

Memorandum

To: Siobhan Quayle, Group General Manager, Regulatory Systems and Operations

Copy to: Sandra Balcombe, Acting Manager, Land & Oceans Applications
Michael Allan, Senior Solicitor, Legal

From: Ben Moginie, Senior Advisor, Land & Oceans Applications

Date: 25 March 2020

Subject: Recommendation and record of decision for Ruling request EEZ500028

Purpose

1. To seek your approval to provide Ruling EEZ500028 as contained in Appendix 1.

Recommendations

2. That you:

a.	Provide Ruling EEZ500028 for Activity 2, Activity 4, Activity 6, and Activity 7 as described in Appendix 1.
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Delegation

3. The decision to provide the Ruling EEZ500028 under section 162(2) of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZ Act) is within your statutory delegation from the Chief Executive of the EPA¹.

Ruling legislation

4. Section 162 of the EEZ Act allows an operator to continue with existing activities involving structures or pipelines which would otherwise require a marine consent as a result of section 20 of the EEZ Act coming into force. These existing activities may continue without a marine consent for the term of the relevant petroleum mining permit or privilege under the Crown Minerals Act 1991.
5. However, if operators wish to undertake activities described in section 162(3) of the EEZ Act, they need to request a ruling from the EPA. Activities described in section 162(3) include:

¹ Instrument of Delegation - Chief Executive to EPA Staff (1 August 2019):

http://epa/edrms/acc/1/md/edmd/2019_08_01_EEZ_Delegation_CE_to_Staff.pdf

- a. Any activity that is part of the existing activity, such as placing a structure or drilling a well, that had not commenced before this Act comes into force,
 - b. Any change in the character, intensity, or scale of the activity made on or after the date on which this Act comes into force, or
 - c. The alteration, extension, removal, or demolition of an existing structure or existing submarine pipeline associated with the activity.
6. A ruling can only be provided under section 162(2) if the EPA determines there are likely to be minor or less than minor adverse effects on the environment or existing interests from the proposed activities.

Summary of request

7. On 15 January 2020, BW Offshore Limited (BWO) submitted a request for a ruling. This was supplemented by further information received on 29 January 2020, 3 February 2020, 12 February 2020, 19 February 2020, 20 February 2020, 21 February 2020 and amendments to the ruling request on 11 February 2020, and 18 February 2020. The amended ruling request submitted on 18 February 2020 superseded the request received on 15 January 2020. The activities for which BWO are seeking a ruling to undertake are described in Table 1.
8. This ruling request relates to the disconnection and retrieval of the mooring lines and anchors that are connected to the offshore installation the Floating Production Storage and Offtake (FPSO) facility Umuroa. This is to enable the FPSO Umuroa to sail away from its moored location in the Tui Field within PMP 38158, approximately 50 kilometres off the coast of Taranaki. The ruling request does not cover the full scope of activities that would be required to enable the FPSO Umuroa to sail away. The other activities that are required to enable the FPSO Umuroa to sail away are described in the impact assessment for this ruling request and BWO note that these other activities are subject to a separate ruling request (EEZ500029).
9. The FPSO Umuroa is connected to three (3) sets of three (3) mooring lines, each of which is connected to an anchor. The nine (9) anchors lie in approximately 100 - 130 m of water. BWO states that it intends to leave the Tui Field in a state that would allow another FPSO to reconnect to the existing subsea infrastructure that is owned and operated by Tamarind Taranaki Limited (in Receivership and Liquidation) (Tamarind)².
10. The Impact Assessment (IA) provided with the ruling request describes eight (8) activities required to mobilise the FPSO³. Six (6) of these activities are the subject of this ruling request, as indicated below:
- a. **Activity 1:** FPSO preparation and demobilisation preparatory works⁴,
 - b. **Activity 2:** Surveys and Inspections (Diver and Remotely Operated Vehicle (ROV) operations)⁵,

² Page 12 of Part 1 of the IA.

³ Ruling completeness tool, and part 1 of the IA.

⁴ In Table 1, Page 14 of Part 1 of the IA, BWO describe part of this activity as being subject to a separate ruling request.

⁵ Ibid.

