



APPENDIX B

METHODS TO PREVENT EROSION AND SEDIMENT LOSS

Prevent silt run off by firstly employing erosion control measures

- expose only as much ground as needed at any one time
- provide **run off diversion channels, contour drains, or earth bunds** to divert clean water away from the site onto stable ground (grassed or sealed)

... then use one or more of these sediment control measures to capture silt

- silt fences • hay bales • vegetation buffer strips • sediment ponds • earth bunds

... and then finally

- topsoil and regrass the exposed ground, or cover with a mulch, as soon as possible

EROSION CONTROL METHODS

Run off diversion channels

- used to protect work areas from up-slope run off
- water from channel to be discharged to areas of vegetation
- can be used to divert water to other sediment retention systems
- have shallow grades on channel to prevent scouring (1%-2%)
- may need to be stabilised against erosion by regrassing

Contour Drains

- use across earthworks area to break up slope
- use more than one drain on steeply sloping sites
- decrease spacing of drains as slope increases
- water can be discharged to vegetation or into sediment control structures

SEDIMENT CONTROL METHODS

Earth bunds

- construct across slope to control and detain run off
- use near edge of site to prevent sediment from leaving area
- can use topsoil from site to create bund

Silt Fences

- for small disturbed areas or low slope angles
- use more than one on steeply sloping sites
- decrease spacing between fences with increasing site slope
- filter fabric is stretched between posts at max spacing of 1 metre

Hay Bales

- for small sites and short term control
- should be dug into ground, tied together and anchored by staking
- regular inspection and maintenance is essential

Vegetation Buffer Strips

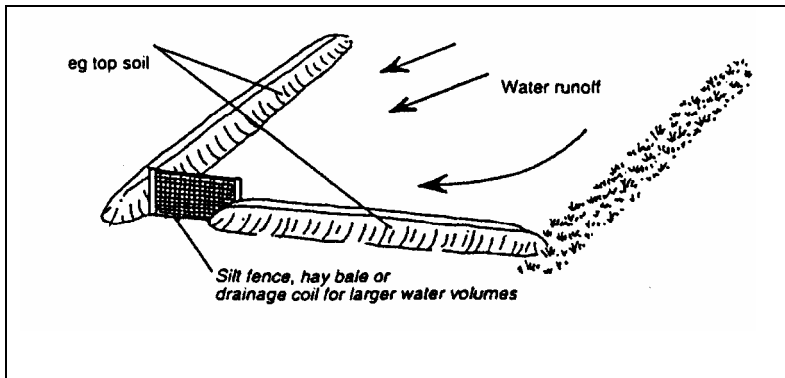
- should always be provided along watercourses
- to filter sediment from overland flow where run off rates are low and not concentrated
- use more than one buffer strip on steep slopes
- decrease buffer strip spacing with increasing slope
- to keep machinery away from watercourses



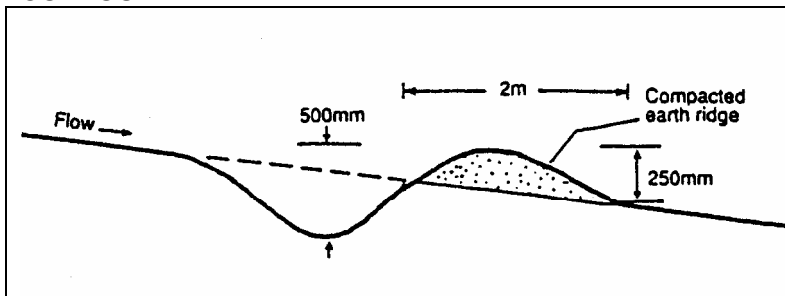
Sediment Ponds

- do not construct in streams
- size at 1-2% of site area (ie $1-2\text{m}^3/100\text{m}^2$)
- clean out sediment regularly
- must have dewatering/drainage facility

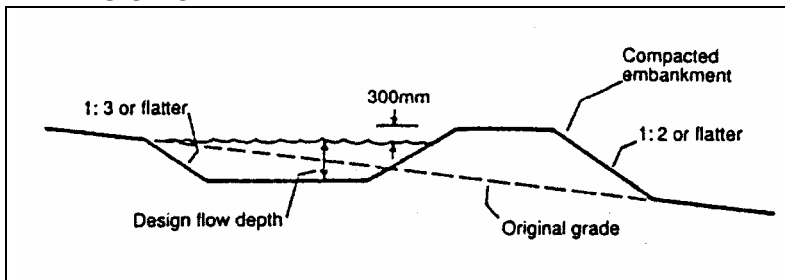
EARTH BUNDS



CONTOUR DRAIN



DIVERSION CHANNEL



SEDIMENT CONTROL ON SMALL SITES



Section 4: Geotechnical Requirements

