Before the Hearing Panel

Under:	Resource Management Act 1991
In the matter of:	Proposed Plan Change 1 – Regional Coastal Plan Kermadec and Subantarctic Islands

Statement of advice Chloe Corne

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Marine and Freshwater Biodiversity

Department of Conservation

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Department of Conservation
Te Papa Atawhai

Te Kāwanatanga o Aotearoa
New Zealand Government

Executive Summary

My advice addresses the following issues:

- Port Ross is the critical breeding habitat for the NZ population of southern right whales, which breed during the austral winter.
- There are multiple factors present increasing the likelihood of vessel-strike, including high densities of whales, increasing population abundance, whale behaviour affecting detectability, and the overlap of preferred habitats with anchorages and transit routes to and from those areas.
- Vessel-strike is one of the largest threats to large whales globally; vessels of any size can strike whales and cause injury. Injuries may be lethal or sub-lethal. Management options include speed restrictions and/or seasonal area closures.

Introduction

1. My full name is Chloe Lucinda Corne.

Instruction

2. I have been asked to provide expert advice on behalf of the Department of Conservation (DOC) on the Proposed Plan Change 1 – Regional Coastal Plan Kermadec and Subantarctic Islands.

Qualification and Experience

3. I am a Technical Advisor in the Department of Conservation's Marine Species Team and have been in the role since June 2025. My role in relation to the Proposed Plan Change 1 – Regional Coastal Plan Kermadec and Subantarctic Islands has been to provide expert advice pertaining to the impacts of vessels on southern right whales at Port Ross, Auckland Islands. I have a Master of Science in Marine Science (with Distinction) from the University of Otago (2024).

4. I have fifteen years' experience in marine mammal research and conservation management, across government and non-governmental organisations.

5. From 2014 to 2025, I was employed by the Department of Conservation (DOC) as Project Lead, Marine & Freshwater (Te Anau). In this role I was responsible for managing marine mammal research programmes, monitoring of compliance with the Marine Mammal Protection Regulations (1992), and delivering marine education programmes in the Fiordland Marine Area. I led the long-term bottlenose dolphin monitoring programmes in Doubtful Sound/Patea and Tamatea/Dusky Sound, Fiordland. The work involved extended field deployments in remote locations, requiring complex logistical planning and extensive fieldwork experience, including small boats skippering experience. Between 2017 – 2023, I led four out of five one-week annual humpback whale research trips along Fiordland's exposed outer coast aboard the DOC vessel *Southern Winds* for biopsy sampling and photo-identification. In December 2019, I carried out marine subtidal monitoring and sea lion counts around Perseverance Harbour, Campbell Island.

6. Earlier in my career, I worked for 18 months (2012-2013) for Global Vision International in Kenya, where I conducted daily boat-based marine megafauna surveys in the Kisite-Mpunguti Marine National Park. This included photo-identification of breeding humpback whales during the austral winter.

7. I have contributed to multiple other marine mammal research projects; those involving large whales include offshore surveys in Northland with the Far Out Ocean Research Collective (multi-species photo-identification, sperm whale tracking and sloughed skin sample collection) and DOC's Cook Strait Whale Project (humpback whale photo-identification and biopsy). Overall, I have accrued >3,000 at sea conducting marine mammal research. Consequently, whether as a small boats skipper, biopsy system (Paxarms) operator or photographer I am intimately familiar with close approaches and safe boating practices around large whales.

8. I have co-authored five scientific publications, and my Master of Science thesis was on the distribution and habitat use of humpback whales in Fiordland.

Code of conduct

9. Whilst it is acknowledged this is not an Environment Court proceeding, I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2023. I have complied with the Code of Conduct in the preparation of this advice. Unless I state otherwise, this assessment is 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.

Material considered

10. In preparing this advice I have reviewed:

    i. The submissions received by DOC related to the proposed changes on Performance Standards 5 and 6, and the rules to which these performance standards apply.

    ii. The submissions received by DOC related to the proposed changes to Note 7.

    iii. The Section 32 Report, specifically the drivers for change related to access and anchoring rules pertinent to Port Ross, Auckland Islands, during the southern right whale breeding season.

    iv. The Proposed Plan change showing the proposed changes to Performance Standards 5 and 6, and all rules to which these performance standards apply.

    v. The Proposed Plan change showing the proposed changes to Note 7.

