

# Master Specification

## Part PR-LS-C4

### Tree and Palm Transplanting

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**Government of South Australia**  
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## PR-LS-C4 Tree and Palm Transplanting

### 1 General

- a) This Master Specification Part specifies the requirements for transplanting and relocation of trees and palms, including:
  - i) the documentation requirements, as set out in section 2;
  - ii) the timing of works requirements, as set out in section 3;
  - iii) the soil testing requirements, as set out in section 4;
  - iv) the setting out requirements, as set out in section 5;
  - v) the tree and palm preparation requirements, as set out in section 6;
  - vi) the planting procedure requirements, as set out in section 7;
  - vii) the tree and palm support requirements, as set out in section 8;
  - viii) the mulch requirements, as set out in section 9;
  - ix) the watering requirements, as set out in section 10;
  - x) the anti-transpirants requirements, as set out in section 11;
  - xi) the reinstatement of site requirements, as set out in section 12;
  - xii) the maintenance requirements, as set out in section 13; and
  - xiii) the Hold Point requirements, as set out in section 14.
- b) The transplanting and relocation of trees and palms must comply with the Reference Documents including:
  - i) AS 4373 Pruning of amenity trees; and
  - ii) AGRD Part 6B: Roadside Environment.
- c) The Contractor must engage a suitably qualified arborist, who must:
  - i) fulfil the requirements as set out in this Master Specification Part, including the preparation of an arborist report;
  - ii) have a minimum Certificate III in Arboriculture and be experienced in the transplanting and relocation of trees and palms; and
  - iii) be responsible for supervising all Works and Temporary Works related to the transplanting or relocation of trees and palms.

### 2 Documentation

#### 2.1 Construction Documentation

In addition to the requirements of PC-CN3 “Construction Management”, the Construction Documentation must include the arborist report, in accordance with section 2.3.

#### 2.2 Quality Management Records

In addition to the requirements of PC-QA1 “Quality Management Requirements” or PC-QA2 “Quality Management Requirements for Major Projects” (as applicable), the Quality Management Records must include written verification that setting out has occurred in accordance with section 5.

## 2.3 Arborist report

- a) A report must be prepared by the arborist appointed pursuant to section 1c) addressing all requirements in this Master Specification Part, which will constitute a **Hold Point**. The Contractor must not commence the transplanting and relocation of trees and palms until this Hold Point has been released.
- b) The arborist report must be included in the relevant Construction Documentation.
- c) The Contractor must prepare, transplant, and relocate trees and palms in accordance with the arborist report.

## 3 Timing of works

The timing of all works required for the transplanting and relocation of trees and palms must be specified in the arborist report.

## 4 Soil testing

Prior to the tree and palm relocation, soil testing must be carried out on the soil at the proposed new site and any imported backfill material in accordance with PR-LS-C7 "Topsoil and Earthworks".

## 5 Setting out

- a) Prior to commencing Works on Site, the Contractor must set out the proposed location of relocated tree and palms in accordance with the arborist report.
- b) The Contractor must provide 2 days prior notification to the Principal when setting out is to occur to allow for inspection of the set out, which will constitute a **Hold Point**. The Contractor must not commence the transplanting and relocation of trees and palms until this Hold Point has been released.
- c) Trees and palms must be set out in accordance with the Reference Documents (including AGRD Part 6B: Roadside Environment) and other Utility Service Authority legislation, regulations and requirements.
- d) The Contractor must provide written verification that setting out has occurred in accordance with this section 5 as part of the Quality Management Records.

## 6 Tree and palm preparation

### 6.1 Orientation marking

The north side of the tree or palm trunk must be marked prior to removal from the original site to facilitate the same orientation at the new site, as required by section 7.2.

### 6.2 Frond preparation method for palms

The frond preparation method for palms must be specified in the arborist report.

### 6.3 Formative pruning for trees

- a) The Contractor must undertake formative pruning prior to transplanting and relocating trees if specified in the arborist report.
- b) The Contractor, under the direction of the arborist, must selectively remove specific branches to enhance form and improve structure, and to directionally shape the tree.
- c) Smaller diameter branches may be reduced to a dormant bud when considered necessary by the arborist.

- d) Formative tree pruning must aim to reduce the development of structural weaknesses, accommodate site constraints and reduce encroachment on utilities or structures as the tree grows.
- e) All formative tree pruning undertaken in accordance with this section 6.3 must comply with AS 4373 Pruning of amenity trees.

## 6.4 Root preparation and excavation

- a) The methodology for root preparation and excavation of the tree or palm to be relocated must be specified in the arborist report.
- b) Root preparation must occur at least:
  - i) 6 months; or
  - ii) such other period specified in the arborist report, prior to the relocation and transplanting of trees and palms.

## 6.5 Lifting and transport

- a) An arborist, or the Contractor under the supervision of the Contractor's arborist, must lift the tree or palm in accordance with the methodology specified in the arborist report.
- b) The Contractor must transport the tree or palm from its original site to the new site in accordance with the methodology specified in the arborist report.
- c) The tree or palm must be protected by covers during transportation as required by the arborist report or otherwise determined on-Site by the arborist.

# 7 Planting procedure

## 7.1 Preparation of planting hole

- a) The Contractor must prepare the planting hole at the new site in accordance with the requirements specified in the arborist report.
- b) The arborist report must take into consideration the soil testing results when determining the planting hole preparation requirements.
- c) If the soil excavated for the planting hole at the new site does not meet the requirements in section 7.5a) for use as backfill, the Contractor must remove the soil from Site.

## 7.2 Orientation

The tree or palm must be orientated at the new site in the same direction as the original site.

