

Superseded

**Specification (Measurement)**

**Transport and Main Roads Specifications  
MRS16 Landscape and Revegetation Works**

**October 2014**

Superseded

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## 1 Introduction

This specification applies to the construction of landscape and revegetation treatments in roadworks. This specification shall be read in conjunction with MRS01 *Introduction to Specifications*, and other specifications as appropriate.

This specification forms part of the *Transport and Main Roads Specifications Manual*.

## 2 Measurement of work

### 2.1 Standard Work Items

In accordance with the provisions of Clause 2.1.3 of MRS01 *Introduction to Specifications*, the Standard Work Items incorporated in this specification are listed in Table 2.1.

**Table 2.1 – Standard Work Items**

Standard Item No.	Description	Unit of Measurement	Clause Reference
<b>GROUND PREPARATION WORKS – TESTING AND AMELIORANTS</b>			
3802	Preparation of a Soil Management Plan – Construction – Form A	lump sum	2.2.1
3803P	Topsoil testing – Form C (Provisional Quantity, if ordered)	set of tests	2.2.1
3804P	Manufactured Site Topsoil Compliance Testing – Form D (Provisional Quantity, if ordered)	set of tests	2.2.1
3805P	Subsoil testing – Form E (Provisional Quantity, if ordered)	set of tests	2.2.1
3806P	Drainage basin soil testing – Form F (Provisional Quantity, if ordered)	set of tests	2.2.1
3807P	Supply of amelioration agent – agricultural lime (Provisional Quantity, if ordered)	tonne	2.2.1
3808P	Supply of amelioration agent – agricultural dolomite (Provisional Quantity, if ordered)	tonne	2.2.1
3809P	Supply of amelioration agent – agricultural gypsum (Provisional Quantity, if ordered)	tonne	2.2.1
3810P	Supply of amelioration agent – organic soil conditioner (Provisional Quantity, if ordered)	m <sup>3</sup>	2.2.1
<b>GROUND PREPARATION WORKS – SUBSOIL</b>			
3816P	Knock-down herbicide application (Provisional Quantity, if ordered)	m <sup>2</sup>	2.2.2
3817P	Manual removal of weeds (Provisional Quantity, if ordered) [ <i>description</i> ]	lump sum	2.2.2
3818P	Target herbicide application (Provisional Quantity, if ordered) [ <i>description</i> ]	m <sup>2</sup>	2.2.2
3819	Spread amelioration agent on subsoil	m <sup>2</sup>	2.2.2
3820	Ripping [ <i>depth</i> ]	m <sup>2</sup>	2.2.2
3821	Cultivation [ <i>depth</i> ]	m <sup>2</sup>	2.2.2

