BEFORE AN EXPERT PANEL **FTAA-2510-1118**
SOUTHERN SEAWALL RENEWAL PROJECT

Under the **FAST-TRACK APPROVALS ACT 2024**

In the matter of an application by Wellington International Airport Limited for approvals for the Southern Seawall Renewal Project

By **WELLINGTON INTERNATIONAL AIRPORT LIMITED**

Applicant

STATEMENT OF EVIDENCE OF DR. LAURELINE MEYNIER (MARINE ECOLOGY) ON BEHALF OF WELLINGTON INTERNATIONAL AIRPORT LIMITED

17 March 2026

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INTRODUCTION

1. My full name is **Laureline Meynier**.

2. My evidence is given on behalf of Wellington International Airport (**WIAL**) in respect of WIAL's proposed Southern Seawall Renewal project (**Project**) in response to comments made under section 53 of the Fast-track Approvals Act 2024 (**Act**) by:

   (a) Wellington Regional Council (**GWRC**);

   (b) Department of Conservation (**DOC**);

3. I prepared the Bioresearches – Southern Seawall Renewal Project Marine Ecological Impact Assessment, dated 21 July 2025 (**Marine Ecology Assessment**) and included in Part B of the application for the Project, and the Marine Mammal Management Plan, dated 13 October 2025 and included in Part G of the application. My experience as a marine ecologist is set out in Appendix 8.1 of my technical assessment.[1] Below are more details on my marine mammal experience.

4. I hold a Bachelor of Science in Biology (1999, Université de Brest, France), a MSc in Zoology (2004, University of Aberdeen, United Kingdom), and a PhD in Zoology (2009, Massey University, New Zealand).

5. My Master's research focused on the feeding ecology of common dolphins in the Bay of Biscay, France between 2000 and 2003. My PhD research examined the feeding ecology of New Zealand sea lions at the subantarctic Auckland Islands, New Zealand, between 2004 and 2008. I subsequently undertook a postdoctoral research project funded by the New Zealand Science and Technology Postdoctoral Fellowship, investigating the foraging ecology of New Zealand fur seals in the South Island, New Zealand, between 2010 and 2014.

6. I have authored or co-authored 25 peer-reviewed scientific publications on marine mammal ecology. I have worked in marine mammal research for approximately 20 years through my academic studies and professional positions. In New Zealand, my work has included research on the diet and foraging ecology of several cetacean species, fur seals, and sea lions, with data collected in part through field expeditions.

[1] https://www.fasttrack.govt.nz/__data/assets/pdf_file/0019/14428/B.11-Bioresearches-Marine-Ecological-Impact-Assessment.pdf.

7. Since joining Bioresearches, I have been involved in multiple coastal infrastructure and construction projects, providing assessments of underwater noise effects on marine mammals.

8. I am also currently involved in the National Wildlife Oil Spill Response programme managed by Massey University's Wildbase, where I contribute as a marine mammal expert.

Code of conduct

9. I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2023 and have complied with it in preparing this evidence. In particular, unless I state otherwise, the issues addressed in my evidence are within my area of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

GWRC SECTION 53 COMMENTS

Impacts on subtidal habitats

GWRC comments

10. The placement of the new seawall will cause the loss of existing subtidal habitats, including kelp beds and rocky reefs. As explained in the Marine Ecology Assessment, I consider that the loss to these habitats will be remedied through natural colonisation within two to three years.

11. GWRC express reservations about whether colonisation of the Cubipods by benthic species constitutes remediation for the permanent loss of kelp beds and subtidal rocky reef habitats within the seawall footprint, as the habitats are not equivalent.

12. GWRC considers that if colonisation of the new seawall with benthic species fails, the remaining adverse effects on benthic habitats will be more than minor. Policy P38 of the Natural Resources Plan would then require biodiversity offsetting or compensation, but this would be too late once consent is granted.

13. While WIAL's proposed biota growth survey would monitor colonisation, GWRC considers the conditions do not adequately:

(a) ensure that the outcomes that are being monitored are prescribed and long-term outcomes for habitat replacement are achieved;

(b) set out how the results of monitoring will determine whether the proposed mitigation has been successful; and

(c) specify what steps must be taken if mitigation is unsuccessful.

