

## MATERIALS

SUPPORT POSTS/STAKES: 1500mm<sup>2</sup> (MIN) HARDWOOD, 2500mm<sup>2</sup> (MIN) SOFTWOOD, OR 1.5kg/m (MIN) STEEL STAR PICKETS SUITABLE FOR ATTACHING WIRE MESH.

WIRE MESH: WIRE OR STEEL MESH MINIMUM 14-GAUGE WITH A MAXIMUM MESH SPACING OF 200mm.

PRIMARY CORE ROCK: 15 TO 75mm ROUND OR CRUSHED (ANGULAR) ROCK.

AGGREGATE FILTER: 15 TO 25mm CLEAN AGGREGATE.

GEOTEXTILE FILTER FABRIC: HEAVY-DUTY NON-WOVEN, NEEDLE-PUNCHED FILTER FABRIC, MINIMUM 'BIDIM' A34 OR EQUIVALENT.

WOVEN FLOW CONTROL FABRIC: MINIMUM UNIT WEIGHT OF 140GSM, WITH ULTRAVIOLET INHIBITORS AND STABILISERS TO PROVIDE A MINIMUM OF 6 MONTHS OF USEABLE CONSTRUCTION LIFE.

ARMOUR ROCK (SPLASH PAD): WELL GRADED, HARD, ANGULAR, EROSION RESISTANT ROCK, WITH MEAN SIZE NOT LESS THAN 225mm.

## INSTALLATION

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. IF REQUIRED, ESTABLISH AN ACCESS TRACK TO THE SEDIMENT TRAP FOR CONSTRUCTION PURPOSES AND ONGOING MAINTENANCE. CLEAR ONLY THOSE AREAS NECESSARY TO COMPLETE THE IMMEDIATE WORKS.

3. CLEAR THE FOUNDATION AREA OF THE SEDIMENT WEIR OF WOODY VEGETATION AND ORGANIC MATTER. DELAY CLEARING THE UP-SLOPE POND AREA UNTIL THE WEIR IS FORMED AND IS ABLE TO ACT AS A SUITABLE SEDIMENT TRAP.

4. IF SPECIFIED ON THE PLANS, EXCAVATE A CUT-OFF TRENCH ALONG THE CENTRE-LINE OF THE EARTH ABUTMENTS (IF ANY).

5. COVER THE FOUNDATION AREA AND CUT-OFF TRENCH WITH HEAVY-DUTY FILTER FABRIC. OVERLAP ADJOINING FABRIC SHEETS A MINIMUM OF 600mm AT ALL JOINTS.

6. INSTALL THE SUPPORT POSTS AT A MAXIMUM 600mm CENTRES, AND ATTACH THE WIRE MESH TO THE INSIDE OF THE POSTS. INSTALL THE PARALLEL WIRE MESH FENCES AT THE SPACING AND NUMBER SPECIFIED IN THE APPROVED PLANS.

7. PLACE FILTER CLOTH AND/OR WOVEN FABRIC (AS SPECIFIED) ON THE UPSTREAM SIDE OF THE MOST DOWNSTREAM FENCE.

8. INSTALL THE INTERNAL FILTER MEDIUM BETWEEN THE PARALLEL FENCES. IF AGGREGATE IS USED, IT SHOULD BE PLACED IN MAXIMUM 400mm LIFTS. AFTER EACH 400mm LIFT, LACE DIAGONAL SUPPORT POSTS TOGETHER USING FENCING WIRE TO IMPROVE STABILITY OF THE WEIR. REPEAT THIS PROCESS UNTIL THE WEIR REACHES THE SPECIFIED HEIGHT.

9. CONSTRUCT THE ASSOCIATED EARTH ABUTMENT (IF ANY). ALL CUT AND FILL SLOPES SHOULD BE 2:1(H:V) OR FLATTER. THE DOWNSTREAM FACE OF EARTH ABUTMENTS SHOULD BE 3:1(H:V) OR FLATTER. EARTH ABUTMENTS SHOULD BE CONSTRUCTED OF WELL-COMPACTED, EROSION RESISTANT SOIL THAT IS FREE OF VEGETATION AND ROOTS. OVERFILL EARTH ABUTMENTS 150mm TO ALLOW FOR SETTLEMENT.

10. INSTALL THE SPECIFIED UPSTREAM FILTER MATERIAL TO THE UPSTREAM FACE OF THE SEDIMENT WEIR. IF FABRIC FILTER IS TO BE USED, CONSIDER ATTACHING SEVERAL LAYERS OF FILTER CLOTH, THUS ALLOWING EACH LAYER TO BE PROGRESSIVELY REMOVED AS THE FABRIC HAS BECOME BLOCKED WITH SEDIMENT. THE AGGREGATE FILTER SHOULD BE FORMED AGAINST THE SEDIMENT WEIR FRAME AT A SLOPE OF 2:1 (H:V) OR FLATTER.

