

**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

CLOSING LEGAL SUBMISSIONS FOR TAMARIND TARANAKI LIMITED

DATED: 15 November 2018

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MAY IT PLEASE THE BOARD

1. INTRODUCTION

1.1 These closing legal submissions respond to matters raised by the Board, submitters and expert witnesses during the hearing on Tamarind's Applications, which was held in New Plymouth between 6 November and 8 November 2018. These submissions supplement the opening legal submissions and evidence presented on behalf of Tamarind.

1.2 The specific matters that these submissions address are as follows:

1.2.1 Scope of the application and the activities that are applied for;

1.2.2 Impact assessment evaluation criteria;

1.2.3 Consideration of effects associated with a loss of well control event;

1.2.4 Cumulative effects and climate change effects; and

1.2.5 Conditions.

2. Scope of application and the activities that are applied for

2.1 On Day 2 of the Hearing, the Chair sought clarification about whether Tamarind was applying for up to five side tracks from up to four wells, or for three side tracks from three locations, with two contingent side tracks from one or more of those three locations.¹ In response to a question from the Chair, Mr Peacock confirmed that Tamarind is seeking consent to drill up to five side track wells from up to four of Tamarind's existing wells². While Tamarind considers it is most likely that only three side-track wells will be drilled from three locations, with the possibility that up to two contingency side track wells may also be drilled from these locations, it is possible an

¹ Hearing Transcript, Day 2, page 5 at paragraphs 20 - 35

² Hearing Transcript, Day 2, page 84 at paragraph 18

alternative configuration may ultimately be drilled. The exact configuration of the wells that will be drilled is not able to be confirmed until further planning and technical analysis has been carried out.

- 2.2 The Impact Assessment and expert evidence considered the effects associated with drilling up to five side tracks from up to four wells. As noted in Tamarind's opening legal submissions at paragraph 6.3, the expert evidence filed on behalf of Tamarind concluded that overall the potential adverse effects of allowing the proposed activities on the environment will be negligible to minor. It is submitted that any variation to the drilling configuration that was applied for, which results in less side track wells being drilled from fewer locations, will result in the potential adverse effects that have been assessed being reduced even further.

3. Impact Assessment Evaluation Criteria

- 3.1 On Day 1 of the hearing, the Chair noted the various conclusions reached by Tamarind's experts with respect to whether something is of negligible, low or minor significance and/or extremely unlikely or unlikely³. The Chair queried whether these are all the same, or whether there were micro distinctions between them that the Board should take notice of.
- 3.2 Section 5 of the Impact Assessment describes the methodology used for identifying and assessing the impacts of the proposed activities. Table 5.1 on page 103 of the Impact Assessment describes the various criteria for assessing the magnitude of impacts and on page 105, the four impact significance criteria that were applied are set out. In Box 5.3 on page 105 of the Impact Assessment, the categories of impact significance are described as follows:

Negligible is where a resource, environmental feature or community will not be affected by a particular activity or the predicted effect is deemed to be 'imperceptible'.

An impact of minor significance (a 'minor impact') is one where an effect will be experienced, but the impact magnitude is sufficiently small (with or without mitigation) and well within accepted standards, and/or the feature is of low

³ Hearing Transcript, Day 1, page 17 at paragraph 10

sensitivity/value. An inconvenience may be caused, but with little or no consequence to long-term livelihood, culture, quality of life or resources. ...

- 3.3 Where Tamarind’s experts have used different methodology to that set out in the Impact Assessment, this is described in their respective statements of evidence. For example, in section 3 of Dr De Luca’s primary statement of evidence, she sets out the criteria she applied to assess the level of effects on benthic habitats and to describe effect magnitude. In Dr. Childerhouse’s primary statement of evidence he confirmed at paragraphs 5.8 – 5.10 that the impact assessment methodology applied in the Impact Assessment was appropriate, but set out some specific considerations that were relevant when assessing impacts on marine mammals.
- 3.4 Accordingly, it is submitted there are distinctions between the different categories of impact significance that the experts have referred to, and to the extent that these distinctions are relevant when considering the Applications and the potential effects on the environment, the Board can take these distinctions into account.
- 3.5 With respect to the impact significance criteria “as low as reasonably practicable” or “ALARP”, Table 5.4 in the Impact Assessment describes the likelihood categories for unplanned events. Extremely unlikely is defined as: “*The event is extremely unlikely to occur under normal operating conditions but may occur in exceptional circumstances*”. Table 5.6 then sets out the Impact Significance Criteria for Unplanned Events as follows:

Table 5.6 Unplanned Event Impact Significance Criteria

		Severity of Impact		
		Low	Medium	High
Likelihood	Extremely Unlikely	ALARP	ALARP	ALARP
	Unlikely	ALARP	Minor	Moderate
	Possible	Minor	Moderate	Major
	Likely	Moderate	Major	Major

