



MEMORANDUM

File Ref: EEZ100015

To: Richard Johnson, Manager, EEZ Applications

Copy To: Siobhan Quayle, General Manager, Climate, Land & Oceans
Doug Jones, Manager, Kaupapa Kura Taiao
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From: [REDACTED] Senior Advisor, EEZ Applications

Date: 3 July 2018

Subject: Coastal Resources Limited's applications for marine dumping consent – decision on completeness under section 40 of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012.

Purpose

1. The purpose of this memorandum is to record the reasons for my recommendation that you decide the Coastal Resources Limited (CRL) marine dumping consent application (EEZ100015) is complete under section 40 of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZ Act).
2. This decision falls within your statutory delegation, as provided in the instrument of delegation from the Chief Executive of the Environmental Protection Authority (EPA).¹ The application was received on 5 June 2018 and a decision on completeness must be made in 20 working days. This means that the decision must be made by 3 July 2018.

Recommendation

3. It is recommended that you:

a.	Agree that Coastal Resources Limited's application for marine dumping consent (EEZ100015) is determined as complete under section 40 of the EEZ Act.
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¹Instrument of Delegation - Chief Executive to EPA Staff (3 November 2017):
http://epa/edrms/acc/1/md/edmd/2017_11_03_EEZ_Delegation_CE_to_staff.pdf

Project Description

4. CRL is the holder of a deemed marine dumping consent (EEZ900012) which commenced in 2013 and expires in 2032. Under EEZ900012 up to 50,000m³ of dredged material can be disposed of per year at a deep-sea site east of Great Barrier Island. This disposal site is referred to as the Northern Disposal Area (NDA). The NDA is a 1,500m radius circle centred on 36° 12.3403"S, 175° 48.002 "E (WGS84 datum), thus covering an area of about 7km².
5. On 5 June 2018, CRL lodged an application with the EPA for a replacement consent (EEZ100015). On 29 June 2018 CRL confirmed that additional documents, referenced in the application lodged on 5 June 2018 but not provided at that time, are part of the application. The additional documents were provided to the EPA on 29 June 2018.
6. The activity CRL has described in its application, and for which a marine dumping consent is sought, is to dispose of up to 250,000m³ per annum of capital and maintenance dredged material at the NDA for a 35-year period.
7. The dumping of dredged material in the EEZ is a restricted activity under section 20G of the EEZ Act.

Completeness Assessment

Legislative context

8. Under section 38 of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZ Act) any person may apply to the EPA for a marine consent to undertake a discretionary activity. For a marine dumping consent, the application must:
 - a. be made in the prescribed form; and
 - b. fully describe the proposal; and
 - c. include an impact assessment (IA) prepared in accordance with section 39 of the EEZ Act and requirements prescribed in regulations.
9. Regulation 36 of the Exclusive Economic Zone and Continental Shelf (Environmental Effects – Discharges and Dumping) Regulations 2015 (the D&D Regulations) requires the IA included in the application for marine dumping consent to (in addition to the matters required by section 39):
 - a. describe the effects on human health of the activity; and
 - b. describe any alternative method of disposal that could be used; and
 - c. specify any practical opportunities to reuse, recycle, or treat the waste.
10. The EPA must return an application for a marine dumping consent as incomplete under section 43 of the EEZ Act if it considers that the application does not comply with section 38. This includes because the IA is not prepared in accordance with section 39, or any requirements prescribed in regulations.
11. If the EPA is satisfied that an application for a publicly notifiable marine dumping consent is complete, it must within 20 working days of that decision:

- a. give public notice of the application; and
- b. serve a copy of the notice on those persons and groups listed under section 46(1)(b)(ii) of the EEZ Act.

Restricted Activities

Section 20G restricted activity

12. Section 20G of the EEZ Act sets out that no person may dump waste, or other matter, into the sea or onto the seabed of the EEZ, unless the dumping is authorised by a marine consent, an emergency dumping consent, or the dumping is in accordance with section 248 or 249 of the Maritime Transport Act.

Section 20 restricted activities

13. Under section 20(1) of the EEZ Act, no person may undertake an activity described in subsection (2) in the EEZ unless the activity is a permitted activity or authorised by a marine consent or section 21, 22 or 23.
14. As part of CRL's environmental monitoring at the NDA, a number of activities restricted under section 20 (2) of the EEZ Act are proposed. These include the:
 - a. depositing of any thing on the seabed;
 - b. disturbance of the seabed; and
 - c. removal of non-living material from the seabed.
15. Under regulation 5(1) of the Exclusive Economic Zone and Continental shelf (Environmental Effects – Permitted Activities Regulations 2013 (PA Regulations), the proposed environmental monitoring is a permitted activity, if the person undertaking the activity complies with the conditions in regulation 5(2) of the PA Regulations.
16. The proposed environmental monitoring qualifies as marine scientific research (MSR), a permitted activity, because MSR is defined in regulation 3 of the PA Regulations as research carried out for the purpose of increasing knowledge about the marine environment, marine resources, or living marine organisms, and includes related scientific activity.

