

Departmental Memo



Department of
Conservation
Te Papa Atawhai

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In Confidence

Date: 3 November 2017
To: Minister of Conservation
From: Jennie Marks, Acting Director - Policy
Subject: Response – Potential marine mammal sanctuary in the South Taranaki Bight

Purpose

1. This memo provides requested advice on the potential to create a marine mammal sanctuary in the South Taranaki Bight, as proposed by the Green Party and outlined in the Labour and Green Party Confidence and Supply Agreement.

Background and context

2. You have requested advice on questions relating to the Green Party proposal to create a marine mammal sanctuary in the South Taranaki Bight (the proposed sanctuary). The proposed sanctuary is shown in **Map One** in the Appendix (map provided by your office).
3. In response to your questions, this memo covers the following issues:
 - Petroleum Block Offers overlapping the area of the proposed sanctuary area;
 - Existing activities in the South Taranaki Bight;
 - Seismic surveying, including:
 - Pathways to undertake seismic surveying;
 - Upcoming seismic surveys in the area of the proposed sanctuary;
 - Impacts of seismic surveying on marine mammals (including blue whales);
 - Trans-Tasman Resources Ltd (TTRL) marine consent application process, and DOC's involvement in this process;
 - Progressing a marine mammal sanctuary in the South Taranaki Bight:
 - Process and timeframes for establishing a marine mammal sanctuary under the Marine Mammals Protection Act 1978; and
 - How the proposed sanctuary could be included under the proposed marine protected areas reform.
4. As part of your questions, you also requested a synopsis/analysis of the opinions of oceanographers and other experts on the likely impact of TTRL's proposed activities on marine mammal species. Unfortunately, this is not something DOC has undertaken to date, and would take some time to complete.
5. Please advise officials if you would like DOC to undertake further analysis on the expert opinions, and your timeframes for this advice.

Petroleum Block Offers overlapping the area of the proposed sanctuary

6. The New Zealand Government allocates petroleum exploration permits in an annual tender called a 'Block Offer'. This enables efficient allocation of exploration acreage, incorporating the views of industry and stakeholders. New Zealand Petroleum and Minerals administers the Block Offer process.
7. The 2017 Block Offer tender included 64,978km² of acreage in offshore Taranaki (see **Map Two** in the Appendix). This acreage overlapped approximately a third of the proposed sanctuary. **Map Two** shows the last Block Offer, and is included as an indication of overlap in previous offers, but may not reflect future offers.
8. There are also a number of existing mineral and exploration permits in the area, under the Crown Minerals Act 1991. These are shown in **Map Three** in the Appendix.
9. Paragraphs 26 and 27 provide information on the petroleum exploration permits in the area of the proposed sanctuary.

Existing activities in the South Taranaki Bight

10. This section provides an overview on some of the existing interests in the South Taranaki Bight. These include:
 - a) *Offshore oil and gas*: There are four offshore oil and gas platforms in the proposed area of the sanctuary:
 - i) Maui A platform (oil and gas);
 - ii) Maui B platform (oil and gas);
 - iii) Maari platform and floating production storage and offloading vessel (oil);
 - iv) Kupe platform (oil).
 - b) *Customary, recreational and commercial fishing*: The area of the proposed sanctuary has significant commercial and recreational fishing interests, particularly near the top of the South Island. At least 40 species of invertebrates (shellfish, crustaceans and fish) are customarily gathered or fished from the South Taranaki Bight.
 - c) *Customary activities*: A number of iwi have statutory acknowledgements¹ in the area (under Treaty of Waitangi settlements). Several applications for customary rights or customary marine titles have also been applied for under the Marine and Coastal Area (Takutai Moana) Act 2011.
 - d) *Maritime and navigation*: There is a significant amount of maritime traffic/movement in the area, especially to the north of Farewell Spit, Nelson and d'Urville Island, and to the south-west of Opunake.
 - e) *Proposed iron sand mining*: Trans-Tasman Resource Ltd have been granted a marine consent under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 to extract and process iron sand within an area of the South Taranaki Bight. This decision has been appealed to the High Court.
 - f) *Coastal recreation*: The area of the proposed sanctuary is commonly used for many recreational activities, including sailing, diving, surfing, fishing and shoreline activities (such a walking, horse riding, etc).
 - g) *Tourism*: the area of the proposed sanctuary also includes part of the top of the South Island, Golden Bay, the Abel Tasman, and the Marlborough Sounds. Marine tourism, including marine mammal tourism, is popular in these areas.

