

## APPENDIX D

### SITE ENVIRONMENTAL MANAGEMENT PLAN

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# 1. INTRODUCTION

## 1.1 Executive Summary

Dabyne Planning Pty Ltd has been engaged by Perisher Blue Pty Ltd (Perisher Blue) the operator of Perisher Ski Resort to prepare a Site Environmental Management Plan (SEMP) to accompany a Statement of Environmental Effects undertake tree and rock removal works to allow for both the widening and re-alignment of the Slopestyle Course on Front Valley, Perisher Ski Resort.

The proposed widening and re-alignment of the course will require the removal of forty-one (41) trees, two (2) rock outcrops and other selected rocks as well as 60m<sup>2</sup> of sub-alpine heath, which all currently form as islands between the southern edge of the current course and northern edge of the Sturt T-bar alignment.

The proposed works will also require the relocation of the three (3) existing light towers and three (3) fan guns to the southern edge of the proposed re-located course with laterals proposed to service the new fan gun locations. The existing hut located at the top of the course will be removed and an existing hut currently located at Blue Cow will be relocated to the site and situated towards the top of the course.

The proposal will also include an entrance feature to the top of the course, which will allow for condition of entry and risk warning signage to be attached and define the entrance to the course.

The proposed construction timing of the project has been scheduled to start in early March 2013 and be completed by the end of March 2013.

It is anticipated that the project will take approximately four weeks to complete, subject to favourable weather conditions.

## 1.2 SEMP Context

This SEMP is to be read in conjunction with:

- Statement of Environmental Effects prepared by Dabyne Planning, December 2012 (which this SEMP forms part of).
- Perisher Blue Ski Resort: Ski Slope Master Plan 2002 (PSSMP) which outlines best practice for development within the Resort.

The following construction practices identified in the PSSMP are relevant to the proposal, as follows:

- Movement on Tracks
- Movement off Tracks
- Planning and Design of erosion and sediment control works
- Sediment control
- Trench construction
- Topsoil Management

- Stockpile Management
- Disposal of surplus spoil and rock
- Protection of Trees
- Choice of plant species and revegetation
- Rehabilitation of well-drained areas
- Monitoring of revegetation
- Fencing and Protection of sensitive areas
- Washing of construction equipment

The guidelines for the above construction practices are contained within Appendix A of the PSSMP.

### **1.3 SEMP Objectives**

The objectives of this SEMP are to:

- ensure compliance with the requirements of all relevant environmental legislation;
- identify specific responsibilities for ensuring the safeguards are implemented;
- ensure that works are managed to reduce adverse impacts on the environment;
- ensure environmental safeguards are implemented correctly; and
- provide a basis for the auditing, monitoring and reporting of environmental performance.

## **2. ENVIRONMENTAL ACTIONS**

### **2.1 Environmental Actions**

The environmental actions required for the proposed works are listed in Table 1 below.

This table also provides the timeframe and frequency for the actions and subsequent monitoring, as well as the designation of responsibilities.

This provides a checklist for the efficient use by Contractors and relevant staff.

**Table 1 Environmental Actions Checklist**

**Flora**

<b>ACTION CHECKLIST</b>	<b>Who's Responsible</b>	<b>When to be undertaken</b>	<b>DONE (Initial/date)</b>
<b>PRIOR TO CONSTRUCTION</b>			
All site personnel shall observe the limits of the works area and be made aware of the importance of vegetation of significant value during the site induction.	Site Environmental Manager	Site Induction / Prior to Commencement / During Construction	
Identify individually threatened plants and sensitive areas during site induction.	Site Environmental Manager	Site Induction / Prior to Commencement	
Ensure sensitive areas are cordoned off (through fencing or taping) to prevent access for staff, contractors and machinery. This should include a rope on each side of the access corridor to ensure vehicles and machinery are contained.	Site Supervisor	Prior to Commencement	
<b>DURING CONSTRUCTION</b>			
To reduce the risk of further spread of weeds; machinery and vehicles used on site are to be thoroughly washed before entering Kosciuszko National Park; and footwear and equipment are to be washed prior to being utilised to ensure they area free of weed seeds.	Site Supervisor / Contractor	Prior to Park Entry	
<b>POST CONSTRUCTION</b>			
The site is to be progressively stabilised as works are completed.	Site Supervisor	Upon Completion	
The condition of rehabilitated areas shall be monitored seasonally until permanent vegetation cover is achieved.	Site Environmental Manager	Summer of 2013/14 and 2014/15	
Follow up weed control (spot spraying) is to be carried out if deemed necessary.	Site Environmental Manager	Summer of 2013/14 and 2014/15	