- 3.6 In response to the Chair’s comment that there’s no actual standard that requires a measurement of the ALARP threshold⁴, this is accepted in terms

⁴ Hearing Transcript, Day 1, page 17 at paragraph 18

of environmental risk assessment. It is however noted that all permit operators are required to prepare Safety Cases for offshore production installations⁵. The Safety Cases must include a description of the elimination, prevention, reduction, and mitigation control measures that have been, or will be, taken to reduce the risks of major accident hazards to a level that is as low as is reasonably practicable⁶. The meaning of reasonably practicable is defined in section 22 of the Health and Safety at Work Act 2015 as that which is reasonably able to be done in relation to ensuring health and safety taking into account several matters, including the likelihood of the hazard or the risk occurring, the degree of harm that might result from the hazard or risk; and the ways of eliminating or minimising the risk.

- 3.7 With respect to the Impact Assessment's conclusions that the impact of unplanned activities would be ALARP or minor⁷, Tamarind's evidence is that the impacts identified cannot be feasibly reduced any further by additional mitigation measures which are not grossly disproportionate to the benefit that would be achieved by implementing them and that the impacts have therefore been actively reduced to a level that can be considered as low as reasonably practicable. Further, in respect of a loss of well control event, Mr Peacock's evidence was that such an event would only occur in the Tui Field in extremely rare circumstances and that for such an event to result in a release of hydrocarbons, there would need to be a complete breakdown in the processes and systems on the rig and the blow out preventer⁸. It is submitted that the ALARP threshold is an appropriate one to use in the context of the unplanned events associated with the Applications and that Board can be satisfied that Tamarind has applied best industry practice to reduce all potential risks.

4. Consideration of effects associated with a loss of well control event

- 4.1 With respect to the effects associated with a loss of well control event resulting in a release of hydrocarbons, the Chair queried whether the Board

⁵ Regulation 22 of the Health and Safety at Work (Petroleum Exploration and Extraction) Regulations 2016

⁶ Schedule 5 of the Health and Safety at Work (Petroleum Exploration and Extraction) Regulations 2016,

⁷ Impact Assessment, Table 7.16 at page 169

⁸ Hearing Transcript, Day 2, page 80 at paragraph 34

needed to concern itself with the issue of such a release if it was actually covered off by an alternate maritime authority⁹. In a related question, the Chair enquired as to what an Oil Spill Contingency Plan covers¹⁰.

4.2 Part 131.21 of the Marine Protection Rules (established under Part 27 of the Maritime Transport Act 1994) states that a person must not operate an offshore installation without the Director of Maritime New Zealand's written approval of an Oil Spill Contingency Plan ("OSCP") containing the matters prescribed in the Schedule that are appropriate to the operation of that installation. The Schedule to Part 131 states that every OSCP must include risk identification, assessment and prevention, including:

- a) location details of the offshore installation and of the permit(s) to which the application relates;
- b) details of the proposed operations at the installation;
- c) description of all oils stored at the installation;
- d) information on the oils produced by the installation;
- e) information on the likely fate of spilled produced oil taking into account weathering characteristics and the likely movement of any oil spilled from the installation;
- f) a detailed description of all the processes and activities which present a risk of pollution from an oil spill, with a list of specific procedures to reduce the risk of an oil spill;
- g) a detailed description of the potential environmental, social, and economic receptors that may be affected by an oil spill from the installation and proposed response options, including details of how the receptor may be affected;

4.3 In addition, the Oil Spill Contingency Plan is required to include emergency spill response procedures for oil, or a Well Control Contingency Plan ("WCCP"). The focus of the WCCP is blow out control and recovery rather than blow out prevention, which is dealt with by other documents (e.g. detailed drilling and completions programme and risk register) and other

⁹ Hearing Transcript, Day 1, page 26 at paragraph 30

¹⁰ Hearing Transcript, Day 1, page 26 at paragraph 5

regulatory regimes (e.g. Health and Safety in Employment (Petroleum Exploration and Extraction) Regulations)¹¹.

