



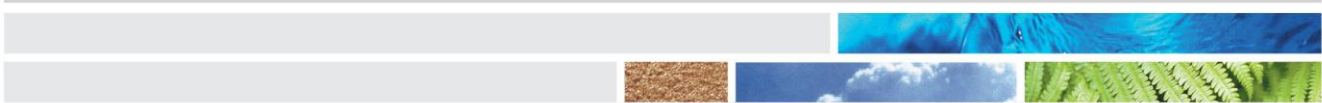
Environmental
Protection Authority
Te Mana Rauhi Taiao

Application Ref: EEZ40008

DECISION ON MARINE DUMPING CONSENT APPLICATION FOR MARINE SCIENTIFIC RESEARCH

National Institute of Water and Atmospheric Research Ltd

Application to dump structures associated with Permitted Activity NIWAPA24



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MARINE DUMPING CONSENT EEZ400008

Pursuant to section 87F(1) of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) 2012 (the EEZ Act), the application for marine dumping consent by National Institute of Water and Atmospheric Research Ltd to dump structures associated with marine scientific research in and around the Cook Strait is **GRANTED** subject to conditions (listed in **Schedule 1**).

Pursuant to section 71(1) of the EEZ Act this marine dumping consent commences when the time for lodging an appeal against the grant of the consent expires and no appeal has been lodged, or when the High Court determines any appeal or all people who lodged appeals withdraw their appeals.

This marine dumping consent expires 16 August 2017.

Dated this day ^{21st} of December 2016

Dr Allan L. Freeth

Chief Executive

Environmental Protection Authority

SCHEDULE 1: MARINE DUMPING CONSENT CONDITIONS

CONDITIONS

Pursuant to sections 63 and 87F(4) of the EEZ Act, this marine consent authorises the dumping activities applied for in application EEZ400008 subject to the following conditions:

1. This marine consent authorises the dumping of the following structures placed for the purpose of marine scientific research within the quadrant identified:

Location point #	Latitude	Longitude	Description of Structure
-	-40.30000	173.80000	Up to two railway wheels, less than, or equal to 0.6m ² weighing 1,000kg each.
	-40.30000	176.00000	
	-42.50000	176.00000	
	-42.50000	173.80000	

2. The expiration date of this marine dumping consent is 16 August 2017.
3. The consent holder must ensure that a copy of this marine dumping consent and any variation is available for inspection at National Institute of Water and Atmospheric Research Ltd, Greta Point, Evans Bay Parade, Wellington, New Zealand until 16 August 2017.
4. The physical nature and quality of material dumped must be in accordance with the information provided in permitted activity application NIWAPA24, regarding the description of the current area and surrounding environment including any known sensitive environment, and in sections two and five of the application for this marine dumping consent EEZ400008.

END OF MARINE CONSENT DOCUMENT

DECISION ON MARINE DUMPING CONSENT APPLICATION

DEFINITIONS

Terms used in this schedule have the following meanings:

EEZ Act	Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012
EEZ	Exclusive Economic Zone
D&D Regulations	Exclusive Economic Zone and Continental Shelf (Environmental Effects – Discharge and Dumping) Regulations 2015
NZGD2000	New Zealand Geodetic Datum 2000
Expiration date	The date by which the structures placed for marine scientific research and subject to this consent must be abandoned
NIWA	National Institute of Water and Atmospheric Research Ltd
EPA	Environmental Protection Authority
Permitted Activities Regulations	Exclusive Economic Zone and Continental Shelf (Environmental Effects—Permitted Activities) Regulations 2013
MSR	Marine scientific research

Background

1. The EPA is the consent authority for activities within the EEZ and continental shelf beyond the 12 nautical mile limit from New Zealand’s coastline. One of the EPA’s functions, pursuant to section 13(1) of the EEZ Act, is to decide applications for marine dumping consents.
2. Regulation 5 of the Permitted Activity Regulations provides for MSR as a permitted activity subject to compliance with conditions. Marine Scientific Research is defined under regulation 3 as *“research (whether fundamental or applied) carried out for the purpose of increasing knowledge about the marine environment, marine resources, or living marine organisms, and includes any related scientific activity, but excludes any research carried out in relation to prospecting, exploration or mining; and seismic surveying.”*
3. The EPA considers that the recycled railway wheels in NIWA’s application fall within the scope of the definition of “structure” meaning that the restriction on the dumping of structures set out in s 20G of the EEZ Act applies and a marine dumping consent is required.