Existing marine protection in the South Taranaki Bight

11. There are also a number of existing marine protection mechanisms in the area of the proposed sanctuary, including:

¹ Statutory acknowledgements enhance iwi ability to participate in specified Resource Management Act 1991 and Heritage New Zealand processes.

- a) *Farewell Spit nature reserve* (and a Ramsar Site). This extends out to the low tide boundary around the Spit.
- b) *Westhaven (Te Tai Tapu) Marine Reserve*². Located southwest of Farewell Spit, and is adjoined by the *Westhaven (Whanganui Inlet) Wildlife Management Reserve*.
- c) *West Coast North Island Marine Mammal Sanctuary*. To the north of the indicative area, from Oakura Beach extending up to Maunganui Bluff in Northland. The sanctuary has restrictions on seabed mining activities, and seismic surveying, and fishing.
- d) *Commercial and recreational set net fishing restrictions or prohibitions*. A number of these have also been implemented under the Fisheries Act 1996, overlapping with the West Coast North Island Marine Mammal Sanctuary, and further south to Hawera.

Seismic surveying

12. Seismic surveys use loud sound to search for features under the sea floor, and are usually a precursor to mining and oil and gas exploration. Surveys can also be carried out for scientific research.
13. Information is provided below on: pathways to undertake seismic surveying in New Zealand; upcoming seismic surveys in the area of the proposed sanctuary; and the impacts of seismic surveying on marine mammals (including blue whales).

Pathways to undertake seismic surveying in New Zealand

14. Seismic surveys may be undertaken to fulfil obligations associated with a Petroleum Exploration Permit, Petroleum Mining Licence, or Petroleum Prospecting Permit issued by New Zealand Petroleum and Minerals (NZPAM), or as part of a scientific research programme independent of petroleum interests.
15. Petroleum Exploration Permits are issued as part of the annual Block Offer process, and normally contain obligations to undertake seismic surveying by a set date (in addition to other obligations).
16. Petroleum Mining Licences are issued via a publicly notified resource consent process, and may contain obligations to undertake seismic surveying, or the permit holder may choose to undertake seismic surveying at a later date to monitor development of the petroleum deposits.
17. Petroleum Prospecting Permits can be issued at any time based on applications submitted to NZPAM, and only contain obligations associated with seismic surveying (i.e. no drilling or mining). Often these are sought by specialist seismic surveying companies who acquire data on behalf of multiple clients simultaneously ("multi-client surveys").
18. Scientific research surveys may be undertaken at any time. These seismic surveys range from large international research programmes examining plate tectonics, all the way down to small local surveys to assess earthquake hazards.
19. DOC seeks to manage the effects of this activity on marine mammals via the *2013 Code of Conduct for Minimising Acoustic Disturbance to Marine Mammals from Seismic Survey Operations* (the Code).
20. Compliance with the Code is voluntary in the territorial sea, and on the extended continental shelf, though most petroleum companies have treated it as a mandatory measure irrespective of survey location. Under the Exclusive Economic Zone and Continental Shelf (Environmental Effects - Permitted Activities) Regulations 2013 operators are required to comply with the Code.

² Under the existing legislation the area of the reserve will need to be excluded from any future marine mammal sanctuary.