EPA assessment of marine dumping consent application

16. I have reviewed CRL's IA, together with its supporting documents provided with the application on 5 June 2018, under section 40 of the EEZ Act to determine whether it complies with section 38 of the EEZ Act. Additional documents, provided by CRL on 29 June 2018, did not inform my view in assessing whether the IA complies with section 38 of the EEZ Act, as they support the IA.

Prescribed Form

17. CRL's application for marine dumping consent has been made in the prescribed form (appendix 2 to the application).

Fully describe the proposal

18. The application, together with its supporting technical reports provided as appendices, fully describe CRL's proposal to continue its use of the NDA to dispose of dredged material, but:
- a. with an increased maximum annual disposal volume;
 - b. for a longer duration than its current deemed marine dumping consent (EEZ900012); and
 - c. including source sites which may be other than marinas.

Impact Assessment

19. The IA addresses the matters listed in section 39 of the EEZ Act and regulation 36 of the D&D Regulations.

Section 39(1)(a) EEZ Act: Describe the activity for which consent is sought

20. The activity restricted under section 20G of the EEZ Act for which marine dumping consent is sought is described in section 3 of the application. Section 3.1 describes the activity as the disposal of up to 250,000m³ per annum at the NDA of accumulated sediment and capital dredging sediment by marine dumping, for a 35-year period.
21. A list of possible source sites for dredged material is provided in table 3 in section 3.7 of the application. These include a number of named marinas and other marine facilities in the Auckland and Waikato regions, as well as unspecified sites. Further information on some of the named marinas is provided in section 2.2 of appendix 5 to the application.
22. Prior to removing sediment from a source site the sediment is characterised to determine if the sediment is suitable for marine dumping at the NDA. The characterisation process is described in section 3.8 of the application, and further details are provided in section 2.1 of appendix 5 to the application. The characterisation process includes a tiered approach:
- a. a level 1 investigation consists of reviewing existing source site information;
 - b. a level 2 investigation involves the physical and chemical characterisation of the source site sediment; and
 - c. level 3 and 4 investigations involve various toxicity and bioaccumulation testing of the sediment.

If the data collected at one level is insufficient to make a decision about the suitability for dumping the material, the characterisation process will proceed to the next level.

23. It is anticipated that dredging will be undertaken by backhoe and placed directly, or transferred to, a split hull hopper (section 4.1 of appendix 5 to the application). Although the method of removal is not specifically stated elsewhere in the application, the proposed consent condition 8, as included in section 9 of the application, notes that the consent holder shall not source material that cannot be moved by mechanical means, or material which is a slurry.
24. The sediment is transported to the NDA via bottom-dump barges, either self-propelled or towed by tugs.

25. The disposal operation is described in section 3.5 of the application. Further detail is provided in section 4.2 of appendix 4 to the application. At the NDA the dredged material is disposed while the barge is in motion, typically travelling at speeds of 4-7knots. Once the hopper doors are opened the disposal of material into the water column is typically completed in 1-2 minutes.
26. How the disposed sediment behaves once it enters the water is described in section 4.4 of appendix 4 to the application. There are generally three phases to the disposal:
- a. convective descent, where the material falls through the water column as a dense fluid-like jet, at a speed of about 0.6m/s. 1-5% of the disposed material is expected to be lost through advection in the upper water column in this phase;
 - b. dynamic collapse, where the descending cloud either arrives at a level of neutral buoyancy, or encounters a boundary, e.g. a pycnocline, or the bottom. This phase is characterised by retarded descent and horizontal spreading; and
 - c. passive transport-dispersion, where transport and spread of the material are determined more by ambient currents and turbulence than by the dynamics of the placement operation.
27. The barges used for the disposal operations have load capacity ranging from around 350m³ to 700m³. It is estimated that 560 barge loads are required to dispose of 250,000m³ of dredged material per year at the NDA (section 3.5 of the application).
28. A round trip from Auckland is described as taking about 20–24 hours.

Level of detail provided

29. I consider that the information provided in the IA and supporting technical documents, describing the activities for which marine dumping consent is sought (section 39(1)(a) EEZ Act), is in:
- a. such detail as corresponds to the scale and significance of the effects that the activity may have on the environment and existing interests (section 39(3)(a) EEZ Act); and
 - b. sufficient detail to enable the EPA and persons whose existing interest may be affected to understand the nature of the activity and its effects on the environment and existing interests (section 39(3)(b) EEZ Act).