11. CLEAR THE SETTLING POND AREA OF WOODY VEGETATION AND ORGANIC MATTER TO THE DIMENSIONS SPECIFIED WITHIN THE PLANS.

12. WHERE NECESSARY, EXCAVATE THE UPSTREAM SETTLING POND AND/OR SEDIMENT STORAGE PIT IN ACCORDANCE WITH THE APPROVED PLANS. EXCAVATED PITS TYPICALLY HAVE SIDE SLOPES OF 2:1(H:V) OR FLATTER UNLESS STEEPER SLOPES ARE KNOWN TO BE STABLE.

13. IF OVERTOPPING FLOOD FLOWS ARE POSSIBLE DURING OPERATION OF THE SEDIMENT WEIR, THEN CONSTRUCT AN APPROPRIATE SPLASH PAD DOWNSTREAM OF THE WEIR TO CONTROL SOIL EROSION.

14. ESTABLISH ALL NECESSARY UP-SLOPE DRAINAGE CONTROL MEASURES TO ENSURE THAT SEDIMENT-LADEN RUNOFF IS APPROPRIATELY DIRECTED INTO THE SEDIMENT TRAP.

15. TAKE ALL NECESSARY MEASURE TO MINIMISE THE SAFETY RISK CAUSED BY THE STRUCTURE.

## MAINTENANCE

1. CHECK ALL SEDIMENT WEIRS AFTER EACH RUNOFF EVENT AND MAKE REPAIRS IMMEDIATELY.

2. INSPECT ALL EMBANKMENTS FOR UNDERCUTTING OR UNDESIRABLE SEEPAGE FLOWS.

3. IDEALLY, SEDIMENT WEIRS SHOULD DISCHARGE (FROM FULL) OVER NO LESS THAN 8 HOURS. IF DRAINAGE IS TOO RAPID, THEN ADDITIONAL FILTER AGGREGATE MAY BE REQUIRED TO ACHIEVE OPTIMUM HYDRAULIC PERFORMANCE.

4. IF FLOW THROUGH THE STRUCTURE IS REDUCED TO AN UNACCEPTABLE LEVEL, THE UPSTREAM FILTER MEDIUM (AGGREGATE OR

FILTER CLOTH) SHOULD BE REMOVED AND REPLACED.

5. IF A GREATER DEGREE OF WATER TREATMENT (FILTRATION) IS REQUIRED, EXTRA GEOTEXTILE FILTER FABRIC SHOULD BE PLACED OVER THE UPSTREAM FACE OF THE STRUCTURE.

6. CHECK THE STRUCTURE AND DOWNSTREAM CHANNEL BANKS FOR DAMAGE FROM OVERTOPPING FLOWS. MAKE REPAIRS AS NECESSARY.

7. IMMEDIATELY REPLACE ANY ROCK DISPLACED FROM THE DOWNSTREAM SPLASH PAD.

8. REMOVE SEDIMENT AND RESTORE ORIGINAL SEDIMENT STORAGE VOLUME WHEN COLLECTED SEDIMENT EXCEEDS 10% OF THE SPECIFIED STORAGE VOLUME.

9. DISPOSE OF SEDIMENT AND DEBRIS IN A MANNER THAT WILL NOT CREATE AN EROSION OR POLLUTION HAZARD.

## REMOVAL

1. WHEN THE UP-SLOPE DRAINAGE AREA HAS BEEN STABILISED, REMOVE ALL MATERIALS INCLUDED DEPOSITED SEDIMENT AND DISPOSE OF IN A SUITABLE MANNER THAT WILL NOT CAUSE AN EROSION OR POLLUTION HAZARD.

2. ALL WATER AND SEDIMENT SHOULD BE REMOVED FROM THE SETTLING POND PRIOR TO THE DAM'S REMOVAL. DISPOSE OF SEDIMENT AND WATER IN A MANNER THAT WILL NOT CREATE AN EROSION OR POLLUTION HAZARD.

3. BRING THE DISTURBED AREA TO A PROPER GRADE, THEN SMOOTH, COMPACT AND STABILISE AND/OR REVEGETATE AS REQUIRED TO MINIMISE THE EROSION HAZARD.

Drawn:

GMW

Date:

Apr-10

Sediment Weir (Off-stream)

SW-02