Standard Item No.	Description	Unit of Measurement	Clause Reference
3822	Roughening [ <i>depth</i> ]	m <sup>2</sup>	2.2.2
<b>GROUND PREPARATION WORKS – TOPSOIL</b>			
3828P	Manufacture of site topsoil (Provisional Quantity, if ordered)	m <sup>3</sup>	2.2.3
3829P	Supply of imported topsoil (Provisional Quantity, if ordered)	m <sup>3</sup>	2.2.3
3830	Install topsoil [ <i>depth</i> ]	m <sup>2</sup>	2.2.3
<b>VEGETATION WORKS – SEEDING</b>			
3836	Drill seeding [ <i>mix name</i> ]	m <sup>2</sup>	2.2.4
3837	Broadcast seeding [ <i>mix name</i> ]	m <sup>2</sup>	2.2.4
3838	Hydromulch grass seeding – single pass [ <i>mix name</i> ]	m <sup>2</sup>	2.2.4
3839	Hydromulch native seeding – double pass [ <i>mix name</i> ]	m <sup>2</sup>	2.2.4
3840	Straw mulch seeding [ <i>mix name</i> ]	m <sup>2</sup>	2.2.4
3841	Organics blanket seeding [ <i>mix name</i> ]	m <sup>2</sup>	2.2.4
<b>VEGETATION WORKS – TURFING</b>			
3847	Turf [ <i>description</i> ]	m <sup>2</sup>	2.2.5
<b>VEGETATION WORKS – MULCHING</b>			
3854P	Manufacture of site mulch (Provisional Quantity, if ordered) [ <i>description</i> ]	m <sup>3</sup>	2.2.6
3855P	Supply of imported mulch (Provisional Quantity, if ordered) [ <i>description</i> ]	m <sup>3</sup>	2.2.6
3856	Install mulch [ <i>depth</i> ]	m <sup>2</sup>	2.2.6
<b>VEGETATION WORKS – MATTING</b>			
3862	Matting [ <i>description</i> ]	m <sup>2</sup>	2.2.7
<b>VEGETATION WORKS – PLANTING OF CONTAINER AND EX-GROUND STOCK</b>			
3868	Planting [ <i>container description</i> ]	container	2.2.8
3869	Plant mats [ <i>description</i> ]	each	2.2.8
3870	Harvesting site plant material [ <i>description</i> ]	each	2.2.8
<b>HARDSCAPE WORKS – PLANTING BED EDGING</b>			
3877	Timber planting bed edging [ <i>type 1   type 2</i> ]	m	2.2.9
3878	Concrete planting bed edging [ <i>type 1   type 2</i> ]	m	2.2.9

Standard Item No.	Description	Unit of Measurement	Clause Reference
<b>HARDSCAPE WORKS – IRRIGATION SYSTEM</b>			
3885	Irrigation system	lump sum	2.2.10
<b>ESTABLISHMENT AND MONITORING OPERATIONS</b>			
3891	Establishment Period	lump sum	2.2.11
3892P	Establishment Period Watering (Provisional Quantity, as directed)	kilolitre	2.2.11
3895	Monitoring Period [ <i>duration</i> ]	lump sum	2.2.11
3896P	Monitoring Period Watering (Provisional Quantity, as directed)	kilolitre	2.2.11

Standard Work Items common to all landscape and revegetation treatments (seeding, turfing and planting) should be nominated in the Schedule of Rates:

- 3802 Preparation of a Soil Management Plan – Construction – Form A
- 3803P Topsoil testing – Form C (Provisional Quantity, if ordered)
- 3804P Manufactured Site Topsoil Compliance Testing – Form D (Provisional Quantity, if ordered)
- 3805P Subsoil testing – Form E (Provisional Quantity, if ordered)
- 3816P Knock-down herbicide application (Provisional Quantity, if ordered)
- 3819 Spread amelioration agent on subsoil
  - 3807P Supply of amelioration agent – agricultural lime (Provisional Quantity, if ordered)
  - 3808P Supply of amelioration agent – agricultural dolomite (Provisional Quantity, if ordered)
  - 3809P Supply of amelioration agent – agricultural gypsum (Provisional Quantity, if ordered)
  - 3810P Supply of amelioration agent – organic soil conditioner (Provisional Quantity, if ordered)
- 3820 Ripping
- 3821 Cultivation
- 3822 Roughening
- 3830 Install topsoil
  - 3828P Manufacture of site topsoil (Provisional Quantity, if ordered)
  - 3829P Supply of imported topsoil (Provisional Quantity, if ordered)
- 3891 Establishment Period
- 3892P Establishment Period Watering (Provisional Quantity, as directed)
- 3895 Monitoring Period
- 3896P Monitoring Period Watering (Provisional Quantity, as directed)

## 2.2 Work Operations

### 2.2.1 Ground preparation works – testing and ameliorants

#### Item 3802 Preparation of a Soil Management Plan – Construction – Form A

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) preparation and updating of the Soil Management Plan - Construction in accordance with Clause 5.2.2 of MRTS16 *Landscape and Revegetation Works*.