- c. Activity 3: Not included in this request: Disconnection – Subsea equipment (SSE),
 - d. **Activity 4**: Disconnection – Mooring systems,
 - e. Activity 5: Not included in this request: Subsea equipment placement on seabed,
 - f. **Activity 6**: Mooring lines retrieval,
 - g. **Activity 7**: Anchor temporary placement on seabed and retrieval, and
 - h. **Activity 8**: FPSO sail away.
11. Table 1 identifies which of the activities subject to this ruling request are captured by section 20 of the EEZ Act.
12. BWO have applied for a separate ruling to authorise Activities 3 and 5. These activities relate to the subsea production infrastructure that is in place on the seabed. BWO have not described the effects of these activities in this request. The assumption in the current ruling request is that Activities 3 and 5 do not have any adverse effects on the environment or existing interests to be accounted for in this assessment. The consideration of the Activities 3 and 5 are covered in BWO's ruling request lodged on 18 February 2020 (EEZ500029). The activities undertaken in this ruling are considered in the context that Activities 3 and 5 are lawfully undertaken in the order listed under paragraph 10 of this memorandum. At the time of writing this memorandum, Activities 3 and 5 have not been authorised by way of a ruling under section 162 of the EEZ Act.
13. In order for the EPA to provide either this ruling or a ruling for EEZ500029 it must be satisfied that both ruling requests independently satisfy the relevant criteria for providing a ruling under section 162 of the EEZ Act. This means the assessment of the ruling request for Activities 3 and 5 must account for all future effects (i.e., reasonably foreseeable effects) including the effects of any activities authorised under this request (should this ruling request be provided), and any cumulative effects of all activities being undertaken.

Table 1: The s 20(2) restricted activities in the EEZ Act that apply to each proposed activity

Relevant Section 20 restricted activities of EEZ Act	Activity 1 FPSO preparation and demobilisation preparatory works	Activity 2 Surveys and Inspections (Diver and ROV operations)	Activity 4 Disconnection – Mooring systems	Activity 6 Mooring lines retrieval	Activity 7 Anchors and mooring lines temporary placement on seabed and retrieval	Activity 8 FPSO sail away
2(a) the construction, placement, alteration, extension, removal, or demolition of a structure on or under the seabed	Triggered by the alteration of the FPSO Umuroa structure (e.g., removal of rudder guards, installation of equipment)	Triggered by alteration of a structure (Divers splitting I-Tube bolts on risers, and tethering to risers)	Triggered by tethering and disconnection of mooring lines and the removal of a structure (FPSO Umuroa)	Triggered by removal of mooring lines	Triggered by: a) Placement (temporary) of anchors and remaining mooring lines on seabed b) removal of remaining mooring lines and anchors	
2(b) the construction, placement, alteration, extension, removal, or demolition of a submarine pipeline on or under the seabed						
2(c) the placement, alteration, extension, or removal of a submarine cable on or from the seabed,						
2(d) the removal of non-living natural material from the seabed or subsoil						
2(e) the disturbance of the seabed or subsoil in a manner that is likely to have an adverse effect on the seabed or subsoil		Triggered by ROV operations that may disturb seabed		Triggered by disturbance to seabed by removal of mooring lines	Triggered by: a) Placement (temporary) of anchors and remaining mooring lines on seabed b) removal of remaining mooring lines and anchors	

2(f) the deposit of anything or organism in, on, or under the seabed					Triggered by placement of remaining mooring lines and anchors on seabed	
2(g) the destruction, damage, or disturbance of the seabed or subsoil in a manner that is likely to have an adverse effect on marine species or their habitat		Triggered by ROV disturbance of seabed		Triggered by disturbance to seabed by removal of mooring lines	Triggered by removal of remaining mooring lines and anchors.	
4(a) the construction, mooring or anchoring long-term, placement, alteration, extension, removal, or demolition of a structure or part of a structure	Triggered by the installation of equipment FPSO and removal of rudder guard		Triggered by tethering and disconnection of mooring lines, the removal of a structure (FPSO Umuroa)	Triggered by removal of mooring lines	Triggered by removal of remaining mooring lines and anchors	
4(b) the causing of vibrations (other than vibrations caused by the normal operation of a ship) in a manner that is likely to have an adverse effect on marine life		Triggered by ROV operations	Triggered by cutting of mooring lines using Divers/ROV	Triggered by ROV operations	Triggered by ROV operations	
4(c) the causing of an explosion						

Applicability of activities for a ruling

14. A summary of the classification of each activity for a ruling under section 162 is summarised in Table 2.
15. As summarised in the Guidance to Operators⁶, a ruling can only be provided for a proposed activity if first that activity:
 - a. is restricted by section 20 of the EEZ Act,
 - b. is associated with a Petroleum Mining Permit,
 - c. is captured under section 162(3) of the EEZ Act, and
 - d. has adverse effects.
16. If an activity satisfies (a) – (d) above, the EPA can only provide a ruling if adverse effects on the environment and existing interests are likely to be minor or less than minor.
17. Below I provide a description of the proposed activities and an analysis against the matters listed under paragraph 15. I note that each of proposed activities below involve an existing structure (the Umuroa) and are associated with Petroleum Mining Permit (PMP) 38158. Therefore, I have not discussed this requirement in more detail below.