14. GWRC considers that the effects should be managed through a subtidal monitoring plan that details:

(a) the purpose of the monitoring;

(b) the method for undertaking monitoring;

(c) timeframes for achieving the outcomes that are being monitored; and

(d) actions to be undertaken in circumstances where monitoring demonstrates that the outcomes are not being achieved.

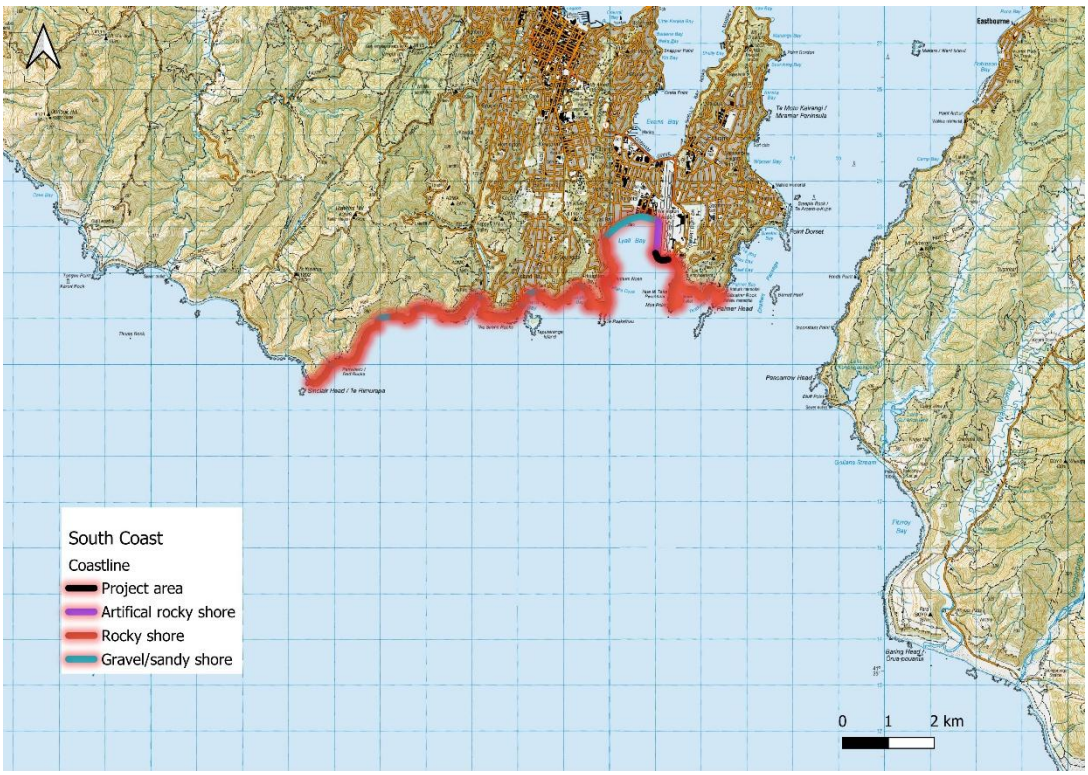
Scale of loss of existing subtidal habitats

15. The Project will result in a permanent loss of approximately 3,934 m² of rocky reef habitat, including areas that support kelp beds. GWRC has described it is a "*meaningful ecological loss in the South Coast context*".

16. I disagree with that statement. In my opinion, the scale of the habitat loss should be considered in the context of the broader South Coast rocky reef environment, in particular:

(a) the rocky reef bordering the actual seawall extends offshore (Figure 17 of the Marine Ecology Assessment). As a result, the proportion of the rocky platform directly affected by the proposed works represents less than 10% of the rocky reef platform immediately in front of the seawall; and

(b) the South Coast from Sinclair Head (red rocks) to Palmer Head (entrance of Wellington Harbour) extends approximately 17,500 m, of which approximately 14,250 m is rocky shoreline habitat. The Project will affect a relatively small section of this coastline, with a 358 m stretch of rocky reef fringe being removed. On this basis, the coastline affected by the Project represents approximately 2.5% of the rocky shoreline habitat along the South Coast.



17. The habitat loss should therefore be considered localised to the Project footprint, rather than representing a significant loss of rocky reef habitat at the scale of the wider South Coast. Rocky reef habitat is widespread and continuous along much of the Wellington South Coast, and the habitat affected by the Project is not unique or functionally distinct from adjacent rocky reef areas.

