



# Delivering to building sites

## Building a better environment

Everyone associated with the building industry is being asked to prevent any pollution from entering the stormwater system because everything that goes down the drain ends up in our waterways.

The following hints are aimed at helping you, the person responsible for delivering goods to building sites, to keep our stormwater systems, rivers and beaches free from pollution from building sites.

## Site disturbance

- Vehicles should enter and leave the site on the access driveway to limit the tracking of mud or soil on to roads.
- If any mud or soil is deposited on the roadway, please remove it as it is your responsibility to clean any deposit left by your vehicle.
- Limit disturbance at a site when delivering materials.
- Always ensure that loads are covered to eliminate any materials blowing off.

## For further information...

- Northern Adelaide & Barossa Catchment Water Management Board Phone: 8285 2033
- KESAB Phone: 8234 7255
- Environment Protection Agency Phone: 8204 9403
- or your local council



**WARNING**  
*On the spot fines apply*

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The northern region's CLEAN SITE program is a partnership between the Northern Adelaide & Barossa Catchment Water Management Board, KESAB, the EPA and the Cities of Playford, Salisbury, Tea Tree Gully and Gawler.

The CLEAN SITE program is a KESAB industry education initiative.



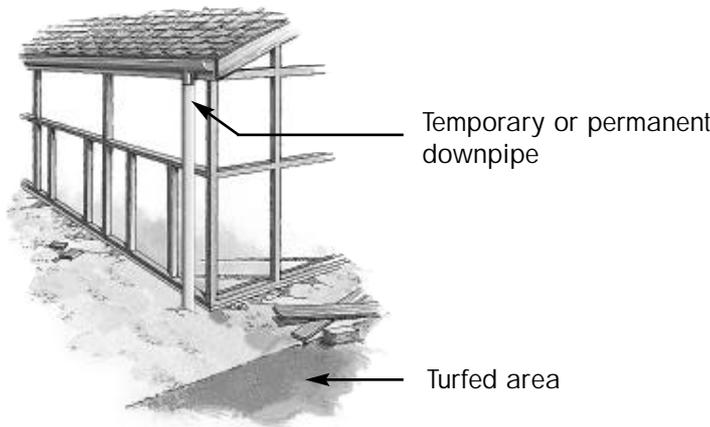
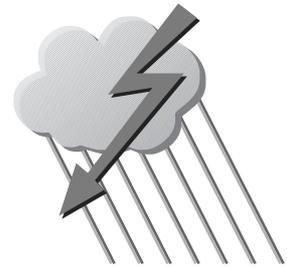


# Early roof downpipe connection

Temporary or permanent downpipes should be installed at the same time as the roof is installed. The early connection of downpipes to the stormwater system will reduce site drainage problems.

This will reduce downtime following storm events.

Connecting roof downpipes is a vital process to keep the water off the site and "Keep the soil on the site". This helps to ensure our waterways stay healthy.



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# DO IT RIGHT CLEAN SITE

BUILDING A BETTER ENVIRONMENT

## Ways to help you reduce erosion and sediment from your site

### MINIMISE DISTURBANCE WHEN EXCAVATING

Preserve as much grassed area as possible as these areas not only improve the appearance of your site, but they also filter much of the sediment from stormwater run-off before it reaches the drainage system.

### SINGLE AGGREGATE ENTRY-EXIT

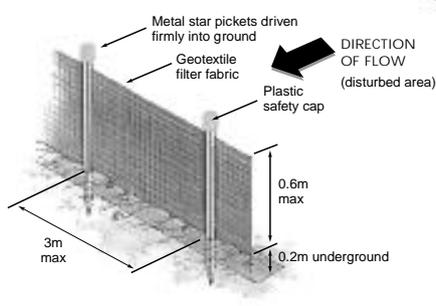
Restrict vehicle access to one entry-exit point where possible. Placing aggregate material at the access point will allow all weather access, will reduce the amount of soil carried off the site by vehicles, and will provide a permanent base for the driveway.

### LITTER AND BUILDING WASTE

All hard waste and litter must be stored on-site in a way to prevent any materials from entering the stormwater system & adjacent areas by wind or water action.

