



# QLDC GUIDELINES FOR ENVIRONMENTAL MANAGEMENT PLANS

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## INTRODUCTION

This Guideline provides content requirements for the preparation of Environmental Management Plans ('EMP'), associated with land development activities as required by Queenstown Lakes District Council ('QLDC') issued resource consents (*Resource Management Act, 1991*).

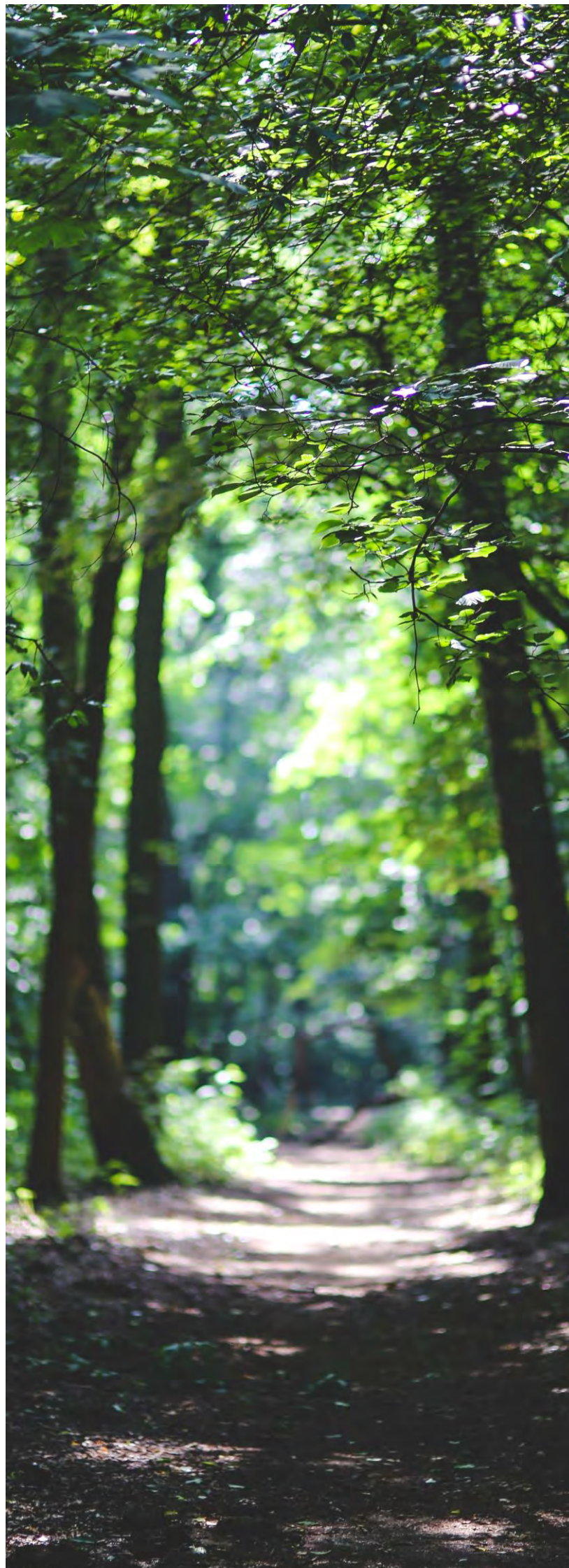
This document can also be applied to small-scale construction sites (e.g. residential construction projects) to assist in compliance with the environmental protection measures outlined in the Earthworks chapter of the Queenstown Lakes District Plan.

For the duration of the works approved under the relevant resource consent (e.g. bulk earthworks, bulk earthworks associated with subdivision), the Consent Holder will need to develop, implement and maintain an EMP that meets the requirements of this document. This process may be managed by the Principal Contractor and some aspects will need to be prepared by a Suitably Qualified and Experienced Person.

### **The EMP shall address:**

- a) Administrative requirements, and
- b) Operational requirements – identified for each environmental element (e.g. erosion and sediment, dust, noise)

This Guideline shall be read in conjunction with the 'Environmental Management' conditions of the relevant QLDC issued resource consent.



## PURPOSE

The purpose of this Guideline is to provide guidance to consent holders and their contractors and consultants about what information, administrative and operational measures shall be outlined in EMPs that are to be submitted for acceptance by QLDC. The Guideline will not prescribe onsite technical measures directly, but will reference guidance and other best practice documents which will provide this detail.

The ultimate objective of this Guideline is to ensure that the Queenstown Lakes District's environmental values are appropriately protected from land development activities through the following:

- > Ensure that the capability of environmental managers is commensurate with the inherent environmental risks encountered.
- > Outline the environmental elements that must be managed on land development projects within the district.
- > Provide a clear set of expectations of the information that must be included in EMPs for acceptance by QLDC so that EMPs are clear to follow and capable of appropriately and comprehensively protecting environmental values present at specific sites and beyond.
- > Ensure that all land development sites have nominated environmental representatives that can oversee day-to-day environmental management, associated with land development sites within the district.
- > Provide consent holders and their contractors and consultants with a record keeping system that demonstrates that environmental management is undertaken efficiently and effectively.

## STAKEHOLDER CONSULTATION

During the preparation of EMPs (or during subsequent construction), consent holders are encouraged to consult with stakeholders to obtain their specific knowledge regarding environmental management and specific issues associated with relevant Sensitive Environmental Receptors.

## EMP CATEGORIES

There are three different categories of EMPs which are based on the anticipated level of environmental risk for each project. Each category has varying levels of detail required. The table below outlines the three categories, how they are determined and the general details required in the EMP.

ENVIRONMENTAL RISK LEVEL FOR EMP CATEGORY	CHARACTERISTICS OF RISK LEVEL	EMP DETAIL REQUIRED
<b>LOW</b>	<ul style="list-style-type: none"> <li>• Less than 2500m<sup>2</sup> disturbed surface area open at any one time; and</li> <li>• Less than 15% (6.6 degrees) slope; and</li> <li>• Earthworks not located within 50m of a Sensitive Environmental Receptor; and</li> <li>• Controls installed and maintained in accordance with Template EMP including measures to ensure sediment does not enter the stormwater network</li> </ul>	Complete <b>Short Form EMP</b> template
<b>MEDIUM</b>	<ul style="list-style-type: none"> <li>• Greater than 2500m<sup>2</sup> disturbed surface area open at any one time; or</li> <li>• Where a Sensitive Environmental Receptor within 50m of the site or specific environmental adverse effect has been identified. All projects not meeting the characteristics of 'Low Risk' (above) and 'High Risk' (below)</li> </ul>	EMP prepared by Suitably Qualified and Experienced Person – and <b>selected Administrative requirements</b> and <b>selected Operational requirements for relevant environmental elements (as outlined in the Operational Requirements of this document)</b>
<b>HIGH</b>	<ul style="list-style-type: none"> <li>• Projects which have greater than one hectare of land exposed, or</li> <li>• Projects which have greater than 2500m<sup>2</sup> disturbed surface area open at any one time and include any any of the following characteristics:               <ul style="list-style-type: none"> <li>○ Project working within or discharging to Sensitive; or Environmental Receptors such as a Waterbody or storm water network</li> <li>○ Topography where any slope is greater than 15% (6.6 degrees)</li> <li>○ Soils with high erodibility (e.g. silts or other soil types with high silt content) as determined by geotechnical advice.</li> </ul> </li> </ul>	EMP prepared by Suitably Qualified and Experienced Person – and <b>all Administrative and Operational requirements for all environmental elements (as outlined in the Operational Requirements of this document)</b>

## EMP UPDATES

The Consent Holder (or nominated Contractor) shall develop and document a process of periodically reviewing the EMP.

This process will focus on identifying opportunities for continual improvement of processes and practices to ensure that the EMP is relevant to the work under the resource consent.

The process shall address how environmental incident corrective actions, or legislative changes will be addressed via an update of the EMP. The Consent Holder (or nominated Contractor) shall establish and implement document version control.

### **Updates to the EMP shall be undertaken by the Consent Holder (or nominated Contractor) when:**

1. The construction program moves from one Stage to another; or
2. Any significant changes have been made to the construction methodology since the original plan was accepted for that Stage; or
3. There has been an Environmental Incident and investigations have found that the management measures are inadequate; or
4. Directed by QLDC's Monitoring and Enforcement team

Where undertaken, updates to the EMP shall be submitted to QLDC for acceptance at [RCMonitoring@qldc.govt.nz](mailto:RCMonitoring@qldc.govt.nz)

## **SHORT FORM EMP (LOW RISK PROJECTS ONLY)**

For Low Risk projects, Consent Holder (or nominated Contractor) need only complete the Short Form Environmental Management Plan template. A copy of this template is attached to this Guideline as Appendix 2.

This template includes all the administrative and operational aspects relevant to Low Risk projects and includes:

- > General project and site information
- > Environmental roles and responsibilities
- > Details of site specific environmental inductions for staff and subcontractors
- > Environmental Incident response
- > Key environmental constraints
- > Mitigation measures
- > Environmental inspections (daily pre-start and Pre and Post-Rain Event) and maintenance
- > Site procedures for managing storm events

**The Short Form EMP is also intended to be utilised for smaller construction projects that do not trigger the need for an earthworks consent and will ensure that the works remain a permitted activity under the District Plan through compliance with the specific Environmental Protection Measures within the Earthworks chapter.**



## **ADMINISTRATIVE REQUIREMENTS (FOR MEDIUM AND HIGH RISK PROJECTS ONLY)**

The following administrative elements must be included where specified for each EMP category. The requirements for each administrative element are outlined in detail below.

### **Medium and High Risk level projects:**

- > Site induction
- > Management of sub-contractors
- > Notification and management of Environmental Incidents
- > Environmental roles and responsibilities of key personnel
- > Records and registers
- > Weekly and Pre and Post-Rain Event inspections (monitoring)

### **High Risk level projects only:**

- > Monthly environmental reporting

## **SITE ENVIRONMENTAL INDUCTION**

The purpose of the site environmental induction is to ensure that all staff and subcontractors onsite are aware of their environmental responsibilities.

Prior to commencing ground-disturbing activities, the Consent Holder (or nominated Contractor) shall ensure that all staff involved in, or supervising, works onsite have attended an Environmental Site Induction. This includes at a minimum, all site management staff, employees and subcontractors working on activities which disturb the ground surface.

The Consent Holder (or nominated Contractor) shall prepare and deliver a project specific site induction to all persons upon entering the site. The Consent Holder (or nominated Contractor) shall maintain a register signed by those inducted. The register shall contain but not be limited to the name of the inductee, date inducted, and the name of the induction facilitator.

