appear to provide any details about the background rates of sediment accumulation on the sea floor.
8. Page 4 of the IA states that "*The concentrations of all contaminants measured at the site are below the ANZECC ISQG's where available.*" This contradicts Appendix 3 which states that the concentration of nickel exceeded the ISQG- Low value post disposal of 10,000 m<sup>3</sup> of sediment.
9. Page 19 of the Beca Report states that the order of accuracy associated with the deep water survey is 2-2.45 m. What does this mean in terms of monitoring the height of sediment at the disposal site? Is this level of accuracy sufficient to provide useful information to assess the cumulative effect of dumping?
10. More information about the basic ecology of the organisms in the sediment would be helpful. What information is known about their lifecycles and reproduction?
11. Is it possible to identify any keystone species (i.e. species whose presence and role within an ecosystem has a disproportionate effect on other organisms within the system)?
12. Is it possible to provide some images of any of these organisms?
13. What are the most likely routes of exposure for each of these organisms to the contaminants in question e.g. pore water, overlying water or consumption of the sediment itself?
14. Page 17 of the Beca Report states that the influence of tides in the region contributes < 25 % of the overall flow – we will require a reference for this.
15. When the reported concentration of any of chemical is less than the analytical limit of detection - the limit of detection should be reported in or

	<p>directly below the table (for example, Tables 2.1, 8.14, 8.15 and 8.16 of the Bioresearches Report).</p> <p>16. In the graphs describing the chemical analysis of the sediment at the centre of the disposal site (Bioresearches Report pages 25-31), it is not clear how the individual sites (N, E, S and W) related to the disposal over time (coloured dots).</p> <p>17. How were the 95 % confidence limits and Honest Significant Intervals (HSIs) calculated?</p> <p>18. What is the specific reason for using the HSI as a basis for comparison of different values – why not just the 95 % confidence intervals? Why present both values?</p> <p>19. Given that the mound is elongated in the south-west to north-east direction, please explain why it appropriate to average the concentrations of contaminants for each direction at each distance? An alternative way would be to look at the concentrations at each monitoring location and look to see if there is any trend over time.</p> <p>20. Why do the sediment samples at the disposal site have HSIs calculated post 150,000 m<sup>3</sup> of sediment which has been disposed (figures 3.8 to 3.15 of the Bioresearches Report)? Is this value a mean of several samples while the other samples at the disposal site are not? Table 8.16 suggests that only 1 value was recorded at the disposal site.</p>
<p>S 39(1)(c) identify persons whose existing interests are likely to be adversely affected by the activity; and</p>	<ol style="list-style-type: none"> <li>1. You mentioned in your letter of 5 September 2017 you had identified organisations who you consulted previously or who potentially have an interest in this area and/or proposal. The IA itself should provide a summary of who they are and how these organisations/persons were identified.</li> <li>2. The specific existing interest held by each organisation/persons must be identified.</li> </ol>
<p>S 39(1)(d) identify the effects of the activity on the environment and existing interests (including cumulative effects and effects that</p>	<ol style="list-style-type: none"> <li>1. This section is very brief in the IA, whereas conventionally this section is a significant part of the IA. The reader is just referred to the Bioresearches and Beca Report with no specific reference to any section. The Bioresearches Report is mostly related to the impacts of the existing disposal activity rather than estimating the cumulative impact of the disposal of significantly larger volumes.</li> </ol>

may occur in New Zealand or in the sea above or beyond the continental shelf beyond the outer limits of the exclusive economic zone); and

2. The IA states that the cumulative effects are not considered to be significant yet this is not explained. There would presumably be some impacts directly at the disposal locations. There should be an explanation in the IA of why there is not thought to be an impact away from the disposal locations, given the significant volumes to be disposed of over 35 years.

#### *Water quality*

3. There should be more information about how the impacts upon water quality were assessed as being less than minor. None of the reports provide sufficient information to enable any conclusions to be drawn about the effects on water quality.
4. The reports should provide information about what the baseline or background water quality at the site is. How much variation would normally occur with these measurements?
5. More information should be provided on the conclusions of the NIWA Report on the sediment plume monitoring and the report itself should be provided as part of the application. The statements in 5.1.1 of the Beca Report are reassuring but evidence is needed to back each of them up. Some of the statements are open to interpretation such as “*typically*” “*some remnant material... was evident*”.
6. If there are any uncertainties in the risk assessment for water quality these should be highlighted. Would the results be applicable if the grain size distribution of the material being dumped changed? Under Section 61 of the Exclusive Economic Zone Act if the available information is uncertain or inadequate, the decision making committee must favour precaution and environmental protection.
7. If modelling of the sediment plume has occurred this would be useful information to provide. It is unclear exactly how much of the dumped material would be present in the “*remnant material*”– or how long this would take to eventually settle. Providing this information would allow the decision making committee to have confidence that the statements in page 46 of the Bioresarches Report that stated that “*the plumes are short lived and the fish and mammals are mobile and able to avoid the plumes*” is correct.