Activity 1: FPSO preparation and demobilisation preparatory works

Summary of analysis for Activity 1

18. Activity 1 does not require a ruling to be undertaken as each part of this activity is either not restricted under the EEZ Act or will not have any adverse effect on the environment or existing interests.

Is the activity restricted by section 20 of the EEZ Act?

19. Section 5.2.1 of Part 1 of the IA describes the wider preparatory works to be undertaken aboard the FPSO Umuroa to ready it for demobilisation. This includes installation of equipment required for sealing caps of production assets, and installation of specialist equipment for lifting, diving, and disconnection operations. Based on the description of activities in Part 1 of the IA, I consider these activities are restricted by section 20(2)(a) and 20(4)(b) of the EEZ Act (see Table 1).
20. I note that some parts of the preparatory activities relating to disconnection and retrieval of the mooring lines and anchors do not directly involve any restricted activities under the EEZ Act. However, a number of activities will take place as a necessary consequence of restricted activities that are proposed to be carried out as part of the wider disconnection programme of work. For example, there will be increased vessel traffic in the Tui Field. I have therefore considered the effects of these wider but necessary activities to ensure that all consequential effects of the restricted activities are considered.
21. Activity 1 also includes vessel movement. This is not a restricted activity under the EEZ Act and therefore does not require a ruling to be undertaken. However, this vessel movement does form

⁶ Page 10 of the Guidance for existing petroleum mining operators – Rulings under 162 dated June 2015.

part of the wider ruling request and may have adverse effects on the environment and existing interests. I have considered this part of Activity 1 in my assessment of effects (Appendix 3).

Is the activity captured under section 162(3) of the EEZ Act?

22. I consider the installation of equipment on the Umuroa to be the alteration of an existing structure under section 162(3)(c), and an activity that had not commenced before the EEZ Act came into force (section 162(3)(a)).

Does the activity have adverse effects on the environment or existing interests?

23. I do not consider there will be any adverse effects on the environment or existing interests from the proposed activities. However, I consider the largest unplanned potential effects on the environment and existing interests from Activity 1 to be failures to perform the preparatory activities adequately (i.e., the removal of rudder guards, the correct installation of equipment) and the subsequent risk of oil spillage or equipment failure.

24. I note that the modifications relating to the installation of equipment on the FPSO are undertaken on-board the FPSO, not in the marine environment (with the exception of divers splitting the I-Tube flanges), and are not at a scale to pose any risk to seabirds. The diving work is unlikely to cause adverse effects on marine life due to the short duration, limited scale, and limited intensity of operations.

25. In section 2.5.2.1 of Part 2 of the IA, BWO identified several measures are in place to mitigate the aforementioned risks, including:

- a. Ballast water management,
- b. Emergency and/or Oil Spill Containment Plan,
- c. An Emergency Management Plan,
- d. An HSE Management System,
- e. Use of certified equipment,
- f. Use of trained and competent personnel / contractors, and
- g. Insurance coverage.

26. I consider the mitigation measures proposed by BWO to reduce the risk of equipment installation failures and spills that could trigger restricted activities are sufficient to ensure that there will not be any adverse effect on the environment and existing interests from planned activities. Therefore, I consider Activity 1 will not require a ruling so long as it is carried out as described in the impact assessment documents (including the above mitigation measures).

Activity 2: Surveys and Inspections (Diver and ROV operations)

Summary of analysis for Activity 2

27. Diving activities proposed by BWO as a part of Activity 2 will not require a ruling as they will not have any adverse effect on the environment or existing interests.

28. I consider that the ROV activities proposed by BWO as a part of Activity 2 require a ruling in order to be undertaken.

Diver operations

Is the activity restricted by section 20 of the EEZ Act?

29. Section 5.2.2 of Part 1 of the IA describes the use of ROV's and divers to undertake pre-start installation surveys and inspections. BWO state this activity covers the use of ROV's and divers that may be involved throughout different stages of the disconnection process⁷.
30. BWO refer to the descriptions of diving operations that was provided by Tamarind Taranaki Limited (Tamarind) in its request for ruling EEZ500022. Tamarind stated in 2017 that air diving operations have been undertaken four (4) times since the FPSO has been in service (2010, 2012, 2014, and 2016)⁸. Tamarind note that typically divers undertake inspections of the sea chests, rudder, propeller, hull welds and mooring system of the FPSO, as well as hull cleaning. BWO state the divers will only operate down to 20m in depth.
31. BWO describe the specific diving activities throughout the description of activities in the IA⁹. These include splitting the I-Tube bottom flange bolt to enable disconnection of the risers and rigging wires to the risers to facilitate the pull-in of the Subsea Umbilical Riser and Flowline (SURF) systems. I consider these activities are restricted under section 20 of the EEZ Act (Table 1).

