Seabirds of the South Taranaki Bight

Prepared for Trans-Tasman Resources Ltd

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Cover image: White-capped albatross and Westland petrel at rest in the South Taranaki Bight, March 2012 (NIWA)

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Executive summary

Trans-Tasman Resources Ltd (TTR) proposes to extract iron sands from the seabed in the South Taranaki Bight (STB), approximately 15-40 km offshore in water depths of 25-45 m. The proposed activities will affect the seafloor community at the extraction sites, while the sediment plume associated with the discharge of tailings sediment back to the seafloor has the potential to affect pelagic and benthic ecosystems downstream. Seabirds, as important high level predators in marine systems, may be indirectly impacted by these activities.

This report summarises information on the presence of seabirds within the STB.

The STB supports a relatively modest seabird assemblage, but detailed, systematic and quantitative information on the at-sea distribution of virtually all species is currently lacking.

Many of the species occurring in the area are likely to be relatively coastal in their distributions. Such species include blue penguin, shags, gulls and terns, although these latter two taxa can extend to more offshore areas.

By contrast, and although some species have been observed from and relatively close to the coast, albatross and petrel species tend to be more pelagic and wide-ranging in their distributions and will likely occur anywhere throughout the area.

The area does not support large breeding colonies for any species but a number of coastal estuarine sites are of significant value to coastal, shore, wading, and migratory bird species. These include the Waikirikiri Lagoon, and the Whanganui, Whangaehu, Turakina, Manawatu and Rangitikei river estuaries.

Information relating to TTR's additional scientific work undertaken since 2014 has been provided and the conclusions is this report remain valid.

1 Background

Trans-Tasman Resources Ltd (TTR) proposes to extract iron sands from the seabed in the South Taranaki Bight (STB), approximately 22-40 km offshore in water depths of 25-45 m. The proposed activities will affect the seafloor community at the extraction sites, while the sediment plume associated with the discharge of tailings sediment back to the seafloor has the potential to affect pelagic and benthic ecosystems downstream. Seabirds, as important high level predators in marine systems, may be indirectly impacted by these activities.

New Zealand supports the most diverse seabird assemblage on earth: approximately 84 species breed in New Zealand, with close to half of this total classified as endemic (Taylor 2000a). However, the STB lacks suitable, predator-free breeding habitat for many species. The nearest offshore islands are the Nga Motu/Sugar Loaf Islands group off New Plymouth, which support perhaps a few tens of thousands of breeding pairs of seabirds, including grey-faced petrel *Pterodroma macroptera* and common diving petrel *Pelecanoides urinatrix*. Elsewhere, breeding seabirds are confined to the mainland coast and are exposed to the full range of introduced predators. However, a number of coastal estuarine sites are of significant value to coastal, shore, wading, and migratory bird species. These include the Waikirikiri Lagoon, and the Whanganui, Whangaehu, Turakina, Manawatu and Rangitikei river estuaries. The Manawatu estuary is particularly significant and was declared a Wetland of International Importance under the Ramsar convention in July 2005.

Although the opportunities for seabirds to breed in the area are relatively limited, the STB is visited by a larger diversity of seabirds that either pass through the region or use the area as a foraging destination. However, there have been no systematic and quantitative studies of the at-sea distributions and abundances of seabirds within the area and the amount of published information on seabirds in this region is modest.

This reports reviews and summarises information from published and unpublished sources and draws upon 'expert opinion' to determine the species of seabirds that are likely to be associated with the STB at some point during the year. It should be noted that no attempt has been made to quantify the use of the area by any species, nor have numbers of any particular species that use the area been reported – these data are unavailable. In this respect, seabird species are noted on a presence basis only. Miskelly et al. (2008) should be referred to for information on the conservation status of New Zealand seabirds.

2 Albatrosses, shearwaters, prions and petrels

There is very limited evidence that the great albatrosses occur in the STB. Robertson et al. (2007) noted unidentified wandering albatross and unidentified royal albatross *Diomedea* spp. as present, but Walker and Elliott (2006), in a tracking study of New Zealand wandering albatrosses (both Antipodean wandering albatross *D. antipodensis antipodensis* and Gibson's wandering albatross *D. a. gibsoni*) using satellite telemetry found no evidence that this area was used. It is likely that black-browed albatross *Thalassarche melanophrys* and Campbell albatross *T. impavida* occur in the area (Robertson et al. 2007), as do white-capped albatross *T. steadi* (Robertson et al. 2007, Thompson unpublished data). The beach patrol scheme operated for many years by the Ornithological Society of New Zealand

(OSNZ) has reported very small numbers of other albatross species found dead on Taranaki beaches, including wandering albatross *D. exulans*, grey-headed albatross *T. chrysostoma*, southern Buller's albatross *T. bulleri bulleri*, and Salvin's albatross *T. salvini* (see Powlesland and Pickard 1992, Powlesland et al. 1992, Powlesland and Powlesland 1993, Powlesland et al. 1993, Powlesland and Powlesland 1994a, 1994b, Taylor 2004). Clearly, these bird carcasses could have drifted some distance at sea before being washed ashore along the Taranaki coast, but it is most likely that they would have originated in the Taranaki region and are similarly likely to use the STB to some extent.