**Fauna**

<b>ACTION CHECKLIST</b>	<b>Who's Responsible</b>	<b>When to be undertaken</b>	<b>DONE (Initial/date)</b>
<b>DURING CONSTRUCTION</b>			
Accidental leakages and spillage of concrete, fuel or lubricant from machinery shall be dealt with by taking immediate measures to contain the spill.	Site Supervisor	During Construction	

<b>ACTION CHECKLIST</b>	<b>Who's Responsible</b>	<b>When to be undertaken</b>	<b>DONE (Initial/date)</b>
Any disturbed areas that are left open overnight are to be inspected early in the morning for trapped fauna. If fauna are found, sheets of hessian or similar are to be left in sections of the disturbed areas to assist escape.	Site Supervisor	At the Start of Each Day	
<b>POST CONSTRUCTION</b>			
Areas which have been disturbed are to be rehabilitated immediately following the completion of works.	Site Environmental Manager / Site Supervisor	Upon Completion	

### **Erosion and Sedimentation**

<b>ACTION CHECKLIST</b>	<b>Who's Responsible</b>	<b>When to be undertaken</b>	<b>DONE (Initial/date)</b>
<b>PRIOR TO CONSTRUCTION</b>			
Where areas are to be disturbed, temporary sediment control structures are to be implemented.	Site Environmental Manager / Site Supervisor	Prior to Commencement	
<b>DURING CONSTRUCTION</b>			
Wherever practicable, during the course of construction, exposed areas shall be provided with a cover to minimise erosion and sedimentation.	Site Supervisor	During Construction	
Erosion and sedimentation controls shall be monitored on a daily basis or immediately following a rainfall event.	Site Environmental Manager	Following Rainfall/ Daily	
Construction activities shall be programmed to minimise the area of disturbed ground that is exposed to erosion at any one time.	Site Supervisor	During Construction	
<b>POST CONSTRUCTION</b>			
All exposed soil areas shall be appropriately stabilised to prevent erosion.	Site Supervisor	During Construction / Prior to Rainfall	
All exposed soil areas shall be appropriately revegetated following stabilisation to prevent erosion.	Site Environmental Manager / Site Supervisor	Upon Completion	

### **Water Quality**

<b>ACTION CHECKLIST</b>	<b>Who's Responsible</b>	<b>When to be undertaken</b>	<b>DONE (Initial/date)</b>

<b>DURING CONSTRUCTION</b>		
Spills of any liquids shall not be hosed or flushed away but swept or collected.	Site Supervisor	During Construction
Equipment shall be properly maintained to prevent water pollution. All plant and equipment should be inspected daily to avoid leakage of fuel, oil or hydraulic fluid.	Site Supervisor	During Construction
No maintenance other than emergency repairs shall be undertaken on site.	Site Supervisor	During Construction
All plant/equipment shall be washed out in an appropriately protected area to prevent erosion and pollution to existing drains or natural areas.	Site Supervisor	During Construction
Spill kits shall be readily accessible.	Site Supervisor	Prior to Commencement

