

MANAGEMENT OF PROBLEMATIC SOILS

SOIL TYPE	EROSION CONTROL	SEDIMENT CONTROL
DISPERSIVE (SODIC) SOILS	- DISPERSIVE SOILS ARE HIGHLY SUSCEPTIBLE TO DEEP, NARROW RILLING (FLUTING) ON SLOPES AND DRAINS.	- DISPERSIVE SOILS USUALLY REQUIRE THE ADDITION OF GYPSUM OR SIMILAR TO IMPROVE SETTLEMENT PROPERTIES.
	- HIGH RISK OF TUNNEL EROSION IF WATER PATHWAYS ARE NOT MANAGED PROPERLY.	- SEDIMENT CONTROL USUALLY RELIES ON THE USE OF TYPE D (WET) SEDIMENT BASINS.
	- DISPERSIVE SOILS MUST BE TREATED OR BURIED UNDER A MINIMUM 100mm LAYER OF NON-DISPERSIVE SOIL BEFORE PLACING ANY REVEGETATION OR EROSION CONTROL MEASURES.	- PRIORITY SHOULD BE GIVEN TO THE APPLICATION OF EFFECTIVE EROSION CONTROL MEASURES, RATHER THAN TRYING TO CONTROL RUNOFF SEDIMENT AND TURBIDITY ONLY THROUGH THE USE OF SEDIMENT CONTROL MEASURES.
	- AVOID CUTTING DRAINAGE CHANNELS INTO DISPERSIVE SOILS.	
NON-COHESIVE SANDY SOILS	- IT IS ESSENTIAL TO CONTROL WATER FLOW AND FLOW VELOCITY.	- SEDIMENT CONTROL MEASURES ARE MOST EFFECTIVE IN SANDY SOIL AREAS.
	- SHORT TERM EROSION CONTROL MAY BE ACHIEVED THROUGH EROSION CONTROL BLANKETS OR MULCHING ANCHORED WITH A SUITABLE TACKIFIER.	- USE OF A WOVEN SEDIMENT FENCE FABRIC IS PREFERRED.
	- LONG TERM EROSION CONTROL IS BEST ACHIEVED WITH GROUND COVER VEGETATION SUCH AS GRASS.	- GRASSED BUFFER ZONES CAN ALSO BE EFFECTIVE IF 'SHEET' FLOW CONDITIONS ARE MAINTAINED.
HIGHLY ERODIBLE CLAYEY SOILS	- SHORT TERM EROSION CONTROL MAY BE ACHIEVED WITH EROSION CONTROL BLANKETS OR MULCHING.	- USE OF A NON-WOVEN, COMPOSITE SEDIMENT FENCE FABRIC IS PREFERRED.
	- LONG TERM EROSION CONTROL IS LIKELY TO RELY ON THE ESTABLISHMENT OF A GOOD VEGETATIVE COVER	- SEDIMENT CONTROL USUALLY RELIES ON THE USE OF TYPE F OR TYPE D (WET) SEDIMENT BASINS.
		- PRIORITY SHOULD BE GIVEN TO EROSION CONTROL MEASURES.
LOW FERTILITY SOILS	- THESE SOILS ARE USUALLY MORE ERODIBLE THAN FERTILE SOILS.	- NO SPECIAL SEDIMENT CONTROL REQUIREMENTS.
	- THESE SOILS MAY BE PROTECTED WITH THE USE OF ROCK MULCHING UNLESS THE SOILS ARE MODIFIED TO ALLOW SUCCESSFUL REVEGETATION.	
POTENTIAL ACID SULFATE SOILS	- MINIMISE DISTURBANCE OF SOIL.	- ACIDIC WATER MAY WASH FROM SEDIMENT CONTROL DEVICES AND THIS WATER MAY NEED FURTHER TREATMENT TO ADJUST pH.
	- WHERE DISTURBANCE IS NECESSARY, MINIMISE THE DURATION OF EXPOSURE.	
	- TREAT EXPOSED SOILS IN ACCORDANCE WITH STATE POLICIES/GUIDELINES.	
	- BACKFILL TRENCHES WITHIN 24 HOURS.	
	- FOLLOW ESTABLISHED GUIDELINES FOR SITE REHABILITATION AND RE-VEGETATION.	

FILE NAME DESIGN\DOCUMENTS\SESC STD DRAWINGS\...

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The content of this standard drawing has been extracted from the "Erosion & Sediment Control - A Field Guide for Construction Site Managers" (Feb 2010)

AMENDMENTS AND REVISIONS

DRAWN	SIGNED	DATE	DIRECTOR
F. K ROLL	<i>Chad</i>	8/8/11	ENGINEERING SERVICES
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CHECKED	SIGNED	DATE	DATE <u>13.12.11</u>
MANAGER TECHNICAL SERVICES			
<i>CFHans 12/12/11</i>			
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STANDARD MANAGEMENT OF PROBLEMATIC SOILS		