

**Specification (Measurement)** 

Transport and Main Roads Specifications MRS87 Supply of Timber Bridge Materials and Components

**July 2016** 





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### **Contents**

| 1   | Introduction        |     |
|-----|---------------------|-----|
| 2   | Measurement of work | .1  |
| 2.1 | Standard Work Items | . 1 |
| 2.2 | Work operations     | 3   |
| 23  | Measurement of work | 4   |



## 1 Introduction

This Specification applies to the supply of materials and components used in the construction and/or maintenance of bridges built either wholly or partially with timber materials.

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 of MRS01 *Introduction to Specifications*, the Standard Work Items covered by this Specification are listed in Table 2.1.

Table 2.1 - Standard Work Items

| Standard<br>Item No. | Description  | Unit of<br>Measurement |
|----------------------|--|------------------------|
| 7001                 | Hardwood kerbs, supply on Site, ([width] mm wide, [thickness] mm thick), [length] metres long                        | each                   |
| 7002                 | Plywood kerbs, supply on Site, ([width] mm wide, [thickness] mm thick), [length] metres long                         | each                   |
| 7003                 | Hardwood decking, supply on Site, ([thickness] mm thick), [length] metres long                                       | m²                     |
| 7004                 | Plywood deck sheets, supply on Site, ([width] mm wide, [thickness] mm thick), [length] metres long                   | each                   |
| 7005                 | Plywood deck sheets including coating, supply on Site, ([width] mm wide, [thickness] mm thick), [length] metres long | each                   |
| 7006                 | Hardwood spiking planks, supply on Site, ([width] mm wide, [thickness] mm thick)                                     | m                      |
| 7007                 | Hardwood end spiking plank, supply on Site, ([width] mm wide, [thickness] mm thick)                                  | m                      |
| 7008                 | Hardwood girders, round, supply on Site, ([diameter] mm diameter), [length] metres long                              | each                   |
| 7009                 | Hardwood girders, octagonal, supply on Site, ([width] mm wide), [length] metres long                                 | each                   |
| 7010                 | Hardwood corbels, round, supply on Site, ([diameter] mm diameter), [length] metres long                              | each                   |
| 7011                 | Hardwood corbels, octagonal, supply on Site ([width] mm wide), [length] metres long                                  | each                   |
| 7012                 | Hardwood headstocks, supply on Site, ([width] mm wide, [thickness] mm thick), [length] metres long                   | each                   |
| 7013                 | Hardwood piles, supply on Site, ([diameter] mm diameter), [length] metres long                                       | each                   |
| 7014                 | Hardwood wales and braces, supply on Site, ([width] mm wide, [thickness] mm thick)                                   | m                      |
| 7015                 | Hardwood sill, round, supply on Site, ([diameter] mm diameter), [length] metres long                                 | each                   |

| Standard<br>Item No. | Description  | Unit of<br>Measurement |
|----------------------|--|------------------------|
| 7016                 | Hardwood sill, rectangular, supply on Site, ([width] mm wide, [thickness] mm thick), [length] metres long.   | each                   |
| 7017                 | Hardwood struts and fenders, round, supply on Site, ([diameter] mm diameter), [length] metres long.  | each                   |
| 7018                 | Hardwood struts and fenders, rectangular, supply on Site, ([width] mm wide, [thickness] mm thick), [length] metres long  | each                   |
| 7019                 | Hardwood distributor planks, supply on Site, ([width] mm wide, [thickness] mm thick)   | m                      |
| 7020                 | Hardwood running planks, supply on Site, ([width] mm wide, [thickness] mm thick)   | m                      |
| 7021                 | Hardwood ballast boards, supply on Site, ([width] mm wide, [thickness] mm thick)   | m                      |
| 7022                 | Hardwood cover boards, supply on Site, ([width] mm wide, [thickness] mm thick)   | m                      |
| 7023                 | Hardwood backing slabs, supply on Site, ([width] mm wide, [thickness] mm thick)  | m                      |
| 7050                 | Steel bridge decking, supply on Site, ([depth] mm deep, [thickness] mm thick), [length] metres long  | m²                     |
| 7051                 | Steel kerb, supply on Site, ([depth] mm deep, [thickness] mm thick), [length] metres long  | each                   |
| 7080                 | Precast prestressed concrete bridge decking, supply on Site, ([width] mm wide, [thickness] mm thick), [length] metres long, [hand] (clockwise/anticlockwise skew/square delete as appropriate), [degrees] degrees skew | each                   |
| 7101                 | Hardwood kerbs, transport to Site, ex Works/Stockpile [location], ([width] mm wide, [thickness] mm thick), [length] metres long  | each                   |
| 7102                 | Plywood kerbs, transport to Site, ex Works/Stockpile [location], ([width] mm wide, [thickness] mm thick), [length] metres long   | each                   |
| 7103                 | Hardwood decking, transport to Site, ex Works/Stockpile [location], ([thickness] mm thick), [length] metres long   | m²                     |
| 7104                 | Plywood deck sheets, transport to Site, ex Works/Stockpile [location], ([width] mm wide, [thickness] mm thick), [length] metres long   | each                   |
| 7105                 | Plywood deck sheets including coating, transport to Site, ex Works/Stockpile [location], ([width] mm wide, [thickness] mm thick), [length] metres long   | each                   |
| 7106                 | Hardwood spiking planks, transport to Site, ex Works/Stockpile [location], ([width] mm wide, [thickness] mm thick)   | m                      |
| 7107                 | Hardwood end spiking planks, transport to Site, ex Works/Stockpile [location], ([width] mm wide, [thickness] mm thick)   | m                      |
| 7108                 | Hardwood girders, round, transport to Site, ex Works/Stockpile [location], ([diameter] mm diameter), [length] metres long  | each                   |
| 7109                 | Hardwood girders, octagonal, transport to Site, ex Works/Stockpile [location], ([width] mm wide), [length] metres long   | each                   |
| 7110                 | Hardwood corbels, round, transport to Site, ex Works/Stockpile [location], ([diameter] mm diameter), [length] metres long  | each                   |

