

OFFSHORE DRILLING: SUMMARY OF ENVIRONMENTAL ASPECTS



You asked us:

- » What are the main environmental effects of an exploration drill process and how are they mitigated

ENVIRONMENTAL IMPACTS OF AN EXPLORATION DRILL

Drilling a well would involve either a rig or a drilling ship being anchored in position for approximately 7 weeks, with a single well being drilled approximately 20cm in diameter. Once complete the well would be filled with concrete and the vessel or rig deployed elsewhere.

Broadly speaking, the physical impact of an exploration well is similar to a ship's mooring, very low impact and short-term.

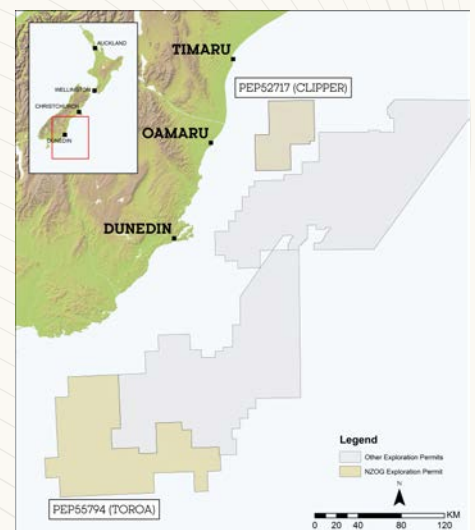
Our application to the Environmental Protection Authority [EPA] for approvals for exploration drilling will include extensive environmental analysis, which would be informed by widespread consultation.

The environmental impact assessment will consider each stage of the project, from rig or vessel installation and operation to drilling the exploration well itself, and the likely or potential impacts on the seabed, seawater quality, ecology and social values including effects on iwi and hapū cultural values.

The assessment will also consider impacts of potential unforeseen or unplanned potential activities [including potential accidental spills of fuel or loss of debris off a rig].

Typical environmental considerations for exploration drilling include:

- Deposit of material on the seabed affecting benthic communities – eg deposition from drilling or stabilisation of rig legs.
- Disturbance of the sea bed during placement and removal of structures for logistic activities eg anchors, jack-up rig feet.
- Increased turbidity and suspended sediments as result of seabed disturbance.
- Impact on commercial or recreational fisheries of physical structures and any exclusion zones.
- Impact to the mauri of the resource
- For unplanned or unforeseen activities: any localised impacts including any effect on water quality or ecology; direct impacts on marine fauna from hydrocarbons or chemicals; damage to benthic fauna; damage to property or risk to human health. [Unplanned events would be assessed in terms of the likelihood of an unplanned event occurring and the potential consequence on the environment and public health and safety].



¹ This list is not exhaustive.

ASSESSMENT OF EFFECTS

The common approach to assessing potential impacts is to consider the sensitivity of the resources being impacted, coupled with the magnitude of the impact to determine the overall significance, considering the nature, type, duration and scale of impact (both positive and negative), and whether impacts can be mitigated.

The regulator (ie the EPA, Regional or District Council) will consider mitigation options and apply conditions to an approval granted.

MITIGATION OPTIONS

The mitigation options will correspond to the assessment of the nature, type, duration and scale of the impacts identified in the environmental impact assessment.

Mitigation options could include:

- » Avoiding certain activities or replacing or reducing activities with greater impacts.
- » Applying restrictions on timing, duration or location of an activity.
- » Approving contingency/emergency plans and other mitigation controls including baseline monitoring requirements.
- » Requiring monitoring after the well has been drilled.
- » Requiring offsetting or achieving a net environmental benefit in relation to a specific impact.
- » Restoration of mauri as advised by Iwi with mana moana.

An application could be declined if the environmental impacts cannot be avoided or mitigated.

MORE INFORMATION

An example of a comparable impact assessment is Shell Taranaki's application in 2017 for marine consent and marine discharge consent to place and remove a jack-up rig and associated activities to assist its existing operations.¹

The application, assessments, decision and conditions, are available on the Environmental Protection Authority website www.epa.govt.nz

The assessment includes an example of a Cultural Values Impact assessment.

ECONOMIC AND SOCIAL BENEFITS

The economic and social benefits of a proposal would also be included in a consent application. These have not been discussed in this information sheet.

SEISMIC SURVEYS

Information about Seismic Surveys is included in our information sheet *Offshore Drilling: Effects on whales*.

More information is available on www.energymix.co.nz

¹ This is one of a series of high level information sheets developed in response to specific questions from the New Zealand Oil & Gas Southern Community Panel <http://southern.communitypanel.org.nz/>. It is intentionally high level and not intended to form part of an environmental impact assessment. Such an assessment will be undertaken as part of any regularity process required for the development of the Clipper permit.