Is the activity captured under section 162(3) of the EEZ Act?

32. I consider splitting of the I-Tube bolts and tethering of the risers is the alteration of an existing pipeline under section 162(3)(c) of the EEZ Act.

Does the activity have adverse effects on the environment or existing interests?

33. Based on the descriptions of the activities provided by BW, I do not consider there will be any adverse effects on the environment or existing interests from the proposed diving activities that are a part of Activity 2.

ROV operations

Is the activity restricted by section 20 of the EEZ Act?

34. In addition to the use of divers, BWO are proposing to deploy ROV's for multiple purposes during the disconnection process. These purposes include:
 - a. Pre and post inspection surveys, where the ROV will inspected the SURF and mooring system before disconnection and after laying on the seabed,
 - b. Physical disconnection of the rigging, slings/strops from flowlines, umbilicals and mooring lines, and
 - c. Cutting of the mooring lines using a cutting tool.
35. I consider these activities are restricted under section 20 of the EEZ Act (Table 1).

⁷ Page 55 of Part 1 of the IA.

⁸ Email correspondence from Tamarind dated 19 September 2017 (EEZ500022)

⁹ Section 5 of Part 1 of the IA.

Is the activity captured under section 162(3) of the EEZ Act?

36. ROV inspection surveys of the subsea equipment are part of an ongoing activity which undertaken on six previous occasions (2010, 2011, 2013, 2014, 2015, 2018)¹⁰, since the FPSO began service in 2007. During these routine inspections the ROV inspected the production & gas lift lines, umbilicals and subsea trees (on the seafloor). Tamarind have also used an ROV to inspect the mooring lines for integrity of the chains on three previous occasions (2011, 2013 and 2017).
37. From the descriptions of the surveys provided in this ruling request I do not consider the ROV surveys are captured under section 162(3)(a) or (c). I consider the ROV surveys are not different in character, intensity or scale from the descriptions of routine maintenance (section 162(b)). I conclude that these survey activities do not require a ruling under section 162 of the EEZ Act¹¹.
38. However, I consider that use of ROV's for connection and disconnection of the slings/strops, nor the cutting of the mooring lines, do not constitute a routine maintenance activity as this activity does not fall in the scope of the descriptions of routine activities. Therefore, I consider this captured by section 162(3)(b).

Does the activity have adverse effects on the environment or existing interests?

39. I consider that there is likely to be some adverse effects on the environment and existing interests from the operation of the ROVs in carrying out restricted activities. Therefore, I consider this activity requires a ruling under section 162 of the EEZ Act. For clarity, this activity relates only to the disturbance and vibrations caused by the use of the ROVs. Disconnection activities (including cutting mooring lines) is covered under Activity 4 below.

Activity 4: Disconnection – Mooring systems

Summary of analysis for Activity 4

40. I consider this activity requires a ruling to be undertaken.

Is the activity restricted by section 20 of the EEZ Act?

41. Section 5.5 of Part 1 of the IA describes the activities BWO propose to undertake for the disconnection and retrieval of the mooring lines¹². The mooring system consists of nine identical anchors grouped in a three by three pattern in a wide base beneath the FPSO. Each anchor is attached to approximately:
- a. 1,065m of chain (weighting 275 tonnes),
 - b. 110 meters of wire rope (weighing 8.7 tonnes)
 - c. A final section of 55m of chain (weighting 50 tonnes) connecting to the base of the FPSO.

¹⁰ Email correspondence from Tamarind dated 19 September 2017 (EEZ500022).

¹¹ Section 162(2) provides that despite s 162(1), activities under s 162(1) are not authorised "where the activity has adverse effects on the environment or existing interests unless the Environmental Protection Authority provides a ruling to the effect that adverse effects are likely to be minor or less than minor".

¹² Section 5.5 initially states that the mooring lines will be abandoned. On 12 February 2020, BWO by way of email provided clarification that this is not the case and that all mooring lines will be retrieved.

42. Of the 1,065m of chain connected to the anchor, approximately 800m is already lying on the sea floor and the remaining 265m is suspended in the water column in addition to the 110m of wire rope and final 55m of chain (totalling 430m for each mooring line). The final 55m section of chain is connected to the FPSO via the securing pawls.
43. Mooring lines will be initially tethered to a construction support vessel (CSV) by ROV at about 20 m down the final section of chain from the FPSO. The ROV will cut the anchor chains above the tether and below the securing pawls on the FPSO. In the event the anchors are unable to be removed after initial attempts the chain will be cut at 150 m from the anchor. The anchors and the 150 m of chain will remain on the seabed (Activity 7) and the remainder of the mooring line will be retrieved. The tethering and disconnection of the mooring lines is a restricted activity under the EEZ Act (Table 1).