8. Section 4.4.2 of the Beca Report states [regarding water quality] that “*These included time series turbidity measurements (using two different types of sensors), water sampling for total suspended sediment concentrations, and Acoustic Doppler Current Profiler (ADCP) backscatter data*”. Yet neither report presents any of this information with the exception of the total suspended sediment concentrations.
9. More detail is required regarding the suspended solid monitoring and should be provided including the sampling and analytical approach used.
10. It is not completely clear but presumably Appendix A of the Beca Report relates to the 2010 monitoring? The 2016 monitoring is also discussed in the Bioresearches Report but the results are not provided apart from stating that the concentrations are less than 5 mg/l. It would be helpful to also provide a full summary of the 2016 monitoring including the methodology and the full results.
11. It is not clear how the suspended solid monitoring relates to the timing of dumping.
12. Where are the 3 stations relative to the dumping location?
13. What does surveys 1-4 mean?
14. What do the negative numbers for the suspended solid concentration refer to?
15. What uncertainties are associated with these results?
16. Are the results applicable in all seasons, under all sea state conditions?

*Re-suspension of the disposed sediment*

17. Section 5.1.2 a. of the Beca Report – More details are needed of how Flaim (2012) determined that the bed velocities required for the suspension at the NDA are in the range of 0.2- 0.3 m/s. How does this link with the next section regarding physical lab testing at the University of Auckland?
18. Page 23 of the Beca Report- Has the University of Auckland work been published? If so and if this information is being relied on in the IA we will require this report as part of the application. Regarding this testing we need to know.
  - a. What mud was been tested?

- b. Is this sediment that has/will be dumped?
  - c. What approaches were used for this testing?
  - d. Would these results be applicable for any type of sediment that will be disposed of at the site?
19. Page 24 of the Beca Report - The following two sentences appear to contradict each other – are they actually talking about different reports/analysis?
- “Two samples of marine mud were tested up to flow velocity of 1.8m/s without erosion being observed”.*
- “Testing on a silty sample indicated that erosion of silty material would commence at a flow velocity of 0.6m/s.”*
20. Page 24 of the Beca Report – it is stated that *“Flaim’s results, which are the lowest of the above results, have conservatively been used for assessing erodibility of deposited material.”* However nowhere in section 5.1.2 b,c or d of the Beca Report is the value from Flaim (2012) used. The estimated range of current speeds on the sea bed should be identified.
21. More information and context about the DOC observations (mentioned in 5.1.2d of the Beca Report) should be provided.
22. We need a very clear explanation with supporting information to justify the following statement on page 25 of the Beca Report *“Due to the available water depth the maximum height of the disposal mound is not considered critical. A clear water depth of at least 120m would remain even with a 15m high mound. Resuspension due to wave action would not be anticipated at this depth (refer to Section 5.1.2)”*. The text in section 5.1.2 does summarise information but does not provide any data.
23. We need the actual detail behind the following sentence *“Based on deep water wave theory, and typical wave periods at the site of 9-13 seconds, (MetOcean Services,2017), a minimum sustained wave height of 14 m would be required to produce the near-bed velocities needed to entrain deposited material (Flaim, 2012). The wave hindcast data gives a 10,000 year extreme significant wave height of 11.6m (MetOcean Services, 2017). On this basis and given the limited duration of such events it is not probable that wave action will resuspend deposited material at the NDA. Flaim drew a similar conclusion in her work (Flaim, 2012).”* We

need the full details behind where the 14 m and the 11.6 m come from so we can judge how reliable these are.

24. Is there any possibility of seismic activity in the area affecting the mound? Even if there is not it would be helpful to address this up front.