#### Item 3803P Topsoil Testing – Form C (Provisional Quantity, if ordered)

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) collection of sample and testing in accordance with Clause 8.1.2.1 of MRTS16 *Landscape and Revegetation Works*
- c) completion of *Form C – Topsoil Testing*, and
- d) preparation of *Form B – Soil Assessment Report* in accordance with Clause 5.2.2.1 of MRTS16 *Landscape and Revegetation Works*.

A quantity allowance should be based on the minimum required testing frequency of 1 test per 500 m<sup>3</sup> of topsoil.

#### Item 3804P Manufactured Site Topsoil Compliance Testing – Form D (Provisional Quantity, if ordered)

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) collection of sample and testing in accordance with Clause 8.1.2.3 of MRTS16 *Landscape and Revegetation Works*
- c) completion of *Form D – Manufactured Site Topsoil Compliance Testing*, and
- d) preparation of *Form B – Soil Assessment Report* in accordance with Clause 5.2.2.1 of MRTS16 *Landscape and Revegetation Works*.

A quantity allowance should be based on the minimum required testing frequency of 1 test per 500 m<sup>3</sup> of stockpiled stripped site topsoil.

#### Item 3805P Subsoil testing – Form E (Provisional Quantity, if ordered)

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) collection of sample and testing in accordance with Clause 8.1.1.1 of MRTS16 *Landscape and Revegetation Works*
- c) completion of *Form E – Subsoil Testing*, and

- d) preparation of Form B – *Soil Assessment Report* in accordance with Clause 5.2.2.1 of MRTS16 *Landscape and Revegetation Works*.

A quantity allowance should be based on 1 test per 500 m length of roadway.  
A higher quantity allowance should be considered on sites with large and / or multiple hills, ridges, cuts / fill batters and water courses.  
A lower quantity allowance should be considered on sites with a consistently flat, landform.

**Item 3806P     Drainage basin soil testing – Form F (Provisional Quantity, if ordered)**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) collection of sample and testing in accordance with Clause 8.1.1.1 of MRTS16 *Landscape and Revegetation Works*
- c) completion of Form F – *Drainage Basin Soil Testing*, and
- d) preparation of Form B – *Soil Assessment Report* in accordance with Clause 5.2.2.1 of MRTS16 *Landscape and Revegetation Works*.

**Item 3807P     Supply of amelioration agent – agricultural lime (Provisional Quantity, if ordered)**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply and storage of agricultural lime, and
- c) provision of a delivery docket in accordance with Clause 7.2.3.1 of MRTS16 *Landscape and Revegetation Works*.

**Item 3808P     Supply of amelioration agent – agricultural dolomite (Provisional Quantity, if ordered)**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply and storage of agricultural dolomite, and
- c) provision of a delivery docket in accordance with Clause 7.2.3.1 of MRTS16 *Landscape and Revegetation Works*.

**Item 3809P     Supply of amelioration agent – agricultural gypsum (Provisional Quantity, if ordered)**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply and storage of agricultural gypsum, and
- c) provision of a delivery docket in accordance with Clause 7.2.3.1 of MRTS16 *Landscape and Revegetation Works*.



**Item 3810P Supply of amelioration agent – organic soil conditioner (Provisional Quantity, if ordered)**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) testing of organic soil conditioner in accordance with Clause 7.2.5 of MRTS16 *Landscape and Revegetation Works*
- c) supply and storage of organic soil conditioner, and
- d) provision of a delivery docket in accordance with Clause 7.2.5.1 of MRTS16 *Landscape and Revegetation Works*.

**2.2.2 Ground preparation works – subsoil**

**Item 3816P Knock-down herbicide application (Provisional Quantity, if ordered)**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials, and
- c) application of knock-down herbicide as part of ground preparation in accordance with Clause 8.1.1.2 of MRTS16 *Landscape and Revegetation Works*.

A quantity allowance should be based on 10% of the total area of vegetation treatments. This quantity allowance generally relates to treatment at the edge of disturbed areas beyond the cut and fill batters. Newly constructed cut and fill batters are typically weed free. A higher quantity allowance should be considered on sites with known weed.

