

INSTALLATION (DRAIN FORMATION)

- REFER TO APPROVED PLANS FOR LOCATION, EXTENT, AND CONSTRUCTION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, EXTENT, OR METHOD OF INSTALLATION, CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.
- CLEAR THE LOCATION FOR THE CATCH DRAIN, CLEARING ONLY WHAT IS NEEDED TO PROVIDE ACCESS FOR PERSONNEL AND EQUIPMENT FOR INSTALLATION.
- REMOVE ROOTS, STUMPS, AND OTHER DEBRIS AND DISPOSE OF THEM PROPERLY. DO NOT USE DEBRIS TO BUILD THE BANK.
- GRADE THE DRAIN TO THE SPECIFIED SLOPE AND FORM THE ASSOCIATED EMBANKMENT WITH COMPACTED FILL. NOTE THAT THE DRAIN INVERT MUST FALL 10cm EVERY 10m FOR EACH 1% OF CHANNEL GRADIENT.
- ENSURE THE SIDES OF THE CUT DRAIN ARE NO STEEPER THAN A 1.5:1 (H:V) SLOPE AND THE EMBANKMENT FILL SLOPES NO STEEPER THAN 2:1.
- ENSURE THE COMPLETED DRAIN HAS SUFFICIENT DEEP (AS SPECIFIED FOR THE TYPE OF DRAIN) MEASURED FROM THE DRAIN INVERT TO THE TOP OF THE EMBANKMENT.
- ENSURE THE DRAIN HAS A CONSTANT FALL IN THE DESIRED DIRECTION FREE OF OBSTRUCTIONS.
- ENSURE THE DRAIN DISCHARGES TO A STABLE OUTLET SUCH THAT SOIL EROSION WILL BE PREVENTED FROM OCCURRING. ENSURE THE DRAIN DOES NOT DISCHARGE TO AN UNSTABLE FILL SLOPE.

INSTALLATION (MAT PLACEMENT)

THE METHOD OF MAT INSTALLATION VARIES WITH THE TYPE OF MAT. INSTALLATION PROCEDURES SHOULD BE PROVIDED BY THE MANUFACTURER OR DISTRIBUTOR OF THE PRODUCT. A TYPICAL INSTALLATION PROCEDURE IS DESCRIBED BELOW, BUT SHOULD BE CONFIRMED WITH THE PRODUCT MANUFACTURER OR DISTRIBUTOR.

- EROSION CONTROL MATS MUST BE STORED AWAY FROM DIRECT SUNLIGHT OR COVERED WITH ULTRAVIOLET LIGHT PROTECTIVE SHEETING UNTIL THE SITE IS READY FOR THEIR INSTALLATION.
- VEHICLES AND CONSTRUCTION EQUIPMENT MUST NOT BE PERMITTED TO MANOEUVRE OVER THE GEOTEXTILE UNLESS IT HAS BEEN COVERED WITH A LAYER OF SOIL OR GRAVEL AT LEAST 150mm THICK. FILL MATERIAL SHALL NOT BE MIXED OVER THE GEOTEXTILE.
- IF THE CHANNEL IS TO BE GRASSED, PREPARE A SMOOTH SEED BED OF APPROXIMATELY 75mm OF TOPSOIL, SEED, FERTILISER, WATER AND RAKE TO REMOVE ANY REMAINING SURFACE IRREGULARITIES.
- EXCAVATE A 300mm DEEP BY 150mm WIDE ANCHOR TRENCH ALONG THE FULL WIDTH OF THE UPSTREAM END OF THE AREA TO BE TREATED.
- AT LEAST 300mm OF THE MAT MUST BE ANCHORED INTO THE TRENCH WITH THE ROLL OF MATTING RESTING ON THE GROUND UP-SLOPE OF THE TRENCH.
- STAPLE THE FABRIC WITHIN THE TRENCH AT 200 TO 250mm SPACING USING 100mm WIDE BY 150mm PENETRATION LENGTH U-SHAPED, 8 TO 11 GAUGE WIRE STAPLES. NARROWER U-SECTIONS MAY EASILY TEAR THE MATTING WHEN PLACED UNDER STRESS.
- WHEN ALL MATS HAVE BEEN ANCHORED WITHIN THE TRENCH ACROSS THE FULL WIDTH OF THE TREATED AREA, THEN THE TRENCH IS BACKFILLED AND COMPACTED. THE MATS ARE THEN UNROLLED DOWN THE SLOPE SUCH THAT EACH MAT COVERS AND PROTECTS THE BACKFILLED TRENCH.
- WHEN SPREADING THE MATS, AVOID STRETCHING THE FABRIC. THE MATS SHOULD REMAIN IN GOOD CONTACT WITH THE SOIL.
- IF THE CHANNEL CURVES, THEN SUITABLY FOLD (IN A DOWNSTREAM DIRECTION) AND STAPLE THE FABRIC TO MAINTAIN THE FABRIC PARALLEL TO THE DIRECTION OF CHANNEL FLOW.