21. The Code requires development of a Marine Mammal Impact Assessment (MMIA), which describes potential effects of the activity on the environment, emphasising effects on marine mammals, and sets out a monitoring and mitigation plan (including the basic requirements described in the Code) to reduce the potential effects.
22. DOC is responsible for evaluating the MMIA for each survey and ensuring that it is sufficient to meet the requirements of the Code.
23. Most existing Marine Mammal Sanctuaries, along with the Te Rohe o Te Whānau Puha / Kaikōura Whale Sanctuary, have restrictions on seismic surveying.

Upcoming seismic surveying in the South Taranaki Bight

24. Under the requirements of the Code, operators are required to give the Director-General of Conservation three months' notice that they intend to undertake a seismic survey. DOC is aware of the following surveys likely to take place within the South Taranaki Bight.
25. Schlumberger New Zealand Ltd is proposing to bring the *M/V Amazon Warrior* back to New Zealand to acquire a multi-client seismic survey in Taranaki between December 2017 and March 2018. The petroleum prospecting area that the survey will be undertaken is indicated by the pink hashed area in **Map Four** in the Appendix. DOC is currently reviewing the MMIA which has been submitted for this survey.
26. Shell Taranaki Limited is proposing to undertake a seismic survey covering the Maui oil and gas field commencing sometime between December 2017 and March 2018.
27. Two Petroleum Exploration Permits have already been issued within the proposed sanctuary area with obligations to undertake seismic surveying in the next three years (see **Map Four** in the Appendix):
 - a) Todd Exploration Management Services Ltd hold a Petroleum Exploration Permit which has seismic surveying obligations due in Nov 2019 and Nov 2020.
 - b) Mont D'Or Resources Limited hold a Petroleum Exploration Permit which has seismic surveying obligations due in Nov 2019.
28. We are not aware of any other surveys at this stage, but such surveys could arise at any time.

Impact of seismic surveying on marine mammal species (including blue whales)

29. Seismic surveying has the potential to have significant impacts on marine mammals, though the most severe of these impacts can be managed to some extent.
30. Seismic airguns produce noise loud enough to cause direct physical injury to marine mammals in the immediate vicinity of the airgun array. Exposure at greater distances has the potential to lead to behavioural reactions causing injury (i.e. swimming quickly to the surface from depth), displacement from critical habitat, inability to communicate with other animals, and other sub-lethal effects.
31. The distance at which physical injury could occur ranges from a few metres (during small surveys) up to hundreds of metres (during large-scale commercial surveys). Behavioural effects could potentially occur up to tens or hundreds of kilometres away from the survey vessel.
32. No deaths have been directly attributed to seismic surveying, though worldwide very little effort has been spent investigating whether such links exist. DOC attempts to organise Massey University veterinary pathologists to attend stranding events to undertake a post-mortem when animals strand near an active seismic survey. Whether such an investigation is possible depends upon finding the animal shortly after death, obtaining iwi approval, availability of Massey staff, and other factors.

33. Worldwide, very little is known about the biological consequences of behavioural responses to seismic surveying noise on individuals or populations of marine mammals. Various behavioural responses have been noted among different species, but none have been directly linked to population-level impacts.
34. Establishing (or disproving) a direct link is hampered by the difficulty of undertaking research on long-lived, slowly reproducing marine mammals. These animals are also exposed to a variety of human activities over the course of their lives, making it difficult to attribute effects to a single activity.
35. Blue whales communicate at very low sound frequencies, significantly overlapping with frequencies of noise produced by seismic airguns. Low frequencies travel much further underwater, and therefore can be detected much further away from the source of the sound.
36. It is therefore likely that blue whales are able to detect seismic surveys from much greater distances than other marine mammals. Whether they are affected by surveys at greater distances is unknown.
37. Blue whales in the South Taranaki Bight are frequently observed feeding on krill. This may make them less likely to move away from a disturbing sound, but it is unknown whether this occurs, or whether it leads to a greater risk to the whales. If blue whales choose to keep feeding as an active seismic surveying vessel approaches, the airguns will be shut down once the monitoring zone around the vessel reaches the whale.
38. A recent study from Australia reported significant mortality of zooplankton in the vicinity of seismic airguns, including complete mortality of larval krill out to the limits of the study (1,200 m from the airguns). It is unknown whether these results transfer to New Zealand, nor whether such mortality would significantly affect overall krill populations. If so, blue whales might be indirectly affected by reduced availability of food.