**Item 3817P Manual removal of weeds (Provisional Quantity, if ordered) [description]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) manual removal and disposal of weeds as part of ground preparation in accordance with Clause 8.1.1.2 of MRTS16 *Landscape and Revegetation Works*.

**Item 3818P Target herbicide application (Provisional Quantity, if ordered) [description]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials, and
- c) application of specific target herbicide as part of ground preparation in accordance with Clause 8.1.1.2 of MRTS16 *Landscape and Revegetation Works*.

**Item 3819 Spread amelioration agent on subsoil**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and

- b) spreading of amelioration agent on subsoil prior to ground preparation in accordance with Clause 8.1.1.3 of MRTS16 *Landscape and Revegetation Works*.

**Payment Note:** Payment for testing of subsoil, supply of amelioration agents and ground preparation operations (ripping, cultivation, roughening) is included under separate Standard Work Items.

When Standard Work Item 3819 *Spread amelioration agent on subsoil* is scheduled, the following interdependent Standard Work Items should be nominated in the Schedule of Rates:

- a) testing of subsoil:

3805P Subsoil testing – Form E (Provisional Quantity, if ordered)

- b) supply of amelioration agents:

3807P Supply of amelioration agent – agricultural lime (Provisional Quantity, if ordered)

3808P Supply of amelioration agent – agricultural dolomite (Provisional Quantity, if ordered)

3809P Supply of amelioration agent – agricultural gypsum (Provisional Quantity, if ordered)

A quantity allowance for the supply of each amelioration agent to ameliorate subsoils should be:

- 1.5 kg of amelioration agent per m<sup>2</sup> of vegetation treatment (seeding, turfing and planting) - (1.5 kg / m<sup>2</sup>)

The actual type and quantity of amelioration agent to be applied is determined through testing the subsoil and completing the relevant sections in the *Soil Assessment Report* and *Soil Management Plan – Construction*. Once determined, the Administrator shall approve the ordering of required materials.

**Item 3820 Ripping [depth]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) ripping of subsoil in accordance with Clause 8.1.1.4 of MRTS16 *Landscape and Revegetation Works*.

**Item 3821 Cultivation [depth]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) cultivation of subsoil in accordance with Clause 8.1.1.5 of MRTS16 *Landscape and Revegetation Works*.

**Item 3822 Roughening [depth]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) roughening of subsoil in accordance with Clause 8.1.1.6 of MRTS16 *Landscape and Revegetation Works*.

### 2.2.3 Ground preparation works – topsoil

#### Item 3828P Manufacture of site topsoil (Provisional Quantity, if ordered)

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) amelioration and screening stockpiled site topsoil in accordance with Clause 8.1.2.2 of MRTS16 *Landscape and Revegetation Works*.

Payment Note: Payment for testing of topsoil and supply of amelioration agents is included under separate Standard Work Items.

When Standard Work Item 3830 *Manufacture of site topsoil* is scheduled, the following interdependent Standard Work Items should be nominated in the Schedule of Rates:

a) testing of topsoil:

- 3803P Topsoil Testing – Form C (Provisional Quantity, if ordered)
- 3804P Manufactured Site Topsoil Compliance Testing – Form D (Provisional Quantity, if ordered)

b) supply of amelioration agents:

- 3807P Supply of amelioration agent – agricultural lime (Provisional Quantity, if ordered)
- 3808P Supply of amelioration agent – agricultural dolomite (Provisional Quantity, if ordered)
- 3809P Supply of amelioration agent – agricultural gypsum (Provisional Quantity, if ordered)
- 3810P Supply of amelioration agent – organic soil conditioner (Provisional Quantity, if ordered)

A quantity allowance for the supply of each amelioration agent to ameliorate topsoils should be:

- 5 kg of chemical amelioration agent per m<sup>3</sup> of stockpiled stripped site topsoil (5 kg / m<sup>3</sup>), and
- 0.1 m<sup>3</sup> of organic soil conditioner per m<sup>3</sup> of stockpiled stripped site topsoil (0.1 m<sup>3</sup> / m<sup>3</sup>).

