

## SPECIFICATION FOR HYDROSEEDING

### 1.0 SEEDING

Seeding or hydroseeding shall be carried out as soon as practicable on slopes and other areas as shown in the Drawings or directed by the Engineer within 14 days after the slope is cut or filled.

Seeding shall be carried out by means of a proper hydroseeder where approved slurry of seeds, mulch, fertilisers, binders and organic matter are sprayed onto the prepared soil surface.

### 2.0 METHOD STATEMENT

Method Statement of Hydroseeding shall be provided to the Engineer at least 10 working days in advance for approval prior to execution. The method statement shall contain, but not limited to, the following items:

1. Seed Mixtures
  - a. Application rate.
  - b. Seed combination(s) and properties.
2. Fertilisers and Soil Amenders
  - a. Type of fertilisers / soil amenders.
  - b. Mix proportions.
  - c. Application rate.
3. Mulch fibres
  - a. Type of mulch fibres.
  - b. Application rate.
4. Binder
  - a. Binder type.
  - b. Mix proportions.
5. Mixing Procedure
6. Spraying Equipment
  - a. Equipment for short range application.
  - b. Equipment for long range application
  - c. Agitator.
  - d. Pressure pump.
7. Biodegradable Mat
  - a. Installation procedure.
  - b. Mat Anchor type.
  - c. Size, Length and Spacing of mat anchor.

### **3.0 PREPARATION OF THE SOIL SURFACE PRIOR TO HYDROSEEDING**

The areas to be hydroseeded shall be uniform and shall conform with the finished grade and cross section shown on the plans or as otherwise designated. Minor shaping and uniforming of uneven and rough areas outside the graded section shall be performed as directed by the Engineer in order to provide for more effective erosion control and for ease of subsequent mowing operations.

Vertical striations or grooves shall be absent from the final trimmed slope. Instead a rough textured surface shall be prepared. Where the surface microtopography varies by  $\pm 20\text{mm}$  from the formation level, an acceptable treatment is to provide horizontal grooving with semicircular or "v" shaped groove, 20mm deep, at an interval of 200mm downslope on all cut slopes. Any surface rills in excess of 25mm shall be rectified by retrimming.

Gullies or local washouts shall be backfilled with suitable material placed in layers of up to 200mm thick, each layer being compacted by hand ramming or by lightweight vibration plate compactors.

Large clods of earth and stones greater than 50mm shall be removed.

Slopes that have been exposed for a long time must be trimmed and scaled to remove any oxidised layer prior to hydroseeding.

### **4.0 MAINTENANCE DURING LIABILITY PERIOD**

The Contractor is to ensure the full establishment of ground cover by taking the necessary maintenance procedures such as regular watering, fertilising, and reseeding of failed areas. The Contractor shall guarantee the success of the seeding work. Any dead grass or bare spots larger than 35mm diameter shall be immediately replaced or resprayed at contractors' own expense.

### **5.0 QUALITY CONTROL**

The following quality controls and acceptance criteria shall be complied and approved by the Engineer.

1. The rate of application of grass seeds, fertilisers, mulch etc shall be verified at field by 1m x 1m plywood and field records (minimum of 1 test per 10,000m<sup>2</sup>). The whole slope shall be resprayed if any test result is found below the specified value.
2. Certificates related to type, origin, quality and validity of seeds and quality of fertilizers shall be certified by qualified agriculture specialist approved by the Engineer. All seeds and fertilizers shall be from suppliers approved by the Engineer.
3. Calibrated weighting machine/balance with  $\pm 1\%$  or  $\pm 2\text{gm}$  accuracy shall be used for all weighting.
4. Minimum of one sample per 1000m<sup>2</sup> of Biodegradable mat shall be sampled by the S.O. for measurements/prospective verification at site. All rolls of BM shall be tested if any sample fails any requirement. Rolls of BM below specification shall be rejected and removed from the site.

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