Giant petrels *Macronectes* spp. occur in the STB (Jenkins 1981). They have been noted off Foxton, west Taranaki and New Plymouth (Robertson et al. 2007) and were recorded near the proposed iron sand extraction sites by NIWA during field studies. Similarly, flesh-footed shearwater *Puffinus carneipes*, sooty shearwater *P. griseus*, fluttering shearwater *P. gavia*, Buller's shearwater *P. bulleri*, Westland petrel *Procellaria westlandica*, common diving petrel *Pelecanoides urinatrix*, Cape petrel *Daption capense*, grey-faced petrel *Pterodroma macroptera* and fairy prion *Pachyptila turtur* occur in the area, either in transit to and from relatively near-by breeding colonies, or from breeding colonies further afield (Jenkins 1981, 1988, Taylor 2000a, 2000b, Robertson et al. 2007, Shaffer et al. 2009), and there is some evidence that Cook's petrel *Pterodroma cookii* may venture into the area (Rayner et al. 2008).

Figure 2-1: Giant petrel *Macronectes* sp. in the South Taranaki Bight (NIWA).

In addition to the species noted above, the OSNZ beach patrol scheme has also recorded the following species along the Taranaki coastline in relatively small numbers: Hutton's

shearwater *Puffinus huttoni*, little shearwater *Pu. assimilis*, wedge-tailed shearwater *Pu. pacificus*, short-tailed shearwater *Pu. tenuirostris*, thin-billed prion *Pachyptila belcheri*, Antarctic prion *Pa. desolata*, medium-billed prion *Pa. salvini*, broad-billed prion *Pa. vittata*, blue petrel *Halobaena caerulea*, mottled petrel *Pterodroma inexpectata*, white-headed petrel *Pt. lessonii*, Kerguelen petrel *Lugensa brevirostris* and white-faced storm petrel *Pelagodroma marina* (Powlesland et al. 1992, Powlesland and Powlesland 1993, Powlesland et al. 1993, Powlesland and Powlesland 1994a, 1994b, Taylor 2004). A further, sixth species of prion, the fulmar prion *Pa. crassirostris*, together with the five prion species noted above, formed the vast majority of seabirds wrecked along New Zealand's west coast beaches, including beaches in the Taranaki region, in an unprecedented mortality event in July 2011 (Tennyson and Miskelly 2011). This event would suggest that during the winter months at least, all six species of prion that frequent New Zealand waters can be found in the STB region.

3 Blue penguin, Australasian gannet and shags

Robertson et al. (2007) noted relatively infrequent sightings of blue penguin *Eudyptula minor* at a few locations along the south Taranaki coastline. No other penguin species are likely to occur in the area.

Although the nearest breeding colony is much further to the north of this area, Australasian gannet *Morus serrator* was noted along most of the south Taranaki coastline (Robertson et al. 2007), and it's at-sea distribution is likely to extend throughout the area.

A total of five species of shag occur in the area – black shag *Phalacrocorax carbo*, pied shag *P. varius*, little black shag *P. sulcirostris*, little shag *P. melanoleucos* and spotted shag *P. punctatus* (Robertson et al. 2007). Of these, black shag and little shag were the most numerous and had the most widespread distributions throughout the area (Robertson et al. 2007). The OSNZ beach patrol scheme has recorded most of the species noted above from Taranaki beaches, and has not identified any additional species to those listed above.

4 Skuas, gulls and terns

The brown skua *Catharacta lonnbergi* breeds in New Zealand's sub-Antarctic, but has been infrequently recorded along the coast to the south of this area outside the summer breeding season (Robertson et al. 2007), and is likely to occur sporadically throughout the STB. Arctic skuas *Stercorarius parasiticus* visit New Zealand during the summer months and this species has been noted coastally in Taranaki and off New Plymouth (Roberston et al. 2007). Black-backed gull *Larus dominicanus* and red-billed gull *L. scopulinus* occur throughout the area, and are both more widespread and numerous than the black-billed gull *L. bulleri*, which is noted only from sites to the south of the area (Robertson et al. 2007). A total of six species of tern likely occur in the STB, but only two – Caspian tern *Sterna caspia* and white-fronted tern *S. striata* – can be considered relatively widespread and common throughout the area. The remaining four species – black-fronted tern *S. albostriata*, little tern *S. albifrons*, fairy tern *S. nereis* and white-winged black tern *Childonias leucopterus* – are uncommonly to very rarely recorded in the area (Robertson et al. 2007).

The OSNZ beach patrol scheme additionally identified two, very rare, vagrants to the Taranaki region: sooty tern *Sterna fuscata* and common noddy *Anous stolidus* (Powlesland et al. 1993, Howell and Esler 2007).

5 Conclusions

Based on the limited available information, the STB supports a relatively modest seabird assemblage. Detailed, systematic and quantitative information on the at-sea distribution of virtually all species is currently lacking. Many of the species occurring in the area are likely to be relatively coastal in their distributions, including blue penguin, several shag species and the gulls and terns, although these latter taxa can also extend to more offshore areas. By contrast, albatross, shearwater, prion and petrel species tend to be more pelagic and wide-ranging in their distributions and will likely occur anywhere throughout the area. The area does not support large breeding colonies for many species: the nearest offshore islands are the Nga Motu/Sugar Loaf Islands group off New Plymouth, which support perhaps a few tens of thousands of breeding pairs of seabirds. Elsewhere, breeding seabirds are confined to the mainland coast and are exposed to the full range of introduced predators.

Information relating to TTR's additional scientific work undertaken since 2014 has been provided and the conclusions is this report remain valid.

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