

Main Roads Technical Standard

MRTS16A

Vegetation Protection Works

June 09

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Table of Contents

| | Page |
|---|------|
| 1 INTRODUCTION..... | 1 |
| 2 DEFINITION OF TERMS | 1 |
| 3 STANDARDS | 1 |
| 3.1 Materials and Practices..... | 1 |
| 4 QUALITY SYSTEM REQUIREMENTS | 1 |
| 4.1 Hold Points, Witness Points and Milestones | 1 |
| 4.2 Plans to be included in the Contract Plan..... | 1 |
| 5 GENERAL REQUIREMENTS | 1 |
| 5.1 Samples | 1 |
| 6 VEGETATION PROTECTION | 2 |
| 6.1 General | 2 |
| 6.2 Vegetation Protection Plan – Construction | 2 |
| 6.3 Material Requirements..... | 2 |
| 6.3.1 Protective Fencing, Pickets and Signs | 2 |
| 6.3.2 Protective Padding and Boarding | 2 |
| 6.4 Construction | 2 |
| 6.4.1 General | 2 |
| 6.4.2 Erection of Fenced Enclosures around Vegetation | 3 |
| 6.4.3 Padding of Trees and Boarding of Dripline Zones..... | 3 |
| 6.4.4 Vegetation Removal in Proximity to Retained Vegetation..... | 3 |
| 6.4.5 Activities Prohibited within the Vegetation Protection Zone | 3 |
| 6.4.6 Activities Permitted within the Vegetation Protection Zone | 3 |
| 6.4.7 Damage to Protected Vegetation..... | 3 |
| 7 SUPPLEMENTARY REQUIREMENTS | 4 |

SUPERSEDED

Vegetation Protection Works

1 INTRODUCTION

This Technical Standard applies to the vegetation protection works for road construction and associated works. This Technical Standard shall be read in conjunction with MRTS16 *General Requirements Landscape and Vegetation Works*.

The Technical Standard suite shall be read in conjunction with MRTS01 *Introduction to Technical Standards*, MRTS50 *Specific Quality System Requirements* and other Standards as appropriate.

This Technical Standard forms part of the Main Roads Specifications and Technical Standards Manual.

2 DEFINITION OF TERMS

Landscape and revegetation related terms and abbreviations used in this Standard are defined in Table 2 of MRTS16 *General Requirements – Landscape and Revegetation Works*. Other terms used in this Standard shall be as defined in Clause 2 of MRTS01 *Introduction to Technical Standards*. Guidance on generic landscape revegetation terms is contained in MRTS16 *User Guidelines Vegetation Ground Works*.

3 STANDARDS

3.1 Materials and Practices

Materials and practices shall be in accordance with, but not limited to the Australian Standard AS 4373 *Pruning of Amenity Trees*.

4 QUALITY SYSTEM REQUIREMENTS

4.1 Hold Points, Witness Points and Milestones

The Hold Points, Witness Points and Milestones applicable to this Standard are summarised in Table 4.1.

Table 4.1 – Hold Points, Witness Points and Milestones

| Clause | Hold Point | Witness Point | Milestone |
|--------|--|---------------|-----------------------|
| 5.1 | | | Submission of samples |
| 6.2 | 1 Submission of a Vegetation Protection Plan (VPP-C) | | |

4.2 Plans to be included in the Contract Plan

Depending on the nature of the project, a *Vegetation Protection Plan – Construction* (VPP-C) may be required to be included in the EMP-C. Clause 1 of Annexure MRTS16A.1 indicates whether the VPP-C is required.

The VPP-C (where required) shall be submitted by the Contractor to the Administrator for a decision on its suitability as part of the EMP-C.

General requirements of the EMP-C are specified in the Supplementary Conditions of Contract.

5 GENERAL REQUIREMENTS

5.1 Samples

The Contractor shall submit to the Administrator, samples of materials as specified in Clause 2.1 of Annexure MRTS16A.1 or where not specified as listed in Clause 5.4 of MRTS16 *General Requirements – Landscape and Revegetation Work*. **Milestone**

6 VEGETATION PROTECTION

6.1 General

Vegetation protection operations shall be carried out where shown on the Drawings, or as specified elsewhere in the Contract.

Vegetation protection operations refer to vegetation to be retained within the extent of clearing and / or landscape revegetation works under the Contract.

6.2 Vegetation Protection Plan – Construction

Where the Contractor's construction activities are likely to occur within the drip line of vegetation to be retained, or where required in Clause 1 of Annexure MRTS16A.1, a *Vegetation Protection Plan – Construction* (VPP-C) shall be completed prior to the commencement of clearing and grubbing. **Hold Point 1**

The VPP-C is to include the following items –

- a) method of tree protection;
- b) the extent of pruning; and
- c) vegetation protection installation program.

6.3 Material Requirements

6.3.1 Protective Fencing, Pickets and Signs

Fencing shall be orange coloured polypropylene mesh capable of standing upright between support points and held in place with a galvanised wire secured between star pickets.

