Soil and water management guidelines

Department: Planning and Environment Group

Responsible Officer: Manager | Environmental Services

Introduction

This Guideline is applicable to all construction activities that cause soil disturbance within the Bega Valley Shire. The purpose of the Guideline is to guide the implementation of Council’s Soil and Water Management Policy (Policy No. 3.08) through the requirement of Soil and Water Control Plans with all development applications when construction works are likely to involve soil disturbance. One of two kinds of Soil and Water Control Plans are required dependent on the size of the construction and/or the sensitivity of the environment. These are either an Erosion and Sediment Control Plans (ESCP) or Soil and Water Management Plans (SWMP).

The aim of the Policy and Guideline is to minimise the impact of soil erosion and sedimentation as well as stormwater pollution resulting from land development.

The risk of soil erosion and sediment movement is greatest during development activities including building and road construction, clearance of vegetation, disturbance to or removal of topsoil, landscaping, excavation, the movement and transportation of soil and trenches for services.

This Guideline outlines the requirements for developing an ESCP or SWMP and is based on the NSW LandCom and NSW Office of Environment & Heritage (OEH), “Managing Urban Stormwater – Soils and Construction Series”, (Volume 1-2004 and Volume 2-2008.)


Scope

All development activities in the Bega Valley Shire are covered by this Guideline where these activities may result in soil erosion or sedimentation of receiving waters and where more than 250 m² of land will be disturbed. Whether an ESCP or SWMP is required is dependent on the area of land being disturbed and the type of activity involved, (refer to Table 1). Different levels of control will be required based on the level of soil erosion or sedimentation risk posed by the development activity. For sites where less than 250 m² of land will be disturbed sites will still need to prevent soil loss or erosion and controls may be required by Council Officers before any works can commence.

The Guideline applies to the whole process of development from initial planning of works through to the completion of construction and subsequent rehabilitation works. This Guideline outlines requirements for best management practices applicable to the construction phase specifically, including the following:

- Marking out areas to be disturbed;
- Controlling run-on water;
- Controlling movement of water on, through and off the site;
- Stripping and stockpiling of topsoil/reshaping the site;
- Stabilisation and/or capture of exposed soils;
- Preventing or managing oxidisation of exposed potentially acid sulphate soils;
- Generally managing the impacts of works, and
• Rehabilitation including revegetation works.

Compliance with the Guideline and the DECCW “Managing Urban Stormwater – Soils and Construction Series”, (Volume 1-2004 and Volume 2-2008) is required. It should be noted that additional measures may be required for development on sites that are deemed ‘environmentally sensitive’ by the Council. Additional requirements for these sites will need to be addressed specifically with Council building and development staff.

Table 1 – Guideline Scope

<table>
<thead>
<tr>
<th>Area of Disturbance – m²</th>
<th>Activity Type</th>
<th>Scope of Works</th>
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</thead>
<tbody>
<tr>
<td>250 – 2500</td>
<td>Most dwelling sites, large driveways, small commercial developments, small subdivisions, medium to high density housing developments and small sewer works</td>
<td>Erosion and Sedimentation Control Plan (ESCP) is required for addressing soil erosion and sediment pollution</td>
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<tr>
<td>Greater than 2500</td>
<td>Large subdivisions, vegetation removal, large civil works and large medium to high density housing developments etc.</td>
<td>A detailed Soil and Water Management Plan (SWMP) addressing soil erosion and pollution by sediment including nutrients held on sediment particles, and including a calculation as to the need and design specifications for sediment basins.</td>
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</table>

General Requirements for Control Plans

Before a Consent or a Complying Development Certificate can be granted for a development application that potentially will cause soil disturbance, either an Erosion & Sediment Control Plan (ESCP) or Soil and Water Management Plan (SWMP) must be submitted, assessed and approved by the Council or Private Certifying Authority before any Construction Certificate will be issued.

Applicants should seek advice from Council’s Building and Planning staff regarding the need for an ESCP or SWMP before lodging a development application. General guidance for the requirement of an ESCP or SWMP is provided below.

All required ESCP / SWMP Plans must be designed and prepared in accordance with the NSW LandCom and NSW OEH, “Managing Urban Stormwater – Soils and Construction Series”, (Volume 1-2004 and Volume 2-2008.) Applicants are strongly advised to use the services of a suitably qualified or experienced person to design their ESCP/SWMP Plans. All submitted plans should bear the names and qualifications of such persons, acknowledging authorship.

During the course of the development or work, control designs and measures may need to be amended and the approved ESCP/SWMP reviewed. Any deviations from the original approved plan for development applications are to be approved only by Council via a section 96 amendment modification under the Environmental Planning and Assessment Act, 1979 and carried out in accordance with the Bega Valley DCP 2013 – General Provisions for Erosion & Sediment Control.

The approved control measures must be installed prior to any land disturbance commencing and be maintained until the completion and/or effective establishment of soil stabilisation works. Once in place, the approved control measures shall be effectively maintained for as long as they are required such as when stabilisation
methods are in place and/or rehabilitation measures are sufficient for stabilisation. Council Building Surveying staff are available to comment on whether controls are adequate or still required.