Section 39(1)(b) EEZ Act: Describe the current state of the area where it is proposed that the activity will be undertaken and the environment surrounding the area

The physical environment

30. The current environment at the NDA and wider area is described in section 4 of the application, with further detail provided in section 5 of appendix 4 to the application, and section 3 of appendix 5 to the application.
31. The proposed activities will take place at the NDA, located approximately 25km east of Great Barrier Island and 22km north of Cuvier Island. The site is located on the mid-continental shelf off the north east coast of New Zealand. The width of the continental shelf is approximately 45km at the NDA latitude. The

NDA site is a 1,500m radius circle centred on 36° 12.3403"S and 175° 48.002 "E (WGS84 datum), thus covering an area of about 7km².

32. The water depth at the NDA is around 135-140m, and the seabed bathymetry is described as generally flat with little to no distinguishable morphologic feature.
33. The NDA is an existing dredged material disposal site. Dredged material was first disposed of at the NDA in 2010, when a test disposal of 4,800m³ was carried out under Maritime New Zealand (MNZ) permit 555. CRL currently holds a deemed marine dumping consent EEZ900012, under which up to 50,000m³ of dredged material can be dumped at the NDA per year. As of April 2018 around 200,000m³ had been dumped at the NDA.
34. The disposal mound is increasing in thickness over time, and the average mound side slope has been measured to between 1 in 75 and 1 in 50.
35. The NDA is described as non-dispersive in nature, based on the oceanography, physiography and sedimentology of the northeast coast region, and earlier investigation of the site. Monitoring results from 2017 are referenced as providing further support for this conclusion as disposed material was not detected beyond the boundary of the disposal site. I note, however, that no visual assessments of the site appear to have been made post disposal.
36. The sediment of the wider area is described as muddy/sand to sandy/mud with a calcium carbonate content of less than 50%. Particle size at the NDA disposal centre site is described as finer than the wider area, as a result of the disposal of fine sediments, with approximately 20% less sand, 19% more silt and clay than the surrounding sites.
37. The current concentrations of measured contaminants at the NDA are described as below the ANZECC ISQG's where available. The application does not specify if it refers to the ANZECC ISQG-Low or the ISQG-High.
38. The meteorological and oceanographic characteristics provided for the area include:
 - a. water temperature, which was measured in the period February to December 2010, show seasonal stratification. The data, however, is not provided;
 - b. turbidity, which was found to be low throughout the water column (section 3.4 of appendix 5 to the application);
 - c. the wind speed, which was noted to be 6m/s on average, with maximum speeds for the 100 year return period reaching up to 28m/s;
 - d. waves, which were shown through hindcasting to have an average significant wave height of 1-1.5m, and a 100 year return period significant wave height of 8.4m, with corresponding periods from 9 to 13 seconds. Further information was also provided in appendix D of appendix 4 to the application;
 - e. tides, which were described as generally similar to those of nearby regions. A local tidal pathway associated with the presence of Great Barrier Island and the Hauraki Gulf is noted, but this was

not expected to impact on the principal flow pattern. The averaged tidal current rose is presented in section 2.6 of appendix D of appendix 4 to the application, and shows the tidal ellipses are oriented along NW/SE; and

- f. currents, where the results from current modelling for the surface (2m), mid-depth (72m) and near-bottom (134m), show a prevailing SW direction throughout the water column in winter, while the prevailing current direction in summer is N/NE for the surface, and NW for mid-depth and near-bottom. Overall the tidal current was found to contribute approximately 25 % of overall flow and the wind-driven currents were not considered as likely to cause significant upwelling or downwelling. The wave-driven currents were not seen as having significant impact on the disposal site, due to its depth (section 2.6 in appendix D of appendix 4 to the application).

39. Aside from turbidity, no information on local water quality has been provided.

The biological environment

40. The existing biological environment is described in section 5 of the application. Further detail is provided in section 3.5 of appendix 5 to the application. Benthic fauna, marine mammals and fin fish are considered.
41. Biota count from sediment cores collected at the NDA and the wider area is provided in appendix 7 of appendix 5 to the application. The application notes that the species diversity at the central disposal site as expected is very low, due to the nature of continuous disposal there. Samples from other locations within the NDA, and the control stations, indicate that the effect on benthic biota was limited to within a smaller area of the NDA.
42. Marine mammals and fin fish are considered to only be transient visitors to the NDA. CRL considers that no breeding grounds or established fishing grounds exist in the immediate area.
43. Aside from fish and marine mammals no information on pelagic communities at the NDA, or surrounding areas, has been provided.

The cultural environment

44. The application states in section 1.2 that the NDA was initially identified as a potentially suitable disposal site due to there, amongst other things listed, being no obvious sites of cultural significance. CRL is not aware of circumstances which impact on that original assessment and has not considered this further..
45. Through consultation, both for CRL's original MNZ permit 568 (now deemed marine dumping consent EEZ900012) and the current application, a number of iwi were identified as having an interest in the area. Consulted iwi, in their responses to CRL, note the significance of the wider area to iwi.