A copy of the Consent Holder's (or nominated Contractor's) Environmental Site Induction shall be included in the EMP. The induction shall include but not be limited to:

- a) Basic roles and responsibilities for environmental management
- b) Specific locations within the site of environmental significance or risks, including Exclusion Zones and Sensitive Environmental Receptors
- c) Scope and conditions of resource consents applicable to the works
- d) The limit of clearing and earthworks for each Stage of works
- e) Environmental management measures stipulated in the EMP
- f) Procedures of notifying of potential Environmental Incidents
- g) Procedures for managing storm events (wind and rain)

## **MANAGEMENT OF SUB-CONTRACTORS**

All sub-contractors must attend the site specific Environmental Induction and must be recorded on the site environmental induction register. The Consent Holder (or nominated Contractor) must ensure that all sub-contractors comply with the EMP at all times.

## NOTIFICATION AND MANAGEMENT OF ENVIRONMENTAL INCIDENTS

The Consent Holder (or nominated Contractor) shall notify QLDC of details of any Environmental Incident where the EMP has failed leading to any adverse environmental effects offsite (including nuisance effects associated with dust as well as spills of fuels and chemicals to ground onsite).

All Environmental Incidents shall be notified to QLDC within 12 hours of becoming aware of the incident [RCMonitoring@qldc.govt.nz](mailto:RCMonitoring@qldc.govt.nz)

## ENVIRONMENTAL INCIDENT MANAGEMENT

The Consent Holder (or nominated Contractor) shall undertake immediate remedial actions to mitigate adverse environmental effects. Immediate response actions should not be delayed.

Once the immediate risk from the Environmental Incident is alleviated, the Consent Holder (or nominated Contractor) shall investigate the cause of the breach and/or adverse environmental effects, then identify and implement corrective actions as soon as practicable.

The Consent Holder (or nominated Contractor) shall provide an Environmental Incident Report to QLDC within 10 working days of the incident occurring. This report must detail:

- a) The nature of the Environmental Incident
- b) What management measures were in place to prevent the incident from occurring
- c) Probable causes of the incident
- d) What corrective actions have been undertaken to prevent incidents reoccurring

A template for the Environmental Incident Report template is provided in Appendix 3. The Consent Holder (or nominated Contractor) may utilise the template or use their own template where the information is the same, where deemed suitable by QLDC.

## ENVIRONMENTAL ROLES AND RESPONSIBILITIES OF PERSONNEL

The Consent Holder's (or nominated Contractor's) EMP shall document all environmental-specific roles and responsibilities of personnel. This should also include email address and mobile phone numbers for each key role. At a minimum, this will include:

- > Project Manager
- > Site Supervisor
- > Environmental Representative
- > Environmental Advisor/Manager ('SQEP')

## ENVIRONMENTAL REPRESENTATIVE

The EMP shall identify an Environmental Representative for the site and outline their role. This role should actively support the project leadership (Project Manager and/or Supervisor) with the day-to-day implementation of environmental controls and administrative activities.

In particular, the role involves:

### Implementation of environmental management

- > Ensure installation of environmental controls as per the EMP
- > Undertake environmental site inspections of the project
- > Oversee the maintenance and improvement of defective environmental controls
- > Undertake Environmental Incident reporting
- > Undertake environmental monitoring where appropriately trained (High Risk projects)

## **Communication**

- > Keep project leadership informed of environmental performance of the project
- > Inform staff of procedures and constraints applicable to managing specific environmental issues
- > May be responsible for providing environmental inductions to all staff and sub-contractors

## **Complaints and Incidents**

- > Assist the project leadership in attending to Environmental Incidents and Complaints

## **Familiarity**

The Environmental Representative should be familiar with:

- > Environmental aspects of the project
- > Environmental Management Plan
- > Best practice erosion and sediment control from:
  - *Guidance Document 2016/005: Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05)*; and/or,
  - *Erosion and Sediment Control Toolbox for Canterbury* on Environment Canterbury website; and/or,
  - *Best Practice Erosion and Sediment Control*, International Erosion Control Association Best Practice Guidelines

## **RECORDS AND REGISTERS**

Environmental records are to be collated onsite and shall be made available to QLDC upon request, immediately if the request is made by a QLDC official onsite and within 24 hours if requested by a QLDC officer offsite.

Records and registers to be managed onsite shall include the following:

### **Medium and High Risk projects:**

- a) Environmental Induction attendance register
- b) Environmental Incident reports and associated corrective actions undertaken
- c) Complaints register and associated corrective actions undertaken
- d) Daily diary entries (including pre-start inspection observations)
- e) Post-Rain event inspection observations and corrective actions

### **High Risk projects only:**

- f) Weekly Site Inspection checklists
- g) Monitoring results (e.g. water quality)
- h) EMP Non-conformance register (based on weekly inspection results or otherwise identified) and associated corrective actions taken

## **WEEKLY AND PRE AND POST-RAIN EVENT SITE INSPECTIONS**

The EMP shall state that the Consent Holder's (or nominated Contractor's) Environmental Representative shall undertake and document weekly and Pre and Post-Rain Event site inspections for the purpose of monitoring the following:

- > Verifying that the management measures prescribed in the EMP are present, functional and adequate
- > Observe the site for actual or potential adverse environmental effects

- > Identify maintenance requirements for implemented management measures, and
- > Verifying preparedness for adverse weather conditions where rain and/or wind is forecast

In some situations such as High Risk sites, during sensitive phases in the construction methodology, or following Environmental Incidents, weekly inspections may need to be undertaken by a SQEP.

The Consent Holder (or nominated Contractor) shall undertake corrective actions to rectify issues identified by the site inspections. Each weekly inspection shall be recorded including date, observations and any corrective actions.

The Weekly and Post-Rain Event Site Inspection records shall be made available to QLDC within 48 hours of a request being made.

Between the Weekly and Post-Rain Event inspections, the Environmental Representatives shall also undertake a daily pre-start inspection to ensure that no new environmental issues have arisen or mitigation measures have been compromised from the previous day's work. Observations should be recorded (e.g. in a works diary).

### **MONTHLY MONITORING BY SQEP ON HIGH RISK SITES**

A SQEP shall monitor the site monthly to ensure that the site is complying with its EMP, identify any new environmental risks arising that could cause an environmental effect and suggest alternative solutions that will result in more effective and efficient management. The outcome of these inspections should be reported and included in the Monthly Environmental Report referred to in the section below.

### **MONTHLY ENVIRONMENTAL REPORTING (HIGH RISK PROJECTS ONLY)**

The Consent Holder (or nominated Contractor) shall complete and submit exception reporting to QLDC in the form of a monthly environmental report. The monthly environmental report shall be submitted to QLDC's Regulatory Department within five (5) working days of the end of each month.

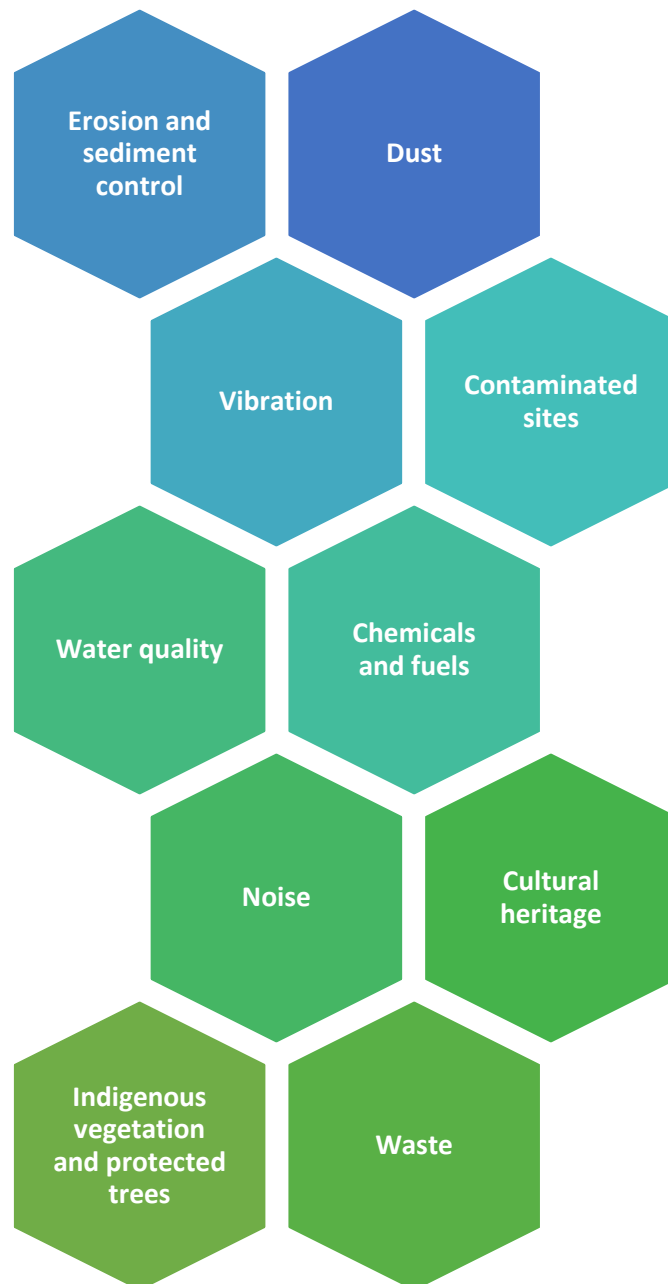
The monthly environmental report shall include exception reporting and statements actively addressing but not limited to the following that occurred during the reporting month:

- a) Updates to the EMP and the Erosion and Sediment Control Plan ('ESCP')
- b) Weekly Site Inspections – number of inspections completed, and summary of corrective actions undertaken
- c) Monitoring reporting – summary of monitoring and whether non-conforming results were obtained
- d) Positive environmental outcomes achieved and opportunities identified by the Consent Holder (or nominated Contractor)

Where exception reporting demonstrates repeated or multiple non-conformances of the same issue, QLDC may instruct the Consent Holder to undertake a review of the adequacy of management measures outlined in the EMP and provide response back to QLDC within five (5) working days, either confirming and justifying the suitability of the existing EMP or notifying of updates to the EMP and the justification.

## OPERATIONAL REQUIREMENTS (FOR MEDIUM AND HIGH ENVIRONMENTAL RISK PROJECTS ONLY)

Environmental elements included in the EMP shall include, but not be limited to those defined in the following sections:



The Consent Holder (or nominated Contractor) shall select mitigation measures which effectively mitigate or avoid adverse effects on the environment. A brief justification of the suitability of the management measures based on the risk assessed shall be provided in the EMP for each environmental element.

It is noted that some environmental elements may not be applicable to all sites. If this is the case, this simply needs to be stated. It is expected that the detail included will be commensurate with the environmental risk posed for each element.

## EROSION AND SEDIMENTATION (INCLUDING EROSION AND SEDIMENT CONTROL PLAN)

The requirements and recommendations set out below should not be inferred to preclude innovative or alternative solutions that provide improved value for money or environmental outcomes that meet the intent and principles of this Guideline.

The Consent Holder (or nominated Contractor) is responsible for temporary erosion and sediment control and for ensuring that controls are adequately designed, installed, adapted, maintained and decommissioned.

