MEMO

DATE: 06/05/2026

TO: Jesse Gooding, Senior Resource Management Planner RSP Resource Management Team

CC: Sarah Hucker, Senior National RMA Advisor, RSP Resource Management Team

FROM: Kat Manno, Technical Advisor, Marine Bycatch and Threats Team

SUBJECT: **Technical advice on New Zealand Sea Lions (NZSL) in the New Zealand Subantarctic Islands**

Introduction

1. My full name is Katharina Louise Manno (Kat Manno)

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. Bachelor of Science, Honours, Biology, Queens University, Canada 1999, Master of Science with Distinction, Zoology, University of Otago, New Zealand 2012, Technical Advisor, Marine Mammals in the Marine Bycatch and Threats Team, Department of Conservation and coordinator of DOC's New Zealand sea lion programme since 2021.

4. I have 6 years' experience with the Alaska Marine Mammal Observer Programme (2002, 2005, 2007, 2008, 2012, 2013), National Marine Fisheries Service, USA, studying marine mammal (including Steller's sea lion) interactions with remote salmon setnet fisheries.

5. I have 5 years' experience liaising with NZSL experts, designing and leading research and monitoring of NZSL at the Subantarctic Islands, and coordinating DOC's efforts to reverse the decline of NZSL.

Code of conduct

6. 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

7. In preparing this advice I have reviewed:

    i. The submissions related to NZSL and the areas important for their breeding, including:

    - New Zealand Sea Lion Trust, submission point 6.11 and 6.14
    - Southland Conservation Board, submission point 7.13
    - Seaeagle Fishing Llimited, submission point 8.10
    - Barine Developments Limited, submission point 10.11
    - Seafood New Zealand / Deepwater Council, submission point 11.11

    ii. The Section 32 Report, specifically the Drivers for change related to the scampi fishing fleet seeking more anchorage options and the proposal to allow vessels longer than 125m to apply for a discretionary coastal permit to access Perseverance Harbour.

    iii. The Proposed Plan change showing the proposed new anchorages in Carnley Harbour.

8. In the course of my work, I have visited the Subantarctic Islands, including Carnley and Perseverance Harbours.

Scope of advice and expert opinion

9. I am aware from the material I have considered that, through the Plan Change process to the Regional Coastal Plan: Kermadec and Subantarctic Islands, there may be changes that may impact New Zealand sea lions, specifically:

    a. Providing for additional anchorages close into shore (within 300m of MHWS) in Carnley Harbour', as requested by the scampi fishing fleet that fish the Southern Ocean below Auckland Island (some proposed in the Plan Change and some requested in submissions), and

    b. A proposal to allow vessels longer than 125m to access Perseverance Harbour as a discretionary activity.

10. There are New Zealand sea lion colonies in both Carnley Harbour and Perseverance Harbour.

11. My expert advice will address the following matters:

    i. Context about New Zealand sea lions (NZSL), including:

        a. Life history of Subantarctic NZSL

        b. Importance of Figure of Eight Island and Carnley Harbour for NZSL

        c. Importance of Perseverance Harbour for NZSL

    ii. Potential impact of increased vessel traffic on NZSL

New Zealand sea lions (NZSL)

12. New Zealand sea lions/pakake/whakahao (NZSL) (*Phocarctos hookeri*) are one of the rarest sea lions in the world, with an estimated population of 10,000 individuals breeding mainly at colonies located in New Zealand's Subantarctic Islands (Roberts and Edwards, 2023). NZSL are Nationally Endangered and listed on the IUCN Red List. The subantarctic colonies of NZSL are currently declining due to a range of threats, primarily commercial fisheries bycatch, nutritional stress, and disease (Robertson and Chilvers, 2011; Roberts and Doonan, 2016; Lundquist et al., 2025; Manno and Whyte, 2025).

13. The main breeding colony of NZSL is located at Dundas Island in the Auckland Islands group. Smaller colonies are located at Enderby Island and Figure of Eight Island in the Auckland Islands group, at Davis and Shoal Points in Perseverance Harbour, Campbell Island, and at Port Pegasus, Stewart Island. Given the species' threat status and trend, all breeding locations are important for NZSL conservation.

14. NZSL are highly mobile from two months of age. They are curious and unafraid of humans. These traits make them vulnerable to human aggression and vessel strike.

