

Public Realm

Master Specification

PR-LS-C5 Erosion Control Matting

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Contents

Contents	2
PR-LS-C5 Erosion Control Matting	4
1 General	4
2 Selection and Supply of Matting Types	4
3 Matting Types	4
4 Additional Matting Requirement	5
5 Site Preparation	5
6 Installation	5
7 Maintenance	6
8 Appendix 1: Selection of Matting	7

PR-LS-C5 Erosion Control Matting

1 General

- 1.1 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 are not addressed in this Part.
- 1.2 All clauses of this Part apply unless otherwise specified in the Contract Documents.
- 1.3 Where a specification differs between the Drawing and the Design Report, the Drawing shall take precedence.
- 1.4 If not specified in the Drawings or Design Report, the clauses in this Part shall be followed.
- 1.5 Where required under the Controlled Substances Act 1984, and the Controlled Substances (Pesticides) Regulations 2003, employees undertaking pest control work shall hold a current Pest Management Technician's License.

2 Selection and Supply of Matting Types

- 2.1 Erosion control matting shall be selected in accordance with Appendix 1: Selection of Matting unless specified on the Drawings or in the Design Report.
- 2.2 The Contractor shall supply and install the matting.

3 Matting Types

- 3.1 Where a matting type is specified, it shall be installed in accordance with the manufacturer's instructions.

Short term Biodegradable Matting

Light Jute

- 3.2 This matting is jute based, graded at 250-300 gms, with a short life span of approximately 9 months. E.g. Jutemaster – lite or equivalent.

Medium Term Biodegradable Matting

Jute Based

- 3.3 This matting is jute based, graded at 600 – 800 g/m², with a life span of approximately 18 months. E.g. Jutemaster - thick and Maxjute™ – thick or equivalent.

Long Term Biodegradable Matting

Heavy Jute Mesh

- 3.4 A long term heavy jute fibre, graded at 620 – 650 gsm, with a life span of 18 months. E.g. Maxjute™ – thick or equivalent.

Synthetic Matting

Polypropylene

- 3.5 Comprises UV stabilized polypropylene fibres and mesh, graded at 380 - 400 gsm and long term life span of up to 10 years. E.g. Grassroots™ or equivalent.

Composite Matting

Short Term

- 3.6 This matting is made up of biodegradable wood wool within a polypropylene mesh, graded at 500 g/m², with 12 – 18 month life span. E.g. Enviromat or equivalent.

Long Term

- 3.7 This matting is a combination of jute, synthetic fibre and mesh scrim graded at 280 – 330 gsm, with a life span of up to 3 years. E.g. MaxBio™ or equivalent.

4 Additional Matting Requirement

- 4.1 Where specified on the Drawings or in the Design Report, matting shall incorporate additional requirements prior to installation which may include treatment with suitable fire retardants and / or mat slitting.

5 Site Preparation

- 5.1 Site preparation for areas to be matted shall be in accordance with following:

Weed Control

- 5.2 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 50 mm. Trash build up and cut material shall be removed from the area prior to spraying with a non-selective herbicide (Glyphosate) incorporating an herbicide marker dye. Weeds shall be sprayed a minimum 10 days prior to installation of matting. All invasive weeds such as Kikuyu, Couch Grass, Onion Weed and Nut Grass shall be eradicated prior to installation of 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

- 5.3 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 50 mm diameter are to be removed to allow smooth and uninterrupted surface contact with the matting.
- 5.4 Exposed dispersible clays require topsoiling prior to matting.

6 Installation

General

- 6.1 Installation of matting shall be in accordance with manufacturer's recommended methods.
- 6.2 The Contractor shall install matting by rolling the mat down the slope with a minimum 150 mm 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.
- 6.3 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 150 mm between strips.

Anchoring

- 6.4 Matting shall be fixed to the base of trenches by pinning and backfilling with excavated material (not containing large rocks < 50 mm) and compacted to original levels. Pins shall be spaced at intervals as specified by the manufacturer prior to backfilling.
- 6.5 Installation to conform to manufacturer's instructions and should be site specific according to soil type.

Top of Batter

- 6.6 The minimum trenching depth shall be 500 mm beyond top and 200 mm depth.

Bottom of Batter

- 6.7 The minimum trenching depth shall be 400 mm beyond toe and 200 mm depth.

Side of Batter

- 6.8 The minimum trenching depth shall be 200 mm beyond sides of batter and 200mm depth.

Pinning

- 6.9 Minimum pinning requirement to be 200 mm x 30 mm x 200 mm (leg x bridge x leg) non-galvanized pins, 3 mm wire diameter spaced at 3 per square metre.

7 Maintenance

Repair of Damaged Matting

- 7.1 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

- 7.2 The Contractor shall reinstate eroded soil with suitable soil to final design levels and specification.

Reseeding and Replanting

- 7.3 The Contractor shall replant or reseed the repaired section and the timing of this work will be with agreement from the Principal.

8 Appendix 1: Selection of Matting

8.1 Matting shall be selected in accordance with Table PR-LS-C5 8-1.

Table PR-LS-C5 8-1 Site Conditions

Site Conditions													
Matting types	Rainfall	Rainfall	Swales & Drains	Swales & Drains	Slope	Slope	Weeds	Weeds	Revegetation	Revegetation	Soil Type*	Soil Type*	
	High > 450 mm	Low < 450 mm	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 > 36 months (estimated life span, dependent on weather and site exposure)

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