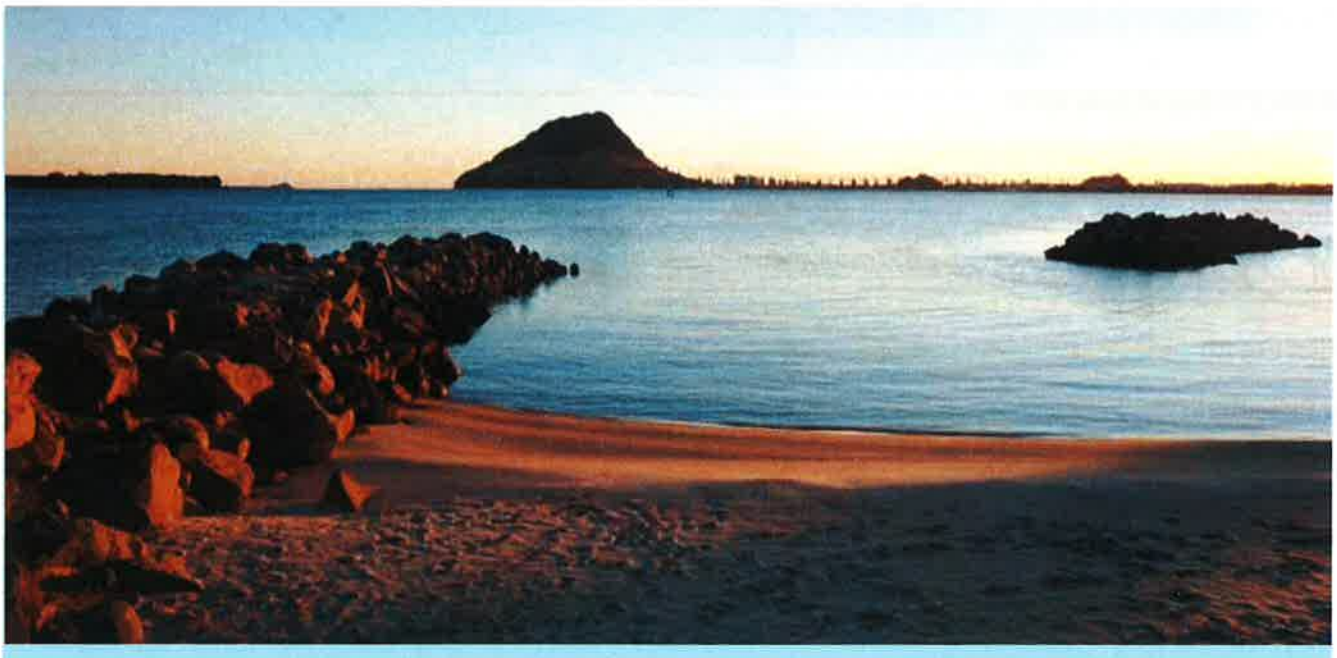
Environmental Protection Authority
Te Mana Rauhī Taiao

Application Ref: EEZ400003

DECISION ON MARINE DUMPING CONSENT APPLICATION FOR MARINE SCIENTIFIC RESEARCH

GNS Science

Application to dump structures associated with Permitted Activity GNSPA04



New Zealand Government

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MARINE DUMPING CONSENT EEZ400003

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 GNS Science to dump structures associated with marine scientific research off the east coast of the North Island 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 persons who lodged appeals withdraw their appeals.

This marine dumping consent expires on 31 December 2021.

Dated this 21st day of June 2016

Dr Allan 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 dumping consent authorises the dumping activities applied for in application EEZ 400003 subject to the following conditions:

1. This marine dumping consent authorises the dumping of the following structures placed for the purpose of marine scientific research at the following locations:

Location point #	Latitude	Longitude	Description of Structure	Dumping schedule	Max # dumped
KU15-1	-38.90720	178.98370	4 bar weight	Each June from 2016 to 2021	6
KU15-2	-38.84680	178.87330	4 bar weight	Each June from 2016 to 2021	6
KU15-3	-38.89180	178.75530	4 bar weight	Each June from 2016 to 2021	6
KU15-4	-38.70810	178.66110	4 bar weight	Each June from 2016 to 2021	6
KU15-5	-38.72150	178.89370	4 bar weight	Each June from 2016 to 2021	6
TX15-1	-38.75550	179.00010	2 cylinder weight	June 2016	1
TX16-1	-39.56166	178.88552	2 cylinder weight	June 2018; 2019; 2020	3
TX16-2	-39.51490	178.64734	2 cylinder weight	June 2018; 2019; 2020	3
TX16-3	-39.47855	178.53995	2 cylinder weight	June 2018; 2019; 2020	3
TX16-4	-39.53539	178.73262	2 cylinder weight	June 2018; 2019; 2020	3
SGPS-1A	-38.69740	178.66090	4 bar weight	June 2018	1
SGPS-1B	-38.71230	178.65020	4 bar weight	June 2018	1
SGPS-1C	-38.71260	178.67100	4 bar weight	June 2018	1