Ecological succession and colonisation of the Cubipods

18. The proposed seawall constructed using Cubipods is expected to be naturally colonised by species currently inhabiting adjacent rocky reef areas. Colonisation of the Cubipods is highly likely, given the environmental conditions along the Wellington South Coast, which are characterised by well-oxygenated waters and strong wave-driven mixing that facilitates the dispersal of planktonic larvae and propagules.

19. Ecological succession (and colonisation) on newly available hard substrates in marine environments is well documented. Initial colonisation typically occurs within the first one-to-three months and is dominated by microbial biofilms and early fouling organisms (e.g., Strain et al. 2017).[2] Crustose coralline algae commonly follow and may require several months to over a

[2] Strain et al 2017. Eco-engineering urban infrastructure for marine and coastal biodiversity: which interventions have the greatest ecological benefit? Journal of Applied Ecology. 1- 16.

year to establish substantial cover. Macroalgae subsequently recruit as propagules settle and attach to increasingly suitable surfaces. As algal cover develops, additional sessile organisms such as bryozoans and sponges colonise the substrate, increasing habitat complexity from a relatively two-dimensional surface to a structurally complex three-dimensional habitat.

20. The development of macroalgal assemblages also facilitates the establishment of grazing invertebrates such as pāua and other molluscs, as well as associated benthic fish species. Ecological succession on artificial hard substrates typically progresses over several years. Studies on the kelp *Ecklonia radiata* have shown that individuals can reach maturity within approximately one year under suitable environmental conditions (Wernberg et al. 2019).[3]

21. Consequently, the ecological effect of the Project is best characterised as a temporary loss of established biogenic habitat within the immediate footprint, followed by natural ecological succession and habitat development on replacement hard substrate, rather than the permanent removal of hard coastal habitat from the South Coast.

Habitat suitability of Cubipod structures

22. I agree with GWRC's statement that the Cubipods do not represent a strict like-for-like replacement for the existing natural rocky substrate, as natural rock surfaces typically contain greater fine-scale irregularities and surface asperities than manufactured concrete units. These natural surface features can support a greater diversity of microhabitats for sessile organisms.

23. However, the Cubipod structure will provide a different type of habitat complexity. In particular, the arrangement of Cubipods creates numerous interstitial spaces and cavities between units. These voids can provide shelter for mobile fauna, including species such as pāua and crayfish, which use crevices for refuge.

24. The rocky reef along the South Coast is subject to relatively high fishing pressure due to its accessibility in shallow coastal waters. In this context, the complex network of cavities created by the placement of Cubipods in

[3] Wernberg et al. 2019. Biology and ecology of the globally and significant kelp Ecklonia radiata. Oceangraphy and Marine biology, an annual review 265.

multiple layers may provide refuge habitat for mobile species that are otherwise exposed on natural reef surfaces.

25. Observations from the existing seawall indicate that artificial rock structures in this location already provide shelter for species such as crayfish. Accordingly, while some loss of natural substrate surface complexity will occur, the Cubipod structures are expected to provide alternative refuge habitat for mobile reef-associated species, including species of commercial and recreational importance.

Conclusion on loss of subtidal habitats

26. Based on my assessment above, I consider the adverse effects on benthic habitats will be less than minor with time. As stated in the Marine Ecology Assessment, I expect the new seawall to be colonised by benthic species originally present in the area within three years after the completion of the construction.[4] I am confident in that expectation, and do not consider it is necessary for the conditions or a management plan to specifically require WIAL to implement some (unspecified) form of alternative compensation if that recolonisation does not eventuate.

27. That said, I am comfortable with GWRC's recommendation that a subtidal habitat monitoring plan be prepared and implemented in order to detail the monitoring study post construction. This will effectively confirm, in advance of construction starting, the detail of the monitoring that WIAL will undertake (noting that monitoring is already required by the conditions). The monitoring will detail the biota measures, frequency of surveys and location of transects, as well as reporting and assessment of target completion.

28. The original proposal was for one survey to occur two years post-construction. Having reflected on this matter, I consider it would be preferable to carry out several surveys over three years, to document the rate of colonisation and succession of species on the Cubipods. A pre-construction transect survey will document the percentage of cover, diversity, and abundance of biota at the toe of the existing seawall. Within several weeks after construction of the seawall is completed, a transect survey will be undertaken to establish a post-construction baseline (time zero). Follow-up transect surveys will then be conducted at 6 months, 1

[4] Bioresearches *Marine Ecological Impact Assessment* (21 July 2025) at 5.1.2.

year, 2 years, and 3 years post-construction. I understand that the conditions proposed by WIAL are being updated accordingly.

