



Erosion and Sediment Control for Residential Building Sites

Introduction

Sediment discharge from building sites can create a number of issues including:

- Dust nuisance.
- Traffic and pedestrian hazards.
- Blockage of stormwater systems.
- Mosquito breeding in ponded water as a result of erosion and sediment deposition.
- Environmental harm to waterways, wetlands and estuaries.

These issues may result in liability and extra costs for the building contractor.



Uncontrolled site access, causing drainage to the verge and sediment discharge to the street, stormwater drainage system and local waterways.

An ESCP enables the Construction Manager to take an integrated approach, controlling costs and work schedules while minimising clean-up and repair costs or call-backs.

An ESCP can also contribute to improved construction productivity, by protecting internal site access for wet weather conditions with provision of drainage controls, diversion of upslope run-on and progressive surface stabilisation.

Through the use of ESCP's, the public image (and marketability) of building contractors and the industry as a whole, is enhanced.



Construction site inaccessible after rain - lack of drainage and no diversion of upslope run-on.

What are the benefits of implementing erosion and sediment controls on a building site?

Controlling erosion and sediment discharge will assist in reducing commercial risk and liability through avoidance of environmental or compliance fines, by avoiding legal action from impacted clients or other affected parties, and by averting contract penalties.

Developing an Erosion and Sediment Control Plan (ESCP) will assist in planning and implementing adequate site management and will help to protect the asset and market value of the site, by preventing degradation such as loss of soil, poor site access or damage to adjacent street plantings and public infrastructure.

When should an Erosion and Sediment Control Plan be developed for a residential building site?

An ESCP should be used where soils are at risk of erosion, through exposure and/or disturbance such as filling, excavation and vehicle movements.

Other factors including slope, area of exposed soil, contributing (upslope) catchment size, seasonal rainfall and wind all contribute to erosion risk and potentially sediment loss from the site.

Consent Authorities or Local Government Councils may also require an ESCP as part of their consent and compliance processes. Check with local authorities well before commencing works, to avoid any unnecessary delays.

What is an Erosion and Sediment Control Plan?

An ESCP sets out erosion and sediment control measures for construction and building sites. An ESCP is a schematic plan based on the building site, showing the location and specifications for proposed erosion, drainage and/or sediment controls.

What information should be included in an Erosion and Sediment Control Plan?

An ESCP should address three fundamental factors:

Drainage Control – within the site and control / diversion of upslope runoff.

Erosion control – protecting and stabilising exposed or vulnerable soil surfaces to limit production of sediment.

Sediment Control – interception and trapping of sediment to prevent discharge from the site.

Although each construction site will be slightly different, there are a number of standard erosion and sediment controls that can be utilised on most sites. If installed correctly, these will generally provide effective management.

Some of these measures include:

- Flagging of 'No-Go' areas to limit site disturbance and costly rehabilitation.
- Downslope perimeter sediment controls (e.g. sediment fence or mulch bund).
- Drainage and diversion, separation of 'clean' and 'dirty' water.
- Stockpile management (diversion bund, sediment fence and cover).
- A stabilised site entry/exit point.
- Side entry pit and drop inlet protection.



Effective side entry pit inlet protection

Other Erosion and Sediment Control (ESC) factors to consider are:

- Timing and staging – especially with regard to Wet season erosion risk.
- Vegetation management – retaining or providing ground cover on bare surfaces.
- Monitoring and maintenance of ESC works – regular and post-storm checks, personnel responsible, contingency measures and materials on hand.
- Site rehabilitation – stabilisation of disturbed areas with cover establishment or mulching, removal of ESC works when site stable.
- Standard drawings or typicals included in the ESCP which show assembly and installation detail for structures such as sediment fences, diversion banks, etc. (see Further Information below).

Further Information:

For more information on Erosion and Sediment Control Plan content, layout and/or standard drawings see:

Developing an Erosion and Sediment Control Plan for a Residential Building Site

NT Department of Land Resource Management (DLRM)

Available from: see Contact Details below.

Erosion and Sediment Control Field Guide For Builders

Version 3 2013 Catchments & Creeks Pty Ltd.

Available from:

www.catchmentsandcreeks.com.au/docs/Erosion-&-Sediment-Control-Field-Guide-for-Builders-screen.pdf

Best Practice Erosion and Sediment Control.

International Erosion Control Association, (IECA) Australasia Chapter, 2008

Available from: www.austieca.com.au

Contact Details:

For further information contact the DLRM Land Management Unit in your region. Additional Fact Sheets are available on the website at:

www.lrm.nt.gov.au/soil/management

Land Management Unit Rangelands Division

Darwin: Phone (08) 8999 4572

Katherine: Phone (08) 8999 4454

Alice Springs: Phone (08) 8951 9208