2. This consent expires 31 December 2021.

3. The consent holder must ensure that a copy of this marine dumping consent and any variations is available for inspection at GNS Science, Avalon, Lower Hutt, New Zealand until the expiry of the consent.

4. The physical nature, quality and quantity of material dumped must be in accordance with the information provided in permitted activity application GNSPA04, 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 EEZ400003.

END OF MARINE DUMPING CONSENT DOCUMENT

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DECISION ON MARINE DUMPING CONSENT APPLICATION

DEFINTIONS

Terms used in this decision have the following meanings:

Expiration date	The date by which the structures placed for marine scientific research and subject to this consent must be abandoned
GNS	GNS Science
EPA	Environmental Protection Authority
EEZ	New Zealand's Exclusive Economic Zone
Permitted Activities Regulations	Exclusive Economic Zone and Continental Shelf (Environmental Effects—Permitted Activities) Regulations 2013
Cold seep	A cold seep (sometimes called a cold vent) is an area of the ocean floor where hydrogen sulfide, methane, and other hydrocarbon-rich fluid seepage occurs, often in the form of a brine pool.

Background

1. The Environmental Protection Authority (EPA) is the consent authority for activities within the Exclusive Economic Zone (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 Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZ Act), is to decide applications for marine dumping consents.

2. Regulation 5 of the Exclusive Economic Zone and Continental Shelf (Environmental Effects – Permitted Activities) Regulations 2013 (Permitted Activity Regulations) provides for Marine Scientific Research as a permitted activity subject to compliance with conditions. Marine Scientific Research is defined under regulation 3 of the Permitted Activity Regulations 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."*

The application

3. GNS is currently undertaking marine scientific research as a permitted activity. See GNSPA04 Permitted Activity (http://www.epa.govt.nz/Publications/GNSPA04_Form1_web.pdf) for further details.

4. On 30 May 2016, GNS lodged an application for a marine dumping consent to dump structures in the EEZ as part of their work monitoring the slow deformation of the Hikurangi trench.

5. Scientific instruments have, or will be deployed at the locations specified in Schedule 1. The instruments are retrieved to recover the memory data by remotely triggering their releases, leaving behind their

sacrificial moorings. Some instruments are repeatedly retrieved and redeployed throughout the research period.

6. The seafloor instruments at sites KU15-1 to KU15-5 were deployed in 2015 before the dumping and discharge regulations were transferred from Maritime New Zealand. Instruments at sites KU15-1 to KU15-5 were deployed in water depths between 1000m and 3500m in June 2015 and will be recovered and redeployed each year until 2021, (funding permitting). At each of these sites up to six sacrificial moorings will be abandoned over an area the size of a rugby field.

7. The instrument at site TX15-1 was deployed at a depth of over 3500m at the same time as sites KU15-1 to 5 and will be retrieved in June 2016 abandoning the sacrificial mooring on the seabed.

8. The acoustic GPS seafloor instruments SGPS-1A –C were deployed in water depths of around 1000m in 2015 and will remain undisturbed before being recovered in 2018, leaving behind one sacrificial mooring at each site.

9. The instruments at sites TX16-1 to TX16-4 will be deployed offshore Mahia in 2017 at water depths between 2250 – 3250m and will be redeployed each year for three years. (a total of 12 sacrificial moorings).

10. When GNS recovers the instrument by remotely releasing it from the sacrificial mooring the instrument is positively buoyant and floats to the surface. The sacrificial moorings remain on the seafloor and will rust over a few decades but are likely to be buried by mud much sooner.

11. The sacrificial moorings vary in design at each site depending on the instrument, either comprising four mild steel bars, up to 120cm long and bolted in each corner, or consisting of two cylinders each 25cm long and 12cm in diameter.

