Form 3: Initial environmental assessment and sensitive environments contingency plan

Regulation 11(c), Exclusive Economic Zone and Continental Shelf (Environmental Effects—Permitted Activities) Regulations 2013

How to use this form:
This form should be completed by organisations planning to carry out marine scientific research, prospecting, or exploration. It fulfils the initial environmental assessment and contingency plan requirements of Schedule 2 of the Exclusive Economic Zone and Continental Shelf (Environmental Effects – Permitted Activities) Regulations 2013.

This form must be provided to the Environmental Protection Authority (EPA) at least 5 working days before commencing the activity.

Note: Items marked in italics are non-compulsory fields; however, inclusion of this information will assist the EPA in processing this form.

Please note that this completed form, once received and processed by EPA, will be posted on the EPA website.

Submitting in hard copy:
If you wish to provide this form in hard copy, please post your completed form to: Environmental Protection Authority, Private Bag 63002, Wellington, 6140.

Submitting electronically:
If you wish to provide this form electronically, please email your form to: eez.compliance@epa.govt.nz

Any form submitted electronically should be attached to an email that sets out:

- The details of the person undertaking the permitted activity (the operator);
- The name of the person supplying the completed form; and
- A statement that the person is authorised to supply the form on behalf of the operator.

Note: there is an 8 MB limit on electronic files submitted via email.
Operation name:
Name used by operator to reference the activity described in this form: Bay of Plenty Volcanics

Details of person undertaking permitted activity

<table>
<thead>
<tr>
<th>Company name:</th>
<th>National Institute of Water and Atmospheric Research (NIWA)</th>
</tr>
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<tbody>
<tr>
<td>Contact person:</td>
<td></td>
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<tr>
<td>Phone number:</td>
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<tr>
<td>Mobile number:</td>
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<td>Fax number:</td>
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<tr>
<td>Physical address:</td>
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<tr>
<td>Postal address (if different):</td>
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<td>Email address:</td>
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</tbody>
</table>

General description of permitted activity

Type of activity:
(e.g. marine scientific research, prospecting)


The voyage aim is to investigate magmatic and tectonic processes affecting the Bay of Plenty - southern Havre Trough region to assess volcanic risk in the region.

Description of methods to be used to undertake the activity:

The voyage will result in a collection of datasets including bathymetric, gravity and magnetic, geophysical data and rock dredge and marine core sampling.

Seafloor sampling will be conducted using rock dredges (~30), which have a typical footprint area of 100-200 m² for hard or rocky sediment. Marine core sampling will also be conducted using a piston core system which comprises a trigger assembly, coring weight assembly (core head), core barrels, catcher and piston. Coring results in a 7cm diameter sample.

Location of permitted activity

Co-ordinates of area where activity will be undertaken:
(latitude and longitude)

The survey area includes the Bay of Plenty and the southern Kermadec Arc – Havre Trough north to 32 S.
Sampling will not occur in Benthic Protected Areas, and seamount closures and marine reserves will be avoided.

The survey areas is encompassed by the following latitude and longitude box.

32S, 176E; 32S 179W
37.9S, 176E; 37.9S 179W.

Description of the current state of the area and the surrounding environment, including any known sensitive environments:

This region is part of a rift region that is subject to volcanism and seismic activity. Although extensive swath mapping has occurred in the region, samples of the seafloor are sparse. A large number of volcanic features (small cones, rifts and possible caldera structures) occur in the region but little is known of their composition. As such the volcanic risk these features pose is unknown. Volcanic features will be targeted for dredge sampling and marine cores will be taken in nearby soft sediments to further our understanding of the volcanic history of this region.

There have been several targeted surveys for biological sampling in this broad region, consequently records of benthic invertebrates from NIWA’s database indicate upwards of 1000 records of invertebrates proximal or within this survey area, however many of these records come from specific targeted sites, none of which will be sampled during this survey. Among the taxa recorded are species of stony coral, sponges, sea pens and byrozoa. When environmental conditions are suitable, certain species can form densities that are considered “sensitive environments”. However, it is unknown whether densities sufficient to satisfy the definition of such sensitive environment occurs. Should sampling indicate the presence of sensitive environments, the sampling plan will be redesigned to avoid further contact with these environments.

Description of the likely effects of the activity on the environment:

Rock dredging will collect surface samples from the seafloor. The total volume per dredge deployment will be less than 0.5 m³ and most will be substantially less. We expect to conduct ~30 dredge deployments, nearly all in the Bay of Plenty on volcanic features, thus impacting less than 0.006 km².
Core sampling will be conducted throughout the area, coring results in a 7cm diameter sample. It is envisaged that up to 25 cores will be obtained thus impacting less than 1 m².

If sensitive marine fauna is identified during sampling activities, sampling will stop at that location.

Identification of sensitive environments

**Describe any sensitive environments likely to exist in the area where the activity will be undertaken:**

There have been several targeted surveys for biological sampling in this broad region, consequently records of benthic invertebrates from NIWA’s database indicate upwards of 1000 records of invertebrates proximal or within this survey area, however many of these records come from specific targeted sites, none of which will be sampled during this survey. Among the taxa recorded are species of stony coral, sponges, sea pens and byrozoa. When environmental conditions are suitable, certain species can form densities that are considered “sensitive environments”. However, it is unknown whether densities sufficient to satisfy the definition of such sensitive environment occurs. Should sampling indicate the presence of sensitive environments, the sampling plan will be redesigned to avoid further contact with these environments.
## Contingency plan

Specify measures that could be taken to avoid, remedy, or mitigate the adverse effects of the activity on sensitive environments:

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>a) Can the activity be undertaken in another place?</td>
<td>Yes</td>
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<tr>
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<td><strong>Explain:</strong> Should sampling at a specific site indicate the presence of sensitive environments, the sampling plan will be redesigned to avoid further contact with environments at that site.</td>
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<tr>
<td>b) Can the activity be undertaken in a way that reduces the amount of contact with the seabed?</td>
<td>No*</td>
</tr>
<tr>
<td></td>
<td><strong>Explain:</strong> Methods used are required for the research collections, however if sensitive marine fauna is identified during sampling activities, sampling will stop at that location.</td>
</tr>
<tr>
<td>c) Can different methods be used in undertaking the activity to lessen its effects on the sensitive environment?</td>
<td>No*</td>
</tr>
<tr>
<td></td>
<td><strong>Explain:</strong> Methods used are required for the research collections, however if sensitive marine fauna is identified during sampling activities, sampling will stop at that location.</td>
</tr>
<tr>
<td>d) Can the activity be undertaken in a way that lessens its effects in the sensitive environment?</td>
<td>No*</td>
</tr>
<tr>
<td></td>
<td><strong>Explain:</strong> Should sampling indicate the presence of sensitive environments, the sampling plan will be redesigned to avoid further contact with these environments.</td>
</tr>
</tbody>
</table>

* Select one

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5th October 2015

**Signature of authorised contact person**

**Date**

**Name:** 

**Title:** 

**Note:** A signature is not required for electronic (email) forms.