11. I have not undertaken a site visit specifically for this Proposed Plan Change due to the remoteness of the location. However, I have passing familiarity with Port Ross, having visited briefly (i.e., <2 days) when travelling to and from Campbell Island aboard the HMNZS Canterbury in December 2019 during "Operation Endurance".

Scope of advice and expert opinion

12. My expert advice will address the following matters:
    i. Factors increasing the risk of vessel strike
    ii. Risks to vessels and people
    iii. Worldwide ship-strike management
    iv. Rationale for allowing research vessels access to Port Ross

Summary of the importance of Port Ross for NZ southern right whales

13. Port Ross is the key nursery and socialising site for NZ southern right whales (Eubalaena australis; classified as Threatened – Nationally Increasing), comprising key habitat for post-whaling population recovery. The area is unique amongst wintering grounds for southern right whale populations in that all demographic classes are present in an area of approximately 24km2.

Factors increasing the risk of vessel strike

14. There is presently a high degree of spatiotemporal overlap between vessels (primarily fishing vessels) and southern right whale core use areas (Zhang et al., 2024) around the NZ sub-Antarctic, including Port Ross in the Auckland Islands.

15. Densities of whales in Port Ross are approximately 5-10 whales per km^2 (Carroll et al., 2022), whereas other anchorages outside of Port Ross have a far lower density of SRW (Patenaude 2002, Rayment et al., 2012). Higher densities occur along the south coast of Enderby Island, as well as middle and south-west Port Ross (Rayment et al., 2012). These high densities make this wintering ground particularly vulnerable to disturbance.

16. The population is increasing at an estimated 7% per annum (Carroll et al., 2013), with cow-calf pairs present in 50% of groups in 2021 compared to 20% of groups in 1998. This is consistent with a growing population (Carroll et al., 2022). Cow-calf pairs show strong preferences for sheltered nearshore habitats (Rayment et al., 2014), namely <0.5m swell, <1000m to sheltered shoreline, 5-20m depth, and 200-1200m from coast. Predicted habitat suitability for cow-calf groups includes all shallow shoreline areas, overlapping with preferred anchorage areas and transit paths to/from those anchorages. Other demographic groups show more variability in their habitat use, but these groups are likely to use similar areas to cow-calf pairs (Rayment et al., 2014).

17. It is likely that nursing southern right whale females spend a greater proportion of time near the surface, as has been shown in North Atlantic right whales (80% of time at

<3.5m depth, noting that detectability of whales is affected by depth of dives (Dombroski et al., 2021), and that this depth is shallow enough to be vulnerable to ship strike. Behaviours such as resting ('logging' at the surface) will increase risk of ship strike, particularly in low visibility conditions.

Risks to vessels and people

18. The overlap of vessels and southern right whales poses some risk to vessel and human safety. Vessel damage is commonly reported for collisions between whales and vessels (Laist et al., 2001; Neilson et al., 2012; Ritter, 2012). Damage has also been recorded from interactions with smaller species, such as propellor damage from interactions with fur seals (Wickens and Sims, 1994). In Alaska, one study documented 36 cases of human injury or property damage resulting from collisions with whales, with at least 15 people thrown into the water (Neilson et al., 2012). Other examples from the media include:

- Boat that capsized, killing five people off Kaikōura was hit by whale, report finds | RNZ News
- Southern Right Whale leaps on yacht deck | Fishing - Fishwrecked.com - Fishing WA. Fishing Photos & Videos
- Why did a humpback whale capsize a boat? Here's what really happened. | National Geographic
- Fishermen end up in ocean after whale breaches onto boat
- Small sailboats restricted from sailing between Prioriño and Bares by killer whales

19. Though I can't comment on the overall likelihood of this occurring at Port Ross, it seems probable that increasing numbers of southern right whales will proportionately increase the risk, small though it may be. The consequences of damage to vessels in such a remote location where help is not readily to hand could range from inconsequential to major, noting that any specific comments on vessel safety are the remit of the Harbourmaster.