### Site Working Area

<b>ACTION CHECKLIST</b>	<b>Who's Responsible</b>	<b>When to be undertaken</b>	<b>DONE (Initial/date)</b>
<b>DURING CONSTRUCTION</b>			
All flammable and/or explosive materials shall be kept in an approved Workover area.	Site Supervisor	During Construction	
Ensure that access to the site is restricted to authorised personnel only.	Site Supervisor	During Construction	
Ensure site and associated plant and equipment is secured when site activities conclude at the end of the day.	Site Supervisor	End of Each Day	
<b>POST CONSTRUCTION</b>			
Upon completion of construction, the site working areas shall be removed, and the area reinstated as found originally.	Site Supervisor	Upon Completion	

### Air Quality

<b>ACTION CHECKLIST</b>	<b>Who's Responsible</b>	<b>When to be undertaken</b>	<b>DONE (Initial/date)</b>
<b>DURING CONSTRUCTION</b>			
Materials transported in open trucks shall be covered to prevent generation of dust.	Site Supervisor	During Construction	
The tailgates of all vehicles transporting material from the construction site shall be securely fixed prior to loading and immediately after unloading.	Site Supervisor	During Construction	
<b>POST CONSTRUCTION</b>			



<b>ACTION CHECKLIST</b>	<b>Who's Responsible</b>	<b>When to be undertaken</b>	<b>DONE (Initial/date)</b>
Areas no longer required for construction activity shall be progressively stabilised as soon as practicable to assist in controlling dust.	Site Supervisor	Upon Completion	

### **Fuel, Chemicals & Hazardous Material (Explosives)**

<b>ACTION CHECKLIST</b>	<b>Who's Responsible</b>	<b>When to be undertaken</b>	<b>DONE (Initial/date)</b>
<b>DURING CONSTRUCTION</b>			
A container of spill absorbent is to be made available and used for emergency spills of fuel, oil or other chemicals.	Site Supervisor	Prior to Commencement	
No fuel will be store on site.	Site Supervisor	During Construction	
<b>POST CONSTRUCTION</b>			
Any contaminated material (empty drums, rag, contaminated soil etc) shall be removed immediately from the site and disposed of in accordance with the appropriate regulations.	Site Supervisor	End of Each Day	

### **Plant and Equipment**

<b>ACTION CHECKLIST</b>	<b>Who's Responsible</b>	<b>When to be undertaken</b>	<b>DONE (Initial/date)</b>
<b>DURING CONSTRUCTION</b>			
All plant and equipment used on the subject site is to be placed in existing disturbed corridors to prevent minimal disturbance to the native vegetation.	Site Supervisor	Prior to Commencement / During Construction	
Emergency procedures shall be displayed in a prominent position in the site working area.	Site Supervisor	Prior to Commencement / During Construction	
<b>POST CONSTRUCTION</b>			
All work sites shall be restored in a satisfactory manner and where necessary in accordance with the appropriate regulations.	Site Supervisor/ Environmental Manager	Upon Completion	

### **Waste Management**

<b>ACTION CHECKLIST</b>	<b>Who's Responsible</b>	<b>When to be undertaken</b>	<b>DONE (Initial/date)</b>

<b>ACTION CHECKLIST</b>	<b>Who's Responsible</b>	<b>When to be undertaken</b>	<b>DONE (Initial/ date)</b>
<b>DURING CONSTRUCTION</b>			
All litter generated on site is to be placed in small garbage bags. At the end of each day, these bags are to be disposed of in appropriate bins.	Site Supervisor	End of Each Day	
A daily inspection shall be carried out to ensure the worksite is left in a rubbish free state.	Site Supervisor	End of Each Day	
All employees shall be informed of the need to maintain a clean worksite.	Site Supervisor	Prior to Commencement / During Construction	
Any excess spoil is to be removed from the site and deposited at the Smiggin Holes stockpile site.	Site Supervisor	During Construction	
All loads of rubbish removed shall be securely covered to ensure no spillage.	Site Supervisor	During Construction	
To the furthest extent possible, efforts shall be made to reduce, reuse and recycle materials used onsite.	Site Supervisor	During Construction	
<b>POST CONSTRUCTION</b>			
The worksite shall be left in a tidy and rubbish free state upon completion of the Project.	Project Manager	Upon Completion	