Trans-Tasman Resources Ltd marine consent application process

39. Trans-Tasman Resources Ltd (TTRL) have recently been granted a marine consent under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 to extract and process iron sand from the seabed in the South Taranaki Bight. This decision has been appealed to the High Court, on points of law.
40. Information is provided below on DOC's involvement in this process, and the current High Court action.

DOC's involvement with the consent application and current High Court action

41. In 2013, TTRL first applied to the Environmental Protection Authority for marine consents under the EEZ Act to extract and process iron sand from the seabed in the South Taranaki Bight. DOC submitted on this application, opposing it in part, seeking further information and appropriate clear, robust conditions.
42. DOC's submission focused on the effects of the application on marine mammals (including noise), the benthic environment and seabirds. The submission also considered the extent and management of the sediment plume. Ultimately, the EPA declined TTRL's application.
43. From mid-2015, TTRL, its expert advisors and DOC experts worked together to agree a draft set of proposed conditions in advance of a new application. This built on work previously undertaken by DOC's experts during the 2013 application.
44. In August 2016 TTRL lodged its application to the EPA including the conditions agreed with DOC.
45. On 14 October 2016, DOC decided not to submit on the TTRL application. Accordingly, DOC did not give evidence at the hearing.

46. During its consideration of the application, however, the EPA Decision-Making Committee (DMC) did request further information from DOC under section 44 of the EEZ Act, including:
- a) DOC's relationship with Conservation Boards;
 - b) Further information that characterises the nature of the marine environment of the South Taranaki Bight;
 - c) DOC's assessment of the application;
 - d) An update on marine mammal stranding and sightings data in the South Taranaki Bight; and
 - e) For DOC's experts on seabirds and marine mammals to be available for conferencing and the hearing (later advised they were not required).
47. DOC advised the DMC that there was no single assessment of the application. Regarding an update on marine mammal stranding and sightings data in the South Taranaki Bight, this is on the EPAs website³.
48. Under the EEZ Act only the applicant or a submitter may appeal the decision. Therefore, DOC had no appeal rights, and has had no involvement in the appeal proceedings. However, the Taranaki/Whanganui Conservation Board (who submitted on the application) are appealing the decision (along with six other parties).

Taranaki/Whanganui Conservation Board to appeal against Environment Protection Authority's decision to approve South Taranaki Bight seabed mining application

49. The Taranaki/Whanganui Conservation Board (the Board) are part of an appeal against the decision to approve TTRL's application. The Board reached its decision to proceed with an appeal by resolution at a full meeting of the Board held on 24 August 2017.
50. Conservation Boards (Boards) are established under the Conservation Act 1987 and are serviced by DOC "in such manner as the Minister may from time to time direct." (section 6V). Boards are funded for their administration support and day to day business such as meetings, inspections, accommodation travel expenses and expense claims from an annual budget allocated by each DOC region. Other Board costs for 'one-off' actions such as this appeal require separate funding approval and allocation by DOC. Funding approvals are made in accordance with standard departmental procedures and delegations.
51. In this case, the Board received independent legal advice and estimates of likely costs involved before seeking assurance from DOC of additional funding to cover those costs. Despite conservation boards having the power to engage in matters such as this appeal, instances of DOC being requested to fund such activities are rare.
52. We considered our obligations in regard to the Board's decision to appeal and decided that it is within DOC's servicing responsibility to meet the reasonable costs. Accordingly, we accepted the Board's request for funding assistance on this occasion to the limit of the estimated costs. This decision was made by a Deputy Director-General.
53. The grounds on which we determined this are that:
- a) the Board has discretion and a legal mandate to appear before courts and tribunals, and this extends to this appeal;
 - b) the Board has properly reached a decision that they wish to appeal; and
 - c) DOC is required to service the Board. In our view this includes meeting reasonable costs associated with the decision to appeal.