- 4.4 Maritime New Zealand's *Well Control Contingency Plan Guidance Note* (Version 2), 2 December 2015 states that the WCCP shall include information on the realistic worst-case scenario in relation to the potential release of reservoir hydrocarbons, including the potential daily release rate and the total quantity of hydrocarbons that could be released during the maximum time that it could take to stop the release. Oil spill trajectory modelling must also be provided and carried out based on the identified installation specific worst-case release scenarios to determine the fate of the released liquid hydrocarbons.
- 4.5 Accordingly, Maritime New Zealand assesses absolute worst-case scenarios in relation to the potential release of reservoir hydrocarbons when approving OSCP and WCCP.
- 4.6 In contrast, the definition of effect in the EEZ Act includes any potential effect of low probability that has a high potential impact. In relation to a potential release of hydrocarbons from a loss of well control event, the Impact Assessment states on page 154 that the results of the modelling for the absolute worst case scenario, i.e. a continuous release for 110 days, are not considered further in the Impact Assessment as it was considered the probability of such a scenario occurring is so remote as not to reach the threshold of low probability in the meaning of "effect". The potential release for 45 days was considered the worst feasible, but extremely unlikely, case and as such the effects of such a scenario were considered.
- 4.7 In terms of whether the Board needs to concern itself with the issue of a potential release for 45 days if the risks and impacts associated with such an event are actually covered off by an alternate maritime authority, it is submitted that there is a risk of duplication if the Board seeks to assess and

¹¹ *Well Control Contingency Plan Guidance Note* (Version 2), Maritime New Zealand, 2 December 2015
<https://www.maritimenz.govt.nz/commercial/environment/operators/documents/Well-Control-Contingency-Plan-Guidance.pdf>

approve those matters which are properly addressed by the OSCP and WCCP and other regulatory regimes. However, the Board must take into account all effects on the environment or existing interests of allowing the proposed activities which require approval under section 20 of the EEZ Act, and can take into account consequential effects that are not regulated by section 20 if these weigh on the Board's decision to grant or decline the Applications. Notwithstanding that, the Board may only impose conditions under section 63 of the EEZ Act which deal with the adverse effects of the activities authorised by the consent and it is submitted it should not impose conditions that conflict with the measures required by other marine management regimes or the Health and Safety at Work Act 2015.

- 4.8 It is submitted this also applies with respect to biosecurity matters, noting Dr McClary's query regarding whether the Board needed to consider biosecurity matters as part of these Applications.

5. Non-interference zone

- 5.1 Section 101B of the Crown Minerals Act 1991 (CMA) enables a non-interference zone to be created around offshore installations by way of a notice published in the New Zealand Notice to Mariners under Part 25 of the Maritime Rules.

- 5.2 On Day 1 of the hearing, the Chair asked whether the non-interference zone prevented passage and whether it applied to military ships also¹². Section 101B of the CMA provides that a ship master commits an offence if, without reasonable excuse, his or her ship enters a specified non-interference zone. However, by virtue of Part 25 of the Maritime Rules, section 101B CMA does not apply to warships.

6. Cumulative effects and climate change

- 6.1 On Day 3 of the Hearing, Dr De Vantier submitted that there is scope within the EEZ Act to look at cumulative effects more broadly. He argued that the interpretation of cumulative effects has been very narrow, and "in fact in

¹² Hearing Transcript, Day 1, page 18 at paragraph 30

many cases it's only looked at the application at hand rather than the synergisms that are involved in a broader sense"¹³. He went on to describe cumulative effects as follows:

The future is a perfect storm of Cumulative Effects. The physical, chemical and biological oceanography of the Tasman Sea are changing, not just from local industrialisation but also from climate disruption. Rising sea temperatures, storms, ocean acidification, deoxygenation and associated impacts on productivity and food webs will all increase in coming decades. Sir Peter Gluckman, "For New Zealand, the resulting impact of changes in wind patterns, precipitation, and the chemistry of our oceans can be expected to be at least as significant as the changes in temperature itself". I believe that these are Cumulative Effects and they need to be taken into account in terms of any future permits that are issued¹⁴.

...

- 6.2 Assuming the physical, chemical and biological oceanography of the Tasman Sea is changing as Dr De Vantier asserts, it is submitted that there is simply no evidence before the Board that the Applications, either in isolation or in combination with any other activities, will result in or contribute to those changes. The Board is required to consider the Applications before it, and it is submitted the activities the subject of the Applications cannot and will not result in climate disruption, rising sea temperatures, storms, ocean acidification, deoxygenation and associated impacts on productivity.
- 6.3 As set out in paragraph 6.29 of the opening legal submissions, the cumulative effects of the Applications were assessed in the Impact Assessment and by the expert witnesses for Tamarind. The assessments undertaken did look more broadly at other activities occurring within the South Taranaki Bight. The conclusion of Tamarind's expert witnesses is that cumulative effects associated with the Applications will be negligible to minor and Mr Baxter concurs with those findings.
- 6.4 In response to a question from Mr Allen, Dr Childerhouse stated: "When looking at cumulative impacts, which is something we did, it's important to consider all the different activities in the region and the potential area of impact. And the area of behaviour disturbance for this activity is just over a kilometre, so 1250[m]. And actually the level of disturbance from the other

¹³ Hearing Transcript Day 3, page 4 at paragraph 11

¹⁴ Hearing Transcript, Day 3, page 7 at paragraphs 5 - 19

activity, the other platforms and operations in the area, is probably in that similar order of magnitude. So, you wouldn't expect to see a lot of cumulative effects from noise over all those activities"¹⁵.