Uncertainty about effects on existing pāua and rock lobster populations

GWRC comments

29. The existing seawall supports pāua and rock lobster, both keystone species essential for marine biodiversity and ecosystem health.

30. GWRC considers that WIAL has not proposed measures to manage the loss of pāua and rock lobster during construction, and that there is a high degree of uncertainty about the impacts on these populations within the Project area.

31. GWRC requests that the Panel:

    (a) ask WIAL to provide evidence quantifying the loss of these species from the project area and explain the likelihood of recruitment from adjacent areas and the pelagic larvae pool to better understand potential impacts; and

    (b) if uncertainty about the effects remain, impose conditions requiring WIAL to translocate pāua and rock lobster from the existing seawall to a suitable alternative site within the South Coast before commencing construction.

Loss of pāua and rock lobster

32. In contrast to the comments from GWRC, I consider that there is limited uncertainty regarding the effects of the Project on pāua and rock lobster within the Project footprint.

33. The existing rocky reef habitat within the footprint will be buried during construction and replaced with a new concrete block structure. As a result, pāua and rock lobster present within the footprint at the time of construction will be lost during the works. Video footage from the subtidal survey in April 2024 showed that rock lobsters occurring in the seawall were mostly juveniles. However, pāua and rock lobster inhabiting rocky reef habitat adjacent to the Project footprint are unlikely to be significantly affected, as the disturbance is spatially confined to the construction area.

34. Over time, the newly created hard substrate is expected to be colonised as the habitat matures. Both pāua and rock lobster are broadcast spawners with pelagic larval stages capable of dispersing over considerable distances. Once suitable post-construction habitat conditions develop, recruitment from the surrounding population is expected to occur.

35. The primary limiting factor for colonisation is therefore not larval supply, but the time required for the new substrate to condition and develop the biological and structural characteristics necessary to support settlement and persistence of these species.

Proposed relocation of pāua and rock lobster

36. Relocation of pāua and rock lobster was not proposed in the Marine Ecology Assessment because it was considered that there is no clear ecological basis, and uncertain ecological benefit at a population level, for undertaking such an action. Relocation should not be treated as a symbolic mitigation measure; rather, it should only be adopted where there is a sound basis to conclude that it will increase survival or reduce ecological effects.

37. Several factors were considered in evaluating whether translocation would be appropriate in this case:

    (a) Along the Wellington South Coast, the rock lobster population is generally considered to be relatively stable despite high recreational fishing pressure. In contrast, pāua are regularly poached, often involving the removal of undersized individuals, creating uncertainty regarding the current status of local pāua populations.

    (b) Outside exceptional circumstances, such as following the Kaikōura earthquake, translocation of pāua has generally been undertaken for fishery management purposes at a local scale where populations have been depleted. Such programmes typically involve transferring individuals from “donor” reef sites with high densities to “receiver” reef sites where populations are locally depleted.

    (c) A key requirement of any translocation programme is the identification of suitable recipient habitat capable of supporting the relocated individuals. Suitable habitat must provide adequate food resources – such as macroalgae and crustose coralline algae in the case of pāua –

and must be capable of supporting additional individuals without adversely affecting the existing population.

(d) The reef areas surrounding the proposed seawall are not considered ideal locations for translocation. These rocky reef habitats already support local populations that may be below carrying capacity due to fishing pressure and poaching. However, introducing additional individuals into these areas would not necessarily increase survival.

38. Considering these factors, there is a high degree of uncertainty regarding the survival of translocated individuals along the surrounding coastline.

39. While the loss of individuals within the Project footprint is acknowledged, the new seawall is expected to provide refuge habitat for both species from recreational fishing pressure, similar to the existing seawall. Translocation is therefore unlikely to provide a measurable ecological benefit beyond that expected through natural recolonisation processes. I therefore disagree with the addition of Condition ECO.79 as proposed by GWRC.

40. That said, I acknowledge that pāua and lobster have particular value for mana whenua, as noted by Te Rūnanga o Toa Rangatira in their section 53 comments. While harvesting and/or translocation of pāua and lobster is not necessary in ecological terms, I am not necessarily opposed to it occurring for cultural purposes (subject to consideration of health and safety issues).