The socio-economic environment

46. Aside from the occasional passing through of vessels, no legally established commercial use of the NDA or the immediately surrounding area is identified by CRL.

Level of detail provided

47. Although there are gaps in the information provided by CRL, I consider that the description of the current state of the area where CRL proposes to undertake the activity and the environment surrounding the area (section 39(1)(b) EEZ Act) is in:
- a. such detail as corresponds to the scale and significance of the effects that the activity may have on the environment and existing interests (section 39(3)(a) EEZ Act); and
 - b. sufficient detail to enable the EPA and persons whose existing interest may be affected to understand the nature of the activity and its effects on the environment and existing interests (section 39(3)(b) EEZ Act).

Section 39(1)(c) EEZ Act: Identify the persons whose existing interests are likely to be adversely affected by the activity

48. Persons with existing interests are discussed in section 10.1 of the application. CRL's efforts to identify persons with existing interests is predominantly based on the outcome of previous consultation, and parties showing interest in CRL's monitoring activity at the NDA.
49. CRL identifies the following persons with existing interests in the area:
- a. Iwi with a strong interest in the area (Ngati Wai, Ngati Rehua, and Ngati Manuhiri); and
 - b. New Zealand Defence Forces (NZDF).
50. I note that CRL has consulted persons additional to those listed in paragraph 49.
51. CRL does not address which iwi interests may be affected. However, some information regarding this was provided by iwi through the consultation process, included in appendix 10 to the application.
52. NZDF has a submarine exercise area which in part overlaps with the NDA.
53. No recreational or commercial activities within or immediately adjoining the NDA are identified by CRL.
54. Navigation by marine vessels and fisheries interests were not expected to be significantly affected, due to the intermittent nature of the activities.

Level of detail provided

55. Although there is some uncertainty introduced by the approach used by CRL to identify those with existing interests, i.e. relying on interest shown in CRL's monitoring programme and historic consultation (MNZ permit), I consider that CRL has made a reasonable effort (section 39(4)) to identify existing interests likely to be adversely affected by the activity (section 39(1)(c) EEZ Act) and that identification is in:
- a. such detail as corresponds to the scale and significance of the effects that the activity may have on the environment and existing interests (section 39(3)(a) EEZ Act); and

- b. sufficient detail to enable the EPA and persons whose existing interest may be affected to understand the nature of the activity and its effects on the environment and existing interests (section 39(3)(b) EEZ Act).

Section 39(1)(d) EEZ Act: Identify the effects of the activity on the environment and existing interests (including cumulative effects and effects that may occur in New Zealand or in the sea above or beyond the continental shelf beyond the outer limits of the EEZ)

Effects on the environment

56. The potential environmental effects of the disposal activity are detailed in section 7.1 of the IA. Further detail is provided in appendices 4 and 5 to the application.
57. Of the potential effects identified by CRL associated with the planned activities, I consider that the key effects relate to:
- a. site capacity;
 - b. increased levels of turbidity caused by the disposal plume or through resuspension of material;
 - c. mortality and reduced diversity of benthic fauna due to smothering or burial;
 - d. potential spread of invasive species, through surviving larvae released with the dredged material; and
 - e. leaching of contaminants from the disposed sediment;.
58. Estimated volumetric capacity of the NDA is provided in section 6.2 of appendix 4 to the application. A cone shaped disposal mound, 3.75m tall at the centre and extending to the border of the NDA, is shown to provide capacity equal to the disposal of 250,000m³ per year for just over 35 years.
59. The effects of increased turbidity are discussed in section 6.1.1 of appendix 4 to the application, and section 3.4 of appendix 5 to the application. The presence of fine sediment plumes is considered to potentially impact on phytoplankton and fish present in the water column. The effects are not expected to extend beyond the borders of the NDA, and are considered by CRL to be minor due to:
- a. the intermittent nature of the activity;
 - b. turbidity returning to background levels within 1-2h of dumping; and
 - c. the water depth and the low near-bed currents at the NDA, making resuspension uncommon.
60. The effect on benthic fauna is addressed in section 7.1 of the application, and section 4.3 of appendix 5 to the application. Significant mortality is expected at the disposal site while disposal is ongoing, with recovery within a number of years once disposal ceases.
61. Effects on individual fin fish or marine mammals are discussed in section 4.5 of appendix 5 to the application. It is noted that the effect is likely to be adverse only where individuals are present in the water column directly below where the material is being dumped.