- 6.5 Dr De Vantier and Ms Ducat also raised the issue of climate change and the discharge of emissions from burning fossil fuels.

Dr. De Vantier: And, so I'm trying to find a way that the decision-makers can actually use the legislation as it stands, and I really hope that this legislation gets changed because at the moment it does not provide enough security for the biosphere in terms of fossil fuels¹⁶.

Ms Ducat: there is no doubt that if hydrocarbons were to be found, the discharge of CO₂ would cumulatively contribute to climate change which is a significant adverse event...¹⁷.

- 6.6 Section 59(5)(b) of the EEZ Act prevents the Board from considering effects on climate change associated with the discharge of greenhouse gases into the air. It is further noted that Tamarind is not applying to discharge of greenhouse gases into the air.

7. Conditions

Condition limiting drilling to 9 months

- 7.1 Mr Allen asked Mr Peacock and Mr McCallum if Tamarind would be open to a condition limiting the drilling to 9 months once drilling starts, if it was relevant to the various technical experts?¹⁸ He then also put the question to Dr Childerhouse and Dr De Luca. Their respective responses were as follows:

David Allen to Dr Childerhouse - Would it concern you, for example, if a drilling operation went for more than nine months or that just wasn't a factor in your assessment?¹⁹

Dr Childerhouse to David Allen - No, I don't think so, given the low level of impacts we're potentially going to see are restricted to a reasonably narrow area around that and the likely drilling campaigns are going to be run at three or four different locations, then that nine month disturbance will actually be spread over a whole range of

¹⁵ Hearing Transcript, Day 2, page 23 at paragraph 10

¹⁶ Hearing Transcript, Day 3, page 12 at paragraphs 6 - 13

¹⁷ Hearing Transcript, Day 3, page 26 at paragraph 2

¹⁸ Hearing Transcript, Day 1, page 21 at paragraph 30; Hearing Transcript, Day 1, page 37 at paragraph 1; Hearing Transcript, Day 1, page 49 at paragraph 7

¹⁹ Hearing Transcript, Day 2, page 23 at para 15

sites. So, if any one of those sites is of particular 25 importance to them, they won't be excluded from that area, in the worst case, for nine months. They'll only be excluded for potentially 40-45 days, I think is what the expected campaign time at each location is.

David Allen to Dr De Luca – From a benthic perspective, is there any concern if the drilling actually took longer than nine months?²⁰

Dr De Luca to David Allen: No, not really because the area of disturbance is going to be the same whether it occurs over 6 months, 9 months or 12 months, it's not going to affect the degree of effect on benthic habitats.

- 7.2 It is submitted therefore that such a condition is not necessary or warranted.

Condition concerning the rig to be used

- 7.3 Mr Allen also asked Mr McCallum whether a condition could be imposed requiring a rig of similar characteristics to be used in the event the contracted rig is not available²¹.

- 7.4 It is submitted such a condition is not necessary as Tamarind will need to ensure that any rig that is used is able to comply with the conditions imposed on all relevant consents. Further, imposing a condition which specifies the exact type of rig Tamarind that must use may unreasonably affect their ability to contract an appropriate alternative rig.

Augier conditions

- 7.5 On Day 2 of the Hearing, the Chair noted some of the conditions recommended by Mr Faithfull and agreed to by Dr Lane appear to be effectively Augier conditions and not conditions that the Board would necessarily impose²². Tamarind was invited to offer some of those conditions as Augier conditions so as to avoid the Board coming to a conclusion that they are not needed and therefore striking them out.
- 7.6 While Tamarind did not offer conditions relating to the agreements it has entered into with iwi, because those agreements already create an obligation that Tamarind is required to meet, Tamarind does not object to the conditions

²⁰ Hearing Transcript, Day 2, page 42 at paragraph 35

²¹ Hearing Transcript, Day 1, page 49 at paragraph 27

²² Hearing Transcript, Day 2, page 7 at paragraph 7

agreed to as between Dr Lane and Mr Faithfull being imposed. To the extent the Board considers any conditions are Augier conditions, Tamarind confirms it is willing to volunteer those conditions as such.

- 7.7 For the avoidance of doubt, Tamarind confirms that it is agreeable to the final agreed set of conditions which were provided to the Board by Mr Faithfull and Dr Lane on Day 3 of the Hearing being imposed, should consent be granted.

Conclusion

- 7.8 For the reasons given in the legal submissions and the expert evidence before the Board, it is submitted that the purpose of the EEZ Act will be achieved if consent is granted to the Applications and that the actual and potential adverse effects of the proposed activities will be appropriately avoided, remedied or mitigated. It is further submitted that there is no valid reason to decline the applications.

Dated 14 November 2018



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