The application

4. NIWA is currently undertaking MSR as a permitted activity NIWAPA24.
5. This permitted activity is an acoustic monitoring survey of whales migrating between Antarctica and the tropics. As part of this survey NIWA has placed passive acoustic monitoring (PAM) devices in the Cook Strait. The PAMs are held in place by recycled railway wheels acting as mooring weights.

6. Following the survey, an acoustic release will be activated, and the PAM devices return to the surface, leaving only the non-recoverable structure/mooring weight (a recycled railway wheel) on the seabed.
7. The footprint of each sacrificial mooring is approximately 0.6 m², with a combined footprint of approximately 1.2 m², and total combined weight of approximately 1,000 kg.
8. The PAMs will be deployed twice, thus NIWA is seeking consent to abandon two recycled railway wheels.
9. On 16 February 2016, the EPA granted marine dumping consent EEZ400002 to NIWA. EEZ400002 authorised NIWA to abandon 10 railway wheels at five locations in and around the Cook Strait. However NIWA is now seeking consent to dump additional railway wheels at a location not authorised by EEZ400002.
10. On 23 November 2016, NIWA lodged an application for a marine dumping consent to abandon two railway wheels (dump structures) associated with NIWAPA24.
11. On 7 December 2016, the EPA did not return the application as incomplete under section 41 of the EEZ Act.

Activity subject to approval

12. The proposed dumping of structures used for marine scientific research is classified as a non-notified activity under regulation 31(e) "*structures placed for the purpose of marine scientific research*" of the D&D Regulations.

Statutory framework

13. The purpose of the EEZ Act pursuant to section 10(1) is to promote the sustainable management¹ of the natural resources of the exclusive economic zone and the continental shelf and to protect the environment from pollution by regulating or prohibiting the discharge of harmful substances and the dumping or incineration of waste or other matter.
14. Section 20 of the EEZ Act restricts certain activities from being undertaken in the EEZ or in, or on, the continental shelf unless they are authorised under the EEZ Act. NIWA is currently undertaking the MSR as a permitted activity and is therefore authorised under section 20. However, section 20G of the EEZ Act operates independently from s 20 to restrict the dumping of waste or other matter (including ships, aircraft, or structures) into the sea within the EEZ or above the continental shelf beyond the outer limits of the EEZ or into or onto the continental shelf unless the dumping is authorised by a marine consent, an emergency dumping consent or is in accordance with section 248 or 249 of the Maritime Transport Act 1994. Therefore, NIWA must apply for a marine dumping consent in order to be compliant under section 20G of the EEZ Act.
15. We note that section 87F provides the EPA with the power to grant or refuse an application for a marine dumping consent, in whole or in part, subject to conditions, or refuse the application.

¹ Section 10 of the EEZ Act. "Sustainable management" is defined in section 10(2).

Best available information and requests for further information

16. In accordance with section 87E of the EEZ Act, the EPA must:

- (a) make full use of its powers to request information from the applicant, obtain advice, and commission a review or a report; and*
- (b) base decisions on the best available information; and*
- (c) take into account any uncertainty or inadequacy in the information available.*

17. If, in relation to making a decision on the application, the information available is uncertain or inadequate, the EPA must favour caution and environmental protection. It is important to note that best available information does not include all information and that the EPA must exercise judgement having regard to issues of cost, effort and time in obtaining information.

18. The information, supplied by NIWA in the marine dumping consent application, in the Permitted Activity form NIWAPA24² and available in the decision to grant marine dumping consent EEZ400002, is sufficient for the EPA to be confident that seeking more information about the application would be unlikely to yield significantly different findings regarding the effects of the activities on the environment and existing interests.

19. As such, the EPA did not consider it necessary to request further information from the applicant,³ or to commission independent reviews or advice.⁴

Hearing on the application

20. Under section 44B, the EPA may conduct a hearing on an application for a marine consent for a non-notified activity if the EPA considers it necessary or desirable or the applicant requests one. NIWA did not request a hearing and the EPA did not consider one necessary or desirable for this application.