## 7.3 Inspection pipes

- a) The Contractor must install inspection pipes at the new site.
- b) 2 inspection pipes must be installed, one on either side of the tree.
- c) Inspection pipes must be 150 mm diameter PVC pipe with a screw inspection lid located within an irrigation type valve box with lock. The top of the valve box must be 50 mm below the surface of the mulch and the screw inspection lid must be 150 mm below the finished ground level.

## 7.4 Watering basin

- a) The Contractor must construct a watering basin from soil around the perimeter of the root ball with a holding capability as specified in the arborist report.

- b) The watering basin must be kept intact at all times after planting and for the duration of the Landscape Maintenance Period, unless instructed otherwise by the Principal.

## 7.5 Backfill

- a) Where the arborist determines that the excavated material is unsuitable for backfill in accordance with the soil test report, imported soil must be used.
- b) Imported soil must be in accordance with PR-LS-C7 "Topsoil and Earthworks".

## 7.6 Fertiliser and soil additives

The Contractor must apply fertiliser and soil additives to the backfill soil in accordance with the arborist report and the soil test report.

# 8 Tree and palm support

## 8.1 General

- a) Tree and palm support installation must be specified in the arborist report.
- b) Tree and palm support must be installed by an arborist, or by the Contractor under the supervision of an arborist.
- c) The guying methods used must be safe for pedestrians.

## 8.2 Guying types

The arborist report must specify suitable guying types, including anchors.

## 8.3 Support attachments

- a) The arborist report must specify the appropriate support attachments.
- b) Support attachments must not damage the tree or palm.
- c) Support attachments must be installed in accordance with manufacturer's recommendations.
- d) Once it has been determined by an arborist that the tree or palm has stabilised itself with its new root system:
  - i) the Contractor must provide evidence of the arborist's recommendation of the removal of attachments to the Principal, which will constitute a **Hold Point**. The support attachments must not be removed until this Hold Point has been released; and
  - ii) following release of the Hold Point, the support attachments must be removed by the same party that installed them.

# 9 Mulch

## 9.1 General

- a) Mulch must be evenly spread on top of the backfilled soil to a depth of:
  - i) 100 mm; or
  - ii) such other depth specified in the arborist report.
- b) Mulch must be spread to the diameter (i.e. distance from the tree trunk) specified in the arborist report.
- c) Mulch material must not be placed in contact with the trunk of the tree or palm.

## 9.2 Mulch types

- a) Mulch must:
  - i) be well leached before application;
  - ii) be free from deleterious materials such as soil, weeds, sticks, sawdust, nails, staples, cardboard and plastic;
  - iii) have a low fines content; and
  - iv) have a minimum 70% hardwood content.
- b) Prior to supply and installation, a sample bag of mulch must be provided to the Principal, which will constitute a **Hold Point**. The mulch must not be applied until the Hold Point has been released.

## 10 Watering

### 10.1 General

- a) The Contractor must water the relocated tree or palm before, during and after relocation in accordance with the arborist report. If the watering requirements set out in the Contractor's moisture monitoring reports provided in accordance with section 10.1c) differ from the arborist report, then the Contractor must consult with the arborist before adjusting the watering requirements.
- b) Immediately following planting, the root ball must be soaked to ensure that air pockets are removed and the entire root ball is wet.
- c) The Contractor must:
  - i) ensure that relocated trees and palms maintain health and are free of water stress at all times;
  - ii) monitor moisture levels to determine the exact watering requirements to ensure tree and palm survival; and
  - iii) provide moisture monitoring reports to the Principal monthly for the first 6 months, then quarterly thereafter,until the end of the Landscape Maintenance Period.

### 10.2 Method of watering

When the arborist specifies that an irrigation system is required at the new site:

- a) the Contractor must design and install the irrigation system in accordance with the arborist's requirements and PR-LS-C9 "Irrigation"; and
- b) the Contractor must ensure that:
  - i) the irrigation system is fully operational at all times; and
  - ii) all trees and palms are receiving the correct amount of water as specified in the arborist report, subject to section 10.1c),until the end of the Landscape Maintenance Period.

## 11 Anti-transpirants

- a) The arborist report must specify if anti-transpirants are required to be applied to the tree or palm.



- b) If required, anti-transpirants must be applied in a spray form by an arborist in accordance with the requirements in the arborist report.

## 12 Reinstatement of site

The area at the original site from where the tree or palm was removed must be reinstated to the levels existing prior to the Contractor commencing work.

## 13 Maintenance

- a) The tree or palm must be maintained by the Contractor in accordance with the arborist report from the day of planting until the end of the Landscape Maintenance Period.
- b) A maintenance report must be provided to the Principal monthly for the first 6 months, then quarterly thereafter, for the duration of the Landscape Maintenance Period outlining tree and palm health status, works undertaken during the previous period, and future works required to maintain tree and palm health.
- c) At the end of the Landscape Maintenance Period, the relocated tree or palm must be in a healthy condition.

## 14 Hold Points

Table PR-LS-C4 14-1 details the review period or notification period, and type (documentation or construction quality) for each Hold Point referred to in this Master Specification Part.

**Table PR-LS-C4 14-1 Hold Points**

Section reference	Hold Point	Documentation or construction quality	Review period or notification period
2.3a)	Provision of the arborist report	Documentation	5 Business Days review
5b)	Inspection of setting out	Construction quality	48 hours notification
8.3d)i)	Evidence of the arborist's recommendation of the removal of support attachments	Documentation	5 Business Days review
9.2b)	Provision of mulch sample	Documentation	5 Business Days review