62. Results of invasive species trajectory modelling are presented in appendix D of appendix 4 to the application. The risk of potential spread of invasive species is further discussed in section 4.4 of appendix 5 to the application. Disposal of planktonic larvae from the point of disposal is noted as having the greatest potential of spreading unwanted invasive species to areas not previously colonised. The application notes that the majority of invasive species encountered at source sites to date do not have a larvae survival time long enough to allow for beaching if released at NDA.
63. The potential for contaminants leaching from the dumped material is discussed in section 4.1 of appendix 5 to the application. The application notes that based on elutriation testing conducted on the source material, contaminants do not appear likely to be released into the water column at the disposal site at concentrations high enough to cause adverse effects to biota. Section 4.1 of appendix 5 to the application also notes that significant leaching requires a pore water pressure, which is typically only established when the mound is very large and solid, and that the continued use of the site as a disposal area as proposed will not result in a significantly higher mound, and thus pore water pressure induced leaching is not expected.
64. The effects of unplanned events are not addressed specifically in the application. The proposed consent conditions 21, provided in section 9 of the application, includes reporting requirements related to such events where material is disposed outside the disposal area.
65. CRL has not identified any potential significant cumulative effects arising from the proposed continued use of the NDA.

Effect on existing interest

66. Existing interests are discussed in sections 7.1 and 10 of the application. Section 1.2 of the application also relates to the cultural considerations prior to the original establishment of the NDA site.
67. The cultural effect of the activity on iwi identified as having strong interest in the area has not been assessed by CRL. CRL notes that through the initial disposal site identification work, no obvious sites of cultural significance were identified at the NDA or its immediate surroundings, and that CRL is not aware of circumstances which impact on that original assessment. However, in appendix 10 to the application, correspondence from Ngāti Whanaunga advises that the iwi has identified the NDA as a waahi tapu, noting that the deposit of the source material on the disposal site has created “a site where a higher level of care must now be taken...[which in its view] has created a Waahi Tapu and therefore needs to be treated as such.”
68. The potential conflict between dumping operations and NZDF utilisation of its submarine exercise area, which overlaps with the NDA, has been identified.
69. CRL has not identified other consented activity at the NDA or the immediate area, and has therefore not considered potential cumulative effects arising from the use of the same area by multiple parties.

Level of detail provided

70. While there are gaps in the information provided, in particular pertaining to cumulative effects, and the effects on cultural values, of the activity, I consider that CRL has identified the key environmental effects and that the information provided regarding the effects of the activity on the environment and existing interests (including cumulative effects and effects that may occur in New Zealand or in the sea above or beyond the continental shelf beyond the outer limits of the EEZ) meets the requirements of making a reasonable effort (section 39(4)) to identify the effects of the activity (section 39(1)(d) EEZ Act), and the information is in:

- a. such detail as corresponds to the scale and significance of the effects that the activity may have on the environment and existing interests; (section 39(3)(a) EEZ Act); and
- b. sufficient detail to enable the EPA and persons whose existing interests are or may be affected to understand the nature of the activity and its effects on the environment and existing interests (section 39(3)(b) EEZ Act).

Section 39(1)(e) EEZ Act: Identify the effects of the activity on the biological diversity and integrity of marine species, ecosystems, and processes

71. The effects of the activity on the biological diversity and integrity of marine species, ecosystems and processes, is briefly addressed in section 4.7 of appendix 5 to the application. It mainly gives a retrospective evaluation of past events, however further relevant information is provided elsewhere in the same appendix 5, in particularly in sections 4.2, and 4.3.
72. The numbers of species, individuals and diversity is expected to decline significantly at the NDA while disposal is ongoing. The decline is expected to be limited to within 500m of where material is dumped. Thus significant effect as pertaining to section 39(1)(e) of the EEZ Act is expected from the activity, but is predicted to be limited to within the NDA.
73. The application notes that biodiversity within and beyond the disposal area has not been impacted by the disposal activity to date. Further information regarding the changes in benthic biota is discussed in section 3.5.1.3 of appendix 5 to the application. Appendix 7 of appendix 5 to the application provides the biota count from sediment cores collected at the NDA and the wider area. These provide information regarding the change in diversity and species composition observed to date.
74. Due to the significant water depth and low bed current velocities, the applicant does not anticipate that increasing the annual volume from up to 50,000m³ to 250,000m³ of disposed dredged material will have a significant effect on the potential for the resuspension (section 6.1 of appendix 4 to the application).
75. Once sediment disposal has ceased, benthic communities are expected to recover to pre disposal levels. No proposed timeframe for the recovery at the NDA is given. The application notes that recovery reported in literature were found to take between 1 and 4 years.

Level of detail provided

76. While little specific information has been provided on biodiversity and ecosystem functioning within the NDA, I consider that the information provided in the application and its appendices, identifies the effects of the activity on the biological diversity and integrity of marine species, ecosystems, and processes and meets the requirements of making a reasonable effort (section 39(4)) to identify the effects of the activity (section 39(3) EEZ Act), and the information is in:
- a. such detail as corresponds to the scale and significance of the effects that the activity may have on the environment and existing interests; (section 39(3)(a) EEZ Act); and
 - b. sufficient detail to enable the EPA and persons whose existing interests are or may be affected to understand the nature of the activity and its effects on the environment and existing interests (section 39(3)(b) EEZ Act).

