INSTALLATION (CHUTE FORMATION)

1. REFER TO APPROVED PLANS FOR LOCATION AND CONSTRUCTION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION OR METHOD OF INSTALLATION, CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.

2. CLEAR THE LOCATION FOR THE CHUTE CLEARING ONLY WHAT IS NEEDED TO PROVIDE ACCESS FOR PERSONNEL AND EQUIPMENT FOR INSTALLATION.

3. REMOVE ROOTS, STUMPS, AND OTHER DEBRIS AND DISPOSE OF THEM PROPERLY.

4. CONSTRUCT THE SUBGRADE TO THE ELEVATIONS SHOWN ON THE PLANS. REMOVE ALL UNSUITABLE MATERIAL AND REPLACE WITH STABLE MATERIAL TO ACHIEVE THE DESIRED FOUNDATIONS.

5. IF THE CHUTE IS TEMPORARY, THEN COMPACT THE SUBGRADE TO A FIRM CONSISTENCY. IF THE CHUTE IS INTENDED TO BE PERMANENT, THEN COMPACT AND FINISH THE SUBGRADE AS SPECIFIED WITHIN THE DESIGN PLANS.

6. ENSURE THE SUBGRADE IS FIRM ENOUGH TO MINIMISE WATER SEEPAGE.

7. ENSURE THE SIDES OF THE CHUTE ARE NO STEEPER THAN A 1.5:1 (H:V) SLOPE.

8. ENSURE THE COMPLETED CHUTE HAS SUFFICIENT DEEP ALONG ITS FULL LENGTH.

9. ENSURE THE CHUTE IS STRAIGHT FROM ITS CREST TO THE TOE OF THE CHUTE.

10. ON FILL SLOPES, ENSURE THAT THE SOIL IS ADEQUATELY COMPACTED FOR A WIDTH OF AT LEAST ONE METRE EACH SIDE OF THE CHUTE TO MINIMISE THE RISK OF SOIL EROSION, OTHERWISE PROTECT THE SOIL WITH SUITABLE SCOUR PROTECTION MEASURES SUCH AS TURF OR EROSION CONTROL MATS.

11. PLACE AND SECURE THE CHUTE LINING (REFER TO SEPARATE SPECIFICATIONS).

12. IF CONCRETE IS USED AS A LINING, THEN KEEP THE SUBGRADE MOIST AT THE TIME CONCRETE IS PLACED. FORM, CUT-OFF WALLS AND ANCHOR BLOCKS AS DIRECTED IN THE APPROVED PLANS.

13. INSTALL AN APPROPRIATE OUTLET STRUCTURE (ENERGY DISSIPATER) AT THE BASE OF THE CHUTE (REFER TO SEPARATE SPECIFICATIONS).

14. ENSURE WATER LEAVING THE CHUTE AND THE OUTLET STRUCTURE WILL FLOW FREELY WITHOUT CAUSING UNDESIRABLE PONDING OR SCOUR.

15. APPROPRIATELY STABILISE ALL DISTURBED AREAS IMMEDIATELY AFTER CONSTRUCTION.

INSTALLATION (FABRIC PLACEMENT)

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

1. GEOSYNTHETIC FABRICS MUST BE STORED AWAY FROM DIRECT SUNLIGHT OR COVERED WITH ULTRAVIOLET LIGHT PROTECTIVE SHEETING UNTIL THE SITE IS READY FOR THEIR INSTALLATION.

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

3. AT LEAST 300mm OF THE FABRIC MUST BE ANCHORED INTO THE TRENCH WITH THE ROLL OF MATTING RESTING ON THE GROUND UP-SLOPE OF THE TRENCH.

4. 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.

5. WHEN FABRIC HAS BEEN ANCHORED WITHIN THE TRENCH, THEN BACKFILLED THE TRENCH AND COMPACT.

6. WHEN SPREADING THE FABRIC, AVOID STRETCHING THE MATERIAL.

7. ENSURE THE FABRIC REMAINS IN GOOD CONTACT WITH THE SOIL.

8. IF THE INFLOW CHANNEL CURVES (UPSTREAM OF THE CREST), THEN SUITABLY FOLD (IN A DOWNSTREAM DIRECTION) AND STAPLE THE FABRIC TO MAINTAIN THE FABRIC PARALLEL TO THE DIRECTION OF CHANNEL FLOW.