The actual type and quantity of amelioration agent to be applied is determined through testing the topsoil and completing the relevant sections in the *Soil Assessment Report* and *Soil Management Plan – Construction*. Once determined, the Administrator shall approve the ordering of required materials.

#### Item 3829P Supply of imported topsoil (Provisional Quantity, if ordered)

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply and storage of imported topsoil, and
- c) provision of a delivery docket in accordance with Clause 7.3.2.1 of MRTS16 *Landscape and Revegetation Works*.

**Item 3830 Install topsoil [depth]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) installation in accordance with Clause 8.1.2.4 of MRTS16 *Landscape and Revegetation Works*.

Payment Note: Payment for supply of topsoil is included under Standard Work Item 3828P or 3829P.

When Standard Work Item 3830 *Install topsoil* is scheduled, the following interdependent Standard Work Items should be nominated in the Schedule of Rates:

a) supply of topsoil:

- 3828P Manufacture of site topsoil (Provisional Quantity, if ordered)
- 3829P Supply of imported topsoil (Provisional Quantity, if ordered)

Generally, the Department prioritises the use of site won materials; however when there is a shortfall in site topsoil, when site topsoil is not feasible to ameliorate or when site storage constraints apply, importation of topsoil may be required.

The total required quantity of topsoil should be nominated against each of these items.

**2.2.4 Vegetation works – seeding**

**Item 3836 Drill seeding [mix name]**

Work Operations in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials
- c) supply of a Seed Supply Proposal in accordance with Clause 5.3.1 of MRTS16 *Landscape and Revegetation Works*
- d) activities in accordance with the Seed Supply Proposal, and
- e) installation in accordance with Clause 8.2.1.1 of MRTS16 *Landscape and Revegetation Works*.

Payment Note: Payment for ground preparation operations (ripping, cultivation, roughening) and installation of topsoil is included under separate Standard Work Items.

**Item 3837 Broadcast seeding [mix name]**

Work Operations in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials
- c) supply of a Seed Supply Proposal in accordance with Clause 5.3.1 of MRTS16 *Landscape and Revegetation Works*
- d) activities in accordance with the Seed Supply Proposal, and

- e) installation in accordance with Clause 8.2.1.2 of MRTS16 *Landscape and Revegetation Works*.

Payment Note: Payment for ground preparation operations (ripping, cultivation, roughening) and installation of topsoil is included under separate Standard Work Items.

**Item 3838 Hydromulch grass seeding - single pass [mix name]**

Work Operations in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials
- c) supply of a Seed Supply Proposal in accordance with Clause 5.3.1 of MRTS16 *Landscape and Revegetation Works*
- d) activities in accordance with the Seed Supply Proposal, and
- e) installation in accordance with Clause 8.2.1.4 of MRTS16 *Landscape and Revegetation Works*.

Payment Note: Payment for ground preparation operations (ripping, cultivation, roughening) and installation of topsoil is included under separate Standard Work Items.

**Item 3839 Hydromulch native seeding - double pass [mix name]**

Work Operations in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials
- c) supply of a Seed Supply Proposal in accordance with Clause 5.3.1 of MRTS16 *Landscape and Revegetation Works*
- d) activities in accordance with the Seed Supply Proposal, and
- e) installation in accordance with Clause 8.2.1.5 of MRTS16 *Landscape and Revegetation Works*.

Payment Note: Payment for ground preparation operations (ripping, cultivation, roughening) and installation of topsoil is included under separate Standard Work Items.

**Item 3840 Straw mulch seeding [mix name]**

Work Operations in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials
- c) supply of a Seed Supply Proposal in accordance with Clause 5.3.1 of MRTS16 *Landscape and Revegetation Works*
- d) activities in accordance with the Seed Supply Proposal, and
- e) installation in accordance with Clause 8.2.1.6 of MRTS16 *Landscape and Revegetation Works*.

