

# PROTECT STOCKPILES AND SERVICE TRENCHES

## WHAT IS THIS?

Unprotected service trenches can concentrate runoff and cause rapid soil erosion. Unprotected temporary stockpiles (including sand, gravel, topsoil, mulch, and woodchips) are at risk of being washed or blown away. Protecting service trenches and stockpiles avoids the risk of soil erosion and significantly reduces the time, cost, and frequency of clean up, and maintaining other on-site controls.

## WHAT DO I NEED TO DO?

### Before starting site works:

Ensure the maintenance schedule for checking stockpile and service trench protection is included in site inductions.

#### Stockpiles:

- Identify a protected storage area for soil and building material away from on-site drainage or stormwater/overland flow paths, on flat or gently sloping land, and show this area on your approved ESCP (see page 17).
- Avoid stockpile loss and stormwater pollution by limiting the amount of material on-site and remove all excess material when work is complete.
- Provide easily identified (i.e. well signed from the road) stabilised vehicle access for drivers delivering material to the designated stockpile area.

*Note:* Do not stockpile any material off site on roadways, footpaths, over gutters, or drainage areas.



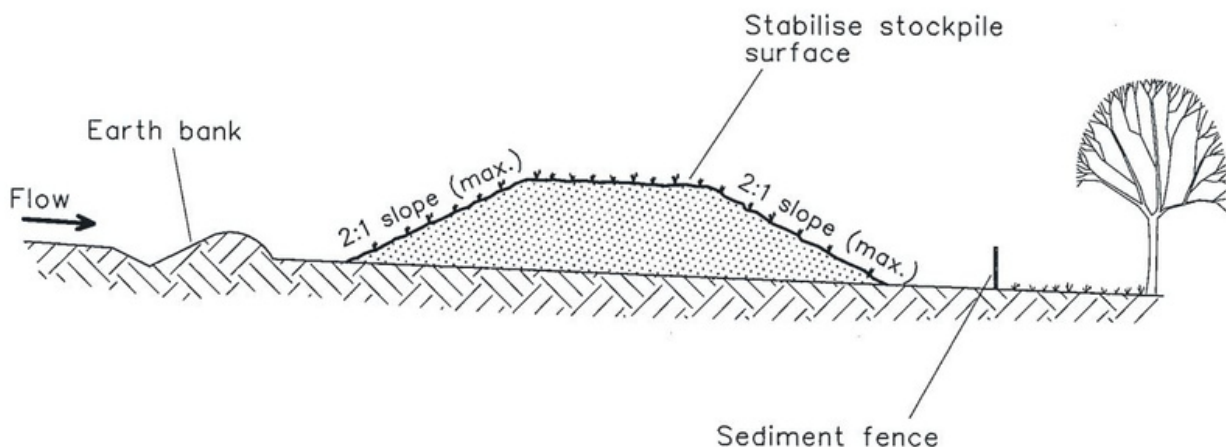
### Service trenches:

- If your site has dispersive soil, specific protection measures will be needed (see page 36).
- Decide where the service trenches will need to go and document them on your approved ESCP.
- Trenches must be located away from areas where water is likely to flow or concentrate.
- Where possible, coordinate the various service connections in a single trench.
- Minimise the duration that trenches will be exposed - backfill as quickly as possible.

### **Installing the controls:**

#### Stockpiles (Figure 11):

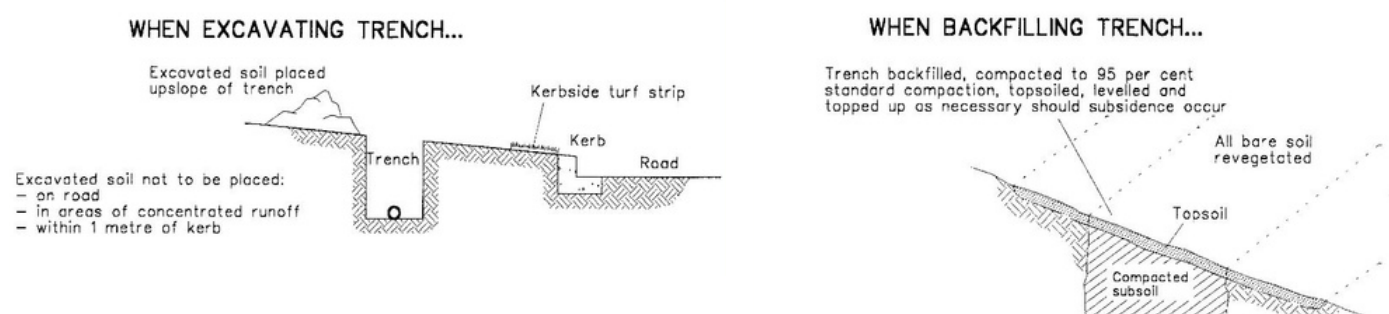
- Build stockpiles as low, flat-topped, elongated mounds, less than 1.5m high.
- Place a soil bank or berm on the upslope side of the stockpile to divert water flow away and install a sediment fence (see page 67) or berm (see page 70) 1-2m downslope of the stockpile. The ends of the sediment fence must 'return' upslope at either end to capture and allow ponding of localised runoff from the stockpile.
- Securely and completely cover your stockpiles with fabric or plastic, particularly prior to forecasted rain and/or high wind and when the site is unattended, such as on weekends.
- Vegetate topsoil stockpiles (e.g. with hydromulch, see page 41) if the soil will not be immediately reused.



**Figure 11:** Diagram illustrating how to protect stockpiled material to avoid erosion. If practical, cover stockpiles with plastic sheeting or erosion control blanket and secure against wind. *Figure from Landcom 2004 'Soils and Construction Volume I Managing Urban Stormwater (4th Edition)'.*

### Service trenches (Figure 12):

- Schedule trench work during dry weather.
- Store topsoil removed when excavating trenches SEPARATELY from subsoil.
- Place a subsoil bank or bund on the upslope side of the trench to divert water flow away from trenches, ensuring flows from this diversion are correctly controlled to avoid sediment in runoff.
- For long trenches (i.e. > 100m) complete works in manageable sections that can be completed and backfilled as you go. Backfill trench with subsoil and compact.
- Replace topsoil, level, and top up with more topsoil to account for soil settling, then revegetate.
- If a service trench must be installed on a steep slope, ensure back filled material is well compacted and the area is protected from scouring.
- Store/stockpile any excess soil correctly so that it does not create a wind or water erosion hazard (see stockpile section above).



**Figure 12:** Cross-sectional views of how to construct and backfill a service trench to minimise erosion of materials. *Figure from the NSW Department of Communities and Justice.*

### **Maintaining the controls:**

**Stockpiles:** Coverage of stockpiles must be regularly checked, especially before, during, and after rain or very windy conditions. Cover more securely if protection has shifted. The controls installed above and below stockpiles (e.g. soil banks, berms, and sediment fences) need to be monitored and maintained at the same frequency.

**Service trenches:** If constructed as above, water should not get into trenches. In the event that trenches fill with water from groundwater or other sources, pump water out and treat appropriately (e.g. spread evenly over a large vegetated area, or pump into a sediment basin (see page 74)). If trench water contains very turbid water, add the correct amount of approved coagulant or flocculant, and allow the suspended particles to settle before pumping the clean water out. If the water has been tested and meets specified conditions, it may be pumped to a stormwater connection (see *Dewatering* section page 78).