Section 39(1)(f) EEZ Act: Identify the effects of the activity on rare and vulnerable ecosystems and habitats of threatened species

77. The possible effects of the activity on rare and vulnerable ecosystems and habitats of threatened species are addressed in section 4.8 of appendix 5 to the application.
78. The application notes that studies to date have shown that NDA does not contain any known vulnerable ecosystems or habitats of threatened species. The potential presence of marine mammals and corals is however discussed further.
79. The stony corals *Caryophyllia quadragenaria*, *Kionotrochus suteri* and *Monomyces rubrum* have been recorded north of the NDA at similar depths to those found at the NDA. Some species of *Scleractinia* corals also have habitat ranges that could occur in the NDA, however, *Scleractinia* has not been identified through monitoring conducted at the NDA to date.
80. A number of whale species use the continental shelf east of Great Barrier Island, but most of these only pass through seasonally on migration to and from breeding grounds. The activity of dumping may create some noise for very short periods of time and the act of dumping will create a risk from falling material.
81. No endangered fish or birds are identified by CRL to be present, or use the NDA.

Level of detail provided

82. Although there is some limitation in terms of CRL's assessment of rare and vulnerable ecosystems and habitats, I consider that CRL meets the requirements of making a reasonable effort (section 39(4)) to provide the information required by section 39(1)(f) of the EEZ Act in:
- a. such detail as corresponds to the scale and significance of the effects that the activity may have on the environment and existing interests (section 39(3)(a) EEZ Act); and
 - b. sufficient detail to enable the EPA and persons whose existing interests are or may be affected to understand the nature of the activity and its effects on the environment and existing interests (section 39(3)(b) EEZ Act).

Section 39(1)(g) EEZ Act: Describe any consultation undertaken with persons described in paragraph (c) and specify those who have given written approval to the activity

83. Section 10 of the application describes the stakeholder engagement process, and some of the feedback CRL received on their consultation documents.

84. Those who were consulted included:

- a. local iwi (Ngati Wai; Ngāti Manuhiri Kaitiaki Charitable Trust; Ngāti Rehua Trust; Ngāi Tai Ki Tāmaki Trust; Ngāti Maru Rununga; Ngāti Whanaunga Incorporated Society; and Ngāti Tamaterā);
- b. marine management regimes (Auckland Council; Waikato Regional Council; Northland Regional Council; Department of Conservation; Ministry for Primary Industries (Operations); and Land Information New Zealand);
- c. seafood and fisheries interest groups (Coromandel Scallop Fishermen’s Association; Federation of Commercial Fishermen; Fisheries Inshore New Zealand; Northern Fisheries Management Stakeholders Group; Seafood Industry Group; and The NZ Rock Lobster Industry council); and
- d. New Zealand Defence Force.

85. Appendix 10 to the application contains the documents provided through the consultation process and responses received by CRL. CRL received written responses from:

- a. iwi (Ngati Rehua; Ngati Maru; Manuhiri Kaitiaki; Ngai Tai Ki Tamaki; and Ngaati Whanaunga); and
- b. marine management regimes (Auckland Council; and Ministry for Primary Industries).

Level of detail provided

86. I consider the description of the consultation undertaken with persons CRL identified as having an existing interest likely to be adversely affected by the activity (section 39(1)(g) EEZ Act) is in:

- a. such detail as corresponds to the scale and significance of the effects that the activity may have on the environment and existing interests (section 39(3)(a) EEZ Act); and
- b. sufficient detail to enable the EPA and persons whose existing interest may be affected to understand the nature of the activity and its effects on the environment and existing interests (section 39(3)(b) EEZ Act).

Section 39(1)(h) EEZ Act: Include copies of any written approvals to the activity

87. No written approvals was sought by CRL

Section 39(1)(i) EEZ Act: Specify any possible alternative locations for, or methods for undertaking, the activity that may avoid, remedy, or mitigate any adverse effects