### CATCH DRAINS AND PERIMETER BANKS

Where possible allow for diversion of up slope stormwater around the work site and other disturbed surfaces



### INSTALL A SEDIMENT BARRIER

Sediment barriers down slope of the building site filter coarse sediment before it can wash into gutters, drains and waterways.

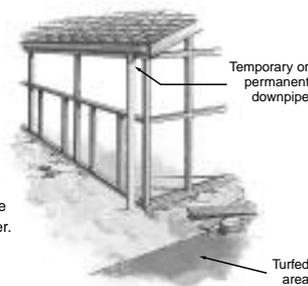
#### Sediment Barrier Techniques

- geotextile sediment fabric attached to posts with the geotextile buried in an upstream trench; or
- place turf of a minimum 600mm width along kerb line; or
- straw bales, staked in a 100mm (min) deep trench.

This project is supported by the Federal Government through the Natural Heritage Trust.

### EARLY STORMWATER DRAINAGE CONNECTION

Connect a temporary or permanent downpipe/s to the stormwater system at the same time as the roof is installed. Downpipe/s may be temporarily removed during wall construction. All stormwater should discharge in a manner that does not cause soil erosion.



### SAND AND SOIL STOCKPILES

Stockpiles should be placed totally on the construction site and behind a sediment barrier.

### CONCRETE WASTE AND WASHING

Waste concrete and household paint should not be allowed to wash into the gutters or the street.

\* Illustrations reproduced courtesy of Brisbane City Council

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# Litter and building waste

All hard waste and litter must be stored on-site in a way to prevent any materials from entering the stormwater system and adjacent areas by wind or water action.

Smaller materials such as litter should be contained in covered bins or litter traps formed on three sides by geotextile as a windbreak. Litter is a major source of pollution of our waterways and coast.



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# Diversion of up slope water

Where practical, or where stormwater run-off is more than 0.5 hectare, up-slope water should be diverted around the site. Stormwater can be diverted with the use of small turf or geotextile lined catch drains, or with the use of diversion banks.

Diverted stormwater should be discharged onto stable areas and should not be diverted into neighbouring properties unless written permission is obtained from the land owner(s). Avoid directing stormwater towards the site's entry/exit point.



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# Sand and soil stockpiles

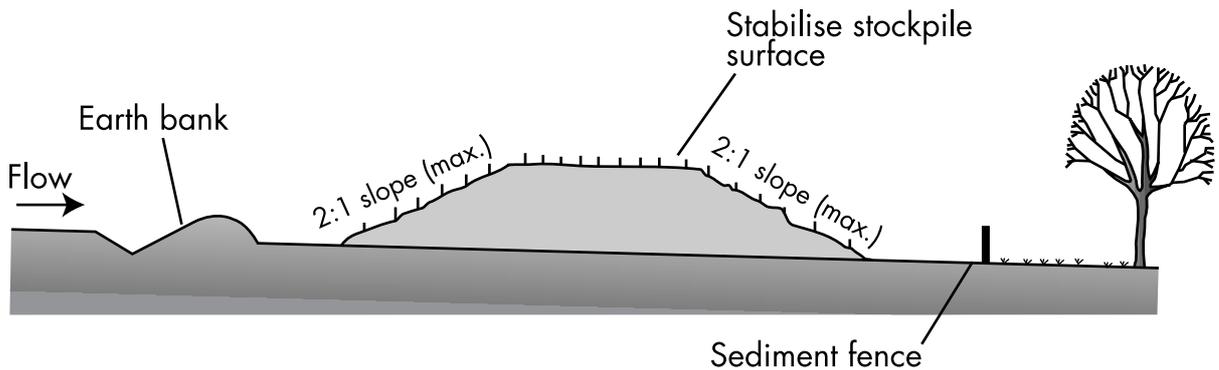
All site workers, subcontractors and delivery drivers need to be advised of their responsibilities to minimise soil erosion and pollution. The delivery driver must be given a designated location to deliver materials on site. This practice will also keep stockpiles away from site access and consequently keep sediment from being discharged to the stormwater system.

Stockpiles and building materials are not to be stored on the footpath or within the road reserve. Where necessary, stockpile losses can be minimised with the use of covers.

All stockpiles and building materials should be located behind the sediment controls. Stockpiles should be protected from run-on water by placing diversion banks up-slope and with sediment control structures placed immediately down-slope.