12. The footprint of the 4–bar sacrificial mooring is about 0.5m². The other sacrificial mooring with two small steel cylinders has a footprint of less than 0.2 m². The profile of the sacrificial moorings are less than 0.12m tall and weigh 40 to 60 kg.

13. As part of their GNSPA04 Permitted Activities application, GNS has identified and notified 61 iwi, hapu, customary marine title group, and protected customary rights group whose existing interests are considered to be potentially affected by the activity. In addition, a notice to Mariners was sent to LINZ in 2015 before the first series of deployments and will continue to be lodged before each deployment. Current sites are outside permits issued under the Crown Minerals Act.

14. On 13 June 2016 the EPA did not return the application as incomplete under section 41 of the EEZ Act.

Activity subject to approval

15. 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 Exclusive Economic Zone and Continental Shelf (Environmental Effects – Discharge and Dumping) Regulations 2015 (D&D Regulations).

Statutory framework

16. Section 10(1) of the EEZ Act states:

"The purpose of this Act is to promote the sustainable management[1] 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."

17. Section 20 of the EEZ Act restricts certain activities from being undertaken in the EEZ or in, or on, the continental shelf unless the activity is a permitted activity or authorised by a marine consent or sections 21, 22 or 23. GNS is currently undertaking the marine scientific research 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, GNS must apply for a marine dumping consent in order to be compliant under section 20G of the EEZ Act.
18. 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.

Best available information and requests for further information

19. In accordance with section 87E of the EEZ Act, the EPA must:
    i. make full use of its powers to request information from the applicant, obtain advice, and commission a review or a report; and
    ii. base decisions on the best available information; and
    iii. take into account any uncertainty or inadequacy in the information available.
20. 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.
21. The information supplied by GNS in the marine dumping consent application and in the GNSPA04 EEZ Act Permitted Activities application is sufficient for the EPA to be confident that seeking more information about the dumping locations and the effect the sacrificial moorings would have on the environment in these locations would be unlikely to yield significantly different findings.
22. As such, the EPA did not consider it necessary to request further information from the applicant,[2] or to commission independent reviews or advice.[3]

Hearing on the application

23. 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. A hearing was not considered necessary or desirable for this application.

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[1] Section 10 of the EEZ Act. "Sustainable management" is defined in section 10(2).
[2] Section 42 of the EEZ Act
[3] Section 44 of the EEZ Act

Decision-making criteria

24. 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).

Assessment

25. The EPA has carried out an assessment of the application in which the effects of all activities included in this application were considered in relation to all of the relevant matters listed under sections 59 and 87D. A full list of section 59 criteria and the EPA's consideration of each of these matters can be found in Appendix 1. The following section on the assessment only discusses matters that the EPA considers warrant discussion in relation to the application.

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.

27. 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.*"

28. The key potential effects of the dumping activities proposed by GNS on the environment and existing interests are discussed below.

Benthic communities

29. Previous underwater observations conducted by GNS in 2010 and 2013 show the environment in the region of the Hikurangi trench to be mudstone colonised by seaweed, tubeworms and gastropods. Where it has been observed, the sea bed appears uniform and in places covered with sandstone and mudstone sediment wash from the Waipaoa River and other smaller rivers in the area.

30. The mild steel sacrificial moorings will rust quickly in salt water and leach iron into the surrounding sediments (whether covered by sand and mud or not). Iron added to the seabed sediments would not be too dissimilar from the iron-rich sediment wash containing weathered greywacke. In total there are up to 46 sacrificial moorings, however rusting of mild steel, (a low carbon steel that is less hard than higher grade steel), is rapid in the presence of salt water, so by the time the last sacrificial moorings are abandoned in 2021 it is likely that the first sacrificial moorings left behind in 2016 will have already been partly corroded or buried.

31. The latitude and longitude of each dumping site is set out in condition 1. Most of these sites are at depths greater than 1000m.

32. 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.

33. Their placement on the seabed will potentially kill the benthic community in each location up to an area of 0.5m². However, previous NIWA surveying suggest that the sacrificial moorings may provide settlement habitat for benthic invertebrates thereby countering the initial impact on the seabed.

34. 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 under or either side of the sacrificial moorings.

35. 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)(d)[4] and (e)[5] of the EEZ Act.

36. We note that cold seeps have been identified by an international expedition (RENEWZ) on New Zealand's Hikurangi Margin, an area that extends from East Cape to Cook Strait. Cold seeps are places on the seafloor where chemosynthetic bacteria use the methane and hydrogen sulfide present in the seep water as an energy source. Often forming bacterial mats on the seafloor, the bacteria acts as the base of the food chain for an extensive and unique collection of organisms.