Worldwide ship-strike management

20. Entanglements and ship strike pose the greatest threat to right whale populations globally (Harcourt et al., 2019; van der Hoop et al., 2013). All species of large whales are susceptible to vessel-strike, and vessels of all sizes and types can hit whales. A landmark study which collated worldwide ship strike data for several species found that 55% and 75% (South Africa and US Atlantic) of right whales struck were calves or

juveniles, and in most cases were not seen or were seen too late to be avoided (Laist et al., 2001). Between 70-73% of right whales in the study mostly showed propellor injuries (Laist et al., 2001). Impacts of ship strike may be lethal or sub-lethal, and even where injury does not occur, behavioural disturbance due to vessel presence has been documented for many whale and dolphin species, including right whales. Disturbances may also have biological consequences; for example, disruptions of energy transfer (nursing) between mother and calf may affect early calf development (Nielsen et al., 2019).

21. As mortality rates from ship strike increase with ship length and speed (Laist et al., 2001), many worldwide management measures impose mandatory or voluntary speed restrictions for some or all vessels in key habitat areas. Examples for right whales include time area closures or restrictions, such as the designation of 'Areas To Be Avoided' in key right whale foraging habitat in the Roseway Basin (van der Hoop et al., 2012) and Shediac Valley in the Gulf of St Lawrence, Canada (Protecting the North Atlantic right whale: speed restriction measures in the Gulf of St. Lawrence - SSB No.: 04/2025). In NZ, the voluntary speed restrictions introduced by the Hauraki Gulf Transit Protocol has virtually eliminated ship strikes of Bryde's whale (*Balaenoptera brydei*) in their core habitat (reducing one to two incidents per year to zero incidents recorded in the last decade). These types of measures can be combined with species-specific minimum approach distances, with examples ranging between 100m (Fowler Bay, South Australia) to 2km (for vessels >300GT; Oman; World Shipping Council.pdf).

22. Case studies of full area closures to vessels to protect marine mammals are less common but do exist, these being:

    - Vessel restrictions off North Pender and Staurna Islands (Canada) between 1 June – 30 November to protect orca.

    - Exclusion of large vessels at Bahía Pavón (at the entrance to Golfo Dulce, Pacific coast of Costa Rica) and the Osa Peninsula Avoidance Zone to protect migratory humpback whales, bottlenose dolphins, pan-tropical spotted dolphins, orca and Brydes whales. Includes mandatory traffic separation scheme.

    - Vessel prohibitions in the Marine Mammal Protection Area (Great Australian Bight Commonwealth Marine Reserve) May 1 to October 31st to protect breeding southern right whales (Charlton et al., 2022; O'Shannessy et al., 2025).

Rationale for allowing research vessels access to Port Ross

23. The NZ southern right whale population is showing strong post-whaling recovery (Carroll et al., 2022) but is still classified as Threatened under the NZ Threat Classification System. Comparatively, other southern right whale populations are showing changes in habitat use and foraging ecology, and have reduced reproductive success (Brandão et al. 2023; Charlton et al. 2022; Germishuizen et al. 2024; Grundlehner et al. 2025), possibly due to climate change-driven changes in prey availability and distribution (e.g., Seyboth et al. 2016; Tulloch et al. 2019; van den Berg et al. 2021).

24. Research is needed to monitor NZ southern right whale population recovery as the climate continues to change. Surveys are imperative to determine any shifts in core habitat to inform future management decisions (Carroll et al., 2022). Research must occur at Port Ross, as it is the key nursery and socialising site for the population, and is unique amongst southern right whale wintering grounds in that all demographic classes are present in a small area. Data collected there is representative of the whole population. Vessels are required to access the waters of Port Ross, as whales use the entire harbour and most research methods and questions currently require close approaches (e.g., accurate GPS locations, photo ID or biopsy sampling) and thus cannot be land-based. The likelihood of accidental vessel strike is reduced for research vessels, as researchers are likely to have heightened awareness of whale presence due to actively searching for them.

Conclusion

25. Port Ross provides critical breeding habitat for the NZ southern right whale population. There are multiple factors that increase the likelihood of vessel-strike occurring, including increasing population abundance, the presence of high whale densities in a relatively small area, and the high degree of spatial and temporal overlap between preferred habitats and anchorages. Vessel-strike will have consequences of varying severity for the whale, vessel and people involved. Management options include speed restrictions and seasonal closures; given that several injuries consistent with vessel-strike have been documented despite existing restrictions under the operative coastal plan, seasonal closures to vessels would be the most effective measure for reducing the risk and impacts of vessel-strike.

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