Life history of subantarctic NZSL

15. Most NZSL form temporary breeding aggregations at the established colony sites in the Subantarctic Islands in December each year. Female NZSL give birth in these aggregations in December and January. After giving birth, females remain on land to suckle their pups for approximately 1 – 2 weeks before departing the colonies to alternate foraging trips at sea with time spent ashore feeding pups (Augé *et al.*, 2009).

16. Female NZSL move their pups inland out of the subantarctic colonies in February and disperse to other areas of the islands beginning in March. Lactation lasts approximately 9 months, with pups normally weaned in August and September (Augé *et al.*, 2009).

Figure of Eight NZSL, Auckland Islands

17. Figure of Eight Island in Carnley Harbour hosts a colonial breeding population of approximately 50 – 60 adult female NZSL and an unknown number of animals of other age and sex classes (Manno and Whyte, 2025). This colony has declined significantly since monitoring began in 1995, when it hosted 143 breeding females (Manno and Whyte, 2025).

18. Lactating female NZSL at Figure of Eight Island travel out of Carnley Harbour to forage up to 900km away on the Auckland Island shelf and return to suckle their pups ashore during the rearing period from January – September annually (Chilvers et al., 2005; Chilvers, 2009).

19. Other than population trends and general foraging habits of the animals at Figure of Eight Island, not much is known about this colony of NZSL.

Perseverance Harbour NZSL, Campbell Island

20. There are two breeding colonies of NZSL in Perseverance Harbour, one located at Davis Point and the other at Shoal Point. There are approximately 450 breeding females at this location, split between the two colonies, and an unknown number of animals of other age and sex classes. Lactating female NZSL at these colonies travel outside the harbour to the shelf east of Campbell Island to forage and return to land to suckle pups ashore in the rearing period from January – September (Lea et al., 2023). These colonies have a very high documented rate of early pup mortality, likely due to a combination of nutritional stress, severe weather events, and disease (McNutt, 2020; McNutt and Young, 2025).

Impact of increased vessel traffic on NZSL

21. Although vessel traffic is not listed among the greatest threats to NZSL, the subantarctic NZSL colonies are fragile and in decline, and any additional stress to these animals should be avoided to allow them the best chance of persistence. The occasional vessel moving slowly through Carnley and Perseverance Harbours and anchoring for a short period of time may not have an impact, but there could be associated risks to this activity if the vessel:

    - or its associated ancillary craft travelled at speed through the area, increasing risk of propeller strike injuring NZSL,
    - discharged marine pollutants, intentionally or unintentionally, exposing NZSL to oil spills or other toxins, which is of serious concern, particularly in Perseverance Harbour. An oil spill in this harbour would have catastrophic population-level effects on NZSL, as there is no oiled wildlife response capacity at the Subantarctic Islands,
    - ran engines or generators for long periods of time in close proximity to breeding colonies of NZSL, raising concern for noise pollution effects (Tripovich *et al.*, 2012),
    - allowed humans ashore without proper biosecurity protocols, increasing the risk of disease transmission to NZSL (Gales, 1995), or
    - allowed humans to interact with the animals, as humans have been known to show aggression to NZSL, particularly when they feel threatened by the animals (note that NZSL can climb out of the water onto the trawl deck of a vessel at anchor, so these interactions may be unavoidable if the vessel anchors close to a NZSL colony).

22. Propeller strike and aggression from humans have been documented in areas where NZSL live in close proximity to humans on the South Island of New Zealand (Manno, 2021; 'Heartless' sea lion attacks need to stop, advocates say | RNZ News)

23. In terms of the submission from the NZSLT in relation to the additional anchorages proposed in Carnley Harbour in the Plan Change for vessels up to 42m long (so includes the scampi fleet), I understand that the operative and proposed Coastal Plan provides for a 'zone' out to 300m from MHWS, within which vessels other than ancillary craft (including scampi fleet vessels) cannot access or anchor without a coastal permit, other than at specific anchorages (see the blue hashed area in Figure 1 below).