Star pickets shall be fitted with plastic safety caps. A star picket, or similar rigid post, set in a transportable footing may be used in lieu of a ground driven picket.

Warning signs shall display text that is easily read by constructors in accordance with Standard Drawing 1640.

6.3.2 Protective Padding and Boarding

Tree padding shall be achieved by wrapping the tree trunk and / or limbs with multiple layers of orange coloured polypropylene mesh. Wooden slats placed around tree trunks shall be a minimum 38 mm thick untreated hardwood and extend the length of the padding.

Boarding shall be a double layer of 18 mm form ply board that minimises damage caused by the passage of construction traffic.

6.4 Construction

6.4.1 General

Protective measures shall be installed in the following locations –

- a) Where shown on the Drawings or as specified elsewhere in the Contract;
- b) Where not shown on the Drawings, any vegetation to be retained within 5 m of construction activities; or
- c) As required below in accordance with Clause 6.4.2 and Clause 6.4.3.

Protective measures shall be installed prior to commencement of any works and remain in place until practical completion or otherwise directed by the Administrator. A warning sign in accordance with Clause 6.3.1 shall be prominently displayed on each fence or individual padded tree. The sign may be attached to the padding but not directly to any vegetation.

It is the responsibility of the Contractor to co-ordinate with Sub-Contractors to protect newly treated landscape revegetation areas that have the potential to be damaged by construction activities, livestock, or pests (as could be reasonably anticipated by the Contractor).

Protective materials shall be removed and properly disposed of by the Date for Practical Completion.

6.4.2 Erection of Fenced Enclosures around Vegetation

The protective fencing shall be placed outside the dripline of any one plant to be retained or the limit of the landscape revegetation works. The fencing shall be secured to star pickets placed at a maximum of 5 m spacings in accordance with Standard Drawing 1640. Warning signs shall be located to face the directions of construction traffic flows in accordance with Standard Drawing 1640.

6.4.3 Padding of Trees and Boarding of Dripline Zones

Where space does not allow fencing to be erected around the drip line of a tree, trunk padding and boarding of the ground surface, in the dripline zone, shall be installed.

Where scaffold branches are low enough to be damaged by equipment, they shall be padded or pruned. Pruning shall be carried out under the supervision of the Landscape Representative and as shown on Standard Drawing 1641.

Tree padding shall be wrapped around the trunk from the ground to the lowest retained branch or to a minimum height of 3 m and to a 25 mm thickness. Branches shall be padded in the same manner. Wooden slats shall be secured around the trunk and / or branches of the tree. The slats shall cover the extent of the protective tree padding as shown on Standard Drawing 1641.

Tree protection shall be installed in a manner that does not cause damage to the tree.

The ground within the dripline of the tree shall be covered with a double layer of 18 mm form ply board capable of withstanding construction traffic.

6.4.4 Vegetation Removal in Proximity to Retained Vegetation

Where vegetation to be cleared is adjacent to vegetation to be retained, as shown on the Drawings and / or described in the VPP-C, the removal of vegetation that extends into the branches or root systems of vegetation to be retained shall be removed under the supervision of the Landscape Representative. The vegetation shall be removed in a manner that shall not damage the retained vegetation above or below ground.

6.4.5 Activities Prohibited within the Vegetation Protection Zone

Activities prohibited in the Vegetation Protection Zone (VPZ) include the –

- a) Use of or parking of vehicles and equipment;
- b) Placement of construction materials, refuse, excavated spoils and stockpiling;
- c) Dumping of poisonous materials that may be harmful to plant health;
- d) Use of tree trunks as a winch support, anchorage, temporary power pole, signpost or other similar function;
- e) Cutting of tree roots by trenching, foundation digging, placement of kerb and / or channel and other miscellaneous excavation without prior approval;
- f) Disturbance of soil or grade change, including silt build-up; and
- g) Alteration of drainage patterns that may occur due to grade changes outside the VPZ.

Work to underground services within the VPZ requires coordination with landscape revegetation activities and shall be carried out to minimise damage to vegetation within the VPZ.

6.4.6 Activities Permitted within the Vegetation Protection Zone

Activities permitted in the VPZ include –

- a) Weed eradication;
- b) Mulching; and
- c) Irrigation, fertilising or other beneficial practices that may be required during construction and have been approved by the Administrator.

6.4.7 Damage to Protected Vegetation

Any damage caused to protected vegetation shall be reported to the Administrator within 24 hours of the damage being first sighted.

Remedial action to mitigate long term damage to the protected vegetation shall be taken by the Contractor and vegetation protection measures reinstated in accordance with the VPP-C.

Where irreparable damage has occurred to vegetation specifically identified as requiring protection the Contractor shall be subject to the penalties indicated in Clause 3.1 of Annexure MRTS16A.1.

7 SUPPLEMENTARY REQUIREMENTS

The requirements of MRTS16A *Vegetation Protection Works* are varied by the supplementary requirements given in Clause 4 of Annexure MRTS16A.1.

SUPERSEDED