Is the activity captured under section 162(3) of the EEZ Act?

44. I consider that the disconnection of the mooring lines constitutes an alteration of an existing structure under section 162(3)(c). After the final mooring line is disconnected, the FPSO Umuroa (as an existing structure) will be deemed to have been removed¹³.

Does the activity have adverse effects on the environment or existing interests?

45. I consider that the disconnection activities will have some adverse effects on the environment or existing interests.

Activities 6 and 7: Mooring lines retrieval and Anchor retrieval (including temporary placement)

Summary of analysis for Activities 6 and 7

46. I consider Activity 6 and 7 require a ruling in order to be undertaken.

Is the activity restricted by section 20 of the EEZ Act?

47. Section 5.6 of Part 1 of the IA describes BWO's proposed retrieval of the mooring lines. After each line is disconnected from the FPSO, BWO state it will be retrieved onto the CSV, including each anchor, repositioning the CSV as required to free the anchor.
48. Each anchor is a 20 metric tonne Stevpris Anchor that has been embedded in position since the FPSO Umuroa was moored in 2007. BWO state that the anchors will be retrieved¹⁴, however BWO have applied for the temporary placement of the anchors and a section of mooring chain (150 m) on the seabed as a contingency activity should the retrieval of the anchors and remaining chain be unsuccessful before June 2020. BWO state that all anchors and remaining mooring lines would be retrieved by the expiry of PMP38158¹⁵. I have considered the effects of temporarily placing these structures on the seabed for up to five (5) years and nine (9) months. These are restricted activities under section 20 of the EEZ Act (Table 1).

¹³ The point at which the FPSO Umuroa is no longer connected to the seabed will mean it is no longer considered a structure under the EEZ Act.

¹⁴ Page 64 of the IA.

¹⁵ Page 50 of part 2 of the IA.

Is the activity captured under section 162(3) of the EEZ Act?

49. I consider the retrieval of the mooring lines and anchors to be the removal of an existing structure under s 162(3)(c) is likely to have adverse effects on the environment or existing interests. Therefore, I consider this activity requires a ruling under s 162 of the EEZ Act.

50. I consider the temporary placement of the mooring lines and anchors to be the placement of a structure under section 162(3)(a) will have adverse effects on the environment or existing interests. Therefore, I consider this activity requires a ruling under section 162 of the EEZ Act.

Does the activity have adverse effects on the environment or existing interests?

Based on the descriptions of the activities provided by BWO, I consider both activities will have adverse effects on the environment or existing interests.

Activity 8: FPSO sail away.

51. Section 5.7 of Part 1 of the IA describes the activities that form part of the proposed Activity 8 (FPSO Sail Away). I consider Activity 8 does not involve any restricted activities under section 20 of the EEZ Act (Table 1). I consider that this activity is not restricted under the EEZ Act and therefore does not require a ruling to be provided by the EPA for it to be lawfully undertaken.

Table 2 – Summary of the applicability of the proposed activities for a ruling under s 162 of the EEZ Act

Activity	Which part of s 20 restricts activity?	Activity captured by s 162(1)?	Activity captured by s 162(3)?	Is there an adverse effect?
<u>Activity 1</u> FPSO preparation and demobilisation preparatory works	20(2)(a) 20(4)(a)	Yes, the FPSO <i>Umuroa</i> is classified an existing structure associated with PMP 38158	Yes, s 162(3)(a) and (c) The activities do constitute the alteration of an existing structure.	No, the proposed activity is not likely to have adverse effects.
<u>Activity 2</u> Surveys and Inspections (Diver and ROV operations)	20(2)(a),20(2)(e), 20(2)(g), 20(4)(b)	Yes, the FPSO <i>Umuroa</i> is classified an existing structure associated with PMP 38158	Yes, s 162(3)(b) The activities do constitute a change in the character of the activity.	Yes, there will be adverse effects on the environment or existing interests from these activities as described in Appendix 3.
<u>Activity 4</u> Disconnection of mooring lines	20(2)(a), 20(4)(a),	Yes, the FPSO <i>Umuroa</i> is classified as an	Yes, s 162(3)(c) The activities constitute the alteration, of an existing structure	Yes, there will be adverse effects on the environment or existing interests from these activities as described in Appendix 3.

