

PART L03
EROSION CONTROL MATTING

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1. GENERAL

- .1 This part specifies the requirements for erosion control matting including selection, site preparation, installation and maintenance of matting. Erosion control products that require geotechnical and engineering solutions such as Geoweb® are not addressed in this specification.

2. SELECTION AND SUPPLY OF MATTING TYPES

- .1 Erosion control matting shall be selected in accordance with Attachment L03A.
- .2 The Contractor shall use the following methods of supply:

Supply of Matting by the Principal: The Contractor shall give at least 2 working days' notice prior to collecting the matting.

- (a) Supply of Matting by the Contractor: The Contractor shall supply and deliver the matting.
- (b)

3. MATTING TYPES

- .1 Where matting is specified, an approved type shall be installed in accordance with the manufacturer's instructions.

Short Term Biodegradable Matting

- (a) **Light Jute:** This matting is jute based, graded at 250-300gms, with a short life span of approximately 9 months. Examples include Jutemaster – lite or equivalent.
- (b) **Jute Based Mesh:** Jute based loose woven “cargo net” mesh with short life span of 9 months. Examples include Jutemesh and SoilSaver jute mesh or equivalent.
- (c)

Medium Term Biodegradable Matting

- (d) **Jute Based:** This matting is jute based, graded at 600 – 800g/m², with a life span of approximately 18 months. Examples include Jutemaster - thick and Maxjute™ – thick, or equivalent.
- (e) **Recycled:** This matting contains recycled materials such as cotton and polyester graded at 260 – 300gsm, with a life span up to 36 months. Examples include ReCover™ or equivalent.
- (f)

Long Term Biodegradable Matting

- (g) **Heavy Jute Mesh:** A long term heavy jute fibre, graded at 620 – 650gsm, with a life span of 18 months. Examples include Maxjute™ - thick or equivalent.
- (h) **Coir Matting:** An open weave geotextile made up of 100% coconut fibre. Life span of approximately 4 – 6 years. i.e. T.E.C. Mat™ Coir or equivalent.

Synthetic Matting

- (i) **Polypropylene:** Comprises UV stabilized polypropylene fibres and mesh, graded at 380 - 400 gsm and long term life span of up to 10 years. Examples include Grassroots™, or equivalent.
- Polypropylene Nets:** Polypropylene nets heat bonded to HDPE nets with 3 dimensional profile providing permanent root matrix. Different grades are available; R20, R40 with 20Kn and 40Kn shear properties, thickness 20-25mm, and mass 340gsm. Long term life span. Examples include TrinterMat™ or equivalent.

Composite Matting

Short Term: This matting is made up of biodegradable wood wool within a polypropylene mesh, graded at 500g/m², with 12 – 18 month life span. Examples include Enviromat or equivalent.

Long Term: This matting is a combination of jute, synthetic fibre and mesh scrim graded at 280 – 330gsm, with a life span of up to 3 years. Examples include MaxBio™ or equivalent.

4. ADDITIONAL MATTING REQUIREMENTS

- .1 Where specified on the Drawings, matting shall incorporate additional requirements prior to installation.

- (i) **Fire Retardant:** Matting installed in fire prone areas shall be treated with a suitable fire retardant prior to revegetation as per the manufacturer's instructions.
- Mat Slitting:** Thick jute matting may be pre slit by the manufacturer to facilitate planting at a spacing of four to six slits per square metre. Slitting may be customized with sufficient lead time and quantities at the time of manufacture.

5. SITE PREPARATION

- (a)
- (b) Site preparation for areas to be matted shall be in accordance with the Drawings for site preparation.

Weed Control

- .2 Before installation of matting commences, the area to be matted shall be eradicated of weeds and any existing vegetative growth (excluding native vegetation) shall be slashed to a height of 50mm. Trash build up and cut material shall be removed from the area prior to spraying with a non-selective herbicide (Glyphosate) incorporating a herbicide marker. Weeds shall be sprayed a minimum ten days prior to installation of matting. All invasive weeds such as Kikuyu, Couch Grass, Onion Weed and Nut Grass shall be eradicated prior to matting. Glyphosate (Biactive formulation) shall be used around wetlands drainage lines and waterways. The herbicide shall be used according to the manufacturer's recommended rates and any off target damage shall be rectified by the Contractor.

Earthworks

- .3 The Contractor shall trim and grade all worked subgrade areas as required prior to placing topsoil to provide a smooth, consolidated, even, free draining surface, free from depressions and undulations to final design levels. Where rill and sheet erosion has occurred the Contractor shall repair and reinstate with suitable stable material. Stones and clay clumps larger than 50mm diameter are to be removed to allow smooth and uninterrupted surface contact with the matting. **Note that exposed dispersible clays require topsoiling prior to matting.**

6. INSTALLATION

General

- .1 Installation of matting shall be in accordance with the Drawings.
- .2 The Contractor shall install matting by rolling the mat down the slope with a minimum 150mm overlap between strips. Rolls should be tiled so that overlap is in the direction of either placement of cover material or prevailing wind. The matting shall lay loosely on the soil surface to achieve maximum soil contact.
- .3 Where matting is laid over low velocity drainage channels, it shall be overlapped in the direction of water flow. Matting of high velocity channels and drains will be laid in the direction of the drainage channel and overlapped a minimum of 150mm between strips.

Anchoring

- (b) Matting shall be fixed to the base of trenches by pinning and backfilling with excavated material (not containing large rocks < 50mm) and compacted to original levels. Pins shall be spaced at 2000mm intervals prior to backfilling.
- (c)
- (d) **Top of Batter:** The minimum trenching depth shall be 500mm beyond top and 200mm depth.
- Bottom of Batter:** The minimum trenching depth shall be 400mm beyond toe and 200mm depth.
- Side of Batter:** The minimum trenching depth shall be 200mm beyond and 200mm depth.
- Pinning:** Minimum pinning requirement to be 200mm x 30mm x 200mm (leg x bridge x leg) non galvanized pins, 3mm wire diameter spaced at 3 per square metre.
- .5 Installation to conform to manufactures instructions and should be site specific according to soil type.

7. **MAINTENANCE**

.1 The Contractor shall provide the following maintenance:

Repair of Damaged Matting: The Contractor shall repair all washouts, wind blowouts, tears and damage to matting and reinstate within 2 weeks of notification. This will include retrenching, repining and replacement of damaged sections of matting.

Reinstatement of Eroded Soil: The Contractor shall reinstate eroded soil with suitable soil to final design levels and specification.

(a) **Reseeding and Replanting:** The Contractor shall replant or reseed the repaired section.

8. **HOLD POINTS**

(b)
.1 There are no Hold Points referenced in this Part.

(c)

1. ATTACHMENT L03A - SELECTION OF MATTING

Matting shall be selected in accordance with the following site conditions table:

SITE CONDITIONS													
	Rainfall	Rainfall	Swales & drains	Swales & drains	slope	slope	weeds	weeds	Revegetation	Revegetation	Soil type *	Soil type *	
Matting types	High >450mm	Low <450mm	High velocity	Low velocity	1:2 – 1:3	1:3 – 1:5	dense	sparse	seeding	planting	stable	erodible	
Biodegradable													
Short term		x				x		x	x		x		
Medium term	x	x		x		x		x	x	x	x		
Long term	x		x		x		x			x		x	
Synthetic													
Long term	x		x	x	x		x			x		x	
Composite													
Short term		x				x		x	x		x		
Long term	x		x		x		x			x		x	

Short term < 9 months

Medium term 18 months

Long term > 36mths (estimated life span, dependent on weather and site exposure)

* On site soil testing to be undertaken to determine soil stability