37. From the research done by RENEWZ and further work by GNS and NIWA (Baco er al., 2010 and Bowden et al., 2013), 119 taxa have been identified in the known cold seeps.

38. GNS propose to mitigate the impact of their operations by locating the instruments and sacrificial moorings away from known cold seeps. The ship's echo-sounder will be used to detect the vent plumes from any unplotted cold seeps in order to prevent instruments and sacrificial moorings being placed on these areas.

39. The second mitigation measure is in the design of the sacifical moorings to limit, as much as practicable, their impact on the seabed. The footprint of each sacrificial mooring will be no more than 0.5m² and the total footprint of all the sacrificial moorings is approximately 19m² across the study area of 10,000km.

[4] *the importance of protecting the biological diversity and integrity of marine species, ecosystems, and processes*

[5] *the importance of protecting rare and vulnerable ecosystems and the habitats of threatened species*

40. The locations of the sacrificial moorings are shown in Figure 1 below.

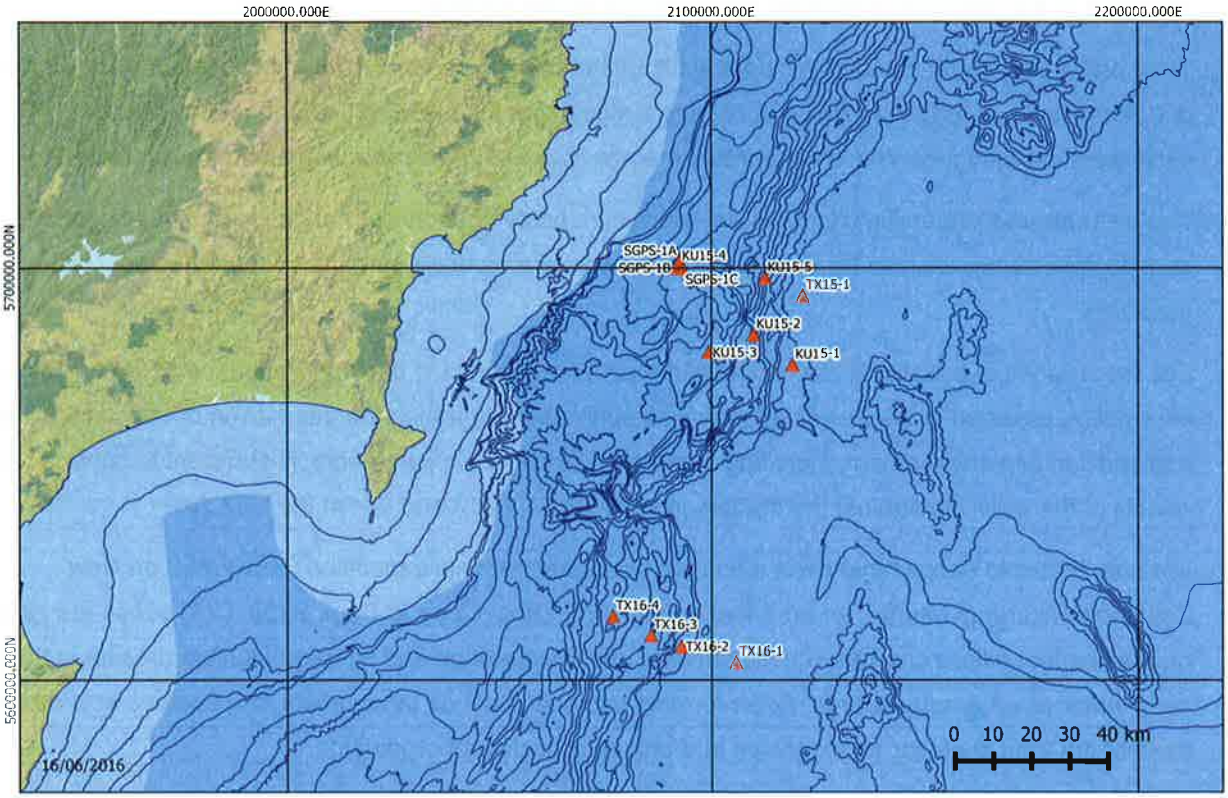

Figure 1. Proposed location of GNS instruments to be anchored with sacrifical moorings

41. There are unlikely to be any significant cumulative effects from the abandonment of up to 46 sacrificial moorings given the natural release of compounds from submarine fissures throughout New Zealand's EEZ contain orders of magnitude more of the compounds contained than in the sacrificial moorings subject to this application.