Payment Note: Payment for ground preparation operations (ripping, cultivation, roughening) and installation of topsoil is included under separate Standard Work Items.

**Item 3841      Organics blanket seeding [*mix name*]**

Work Operations in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials
- c) supply of a Seed Supply Proposal in accordance with Clause 5.3.1 of MRTS16 *Landscape and Revegetation Works*
- d) activities in accordance with the Seed Supply Proposal, and
- e) installation in accordance with Clause 8.2.1.7 of MRTS16 *Landscape and Revegetation Works*.

Payment Note: Payment for ground preparation operations (ripping, cultivation, roughening) is included under separate Standard Work Items.

**2.2.5    Vegetation works – turfing**

**Item 3847      Turf [*description*]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials, and
- c) installation in accordance with Clause 8.2.2 of MRTS16 *Landscape and Revegetation Works*.

Payment Note: Payment for ground preparation operations (ripping, cultivation, roughening) and installation of topsoil is included under separate Standard Work Items.

**2.2.6    Vegetation works – mulching**

**Item 3854P      Manufacture of site mulch (Provisional Quantity, if ordered) [*description*]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) manufacture and stockpiling in accordance with Clause 8.2.3.1 of MRTS16 *Landscape and Revegetation Works*.

**Item 3855P      Supply of imported mulch (Provisional Quantity, if ordered) [*description*]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply and storage of imported mulch, and
- c) provision of a delivery docket in accordance with Clause 7.6.2.1 of MRTS16 *Landscape and Revegetation Works*.

**Item 3856      Install mulch [*depth*]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) installation in accordance with Clause 8.2.3.2 of MRTS16 *Landscape and Revegetation Work*.

Payment Note: Payment for supply of mulch is included under Standard Work Item 3854P or 3855P.

Where the Standard Work Item 3856 *Install mulch* is scheduled, the following interdependent Standard Work Items should be nominated in the Schedule of Rates:

- a) supply of mulch:
  - 3854P    Manufacture of site mulch (Provisional Quantity, if ordered)
  - 3855P    Supply of imported mulch (Provisional Quantity, if ordered)

Generally, the Department prioritises the use of site won materials; however when there is a shortfall in site mulch or where it is not feasible to manufacture on site, importation of mulch may be required.

The total required quantity of mulch should be nominated against each of these items.

**2.2.7    Vegetation works – matting**

**Item 3862      Matting [*description*]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials, and
- c) installation in accordance with Clause 8.2.4 of MRTS16 *Landscape and Revegetation Works*.

**2.2.8    Vegetation works – planting of container and ex-ground stock**

**Item 3868      Planting [*container description*]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supplying all materials
- c) supply of a Plant Supply Proposal in accordance with Clause 5.3.2 of MRTS16 *Landscape and Revegetation Works*
- d) activities in accordance with the Plant Supply Proposal, and
- e) installation in accordance with Clause 8.2.5 of MRTS16 *Landscape and Revegetation Works*.

Payment Note: Payment for ground preparation operations (ripping, cultivation, roughening), and installation of topsoil, mulch, plant mats, matting, and seeding operations is included under separate Standard Work Items.



**Item 3869 Plant mats [description]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials
- c) installation in accordance with Clause 8.2.5.4 of MRTS16 *Landscape and Revegetation Works*.

**Item 3870 Harvesting site plant material [description]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials
- c) preparation of a Plant Harvesting Proposal in accordance with Clause 5.3.3 of MRTS16 *Landscape and Revegetation Works*, and
- d) activities in accordance with Clause 8.2.5.7 of MRTS16 *Landscape and Revegetation Works*.

Payment Note: Payment for planting site harvested plant material is included under Standard Work Item 3868.

**2.2.9 Hardscape works – planting bed edging**

**Item 3877 Timber planting bed edging [type 1 / type 2]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials, and
- c) installation in accordance with Clause 8.3.1 of MRTS16 *Landscape and Revegetation Works*.

