

**ASSESSMENT OF ENVIRONMENTAL EFFECTS
FOR NON-MINIMUM IMPACT ACTIVITIES
UNDER THE CROWN MINERALS ACT 1991**

Information Required in Support of an Application Under
Section 59 of the Crown Minerals Act 1991 for an Access Arrangement
to Conduct Non-Minimum Impact Activities Pursuant to Section 61 of that Act.

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1 Introduction

These guidelines are to give you an indication of the information you should provide when applying to gain access under the Crown Minerals Act 1991 to undertake non-minimum impact activities on public conservation land.

1.1 What should my application contain?

No matter how large or small the proposed activity is going to be, the following information should always be contained in an application:

- Permit Details
- Contact Details
- A description of the land affected including location and land tenure; providing maps, photos and plans where appropriate
- The purpose for which the access arrangement is required
- The proposed programme of work including the type and duration of work to be carried out
- An Assessment of Environmental Effects (AEE) including:
 - details of natural and social conservation values on the land affected
 - the likely adverse effects on the land, including affects on natural and social conservation values
 - compensation and safeguards against any likely adverse effects proposed
- Details of any resource consents required for the proposed activity

Inadequate information may result in delays in processing your application and processing costs could increase.

If you are not confident that you can produce a complete application, serious consideration should be given to contracting out the work to someone such as a technical consultant who is familiar with all aspects of the area in question, the methodology to be employed during operations, likely environmental impacts and mitigating measures that can be employed to minimise such effects.

1.2 Why an AEE?

The Department of Conservation's role is to conserve New Zealand's natural and historic heritage and provide for public use and access. An Assessment of Environmental Effects (AEE) is required to help determine what effects your proposed activity will have on these conservation values.

It is important for you to complete an AEE to identify the environmental issues surrounding your proposal and allow you to propose ways to minimise the effects that your activities may have on conservation values and the greater environment.

An AEE is one of the tools used by the Department when considering whether to allow you access to public conservation land. If the recommendation is to grant access, the AEE will inform and guide what type of restrictions or conditions the Department should impose, in order to minimize the effects your proposal may have on the environment.

1.3 How much detail is required?

The detail and size of your AEE should reflect the scale of your proposed activity. Your AEE should provide enough detail for the Department to assess the effects the activity is going to have on the environment.

We strongly recommend that you have a pre-application meeting with Departmental staff and this will help you determine the level of detail required in your application and the scope of effects the proposed activity may have on conservation values in the area. During this meeting other important aspects of the access arrangement process will be explained such as our policy on cost recovery, compensation

requirements and relevant sections of legislation that will help guide the process (Crown Minerals Act 1991, Conservation Act 1987 etc).

2 The Application

The following information provides general guidelines on what type of information to provide when applying for access to conduct non-minimum impact activities on public conservation land.

2.1 Location

You should provide the following in order to accurately define and illustrate the area of interest:

- A topographical map showing the location of the area with relation to neighbouring properties and regions
- A certified land status schedule obtained from Land Information New Zealand, together with a legal description
- A detailed map, plan, drawing or aerial photograph of the application area showing topography, water courses, physical features, vegetation, land use, rights of way and any special features
- A series of photographs showing the application area from a number of representative viewpoints

2.2 Proposed Non Minimum Impact Activities

This section is a guide to what information the applicant should provide when describing the proposed activity. The scale of your activities will determine the level of detail required here.

2.2.1 Proposal

A summary of what you are proposing to do under this application. It may be useful to explain what your objective is and what the next stage of work might be if the proposed activities yield encouraging results.

2.2.2 Access

Proposals

Describe fully and illustrate on a site plan, all types of access required for personnel, plant, equipment and materials to and from the application area, including:

- Any access roads existing or to be constructed.
- Helicopter landing pads.
- Personnel tracks and pathways.

Indicate what type of vehicles and transport systems will be employed, frequency of operation and state what the access requirements are, eg 24 hour, all weather or on a more infrequent or weather dependent basis.

Show detailed proposals for construction of the above or upgrading of existing facilities and indicate what type and size of plant is to be used during such work.

2.2.3 Services

Proposals

List in detail and illustrate on a site plan all services present in the area and any proposed services that may be installed for the proposed activity. These may include:

- Power lines - state voltage and means of support, width of access corridor etc. - if power is to be generated on site, state size and type of generators, and show their proposed location on a site plan

- Water mains - state pressure, source and size - indicate depth of burial or means of support if above ground - see also separate section on water management
- Compressed air - show site of compressors and route and size of all lines -Indicate working pressure.
- Aerial masts and towers for any RF communications etc.

In all cases, show how it is proposed to install the services and by whom they shall be installed. Indicate means of plant access to install power poles / dig trenches etc.