- STAPLE THE SURFACE OF THE MATTING AT 1m CENTRES. ON IRREGULAR GROUND, ADDITIONAL STAPLES WILL BE REQUIRED WHEREVER THE MAT DOES NOT INITIALLY CONTACT THE GROUND SURFACE.
- AT THE END OF EACH LENGTH OF MAT, A NEW TRENCH IS FORMED AT LEAST 300mm UP-SLOPE OF THE END OF THE MAT SUCH THAT THE END OF THE MAT WILL BE ABLE TO FULLY COVER THE TRENCH. A NEW ROLL OF MATTING IS THEN ANCHORED WITHIN THIS TRENCH AS PER THE FIRST MAT. AFTER THIS NEW MAT HAS BEEN UNROLLED DOWN THE SLOPE, THE UP-SLOPE MAT CAN BE PINNED IN PLACE FULLY COVERING THE NEW TRENCH AND AT LEAST 300mm OF THE DOWN-SLOPE MAT. THE PROCESS IS CONTINUED DOWN THE SLOPE UNTIL THE DESIRED AREA IS FULLY COVERED.
- IN HIGH-VELOCITY CHANNELS, INTERMEDIATE ANCHOR SLOTS ARE USUALLY REQUIRED AT 10m INTERVALS DOWN THE CHANNEL.
- ANCHOR THE OUTER MOST EDGES (TOP AND UPPER MOST SIDES) OF THE TREATED AREA IN A 300mm DEEP TRENCH AND STAPLE AT 200 TO 250mm CENTRES.
- IF THE CHANNEL WAS GRASS SEED PRIOR TO PLACEMENT OF THE MATS, THEN THE MATS SHOULD BE ROLLED WITH A SUITABLE ROLLER WEIGHING 60 TO 90kg/m, THEN WATERED.
- THE INSTALLATION PROCEDURE MUST ENSURE THAT THE MAT ACHIEVES AND RETAINS GOOD CONTACT WITH THE SOIL.
- DAMAGED MATTING MUST BE REPAIRED OR REPLACED.

ADDITIONAL INSTRUCTIONS FOR THE INSTALLATION OF JUTE MESH (NOT JUTE BLANKETS):

- ENSURE THE JUTE MESH IS LAID ON A FIRM EARTH SURFACE THAT HAS BEEN TRIMMED, TOPSOILED, WATERED, SOWN WITH SEED AND FERTILISER.

- THE JUTE MESH IS THEN EITHER TAMPED OR ROLLED FIRMLY ONTO THE PREPARED SURFACE, AVOIDING STRETCHING, WATERED TO ENCOURAGE THE PENETRATION OF THE BITUMEN EMULSION, AND FINALLY SPRAYED WITH A TOP LAYER OF BITUMEN AT 1 TO 3 LITRES PER SQUARE METRE.
 - THE RATE OF EMULSION APPLICATION SHOULD BE ADJUSTED SUCH THAT THE EMULSION JUST STARTS TO POND IN THE MESH SQUARES.
- MAINTENANCE**
- INSPECT ALL CATCH DRAINS AT LEAST WEEKLY AND AFTER RUNOFF-PRODUCING STORM EVENTS AND REPAIR ANY SLUMPS, BANK DAMAGE, OR LOSS OF FREEBOARD.
 - ENSURE FILL MATERIAL OR SEDIMENT IS NOT PARTIALLY BLOCKING THE DRAIN. WHERE NECESSARY, REMOVE ANY DEPOSITED MATERIAL TO ALLOW FREE DRAINAGE.
 - DISPOSE OF ANY SEDIMENT OR FILL IN A MANNER THAT WILL NOT CREATE AN EROSION OR POLLUTION HAZARD.
- REMOVAL**
- WHEN THE SOIL DISTURBANCE ABOVE THE CATCH DRAIN IS FINISHED AND THE AREA IS STABILISED, THE DRAIN AND ANY ASSOCIATED BANKS SHOULD BE REMOVED, UNLESS IT IS TO REMAIN AS A PERMANENT DRAINAGE FEATURE.
 - DISPOSE OF ANY SEDIMENT OR EARTH IN A MANNER THAT WILL NOT CREATE AN EROSION OR POLLUTION HAZARD.
 - GRADE THE AREA AND SMOOTH IT OUT IN PREPARATION FOR STABILISATION.
 - STABILISE THE AREA BY GRASSING OR AS SPECIFIED WITHIN THE APPROVED PLAN.

NO.	DATE	DESCRIPTION	APPVD
A	18/11/11	ISSUE FOR CONSTRUCTION	
AMENDMENTS AND REVISIONS			
FILE NAME DESIGNDOCUMENTS\SESC STD DRAWINGS\...			

SURVEY	
SURVEY FILE NO	
LEVEL DATUM	AHD
MERIDIAN	MGA 55

DRAWN	DESIGNED	CHECKED	MANAGER	TECHNICAL SERVICES
PDU	PDU	PDU	G. Hawes	R/12/11
SIGNED	SIGNED	SIGNED	G. HAWES	RPEQ 5693

DATE	12/11/11
DATE	12/11/11
DATE	12/11/11
DIRECTOR ENGINEERING SERVICES	Sam. Hiles
STUART HOLLEY RPEQ 3940	
DATE	13.11.11



CATCH DRAINS - GEOTEXTILE LINED