### European and Aboriginal Heritage

<b>ACTION CHECKLIST</b>	<b>Who's Responsible</b>	<b>When to be undertaken</b>	<b>DONE (Initial/ date)</b>
<b>DURING CONSTRUCTION</b>			
All staff and contractors working on the site shall be advised of the need to notify their supervisor and cease work, if either indigenous or non-indigenous heritage items are encountered.	Project Manager	Prior to Commencement	
Any evidence of Aboriginal relics discovered during construction shall be reported to OEH. Work in subject area to cease.	Project Manager	During Construction	

### Noise and Vibration

<b>ACTION CHECKLIST</b>	<b>WHO'S Responsible</b>	<b>When to be undertaken</b>	<b>DONE (Initial/ date)</b>

<b>ACTION CHECKLIST</b>	<b>WHO'S Responsible</b>	<b>When to be undertaken</b>	<b>DONE (Initial / date)</b>
<b>PRIOR TO CONSTRUCTION</b>			
All equipment to be used shall be correctly maintained and in good working order.	Site Supervisor	Prior to Commencement	
<b>DURING CONSTRUCTION</b>			
All construction activities shall be restricted to the hours as stipulated in the development consent issued by the Department of Planning & Infrastructure.	Project Manager	During Construction	
All site works shall be ceased by 30 May unless otherwise agreed to in writing by the Department of Planning & Infrastructure.	Project Manager	30 May 2013	

## 2.2 Soil, Water & Construction Management

A comprehensive manual for soil, water and construction management procedures in relation to all the components of tree and rock removal works & snowmaking infrastructure are provided Appendix A of the PSSMP. The manual provides an 'Environmental Best Practice' for Construction Practices specifically tailored for the resort, which has been adopted by the OEH (NPWS).

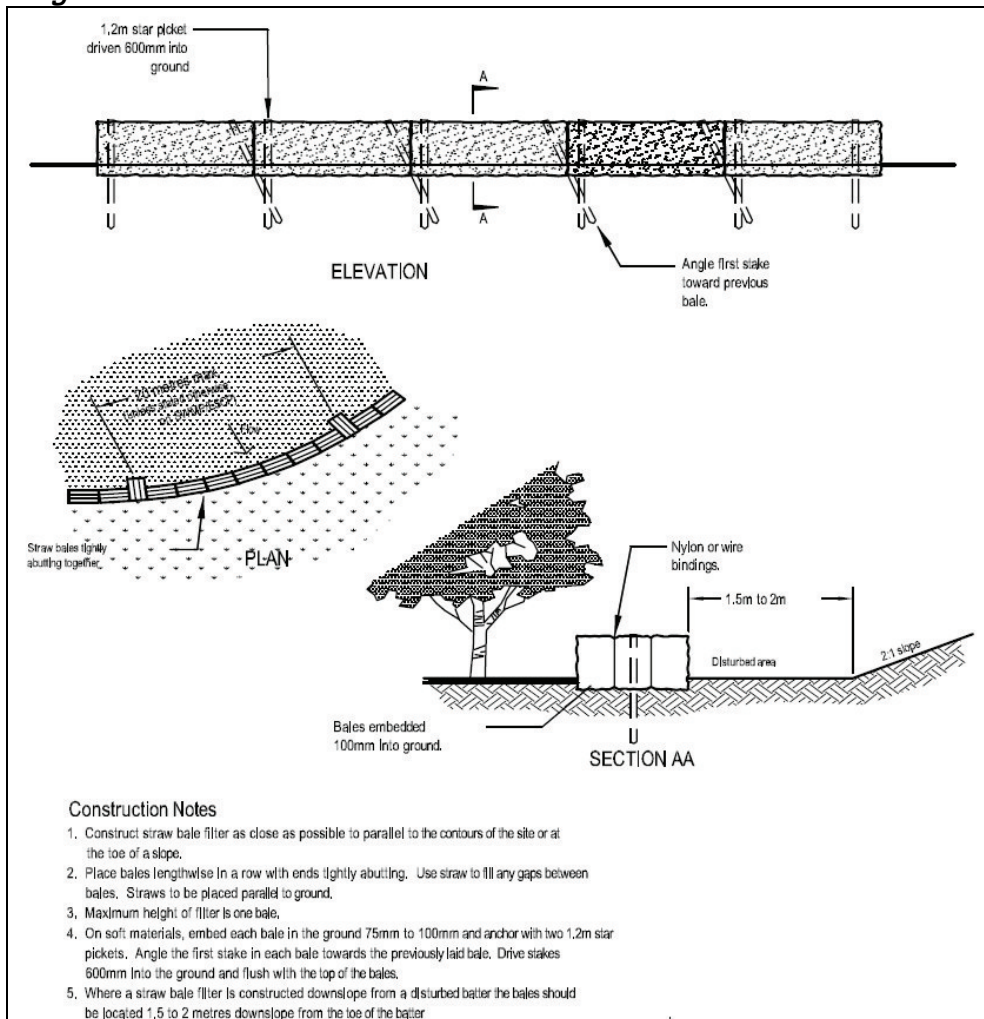
The construction methods prescribed in Appendix A of the PSSMP are to be read in conjunction with the above Environmental Actions Checklist.