Decision-making criteria

21. Sections 87D of the EEZ Act sets out the matters that the EPA must take into account in coming to a decision on an application for a marine dumping consent. These include:

- i. the matters described in section 59(2), except paragraphs (c), (f), (g), and (i); and
- ii. the effects on human health of the dumping of waste or other matter if consent is granted; and
- iii. any alternative methods of disposal that could be used; and
- iv. whether there are practical opportunities to reuse, recycle, or treat the waste; and
- v. section 59(3).

22. The EPA has carried out an assessment in relation to all of the relevant matters listed under sections 59 and 87D. A full list of section 59 and 87D criteria and the EPA's consideration of matters i-iv can be found in Appendix 3.

² Appendix 1 and 2 respectively

³ Section 42 of the EEZ Act

⁴ Section 44 of the EEZ Act

23. No submissions, evidence, advice⁵, reports or information were sought or received in relation to the application under s 59(3).
24. The following section on the assessment only discusses matters that the EPA considers warrant discussion in relation to the application.
25. We note that section 59(2)(j) of the EEZ Act requires the EPA to take into account “*the extent to which imposing conditions under section 63 might avoid, remedy or mitigate the adverse effects of the activity.*”

Assessment

26. Sections 59(2)(a) and 59(2)(b) of the EEZ Act require the EPA to take into account the effects of allowing the activity on the environment and existing interests. We note that section 59(2)(a)(i) requires the EPA to consider cumulative effects and that section 59(2)(b)(i) requires the EPA to take into account the effects of activities that are not regulated under the EEZ Act. The key potential effects of the dumping activities proposed by NIWA on the environment and existing interests are discussed below.

Environment

27. NIWA is proposing to dump up to two recycled railway wheels in the EEZ within the following quadrant covering the Cook Strait:

Latitude	Longitude
-40.30000	173.80000
-40.30000	176.00000
-42.50000	176.00000
-42.50000	173.80000

28. Each sacrificial mooring/railway wheel has a footprint of ~0.6m² weighing approximately 1,000kg.
29. Their placement, in water depths 500-1,000m, on the seabed will potentially harm the benthic community, at each location, up to a combined area of approximately 1.2m².
30. The disturbances are unlikely to have any significant acute impacts on marine life as any effects on benthic species are likely to be limited to the immediate area beneath or surrounding the sacrificial moorings.
31. It is likely the only long-term impact of the activity covered by this marine dumping consent will be the presence of the sacrificial moorings, which remain on the seabed.
32. However, NIWA reports that previous experience suggests that the sacrificial moorings may provide settlement habitat for benthic invertebrates thereby countering any initial adverse impacts on the seabed.
33. Of the 7554 biological sample records in NIWA’s archive (National Invertebrate Collection database) located in the area NIWA is proposing to conduct its research, 40-43° S and 173-176° E, only 141 samples were found within five km of the proposed PAM locations. Of those 141, only five have the potential to create a ‘sensitive environment’ according to the definitions of Schedule 6 of the Permitted Activity Regulations. There are no species close to the abandonment location that indicate the presence of a sensitive environment. Details of the five species are in the permitted activity form (Appendix 2).

⁵ Including advice from the Māori Advisory Committee

34. For the purpose of assessing the effects of the activities subject to this application the EPA considers the information provided in the Permitted Activities application regarding the description of the current area and surrounding environment, including any known sensitive environments, is sufficient to consider the effects of the activities against the matters in sections 59(2) of the EEZ Act.
35. There are unlikely to be any significant cumulative effects from the abandonment of the sacrificial moorings as the total footprint of ~1.2m² is less than 0.000001% of the greater Cook Strait seafloor area. Further, the abandonment of structures such as vessels and explosives in the authorised dumping sites⁶ and the natural release of compounds from submarine fissures throughout New Zealand's EEZ, contain orders of magnitude more of the compounds than those contained in the sacrificial moorings subject to this application.
36. Therefore, the EPA considers that condition 1, which confines the dump site locations, and condition 4, which requires the physical nature, quality and quantity of material dumped to be in accordance with information provided by NIWA, and NIWA's obligations under the Permitted Activities Regulations, will operate to minimise adverse effects of the dumping on the environment.

