



Guidelines for preparing an erosion and sediment control plan

Introduction

An Erosion and Sediment Control Plan (ESCP) identifies the methods and devices implemented to minimise erosion and sediment loss from your site as a result of soil disturbing activities.

This document provides a guide for preparing an ESCP for your site and should recognise the unique characteristics of your site, the methods for avoiding the environmental effects of erosion and sediment and who will be undertaking the implementation and monitoring of your ESCP.

When is an ESCP required?

Typically, an ESCP is required by Greater Wellington (GW) as part of any consent for discharges associated with earthworks, but also for activities such as cleanfilling, quarrying and forestry operations. Having a well designed and implemented ESCP is considered best practice for small and large sites.

GW currently allows consent holders to refine their ESCP for approval after their consent is granted but before works begin. This allows the consent holder, engineer, consultant and contractor to work together to develop a plan that will work well on site. An ESCP is a living document and can be flexible to respond to changes in methodology or unforeseen site restrictions, provided approval is gained from GW prior to the changes being implemented on site.

What standards should be used?

GW's *Erosion and Sediment Control Guidelines* should be used as a **minimum standard** for designing your ESCP. Depending on where your site is located and the extent of the activity, there may be cases where you need to exceed the standards set out in these guidelines. For example, this could be expected for sites with low energy or very sensitive receiving environments such as estuaries, or for sites with steep slopes or soils with a high clay content. The Porirua Harbour is an example in the Wellington region where all these factors come together and so an ESCP for works in this catchment may well need to exceed GW's guidelines.

You can find a copy of these GW's *Erosion and Sediment Control Guidelines* and further information on earthworks at the GW website www.gw.govt.nz/earthworks.

What should be contained in an ESCP?

An ESCP should comprise two parts:

- A written methodology, and
- A site plan or plans

Below we provide a guide of what should be included in each part of your ESCP. Please note that these guidelines should be adapted for your site and reflect the nature and size of your works.

Written methodology

1. Project description

- Brief description of site and purpose of works
- Description of the existing site including vegetation, topography, watercourses
- Disturbed soil area and volume
- Description of soil types on site, including results of any soil testing, highlighting areas of low cohesive soils
- Proposed sequence of works in site, including the when areas will be opened and stabilised and in which order
- Any important consent conditions or site considerations to be aware of

2. Principles for minimising sediment discharges from your site

- Identify the principles of the ESCP
- Description of where the principles for the ESCP have been drawn from, including but not limited to the *GW Erosion and Sediment Control Guidelines*

3. Erosion control and sediment control methods

- Identify methods used to limit erosion
- Identify all ESC device types to be employed
- Detailed design information for each ESC device, including catchment size, dimensions, installation method and materials
- Information on all discharge points, decants and emergency spillways
- Annotated drawings of ESC devices where possible
- All supporting calculations for ESC choices
- Indicate if as-built design information will be provided

4. Site stabilisation

- Timeframes for the rapid stabilisation of all disturbed areas
- Methods for achieving stabilisation of all disturbed areas, including both vegetative and instant stabilisation methods
- Details of hydroseed, grass seed and fertiliser application, including application rates
- Plans for ensuring all or most of the site is stabilised prior to winter
- Methods to be used if grass strike is not achieved by winter works shutdown

5. Maintenance, monitoring and reporting

- Describe how ESCs will be inspected, including frequency of inspections and procedures and templates for recording and reporting monitoring results
- A role description and qualifications of the personnel undertaking all ESC monitoring
- Trigger levels for removing sediment from ESC devices
- Trigger levels that require review and improvement of on site procedures and ESC devices, including any additional sampling
- Details on any water quality, ecological or pond flocculation monitoring

6. Heavy rainfall response and contingency measures

- Any monitoring of weather forecasts
- Inspection protocols in the event of heavy rain warnings
- Any additional control measures proposed in the case of heavy rain warnings
- Contingency measures in event of failure of any ESC device

7. Reviewing and changing your ESCP

- Procedures for reviewing and changing your ESCP
- Details on responsibilities for who will contact GW to request acceptance of any approvals

8. Site responsibilities

- Identify the all people with responsibilities on site
- Identify chain of command for ensuring the various aspects of your ESCP are implemented
- Identify responsibilities for routine monitoring and maintenance, provision of design details for ESC devices, and ensuring that ESC devices have been constructed correctly

9. Construction timeline

- An anticipated sequence and timing for construction of the ESCs, bulk earthworks and any additional works (such as bridge construction, stream works etc)
- Lengths of time each phase of construction works will take

Site plan

Your ESCP site plan should give a clear picture of the layout of the site, showing all ESCs and other relevant features including all streams, water run off and discharge points. It is useful to provide a second site plan showing the site topography and water drainage flow paths after re-contouring.

If you are carrying out large scale earthworks and there will be changes to the catchments as the works progress, you should provide a site plan for each stage of works indicating the changes in ESC devices and methods through time.

Your ESCP site plan should contain:

- Title, date and drawing reference number, north arrow, scale and key
- Unique identification numbers for each ESC device
- Extent of soil disturbance (earthworks footprint)
- Clearly marked areas of cut and fill
- Location of all ESC devices
- Boundary of the contributing catchment for each esc device and where they discharge to
- Topsoil and unsuitable material stockpiles
- Identification of any 'no go' or buffer areas to be maintained on the site
- Arrows depicting the general flow path/direction of water within each catchment
- All watercourses and/or overland flow paths
- All historic and cultural sites
- Site entranceways and boundaries
- Contour lines
- Any other relevant site information