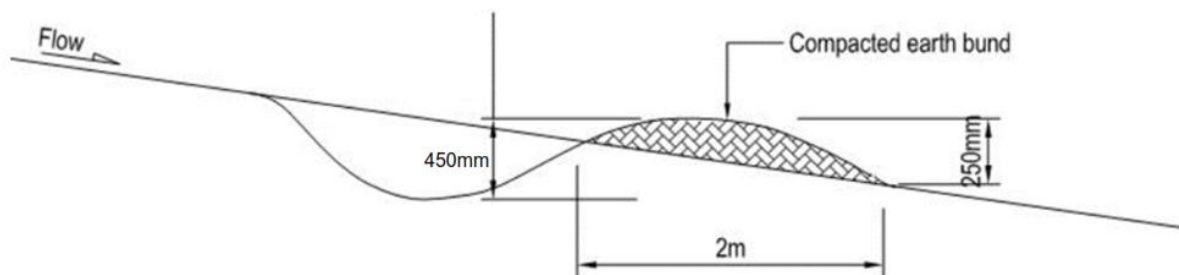


- Formally design diversion channels where catchments exceed 5 ha, ensuring they have capacity to carry the 5% AEP storm plus 300 mm freeboard
- Consider lining channels where gradients exceed 2% – however check dams can also help reduce flow velocities and scour in steeper drains.

Trafficable contour bund – GD05 pgs 47-50

Contour drains or contour bunds are constructed parallel to the contour to break up flowpaths, reduce slope catchments and minimise runoff velocities. Bunds need to be well-compacted, low and wide, to ensure heavy machinery can track over the bunds without damaging them. A shallow drain is to be formed on the upslope side of the bund.



Cross-section

Due to the virtually flat gradient of most of earthworks Areas 1-3, contour bunds can be installed every 50 to 100 m, and adjusted to suit vehicle movements and site needs.

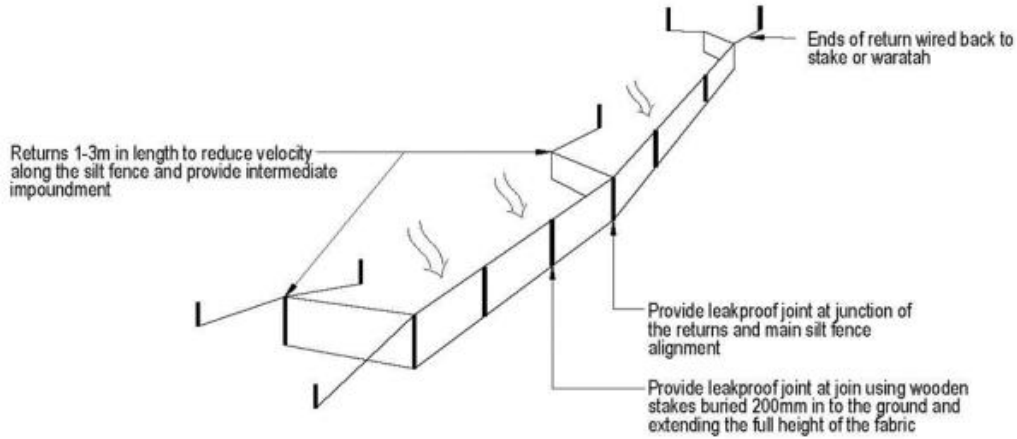
Silt fencing GD05 pgs 111-118

Silt fences are very effective perimeter sediment controls when installed correctly, however they are not designed to treat concentrated flows, and should only be relied on as a final element in a runoff treatment train – not a standalone ESC solution. For larger catchments, super silt fences provide more robust sediment control.

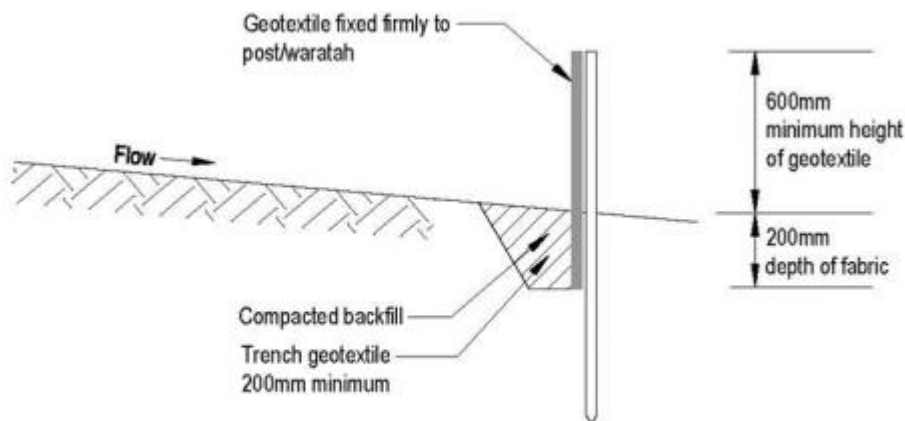
Key design criteria for installing silt fencing is as follows:

- Ensure silt fence height is 600 mm above ground level and 200 mm below ground level.
- Install silt fence **parallel to contours** to avoid formation of low points, where runoff can collect and destabilise the fence.

- Locate supporting posts/waratahs for silt fences 2-4 m apart with support provided by a tensioned wire (2.5 mm HT) along the top of the silt fence.
- Join lengths of silt fence by doubling over fabric ends around a waratah or by stapling the fabric ends to a batten and butting the two battens together.



Silt fence with returns and support wire



Cross-section

Appendix F: Infiltration basin and diversion drain calculations