Alternative locations

88. Possible alternative locations for disposal of the dredged material are addressed in section 3.10 of the application. Alternative location for disposing of dredged material identified by CRL, include its:
- a. use for reclamation;
 - b. disposal to landfill (as either waste or cover material);
 - c. disposal at near-shore sites; and
 - d. disposal at Auckland explosives dumping ground (AEDG).
89. Only one reclamation project is currently consented in the Auckland area. This is the Fergusson Wharf reclamation, which is now nearing completion. Although CRL considers reclamation as a potentially economically viable option, it notes that its use would always be limited in time, and therefore does not provide certainty of operations.
90. Disposal to landfill would require the material to be in a “spadable” form. This would require the use of large land surfaces to dry the dredged material for a period up to six weeks. No such land area is currently available, and would also require consent for discharges of runoffs, if it was available. The disposal on land would also require a significant number of road transportation hours. Due to these reasons CRL does not see land disposal as an economically viable option.
91. There are no near-shore marine disposal sites currently consented by Auckland Council. For a new site, a detailed site investigation would be needed prior to lodging a consent application. CRL believes that there would be strong local opposition to a near-shore disposal site. It also notes that the opposition to a near-shore site by the then Auckland Regional Council was one of the key drivers in identifying an alternative site, which culminated in CRL applying to establish the NDA in 2008.
92. The AEDG is the former site for disposal of dredged material from the Auckland region. The application notes that the depth of the AEDG, ranging from 500m to 1300m, makes traditional monitoring uneconomic and practically unfeasible. The possible presence of unexploded ordnance (UXO) also introduces an unacceptable risk to parties involved with such monitoring. CRL therefore does not consider the AEDG as a viable alternative for disposal of dredged material.

Alternative methods

93. Alternative methods for disposal is not discussed in the application, aside from noting in section 3.10 of the application that CRL is not aware of any “changes of circumstances/technology” why any of the options listed under alternative locations above, would now be “applicable, practicable or consentable in Auckland and have therefore not considered them.”
94. I note that one alternative method, pertaining to biosecurity risk, was mentioned, i.e. the storing of dredge material on land for a number of days before transportation to the NDA. The application does not,

however, set out to what extent this method would routinely, or otherwise, be used to mitigate biosecurity risk.

Level of detail provided

95. I consider the information provided on possible alternative locations, or methods for undertaking the activity that would avoid, remedy or mitigate the adverse effects (section 39(1)(i) EEZ Act) is in:
- a. such detail as corresponds to the scale and significance of the effects that the activity may have on the environment and existing interests (section 39(3)(a) EEZ Act); and
 - b. sufficient detail to enable the EPA and persons whose existing interest may be affected to understand the nature of the activity and its effects on the environment and existing interests (section 39(3)(b) EEZ Act).

Section 39(1)(j) EEZ Act: Specify the measures that could be taken to avoid, remedy, or mitigate the adverse effects identified (including measures that the applicant intends to take)

96. Measures the applicant intends to take in order to mitigate the identified adverse effects of the planned activity that have the potential to interact with the environment or existing interests is primarily set out in sections 7.1, 8, and 9 of the application.
97. CRL has prepared a set of proposed conditions, which are provided in section 9 of the application. In addition to these, further conditions are offered in section 10.3 of the application.
98. To mitigate potential effects associated with increased turbidity caused by the dumping of dredged material, CRL proposes that consent conditions require that;
- a. no material is sourced for disposal which:
 - i. cannot be moved by mechanical means;
 - ii. is a slurry (condition 8); and
 - b. a minimum of 1 hour between barge unloadings at the NDA (condition 9).
99. To mitigate adverse effect on marine mammals, CRL proposes to undertake observation for marine mammals for at least 30 minutes immediately prior to any disposal activity (condition 11).
100. The potential conflict between dumping operations and NZDF utilisation of its submarine exercise area is proposed to be mitigated by CRL contacting NZDF prior to disposal to confirm no conflict in operations occur. The same approach is in place for CRL's deemed marine dumping consent EEZ900012.
101. CRL notes that although no practical opportunities to use dredged material for reclamation work is currently available, in the event that future reclamation projects were progressed in Auckland there could be an opportunity for dredged material to be used for that reclamation.

102. Potential cultural effects were not specifically addressed in the application. However, in consultation with iwi, CRL proposes requirements which will enable greater involvement of iwi in the assessment of on-going monitoring results. These requirements have not been included in CRL's proposed conditions, provided in section 9 of the application, however, it is noted in section 10.3 that CRL could offer such requirements as conditions. The requirements outlined in section 10.3 of the application include:
- a. making all relevant reports and data available to the relevant iwi;
 - b. provide the opportunity for on-going effects arising from the proposal to be considered by iwi;
and
 - c. an opportunity to provide feedback and recommendations back to the consent holder and the EPA.
103. To mitigate the risk of spreading invasive species through their operations, CRL proposes to assess the sediment for biosecurity threats, prior to dredging. The results would be provided to the Ministry for Primary Industries (MPI) for comment. MPI's comments would be provided to the EPA who would subsequently approve or reject the sediment as appropriate for dumping at the NDA.
104. Section 39(5) of the EEZ Act requires that the measures specified under section 39(1)(j) must include any measures required by another marine management regime (MMR), and any measures required by the Health and Safety at Work Act 2015. Section 2.2 of the application addresses the nature and effect of a number of MMRs, however, the application does not specifically identify the measures required by other MMRs.
105. I note that CRL has outlined other mitigation measures than those listed above. I have commented only on those I consider are most relevant to mitigation of the key adverse effects.