For the purposes of clarity and consistency the specific controls required for the development are expanded and discussed below.

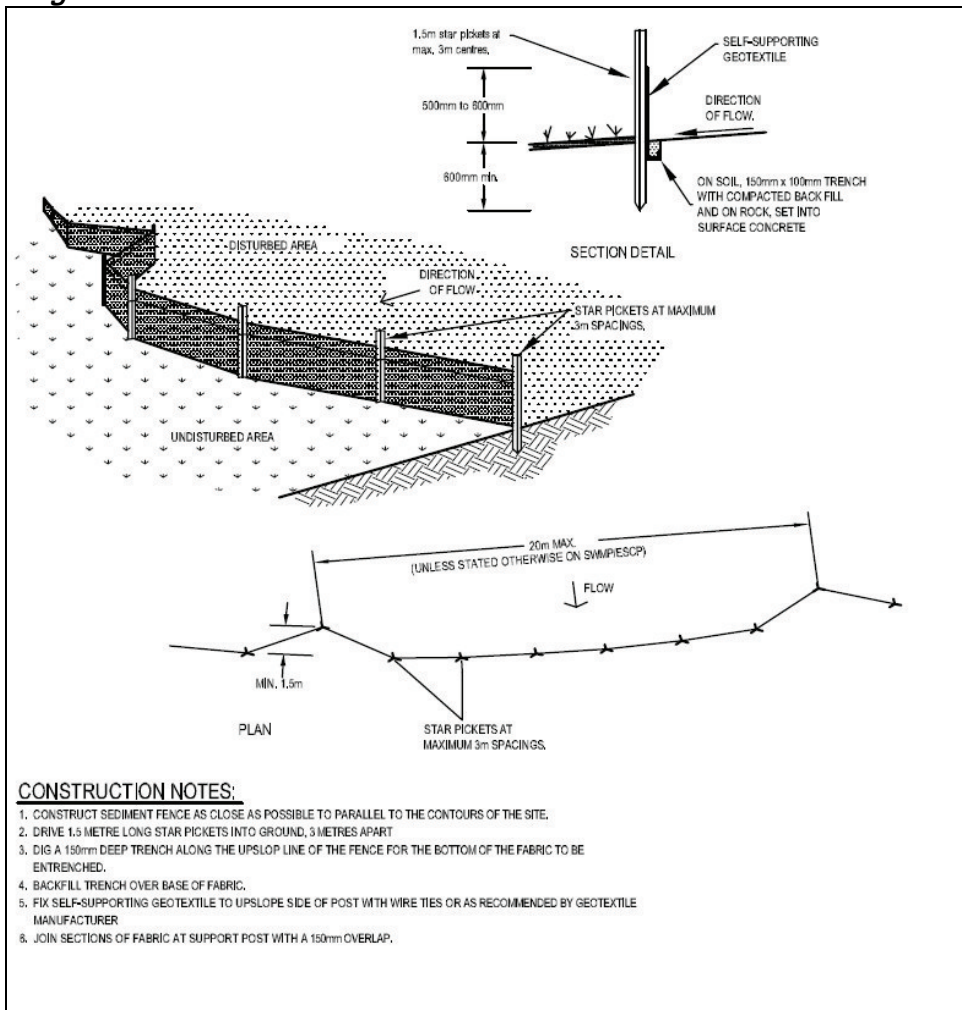
### 2.2.1 Erosion and Sedimentation Control