2.2.4 Accommodation

Proposals

Give detail if temporary or semi-permanent work camps are to be established for any stage of the proposed work, stating size, location, duration of occupation and the number of people occupying any such accommodation facility. Detail any other amenities and facilities to be constructed as part of any work camp. In particular, describe the proposed means of dealing with sewage, foul water and refuse from the camp(s).

A concession (under the Conservation Act 1987) may be required if the accommodation is not deemed to be directly related to the proposed activity.

Show the positions of the above on a site plan.

2.2.5 Surface Structures

Proposals

On a site plan, clearly indicate the proposed extents and number of any temporary or semi-permanent offices, workshops or other buildings. For each structure, show:

- Size and type
- Nature of intended use
- Proposed duration of existence
- Services required within (power, phone, water etc.)

2.2.6 Water Management

Proposals

Describe in detail the provisions for water management under the following headings:

Existing Hydraulic Environment

Detail all impacts on natural water courses and bodies due to the implementation of the proposal. Show any diversions, bunds, stopbanks etc to be constructed to prevent compromise of the natural aquatic environment. Detail work area surface drainage and show how any contamination is to be prevented from entering natural water courses directly without treatment.

Water Supply

Give full details of the following:

- Quantity required.
- Type i.e.: potable or 'grey'
- Source i.e.: municipal main, reservoir, creek, borehole etc.
- Effects of removing water on the source, especially during low flow or drought conditions
- Effects of installing equipment in watercourses
- Effects of the above on other water users - detail who the other users are
- Type and size of any pumping equipment
- Any impoundment structures to be constructed
- Any disturbance which may be caused to the banks or bed of the watercourse

Water Use

Describe the use of water with regard to the proposal. In particular detail:

- Uses in the activities themselves and elsewhere
- Any methods of recycling
- Contamination details, i.e.: silt, clay, sand, other particulates, chemicals, pH, heat, discolouration
- Methods to be used to prevent contaminated and clean water being mixed
- Details of remediation and treatment of water, such as settlement ponds / tanks, chemical admixtures, flocculants, on-land disposal

Detail how periodic processes such as sump cleaning and desilting shall be dealt with in regard to water management and cleanliness. Procedures should be in place to prevent such activities creating an unacceptable sediment load in the discharged water.

Water Disposal

Detail the proposals for efficient and harmless discharge of water from the site. Show:

- Volumes (litres per sec. etc.)
- Frequency
- Duration
- Quality, pH, levels of suspended solids etc.
- Effects of addition to existing water courses
- Contingencies in the event of freezing, delivery pipe blockage etc.
- How sewage from temporary accommodation units, offices etc is to be dealt with

Describe measures to be put in place to ensure that drill flush water will be reticulated and / or cleaned before discharge to the environment.

Maori Interests (See section 3.4)

If the use of water in the proposal affects in any way the interests of Maori, detail procedures and / or agreements and negotiations entered into in order to mitigate these effects.

River Use

Where the activities are to be carried out directly in a river or other natural body of water detail the following:

- The methods to be used for construction / delivery of all equipment to site
- Mooring / movement methods
- Anchoring procedures and position control
- Emergency flood contingencies
- Sampling method
- Founding considerations for any heavy riverside plant
- Discharge of spoil to the river.
- Water uptake.
- Power supply.

2.2.7 Waste Processing

Proposals

Describe in detail the provisions for waste management, both for rock arisings and general rubbish, in terms of both on and off site disposal. Include:

- Transport arrangements
- Disposal locations
- Frequency of movements

2.2.8 Consents

Detail of any consents required and applied for from both the relevant district council and the West Coast Regional Council.

3 The Assessment of Environmental Effects

This section gives guidance on the type of information you should provide when preparing your AEE. Depending on the scale and scope of the proposed activities, and the nature of the environmental values in the area to be affected, the applicant may need to engage specific expertise to provide the information required by the Department. If unsure, this can be discussed with the Department during the pre-application meeting.

3.1 Existing Natural Environment

3.1.1 Landscape

Provide a detailed description of the topography of the zone of interest and surrounding area. Show all major physical features, relief, water courses and bodies of water. Clearly show on a plan of the area all different landforms present. Make an assessment of approximate percentages of the different types; i.e.: 20 % braided river bed, 5 % scree, 40 % open mountainside above tree line etc.

- Include a broad assessment of geology and soil types and drainage patterns
- Give a description of seasonal weather patterns, particularly: historical levels of precipitation and both mean and extremes of summer and winter temperatures

3.1.2 Nature Conservation Values and Biodiversity

Floral Assessment

Give a description of the major types of vegetation found in, and adjacent to, the application area. Depict the variation on a map of the site.