All site personnel are responsible for notifying the appropriate people for the authorised or unauthorised removal of any soil erosion & sediment control measures. The control measures must be reinstated within the same working day.

Council officers will inspect control measures as part of their routine inspections.

Council can refuse to carry out inspections requested by the applicant / owner / builder if erosion & sediment control measures are not satisfactory or maintained in accordance with this Guideline, conditions of development consent and the approved ESCP/SWMP.

Council will also conduct random inspections to ensure compliance with environmental legislation.

**Land development between 250m² & 2500m²**

Erosion & Sediment Control Plans are required where between 250 m² and 2500 m² of land will be disturbed by development for:

- a. Single dwellings and other developments if approval is required from Council, and
- b. Minor civil infrastructure works including:
  - i. urban and minor rural roads construction and reconstruction;
  - ii. stormwater, sewerage and water pipelines including culverts in urban areas;
  - iii. bulk earthworks including retention basins and sports-fields, and
  - iv. electricity, telephone and natural gas lines.

Council may vary this requirement for an ESCP, especially where a high risk of polluting receiving waters exists, to require a detailed SWMP Plan instead.

**Land development greater than 2500 m²**

Soil & Water Management Plans are required for all development works where more than 2500 m² of land will be disturbed, and/or where development consent is required.

**Land development within 40 m of a watercourse**

A controlled activity approval must be gained from the NSW Office of Water (previously OEH and DECCW) on waterfront land (land within 40 m of a watercourse) before any of the following works are undertaken:

- a. erection of a building or carrying out of work within the meaning of the *Environmental Planning Assessment Act 1979*, or
- b. the removal of material, whether or not extracted material, or vegetation from land whether by way of excavation or otherwise, or
- c. deposition of material whether or not extracted material on land whether by way of landfill operations or otherwise, or
- d. the carrying out of any other activity that affects the quantity, flow or course of water in a water source.

The controlled activity approval must be submitted to Council before the commencement of any works on site. The Bega Office of Water (OEH) can be contacted on phone 02 64918200.

**Enforcement and Compliance**

Under the Protection of the Environment Operations Act 1997 (POEO Act), significant fines may be imposed on builders, owner/occupiers or landscapers of land where pollution has the potential to, or has entered gutters, drains and waterways. Pollution in this context refers to soil sediments and associated vegetative debris and nutrients.
Site supervisors need to take reasonable and practical steps to ensure that workers under their control on the site including sub-contractors do not breach environmental laws.

The legislation does not recognise:

- whether or not the site is difficult;
- problems that might be encountered in implementing the Soil and Water Control Plan, or
- whether or not you are familiar with good soil and water standards.

Note that workers who become aware of significant environmental harm in association with their work, e.g. a major loss of sediment from their site, have a legal duty under the POEO Act to notify their employer of this information.

Enforcement and compliance activities will be instituted immediately if required. Regulatory options include the issue of a Stop Work Notice, the issue of Penalty Infringement Notices under the provisions of the *POEO Act 1997*, the issue of a Penalty Infringement Notice under the provisions of the *Environmental Planning and Assessment Act 1979*, and/or Clean up or Prevention Notices under the provisions of the *POEO Act 1997*.

**NOTE:**
Clean Up and Prevention Notices under the *POEO Act 1997* include a statutory administration charge.

### Development of Soil and Water Control Plans

Erosion and Sediment Control Plans (ESCP) and Soil and Water Management Plans (SWMP) should be prepared and submitted to Council for approval in accordance with the Guidelines contained within the Soils and Construction Volume 1 2004 – *Managing Urban Stormwater Guideline* (blue book).

All ESCP/SWMP Plans should follow the following seven principles for effective soil and water management during land disturbance:

- assess the soil and water implications of the site and the management issues that will arise from land disturbance (including potentially acid sulphate soils);
- plan for soil erosion and sediment control appropriate to the level of risk, concurrently with engineering design and before earthworks begin;
- minimise the area of soil disturbance and exposed to erosion by maintaining vegetation especially groundcovers where possible, delineating vehicle movement zones on site and use of low-impact machinery;
- conserve topsoil for later site rehabilitation/revegetation;
- control water from the top of, and through the development area;
- progressive rehabilitation and/or stabilisation works while maintaining control measures until stabilisation is adequate, and
- include a mechanism for ongoing review and adaptive management.

### Erosion and Sediment Control Plans

On sites where less than 2,500 m² of land is disturbed an ESCP is required and must show:

a. the following background information displayed on the planning drawing(s):
   i. Location of site boundaries and adjoining roads;
   ii. Approximate grades and indications of directions of fall;
   iii. Approximate location of trees and other vegetation showing items for removal or retention;
iv. Location of site access, proposed roads and other impervious areas (e.g. parking areas and site facilities);
v. Existing and proposed drainage patterns with stormwater discharge points, and
vi. The north point and a relevant scale.

**Note:**
Access to the site from adjacent vacant land or Council or Crown Reserves is prohibited as is parking on nature strips adjacent to the development site.