24. The 300m zone (from MHWS) around Figure of Eight Island provides a buffer that offers some reduction of impact of vessels other than ancillary craft on this colony. However, as noted above, given the species' threat status and trend, all breeding locations are important for NZSL conservation. Coupled with the fact that we know this colony has been in decline since at least 1995, in my opinion, vessel presence around this colony should be managed to reduce impacts on NZSL to the extent possible.

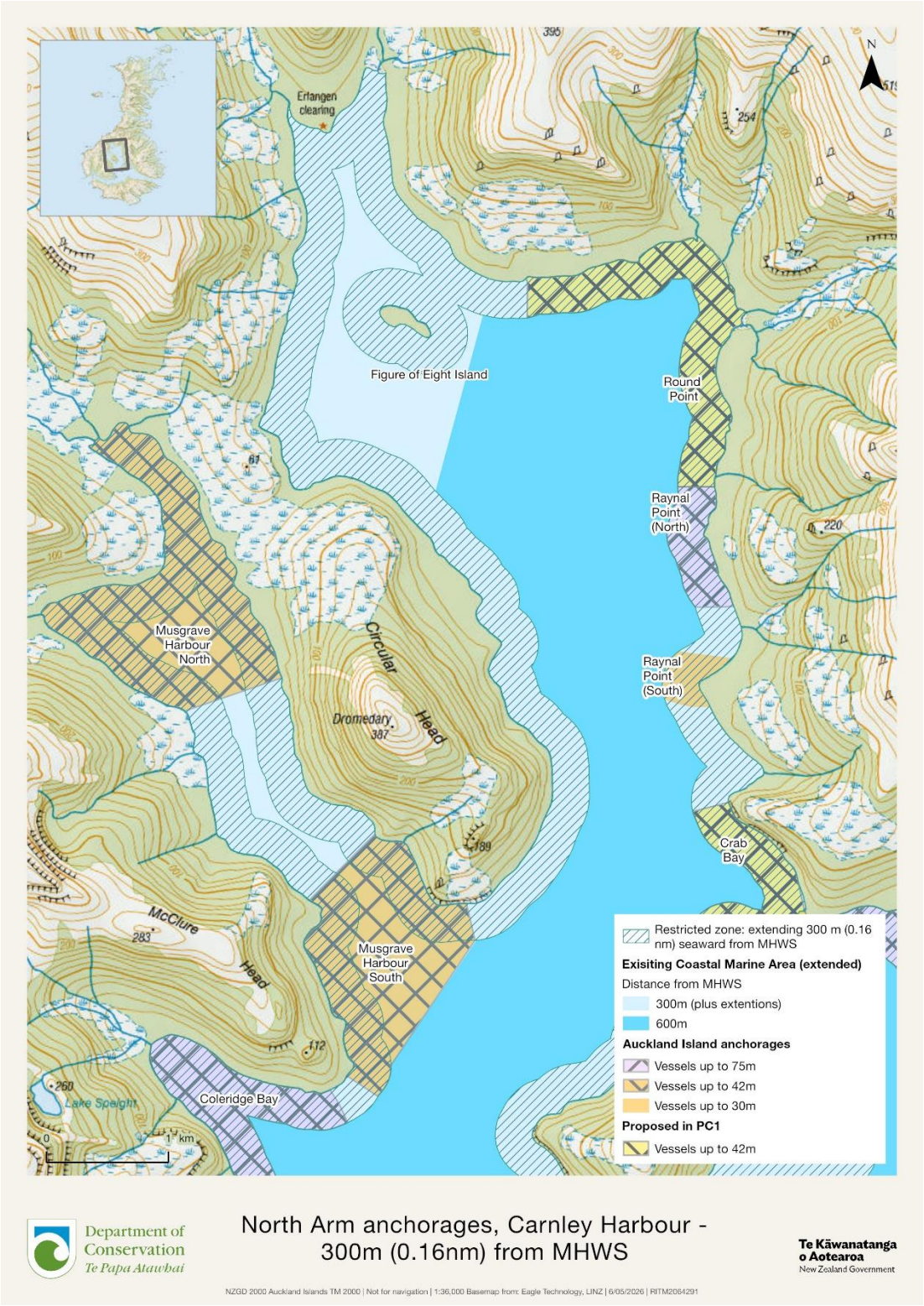

Figure 1: existing and proposed anchorage options inside 300m from MHWS in North Arm, Carnley Harbour

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