	20(4)(b),	existing structure associated with PMP 38158	associated with the activity described in s 162(1)	
<u>Activity 6</u> Mooring lines retrieval	20(2)(a), 20(2)(e), 20(2)(g), 20(4)(a), 20(4)(b)	Yes, the FPSO <i>Umuroa</i> is classified as an existing structure associated with PMP 38158	Yes, s 162(3) (c) The activities constitute the removal of an existing structure associated with the activity described in s 162(1)	Yes, there will be adverse effects on the environment or existing interests from these activities as described in Appendix 3.
<u>Activity 7</u> Retrieval of anchors and remaining mooring lines (and temporary placement)	20(2)(a), 20(2)(e), 20(2)(f), 20(2)(g), 20(4)(a), 20(4)(b)	Yes, the FPSO <i>Umuroa</i> is classified as an existing structure associated with PMP 38158	Yes, s 162(3)(a) and (c) for retrieval of anchors and 162(3)(c) for temporary placement The activities constitute the removal of an existing structure associated with the activity described in s 162(1)	Yes, there will be adverse effects on the environment or existing interests from these activities as described in Appendix 3.

Criteria for assessment of information adequacy and environmental effects

Evaluating information adequacy

52. Section 162 does not provide any statutory process or criteria for an evaluation of information provided with a request for a ruling (unlike a marine consent process).
53. As an initial step, the EPA may consider if the information provided in the request is sufficiently certain and adequate to be assessed. The Guidance to Operators¹⁶ states the EPA will use section 39 of the EEZ Act (criteria for an impact assessment) to consider the adequacy of the information provided in the request. The assessment can also consider sections 39(2)(c) and 39(3) of the EEZ Act.
54. The assessment against s 39(1) matters is addressed in Appendix 2 and I conclude that the information provided by BWO is in such detail as corresponds to the scale and significance of the effects that the activity may have on the environment and existing interests and is in sufficient detail to enable the EPA and persons whose existing interests are or may be affected to understand the nature of the activity and its effects on the environment and existing interests.

¹⁶ Guidance for petroleum mining operators Rulings under section 162, June 2015.

Criteria for assessing the effects of the activities on the environment and existing interests

55. In order to determine if the EPA can provide a ruling, an assessment of the effects of the activities must be undertaken. The decision pathways in the Guidance to Operators¹⁶ were followed and the assessment was based on relevant decision-making matters under sections 59 to s 61 of the EEZ Act. I have reviewed the ruling request information provided by BWO and I have based the assessment of effects on the information provided in the ruling request information and further information received from BWO and other parties¹⁷.
56. To assess the significance of the adverse effects of the activities on the environment, and in lieu of any criteria set out in the legislation, the EPA has adopted the significance assessment tool developed by NIWA for the Ministry for the Environment¹⁸ as this methodology is in accordance with accepted New Zealand standards for the evaluation of ecological effects. The methodology set out in the criteria can be applied to rulings and provides adequate guidance to decision makers on assessing adverse effects on the environment.
57. The assessment of the proposed activities against relevant section 59 and s 61 matters is addressed in Appendix 3. A discussion of the key effects and mitigations is presented below.

Assessment of effects and mitigations

58. I have considered information provided by BWO, including the adequacy and certainty of the information (Appendix 2) and the assessment of the information against Decision-making Criteria in sections 59 to 61 (Appendix 3) in relation to the significance assessment tool (Appendix 5). The sections below only discuss matters that I consider warrant further discussion in relation to this ruling request.

Effects on the environment

59. I consider the adverse effects on the environment are likely to be minor or less than minor. I have identified two effects that are likely to have a more than negligible impact, these are:

Potential effects on marine mammals

60. Marine mammals are likely to be affected by increased vessel activity (Activity 1) and vibrations in the water column that may be caused by the operation of the ROV and cutting of the mooring lines (Activities 2 and 4). The limited duration of activities (up to 40 days) and scale of the effects (limited to within a few square kilometres) reduce the likelihood of any adverse effects of any marine mammals including Maui Dolphins. Notwithstanding the very low likelihood of potential for marine mammals' mortality, I consider that the integrity of some marine mammal species, particularly Maui Dolphins, is extremely sensitive to mortality due to their very low population numbers.
61. BWO specify mitigation measures to reduce the risk of vessel strike, including and slowing vessels or changing course when marine mammals are sighted. Given the relatively low level of

¹⁷ Appendix 4 lists the further information received from BWO and other parties when considering this ruling request.

¹⁸ Tabulated risk matrix from MacDiarmid et al. (2012). Expert Risk Assessment of Activities in the New Zealand Exclusive Economic Zone and Extended Continental Shelf. A Report prepared by NIWA for the Ministry for the Environment (see table in Appendix 4).

vessel presence and short duration of activity, I consider this voluntary measure is appropriate to reduce impacts on marine mammals. This is consistent with the approach taken by the Board of Inquiry for EEZ100016 in relation to vessel traffic for the development drilling programme in the Tui Field¹⁹. I consider the residual risk to marine mammals could be at worst low, and the potential adverse effects to be minor.