Appropriate environmental management controls may be required to manage soil and surface water during the construction of the development. Temporary controls will include either a straw bale filter, installed as illustrated Diagram A or a sediment fence in accordance with Diagram B below.

**Diagram A: Standard Straw Bale Filter Installation**



**Diagram B: Standard Sediment Fence Installation**



These controls are to be installed in accordance with the following suite of criteria:

- Both straw bale and sediment control fencing should be installed on the low side of the work site;
- Both straw bale and sediment control fencing should be installed as close as possible to follow the existing contours of the site;
- A provision for the diversion of water, and stabilisation of channels, around the excavation site should be installed; and
- Areas where soil is to be stockpiled is to be surrounded by sediment control fencing and protected from runoff water.

For trenching a combined use of straw bale filter fencing in drier areas and sediment fencing in wetter areas is to be used.

All excavated material is to be placed on the high side of the trench and in areas where native heath predominates; stockpiling should only occur where there are open areas rather than stockpiling continuously along the trench.

The fencing shall be placed at regular intervals across the contour of the slope and should be installed to protect any drainage lines or watercourses downslope.

## **2.3 Construction Access**

Access to the site can be achieved via the existing access road at the base of the Perisher Quad Express Chairlift or via the vehicle track across Front Valley from Pump Station 4, and then travel up or down the disturbed ski slopes.

## **2.4 Rehabilitation of the site**

Rehabilitation of the site will be undertaken in accordance with the rehabilitation guidelines for the KNP resort areas (NPWS 2006).

Any areas requiring rehabilitation would be revegetated by preparing the soil and reseeded with a 50:50 mix of native Poa seed and Chewings fescue seed to ensure rapid growth of vegetation for adequate stabilisation. Mulching of exposed areas will be undertaken following seeding with weed free straw and sprayed anionic emulsion.

The Snow Gums and heath vegetation cleared as a result of the proposal will be offset by planting native heath species (at a ratio of 5:1) and locally propagated Snow Gums (at a ratio of 2:1) within the area identified on the southern side of Sturt T-bar, shown on the Site Plan in Appendix A.

The site should be rehabilitated as soon as possible after the works have been completed to ensure rapid stabilisation.

The works should be continually monitored until slope stabilisation is achieved.

### 3 Responsibility and Requirements

#### 3.1 On-site Structure and Responsibility

**Table 2: Allocation and Responsibility**

Environmental Responsibilities		
Title	Name and Contact No.	Responsibility
General Manager of Operations for Perisher	Michael Fearnside - 6459 4408 / 0428 484 273	Project Manager: <ul style="list-style-type: none"> <li>• Oversee the project and manage contractors.</li> <li>• Liaise with Perisher Blue staff and Contractors.</li> <li>• Respond to complaints &amp; inquiries of environmental matters.</li> <li>• Liaise with DPI and NPWS.</li> </ul>
Mountain Manager, Perisher	Andrew Kennedy - 6459 4408	Site Supervisor: <ul style="list-style-type: none"> <li>• Day to day supervision of the project.</li> <li>• Ensure conditions of consent are complied with.</li> <li>• Implementation and maintenance of environmental controls as detailed in the SEMP.</li> </ul>
Environmental Manager, Perisher (or delegate)	Tanya Bishop - 6459 4504 / 0424 946 365	Site Environmental Manager: <ul style="list-style-type: none"> <li>• Site induction.</li> <li>• Staff training.</li> <li>• Oversee environmental management of the project.</li> <li>• Audit implementation and maintenance of environmental controls as detailed in the SEMP.</li> <li>• Manage rehabilitation and offsets program.</li> <li>• Monitor the site.</li> </ul>