Existing interests

37. The Cook Strait region is subject to a range of activities including oil and gas operations, ferry traffic, regulated disposal grounds, commercial and recreational fishing operations, and recreational boating.
38. The NIWPA24 Permitted Activities notification identified 73 iwi, hapū, customary marine title groups and/or protected customary rights groups who are considered to have existing interests in the area.
39. The EPA considers there are unlikely to be any effects on existing interests from this activity as the profile and weight of the railway wheels is unlikely to interfere with these interests' activities.
40. Therefore, the EPA considers that condition 1, which confines the dump site locations, condition 4, which requires the physical nature, quality and quantity of material dumped to be in accordance with information provided by NIWA and NIWA's obligations under the Permitted Activities Regulations will operate to mitigate any potential adverse effects of the dumping on existing interests.

Human health

41. Section 87D(2)(b)(ii) requires the EPA to take into account the effects on human health of the dumping of waste or other matter if consent is granted.
42. The iron in the sacrificial moorings will, over an extended period, gradually rust and leach into the water and is likely to be absorbed and ingested by marine life which, may in turn make its way into the human food chain. Metal leaching from other dumped or abandoned structures and the natural release of compounds from submarine fissures contribute significantly more than the total amount of iron and other compounds released from the sacrificial moorings. Therefore, the abandonment of the sacrificial moorings are unlikely to have a measureable impact on human health.

Alternative methods of disposal

⁶ There are five authorised dumping sites in New Zealand's EEZ. These locations were historically dumping grounds for explosives. One such site is in the Cook Strait.

43. Section 87D(2)(b)(iii) requires the EPA to take into account alternative methods of disposal that could be used.
44. The EPA considers that alternatives to disposal at sea, such as landfill, do not apply in these circumstances and the only practical alternative to the abandonment of a structure already in place on the seabed is retrieval.
45. Methods of retrieval have been discussed and considered in previous MSR marine dumping applications⁷ and the EPA has concluded that the alternatives are not practical without imposing unreasonable costs on the applicant in the circumstances.
46. There is nothing in this application to reach a different conclusion. Therefore, given the scale and nature of any effects, the abandonment of recycled railway wheels is appropriate under the circumstances.

Practical opportunities to reuse, recycle, or treat the waste

47. Section 87D(2)(b)(iv) requires the EPA to take into account whether there are practical opportunities to reuse, recycle or treat the waste.
48. There are no practical opportunities to reuse, recycle or treat the railway wheels, as this would require their retrieval from the seabed, which is considered impractical under the circumstances.

Grounds for refusal

49. Section 87F(2) states:

(2) “However, the Environmental Protection Authority must refuse an application for a marine dumping consent if—

(a) the Environmental Protection Authority considers that the waste or other matter may be reused, recycled, or treated without—

(i) adverse effects on human health or the environment that are more than minor; or

(ii) imposing costs on the applicant that are unreasonable in the circumstances; or

(b) the waste or other matter is identified in such a way that it is not possible to assess the potential effects of dumping the waste or other matter on human health or the environment; or

(c) the Environmental Protection Authority considers that dumping the waste or other matter is not the best approach to the disposal of the waste or other matter in the circumstances.”

50. The EPA considers that:

- i. The railway wheels cannot be reused, recycled or treated without imposing costs on NIWA that are unreasonable under the circumstances, and
- ii. The railway wheels are described in such a way that the effects of dumping them can be assessed, and
- iii. Abandoning the railway wheels is an appropriate approach to the disposal under the circumstances.

⁷ EEZ400002, EEZ400003, EEZ400006 and EEZ400007

Conclusion

51. The EPA is satisfied that this decision is based on the best available information in accordance with section 87E of the EEZ Act.
52. After considering all the information provided by NIWA, marine dumping consent EEZ400002 and taking into account the matters listed in sections 87D and 87E, the EPA considers that there is no reason to refuse the application by NIWA and that granting the marine dumping consent accords with the sustainable management purpose of the EEZ Act.
53. The EPA acknowledges that the application may generate adverse effects, but consider that these are negligible to minor, given the total area covered by the sacrificial moorings as discussed in paragraph 27. The moorings also have the potential to have a positive effect by providing a substrate for colonization by benthic invertebrates.

Duration of consent

54. Section 87H of the EEZ Act sets out the matters relevant to determining the duration of the consent. It states:

(1) "The duration of a marine discharge consent or a marine dumping consent is the term specified in the consent.

(2) However, the duration must not be more than 35 years.

(3) If no duration is specified in a consent, its duration is 5 years.