³ <http://www.epa.govt.nz/EEZ/whats-going-on/current-applications/ttr-2016/reports/Pages/Information-and-Advice-sought-by-the-DMC.aspx> (scroll down to the information provided by DOC).

Progressing a marine mammal sanctuary in the South Taranaki Bight

54. A sanctuary in the South Taranaki Bight could be progressed in the following ways:

- a) As a marine mammal sanctuary under the Marine Mammals Protection Act 1978 (MMPA); or
- b) As a species-specific sanctuary alongside the proposed Marine Protected Areas reform (MPA reform); or
- c) As a species-specific sanctuary created under special legislation⁴.

55. If you were to develop a sanctuary under the MMPA, and then implement MPA reform, the sanctuary could be transitioned into the new legislative framework.

Process for creating Marine Mammal Sanctuaries under the Marine Mammal Protection Act 1978

56. Marine mammal sanctuaries are created through a legislative process. Subject to section 22 of the MMPA, the Minister of Conservation can create a sanctuary by Gazette notice. The Minister may in like manner, after considering any submissions in writing received within 28 days after the date of publication of a notice in the Gazette indicating their intention, vary, redefine, or abolish the sanctuary.

57. The timeframe for developing a marine mammal sanctuary depends on the length of policy development and the consultation process. With this in mind, a sanctuary could be developed in less than a year.

58. Creation of a marine mammal sanctuary requires the consent of other Ministers who control any Crown-owned land, foreshore, seabed, or waters of the sea within the proposed area. For example, the proposed sanctuary would require consent from:

- a) the Minister of Energy and Resources, due to the Petroleum Exploration Permits, Block Offers, and existing oil and gas operations in the proposed area;
- b) the Minister of Fisheries, due to commercial fishing quota allocated in the proposed area;
- c) the Minister of Transport, due to commercial shipping traffic which transits the proposed area; and
- d) the Minister for the Environment, due to responsibilities under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012.

59. Public consultation would need to be undertaken on the proposal, to inform decision-making.

60. In addition to creating the sanctuary as the Minister of Conservation you would also specify the activities that may or may not be engaged in within the sanctuary, and may impose restrictions in respect of the sanctuary.

61. Once Gazetted, marine mammal sanctuaries are managed by DOC.

Aligning the Sanctuary with the proposed Marine Protected Areas reform

62. In 2016, the previous Government consulted on MPA reform. These proposals included establishing different types of marine protected areas, including species-specific sanctuaries. Species-specific sanctuaries are similar to marine mammal sanctuaries but would be available to other marine life such as albatross or great white sharks, with rules focussed on the specific protection of that species.

⁴ The Te Rohe o Te Whānau Puha / Kaikōura Whale Sanctuary was part of a suite of tools and was created by special legislation.

63. If MPA reform is progressed, a sanctuary could be consulted on alongside further consultation on MPA reform, or developed once the reform is implemented, under the new framework.
64. Under the current proposals, the intent is for existing marine mammal sanctuaries to transition into the new framework as species-specific sanctuaries. For this reason, you could advance the development of a sanctuary under the MMPA without waiting for the reform process to be completed.

Next steps

65. Please advise officials if you would like further advice on the creation of a sanctuary in the South Taranaki Bight.
66. If you would like further analysis undertaken on the opinions of oceanographers and other experts on the likely impact of TTRL's proposed activities on marine mammal species, please advise officials on your timeframes for this advice.

