Review of AEE Report Coastal Birds (Consultation Draft) by Bioresearches Group Limited, prepared for Refining NZ

Review prepared for Northland Regional Council

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The ‘Coastal Birds’ report considers the potential effects of New Zealand Refining Company Limited’s proposal to deepen and partially realign the approaches to Marsden Point on coastal and pelagic birds, and considers the avifauna value and habitat significance of areas adjacent to the proposal’s footprint.

Data for the ‘Coastal Birds’ report were acquired through a range of sources. For coastal birds, a series of observations from vantage points at a range of locations were carried out during February-March 2015 and again during February-March 2016. One location (Bream Bay beach) was only surveyed in 2015. Species, abundance and behaviour (e.g. feeding, resting, roosting) were recorded. Additionally, breeding coastal birds were assessed during November 2015. For pelagic birds (in the outer harbour area and in Bream Bay), information was derived from an earlier literature review and from some ad hoc sightings and observations. Some preliminary observations of little penguins from November-December 2016 are also noted indicating a likely breeding population of at least 12 pairs. There were no structured and systematic at-sea surveys of seabirds undertaken.

I think the above approaches to data acquisition are appropriate and provide a good overview of the species using the coastal and nearby pelagic environments. Further, the coastal bird surveys provide useful information about how the observed species use particular locations. I think it would have been informative to compare coastal bird diversity and abundance seasonally (increased temporal resolution), but given the report’s conclusion that there would be no adverse effect from sediment deposition on intertidal and subtidal areas (with which I agree) then the lack of such additional information is not critical. Some additional clarity around how the coastal bird surveys were undertaken would be helpful: specifically, it is not clear how data were acquired from locations with multiple observation points, and then how these data were combined. For example, the summary table on page six of the report
identifies nine hourly counts at Urquharts Bay in both 2015 and 2016. Figure 8 of Urquharts Bay on page 17 of the report identifies five observation points – how were the nine hours of observation in each year split between these five observation points, how was repeat counting of the same birds avoided or treated and how were the average number of individuals calculated? In terms of the pelagic bird information, a literature review is adequate to capture the likely species make-up of the seabird assemblage in the area. However, it might have been useful to summarise what’s known about local/regional breeding populations for seabirds as this would have provided a basis for species that could be expected to occur (simply through proximity) in the area, in addition to a list of species recorded in the outer harbour and Bream Bay areas obtained from published sources. In this regard it is perhaps a little surprising that Cook’s petrel *Pterodroma cookii* and black petrel *Procellaria parkinsoni* do not appear as species recorded from the area – given the proximity of breeding populations at nearby Little Barrier and Great Barrier islands, and that grey-faced petrel *Pterodroma macroptera gouldi* is similarly missing (presumably because this taxon is not classified as ‘threatened’ or ‘at risk’) even though this taxon is mentioned in the report as breeding within the Bream Head Scenic Reserve (at page 42 of the report). For completeness it would have been informative to note all 15 taxa recorded from the area. Again, given the report’s conclusions about adverse effects and how these can be managed (see below) these omissions are perhaps not critical, but I suggest the author may wish to revisit the pelagic seabird list.

I think it would be useful for the reader to present a summary table of all bird taxa noted in the report and their corresponding conservation status. This would be particularly relevant since the publication of the latest New Zealand Threat Classification report for New Zealand birds (Robertson et al. 2017), which is mentioned in the report (at page four), has recently been published.

Notwithstanding my comments above, I found section 3 of the report (methodology and survey results) thorough and easy to follow.

Section 4 of the report deals with avifaunal values and habitat significance. While this section is comprehensive in its treatment of each site and of species recorded at the sites, I think the author should consider detailing the criteria used in order to assign particular values and levels of significance – for example, what criteria have been used to describe Mair Bank to be
of ‘national significance’, whereas Snake Bank is of ‘regional significance’ but also of ‘high value in an outer harbour context’? (see page 25 of the report). Similarly, no objective criteria are provided to support the claim that the Bream Bay area is of national significance for seabirds (other than being close to ‘breeding habitats’ – see page 26 of the report). Forest & Bird (2014) provides some guidance in this regard, and in fact the whole harbour area and beyond falls within the North Eastern North Island Important Bird Area of that report.

Section 5 of the report deals with effects. In short, I concur with the report’s assessment and findings here, both in terms of effects that can be discounted and effects that could potentially affect birds. The treatment of potentially adverse effects is thorough, noting increased turbidity through dredging operations and at disposal sites, the potential for deposition of resuspended sediments intertidally, vessel movements and lighting and underwater noise. Although there is a paucity of detailed information available on how coastal and pelagic birds are likely to respond to many of these potential effects (perhaps vessel lighting being an exception), the report takes a balanced view in my opinion.

Section 6 of the report deals with mitigation measures. In terms of vessel lighting, the report notes a range of relatively standard measures that should be adopted to reduce the risk of vessel strike through attraction to nocturnal lighting. For little penguin *Eudyptula minor* and grey-faced petrel, provision of artificial nesting chambers is suggested as a constructive ‘offset’ against any adverse effects. This seems entirely reasonable, but noting that provision of nest boxes would be enhanced if undertaken alongside effective predator control – I suspect availability of suitable nesting habitat is not currently limiting local populations of these seabirds, rather disturbance and predation from introduced mammals are probably more important factors?

Section 7 of the report deals with monitoring. The report recommends repeating the coastal bird surveys following the completion of the project. Given the likely lack of any adverse effects on coastal birds I think it unlikely any substantial differences between pre- and post-project patterns in coastal bird diversity and abundance would be recorded, but that for completeness this monitoring should be considered. For pelagic birds I think the monitoring being recommended is of low value and highly unlikely to be informative. ‘Surveys’ for two seabird taxa in Bream Bay (no details provided) to be compared with previous ad hoc sightings does not appear a sound basis for any sort of monitoring, even less for a monitoring
plan to provide any useful information on potential effects of the proposal. I would suggest that any effort put into monitoring little penguin (see section 7.1.3 of the report at page 49) should be directed at recording breeding pairs ashore, perhaps at sites with nest boxes and predator control, rather than counting birds at sea.

Finally, the report contains several typos and references to the wrong section numbers, none of which affect my comments above.