(4) When determining the duration of a consent, the Environmental Protection Authority must comply with sections 73(2)(b) and (c), 87D, and 87E."

55. The effects on the environment and existing interests including effects on human health have been discussed earlier in this decision. The EPA has determined that any adverse effects on the environment and existing interests of granting this marine dumping consent are likely to be negligible or minor.
56. Pursuant to section 73(2)(b) of the EEZ Act, in determining the duration of the consent, the EPA has taken into account the fact that NIWA have not sought a duration for this consent.
57. Pursuant to section 73(2)(c) of the EEZ Act, the EPA has considered the following legislative authorisation associated with the application:
 - Permitted Activity NIWAPA24
 - Marine dumping consent EEZ400002
58. The overriding consideration for the EPA is the sustainable management purpose of the EEZ Act and whether this authorisation has any direct impact on that, and if so, whether there would be an advantage in aligning the duration of the marine dumping consent with other authorisations.
59. The EPA considers there would be an advantage in aligning this marine dumping consent duration with the duration of the activity authorised in marine dumping consent EEZ400002. This Marine discharge consent expires 16 August 2017, being 18 months following the granting of the consent on 16 February 2016.

60. Having considered the requirements set out in 87H, and in light of the purpose of the EEZ Act, the EPA has determined that this marine dumping consent should expire on 16 August 2017.

End of decision

APPENDIX 1 – APPLICATION

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APPENDIX 2 – PERMITTED ACTIVITY FORM NIWAPA24

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Appendix 3 – Section 87D(2)(b) assessment

Information taken into account under section 59 of the EEZ Act	Assessment
<p>Section 59(2)(a)(i) any effects on the environment or existing interests of allowing the activity including cumulative effects</p>	<p>There are no harmful substances in the structures to be dumped.</p> <p>Any effects are likely to be limited to disturbance of the seabed in the immediate area around the sacrificial moorings. The dump site location is in a high energy environment and the footprint of seabed actually impacted is 0.6m² x 2.</p> <p>The Cook Strait region is subject to a range of activities including: oil and gas operations, ferry traffic, regulated disposal grounds, commercial and recreational fishing operations, and recreational boating.</p> <p>The NIWPA24 EEZ Act Permitted Activities notification identified 73 iwi, hapū, customary marine title group and/or protected customary rights group who are considered to have existing interests in the area.</p> <p>The EPA considers there are unlikely to be any effects on existing interests from this activity as the profile and weight of the railway wheels are unlikely to interfere with these interests' activities.</p> <p>There are unlikely to be any significant cumulative effects from the abandonment of the sacrificial moorings and the total footprint of ~1.2m² for dumping under this marine consent is less than 0.000001% of the greater Cook Strait seafloor area. Further, the abandonment of structures such as vessels and explosives in the authorised dumping site and the natural release of compounds from submarine fissures throughout New Zealand's EEZ contain orders of magnitude more of the compounds contained in the sacrificial moorings subject to this application.</p> <p>In NIWA's experience structures like the mooring weights may have a positive effect by providing settlement habitats for benthic invertebrates.</p>

Information taken into account under section 59 of the EEZ Act	Assessment
<p>Section 59(2)(a)(ii) any effects on the environment or existing interests of allowing the activity including effects that may occur in New Zealand or in the waters above or beyond the continental shelf beyond the outer limits of the exclusive economic zone</p>	<p>There are unlikely to be effects occurring in the waters above or beyond the continental shelf from these activities</p>
<p>Section 59(2)(b)(i) the effects on the environment or existing interests of other activities undertaken in the area covered by the application or in its vicinity including the effects of activities that are not regulated under this Act</p>	<p>Currently the Cook Strait region is subject to a range of activities including:</p> <p>oil and gas operations, ferry traffic, regulated disposal grounds, commercial and recreational fishing operations, and recreational boating.</p> <p>The effects of these activities are uncertain as there is no specific research or information currently publically available.</p>
<p>Section 59(2)(b)(ii) the effects on the environment or existing interests of other activities undertaken in the area covered by the application or in its vicinity including effects that may occur in New Zealand or in the waters or beyond the continental shelf beyond the outer limits of the exclusive economic zone</p>	<p>The EPA does not consider there are any other activities relevant to this matter.</p>