Each vegetation unit should be annotated as follows:

- Approximate area
- Name of predominant species
- Any previous use within area
- Extent, if any, of modification of area
- Any known endangered species present
- Known presence of a species at the edge of their natural range

Faunal Assessment

Provide a list of wild animals present in, and adjacent to, the application area. This should include:

- Bird species and number observed
- Known native fish, invertebrate species and other aquatic fauna in any waterways
- Known presence of endangered species
- Known breeding / spawning ground for any species

Habitat Assessment

Give a broad outline of the key habitat characteristics present within the application area:

- Is the area part of a larger natural environment or does it form an isolated pocket within a modified landscape
- Provide an indication of the extent to which introduced species are present
- Show the presence and extent of any natural waterways, wetlands, dune systems or tidal estuaries
- Indicate whether the application area is currently, or has been, the subject of scientific or ecological study with relation to bio-diversity and natural habitat

3.2 Archaeological and Historic Sites

If there are any sites of historical and archaeological interest within the application area an archaeological assessment from a qualified archaeologist will be required. In some cases an archaeological survey may be required to determine whether there are any historic sites in the area. In cases where historic sites are identified, outline measures to be undertaken to avoid or mitigate disturbance of such sites.

3.3 Social Environment

3.3.1 Existing Landscape and Scenic Qualities

Describe in detail the landscape of the area, with particular reference to the following:

- Historical modification of the existing natural environment
- Proximity of proposed activity to roads, tracks, pathways and routes

3.3.2 Use of the Area by Visitors

Provide details of existing land use by visiting members of the public, both as private individuals and as part of commercial tourist activities. In particular:

- List all existing recreational amenities in the area covered by the application, such as huts, tracks, bridges, car parks and picnic sites
- Detail all recreational activities undertaken within, and adjacent to, the application area - these should include tramping, hunting, fishing etc. and any recreational or tourist businesses such as guiding, transport or accommodation

3.3.3 Noise Considerations

If machinery is to be used as part of the applicant's activities, describe the following associated with existing noise within the area of interest:

- Existing noise levels within the area of interest
- The source(s) of any existing noise
- Frequency and duration of any existing noise

3.4 Tangata Whenua

With reference to any application for access on public conservation land it is necessary to consult with the relevant iwi. It is not adequate simply to inform iwi of your application.

Please provide evidence of this consultation with each group and details of its outcome.

Once consultation has taken place you should have an idea of any Maori interest in the land or water within, or adjacent to, the application area, particularly:

- Any known sacred or spiritual sites
- Sites of historical occupancy, Pa etc.
- Traditional food gathering areas etc.

If the application is likely to compromise any Maori interest in the water contained in the application area a full and detailed description of all effects and mitigating measures is required.

3.5 Disturbance of Existing Environments

3.5.1 Effects

Describe any potential adverse or positive effects which the proposed activities outlined in section 2.2 may have on natural, historic and cultural resources, and on recreational activities detailed previously in this section. Describe these for each subsection heading 2.2.2 to 2.2.7 inclusive.

The above must specifically indicate whether the proposal is likely to cause any of the following:

- Increased fire risk
- Introduction of noxious weeds
- Visual intrusion
- Dust and airborne pollution
- Degeneration of vegetation
- Acid mine drainage
- Land subsidence

In each case, describe safeguards which will be put in place and what measures will be taken in order to mitigate any such effects.

3.5.2 Monitoring of Effects

Describe what onsite monitoring of the above effects you intend to undertake including details of:

- Location.
- Frequency.
- Reporting body.
- Relevant governing legislation and acceptable limits.
- Method of analysis.
- Any consultants employed and for what purpose.

The above should include (as a minimum):

- Discharge water turbidity, suspended solids and pH.
- Dust levels around any machinery.
- Floral and faunal impacts.
- Fish numbers.
- Noise levels.
- Blasting vibration and overpressures.
- Risk of Didymo

4 Reinstatement and Rehabilitation

The Department views rehabilitation (including residual water management) as a crucial component of any application.

A key thing to remember is that this is public conservation land and the state of that land once your operations have completed will help to determine future land management options for the public to use and enjoy.

Your proposed restoration should fit with the Department's long term vision for that general area, which can be found in each Conservancy's Conservation Management Strategy.

Detail all proposals for rehabilitation and reinstatement of the entire affected area upon cessation of the proposed activities. In particular:

- Show how reinstatement shall be carried out, and how environmental considerations are to be dealt with **during** the reinstatement works.
- Show where any additional topsoil is to be obtained from if stockpiled quantities prove to be insufficient.
- Detail how existing vegetation is to be regrown in the reinstatement area.
- Show how any affected watercourses are to be returned to their natural routes/states.
- Describe what if any of the infrastructure is to be left and for what purpose. In particular, give details of roadways and access routes which may be left open.

For full scale mining activities a rehabilitation plan will be required.

5 ***Glossary***

AEE	Assessment of Environmental Effects
Access Arrangement	Defined under Crown Minerals Act 1991, Part II(1)
Concession	Defined under the Conservation Act 1987, Part I
Minimum Impact Activities	As prescribed in the Crown Minerals Act 1991
Non-Minimum Impact Activities	Other than Minimum Impact Activities