Appendix: Relevant Maps

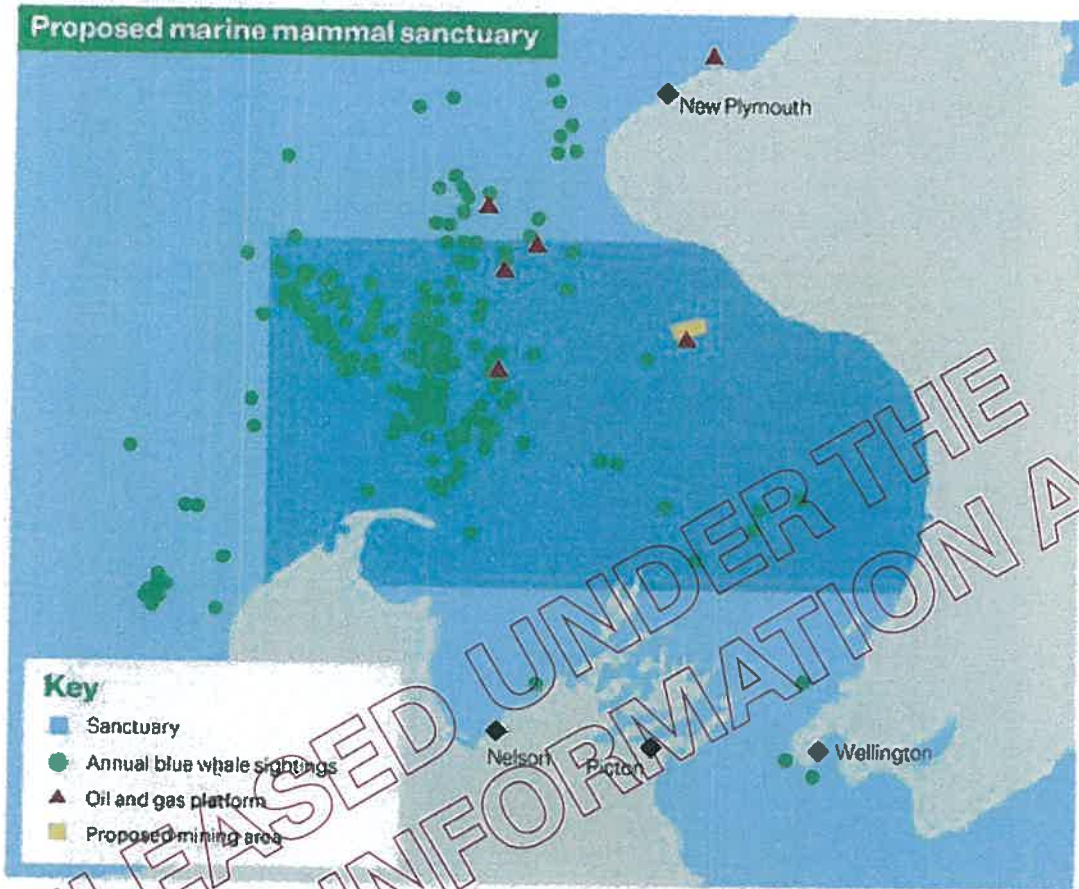
- Map One: Proposed marine mammal sanctuary in the South Taranaki Bight.
- Map Two: Block Offer 2017 Taranaki Offshore Release Area and the proposed Marine Mammal Sanctuary.
- Map Three: Petroleum and Minerals Permits in the South Taranaki Bight.
- Map Four: Petroleum permits in the South Taranaki Bight.