- how the various soil conservation measures will be carried out on site, including:
  - details of the timing of the works;
  - the location of lands where protective ground cover will be maintained;
  - access protection measures;
  - the nature and extent of earthworks including the amount of cut and fill;
  - the diversion of runoff from upslope lands around the disturbed areas;
  - the location of all soil and other material stockpiles and stabilisation methods;
  - the location and type of proposed erosion and sediment control measures;
  - site rehabilitation including schedules for revegetation and rehabilitation works;
  - the frequency and nature of any maintenance programme, and
  - any other site specific soil or water conservation structures or devices.

### Soil and Water Management Plans

On larger sites where greater than 2,500 m² of land is disturbed, or where a site is deemed environmentally sensitive a SWMP Plan should include all items listed for an ESCP above, as well as the following:

- Information on:
  - the location of lots, public open space, stormwater drainage systems, schools, shopping/community centres
  - the location of land designated or zoned for special uses
  - existing site contours
- The location and general diagrammatic representations of all necessary:
  - sediment and water control best management practices
- Location and engineering details with supporting design calculations for all necessary:
  - sediment basins; and
- Location and basic details of any other facilities proposed to be included as part of the development or works, such as:
  - constructed wetlands;
  - gross pollutant traps, and
  - trash racks or trash collection/separator units.
- Specify the scale, type, operation and maintenance of all soil and water management devises in the soil and water management program. Include maps and/or specifications of measures proposed to control soil erosion and pollution by sediment.

### Clearing of Vegetation

Nothing in this Guideline releases any person, proponent, Council or authority from their obligations under the Native Vegetation Act 2003. Furthermore, approval given for clearing does not exempt anyone from requirements to:

1. obtain additional approval as might be required by other Government agencies, and
2. meet the requirements of other legislation.
No vegetation shall be removed before approval by Council has been given to start work on any stage and not before the approved sediment and water control measures are installed and correctly in place.

The management or removal of site vegetation shall:

- comply with Council’s Tree Protection and management measures in BV LEP 2013 and BV DCP 2013, and any relevant State government legislation or regulation;
- be minimised in order to most effectively stabilise the ground surface (includes trees, shrubs and ground covers), noting that the inner and outer Asset Protection Zones have different conditions for clearing which may allow for retention of specific vegetation;
- not disturb the footpath or nature-strip by construction activities other than where shown on the plan for access to site, installation of services or other works specifically approved by Council;
- be confined to the approved building envelope area or any permanent access ways and areas within 3 m of the outer most projection of the approval works and storage areas & within 5 m for subdivisions;
- provide a suitable barrier to protect retained vegetation;
- be encouraged to mulch vegetative debris for later use as brush mulch to control erosion or to rehabilitate the site. Brush mulch is a particularly valuable resource to aide to the germination of seed stock and to act as a barrier to sheet flow of waters, and
- be phased (as appropriate dependent on the size of the development) with the clearing of vegetation undertaken only within development of each stage, and understorey ground cover vegetation slashed except in areas shown on the plan, providing that ground surface disturbance is minimised and rubber tyred vehicles only are used for such slashing works.

All reasonable care must be taken to protect other vegetation from damage during construction works. This may involve the following:

- clearly marking trees to be retained;
- avoiding compaction of ground within the drip line of trees;
- clearly delineating the area of disturbance and keeping all vehicles, building materials, stockpiles and refuse within that area;
- limiting the number of access points to the site;
- clearly defining access tracks within the site, and
- clearly restricting access to “No Go” areas.

**Access and Roads**

For subdivisions, priority must be given to roads and road shoulders stabilisation to mitigate erosion hazards. Where circumstances preclude the sealing of road shoulders and / or construction of kerbs and guttering and where grades permit grass shoulders, then the following measures must be implemented:

1. the shoulders and associated table drains must be topsoiled and turfed having dimensions that simplify maintenance mowing, and
2. where grades do not permit grass shoulders (generally more than 5%), the shoulders and associated table drains must be stabilised with appropriate erosion control measures (e.g. jute mesh and bitumen, cross drains, erosion matting etc) and be revegetated.
Rehabilitation and Landscaping

The proponent will carry out progressive land surface stabilisation works on all disturbed areas until the site is satisfactorily rehabilitated and where appropriate landscaped to the satisfaction of Council.

- All disturbed areas shall be progressively stabilised and/or revegetated across the site.
- No completed areas to remain exposed to erosion for more than 14 days.
- Installed sedimentation measures are to be maintained until soil stabilisation is complete and they are then to be de-commissioned.
- If the sowing of seed stock is used as a primary rehabilitation measure on disturbed ground, additional erosion and sediment control measures must be carried out. These can include turf stripping, permanent fences or brush mulching. They are to be maintained until an effective 70% vegetative ground cover has been established over the completed areas.
- The removal or management of vegetation within Council Shire boundaries shall be consistent with all relevant State Government legislation. It should be noted that other legislation may contain conditions that override clauses of this Code of Practice.