| Standard Item No. | Description   | Unit of<br>Measurement |
|-------------------|---|------------------------|
| 7111              | Hardwood corbels, octagonal, transport to Site, ex Works/Stockpile [location], ([width] mm wide), [length] metres long  | each                   |
| 7112              | Hardwood headstocks, transport to Site, ex Works/Stockpile [location] ([width] mm wide, [thickness] mm thick), [length] metres long   | each                   |
| 7113              | Hardwood piles, transport to Site, ex Works/Stockpile [location], ([diameter]), [length] metres long  | each                   |
| 7114              | Hardwood wales and braces, transport to Site, ex Works/Stockpile [location], ([width] mm wide, [thickness] mm thick)  | m                      |
| 7115              | Hardwood sill, round, transport to Site, ex Works/Stockpile [location], ([diameter] mm diameter), [length] metres long  | each                   |
| 7116              | Hardwood sill, rectangular, transport to Site, ex Works/Stockpile [location], ([width] mm wide, [thickness] mm thick), [length] metres long   | each                   |
| 7117              | Hardwood struts and fenders, round, transport to Site, ex Works/Stockpile [location], ([diameter] mm diameter), [length] metres long  | each                   |
| 7118              | Hardwood struts and fenders, rectangular, transport to Site, ex Works/Stockpile [location], ([width] mm wide, [thickness] mm thick), [length] metres long   | each                   |
| 7119              | Hardwood distributor planks, transport to Site, ex Works/Stockpile [location], ([width] mm wide, [thickness] mm thick)  | m                      |
| 7120              | Hardwood running planks, transport to Site, ex Works/Stockpile [location], ([width] mm wide, [thickness] mm thick)  | m                      |
| 7121              | Hardwood ballast boards, transport to Site, ex Works/Stockpile [location], ([width] mm wide, [thickness] mm thick)  | m                      |
| 7122              | Hardwood cover boards, transport to Site, ex Works/Stockpile [location], ([width] mm wide, [thickness] mm thick)  | m                      |
| 7123              | Hardwood backing slabs, transport to Site, ex Works/Stockpile [location], ([width] mm wide, [thickness] mm thick)   | m                      |
| 7150              | Steel bridge decking, transport to Site, ex Works/Stockpile [location], ([depth] mm deep, [thickness] mm thick), [length] metres long   | m²                     |
| 7151              | Steel kerb, transport to Site, ex Works/Stockpile [location], ([depth] mm deep, [thickness] mm thick), [length] metres long   | each                   |
| 7180              | Precast prestressed concrete bridge decking, transport to Site ex Works/Stockpile [location], ([width] mm wide, [thickness] mm thick), [length] metres long, [hand] clockwise/anticlockwise skew/square (delete as appropriate), [degrees] degrees skew | each                   |
| 7190              | Storage of timber bridge materials and components at Site   | lump sum               |

# 2.2 Work operations

# Items 7001 to 7080

These items are used only where materials and components are supplied by the Contractor.

Work Operations incorporated in the above items include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 Introduction to Specifications
- b) supply of construction materials
- c) transport to Site
- d) preparation of Site storage area, and
- e) unloading at Site.

#### Items 7101 to 7180

These items are used only where components are supplied by the Principal for collection by the Contractor from the location nominated in the Principal Supplied Materials List.

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 Introduction to Specifications
- b) taking delivery of the materials and components at the location nominated in the schedules, including loading where so required
- c) transport to Site
- d) preparation of Site storage area, and
- e) unloading at Site.

## Item 7190 Storage of timber bridge materials and components at Site

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 Introduction to Specifications, and
- b) stacking of materials and components at Site to the requirements of this Specification.

### 2.3 Measurement of work

The measurement of steel bridge decking shall be the plane (not developed) length along the centreline of the bridge multiplied by the overall deck width as shown on the Drawings.

Adequate allowance shall be made by the Contractor for additional quantities in order to allow for overlap of sheets.