Amendments to the Marine Mammal Management Plan

GWRC comments

41. GWRC considers that the Marine Mammal Management Plan (**MMMP**) should be amended as follows to reflect good management practice:

(a) include a soft-start period of at least 20 minutes, as this is widely regarded as the minimum good practice;[5] and

(b) where Passive Acoustic Monitoring (**PAM**) is not used, require marine mammal observers (**MMOs**) to listen for marine mammals and use this as evidence to justify an operational shutdown.

[5] Te Runanga o Toa Rangatira seek a similar ‘soft start’ period in their section 53 comments.

Response

42. I have addressed these matters in my response to the DOC comments on the MMMP and noise effects on marine mammals.

DOC SECTION 53 COMMENTS

43. DOC's comments confirm it is comfortable with the approach being taken in respect of intertidal habitat values, loss and effects management. DOC does not raise any issues in respect of pāua or koura.

44. DOC's comments focus on potential noise effects on marine mammals. The MMMP was developed following feedback from DOC prior to lodgement.

45. In summary, the MMMP provides for the following procedures in respect of rock milling and noise effects on marine mammals:

    (a) initial noise measurements and confirmation of the Marine Mammal Observation Zone (**MMOZ**, proposed in the MMMP as lodged to be 20m from the seawall);

    (b) a pre-start procedure involving visual monitoring of the MMOZ for 15 minutes by the MMOs;

    (c) a soft start procedure (assuming no marine mammals are observed during pre-start) involving agitating the rock miller once in the water, alerting any cetaceans in a larger zone than the MMOZ and allowing them to move away;

    (d) during normal operation, regular visual observations of the MMOZ by the MMO, with the pre-start procedure to be repeated if the milling activity stops for longer than 30 minutes; and

    (e) a shut-down procedure, with rock milling to be stopped immediately if a cetacean is seen in or near the MMOZ (until it moves out of the MMOZ).

46. DOC seeks a number of updates to the MMMP including in relation to the procedures above. I address DOC's comments on marine mammals, and in particular the updates to the MMMP sought by DOC (and also those sought by GWRC) below.

47. Overall, while I do not agree with all of DOC's requests, I consider a number of updates to the MMMP can be made in response to DOC's feedback, to provide additional conservatism in respect of the treatment of noise.

Marine mammal presence near the construction site

48. I acknowledge that the marine mammal species listed by DOC can be occasionally seen in the area. They are listed in the MMMP. Three marine mammal species (orca, common dolphins and fur seals) have been identified as common users of Lyall Bay. These three species are likely to use waters close to the seawall for foraging.

49. DOC noted that resting behaviour was not considered for pinnipeds and baleen whales. I agree that baleen whales, such as the southern right whale and humpback whale, may occasionally rest close to the shore during calm conditions. The rare sightings of these species in Lyall Bay include footage of whale resting at the surface close to the shore.

50. Regarding pinnipeds however, I do not consider the seawall is likely to provide suitable resting area for leopard seals and fur seals. Leopard seals, which have been sighted in Lyall Bay beach on two occasions during the past five years, are unlikely to rest on the seawall concrete blocks, as they typically favour smooth and flat surfaces like beach or pontoons. Fur seals may occasionally haul out on the seawall but, once construction activities start on land, the zone is unlikely to be favoured as a resting place due to associated disturbance.

Observation methodology

DOC comments

51. DOC expressed concern about the methodology provided to observe marine mammals at night. DOC does not consider that using solely visual observations with torches and thermal infrared (**IR**) binoculars will give confidence that all marine mammals will be detected.

52. DOC also asks that the visual observations be complemented with acoustic monitoring.

Response

53. IR imaging systems are increasingly used to support marine mammal monitoring under conditions of low visibility or at night. These systems detect temperature differences between animals and the surrounding water surface, allowing marine mammals to be identified from their body heat signatures or from warm exhaled blows during surfacing events. IR imaging technologies have been deployed on vessels and coastal platforms to complement visual marine mammal observer surveys and enable monitoring on a 24-hour basis (Zitterbart et al. 2013; Smith et al. 2020).[6] Studies have demonstrated that IR detection systems can identify whales at distances of several kilometres under favourable conditions.