**Item 3878 Concrete planting bed edging [type 1 / type 2]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials, and
- c) installation in accordance with Clause 8.3.1 of MRTS16 *Landscape and Revegetation Works*.

**2.2.10 Hardscape works – irrigation systems**

**Item 3885 Irrigation system**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) design and documentation of the irrigation system in accordance with Clause 8.3.2.1 of MRTS16 *Landscape and Revegetation Works*
- c) supply of all materials
- d) installation and commissioning in accordance with Clause 8.3.2.2 of MRTS16 *Landscape and Revegetation Works*



- e) documentation and warranties in accordance with Clause 8.3.2.3 of MRS16 *Landscape and Revegetation Works*, and
- f) training the Principal's nominated representatives in the setup and operation of the system.

#### **2.2.11 Establishment and monitoring operations**

##### **Item 3891 Establishment Period**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials, and
- c) activities in accordance with Clause 9.1 of MRS16 *Landscape and Revegetation Works*.

##### **Item 3892P Establishment Period Watering – (Provisional Quantity, as directed)**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials, and
- c) watering in accordance with Clause 9.1.1.1 of MRS16 *Landscape and Revegetation Works*.

##### **Item 3895 Monitoring Period [duration]**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials, and
- c) activities in accordance with Clause 9.2 of MRS16 *Landscape and Revegetation Works*.

##### **Item 3896P Monitoring Period Watering – (Provisional Quantity, as directed)**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials, and
- c) watering in accordance with Clause 9.2.1.1 of MRS16 *Landscape and Revegetation Works*.

### **3 Payment**

#### **3.1 Management of stockpiles of site and imported topsoil**

Payment for the management of stockpiles of site topsoil and imported topsoil is included under the Work Item 3103P *Stripping of Topsoil (Provisional Quantity, as directed)* – MRS04.

#### **3.2 Installation of topsoil**

Where topsoil has been installed and subsequently disturbed by the Contractor, the topsoil shall be restored to the specified depths and profiles at the Contractor's cost.

No additional payment shall be made for the corrective actions required to topsoil due to delay in the installation of vegetation treatments.

### **3.3 Seeding supply proposal, plant supply proposal and plant harvesting proposal**

No separate payment shall be made for the preparation of proposals.

Payment for the preparation of proposals is included under the relevant Work Item.

### **3.4 Non-potable water management plan and associated testing**

No separate payment shall be made for the preparation of the management plan or associated testing.

Payment for the preparation of the management plan and associated testing is included under the relevant Work Item.

### **3.5 Replacing installed works damaged by herbicide overspray**

Where vegetation treatments are poisoned due to overspray with herbicides, the Contractor shall reinstall the area in accordance with this Specification.

No additional payment shall be made for replacement work for installed works damaged by herbicide overspray.

### **3.6 Replacing installed works damaged by construction works**

Where landscape works are damaged by construction works, the Contractor shall reinstall the area in accordance with this Specification.

No separate payment shall be made for replacement work for works damaged by construction works.

### **3.7 Payment for Establishment Period**

Provided the Contractor is fulfilling all his obligations, payment for Item 3891 shall be:

- a) the first two payments shall each comprise 30% of the tendered amount, and
- b) the balance of monies owed to the Contractor for Item 3891 is payable following the issue of the *Certificate of Commencement of the Monitoring Period*.

### **3.8 Payment for Establishment Period Watering**

Payment for Item 3892P (Provisional Quantity, as directed) shall be paid monthly based on quantities used.

### **3.9 Payment for Monitoring Period**

Provided that the Contractor is fulfilling all obligations, payment for Item 3895 shall be as follows:

- a) monthly pro-rata payments of the tendered amount until the total payments comprise 90% of the tendered amount, and
- b) the balance of monies owed to the Contractor for Item 3895 is payable following the issue of the *Certificate of Commencement of the Monitoring Period*.

### **3.10 Payment for Monitoring Period Watering**

Payment for Item 3896P (Provisional Quantity, as directed) shall be paid monthly based on quantities used.

Superseded