

REQUIREMENTS FOR ROCK ARMOUR						
	LOWER	UPPER	STANDARD			
GRADINGS	SEE IS EN 13383-1:2002 and IS EN 13383-2:2013					
SHAPE	SEE IS EN 13383-1:2002 and IS EN 13383-2:2013					
PROPORTION OF CRUSHED OR BROKEN SURFACES	SEE IS EN 13383-1:2002 and IS EN 13383-2:2013					
PARTICLE DENSITY	2.5		IS EN 13383-1:2002 and -2:2013			
PLASTICITY INDEX	NON PLASTIC		BS 1377:PART2			
LOS ANGELES COEFFICIENT		50	CC-SPW-00600 CLAUSE 635			
SLAKE DURABILITY	95%		CC-SPW-00600 CLAUSE 634			
RESISTANCE TO WEAR	SEE IS EN 13383-1:2002 and IS EN 13383-2:2013					

NOTES:

- 1. ALL DIMENSIONS ARE TO BE IN MILLIMETRES.
- 2. THE DESIGNER SHALL TAKE IN TO CONSIDERATION THE SITE SPECIFIC REQUIREMENTS AND MODIFY THIS SCD ACCORDINGLY. REFER TO GUIDANCE PROVIDED IN ESCARAMEIA, M, (1998), RIVER AND CHANNEL REVETMENTS A DESIGN MANUAL, THOMAS TELFORD LIMITED ISBN 0 7277 2691 9 AND CIRIA, CUR, CETMEF, (2007). THE ROCK IN HYDRAULIC ENGINEERING, 2ND EDITION, C683, CIRIA, LONDON, MAY, RWP, ACKERS, JC, KIRBY, AM, (2000), MANUAL ON SCOUR AT BRIDGES AND OTHER HYDRAULIC STRUCTURES, CSSI, CIRIA, LONDON. A RISK ASSESSMENT SHALL BE CARRIED OUT TO ASSESS THE REQUIREMENT FOR ROCK ARMOUR.
- THE MINIMUM DIMENSIONS AND MAXIMUM SLOPE GRADIENT OUTLINED IN THIS SCD SHALL BE RETAINED BY THE DESIGNER IN THEIR DETAIL.
- 4. THIS SCD IS SUITABLE FOR MAXIMUM FLOW VELOCITIES OF 2.5m/s. THE DESIGNER IS REQUIRED TO DEMONSTRATE THAT THIS SCD IS SUITABLE FOR USE.
- 5. ROCK ARMOUR SHALL BE HANDLED AND PLACED TO THE FULL LAYER THICKNESS IN ONE OPERATION SO THAT SEGREGATION IS MINIMISED AND THE GEOTEXTILE USED UNDER THE ROCK ARMOUR IS NOT DISTURBED AFTER THE INITIAL ROCK PLACEMENT.
- ROCK ARMOUR PLACEMENT SHOULD BEGIN AT THE TOE TRENCH AND PROGRESS UP THE SLOPE MAINTAINING THE DESIRED ROCK PLACEMENT THICKNESS AS THE WORK PROCEEDS.
- 7. IF THIS SCD IS NOT SUITABLE FOR USE, THE DESIGNER IS REQUIRED TO PROVIDE A SOLUTION TAKING INTO ACCOUNT OF NOTES 7 14.
- 8. THE DESIGNER SHALL SPECIFY THE GRADING AND STONE SIZE TAKING INTO ACCOUNT THE SPECIFIC SITE CONDITIONS, THE HYDRAULIC CONDITIONS AND WATER LEVELS. A FILTER LAYER IS REQUIRED BETWEEN THE COARSE COVER LAYER AND THE FOUNDATION. GEOTEXTILES ARE TO BE USED AS PART OF THE FILTERING SYSTEM.
- 9. THE DESIGN OF THE TOE SHALL TAKE INTO CONSIDERATION POTENTIAL SCOUR.
- 10. DETERMINATION OF THE STABILITY SHALL BE CARRIED OUT FOR THE DIFFERENT DESIGN SITUATIONS SUCH AS HYDRAULIC LOADS INDUCED BY FLOOD OR NAVIGATION OR OTHER TYPES OF LOADS.
- 11. DIMENSIONS OF COVER LAYERS AND FILTERS SHALL TAKE INTO CONSIDERATION WIND AND SHIP-INDUCED WAVES AND CURRENTS WHERE APPLICABLE.
- 12. THE DESIGNER SHALL ENSURE THAT THE EARTHWORKS ARE DESIGNED IN ACCORDANCE WITH IS EN 1997: PART 1.
- 13. THE STONES SHALL PREFERABLY BE ANGULAR AND REGULAR IN SHAPE RATHER THAN ROUNDED.
- 14. THE DESIGNER SHALL TAKE INTO ACCOUNT SITE SPECIFIC REQUIREMENTS (E.G. SOIL TYPE, GRAIN SIZE, INSTALLATION DAMAGE, ROCK ARMOUR SIZE ETC.) WHEN SPECIFYING THE GEOTEXTILE.
- 15. THE UNDERLAYER NEEDS TO BE APPROPRIATELY DESIGNED TO PROTECT THE IN-PLACE BANK MATERIAL AND REMAIN BENEATH THE OUTER ROCK ARMOUR.



NOT TO SCALE

CC Construction & Commissioning

STANDARD CONSTRUCTION DETAILS (S

PUBLICATION TITLE

DRAINAGE

ROCK ARMOUR: SCOUR PROTECTION

	HISTORICAL REFERENCE DOCUMENTATION SET PUBLICATION I		PUBLICATION DATE	PUBLICATION NUMBER
SCD)	RCD/500/50	STANDARDS	FEBRUARY 2024	CC SCD DAWING NUMBER 00550