

**BEFORE THE BOARD OF INQUIRY
TAMARIND DEVELOPMENT DRILLING APPLICATIONS**

EEZ100016

IN THE MATTER

of the Exclusive Economic Zone and
Continental Shelf (Environmental
Effects) Act 2012

AND

IN THE MATTER

of a Board of Inquiry appointed under
s52 of the Exclusive Economic Zone
and Continental Shelf (Environmental
Effects) Act 2012 to decide on
Tamarind Taranaki Limited's marine
consent and marine discharge consent
applications

**SUMMARY STATEMENT OF EXPERT EVIDENCE OF
DAVID RICHARD THOMPSON FOR TAMARIND TARANAKI LIMITED**

Dated: 7 November 2018

Govett Quilliam
THE LAWYERS

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MAY IT PLEASE THE BOARD

Introduction

1. My full name is David Richard Thompson. I am currently employed as a seabird ecologist for the National Institute of Water and Atmospheric Research Limited, based in Wellington, and have held that position since 1998.
2. In this summary statement of evidence, I set out the key conclusions of my primary evidence dated 20 July 2018.
3. My primary evidence provides an assessment of potential adverse effects of the Proposal on seabirds.

Summary of the key findings of my primary evidence

4. New Zealand supports the most diverse seabird assemblage on Earth, with 168 taxa (species and sub-species) recorded from the region. There have been no systematic and quantitative surveys of seabird distribution and abundance within the South Taranaki Bight (“STB”) and compiling a definitive species list of seabirds for the STB is therefore difficult. However, it is likely that 11 ‘threatened’ taxa and a further 25 ‘at risk’ taxa could occur in the STB.
5. Additionally, 73 shorebird taxa have been recorded in New Zealand, although most of these (55, or 75% of taxa) are either migrants or vagrants and do not breed in New Zealand. It is likely that six ‘threatened’ shorebird taxa occur along the coastline of the STB, together with a further seven ‘at risk’ taxa. Shorebirds are highly unlikely to occur at sea within the area of interest.
6. There are a number of potential temporary effects on seabirds from Tamarind’s proposed activities, including as a result of:
 - 6.1 attraction to structures as a result of artificial nocturnal lighting on the drilling rig and support vessels;
 - 6.2 disturbance and physical exclusion from the space occupied by the drilling rig and support vessels;
 - 6.3 noise generated by operations on the drilling rig and support vessels;

- 6.4 increased turbidity from the placement and removal of structures and associated activities on the seabed; and
 - 6.5 contamination from discharge of small amounts of harmful substances in offshore processing drainage via deck drains.
7. In my opinion, artificial nocturnal lighting present on the drilling rig, and on support vessels, represents the main risk to seabirds. All other potential effects on seabirds from the proposed activities will be insignificant.
 8. Artificial nocturnal lighting is known to attract some seabirds, with the potential for birds to collide with structures and be injured or killed as a result. Nocturnal seabird strikes tend to occur when bright, artificial light sources are used at times of poor visibility, typically during bad weather, often angled outwards or upwards from the structure and when the structure is relatively close to large breeding aggregations of seabirds. However, Tamarind have reported that historically there have been no seabird strikes in the Tui Field, probably reflecting the relatively large distance (approximately 80 km) to the nearest significant seabird breeding colonies. On this basis, my opinion is that artificial lighting poses a minor risk to seabirds.
 9. Unplanned release of oil from a loss of well control, or spills of fuel or oil from support vessels (that is not a discharge from the offshore processing drainage system) could also potentially impact seabirds and shorebirds. Modelling of a loss of well control, for both summer and winter scenarios, found that coastal waters off New Plymouth and South Taranaki had a low probability of moderate oil slicks. The modelling also predicted that the South Taranaki coast was most likely to receive a high loading of oil, with only five other sections of coast predicted to receive high loadings of oil. All but one shoreline sector would receive moderate burdens of oil following a loss of well control, including the Manawatu coast (with a probability of 11% and 40% in summer and winter, respectively), which supports a diverse assemblage of shorebirds, several of high conservation status, at the Manawatu estuary.
 10. While the potential impact severity for a loss of well control is high, the likelihood of a hydrocarbon release is extremely unlikely, and combined with Tamarind's mitigation and control measures, my opinion is that the overall impact significance for sea and shorebirds from a hydrocarbon release resulting from a loss of well control is as low as is reasonably practicable.

11. The spill modelling also considered a surface release scenario of diesel. No shoreline contact was predicted, and the extent of high exposure extended only 4 km from the release site. Given the volatile nature of diesel and the dynamic STB environment, I consider the impact on seabirds to be minor in the unlikely event of a diesel spill.
12. Overall, I consider the likely impact on seabirds and shorebirds from Tamarind's proposed activities as set out in the IA to be negligible.

A handwritten signature in black ink that reads "David Thompson". The signature is written in a cursive, flowing style.

DAVID THOMPSON

7 November 2018