42. Therefore, the EPA considers that condition 1, which confines the dumping to specific locations, and condition 4, which requires the physical nature, quality and quantity of material dumped to be in accordance with information provided by GNS, and GNS's obligations under the Permitted Activities Regulations, will operate to minimise adverse effects of the dumping on the environment.

Existing interests

43. The EPA considers the effects of the dumping to be less than minor or negligible on fishing interests, commercial, or recreational mariners, those being the likely existing interests at the dumping locations.

44. GNS has planned the site locations to avoid trawling areas. The profile of the sacrificial moorings are round and less than 0.12m tall which makes them unlikely to snag or have any effect on fishing equipment if trawling or other fishing activity does take place in the site locations.

45. GNS will send Land Information New Zealand (LINZ) a Notice to Mariners to provide mariners with a permanent record of the location of the sacrificial moorings.

46. The effect of the GNS research vessel (likely to be R/V Tangaroa), on shipping is likely to be no greater than that of any other ship traversing the waters of the EEZ.

47. The GNSPA04 EEZ Act Permitted Activities application has identified 61 iwi, hapu, and customary marine title group and/or protected customary rights group whose existing interests are considered to be

potentially affected by the activity. As part of the permitted activity application, these groups will be notified at least 25 days before GNS undertakes the deployment of the moorings, providing them with an opportunity to comment on the activities.

48. 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 GNS and GNS's obligations under the Permitted Activities Regulations will operate to mitigate any potential adverse effects of the dumping on existing interests.

Human health

49. 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.

50. 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 and therefore are unlikely to have a measureable impact on human health.

Alternative methods of disposal

51. Section 87D(2)(b)(iii) requires the EPA to take into account alternative methods of disposal that could be used. The only alternative available to GNS to leaving the sacrificial moorings on the seabed is to retrieve and reuse or dispose of them onshore or within coastal waters.

52. GNS has considered alternatives to abandoning the sacrificial moorings. Using dissolvable sacrificial moorings is not an option as they dissolve within 6 months. Attaching lanyards from the weights to buoys is not practicable in water depths greater than 1000m. Further, lanyards may become entangled around seafloor formations, such as rock outcrops, and may increase the risk of the scientific equipment failing to return to the surface. This would negate the purpose of the research and result in the loss of knowledge about earth deformation that occurs offshore East Coast. This area is unique and no other area can be monitored to undertake this research.

53. Therefore, the EPA considers that there are no viable alternatives and the abandonment of the sacrificial moorings is appropriate for this application.

Practical opportunities to reuse, recycle, or treat the waste

54. Section 87D(2)(b)(iv) requires the EPA to take into account whether there are practical opportunities to reuse, recycle or treat the waste.

55. There are no practical opportunities to reuse, recycle or treat the sacrificial moorings as this would require their retrieval from the seabed. The effects of which are discussed in the paragraphs above.

Grounds for refusal

56. Section 87F(2) states:

(2) "However, the EPA must refuse an application for a marine dumping consent if—

(a) the EPA 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 EPA 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."

57. The EPA considers that:

(a) The sacrificial moorings cannot be reused, recycled or treated without imposing costs on GNS that are unreasonable under the circumstances, and

(b) The sacrificial moorings are described in a such a way that the effects of dumping them can be assessed, and

(c) Abandoning the sacrificial moorings is an appropriate approach to the disposal under the circumstance.

Conclusion

58. The EPA considers the sacrificial moorings are described in a such a way that the effects of dumping them can be assessed.

59. The EPA considers the sacrificial moorings cannot be reused, recycled or treated without imposing costs on GNS that are unreasonable given the scale and significance of the circumstances, and that abonding the the sacrificial moorings is an appropriate approach to their disposal.

60. The EPA is satisfied that this decision is based on the best available information in accordance with section 87E of the EEZ Act.

61. After considering all the information provided by GNS 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 GNS and that granting the marine dumping consent accords with the sustainable management purpose of the EEZ Act.

62. We acknowledge that the application may generate adverse effects, but consider that these are negligible to minor, given that the total area covered by the sacrificial moorings is 19m². The moorings also have the potential to provide a substrate for colonization by benthic invertebrates.

63. The application for marine dumping consent by GNS to dump sacrificial moorings at the locations described in the table in Schedule 1 is **GRANTED,** subject to conditions listed in Schedule 1.

