FACT SHEET

STORMWATER POLLUTION FROM BUILDING SITES

This fact sheet applies to owner-builders or single building block construction sites. This fact sheet does not cover large scale land developments. Soil erosion on building sites can be a major source of sediment pollution in our waterways. In fact, a single building block can lose four truckloads of soil in one storm. Washed from the sites into stormwater drains this sediment is eventually deposited in creeks, rivers and lakes in the area. Although a single block of land may seem a small part of the river catchment, the cumulative effect of polluted runoff from a number of building sites can have a dramatic impact on water quality.

Who's responsible?

The owner and the builder are responsible for controlling soil erosion and preventing sediment from the building site being washed into stormwater drains.

Under section 120 of the Protection of the Environment Operations Act 1997 heavy fines, including on-the-spot fines ($750 for individuals and $1500 for corporations), may be imposed if a person allows soil, earth, mud, clay, concrete washings or similar material to be washed, or placed in a position from where it is likely to be washed, into stormwater drains.

The effect on the environment

There are a number of environmental problems directly associated with pollution from building sites.

- Water carrying pollutants like soil and soil nutrients, as well as building materials such as concrete residues, runs off building sites and enters stormwater drains with subsequent pollution of natural water courses.
- The changes to natural land surfaces and drainage patterns which accompany urban development can result in natural watercourses becoming turbid, silted, littered and undesirably enriched with nutrients. This nutrient-rich water often develops algal blooms.
- When turbid water restricts sunlight filtration, photosynthesis is reduced and productivity of the aquatic ecosystem suffers.
- Watercourses are subject to increased flooding and an increase in cross-sectional area, where catchments have been cleared of vegetation. Subsequent flooding and erosion contribute to siltation problems downstream.

Controlling erosion

Management strategies to control site erosion and the water quality of runoff are determined by the following factors:

- Soil type;
- Slope of site;

- Site erosion hazard rating;
- Surface rock;
- Extent and duration of site disturbance;
- Proximity of watercourses and drainage lines;
- Sensitivity of receiving waters.

When the erosion hazard rating for the site is high or moderate, local councils often require a soil erosion and sediment control plan. If the site has a low erosion hazard rating then general protection measures are required. These include preventative measures as well as appropriately placed and maintained sediment controls such as sediment traps, barriers, silt fences and straw bales below fill batters or highly disturbed areas.

Pollution prevention measures

All building sites should adopt the following measures to prevent pollution:

- Restrict vehicle access to one stable entry and exit point. Vehicles should not track soil onto the road. Minimise on-site vehicle activity during wet weather or when the site is muddy.
- Preserve grassed areas and retain the maximum cover of natural vegetation by minimising the amount of land disturbed by shaping. Mulch or revegetate disturbed areas as soon as possible.
- Ensure that stockpiles of sand, gravel, soil and similar materials are located so that material:
    - Does not spill onto the road or pavement;
    - Is not placed in drainage lines, depressions or watercourses; and
    - Cannot be washed into roadways, drainage lines, depressions or watercourses.
- Remove accidental spills of soil or other materials on the roadway or gutter prior to completion of the day's work. Sweep down the road and footpath everyday and collect the sediment. DO NOT use a hose.
- Excess materials and water from cleaning tools and equipment should not be washed down stormwater drains.
- Install sediment fences along the lower side of the site to catch sediment. Fences should be laid along the contour as much as possible, and should consist of a suitable geo-textile fabric supported every three metres (max.) with the lower edge trenched to a depth of 150 mm. Several fences in parallel may be required if there is a large volume of water.
- Check your erosion and sediment controls every day, and repair them when necessary. To make sure the controls work, remove any trapped sediment and either reuse it on site or dispose of it as waste. Whenever possible, observe how the site controls perform during rain to see how well they work.
- Protect all Council kerbside culverts with a `gravel sausage' made from geo-textile fabric rolled and filled with blue metal.

Further information can be obtained from Council or: The Department of Environment and Climate Change (Pollution Line) Phone: 131 555 (local call cost), Fax: (02) 9995 5999 or visit their website: www.environment.nsw.gov.au