### PROJECT RISK

For the purpose of the management requirements to be employed under this Guideline, the project is deemed to have Erosion Risk identified in the erosion risk level table below unless otherwise stated in the conditions of consent.

EROSION RISK	CHARACTERISTICS OF RISK LEVEL
<b>LOW</b>	<ul style="list-style-type: none"> <li>• &lt;2500m<sup>2</sup> disturbed surface area open at any one time</li> <li>• Controls installed and maintained in accordance with Short Form EMP (QLDC proforma)</li> </ul>
<b>MEDIUM</b>	All projects not meeting the characteristics above or below
<b>HIGH</b>	<p><b>Projects with two or more of the following characteristics:</b></p> <ul style="list-style-type: none"> <li>• Project duration &gt; 6 months</li> <li>• Project working within or discharging to Sensitive Environmental Receptors such as a Waterbody</li> <li>• Projects which have &gt; 1 hectare of land exposed</li> <li>• Topography where any slope is greater than 15% (6.6 degrees)</li> <li>• Soils with high erodibility (e.g. silts or other soil types with high silt content) as determined by geotechnical advice.</li> </ul>

### EROSION AND SEDIMENT CONTROL PRINCIPLES

Erosion and Sediment Controls for all projects shall be designed, installed, maintained and decommissioned in accordance with the following principles:

- a) Erosion and sediment controls are integrated with construction planning
- b) Effective and flexible erosion and sediment control plans are developed based on soil, site slope, weather, construction conditions and the receiving environment
- c) The extent and duration of soil exposure is minimised
- d) Water movement through the site is controlled – in particular clean water is diverted around the site and ‘dirty’ and ‘clean’ water<sup>1</sup> is kept separated as far as practicably possible
- e) Soil erosion is minimised as far as reasonable and practical (to the satisfaction of QLDC)

<sup>1</sup> ‘Dirty’ water are those that have picked up and are carrying sediment in suspension following erosion of the exposed soil. ‘Clean’ water has no sediments (or negligible sediments) in suspension and has not made contact with exposed soils.

- f) Disturbed areas are promptly stabilised
- g) Sediment retention on site is maximised (i.e. must meet the discharge criteria for suspended sediment in Table 4.3)
- h) Controls are maintained in proper working order at all times, and
- i) The site is monitored and erosion and sediment practices adjusted to maintain the required performance standard.
- j) Avoidance of discharges, especially sediment off site.

**EROSION AND SEDIMENT CONTROL PLAN**

As per the conditions of the resource consent, prior to ground disturbance on a Stage of works, the Consent Holder (or nominated Contractor) shall submit for review and acceptance, an Erosion and Sediment Control Plan (**ESCP**) for that Stage.

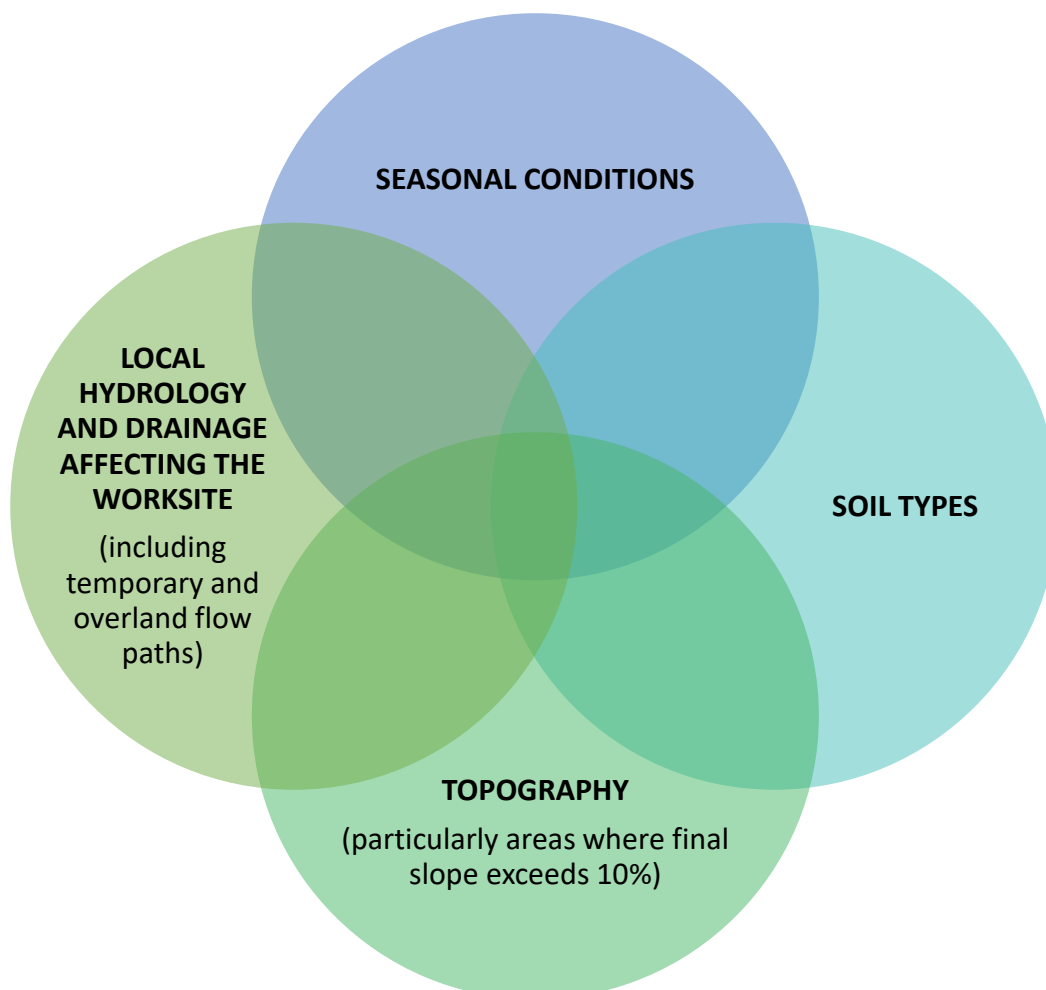
An ESCP is required to be prepared for all areas prior to disturbance including but not limited to bulk earthworks, stockpile and storage areas, and access and haulage tracks.

As specified by conditions of resource consent regarding Hold Points, vegetation clearance for that section shall not start until the ESCP for that section is accepted by QLDC and erosion and sediment control devices are installed in accordance with the ESCP.

For large sites, multiple ESCPs may be required i.e. one for each Stage.

**PLAN REQUIREMENTS**

The ESCP shall be developed in accordance with the Erosion and Sediment Control Principles outlined in page 13 and taking into account:

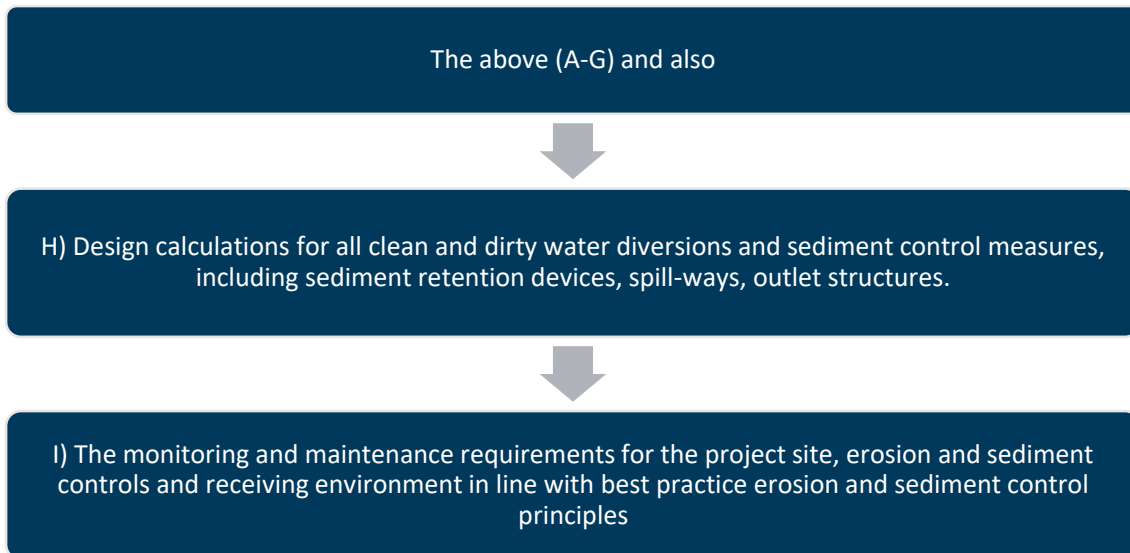


**The ESCP shall consist the following information:**

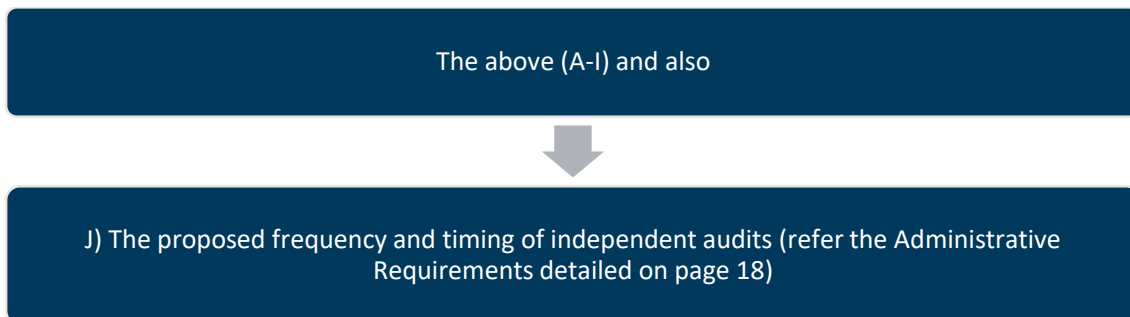




**For Medium Risk sites the ESCP shall include<sup>2</sup>:**



**For High Risk sites the ESCP shall include:**



### **Personnel – Plan development**

The ESCP shall be prepared and updated by personnel who have the requisite level of training and experience as follows:

- ESCP to be prepared by Suitably Qualified and Experienced Person (see definition) with experience in relevant construction type.