Duration of consent

64. 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 EPA must comply with sections 73(2)(b) and (c), 87D, and 87E."

65. 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 the likely effects on the environment and existing interests of granting this marine dumping consent will be negligible to minor.

66. Pursuant to section 73(2)(b) of the EEZ Act, in determining the duration of the consent, the EPA has taken into account the duration sought by GNS.

67. Pursuant to section 73(2)(c) of the EEZ Act, the EPA has considered the legislative authorisation Permitted Activity GNSPA04 associated with the application.

68. The overriding consideration for the EPA is the sustainable management purpose of the EEZ Act and whether any of these authorities have any direct impact on that, and if so, whether there would be an advantage in aligning the duration of the marine dumping consent with that of one of the other authorisations.

69. The EPA considers there would be an advantage in aligning this marine dumping consent duration with the duration of the activity signalled in the permitted activity form GNSPA04. In their Permitted activities: Pre-activity notice GNS indicate that their activities are likely to continue to June 2021 depending on future funding.

70. Having considered the requirements set out in 87H, and in light of the purpose of the EEZ Act, the EPA have determined the marine dumping consent should expire on 31 December 2021.

END

Appendix 1: Assessment of effects

EEZ Act requirement	EPA Assessment
Secrion 87D(2)(b)(ii)	No effects on human health can be identified, (small amount of rust in water)
Section 87D(2)(b)(iii)	No alternatives to disposal can be identified, and (have explained alternative methods are unsuitable)
Section 87D(2)(b)(iv)	The sacrificial moorings cannot be reused, recycled or treated, (see comment on 2, communication from NIWA suggests sacrificial moorings may provide settlement habitat for benthic invertebrates).
Section 59(2)(a)(i) any effects on the environment or existing interests of allowing the activity including cumulative effects	Any effects are likely to be limited to disturbance of the seabed in the immediate area around the sacrificial moorings. The total footprint of seabed actually impacted by the sacrificial moorings is 19.1m² over the deployment period 2015-2021.
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	The dump site locations are all located within the EEZ, so there are no effects occurring in the waters above or beyond the continental shelf.
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	The size of the sacrificial moorings are such that there are unlikely to be effects on existing interests on the seabed. GNS will send LINZ a Notice to Mariners. The effect of the GNS research vessel on shipping in and around Poverty Bay is likely to be no greater than that of any other ship traversing the waters of the EEZ.
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	There is likely to be disturbance of the seabed in the immediate area where the sacrificial moorings is placed. The disturbance is unlikely to have any significant impact on marine life as any effects on benthic species are likely to be limited to the immediate area surrounding the sacrificial moorings, an area of up to 0.5m² at each site.
Section 59(2)(d) the importance of protecting the biological diversity and integrity of marine species, ecosystems and processes	Any adverse effects on the local species and ecosystem in the 13 locations where the sacrificial moorings will be abandoned is unlikely to threaten biological diversity in the area as each footprint is made by steel bars up to 12 cm wide, so unlikely to completely smother an entire benthic community. The only long-term impact will be the sacrificial moorings, which remain on the seabed. The total footprint of seabed actually impacted by the sacrificial moorings is 19.1m² over the deployment period 2015-2021. Previous experience has suggested that sacrificial moorings may provide settlement habitat for benthic invertebrates.
Section 59(2)(e) the importance of protecting rare and vulnerable ecosystems and the habitats of threatened species	From known sources, there are no species close to the deployment locations to indicate the presence of a sensitive environment. GNS has ensured that deployments are not situated near cold seeps which can have diverse communities. If observations made during deployments discover new cold seeps, then GNS will reposition the sacrificial moorings.
Section 59(2)(h) the nature and effect of other marine management regimes	There are unlikely to be any direct effects on other marine management regimes.
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 considered to be applicable to avoid, remedy or mitigate the adverse effects of the activity are listed in Schedule 1.
Section 59(2)(k) relevant regulations	The relevant regulations covering permitted activities have been taken into account.

Section 59(2)(l) any other applicable law	The operation of the vessel used to deploy the instruments and sacrificial moorings will be governed by the appropriate law covering the operation of vessels within New Zealand waters or in the waters above or beyond the continental shelf beyond the outer limits of the exclusive economic zone.
Section 59(2)(m) any other matter the EPA considers relevant and reasonably necessary to determine the application	The EPA has considered there are no other matters to be considered in determining the application.