*Procedures for EPA approval to dispose of sediment*

25. The report should outline the protocols involved in sampling the sediment pre-dredging, comparing the monitored concentrations to the ANZEEC guidelines, and getting EPA approval before dumping the material. This is only described in the proposed conditions (page 20 of the IA), and a brief overview of previous sampling is provided in the Bioresearches Report (pages 4-12). The report does not go into details about how the risk assessment will be completed in the future. Given that this would be an important way of ensuring that the environmental risks would be low it is important to outline how the applicant anticipates that this will happen.
26. What is the explanation for the fact that the concentration of certain chemicals is less than different values in Table 2.1 of the Bioresearches report e.g for TBT is it <9.5, <9.3, <10.2 mg/kg etc? Is this to do with the different volumes of material being disposed of or is it to do with different laboratories having different analytical limits of detection?
27. How was Table 2.1 of the Bioresearches Report put together?
28. Can an explanation be provided about the Auckland Council and MSANZ sediment quality guideline values? For example, they are referred to in Table 8.13 of the Bioresearches Report.
29. Page 45 of the Bioresearches Report states that [regarding leaching of contaminants into water] “*On most occasions, the contaminants were strongly bound to sediment...*” This suggests that there were occasions when the contaminants were not strongly bound to the sediment. More information should be supplied to understand the potential impact of leaching and how variable this is.
30. We are interested in the cumulative impact of exposure to multiple contaminants. Just being below the ANZEEC SQG-L does not necessarily guarantee that there would not be an ecotoxicological impact. While the concentration of contaminants at the disposal location are lower than the ANZEEC SQG-L value, they are typically elevated

compared to background levels, and several contaminants are close to the ANZEEC SQG-L values (lead, zinc and mercury). We need to understand how the risk assessment is carried out pre dredging, the basis for the ANZEEC SQG-L values, likelihood of any additive or synergistic effect from multiple contaminants, comparison with background levels, bioavailability etc. The application should outline how any potential effects from mixtures will be dealt with.

31. The organic carbon content of the sediment that has been sampled at the disposal site has not been reported in Appendix 3 (pages 9-11 of the BioResearches Report –note that page numbering is not correct). Is this an accidental omission or is there a particular reasons why the organic carbon content of the sediment is not reported?
32. Have pH, redox potential, dissolved oxygen, salinity etc been monitored for any of the sediments?

#### *Benthic Fauna Survey*

33. More information needs to be provided about the benthic fauna monitoring that was carried out including
  - a. Null hypothesis that was tested.
  - b. Exact procedures involved in sampling the sediment, for example, the sediment depth that samples were taken from.
  - c. QA/QC procedures used for sorting, identification and enumeration.

#### *Recovery rate at the disposal site*

34. The section on recovery is quite short and effectively concludes that it is not possible to determine with any accuracy how long it will take. While it is accepted that there is a degree of uncertainty, more details on this would be helpful. Our understanding is that there have been reports produced following dredging at various locations in New Zealand, for example, the Otago Harbour. A more detailed explanation of the findings of these studies would be helpful.

#### *Other impacts*

35. An estimate of impact upon commercial fishing must be provided along with a rationale for this estimate.

	<p>36. There should be a summary of the potential impacts on recreational fishing and navigation.</p> <p>37. Section 4.4 of the Bioresearches Report includes birds in the section title, yet there is no risk assessment for birds.</p>
<p>S 39(1)(e) identify the effects of the activity on the biological diversity and integrity of marine species, ecosystems, and processes; and</p>	<ol style="list-style-type: none"> <li>1. The Bioresearches Report mentions that the majority of disposal events occurred during the night due to operational constraints so the effect of reduced light on phytoplankton is reduced (page 46/47) yet this is not mentioned elsewhere – how much of the time will disposal occur at night time?</li> <li>2. Page 49 of the Bioresearches Report states that “...<i>there is no ecological reason to prevent the expansion of the current 1500 m diameter disposal area to increase the life of the disposal site. Increasing the size of the area would be ecologically preferable to creating a new area.</i>” – What information is there to justify this statement? The IA states that there is no change to the size of the disposal area, ideally both documents would be consistent.</li> </ol>
<p>S 39(1)(f) identify the effects of the activity on rare and vulnerable ecosystems and habitats of threatened species; and</p>	<ol style="list-style-type: none"> <li>1. The IA states that no vulnerable ecosystems or habitats of threatened species have been identified in or near the disposal site. Yet page 42 and onwards of the Bioresearches Report suggest that it is possible that threatened species could be present in the area of interest.</li> <li>2. A more thorough assessment of the impacts on threatened habitats or species is required along the lines of <ol style="list-style-type: none"> <li>a) A comprehensive list of the threatened habitats or species that might be present in the disposal area and the source of this information.</li> <li>b) A description of the biology and local distribution of these species, including where possible, information about their feeding/reproductive behaviour.</li> <li>c) Likely impacts of the dumping with a rationale for why this conclusion has been drawn.</li> </ol> </li> </ol>
<p>S 39(1)(g) describe any consultation undertaken with persons described in paragraph (c) and specify those persons who have given written</p>	<ul style="list-style-type: none"> <li>• The consultation document has been provided to the EPA but feedback from those consulted needs to be included in the application.</li> </ul>