Information taken into account under section 59 of the EEZ Act	Assessment
<p>Section 59(2)(d) the importance of protecting the biological diversity and integrity of marine species, ecosystems and processes</p>	<p>Any adverse effects on the local species and ecosystem where the sacrificial moorings will be abandoned are unlikely to threaten biological diversity in the Cook Strait area, or the integrity of the existing species.</p> <p>Of the 7554 biological sample records in NIWA's archive (National Invertebrate Collection database) located in the area NIWA is proposing to conduct its research, 40-43° S and 173-176° E, only 141 samples were found within five km of the proposed PAM locations. Of those 141, only five have the potential to create a 'sensitive environment' according to the definitions of Schedule 6 of the Permitted Activity Regulations, and there are no species close to the abandonment location that indicate the presence of a sensitive environment. Details of the five species are in the permitted activity form.</p> <p>For the purpose of assessing the effects of the activities subject to this application the EPA considers the information provided in the Permitted Activities application regarding the description of the current area and surrounding environment, including any known sensitive environments, is sufficient to consider the effects of the activities against the matters in sections 59(2) of the EEZ Act</p> <p>The likely long-term impact will be the sacrificial moorings, which remain on the seabed. The footprint of each weight is ~0.6m². The combined footprint of the two moorings deployed beyond the territorial seas will have a benthic impact ~ 1.2m². Previous experience has suggested that sacrificial moorings may provide settlement habitat for benthic invertebrates.</p>
<p>Section 59(2)(e) the importance of protecting rare and vulnerable ecosystems and the habitats of threatened species</p>	<p>The assessment against s 59(2)(d) matters are relevant and applicable to s 59(2)(e) matters. Therefore, it is unlikely there will be any effects on rare and vulnerable ecosystems and the habitats of threatened species.</p>
<p>Section 59(2)(h) the nature and effect of other marine management regimes</p>	<p>There are unlikely to be any direct effects on other marine management regimes.</p>

Information taken into account under section 59 of the EEZ Act	Assessment
Section 59(2)(j) the extent to which imposing conditions under section 63 might avoid, remedy, or mitigate the adverse effects of the activity	The conditions listed in Schedule 1 are considered to be appropriate to avoid, remedy or mitigate the adverse effects of the activity.
Section 59(2)(k) relevant regulations	The relevant regulations covering permitted activities and dumping have been taken into account.
Section 59(2)(l) any other applicable law	No other laws are considered applicable to this application.
Section 59(2)(m) any other matter the EPA considers relevant and reasonably necessary to determine the application	There are no other matters considered to be directly relevant in determining this application.
Section 87D(2)(b)(ii) the effects on human health of the dumping of waste or other matter if consent is granted	<p>The iron in the sacrificial moorings will, over an extended period, gradually rust and leach into the water and is likely to be absorbed and ingested by marine life which, may in turn make its way into the human food chain.</p> <p>Metal leaching from other dumped or abandoned structures and the natural release of compounds from submarine fissures contribute significantly more than the total amount of iron and other compounds released from the sacrificial moorings.</p> <p>Therefore the abandonment of the sacrificial moorings are unlikely to have a measureable impact on human health.</p>

Information taken into account under section 59 of the EEZ Act	Assessment
<p>Section 87D(2)(b)(iii) any alternative methods of disposal that could be used</p>	<p>The EPA considers that alternatives to disposal at sea, such as landfill, do not apply in these circumstances and the only practical alternative to the abandonment of a structure already in place on the seabed is retrieval.</p> <p>NIWA has not proposed any alternatives to abandoning the sacrificial moorings, citing “The Mooring ballast weight cannot be recovered”. The EPA considers that there are alternative methods to abandoning them, such as attaching lanyards from the weights to the buoys or using remotely operated vehicles (ROVs) to retrieve the moorings however, these alternatives are likely to impose unreasonable costs on NIWA. Further, lanyards may become entangled around seafloor formations, such as rock outcrops, and may increase the risk of the monitoring equipment failing to return to the surface. This would negate the purpose of the research and result in the loss of information on migratory whales around New Zealand.</p> <p>Therefore, given the scale and nature of any effects, the EPA considers that the abandonment of recycled railway wheels is appropriate under the circumstances.</p>
<p>Section 87D(2)(b)(iv) whether there are practical opportunities to reuse, recycle, or treat the waste</p>	<p>There is no practical opportunity to recover the railway wheels once they are deployed from the research vessel.</p>