### **Implementation and revision of plan**

The Consent Holder (or nominated Contractor) shall:

- a) Provide and implement As Built plans for the Erosion and Sediment Control Plan
- b) monitor the continued effectiveness of the ESCP during the contract
- c) update the ESCP where necessary

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<sup>2</sup> Best practice erosion and sediment control from:

- *Guidance Document 2016/005: Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05)*; and/or,
- *Erosion and Sediment Control Toolbox for Canterbury* on Environment Canterbury website; and/or,
- *Best Practice Erosion and Sediment Control*, International Erosion Control Association Best Practice Guidelines

The plans shall be updated when:

- The construction program moves from one Stage to another; or
- Any significant changes have been made to the construction methodology since the original plan was accepted for that Stage; or
- There has been an Environmental Incident and investigations have found that the management measures are inadequate; or
- Directed by QLDC's Resource Management Engineering team during subdivision inspections or QLDC's Regulatory Department through enforcement

Bulk earthworks may not commence until the following has been completed in order to satisfy **HOLD POINTS 1 and 2** as required by conditions of the resource consent:

- The updated ESCP is submitted and deemed acceptable by QLDC in conjunction with the overarching EMP; and
- The erosion and sediment control devices are installed correctly; and
- As Built plans have been provided and deemed acceptable by QLDC

## **EROSION AND SEDIMENT CONTROL GENERAL REQUIREMENTS**

### **Installation**

As soon as practicable and prior to bulk earthworks operations (and vegetation clearance) for any Stage of works, the Consent Holder (or nominated Contractor) must provide and implement As Built plans for the erosion and sediment controls. The completion of these activities on High Risk sites will be **HOLD POINT 2** for any further earthworks.

### **Operation and Maintenance**

The Consent Holder (or nominated Contractor) shall maintain all erosion and sediment controls in effective working order at all times.

Reuse of water collected in sediment retention devices for dust suppression and appropriate construction works is preferred over release into the environment. Where water is being stored for dust suppression the required design capacity of the sediment retention devices must be available (noting that depending on site constraints this may not always be practical).

Sediment retention devices and other sediment controls shall be operated and maintained in a matter that minimises the risk of adverse environmental effects.

Where flocculants are used to treat sediment-laden runoff, they must not cause adverse environmental effects to the receiving waters of the environment and must be approved for use in the ESCP/EMP.

## **EROSION AND SEDIMENT CONTROL PERFORMANCE REQUIREMENTS**

Releases from site must not cause scour at the area of Discharge. Water must only be released at the Discharge Point nominated within the ESCP and as deemed acceptable by QLDC. Any modification to Discharge Point must be accepted by QLDC.

The Consent Holder's (or nominated Contractor's) erosion and sediment controls shall be sufficient to achieve the water quality criteria for Discharge in accordance with Table 4.3 provided resource consent has been obtained for the earthworks activity. Otherwise the performance criteria shall be in accordance with the currently active Operative and Proposed District Plan.

## **Decommissioning and removal**

The Consent Holder (or nominated Contractor) shall remove temporary controls when permanent measures are in place and/or Site Stabilisation (defined as at least 80% revegetation cover) has occurred. For bulk earthworks associated with subdivisions, this should occur prior to s224(c) certification<sup>3</sup> by QLDC or unless a legal mechanism is in place to ensure Stabilisation will be achieved.

## **ADMINISTRATIVE REQUIREMENTS**

### **Monthly erosion and sediment control audits by the SQEP on High Risk sites**

As specified in the conditions of the resource consent, the Consent Holder (or nominated Contractor) shall engage their SQEP to undertake monthly erosion and sediment control audits by their SQEP approved by QLDC. This can be undertaken at the same time of the monthly environmental inspection to be undertaken by the SQEP as outlined on page 11.

This documentation may stand in place of the erosion and sediment control component of the monthly environmental reporting.

### **Independent audits**

For sites determined to have a very erosion risk (as per the criteria in the erosion risk level table on page 13 or specified by conditions of resource consent); conditions of resource consent may require that the Consent Holder engage an independent SQEP to be approved by QLDC, to assess the compliance of the erosion and sediment control measures against:

- a) the accepted ESCP
- b) Erosion and Sedimentation section of this Guideline specifically ESCP principles outlined
- c) Discharge criteria specified in the water quality discharge table on page 18

The Consent Holder (or nominated Contractor) shall submit the independent review report to QLDC with proposed and completed actions undertaken to address the issues identified during the audit not more than seven (7) working days following the audit.

## **DESIGN AND TECHNICAL REQUIREMENTS**

### **Technical standards and design requirements**

The Consent Holder (or nominated Contractor) shall ensure sediment and erosion controls are designed, installed and maintained in accordance with best practice erosion and sediment control principles and standards<sup>4</sup>, as well as manufacturer's specifications.

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<sup>3</sup> Certification from QLDC that all subdivision conditions of resource consent have been met.

<sup>4</sup> Best practice erosion and sediment control from:

- *Guidance Document 2016/005: Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05)*; and/or,
- *Erosion and Sediment Control Toolbox for Canterbury* on Environment Canterbury website; and/or,
- *Best Practice Erosion and Sediment Control*, International Erosion Control Association Best Practice Guidelines

## WATER QUALITY

The Consent Holder (or nominated Contractor) shall be responsible for the management of the water quality to ensure that adverse environmental effects to Waterbodies within the site or adjacent Waterbodies into which the site discharges.

### PERFORMANCE REQUIREMENTS

The Consent Holder (or nominated Contractor) shall at all times undertake reasonable and practicable management measures to avoid adverse environmental effects within the site or adjacent waterbodies into which the site discharges.

Water quality management measures shall be designed to achieve Discharge from site compliant with the Water Quality (Discharge) Criteria outlined in the table below.

The Consent Holder (or nominated Contractor) shall develop and undertake a water quality Monitoring Plan that is reasonable and practicable in accordance with the requirements stipulated on page 19.

Depending upon the specific circumstances (volumes, waterway, etc) a discharge permit may need to be obtained from the Otago Regional Council.

WATER QUALITY RISK	PARAMETER	DISCHARGE CRITERIA
LOW WATER QUALITY RISK	TURBIDITY	No visual evidence of sediment run-off at Discharge Point
	HYDROCARBONS, TANNINS, PAINT	No visible trace
	WASTE	No waste or litter visible
MEDIUM AND HIGH WATER QUALITY RISK	SUSPENDED SOLIDS	<50 mg/L Total Suspended Solids (TSS); unless specified otherwise by resource consent conditions or agreed with QLDC.  May utilise equivalent turbidity expressed as Nephelometric Turbidity Units (NTU) as determined by laboratory analysis by correlating turbidity with the suspended solid criteria for the specific site.
	PH	Stable pH reading and within 6.5 – 8.5
	HYDROCARBONS, TANNINS, PAINT	No visible trace
	WASTE	No waste or litter visible

## FLOCCULATION

Where flocculation is undertaken onsite, the Consent Holder (or nominated Contractor) shall select, store, apply and monitor the use of flocculants in accordance with best practice erosion and sediment control principles and standards<sup>5</sup> to ensure that the flocculant does not cause adverse environmental effects on surrounding land and water. If monitoring by the Consent Holder (or nominated Contractor) or QLDC indicates adverse environmental effects may be occurring, flocculation shall cease until changes are made to the flocculation process to prevent the adverse environmental effects.

Management of sediment retention device sludge where flocculation has been used shall be in accordance with the chemical supplier's advice and documented in the EMP.

## STORMWATER REUSE

The reuse of stormwater (including stormwater captured in sediment retention devices) for dust suppression, roadworks or landscaping is preferred over discharge. This will need to be factored into the design of the sediment retention device in the form of additional capacity (noting that depending on site constraints this may not always be practical).

## MONITORING

The Consent Holder (or nominated Contractor) shall develop and implement a water quality monitoring plan to verify the effective management of water quality risks from site. Applicable water quality criteria consists of 'Discharge' criteria only (noting that the Otago Regional Council manages instream sediment).

Discharge criteria are applicable to any liquid, soluble or material flows moving beyond the boundary of the site where it could reasonably enter a waterbody or storm water network, enter waterbodies within the site or waterbodies adjacent the site. Discharge criteria also applies from Discharges from sediment retention devices.

It is expected that the sampling location will be at the discharge point where discharge crosses the site boundary unless otherwise agreed with QLDC.

The timing of the discharge monitoring shall occur prior to dewatering Discharge from sediment retention devices and during rain events when 'controlled' or 'uncontrolled' Discharge crosses the boundary of the site.



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<sup>5</sup> Best practice erosion and sediment control from:

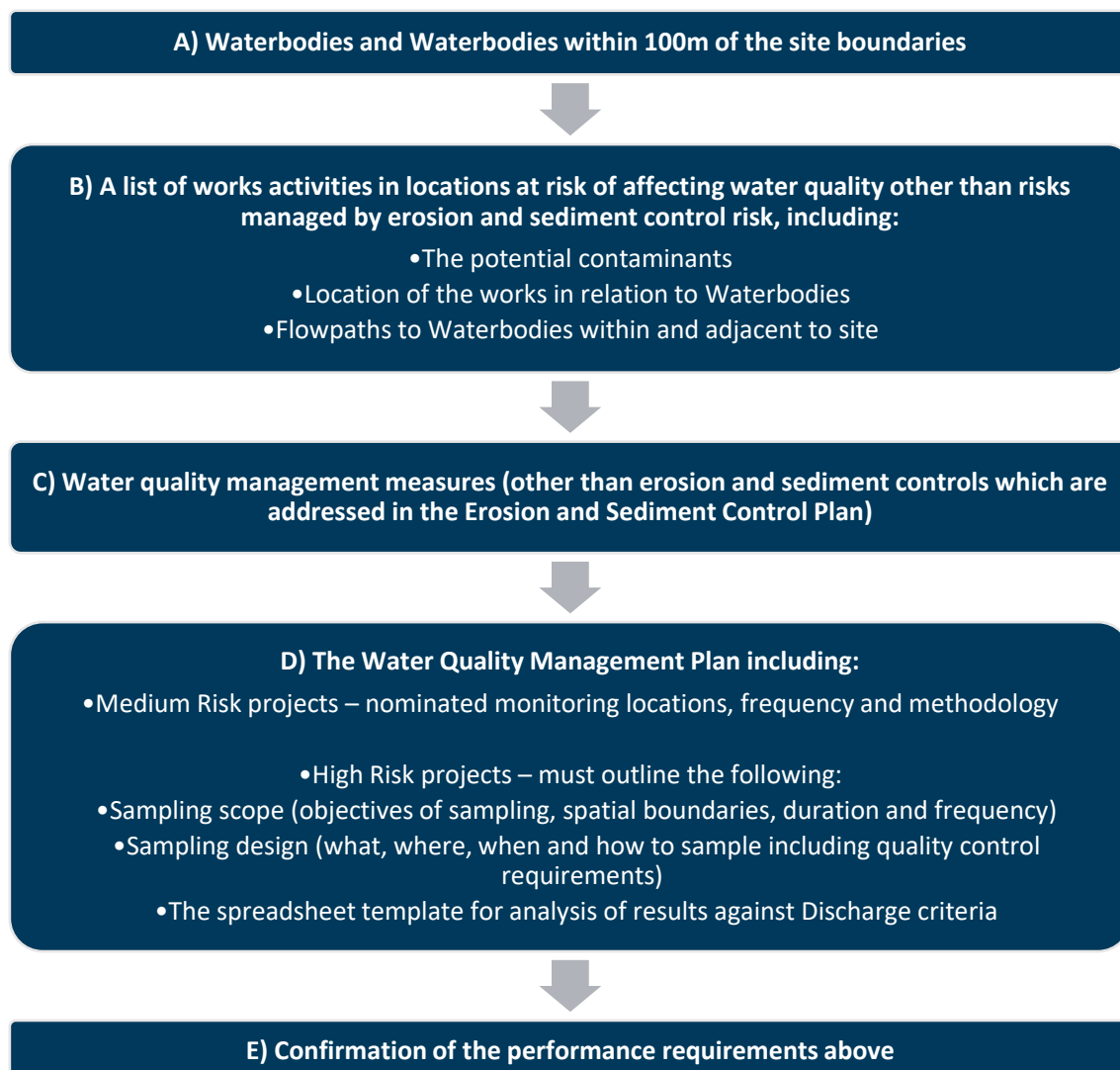
- *Guidance Document 2016/005: Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05)*; and/or,
- *Erosion and Sediment Control Toolbox for Canterbury* on Environment Canterbury website; and/or,
- *Best Practice Erosion and Sediment Control*, International Erosion Control Association Best Practice Guidelines