Level of detail provided

106. I consider that CRL has provided information required by section 39(1)(j) and section 39(5) of the EEZ Act in:
- a. such detail as corresponds to the scale and significance of the effects that the activity may have on the environment and existing interests (section 39(3)(a) EEZ Act); and
 - b. sufficient detail to enable the EPA and persons whose existing interest may be affected to understand the nature of the activity and its effects on the environment and existing interests (section 39(3)(b) EEZ Act).

Section 39(2)(b)(i) EEZ Act and Regulation 36(a) D&D Regulations: Description of effects of the activity on human health

107. No direct effect on human health from the activity is identified by CRL. The only potential effect on human health identified in the application is by fish feeding on the seabed at the disposal site, subsequently being caught and consumed by humans, as noted in section 7.2. CRL considers the risks

posed to human health by the planned activities to be almost zero, due to the low numbers of fish present at the site, and the remote location of the site.

Level of detail provided

108. I consider that CRL has provided information required by section 39(2)(c) of the EEZ Act in:
- a. such detail as corresponds to the scale and significance of the effects that the activity may have on the environment and existing interests (section 39(3)(a) EEZ Act); and
 - b. sufficient detail to enable the EPA and persons whose existing interest may be affected to understand the nature of the activity and its effects on the environment and existing interests (section 39(3)(b) EEZ Act).

Section 39(2)(b)(ii) EEZ Act and Regulation 36(c) D&D Regulations: specify any practical opportunities to reuse, recycle, or treat the waste

109. No practical opportunities have been identified to re-use, recycle or treat the dredged material. In the event that future reclamation projects were progressed in Auckland there may be an opportunity for dredged material to be used for that reclamation

Regulation 36(b) D&D Regulations: describe any alternative method of disposal that could be used.

110. Alternative methods for disposal (section 39(1)(i) EEZ Act) are noted at my paragraphs 88-94 above.

Cross-boundary activity

111. Under section 88 of the EEZ Act a cross-boundary activity means an activity that is carried out partly in the EEZ, or in or on the continental shelf, and partly in New Zealand.
112. If the EPA decides, under section 93(1) of the EEZ Act, that a cross-boundary application ought to be processed and heard with an application for resource consent for the activity, it can, under subsection (3)(b), return the application for marine consent to the applicant under section 43 of the EEZ Act as if it were incomplete.
113. I have considered the proposed activity, for which marine dumping consent is sought, and do not consider that the application should be processed and heard with an application for resource consent under the Resource Management Act 1991. The consideration and decision on cross boundary activities in relation to CRL's application for marine dumping consent will be addressed in a separate memo.

Conclusion

114. I have assessed CRL's IA together with the application, and supporting documents provided as appendices on 5 June 2018 against all the relevant criteria in section 39 of the EEZ Act and regulation 36 of the D&D Regulations. I conclude that CRL's application for marine dumping consent (EEZ100015) complies with section 38 of the EEZ Act.
115. Additional documents, in support of the application, were provided by CRL on 29 June 2018. These did not inform my view on whether the application complies with section 38 of the EEZ Act, but may inform the decision maker's considerations under section 61 of the EEZ Act.
116. I observe that for all matters outlined in section 39 of the EEZ Act and regulation 36 of the D&D Regulations, the application contains information that is in;
- a. such detail as corresponds to the scale and significance of the effects that the activity may have on the environment and existing interests (section 39(3)(a) EEZ Act); and
 - b. sufficient detail to enable the EPA and persons whose existing interest may be affected to understand the nature of the activity and its effects on the environment and existing interests (section 39(3)(b) EEZ Act).
117. A further information request can be issued to CRL under section 54 of the EEZ Act to address any information issues in the application. The EPA or the DMC can also commission a review or seek advice or information from any person under section 56 of the EEZ Act.

Recommendation

118. I recommend that CRL's application for marine dumping consent, including its accompanying IA and appendices, for activity restricted under section 20G of the EEZ Act, being the dumping of dredged material at the Northern Disposal Site in the EEZ, complies with section 38 of the EEZ Act and therefore should be determined as complete under section 40 of the EEZ Act, for the reasons set out in this memo.



3 July 2018

[Redacted]

Date

Senior Advisor, EEZ Applications
Climate, Land & Oceans

Decision

119. That you:

a.	Agree that Coastal Resources Limited's application (EEZ100015) for marine dumping consent to dump dredged material in the EEZ is determined as complete under section 40 of the EEZ Act for the reasons set out in this memo.	<input checked="" type="radio"/> Yes / No
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3 July 2018

Richard Johnson
Manager, EEZ Applications
Climate, Land & Oceans

Date