Form 1: Pre-activity notice

Regulation 11(a), 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 a permitted activity (except seismic survey) as defined in the Exclusive Economic Zone and Continental Shelf (Environmental Effects-Permitted Activities) Regulations 2013. It fulfils, in part, the pre-activity requirements of Schedule 1 of the Regulations.

This form must be provided to the Environmental Protection Authority (EPA) at least 40 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.

All forms prescribed by the Exclusive Economic Zone and Continental Shelf (Environmental Effects – Permitted Activities) Regulations 2013, as well as suggested templates for providing other information, may be viewed and downloaded from our website at www.epa.govt.nz or requested by contacting us:

Private Bag 63002, Wellington, 6140
Email info@epa.govt.nz
Ph +64 4 916 2426
Fax +64 4 914 0433
Operation name:

Name used by operator to reference the activity described in this form: Madden Seafloor Sampling Programme, East Coast, North Island

Details of person undertaking permitted activity

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

Fax number:  
Postcode:  
Postal address (if different):  
Postcode:  

General description of permitted activity

Type of activity:  
(e.g. Marine scientific research, prospecting)  
Seafloor Sampling Program, consisting of seafloor sampling (piston coring).

NIWA’s vessel RV Tangaroa is being engaged by Fugro-BTW Ltd to conduct a seafloor sampling programme during the austral spring of 2015.

Description of methods to be used to undertake the activity:

This voyage proposes to use a piston core system, which is designed to collect sediment core samples of the sea floor.

Piston core systems comprise a trigger assembly, coring weight assembly (core head), core barrels, catcher and piston. The piston corer is lowered over the side of the vessel and allowed to free fall under its own weight from about 3 m above the seafloor to allow good penetration into the sediment. Generally the mechanical action of coring is as follows: the trigger weight hits the bottom, relieving the weight on the trigger arm to release the corer to "free-fall" the ~3 m distance to the seafloor floor. The core barrel penetrates into the sediment. The movement of the core barrel around the piston creates a vacuum immediately over the sediment-water interface, expelling the head of water in the core barrel as the core descends and aids sediment penetration. Coring results in a 7 cm diameter core sample.

Up to 60 core samples could be conducted, across a range of water depths, up to ~2500 m. No equipment will be left behind on the seafloor.

A picture of NIWA’s sediment piston coring system is below:
### Timing of permitted activity

<table>
<thead>
<tr>
<th><strong>Proposed commencement date:</strong></th>
<th>From 28th October</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Approximate duration of activity (in days):</strong></td>
<td>Approximately 7 days within the period of 28th October to 4th December</td>
</tr>
<tr>
<td><strong>Timetable:</strong></td>
<td>Activities are weather dependant and the activity order and timing throughout the survey cannot be determined in advance. However, planned coring activities will be scheduled across the full survey time.</td>
</tr>
</tbody>
</table>

### Location of permitted activity

| **Co-ordinates of area where activity will be undertaken:** (latitude and longitude) | The survey will be conducted offshore the East Coast of New Zealand, with the survey area (below) encompassed by the following latitude and longitude box (red outline):
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>39°46.8 S, 177°16.6 E</td>
</tr>
<tr>
<td></td>
<td>39°50.0 S, 178°18.8 E</td>
</tr>
<tr>
<td></td>
<td>40°58.2 S, 176°16.4 E</td>
</tr>
<tr>
<td></td>
<td>41°22.3 S, 177°03.2 E</td>
</tr>
</tbody>
</table>
Description of the current state of the area and the surrounding environment, including any known sensitive environments:

This region of offshore New Zealand has been the focus of a number of mapping surveys and consequently NIWA has access to almost 100% coverage multibeam echosounder data which results in high resolution bathymetry and backscatter data (i.e. the depth and nature of the seafloor). In this region the New Zealand landmass is rimmed by a sloping shelf margin that extends from the coast to ~150m water depth. The survey area extends downslope from the shelf break about 15 km offshore and in about 200 m water depth, to the middle continental slope lying variably in about 1000 m (north) to 2000 m (south) water depth. The sediment covered slope dips regionally about 1° to the east, but there are considerable variations in gradient across a series of progressively deepening slope basins and ridges, which owe their origin to subduction processes.

In addition, within NIWA’s archive there are over 250 benthic stations from the specific area of the sampling program. These include ~500 biological records of seafloor fauna within the survey area. If environmental conditions are suitable, certain species may occur in densities that are considered “sensitive environments”. Three types of potential sensitive marine habitat are known to be present in this region: (1) cold seep chemoautotrophic communities; (2) stony coral thickets or reefs; and (3) sea pen populations. However, it is unknown whether they occur in 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 minimise and, wherever possible, avoid further contact with these environments.

Description of the likely effects of the activity on the environment:
No equipment used for sediment sampling will remain on the seabed.
Core sampling will be conducted throughout the area, coring results in a 7cm diameter sample. It is envisaged that up to 60 cores could be obtained, impacting less than 1 m² (~0.3 m²) of the seafloor in total.

**Other information**

<table>
<thead>
<tr>
<th>Name of ship involved in activity:</th>
<th>RV Tangaroa</th>
</tr>
</thead>
<tbody>
<tr>
<td>International call sign or vessel number of the ship:</td>
<td>ZMFR Tangaroa, IMO 9011571</td>
</tr>
<tr>
<td>Associated licence number (under the Continental Shelf Act 1964):</td>
<td>PEP57073</td>
</tr>
<tr>
<td>Associated permit number (under the Crown Minerals Act 1991):</td>
<td>PEP57073</td>
</tr>
</tbody>
</table>

25 August 2015

**Signature of authorised contact person**

Name: [Redacted]
Title: [Redacted]

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