Monitoring results should be recorded on a monitoring spreadsheet and evaluated by the Consent Holder (or nominated Contractor) against the water quality criteria to verify compliance. For each monitoring result that does not conform to the water quality criteria, the Consent Holder (or nominated Contractor) shall:

- a) Report the non-conformance to QLDC including the water quality parameter that exceeded the criteria and level that was recorded;
- b) Where the discharged water was as the result of the erosion and sediment controls failing or exceeding capacity the following should be reported:
  - a. the depth of rain recorded at the nearest meteorological station that collects daily rain data,
  - b. size of the Rain Event Average Recurrence Interval (ARI<sup>6</sup>),
  - c. duration of the Rain Event;
- c) Identify the cause and develop and implement corrective actions such as improved work procedures or management measures to improve water quality and prevent re-occurrence of monitoring non-conformances.

### **EMP REQUIREMENTS FOR WATER QUALITY**

The EMP shall include descriptions and/or diagrams of:



<sup>6</sup> Information can be found using the NIWA HIRDS website: <https://hirds.niwa.co.nz/>

## DUST

The Consent Holder (or nominated Contractor) shall be responsible for managing construction works to appropriately avoid and mitigate adverse effects on air quality from dust.

### PERFORMANCE REQUIREMENTS

The Consent Holder (or nominated Contractor) shall at all times take reasonable and practicable management measures to avoid dust moving beyond the boundaries of the site.

### MONITORING

Weekly inspections shall include observations of the site for visual evidence of dust travelling beyond the boundaries of the site and evidence of dust fall out from the works on adjacent vegetation or buildings.

### EMP REQUIREMENTS FOR DUST

The EMP shall include documents and/or diagrams indicating the following:

- a) Location of dust sensitive receivers onsite & off site
- b) Works likely to cause adverse environmental effects including Environmental Nuisance effects in relation to dust and location of these works onsite (for example excavation and moving plant)
- c) Prevailing wind direction and speeds generally expected for the site location
- d) Evaluation outcome of which air quality sensitive receivers will likely experience Environmental Nuisance effects or adverse environmental effects in relation to dust
- e) Management measures and strategies for mitigating Environmental Nuisance and adverse environmental effects associated with dust
- f) Confirmation of the performance requirements above



## CULTURAL HERITAGE

The Consent Holder (or nominated Contractor) shall be responsible for the management and protection of Cultural Heritage within and adjacent to the site to avoid adverse environmental effects to Cultural Heritage.

### PERFORMANCE REQUIREMENTS

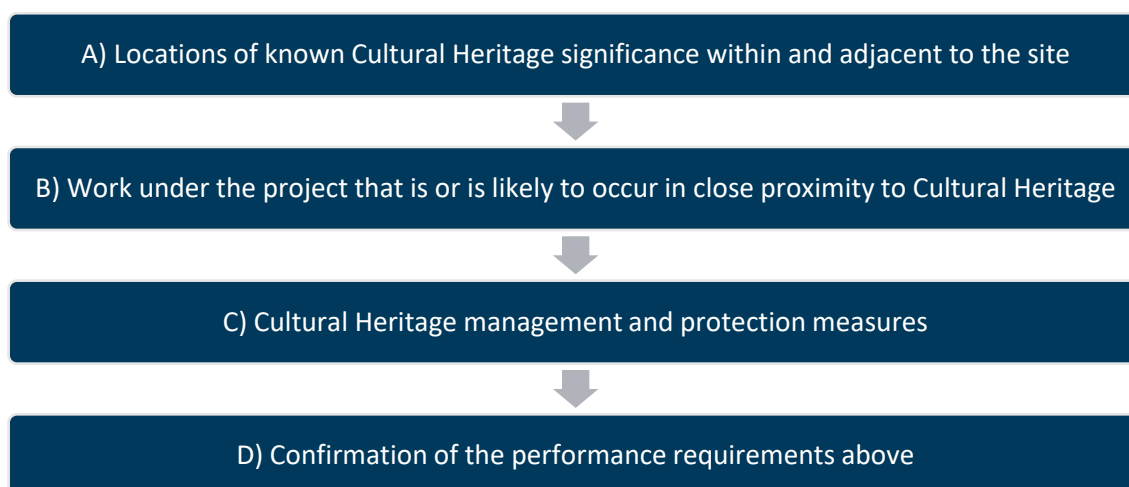
The Consent Holder (or nominated Contractor) shall at all times take reasonable and practicable management measures to avoid adverse environmental effects to Cultural Heritage from construction works. This includes ensuring that the works are undertaken in accordance with the obligations of the *Heritage New Zealand Pouhere Tāonga Act, 2014* (HNZPTA).

### ACCIDENTAL DISCOVERY

The Consent Holder (or nominated Contractor) must comply with the relevant resource consent conditions associated with accidental discovery as well as the obligations under the HNZPTA. This can be achieved through following the Accidental Discovery Protocol found in Appendix 4 of this document.

### EMP REQUIREMENTS FOR CULTURAL HERITAGE

The EMP shall include descriptions and/or diagrams of<sup>7</sup>:



<sup>7</sup> Sources of information include Aukaha, Te Ao Marama, Heritage New Zealand Pouhere Tāonga and Archsite.



## NOISE

The Consent Holder (or nominated Contractor) is responsible for the management of construction noise generated from construction works.

### PERFORMANCE REQUIREMENTS

The Consent Holder (or nominated Contractor) shall at all times take reasonable and practicable management measures to avoid and mitigate effects from noise associated with construction works.

The Consent Holder (or nominated Contractor) shall ensure that all works are undertaken in accordance with the noise limits set in any relevant conditions of consent or in the absence of a consented limit must comply with the noise limits specified in the Zone Standards.

For all sites the Consent Holder (or nominated Contractor) shall review the Noise Management Plan or EMP, update and implement additional management measures:

- a) In response to a justifiable Complaint caused by construction works
- b) When changes in the equipment/work method, intensity, location, duration or timing of effects that are expected to increase noise impacts are foreseen.

### EMP REQUIREMENTS FOR NOISE

**For consents where no specific Noise Management Plan is required to be prepared by a Suitably Qualified and Experienced Person:**

If the relevant resource consent does not require a specific Noise Management Plan by a Suitably Qualified and Experienced Person then the EMP shall include the following:

- a) Location of any Sensitive Environmental Receptors
- b) Noise generating activities, their locations, work periods
- c) Evaluation and outcome of whether Sensitive Environmental Receptors will likely be affected by construction noise
- d) Noise management measures to avoid or mitigate noise effects
- e) Confirmation of the performance requirements above

**For consents where specific Noise Management Plan is required to be prepared by a Suitably Qualified and Experienced Person:**

If required by conditions of the relevant consent then a specific Noise Management Plan must be prepared by a Suitably Qualified and Experienced acoustic expert and shall be commensurate to the level of detail required to appropriately avoid or mitigate adverse effects associated with noise.

## VIBRATION

The Consent Holder (or nominated Contractor) is responsible for managing work to avoid environmental effects or nuisance to Sensitive Environmental Receptors and Critical Facilities, Infrastructure or Utilities.

### **FOR THE PURPOSE OF THIS GUIDELINE, POTENTIAL VIBRATION EFFECTS ARE CATEGORISED IN TWO FORMS:**

1. Nuisance vibration management relates to managing vibration to avoid nuisance to public, residents or people utilising the area in the vicinity of the site.
2. Building/structural vibration management relates to managing vibration to avoid structural damage to buildings and structures within and beyond the site. This also includes managing effects on building contents and surrounding utilities and services.

In addition to any Sensitive Environmental Receptors and Critical Facilities, Infrastructure and Utilities identified in relevant resource consents, the Consent Holder (or nominated Contractor) shall be responsible for identifying any additional Sensitive Environmental Receptors and Critical Facilities, Infrastructure and Utilities likely to be affected by construction vibration through the application of the performance requirements in 4.6.2.

### **PERFORMANCE REQUIREMENTS**

The Consent Holder (or nominated Contractor) shall at all times take reasonable and practicable management measures to mitigate:

1. Vibration effects associated with the project so as to minimise Environmental Nuisance effects on Sensitive Environmental Receptors outside of the site.
2. Environmental effects to buildings, structures, services and utilities within or beyond the boundary of the site in accordance with *DIN 4150-3:1999 Effects of vibration on structures*.

### **EMP REQUIREMENTS FOR VIBRATION**

**For consents where no specific Vibration Management Plan is required to be prepared by a suitably Qualified and Experienced Person:**

If the relevant resource consent does not require a specific Vibration Management Plan by a Suitably Qualified and Experienced Person then the EMP shall include the following:

- a) The type of vibration sensitive receptors and Critical Facilities, Infrastructure and Utilities potentially affected by the works and their location in relation to the subject site
- b) Vibration management measures and strategies to avoid or minimise environmental effects of vibration in terms of both Environmental Nuisance and structural/building receptors
- c) Contingency plan for observed damage to structures (private or public)
- d) Confirmation of the performance requirements above

**For consents where specific Vibration Management Plan is required to be prepared by a Suitably Qualified and Experienced Person:**

If required by conditions of the relevant consent, then a specific Vibration Management Plan must be prepared by a Suitably Qualified and Experienced acoustic expert and shall be commensurate to the level of detail required to appropriately avoid or mitigate adverse effects associated with vibration.

## CONTAMINATED SITES

The Consent Holder (or nominated Contractor) is responsible for work in order to mitigate the risks of environmental effects from Contaminated Sites within the work site.

### PERFORMANCE REQUIREMENTS

The Consent Holder (or nominated Contractor) shall at all times take reasonable and practicable management measures to manage known contamination sites in order to avoid and prevent the spread of contaminants either within the site or beyond the boundary of the site. Management shall be in accordance with the Ministry for the Environment's *User's Guide, National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health*.