54. During periods of low visibility, IR imaging is considered an effective tool for detecting marine mammals at the water surface in the vicinity of the seawall. While detection performance can be influenced by environmental conditions such as sea state, wind, rain, fog and wave breaking, rock milling operations are expected to occur only during relatively calm sea conditions.

55. Based on the available literature and the expectation of suitable conditions during construction works, I am confident that IR imaging technology before and during rock milling operations will be capable of identifying marine mammals present within the shutdown zone.

56. In addition, DOC has suggested that complementary visual and acoustic monitoring would yield the highest detection rates. As noted above, GWRC has also suggested that "marine mammal observers should listen for the presence of marine mammals in the absence of PAM during periods of poor visibility".

57. This comment does not make sense. Instead, I have interpreted it as a recommendation to use PAM. The suggestion to "listen for the presence of marine mammals" implies the use of underwater acoustic detection, therefore PAM, as cetacean vocalisations cannot generally be detected from land-based observers due to the strong attenuation of sound across the air-water interface. In the international scientific literature, PAM is used

[6] Zitterbart et al 2013. Automatic round-the-clock detection of whales from underwater noise impacts. PLoS ONE 8(8):e71217.
Smith et al 2020. A field comparison of marine mammal detections via visual, acoustic, and infrared (IR) imaging methods offshore Atlantic Canada. Marine Pollution Bulletin, 154: 111026.

as a complementary monitoring tool when visual observations are limited by poor visibility (e.g. MMOA 2022). [7]

58. The possibility of PAM was considered earlier in the development of the MMMP, however, was thought to be of limited effectiveness in this exposed environment, which would mask cetacean vocalisations. Therefore, PAM is not currently provided for in the MMMP. The exception is that if the noise monitoring identifies noise levels above the predicted levels, requiring a larger shutdown area, this may necessitate the use of PAM. This is also provided for in the MMMP.

59. As set out above, I am confident in the methodology for visual observations and I do not consider any more formal acoustic monitoring to be necessary.

Shutdown zone size buffer (MMOZ)

DOC comments

60. WIAL's application proposes a MMOZ of 20 m with adaptive management of the MMOZ size based on in-situ underwater noise measurements. As discussed above, the MMOZ is relevant to pre-start procedures (ensuring the area is clear) and to observations during milling operation (if a cetacean enters the MMOZ then activity will cease).

61. DOC considers that the MMOZ should include a buffer to give greater confidence that marine mammals are outside the range where injury may occur.

62. DOC recommends using a shutdown zone which mitigates behavioural responses, which they estimate (on a conservative basis) at 250 m.

63. DOC also seeks to amend the MMMP to include unequivocal wording requiring rock milling activities to stop immediately if a marine mammal is seen in the shut-down zone.

Response

64. The 20 m shutdown zone corresponds to the estimated Temporary Threshold Shift (**TTS**) onset distance for the most sensitive marine mammal hearing group (very high frequency, **VHF**), represented in New Zealand by Hector's dolphins. However, the cetaceans most likely to be encountered in

[7] MMOA 2022. Marine Mammal Observer Association: Position Statements. Key issues that should be addressed when developing mitigation plans to minimise the effects of anthropogenic effects on marine fauna. V3.

the area are orca and common dolphins, which belong to the high-frequency (**HF**) hearing group and are considered less sensitive to underwater noise than VHF species.

65. The TTS threshold is calculated using a cumulative sound exposure period of 24 hours. However, the noise generated by rock milling will not be continuous. Grinding periods are expected to last approximately five minutes and will be followed by pauses between operations.

66. As a result, the current noise estimates are already conservative. It is therefore not expected that the noise levels measured once rock-milling works commence will exceed the estimated levels used in the assessment.

67. Despite the conservative nature of the estimated impact zone, DOC has proposed increasing the shutdown zone to further reduce the risk of marine mammals entering the injury zone during rock milling. I acknowledge the benefit of incorporating a buffer zone and consider that doubling the shutdown zone from 20 m to 40 m in the MMMP would reduce the risk of injury to a negligible level.

68. I do not support the use of the behavioural response zone as a shutdown zone. The points outlined above demonstrate that the initial shutdown zone is already based on conservative assumptions. Expanding the shutdown zone to 40 m provides an additional precautionary buffer and should ensure that marine mammals can be detected before rock milling begins. To provide another layer of conservatism, and in response to the request from GWRC (and also from Te Rūnanga o Toa Rangatira), the increased shutdown zone will also be accompanied by an increase in the pre-start observation period from 15 minutes to 20 minutes.

