

**INSTALLATION**

THE METHOD OF 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.

1. 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.

2. EROSION CONTROL MATS SHALL BE STORED AWAY FROM DIRECT SUNLIGHT OR COVERED WITH ULTRAVIOLET LIGHT PROTECTIVE SHEETING UNTIL THE SITE IS READY FOR THEIR INSTALLATION.

3. VEHICLES AND CONSTRUCTION EQUIPMENT SHALL 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.

4. CLEAR AWAY TRASH AND LARGE STONES, AND GRADE THE SURFACE SMOOTHLY TO ELIMINATE FOOTPRINTS, TRACKS AND RUTS.

5. IF THE CHANNEL IS TO BE GRASSED, PREPARE A SMOOTH SEED BED OF APPROXIMATELY 75mm OF TOPSOIL, SEED, FERTILISE, WATER AND RAKE TO REMOVE ANY REMAINING SURFACE IRREGULARITIES.

6. EXCAVATE A 300mm DEEP BY 150mm WIDE ANCHOR TRENCH ALONG THE FULL WIDTH OF THE UPSTREAM END OF THE AREA TO BE TREATED.

7. AT LEAST 300mm OF THE MAT IS ANCHORED INTO THE TRENCH WITH THE ROLL OF MATTING RESTING ON THE GROUND UP-SLOPE OF THE TRENCH.

8. 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.

9. IN LARGE DRAINAGE CHANNEL WHERE THE WIDTH OF THE CHANNEL IS MORE THAN THE WIDTH OF ONE MAT, INSTALL EACH PARALLEL MAT SUCH THAT MAT HIGHER UP THE CHANNEL BANK ALWAYS OVERLAPS THE MAT LOWER DOWN THE BANK BY AT LEAST 300mm. THIS USUALLY REQUIRES THE MATS

LOCATED ALONG THE CHANNEL BED TO BE UNROLLED FIRST, FOLLOWED BY EACH CONSECUTIVE PARALLEL MAT LOCATED HIGHER UP THE CHANNEL BANK.

10. 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.

11. WHEN SPREADING THE MATS, AVOID STRETCHING THE FABRIC. THE MATS SHOULD REMAIN IN GOOD CONTACT WITH THE SOIL.

12. 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.

13. 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.

14. 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.

15. IN HIGH-VELOCITY CHANNELS, INTERMEDIATE ANCHOR SLOTS MAY BE REQUIRED AT 10m INTERVALS DOWN THE CHANNEL.

16. 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.

17. IF THE CHANNEL WAS GRASS SEEDING PRIOR TO PLACEMENT OF THE MATS, THEN THE MATS MAY NEED TO BE ROLLED WITH A SUITABLE ROLLER WEIGHING 60 TO 90kg/m, THEN WATERED.

18. THE INSTALLATION PROCEDURE MUST ENSURE THAT THE BLANKET ACHIEVES AND RETAINS GOOD CONTACT WITH THE SOIL.

19. DAMAGED MATTING SHALL BE REPAIRED OR REPLACED.

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

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

2. 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.

3. THE RATE OF EMULSION APPLICATION SHOULD BE ADJUSTED SUCH THAT THE EMULSION JUST STARTS TO POND IN THE MESH SQUARES.

**ADDITIONAL REQUIREMENTS ASSOCIATED WITH USE NEAR AIRPORT PAVEMENTS:**

1. ONLY EROSION MATS THAT ARE DOUBLE NETTED SHALL BE ALLOWED WITHIN 3.0m OF ANY AIRPORT PAVEMENT USED BY AIRCRAFT WITH THE EXCEPTION OF AIRPORTS CLASSIFIED AS AIR CARRIER OR CORPORATE/TRANSPORT. IF THE AIRPORT IS CLASSIFIED AS AN AIR CARRIER OR CORPORATE/TRANSPORT, THERE WILL BE NO EROSION MATS ALLOWED WITHIN 9.0m OF PAVEMENT USED BY AIRCRAFT.

2. ONLY BIODEGRADABLE ANCHORING DEVICES SHALL BE ALLOWED IN THE INSTALLATION OF ANY EROSION MAT FOR AIRPORT APPLICATIONS. NO METAL STAPLES WILL BE ALLOWED.

**MAINTENANCE**

1. ALL SURFACE-LAID FABRICS SHOULD BE INSPECTED FORTNIGHTLY DURING THE

CONSTRUCTION PHASE AND AFTER SIGNIFICANT RAINFALL.

2. BIODEGRADABLE MATS SHOULD BE INSPECTED AFTER THE FIRST FEW RUNOFF-PRODUCING RAINFALL EVENTS.

3. INSPECT THE MATS TO SEE IF:  
(i) CONSTRUCTION ACTIVITY OR FALLING DEBRIS HAVE DAMAGED THE MATS;  
(ii) RUNOFF IS UNDERMINING THE MATS;  
(iii) THE MATS ARE NOT IN GOOD CONTACT WITH THE SOIL;  
(iv) THE MATS DO NOT HAVE ADEQUATE OVERLAP; AND  
(v) UP-SLOPE MATS DO NOT OVERLAP DOWN-SLOPE MATS.

4. IF THE MATTING IS DAMAGED, REPAIR OR REPLACE THE DAMAGED SECTION. IF WATER IS UNDERMINING THE FABRIC, REPAIR ANY HOLES OR JOINTS OR RE-BURY THE UPPER ENDS OF THE DAMAGED SECTIONS.

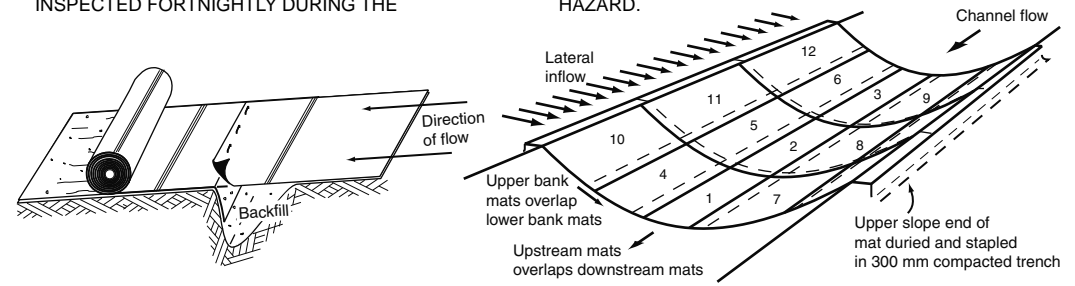
5. MAKE NECESSARY REPAIRS WITHIN 48 HOURS BUT AT LEAST BEFORE THE NEXT EXPECTED RAINFALL EVENT.

**REMOVAL**

1. IF THE MATTING IS TEMPORARY, IT MUST BE REPLACED/SUPPLEMENTED WITH PERMANENT STABILISATION MEASURES AS SPECIFIED IN THE APPROVED PLAN.

2. TEMPORARY STABILISATION WORKS MUST BE MAINTAINED UNTIL ARRANGEMENTS HAVE BEEN MADE TO INSTALL THE PERMANENT STABILISATION MEASURES.

3. DISPOSE OF THE REMOVED FABRIC IN A MANNER THAT WILL NOT CREATE AN EROSION OR POLLUTION HAZARD.



(a) Typical anchorage of mats in high velocity channels

(b) Typical order of placement of mats

Drawn: <b>GMW</b>	Date: <b>May-10</b>	<b>Erosion Control Mats</b>	<b>ECM-01</b>
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