Effects on benthic communities by removal of the anchors and mooring lines and possible temporary placement

62. Benthic communities are likely to be affected by ROV operations near the seabed (Activity 2), and removal of the mooring lines and anchors (Activities 6 and 7A), and temporary placement of the anchors and any remaining mooring lines (Activity 7B). I consider the temporary placement of the anchors and mooring lines would have a negligible adverse impact on benthic communities. However, ROV activity and removal of mooring lines and anchors may generate sediment re-suspension potentially smothering or causing ecotoxic effects on benthic communities. These disturbances are likely to take place over the same area, potentially causing additive effects on benthic organisms adjacent to the mooring lines anchors due to increased frequency of sediment deposition. However, given the combination of these activities is not likely to increase the scale of the activity (1,174 m² in total) and no sensitive environments are likely to be affected, I consider the effects would not affect any organisms on a population level and recovery would be likely to occur within months. I consider these effects to be less than minor.
63. BWO specify that no mitigation measures are to be applied to reduce impacts on the benthic environment (and water quality by resuspension of sediment). The scale and intensity of the effects of the of the removal activity are such that I do not consider additional measures to avoid, remedy, or mitigate the potential effects are warranted.

Effects on existing interests

64. I consider the adverse effects on existing interests are no more than minor. To ensure I had sufficient information to assess the effects on existing interests, I sought further information from:
 - a. Tamarind,
 - b. Taranaki Iwi,
 - c. Te Ati Awa,
 - d. Ngā Ruahine, and
 - e. Ngāti Ruanui
65. Tamarind, Taranaki Iwi, and Ngāti Ruanui responded to the further information requests.
66. The EPA also approached its Māori Advisory Committee, Ngā Kaihautū Tikainga Taiao (Ngā Kaihautū) to provide advice on which iwi should be asked for comment and whether it wished to provide additional comment. Ngā Kaihautū noted and encouraged EPA engagement with iwi in Taranaki but decided not to provide a substantive response. Ngāti Ruanui, Ngā Ruahine, Taranaki iwi, and Te Ati Awa are all present in the wider geographic area to the PMP38158. Both BWO and Ngāti Ruanui acknowledged the activities are planned to take place in the rohe of Taranaki Iwi.

¹⁹ Page 77 of the Decision on marine consent and marine discharge consent EEZ100016.

67. I consider the existing interests that are most likely to be affected by the activities are persons with commercial or customary fishing interests in the Tui Field and Tamarind (who owns existing infrastructure in the Tui Field). A full assessment of the effects on existing interests is found in Appendix 3

Potential effects on fishing interests

68. I consider that there is sufficient information to address effects on persons with commercial fishing interests in Fisheries Management Area (FMA) 8 where the Tui Field is located. Both Taranaki iwi and Ngāti Ruanui identified their right to commercial and customary fishing in the wider area, including FMA 8. I consider the effects of the activities on fish (including commercially caught species) from the activities is negligible²⁰. On this basis, I consider the effects on fishers (including iwi with established fishing rights) would not be affected due to impacts on fish.

69. However, I consider a reasonably foreseeable scenario could be the removal of both the Protection Area²¹ and the Safety Zone²² that exclude existing interests (including fishers) from the area near the Umuroa. In these circumstances the extent of the area that may be made available to benthic trawling fishers could be limited by anchors on seabed that are yet to be retrieved. I consider that the anchors would exclude the use of the area to fishers for the duration of their placement and that this effect could be minor due to the limited scale of the exclusion. I consider this effect may be mitigated by restricting the duration of the temporary placement of any anchors on the seabed.

Potential effects on Tamarind's existing rights

70. I consider that there is sufficient information to understand the effects on Tamarind's existing interests in the Tui Field. Information supplied by Tamarind (or its parent company, Tamarind Group) was consistent with BWO's description of Tamarind's existing assets in the Tui Field. These assets include the wellheads, mid-water arches, and the Subsea Umbilical, Riser, and Flowline system. None of the technical matters raised in Tamarind Group's response related to the disconnection of mooring lines or retrieval of anchors that are the subject of this ruling request. I consider that these assets are not likely to be adversely affected by the proposed activities

71. Tamarind also have existing structures in the Tui Field, and its marine discharge consent to discharge produced water from the Umuroa (EEZ300006). With the Umuroa moving off location, Tamarind will not be in a position to exercise its marine discharge consent unless a replacement FPSO was reinstated.