## 4. Implementation

### 4.1 Emergency Response Contacts

The following key environmental emergency response contacts are provided as follows:

#### Key Environmental Emergency Response Contacts

Organisation	Emergency Phone	Non Emergency Phone
NSW Police	000	Jindabyne: 6456 2244
NSW Fire Brigade	000	Perisher: 6457 5037 Jindabyne: 6456 2476
NSW Ambulance	000	Perisher: 131 233
Medical Centres	Perisher (Winter Only): 6457 5266 Jindabyne: 6457 1221	
National Parks and Wildlife Service (NPWS)/DECCW	1800 629 104	Perisher: 6457 5214 Jindabyne 6450 5555
Roads and Traffic Authority	Traffic incidents & road conditions: 131 700 Road closures and special events: 132 701	
Environment Protection Authority Environment Line	131 555	
NRMA Road Service	Jindabyne: 6456 2170	

### 4.2 Environmental Training

All the contractors and staff involved with the works are to be made aware of the relevant requirements of this SEMP. Site induction is to be undertaken prior to the commencement of works by the Perisher Environmental Manager.

It is the responsibility of the Environmental Manager to ensure that all staff and subcontractors working on the site are provided with environmental training to achieve a level of awareness and competence appropriate to their assigned activities. Persons, including subcontractors' personnel, without appropriate environmental training should not be permitted to work on the site.

The Environmental Manager should establish and maintain a register of environmental training carried out including dates, names of persons trained and trainer details.

Site induction is to include:

- a) Environmental awareness, the principal of due diligence, and other relevant codes of practice.
- b) Specific environmental issues including:
  - *This SEMP*
  - *Relevant legislation (as identified in this Report)*
  - *Emergency preparedness/procedures*
  - *Incident reporting*
  - *Community consultation*
  - *Site environmental procedures*



## **4.3 Communication**

### **4.3.1 External Stakeholders**

Given the location and extent of the proposed works on the ski slopes, consultation is not considered necessary, outside of the regulatory authorities.

### **4.3.2 Liaison with EPA**

The Project Manager must notify the EPA Regional Manager of pollution incidents on or around the site (or the EPA Pollution Line on telephone 131 555 should the incident occur outside normal EPA business hours), which have occurred in the course of the activities (to comply with the PEOA), in the following circumstances:

- if the actual or potential harm to the health or safety of human beings or ecosystems is not trivial,
- if actual or potential loss or property damage (including clean-up costs) associated with a pollution incident exceeds \$10,000.

The Project Manager should notify OEHL verbally within 2 hours and in writing within 24 hours of any pollution incidents that involve the EPA.

### **4.3.3 Complaints Register**

Any complaints made by the community & other stakeholders shall be recorded on a complaints register managed by the Project Manager.

All complaints should be responded to within 24 hours of receipt.

## **4.4 Working Hours**

As per the Department of Planning & Infrastructure standard condition of consent, the proposed working hours for the project will be between 7am and 6pm on Mondays to Saturdays with no work be carried out on Sundays or public holidays.

Should these hours need to be varied, the Project Manager will request a variation from the Department of Planning & Infrastructure in accordance with the conditions of consent.

## **4.5 Auditing**

The Contractor and Site Supervisor in consultation with the Site Environmental Manager will both undertake an audit of the works to ensure the environmental safeguards and controls are being implemented effectively.