The location of all stockpiles on-site should be at least 2 metres (preferably 5 metres) from hazard areas, especially likely areas of concentrated or high velocity flows such as waterways, kerb inlet pits, paved areas and driveways. The height of the stockpile should be less than 2 metres. The incorrect storage of stockpiles is a major cause of pollution in our waterways through the stormwater system.

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# Sediment fencing

The most efficient and widely accepted sediment barrier for construction sites is a specially manufactured geotextile sediment fence. Sediment fences act like dams - trapping the sediment while allowing water to leave the site. They are effective in retaining suspended solids coarser than 0.02 mm. They are simple to construct, relatively inexpensive and easily moved as development proceeds.

On a typical residential building block (approx. 700sq.m), a sediment fence should work well providing it is situated on the low side of the block. If there needs to be a break in the fence for any reason (say, an access point) a contour bank/diversion bank or bund needs to be constructed to direct water back to the fence. The sediment fence must have uphill returns at either end to prevent sediment flowing around it.

## Tips for using a sediment fence

When using a sediment fence, keep in mind that it will be effective within the following parameters:

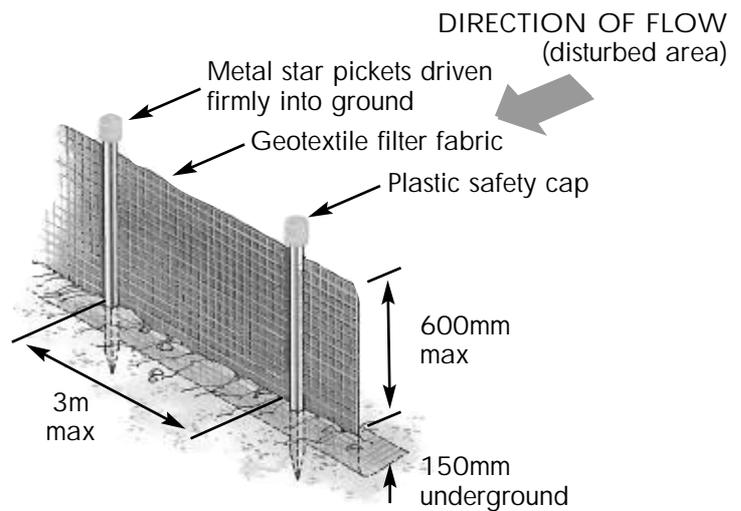
- It is generally not designed to filter concentrated flows and therefore needs to be placed following the contours whenever possible.
- It should last for up to six months but requires regular maintenance and weekly checks are needed. The performance of a sediment fence diminishes considerably when crushed by delivery of building materials. It must remain vertical and keyed into the soil.
- Where the sediment fence is not installed correctly water will inevitably flow through the point of least resistance. Damaged fences must be repaired promptly.
- Sediment fences need to be trenched in at least 150 mm and buried so the water flows through and not underneath.
- Soil on both sides of the fence must be compacted to avoid seepage under the barrier.

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**Advantages.** It is a simple strategy that is easily installed, shifted or removed. Sediment fences work well and, if maintained, will last for the duration of the construction stage.

## Construction notes

1. Construct sediment fences as close as possible to follow the contours of the site.
2. Drive 1.5 metre long posts into ground, maximum 3 metres apart.
3. Staple to 40 mm square hardwood posts or wire tied to steel posts.
4. Dig a 150 mm deep trench along the up-slope line of the fence for the bottom of the fabric to be entrenched.
5. Backfill trench over base of fabric and compact on both sides.



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# Soil on site checklist

## What happens to soil washed off sites?

Soil washed from building sites is often a major source of sediment pollution in our waterways. A single building block can lose up to four truckloads of soil in one major storm. Imagine that multiplied by the hundreds of blocks in your area. Think of the adverse impact that sediment has on our waterways.