Effects on cultural values

72. Section 59(2)(m) of the EEZ Act does not provide unlimited scope. I cannot expand on (or take a different approach to) a specific requirement that Parliament has chosen to confine or regulate in a particular way. I have therefore considered section 59(2)(m) of the EEZ Act in the context of the specific matters required to be taken into account by section 59(2) of the EEZ Act. Importantly, I have been careful to consider whether a matter has been expressly addressed by another section

²⁰ Considered under section 59(2)(a) of Appendix 3.

²¹ Established under the Submarine Cables and Pipelines Protection Act 1996.

²² Established under the Continental Shelf Act 1967

of the EEZ Act, and therefore whether it could be capable of consideration under section 59(2)(m) of the EEZ Act.

73. In response to our requests for further information from Taranaki iwi, Ngā Ruahine, Te Ati Awa, and Ngāti Ruanui, iwi raised matters that relate to their cultural interests that may be affected by the proposed activities. I consider these are relevant and reasonably necessary to determine the ruling request. This consideration is related to the assessment of Māori existing interests under 59(2)(a) detailed in Appendix 3. Taranaki iwi and Ngāti Ruanui raised issues relating to effects on cultural values. I have based my assessment on their response. A full assessment of these matters is included under section 59(2)(m) in Appendix 3.
74. In summary, I consider the matters raised by Taranaki Iwi and Ngāti Ruanui primarily related to effects that may arise from a spill or the presence of structures on the seabed. It is not anticipated that any effects of the activities subject to this ruling will give rise to a risk of a spill. I acknowledge there will be adverse effects on the mauri of the environment as stated by Taranaki iwi. In my view, the scale and intensity of these effects on such values (for the scope of the proposed activities) is likely to be of a similar significance to the environmental effects assessed in Appendix 3.

Conclusion

75. I consider that Activity 1 does not require a ruling under section 162 of the EEZ Act because it does not involve restricted activities under the EEZ Act.
76. Activities 2, 4, and 6 will require a ruling. The adverse effects of these activities on the environment and existing interests are likely to occur within a limited area within PMP 38158 and for a limited duration.
77. Activity 7 will require a ruling. There are adverse effects on existing interests, cultural values of iwi, and the efficient use and development of natural resources from temporary placement of the anchors on the seabed for five (5) years until future retrieval. I consider these effects may be limited to a level that is likely to be minor or less than minor if all anchors are retrieved at the next practicable opportunity but no later than 31 January 2021.
78. I consider that Activity 8 does not require a ruling under section 162 of the EEZ Act because it does not involve restricted activities under the EEZ Act.
79. For Activities 2, 4, 6, and 7 (with limited duration), and based on my assessment in Appendix 3, I consider that:
 - a. The effects on the environment of undertaking the activities are **minor**.
 - b. The effects on existing interests as the activities are **minor**.

Recommendation

80. I have assessed the final ruling request, submitted by BWO on 18 February 2020, for a ruling related to the preparation, disconnect and retrieval of mooring lines and anchors, and sail away of the FPSO Umuroa in PMP 38158 and I recommend that the EPA provide a ruling for Activities 2, 4, 6, and 7 (with limited duration) as set out in Appendix 1 because:

- a. The activities for which a ruling is sought are restricted by section 20 of the EEZ Act,
- b. The FPSO Umuroa and associated mooring lines and anchors are structures that existed prior to 28 June 2013,
- c. The activities are associated with PMP 38158 which is authorised under the Crown Minerals Act 1991 prior to 28 June 2013,
- d. The activities identified in the request fall within the scope of sections 162(3) of the EEZ Act,
- e. There are adverse effects on the environment and existing interests, and
- f. The adverse effects on the environment and existing interests are likely to be minor or less than minor.

81. I recommend that you:

- a. **provide** ruling EEZ500028 to BW Offshore for the activities described in Appendix 1; and
- b. **require** the exercise of this ruling to be contingent on ruling EEZ500029 being provided, as both are required to provide lawful authority for all of restricted activities involved in disconnection of the FPSO Umuroa from the subsea infrastructure in the Tui Field (PMP 38158) and one cannot, in practical terms, be carried out without the other. It has been the EPA's position since January 2020 that the 2017 Ruling provided to Tamarind Taranaki Limited may not be relied on; and
- c. **require** that the activities subject to this ruling will be carried out in accordance with the ruling request information and all further information provided by BWO.



25 03 2020

Ben Moginie

Date

Senior Advisor

Land & Oceans Applications

Decision

Pursuant to section 162(2) of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZ Act), the EPA provides ruling EEZ500028 to BW Offshore.

This ruling expires on 24 November 2025.

Approved on behalf of the Environmental Protection Authority under Delegated Authority.



27 03 2020

Siobhan Quayle

Date

Group General Manager

Regulatory Systems and Operations