### EMP REQUIREMENTS FOR CONTAMINATED SITES

**For consents where no specific Contaminated Site Management Plan is required to be prepared by a Suitably Qualified and Experienced Person:**

If the relevant resource consent does not require a specific Contaminated Site Management Plan by a Suitably Qualified and Experienced Person then the EMP shall include documents and/or diagrams indicating the following:

- a) Contingency plan for the event that a Contaminated Site is discovered during construction
- b) Confirmation of the performance requirements above

**For consents where specific Contaminated Site Management Plan is required to be prepared by a Suitably Qualified and Experienced Person:**

If required by conditions of the relevant consent then a specific Contaminated Site Management Plan must be prepared by a Suitably Qualified and Experienced expert and shall be commensurate to the level of detail required to appropriately avoid or mitigate adverse effects associated with Contaminated Sites.

If a Contaminated Site has been identified prior to the issue of resource consent then this would usually require an expert to prepare the Contaminated Site Management Plan.

## VEGETATION MANAGEMENT

The Consent Holder (or nominated Contractor) is responsible for work in order to mitigate the risks of environmental effects to Indigenous Vegetation or Protected Trees within the site when either clearing Indigenous Vegetation directly or working in proximity to Indigenous Vegetation or Protected Trees.

### PERFORMANCE REQUIREMENTS

The Consent Holder (or nominated Contractor) shall adhere to any limit of clearing specified within relevant resource consents.

The Consent Holder (or nominated Contractor) shall at all times take reasonable and practicable management measures to avoid disturbance to vegetation or ground surface outside the limits of clearing and to minimise disturbance to vegetation or ground surface outside of the limits of clearing.

The Consent Holder (or nominated Contractor) shall install identification markers along the limits of clearing prior to commencing vegetation clearing and ground disturbance. Identification markers shall be maintained for the duration of the works or at least until works are complete in the adjacent area.

Where works encroach on individual trees or vegetation to be protected/retained, ground disturbance or other works including stockpiling, shall not encroach within the dripline of the tree unless otherwise deemed suitable under the relevant resource consent.

The Consent Holder (or nominated Contractor) must undertake works in accordance with any relevant resource consents and supporting documents associated with the application for resource consent.



## **EMP REQUIREMENTS FOR VEGETATION MANAGEMENT**

### **For consents where no specific Vegetation Management Plan is required to be prepared by a Suitably Qualified and Experienced Person:**

If the relevant resource consent does not require a specific Vegetation Management Plan by a Suitably Qualified and Experienced Person then the EMP shall include documents and/or diagrams indicating the following:

- a) A drawing depicting the following locations and dimensions of limits of clearing as specified in the relevant resource consent (if Indigenous Vegetation clearing or works around Protected Trees is occurring)
- b) Management measures and strategies to minimise the area of clearing (if Indigenous Vegetation clearing or works around Protected Trees is occurring)
- c) Methodology and management measures to protect vegetation that is to be retained
- d) Confirmation of the performance requirements above

### **For consents where specific Vegetation Management Plan is required to be prepared by a Suitably Qualified and Experienced Person:**

If required by conditions of the relevant consent then a specific Vegetation Management Plan must be prepared by a Suitably Qualified and Experienced Person and shall be commensurate to the level of detail required to appropriately avoid or mitigate adverse effects associated with vegetation clearance.



## CHEMICALS AND FUELS MANAGEMENT

The Consent Holder (or nominated Contractor) is responsible for the management of all chemicals and fuels within the site so as not to cause adverse environmental effects (including environmental nuisance off site).

Where the works trigger an approval in relation to chemical storage, the Consent Holder shall be responsible for obtaining and complying with the relevant approval.

### PERFORMANCE REQUIREMENTS

The Consent Holder (or nominated Contractor) shall ensure spill response equipment is available on the site for use in an emergency. Spill response equipment shall be commensurate with the site location, topographical features, type and quantity of chemicals and fuels being stored on site.

The Consent Holder (or nominated Contractor) shall promptly remediate any contamination resulting from spill, leaks and discharges to a condition similar to that existing before the contamination.

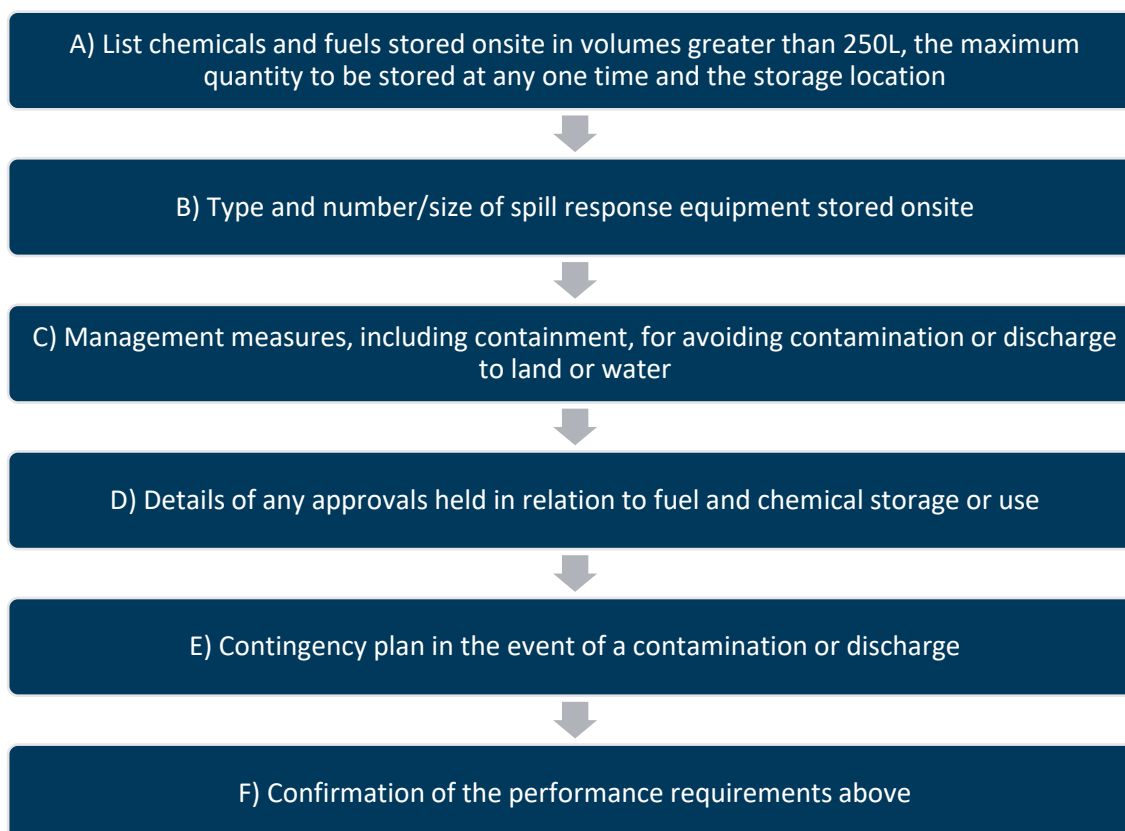
Refuelling of machinery shall conform to the following requirements:

- a) Occur at least 30m from a waterway
- b) Fuelling activity to be supervised at all times
- c) Hoses to be fitted with a stop valve at the nozzle end

Machinery shall be maintained to minimise the leakage of oil, fuel, hydraulic and other fluids.

### EMP REQUIREMENTS FOR CHEMICALS AND FUELS MANAGEMENT

The EMP shall include documents and/or diagrams indicating the following:



## WASTE MANAGEMENT

The Consent Holder (or nominated Contractor) is responsible for the management of all wastes within the site so as not to cause adverse environmental effects (including environmental nuisance off site).

### PERFORMANCE REQUIREMENTS

The Consent Holder (or nominated Contractor) shall ensure that all wastes have been removed from site. No waste shall be burnt onsite.

The Consent Holder (or nominated Contractor) shall provide bins at common areas at all times. Bins shall be fitted with lids and serviced prior to being filled to capacity. During construction, the Consent Holder (or nominated Contractor) shall maintain the site free of litter and ensure that no litter leaves the boundary of the site or enters any waterway within the site.

Vegetation waste from clearing and striping, that is free of noxious plants, may be used in conjunction with soil erosion and sediment measures such as brush matting or mulching.

Mulch stockpiles shall be separated from drainage lines and waterways to inhibit discharges. Mulch stockpiles shall be no higher than 2.5m in height. When temperatures exceed 30 degrees Celsius they should be no higher than 1.5m and monitored regularly for excess leachate and heat.

### EMP REQUIREMENTS FOR WASTE MANAGEMENT

The EMP shall include documents and/or diagrams indicating the following:

- a) Waste containment locations
- b) Any mulch stockpiles shall be located on a plan
- c) Confirmation of the performance requirements above



## APPENDIX 1: DEFINITIONS

TERM	EXPLANATION
<b>ACCIDENTAL DISCOVERY</b>	When an archaeological site (defined as a place associated with pre-1900 human activity, where there may be evidence relating to the history of New Zealand), regardless of cultural association is discovered during construction. Works onsite must cease immediately and the accidental discovery protocol in Appendix 4 must be followed.
<b>AVERAGE RECURRENCE INTERVAL (ARI)</b>	The average or expected value of the periods between exceedances of a given rainfall total accumulated over a given duration. For example a 100-year ARI event will occur on average once every 100 years. It is implicit in this definition that the periods between exceedances are generally random.
<b>CLEARANCE OF VEGETATION</b>	<p>The removal, trimming, felling, or modification of any vegetation and includes cutting, crushing, cultivation, soil disturbance including direct drilling, spraying with herbicide or burning.</p> <p>Clearance of vegetation includes, the deliberate application of water or oversowing where it would change the ecological conditions such that the resident indigenous plant(s) are killed by competitive exclusion. Includes dryland cushion field species.</p>
<b>CONSENT HOLDER</b>	The land owner of the resource consent that has been issued. It is noted that generally the consent holder delegates functions and duties to the Principal Contractor tasked with delivery of construction activity. The ultimate responsibility for ensuring compliance with resource consents however, will continue to be with the land owner that resource consent has been issued to.
<b>COMPLAINT</b>	A verbal or written complaint from a member of the public regarding the works and the effect upon their person or property.
<b>CONTAMINATED LAND</b>	<p>This means land that has a hazardous substance in or on it that—</p> <p>(a) has significant adverse effects on the environment; or</p> <p>(b) is reasonably likely to have significant adverse effects on the environment</p> <p>Management of contaminated land must comply with the <i>National Environmental Standard for Assessing Contaminants in Soil to Protect Human Health</i>.</p>
<b>CRITICAL FACILITY, INFRASTRUCTURE AND UTILITY</b>	Critical facilities include medical/health buildings, educational / research facilities, courts of law and community buildings. The latter