<p>approval to the activity; and</p>	
<p>S 39(1)(h) include copies of any written approvals to the activity; and</p>	<ul style="list-style-type: none"> <li>• None has been provided</li> </ul>
<p>S 39(i) specify any possible alternative locations for, or methods for undertaking, the activity that may avoid, remedy, or mitigate any adverse effects; and</p>	<ol style="list-style-type: none"> <li>1. The section is very short but more information may be provided in the economic assessment report which we have not seen.</li> <li>2. The AEDG has been dismissed in a few short paragraphs. Ideally there should be a more thorough assessment of this option. While benthic monitoring of the location might not be feasible, other monitoring may be feasible e.g. monitoring of sediment before dumping, monitoring of the plume, detail bathymetric surveying post disposal etc.</li> </ol>
<p>S 39(j) specify the measures that could be taken to avoid, remedy, or mitigate the adverse effects identified (including measures that the applicant intends to take).</p>	<ol style="list-style-type: none"> <li>1. Page 20 of the IA outlines the suggested conditions that the applicant is proposing which includes EPA approval prior to dumping material from any site. Somewhere there should be a detailed description of how this monitoring is being carried out. Information about the sampling methodology and analytical approach needs to be provided.</li> <li>2. Condition 1 (b) states that the sample results must comply with the limits contained in the ANZECC ISQG guidelines. Has the reference to ANZECC ISQG (<b>L</b>) levels deliberately been omitted or is it a mistake? We note elsewhere in the suggested conditions that reference is made to the ANZECC ISQG (L) guidelines.</li> <li>3. The proposed conditions reference the DSMM plan yet this is not explained elsewhere (we believe that this is a carryover from the existing conditions).</li> <li>4. Marine Protection Rule 180.2 is referred to in the draft conditions yet we understand that this is no longer current.</li> <li>5. What is the procedure for substance with no ANZECC SQG?</li> </ol>

	<ol style="list-style-type: none"> <li>6. Similarly a full description of the approach that will be taken to all monitoring that is proposed at the disposal location and associated sites is required.</li> <li>7. The approach taken for detecting marine mammals prior to dumping should be explained in detail.</li> </ol>
<p>S 39(2)(b)(ii) describe the effects of the activity on human health;</p>	<ul style="list-style-type: none"> <li>• If not managed properly there is the potential for some effects upon fish and consequently human health. This should be explained and the mitigation measures outlined. This primarily relates to checking that the sediment being dumped does not contain significant concentrations of any substances which are Persistent Bioaccumulative and Toxic (PBT) and the risk assessment process behind this.</li> </ul>
<p>S 39(2)(b)(ii) specify any practical opportunities to reuse, recycle, or treat the waste or other matter:</p>	<ol style="list-style-type: none"> <li>1. This is currently inadequate, however, more information may be provided in the economic assessment report which we have yet to see. The IA states that a detailed review did take place for the original application and has summarised this but not provided the detailed review. The list of options in the IA does not match those listed on page 5 of the Beca Report (assuming that they are the same report – or are these different reports?).</li> <li>2. The Beca Report states that the options were explored in 1993 – has anything changed since then?</li> <li>3. Irrespective of what information is provided in the economic assessment report there should be a more detailed summary in the IA (it currently lacks any economic information).</li> </ol>

**Other comments**

Formatting the report so either sections or individual paragraphs are numbered so enable ease of cross referencing would be appreciated.

Perhaps a table at the start of the document showing that you have addressed everything (cross reference to sections of the IA) and then the body of the IA could be broken into topics and tell a story.

The page numbering in the Bioreserches Report is not consistent after page 62.

The table on Page 6 of the IA needs units.

Figure 3.20 of the Bioresarches Report is virtually impossible to read.

Format of the referencing in the Beca Report is not consistent.

A number of reports are referenced in the text of the Beca Report but do not make the reference list e.g. Gordon 1974, Bokumiewicz and Gordon 1980, Clyde and Christian, 1993.

All of the documents should clarify what the OGDA and the NDA are. For example, the term OGDA appears in the IA without being defined or explained.

Typo Section 4.4 of the Bioresarches Report– breeding activity. Should be breeding activity?

Arguably the title of Appendix 3 (the Beca Report) is not completely helpful. As well as describing the physical oceanography it also describes the options for the dredged material and international disposal locations.

The IA refers to Section 87D of the EEZ Act. This is no longer current and should be replaced by Section 59(2B).