Permitted activities: Post-activity report

Form 4 of Schedule 5 of the Exclusive Economic Zone and Continental Shelf (Environmental Effects – Permitted Activities) Regulations 2013

How to use this form: This form should be completed by people who have carried out a permitted activity (other than seismic surveying) in accordance with regulation 5, 6 or 8 of the Exclusive Economic Zone and Continental Shelf (Environmental Effects – Permitted Activities) Regulations 2013 (PA Regulations 2013). This form fulfils the post-activity report requirements of Schedule 4 of the PA Regulations 2013.

Timeframe: You must provide this form to the Environmental Protection Authority (EPA) within 60 working days of completing the activity.

Note: Items marked in italics are not compulsory; however, including this information will help the EPA process the form.

This completed form, once received and processed by the EPA, will be posted on the EPA website.

Submitting in hard copy: If you wish to provide the completed form in hard copy, post it to Environmental Protection Authority, Private Bag 63002, Wellington 6140 or fax it to +64 4 914 0433.

Submitting electronically: If you wish to provide the completed form electronically, email it to permitted.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
- a statement that the person is authorised to supply the form on behalf of the operator.

Note: The EPA has an 8 MB limit on electronic files submitted by email.

You can find and download all forms prescribed by the PA Regulations 2013, as well as suggested templates for providing other information, on our website at www.epa.govt.nz or request them from us by contacting:

Environmental Protection Authority,
Private Bag 63002, Wellington 6140
Email permitted.compliance@epa.govt.nz

Phone +64 4 916 2426
Fax +64 4 914 0433
Operation name:
Name used by operator to reference the activity described in this form: Canterbury Hydrogeology

Activity code:
Code given to you by the EPA after submitting the pre-activity notice: NIWPA32

Details of the person undertaking the permitted activity

| Name of company, organisation or person: | National Institute of Water and Atmospheric Research (NIWA) |
| Contact person: | 
| Phone number: | 
| Mobile number: | 
| Physical address: | 
| Fax number: | 
| Postal address (if different): | 
| Postcode: | 
| Email address: | 

Description of permitted activity

Type of activity:

| Marine scientific research | ☒ | Alteration, extension or removal of a permitted marine structure | 
| Prospecting | ☐ | Discharge of sediments from iron sand prospecting and exploration | 
| Exploration | ☐ | Incidental discharge of sediments from phosphate nodule or placer gold prospecting and exploration | 
| Placement or removal of submarine cables | ☐ | Discharge of sediments from seafloor massive sulphide prospecting and exploration | 

Period during which activity was undertaken: 9-28 April 2017

Location of the permitted activity

Co-ordinates of area where the activity was undertaken:
(Provide four sets of co-ordinates in latitude and longitude or submit a shape file or KML/KMZ file.)

| Set 1 | -41.957162, 173.989028 |
| Set 2 | -43.081194, 175.792855 |
| Set 3 | -45.392273, 170.014068 |
Details of the environment of the area where the activity was undertaken

Describe the environment:

This region offshore the coasts of Otago and Canterbury has received scientific sampling in the past for geology, biology, and physical oceanography. From these scientific surveys, NIWA has data for seabed topography, sediments, and fauna which can be used to broadly characterise the environment, and identify sensitive environments. The study area includes continental shelf and slope and contains a number of submarine canyons. Many types of seabed substratum are known to exist across the area, but muddy substratum is expected to be the dominant type.

There are thirteen "sensitive environments" listed in the regulations for Permitted Activities under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act. Two of these (macro-algae beds, Rhodolith (maerl) beds) typically occur shallower than the water depths of the study area, and therefore are very unlikely to be encountered during the survey. Another sensitive environment (deep-sea hydrothermal vents) occurs only to the north of New Zealand, and thus outside of the study area. Records
for taxa that are the constituents of sensitive environments exist in NIWA databases (stony coral thickets or reefs, Xenophyophores (sessile protozoan), calcareous tube worm thickets, sea pen fields, sponge gardens, beds of large bivalve molluscs). However, there are no corresponding abundance data that confirm that these taxa occur at densities that classify them as sensitive environments. Records exist for taxa that the presence alone in a single sample indicates the occurrence of 2 sensitive environments in the study area; brachiopods, and methane or cold seeps. A further 2 sensitive environments, bryozoan thickets and chaetopteridae worm fields, have been confirmed by visual surveys to occur in the study area (Jones et al. in review). Data available to NIWA for these 4 sensitive environments will used to avoid disturbing these habitats where they are known to occur within the study area. Should core sampling or the recovery of the CSEM sledge (pig) indicate the presence of potentially sensitive environments, the sampling plan will be redesigned to avoid physical contact with these environments.

The activity was primarily carried out on the continental shelf. Four core sites were on the continental slope. The shelf environment comprised a mix of mud sand and gravel. The continental slope was composed of mud.

**Describe any sensitive environment that was encountered in the area where the activity was undertaken:**

No sensitive environments were encountered during this activity
Environmental footprint of the activity

<table>
<thead>
<tr>
<th>Estimate of the volume of material removed:</th>
<th>0.02 m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate of the areas of seabed affected by each component of, or sample taken as part of, the activity (m²):</td>
<td>14 cores were completed within the area impacting 0.035 m² of the seafloor. 223.4 km of CSEM transects were completed within the area impacting approximately 111,710 m² of the seafloor.</td>
</tr>
</tbody>
</table>

Details of measures taken to avoid, mitigate or remedy adverse effects on the sensitive environment

Did you implement the contingency plan submitted to the EPA?  
☐ Yes ☒ No  
**Explain:** This was not necessary as no sensitive environments were encountered.

Provide details of, and the reasons for, the measures taken to avoid, mitigate or remedy the effects of the activity:  
NA

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30/4/2017

Signature of authorised contact person

**Name:** [Redacted]  
**Title:** [Redacted]  

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