1.0 TECHNICAL MEMO – Coastal Avifauna

To:	Stacey Sharp & Blair Masefield, Beca (consultant planners)
From:	Claire Webb, Senior Associate - Ecology, Beca (consultant ecologist)
Ref:	Northland Regional Council: APP.005055.38.01 Whangārei District Council: LU2200107
Date:	16 November 2023

1.1 Statement of Qualifications and Experience

My name is Claire Webb. I am currently Senior Ecologist and Ecology Discipline Lead at Beca Ltd.

I hold the qualifications of BSc. (botany & zoology), BSc (Hons) Environmental Science (botany and geography) and a MSc (Botany). The topic of my Honours dissertation was native vegetation regeneration after invasive plant removal and the topic of my MSc thesis was coastal dune dynamics. My area of specialisation is coastal ecology, particularly ecosystem and species interactions in the coastal environment.

I have worked as a professional ecologist for 13 years not including 4 years in a generalist environmental role and 10 years of academic study. Before joining Beca Ltd, I held the position of Principle Advisor – Biodiversity at Auckland Council and was responsible for the development and delivery of regional conservation programmes including threatened species projects. Part of my role at Auckland Council was provision of ecological advice on numerous ecological impacts assessments including reclamation, mangrove removal applications that involved impacts on coastal avifauna. These include the Onehunga Foreshore Reclamation application, mangrove removal at Auckland Airport and preliminary advice on the development of the second runway at Auckland Airport.

As an ecological consultant, I have prepared and overseen numerous ecological impact assessments for a wide range of projects including coastal asset renewals and installation, renewable energy, transport infrastructure, water and wastewater projects. Several of these projects include impacts to coastal avifauna and I have undertaken numerous coastal avifauna surveys to support these applications.

In addition, I have experience in both terrestrial and coastal marine significance assessments as part of policy and plan development. This includes data collation and review, mapping and undertaking significance assessments of coastal bird habitats. Furthermore, I have provided ecological input into coastal adaptation and climate change impacts assessments.

I have appeared as an expert witness before Council hearings and Environment Court and participated in numerous expert conferences as part of other projects.

I am Certified Environmental Practitioner – Ecology Specialist and Member of the

Environment Institute of Australia and New Zealand. I also hold a position on the EIANZ committee and are a member of Birds NZ (formerly Ornithological Society of New Zealand).

I have been engaged by Northland Regional Council to review the coastal avifauna effects assessment report and have attended pre-application meeting with the applicant and completed a site visit to Northport.

2.0 PURPOSE

The purpose of this supplementary memorandum is to respond to technical matters, pertaining to coastal avifauna effects, raised during initial hearings proceedings.

This memorandum is to be read in conjunction with the Technical Memo – Coastal Avifauna (July 2023) appended to the Council s42A Officers Report, and the Avifauna Joint Witness Statement (JWS) dated 20 September 2023.

For the avoidance of doubt, the opinions and conclusions expressed in both the above-referenced documents remain unchanged.

3.0 TECHNICAL RESPONSE TO MATTERS RAISED

This memorandum covers the following matters:

- Avoidance of adverse effects on variable oystercatcher (VOC) and Northern New Zealand Dotterel (NNZD)
- Sandbank renourishment area as effects management measure for VOC and NNZD.
- Alternative effects management options for high-tide roost loss.
- Requirement for an Operational Avifauna Management Plan.

3.1 Avoidance of adverse effects on Threatened and At-Risk Species Populations

1. The Avifauna Assessment, as recommended in the EIANZ Guidelines (Roper-Lindsay et al., 2018), assesses the effects on coastal bird populations. This focusses all effects assessment matters on population effects and the influence of habitat loss on affected populations. In this context, it is important to consider whether adverse effects on **affected populations** (as opposed to habitat) have been avoided or minimised to such an extent that material harm has been avoided[1].

[1] *Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd* [2014] NZSC 38 (the NZKS decision)

Port Otago Limited v Environmental Defence Society [2023] NZSC 112

2. Population effects, as they are related to habitat loss, have not been well described in the application or evidence presented by Dr. Bull and other expert submitters. At a high level, it can be explained as the influence that a habitat has on the fitness and viability of a species population. This is relative to the proportion of the population utilising a particular area of habitat.

3. The applicant purports that by creating new high-tide roost habitat in advance of the impact, population effects can be avoided.

4. Habitat loss cannot be avoided at point of impact defined as the eastern reclamation footprint. As such, my view is that the proposed bird roost meets the definition of biodiversity offset under the Northland Regional Policy Statement in that it addresses residual effects of habitat loss by providing additional, like-for-like habitat in proximity to the point of impact.

5. Therefore, the applicant is reliant on the provision of a habitat offset, to minimise effects on species populations to the point that material harm is avoided.

6. In this instance, there is uncertainty around the effectiveness of the sandbank renourishment area in minimising population effects. This uncertainty and the factors contributing to it were raised in my technical memo (Technical Memo – Coastal Avifauna, July 2023) and by Dr. Beaucamp, the Department of Conservation expert.

3.2 Sandbank roost as an effects management measure

7. As stated in the Avifauna Joint Witness Statement (20 September 2023), providing alternative high-tide roost is a suitable effects management measure in principle however, the effectiveness of the proposed sandbank remains uncertain. The applicant has partially addressed this uncertainty through consent conditions discussed further below.

8. The design and maintenance of the sandbank renourishment is addressed by setting minimum performance standards set out in the Sandbank Renourishment Management Plan (SBRMP). This addresses concerns regarding the permeance and stability of the proposed roost noting that on-going maintenance will be required long-term.

9. To address effectiveness concerns, the applicant addresses proposes a monitoring and adaptive management approach where an alternative bird roost will be sought or designed should the sandbank fail to provide high-tide roosting for VOC and NNZD. The details of the alternative avifauna initiative are to be approved by Council.

10. I concur with Dr. Beauchamp's view that it is unlikely that VOC and NNZD will use the roost after reviewing the distribution data for these species within the harbour. Furthermore, there are outstanding matters related to additional adverse effects on foraging habitat that could be caused by the sandbank roost.

This includes the alteration of coastal processes causing mangroves to expand seaward and further reducing foraging habitat for coastal waders and specifically, the loss of lesser knot foraging habitat.

11. For these reasons, I don't support the sandbank renourishment area as a habitat offset and recommend that the applicant seeks an alternative avifauna initiative to manage population effects.

3.3 Operational Avifauna Management Plan

12. An Operational Avifauna Management Plan will consolidate all avifauna management measures required to adequately managed adverse effects at the Port.

13. I support the proposed condition for an Operational AMP given the complexity of coastal avifauna values and effects as well as the monitoring and adaptive management approach needed to avoid effects on Threatened and At Risk coastal avifauna.

4.0 CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

14. Overall, in consideration of the above I remain of the opinion that, subject to conditions, the actual and potential adverse effects on coastal avifauna of the proposal are moderate for affected species populations within the Whangarei Harbour.

15. I am of the opinion that managing residual effects would be better managed by seeking an alternative avifauna initiative.

Memo prepared by:	Claire Webb, Senior Ecologist, Beca
Date:	16 November 2023
Memo reviewed and approved for release by:	Blair Masefield, Technical Director Beca Limited On behalf of the Whangārei District Council and Northland Regional Council
Date:	16 November 2023