Contact for queries: Tim Bamford, Acting Manager – Marine Policy; 0275697343

ENDS

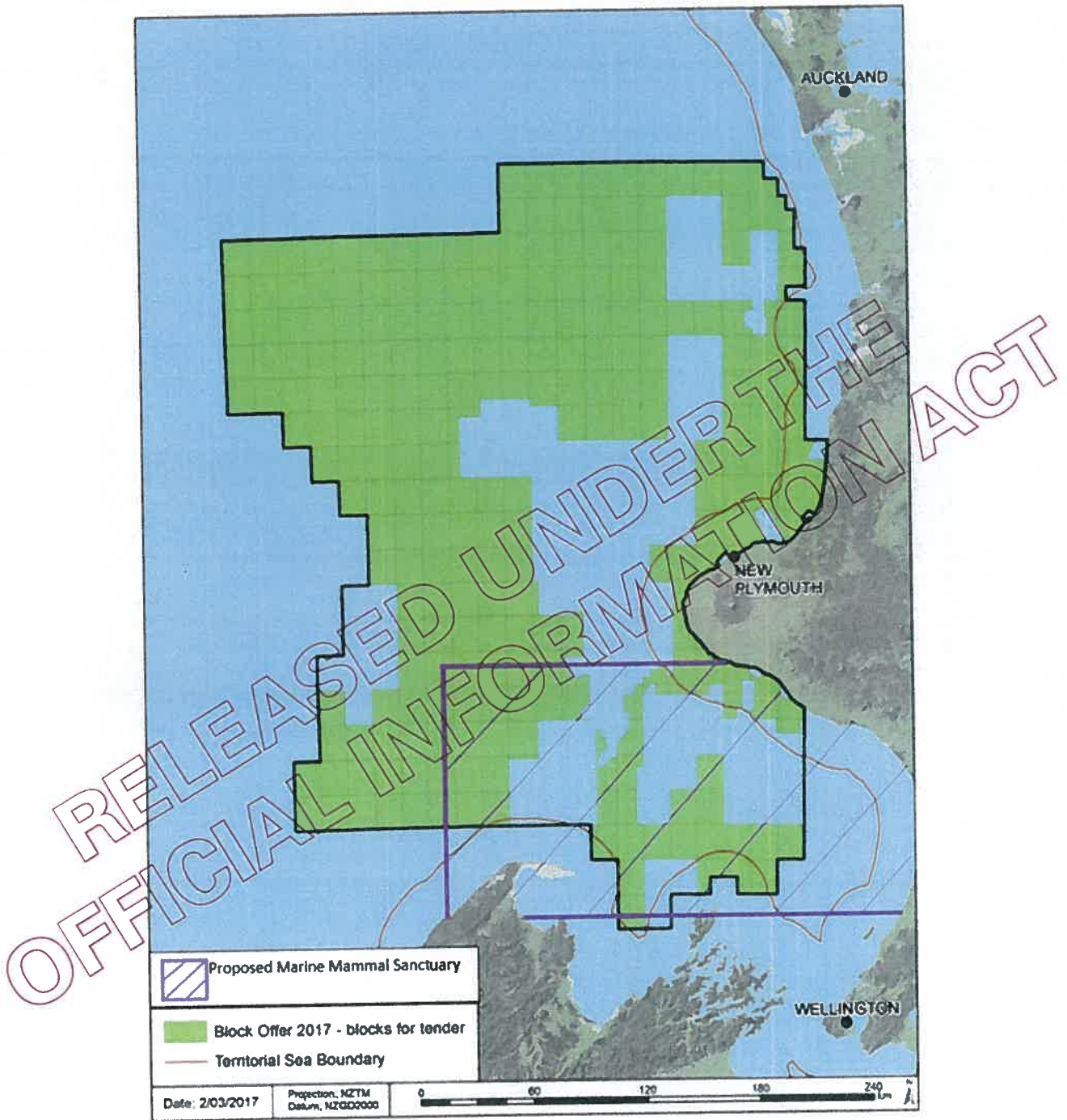
Appendix: Relevant Maps

Map One: Proposed marine mammal sanctuary in the South Taranaki Bight (source: the office of the Minister for Conservation)