	<p>three are only considered critical when in use. Critical facilities are usually sensitive to both construction noise and vibration.</p> <p>Critical infrastructure and utilities include dams, pump stations, electrical and telecommunications facilities (including railway signalling systems), oil and gas pipelines and other petrochemical installations and utilities such as water mains and sewers. Critical infrastructure and utilities are typically sensitive to construction vibration.</p>
<b>CULTURAL HERITAGE</b>	Includes wāhi tūpuna, historic heritage and archaeological sites related to Māori, Pākehā, Chinese or other occupation and use of land.
<b>DISCHARGE</b>	<p>The movement of a substance/material or medium:</p> <ul style="list-style-type: none"> <li>a) into a Waterbody or gravels upon an aquifer within the site,</li> <li>b) into a Waterbody or gravels upon an aquifer adjacent to the site, and</li> <li>c) beyond the boundary of the site where it could reasonably enter a Waterbody, gravels upon an aquifer or storm water network.</li> </ul>
<b>DISCHARGE POINT</b>	The location(s) at which Discharge crosses from the site into the locations (A-C) as outlined in the definition of Discharge.
<b>ENVIRONMENTAL MANAGEMENT PLAN (EMP)</b>	An Environmental Management Plan is a specialised document prepared and implemented to avoid, remedy and mitigate adverse environmental effects associated with land use activities.
<b>ENVIRONMENTAL NUISANCE</b>	The emission, discharge, depositing or disturbance of a pollutant that unreasonably interferes with, or is likely to unreasonably interfere with, a person's enjoyment of the environment or unhealthy, offensive or unsightly conditions caused by contamination or a pollutant. Also includes nuisance associated with noise and vibration.
<b>ENVIRONMENTAL INCIDENT</b>	The occurrence of a reportable breach of the relevant legislation, District Plan or other planning documents, the resource consent and the EMP. For the purpose of this document, a reportable breach is one that causes a significant environmental effect or nuisance offsite or to Sensitive Environmental Receptors within the site including waterways, aquifers or groundwater onsite.
<b>ERODIBILITY RATING</b>	A factor that is determined by how likely a specific soil type is to erode based on its physical and chemical properties as determined in Geotech report and or Suitably Qualified & Experienced Person.
<b>EXCLUSION ZONE</b>	An area not to be entered by a person or machine for the duration of the works or otherwise designated period of time or restricted access for authorised persons.

<b>HAZARDOUS SUBSTANCE</b>	This includes, but is not limited to, any substance defined in section 2 of the <i>Hazardous Substances and New Organisms Act, 1996</i> as a hazardous substance.
<b>HOLD POINT</b>	A mandatory confirmation point beyond which no further construction activities may commence until QLDC has provided notice to the Consent Holder that the HOLD POINT matter(s) have been accepted as suitable. These are set through conditions of resource consent.
<b>INDIGENOUS VEGETATION</b>	Vegetation that occurs naturally in New Zealand, or arrived in New Zealand without human assistance, including both vascular and non-vascular plants. Shall have the same meaning as the Queenstown Lakes District Plan. Includes 'Tāonga species' listed within the <i>Ngai Tahu Claims Settlement Act, 1998</i> .
<b>PROTECTED TREES</b>	Any trees that a registered as protected under the Queenstown Lake District Plan.
<b>RAIN EVENT</b>	Any precipitation event that generates overland flow.
<b>SENSITIVE ENVIRONMENTAL RECEPTORS</b>	Living things, ecosystems or sites of cultural significance that can be adversely impacted by exposure to pollution or contamination. Includes places and areas occupied by people that are more susceptible to the adverse effects of exposure to toxic chemicals, pesticides, and other pollutants than the general population (e.g. hospitals, schools, daycare facilities), drinking water sources, and also sensitive plant and animal species and habitats. Also includes wāhi tūpuna and other places of cultural and heritage significance.
<b>SIGNIFICANT RAIN EVENT</b>	A rain event at an intensity of 20mm/ 12hrs.
<b>SITE</b>	This has the same meaning as what is in the Queenstown Lakes District Plan.
<b>STABILISED</b>	Inherently resistant to erosion or rendered resistant, such as by using indurated rock or by the application of basecourse, grassing, mulch, or another method to the reasonable satisfaction of QLDC. Where seeding or grassing is used on a surface that is not otherwise resistant to erosion, the surface is considered stabilised once, on reasonable visual inspection by QLDC, a minimum of 80% vegetative ground cover has been established over the entire area. "Non-stabilised" areas are those which do not meet the definition of "stabilised".
<b>STAGE</b>	A discrete sub-area of works within the overall site. The boundaries of each stage should be clearly identified in the resource consent application and/or the EMP.

<p><b>SUITABLY QUALIFIED AND EXPERIENCED PERSON</b></p>	<p>A person who has the abilities, formal qualifications, relevant experience, the skills and competencies necessary to perform a particular job. The qualification and experience level required will be commensurate to the specific complexities, constraints and issues associated with the project.</p> <p>SQEPs will be required for sites that are classified as ‘Medium Risk’ or High Risk’ in Table 4.1 of this document.</p> <p><b>For High Risk sites</b>, only the following will be considered eligible:</p> <ul style="list-style-type: none"> <li>- Certified Practitioner in Erosion and Sediment Control (CPESC); or</li> <li>- Chartered Professional Engineer (CPEng) in Environmental or Civil Engineering; or,</li> <li>- Certified Environmental Practitioner (CEnvP).</li> </ul> <p>All of the above must hold at least three years’ experience in preparing, implementing or managing EMPs and Erosion and Sediment Control Plans (ESCPs) on High Risk construction sites. This must include experience of onsite management and/or oversight of construction environmental management (including erosion and sediment control).</p> <p>For <b>Medium Risk sites</b>, QLDC will decide whether the person nominated person qualifies as a SQEP based on the inherent risks of the project. The level of qualifications and experience outlined for High Risk sites may also be required for some Medium Risk sites.</p> <p>Anyone that QLDC approves outside of the above three SQEP categories must provide evidence to QLDC that they have undertaken environmental awareness training. This training needs to cover administrative and operational requirements outlined in this guidance document (including a focus on erosion and sediment control).</p>
<p><b>WATERBODY</b></p>	<p>Fresh water or geothermal water in a river, lake, stream, pond, wetland, or aquifer, or any part thereof, that is not located within the coastal marine area.</p>

## APPENDIX 2: ENVIRONMENTAL MANAGEMENT PLAN FOR LOW RISK SITES

<b>Project Address:</b>	<b>QLDC Consent Number (if applicable):</b> RM123456                      BC123456
<b>Brief Project Description:</b>	
<b>Nearest Sensitive Receptors: (e.g storm water network, waterway)</b>	

### Purpose

This document is for use for sites that are deemed through resource consent to be of low environmental risk. These are also designed for the construction industry to provide guidance to construction environmental management on small scale jobs with low environmental risk.

This document is a guide for operators to help control environmental effects such as storm water, erosion and sediment run off into nearby waterways and storm water infrastructure, manage dust, noise, litter pollution and other construction related effects to neighbours and the environment.

### Administrative requirements

#### Roles and responsibilities

ROLE	NAME	PHONE NUMBER	EMAIL
SITE SUPERVISOR			
ENVIRONMENTAL REPRESENTATIVE			

### Inductions

All workers on site shall be briefed on the control measures outlined in this Environmental Management Plan. This should include and outline of the rapid stabilisation and spill response procedures. A copy of this Environmental Management Plan shall be kept on site at all times.

#### **Environmental incident notification and reporting**

Any environmental incidents which may result in an adverse effect on the environment or community shall be notified to the Regulatory Team at Queenstown Lakes District Council within 12 hours of the incident occurring. Any spills or offsite release of a hazardous substance shall be notified immediately to the Pollution Hotline at Otago Regional Council.

QLDC Regulatory Team – [03 441 0499](tel:034410499)

ORC Pollution Hotline – [0800 800 033](tel:0800800033)

**Environmental inspections**

The Environmental Representative will inspect all control measures at the start of each working day, and ensure that all measures are in good condition and suitable for the works. Inspections will also be undertaken where adverse weather events are forecast. The site should always be suitably stabilised to limit erosion and sedimentation, any potential spills, discharges and deposition of waste from site.

**Operational requirements**

**Site Set-up**

The site will have the following measures installed. These need to be considered when planning the site set out:

- Stabilised access point
- Waste collection facility
- Concrete wash out bay
- Parking area
- Hazardous substance storage facility
- Wash down facility (mud from tyres)
- Fencing
- Spill kit

**Further Comments/Other Measures:**

**Drainage, Erosion and Sediment Control**

Under the Queenstown Lakes District Plan, no discharge of water holding sediment is allowed off-site, unless you have a resource consent permitting this activity. Consider your site and your works: what’s the best tool for the job, to make sure your site is stabilised at all times.

The site will have the following measures installed. These need to be considered when planning the site set out:

- Water diverted around site
- Bunds and/or catch drains
- Stabilisation following earthworks
- Minimise area of exposed soil
- Sediment retention device
- Storm water inlets protected (cl off or sediment sock)
- Sediment fences
- Stockpile management

**Ongoing management of erosion and sediment controls:**

- E&SCs to be inspected daily, prior to heavy rainfall and following heavy rainfall
- E&SCs are always correctly installed and suitable for the planned works
- Sediment deposits removed from E&SCs following storm events to ensure capacity for next storm

**Rapid Stabilisation Procedure:**

In the event of heavy rainfall or significant weather event forecast, the site can be quickly stabilised by:

**Further Comments/Other Measures:**

**Erosion and Sediment Control Plan:**

An example of this at the end of this appendix

This needs to demonstrate:

- > overland flow paths
- > locations of controls (sediments fences, catch drains, sumps, etc)
- > stormwater outlet point

**Draw ESCP Here**

**Disclaimer:** It is noted that these are for the operators own use and Council accepts no responsibility for failure of these plans in the case of any environmental incidents. This document is intended as a guide for operators and it is recommended that if the operator is unsure of how to manage a potential environmental effect they should seek the advice of an appropriately qualified environmental professional.

### Dust Management

The site will have the following measures installed. These need to be considered when planning the site set out:

- Irrigators for soil dampening covered/stabilised
- Hand watering
- Longstanding stockpiles
- Stockpile heights minimised
- Geotextiles device
- Soil binders
- Progressive stabilisation

#### Ongoing management of dust:

- Dust generating activities avoiding during windy weather (where possible)
- Stabilise site when works untended for more than 5 calendar days.

#### Further Comments/Other Measures:

### Noise and Vibration management

#### Ongoing management of noise and vibration:

- Noisy activities to be undertaken between 0800hrs – 1700hrs Monday to Saturday inclusive
- Letter drops to neighbours during any unusually loud or noisy activities outside of 0800 – 1700 Mon to Sat
- Noise dampening devices utilised and avoidance of loud slamming to be avoided where possible

#### Further Comments/Other Measures:

### Cultural Heritage Management

#### Accidental Discovery Protocol

In the event that an archaeological site (defined as a place associated with pre-1900 human activity, regardless of cultural association) is discovered during construction, works onsite will cease immediately and the accidental discovery protocol attached to this document as Appendix 4 will be followed.

