



Construction Notes

1. Remove all vegetation and topsoil from under the dam wall and from within the storage area.
2. Construct a cut-off trench 500 mm deep and 1,200 mm wide along the centreline of the embankment extending to a point on the gully wall level with the riser crest.
3. Maintain the trench free of water and recompact the materials with equipment as specified in the SWMP to 95 per cent Standard Proctor Density.
4. Select fill following the SWMP that is free of roots, wood, rock, large stone or foreign material.
5. Prepare the site under the embankment by ripping to at least 100 mm to help bond compacted fill to the existing substrate.
6. Spread the fill in 100 mm to 150 mm layers and compact it at optimum moisture content following the SWMP.
7. Construct the emergency spillway.
8. Rehabilitate the structure following the SWMP.

EARTH BASIN - WET **SD 6-4**
(APPLIES TO TYPE D AND TYPE F SOILS ONLY)

TYPICAL DETAIL DRAWING OF TYPE D/F SEDIMENT BASIN

1. Erosion Hazard and Sediment Basins

Site Name:	PEMULWUY PROJECT	
Site Location:	REDFERN	
Precinct/Stage:	PRECINCT 1 AND 3	
Other Details:		

Site area	Sub-catchment or Name of Structure		Notes
	PC1	PC3	
Total catchment area (ha)	0.68	0.25	
Disturbed catchment area (ha)	0.68	0.25	

Soil analysis (enter sediment type if known, or laboratory particle size data)

Sediment Type (C, F or D) if known:	D	D					Notes
% sand (fraction 0.02 to 2.00 mm)							Enter the percentage of each soil fraction. E.g. enter 10 for 10%
% silt (fraction 0.002 to 0.02 mm)							
% clay (fraction finer than 0.002 mm)							
Dispersion percentage							E.g. enter 10 for dispersion of 10%
% of whole soil dispersible							See Section 6.3.3(e). Auto-calculated
Soil Texture Group	D	D					Automatic calculation from above

Rainfall data

Design rainfall depth (no of days)	5	5					Notes
Design rainfall depth (percentile)	75	75					See Section 6.3.4 and, particularly, Table 6.3 on pages 6-24 and 6-25.
x-day, y-percentile rainfall event (mm)	43.6	43.6					
Rainfall R-factor (if known)							Only need to enter one or the other here
IFD: 2-year, 6-hour storm (if known)	13	13					

RUSLE Factors

Rainfall erosivity (R-factor)	3650	3650					Notes
Soil erodibility (K-factor)	0.06	0.06					RUSLE LS factor calculated for a high rill/interrill ratio.
Slope length (m)	80	80					
Slope gradient (%)	6	4.5					
Length/gradient (LS-factor)	1.47	1.05					
Erosion control practice (P-factor)	1.3	1.3	1.3	1.3	1.3	1.3	
Ground cover (C-factor)	1	1	1	1	1	1	

Sediment Basin Design Criteria (for Type D/F basins only. Leave blank for Type C basins)

Storage (soil) zone design (no of months)	2	2	2	2	2	2	Notes
Cv (Volumetric runoff coefficient)	0.69	0.69					See Table F2, page F-4 in Appendix F

Calculations and Type D/F Sediment Basin Volumes

Soil loss (t/ha/yr)	418	299					
Soil Loss Class	4	3					See Table 4.2, page 4-13
Soil loss (m ³ /ha/yr)	322	230					Conversion to cubic metres
Sediment basin storage (soil) volume (m ³)	36	10					See Sections 6.3.4(i) for calculations
Sediment basin settling (water) volume (m ³)	205	75					See Sections 6.3.4(i) for calculations
Sediment basin total volume (m ³)	241	85					

NB for sizing of Type C (coarse) sediment basins, see Worksheet 3 (if required).

SEDIMENT BASIN CALCULATION

SOIL WATER MANAGEMENT PLAN

- NOTE:**
- VERIFY THE SOIL TEXTURE GROUP. IF TYPE D (DISPERSIBLE SOIL) FLOCCULATE WATER IN BASIN TO SETTLE AS REQUIRED FOR DISCHARGING PRIOR TO STORMWATER.

Rev	Description	Date	By	App
A	FOR CONSTRUCTION	13.12.11	AS	SW

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SEDIMENT BASIN DETAIL
DRAWING AND CALCULATION
REDFERN

FOR CONSTRUCTION

Designed	SN	Project Director Approved	Date	North
Drawn	AS	SN		
Scale	NOTED	Project Ref	Drawing No	Rev
Date	MAR 11	200116401	C084	A
Sheet				