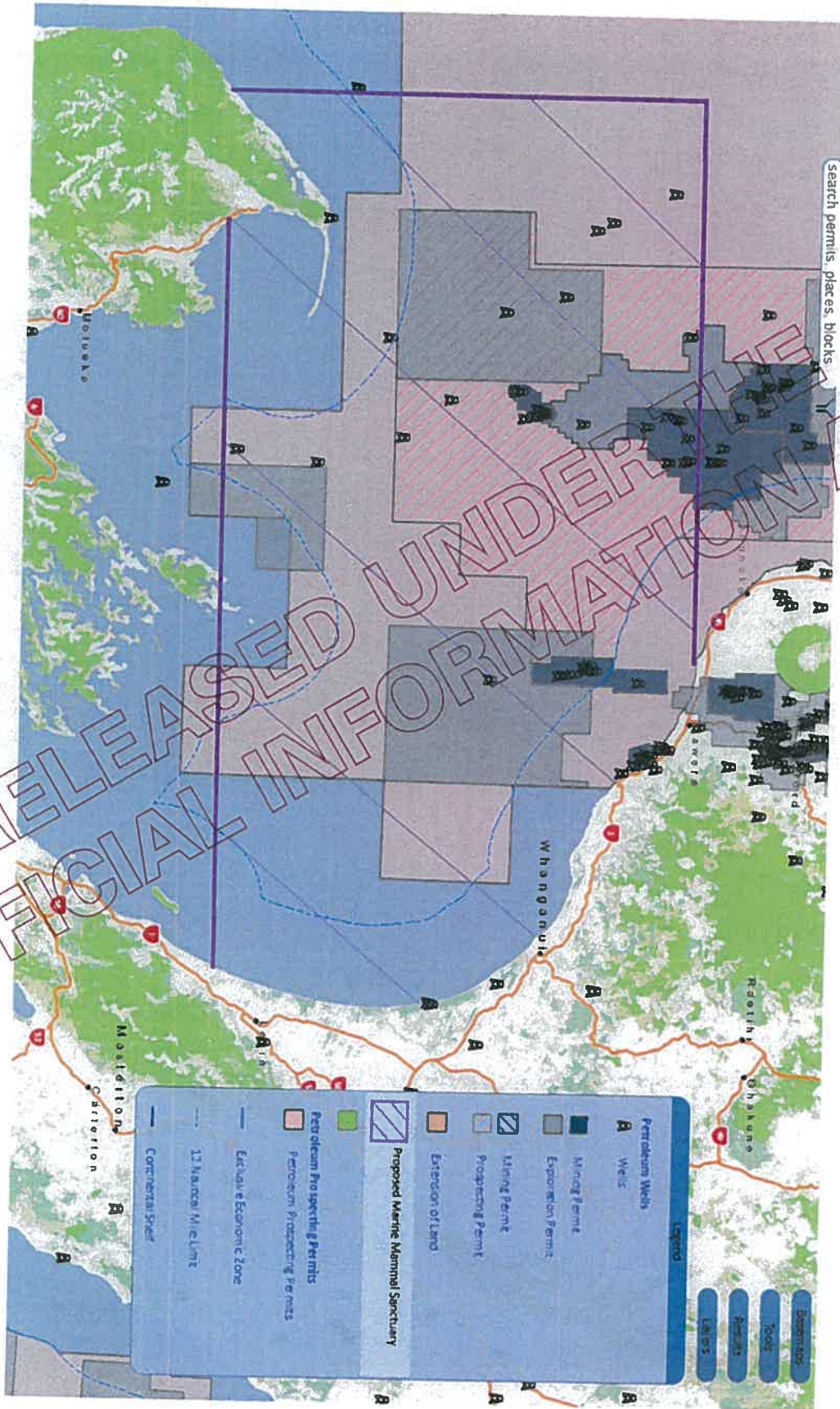


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Map Two: Block Offer 2017 Taranaki Offshore Release Area and the proposed Marine Mammal Sanctuary (source: <https://www.nzpam.govt.nz/permits/petroleum/block-offer/2017/release-areas/>, area of proposed sanctuary added by DOC)



Map Three: Petroleum and Minerals Permits in the South Taranaki Bight (source: screen shot from <http://data.nzpam.govt.nz/permitwebmaps?commodity=petroleum>, area of proposed sanctuary added by DOC)



Map Four: Petroleum permits in the South Taranaki Bight (source: screen shot from <http://data.nzpam.govt.nz/permitwebmaps?commodity=petroleum>)

Todd Exploration Management Services Ltd, in red, and Mont D'Or Resources Limited, next to d'Urville Island, both have seismic surveying requirements.