69. Despite the increase in the shutdown zone to 40 m, I am confident that IR imaging will allow marine mammals within this area to be detected effectively. Studies have demonstrated that IR detection systems can identify whales at distances of several kilometres under favourable conditions.

70. The MMMP has also been amended to include clear, unambiguous requirements for rock milling activities, such as stopping rock milling activities when a marine mammal is seen in the shutdown zone.

Underwater noise verification

DOC comments

71. DOC seeks that the MMMP be amended to explicitly state that underwater noise measurements (to validate estimated noise levels and therefore to validate the MMOZ) will be undertaken by an experienced underwater acoustician and be undertaken concurrently with the beginning of works to avoid confusion about timelines or potential impacts on marine mammals due to unmitigated noise.

Response

72. The MMMP has been amended to confirm that underwater noise level measurements and verification will be undertaken during the initial phase of construction when rock milling occurs for the first time. These measurements and verification will be carried out by an experienced acoustician. This process will confirm the appropriateness of the 40 m MMOZ or if any amendments to the MMOZ are necessary.

MMO competency

73. DOC seeks that greater detail is included in the MMMP as to the MMO training provider and the experience of the MMO.

74. The MMMP has been updated to provide that training of the MMO will be provided during Project induction by a marine mammal specialist and sets out the requirements for this training process.

Soft start procedure

DOC comment

75. DOC seeks that rock milling starts at low intensity before ramping up; agitating the rock miller in water will produce a different noise compared to milling rock.

76. As mentioned above, GWRC has also requested a 20 minute soft-start procedure be adopted.

Response

77. As a preliminary point, my understanding is that rock milling has been adopted for this Project because it will have lesser noise effects than

traditional alternatives. Notably, rock milling typically occurs in 5-minute periods of grinding with short breaks between, and produces relatively low vibration and less noise than percussive breaking with a chipper.[8]

78. I also note that, as outlined above, the proposed starting procedure for rock milling set out in the MMMP includes two phases:

    (a) a pre-start procedure involving visual monitoring of the MMOZ for 20 minutes (previously 15 minutes, but now increased to 20) by the MMOs;

    (b) a soft start procedure (assuming no marine mammals are observed during pre-start) involving agitating the rock miller.

79. Given the initial 20 minutes of pre-start monitoring, I do not consider an additional 20 minutes of soft start procedures, as requested by GWRC, to be necessary.

80. In terms of the soft start procedure itself, I have discussed DOC's comments with McConnell Dowell, who have advised that it is not possible to adjust the rotating speed of the rock miller (due to the nature of the equipment), however, it is possible for the rock miller to apply different pressure.

81. I have therefore updated the MMMP to provide that following the pre-start observation period (20 minutes), the contractor will use a soft start procedure where the milling head is applied at the prescribed operating Revolutions Per Minute (RPM). The operator will apply a 'soft pressure' for the first 30 seconds, followed by lifting the milling head from the rock and reducing the RPMs to idle speed for 30 seconds. This process will be followed by a 'medium pressure' sequence and 'hard pressure' sequence over a total period of three minutes. On completion of the soft, medium and hard pressure cycles, the operator will then commence rock milling as required for the remaining shift. This process will alert any cetaceans in a larger zone than the MMOZ and allow them to move away from the Project works before the main milling works commence.

82. In my view, the pre-start and soft start procedure provide an appropriate response. In addition, when rock milling ceases completely for 30 minutes or more, the starting procedures, including both pre-start and soft-start

[8] Refer to Appendix B of Application document B.14: Noise and Vibration Assessment, Tonkin and Taylor, October 2025.

phases, must be repeated. This approach effectively addresses DOC's request for a constant visual watch as it will ensure that the surrounding environment is rechecked for marine mammals following a pause in milling of 30 minutes or more.

Reporting requirements

DOC comment

83. DOC recommends amending the MMMP reporting section to be more specific on the data to be recorded (date, time, species, number, proximity to MMOZ, shutdown occurrence and duration)

Response

84. The MMMP has been amended to specify the information that must be collected by the MMO during both the pre-start, soft start and shutdown procedures.

Dr Laureline Meynier

17 March 2026