

# SEDIMENT CONTROL CLASSIFICATION

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## WHAT IS THIS?

Sediment is made up of different sized particles from very fine clay particles (less than 0.045mm) to large sand particles (more than 0.14mm), which differ depending on the site soil type. Sediment controls are grouped into four categories based on their effectiveness at trapping sediment of different sizes. Standard practice is to use a combination of controls to capture different sized particles (Figure 1).

Below is a brief description of each sediment control type and what sediment these controls are targeting. The details on how to plan for, install, and maintain these controls can be found in Part B of this booklet.

## **TYPE 1: CONTROLS TO CAPTURE SMALL PARTICLES - CLAY, SILT, FINE SAND (LESS THAN 0.045MM)**

### **E.g. Sediment basin**

Type 1 controls capture the greatest range in sediment particle sizes by allowing water to pool and for gravity to pull sediment to the bottom. These controls include sediment basins (see page 74) and more sophisticated filtration systems used in dewatering operations (see page 78). A flocculant or coagulant can be added, which causes even very fine clay particles to settle out of the water column. A Type 1 control is expected to achieve less than 50mg/L of total suspended solids (TSS) in discharged water (that is, quite clear).

## **TYPE 2: CONTROLS TO CAPTURE MEDIUM PARTICLES - SILT AND SAND (BETWEEN 0.045 AND 0.14MM)**

### **E.g. Rock filter dam, compost filter berm**

These controls capture medium sized particles from sand down to coarse silts. These controls include rock filter dams which can be used in concentrated flow paths to trap sediment by both filtration through an aggregate and/or geotextile lining, and particle settlement within the pond formed by the dam (see page 72). However, discharge of TSS < 50mg/L is typically not achieved. Mulch berms or berms operate in a similar way to rock filter dams but are used for treating sheet-flow in small catchments (see page 70).

## TYPE 3: LARGE PARTICLES – SAND

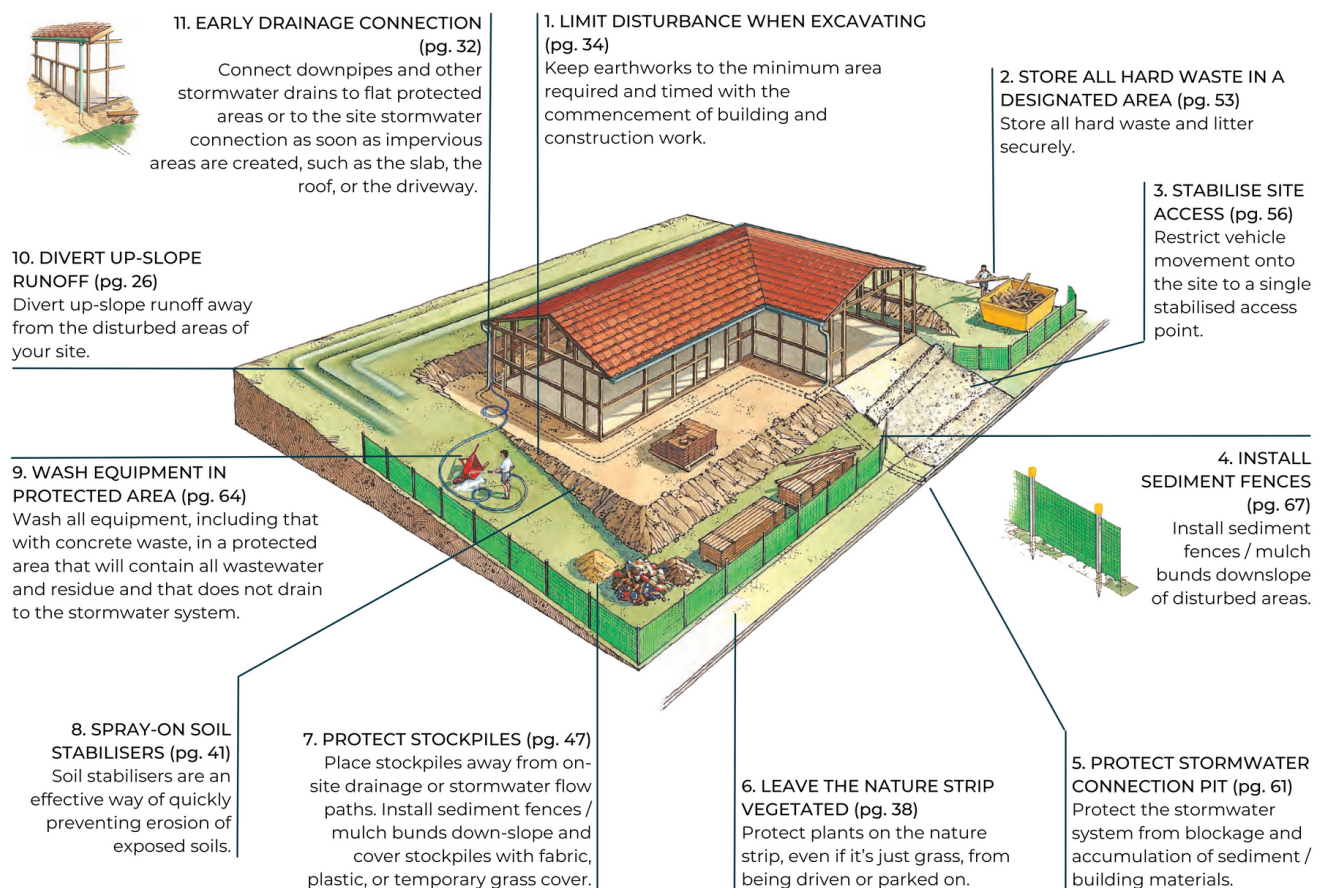
### E.g. Sediment fence, vegetated buffer zone

These controls are commonly used for small sites or catchment areas for sheet flow and low flow conditions and capture only large particles. Sediment fences should NOT be used in drainage channels (see page 67).

## SUPPLEMENTARY CONTROLS - LAST RESORT

### E.g. Protection of stormwater pits, stabilised site access

Although limited in effectiveness, these controls contribute to best practice sediment control. Supplementary sediment controls are used to support and complement Type 1, 2, and 3 controls on-site, based on specific work activities.



**Figure 1:** A summary of drainage, erosion, and sediment controls that can be combined on small development sites to achieve best practice. A3 sized version available as part of the *Erosion and sediment control - the basics*, on the TEER Program and Derwent Estuary Program websites. Figure modified from *Water by Design ESC Factsheet #1*.