#### Further Comments/Other Measures:

### Chemicals and Fuels management

The main environmental concern for fuel and chemical management is avoiding spills entering a watercourse or groundwater.

#### Ongoing management of chemicals and fuels:

- Containers closed and appropriately stored at all times when not in use
- Spill kit onsite at all times and restocked immediately following any spills

Spill Response procedure:

Further Comments/Other Measures:

### Waste management

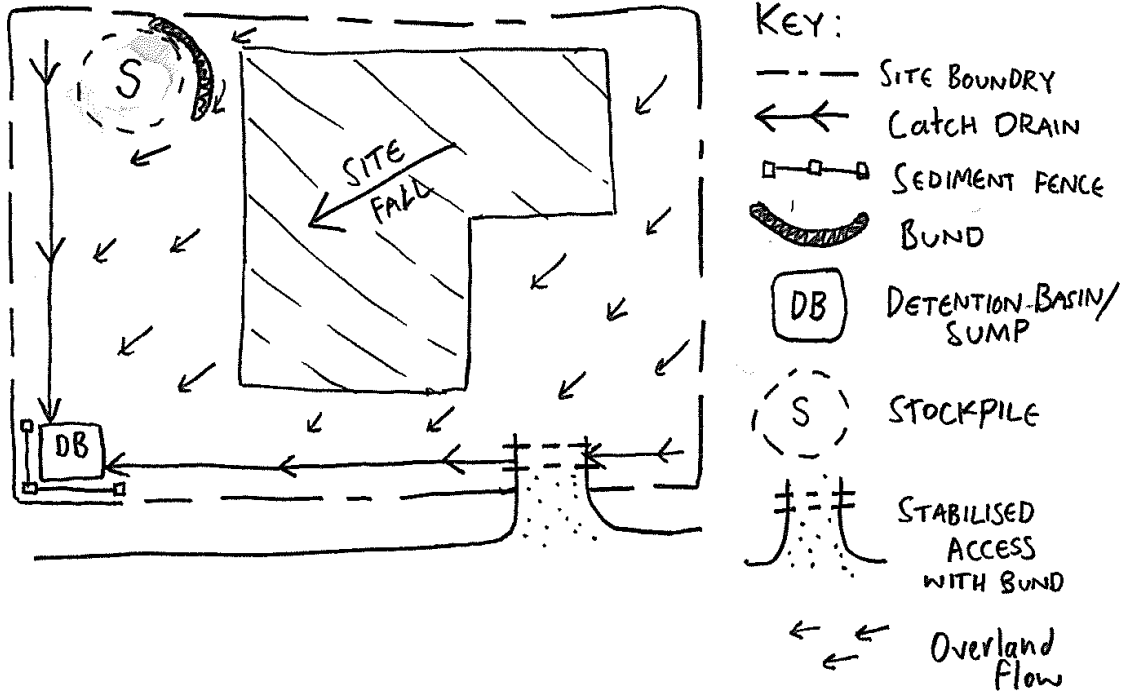
#### Ongoing management of waste:

- Appropriately-sized bin located onsite with lid
- Site cleaned free of rubbish at the end of each day
- Waste regularly removed from site such that bins are not overflowing
- Adopt the Waste Hierarchy

Further Comments/Other Measures:

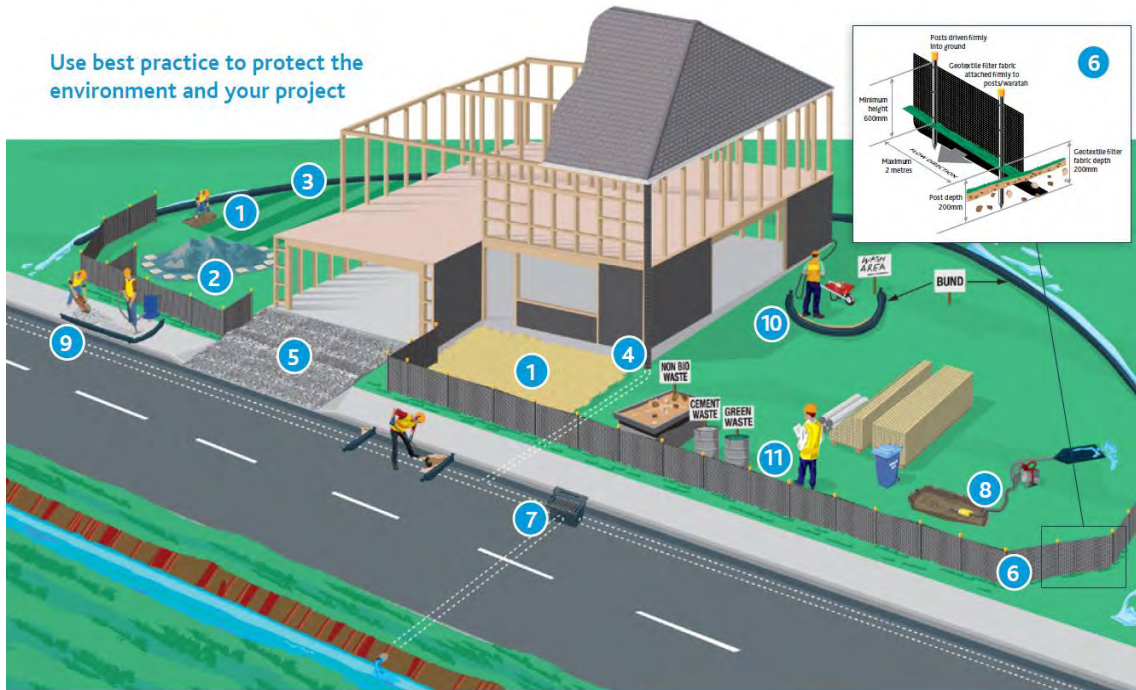


Example of an Erosion and Sediment Control Plan:



Example of Best Practice Construction Environmental Management:

Use best practice to protect the environment and your project



Key to site diagram

1. Minimise exposed areas
2. Cover stockpiles
3. Clean water diversion

4. Connect to the stormwater system as soon as the roof is complete
5. Stabilise construction entranceway
6. Silt fences
7. Drain/catchpit protection

8. Dewatering
9. Keep concrete cutting away from drains & water courses
10. Stop concrete, paint and other chemical waste from entering drains or streams. Isolate it on site
11. Maintenance and inspections

## APPENDIX 3: ENVIRONMENTAL INCIDENT REPORT FORM

<b>Project Address:</b>	<b>QLDC Consent Number (if applicable):</b> RM123456                      BC123456
<b>Brief Project Description:</b>	

### Instructions

Complete this form for all environmental incident that cause contaminants (including sediment) or environmental nuisance to leave the site. Please be succinct, stick to known facts and do not make assumptions.

Once completed submit to the Regulatory team at Queenstown Lakes District Council at [RCMonitoring@qldc.govt.nz](mailto:RCMonitoring@qldc.govt.nz) Call the Regulatory team immediately on [03 441 0499](tel:034410499) for any serious or ongoing incidents that cannot be brought under control.

### Incident details

<b>Date and Time</b>	Date: XX/XX/XX    Time: XX:XX    am <input type="checkbox"/> pm <input type="checkbox"/>
<b>Description</b> Provide a brief and factual description of what happened during the incident, include relevant details such as: <ul style="list-style-type: none"> <li>&gt; The estimated distance to the nearest waterway (include storm water and dry courses)</li> <li>&gt; The estimated distance to the nearest sensitive receiver</li> <li>&gt; The activity being undertaken when the incident occurred</li> </ul> Sketches/diagrams/photos may be reference and appended to this report to aid in the description of the incident.	
<b>EXACT location of the incident</b> Include address, landmarks, features, nearest cross street, etc. Maps and plans can be attached to the incident report if appropriate	
<b>Quantity or volume of material escaped or causing incident</b> (provide and estimate if quantity unknown)	
<b>Who identified the incident?</b>	<input type="checkbox"/> Contractor <input type="checkbox"/> Council <input type="checkbox"/> Community <input type="checkbox"/> Other

**What immediate actions/control measures were taken to rectify or contain the incident?**

**What initial corrective action will be taken to prevent similar incidents recurring in the near future?**

**Has the Otago Regional Council been notified?**  Yes  No

**Approvals:**

**Environmental Representative/Person making report**

Name..... Signature.....

Organisation..... Date.....

Mobile phone number.....

**Site Supervisor**

Name..... Signature.....

Organisation..... Date.....

Mobile phone number.....



HERITAGE NEW ZEALAND  
POUHERE TAONGA

## Heritage New Zealand Pouhere Taonga Archaeological Discovery Protocol

Under the Heritage New Zealand Pouhere Taonga Act (2014) an archaeological site is defined as any place in New Zealand that was associated with human activity that occurred before 1900 and provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand. For pre-contact Maori sites this evidence may be in the form of bones, shells, charcoal, stones etc. In later sites of European/Chinese origin, artefacts such as bottle glass, crockery etc. may be found, or evidence of old foundations, wells, drains or similar structures. Burials/koiwi tangata may be found from any historic period.

In the event that an unidentified archaeological site is located during works, the following applies;

1. Work shall cease immediately at that place and within 20m around the site.
2. The contractor must shut down all machinery, secure the area, and advise the Site Manager.
3. The Site Manager shall secure the site and notify the Heritage New Zealand Regional Archaeologist. Further assessment by an archaeologist may be required.
4. If the site is of Maori origin, the Site Manager shall notify the Heritage New Zealand Regional Archaeologist and the appropriate iwi groups or kaitiaki representative of the discovery and ensure site access to enable appropriate cultural procedures and tikanga to be undertaken, as long as all statutory requirements under legislation are met (*Heritage New Zealand Pouhere Taonga Act, Protected Objects Act*).
5. If human remains (koiwi tangata) are uncovered the Site Manager shall advise the Heritage New Zealand Regional Archaeologist, NZ Police and the appropriate iwi groups or kaitiaki representative and the above process under 4 shall apply. Remains are not to be moved until such time as iwi and Heritage New Zealand have responded.
6. Works affecting the archaeological site and any human remains (koiwi tangata) shall not resume until Heritage New Zealand gives written approval for work to continue. Further assessment by an archaeologist may be required.
7. Where iwi so request, any information recorded as the result of the find such as a description of location and content, is to be provided for their records.
8. Heritage New Zealand will determine if an archaeological authority under the *Heritage New Zealand Pouhere Taonga Act 2014* is required for works to continue.

It is an offence under S87 of the *Heritage New Zealand Pouhere Taonga Act 2014* to modify or destroy an archaeological site without an authority from Heritage New Zealand irrespective of

whether the works are permitted or a consent has been issued under the Resource Management Act.

Heritage New Zealand Regional archaeologist contact details:

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Regional Archaeologist Otago/Southland  
Heritage New Zealand  
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