### Can you answer yes to these questions?

Yes/No  
✓ X

- Do you have erosion and sediment control measures in place before excavation starts?
- Are the stormwater drains around your site free of pollution (litter, soil, building materials, etc.)?
- Do you have a kerbside turf strip to slow the speed of water and trap sediment?
- Are soil stockpiles surrounded by a sediment fence on the downslope side?
- Do you have and use a designated washout area that is isolated from stormwater drains?
- Do you protect all drains with sediment traps that are appropriately sized for the stormwater flow and sediment load?
- Do you check and maintain your erosion and sediment control measures, particularly before rain and daily before leaving the site?
- Have you retained trees and vegetation and protected them from being damaged?
- Do you have a single access point that is stabilised to prevent tracking of sediment onto the road, footpath and gutters?
- Do you sweep and shovel all soil, earth, mud, clay and concrete waste from roads, driveways, etc. every day?
- Do you connect downpipes to the stormwater system as soon as roofing is completed?

## Benefits to the builder

- ✓ No fines
- ✓ A better looking, more marketable site
- ✓ Less downtime after wet weather due to reduced site waterlogging
- ✓ Reduced stockpile losses
- ✓ Reduced clean-up costs
- ✓ Fewer public complaints
- ✓ Better public image

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# Stabilised entry/exit point

Where possible, the entry/exit point of the site should be restricted to one stabilised location to ensure sediment is not tracked off the site. Note that an appropriate location for the construction entrance may not be the location of the permanent driveway.

The recommended construction method for stabilising the access point is 200 mm of aggregate at 30-40 mm in size (note: crushed sandstone is not suitable). The access should be a minimum 3 metres wide and 15 metres long, or to the building alignment for all residential or sub-division sites. Where possible, the entry/exit area should extend from the kerb to the building footprint. Remember that a large truck must be able to gain access to this site without leaving the stabilised access.

Where the entry/exit area slopes toward the road, a diversion hump should be installed across the stabilised area to direct stormwater run-off to the side where it can be filtered by a sediment fence. Stabilised access points only require periodic maintenance with the topping up of the rock. Street sweeping on adjacent roads may still be required.

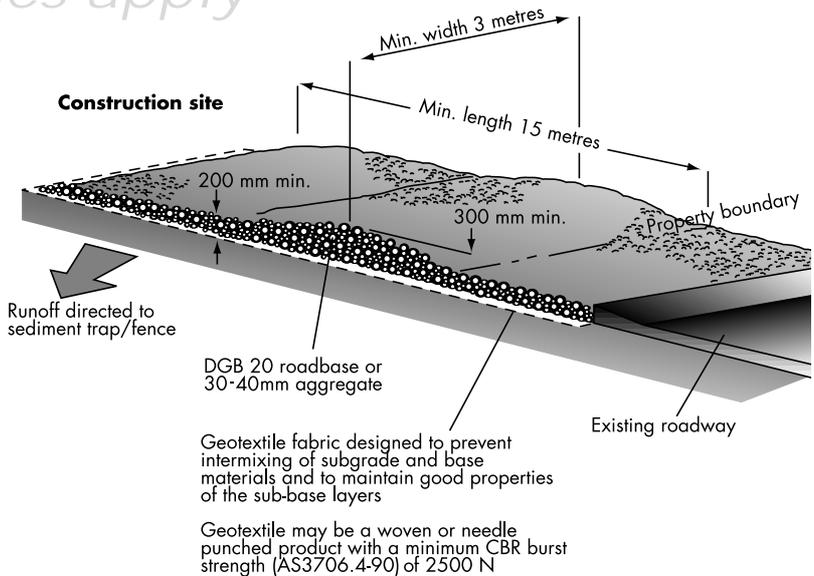
**Advantages.** The advantages to builders of stabilising the access point is that restricting vehicular movement allows the entire site to be more stable and durable during wet weather. After wet weather, work can begin on the site more quickly due to the area being stable. This prevents the most heavily travelled routes from becoming a source of sediment and reduces the likelihood of vehicles bogging on site.

Remember that extra crushed rock or recycled concrete needs to be added to maintain its effectiveness.

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## Construction notes

1. Strip at least 150 mm of topsoil, level area and stockpile on site if space available.
2. Compact sub-grade.
3. Cover area with needle-punched geotextile.
4. Construct a 200 mm thick pad over geotextile using aggregate at least 40 mm in size. Minimum length 15 metres or to building alignment. Minimum width 3 metres.
5. Construct diversion hump immediately within boundary to divert water to a sediment fence or other sediment trap.



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