9. STAPLE THE SURFACE OF THE FABRIC AT 1m CENTRES. ON IRREGULAR GROUND, ADDITIONAL STAPLES WILL BE REQUIRED WHEREVER THE FABRIC DOES NOT INITIALLY CONTACT THE GROUND SURFACE.

10. INSTALL INTERMEDIATE ANCHOR TRENCHES AT 3m (MAX) INTERVALS.

11. IF THE CHUTE EXTENDS BEYOND THE LENGTH OF THE FABRIC, THEN FORM A NEW TRENCH IS FORMED AT LEAST 300mm UP-SLOPE OF THE END OF THE FABRIC SUCH THAT THE END OF THE FABRIC WILL BE ABLE TO FULLY COVER THE TRENCH. A NEW ROLL OF FABRIC IS THEN ANCHORED WITHIN THIS TRENCH AS PER THE FIRST. THE PROCESS IS CONTINUED DOWN THE SLOPE UNTIL THE DESIRED AREA IS FULLY COVERED.

12. IF CHUTE IS SUBJECT TO LATERAL INFLOWS, TEN ANCHOR THE OUTER MOST SIDES OF THE FABRIC IN A 300mm DEEP TRENCH AND STAPLE AT 200 TO 250mm CENTRES.

13. THE INSTALLATION PROCEDURE MUST ENSURE THAT THE FABRIC ACHIEVES AND RETAINS GOOD CONTACT WITH THE SOIL.

14. DAMAGED FABRIC MUST BE REPAIRED OR REPLACED.

MAINTENANCE

1. DURING THE CONSTRUCTION PERIOD, INSPECT ALL CHUTES PRIOR TO FORECAST RAINFALL, DAILY DURING EXTENDED PERIODS OF RAINFALL, AFTER SIGNIFICANT RUNOFF PRODUCING STORM EVENTS, OR OTHERWISE ON A WEEKLY BASIS. MAKE REPAIRS AS NECESSARY.

2. CHECK FOR MOVEMENT OF, OR DAMAGE TO, THE CHUTE LINING, INCLUDING SURFACE CRACKING.

3. CHECK FOR SOIL SCOUR ADJACENT THE CHUTE. INVESTIGATE THE CAUSE OF ANY SCOUR, AND REPAIR AS NECESSARY.

4. ENSURE SEDIMENT IS NOT PARTIALLY BLOCKING FLOW ENTRY INTO THE CHUTE. WHERE NECESSARY, REMOVE ANY DEPOSITED MATERIAL TO ALLOW FREE DRAINAGE.

5. DISPOSE OF ANY SEDIMENT IN A MANNER THAT WILL NOT CREATE AN EROSION OR POLLUTION HAZARD.

6. WHEN MAKING REPAIRS, ALWAYS RESTORE THE CHUTE TO ITS ORIGINAL CONFIGURATION UNLESS AN AMENDED LAYOUT IS REQUIRED.

REMOVAL

1. WHEN THE SOIL DISTURBANCE ABOVE THE CHUTE IS FINISHED AND THE AREA IS STABILISED, THE CHUTE AND ANY ASSOCIATED FLOW DIVERSION BANKS SHOULD BE REMOVED, UNLESS IT IS TO REMAIN AS A PERMANENT DRAINAGE FEATURE.

2. DISPOSE OF ANY MATERIALS, SEDIMENT OR EARTH IN A MANNER THAT WILL NOT CREATE AN EROSION OR POLLUTION HAZARD.

3. GRADE THE AREA IN PREPARATION FOR STABILISATION, THEN STABILISE THE AREA AS SPECIFIED IN THE APPROVED PLAN.

Drawn:	Date:		
GMW	Dec-09	Chutes - Synthetic Linings	CH-03